



University
of Glasgow

Smith, Thomas Aneurin (2012) *At the crux of development? Local knowledge, participation, empowerment and environmental education in Tanzania*. PhDthesis.

<http://theses.gla.ac.uk/3700/>

Copyright and moral rights for this thesis are retained by the author

A copy can be downloaded for personal non-commercial research or study, without prior permission or charge

This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the Author

The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the Author

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given

At the crux of development?
**Local knowledge, participation, empowerment and environmental
education in Tanzania**

by

Thomas Aneurin Smith

A thesis submitted for the degree of Doctor of Philosophy
School of Geographical and Earth Sciences
The University of Glasgow
November 2012

“Crux. The most significant, committing, or difficult section of a climb.”

Cox and Fulsaa (2006, p.565)

Abstract

At the crux of development?

Local knowledge, participation, empowerment and environmental education in Tanzania

Thomas Aneurin Smith

Development appears to have gone through a paradigm shift, from top-down, state-led projects to bottom-up, participatory schemes which seek to take account of local knowledges. Tanzania is a country which, like many others in the 'Global South', faces a myriad of interlinked environmental and development problems, particularly as much of the population's livelihood needs are deeply entwined with local environmental resources. Current environmental policies and conservation practise in Tanzania appear to reflect this new shift in development, and increasingly the Tanzanian state and a number of NGOs have aimed to increase the participation of local people in environmentally sustainable practices. Education about the environment, for both adults and young people, has become key to this approach in Tanzania since the 1990s. This thesis aims to explore the many practical and theoretical questions which remain about the suitability of participatory projects that utilise local knowledges, considering questions which are fundamentally at the heart of how development is and how it should be done, questions which are ultimately at the crux of development itself. Specifically, I aim to answer questions about how participants and communities can become 'empowered' through participatory initiatives, and to this end I investigate the important yet presently neglected role of young people. I further explore the nature of 'local knowledge', questioning its current use in development projects whilst seeking to re-conceptualise and re-orientate how 'local knowledge' is understood and employed. I utilise a qualitative and participatory methodology through three communities in Tanzania, each of which offers a contrasting picture of environmental issues throughout the country.

I begin by exploring the current understandings of participation and local knowledges in development, and follow with an explanation of the methodological approach. The empirical chapters are then organised around three main themes: local knowledges, environmental education in Tanzania, and the role of participation in Tanzanian communities. The first of these chapters appraises the concept of 'local knowledge' critically by first comparing local and official discourses of the 'environment', assessing how far an attention to local knowledges has percolated into official environmental discourses in Tanzania. In light of local understandings of the environment encountered in these three communities, I consider how the current conceptual framework of local knowledge may be limiting our understanding of how these knowledges are

constructed and communicated. The second empirical chapter examines environmental education projects in Tanzania, and from this I critically reflect on the role of NGOs and the state in local development. Through an analysis of environmental education, I consider how both local knowledge and participation agendas can be spatialised, in particular by understanding how formal and informal spaces of learning are constructed discursively in communities, and the implications this has for the outcomes of education projects. I go on to examine the notions of participation and community, exploring how participation and inclusion operate at different scales, including those beyond the local. I consider how the current conceptualisation of participation and community, derived from 'Western' ideals, can conflict with local understandings of responsibility, volunteerism, participation and community development. Through this, I question the 'community' as the necessary site of empowerment, and in particular here I draw attention to the role of young people and how their identities are reproduced at the community scale and beyond. Finally, I conclude by discussing the conceptual and practical application of local knowledge and participation in development in light of this critical appraisal. I consider the role of formal education more broadly in empowering young people, and I question the role of NGOs in the future of locally and nationally orientated development. I end with an examination of the ethics of the current development paradigm in light of the understandings of development uncovered by this study, many of which fundamentally challenge the way that participatory forms of development should be done.

Acknowledgements

I would like to thank my supervisors, John Briggs and Jo Sharp, for all their guidance, support and help throughout my years at Glasgow. At Glasgow University I would also like to thank Mike Shand for providing maps for the final thesis, and William Hasty, Isla Forsyth, Cheryl McGeachan, David Beel, Aaron Franks and Richard Lowdon, among many others, for their support.

My field research assistants in Tanzania have been invaluable, both in practical help and insight, and my thanks goes to Daud Buyagu, Gabriel Gibson, Editha and Alfred. I have also benefitted a great deal from the insights of students from the University of Glasgow and the University of Dar es Salaam who have been involved in exchange visits between these two Universities, and my thanks to them too. At the University of Dar es Salaam I owe thanks most of all to Alex Ngowi, without whom much of my fieldwork would not have been possible. I would also like to thank Opportuna Kweka, Cosmas Sokoni, Herbert Hambati, William Andindilile and Coster Mahuwi.

This research would not have been possible without the tremendous amount of cooperation and help that I received from the people of Kawe, Bagamoyo and Rukwa. I owe a great deal of thanks to the adults and young people, teachers, headmasters and those working for the state and NGOs who took part in, and assisted with, my research. Particularly in Rukwa, I was welcomed, looked after, and assisted by too many people to name, and my thanks go to them all. I would also like to thank staff at the Jane Goodall Institute, the Tanzanian Forest Conservation Group, the Joint Environmental and Development Management group and the Tanzanian Youth Environmental Network, all of whom offered considerable cooperation, openness and assistance with my research.

My thanks to those who have funded my research, including the Journal of Urban Studies, the Royal Scottish Geographical Society and the School of Geographical and Earth Sciences at the University of Glasgow.

Finally, my family and friends have, intentionally or otherwise, supported me throughout my PhD. In particular, the Glasgow University Mountaineering Club, and all those associated with it, has kept me on the straight and narrow. Special thanks to Katherine Torr, for taking over when the little voice inside my head gave up, and for providing the penguins.

Table of contents

<i>Abstract</i>	<i>iii</i>
<i>Acknowledgements</i>	<i>v</i>
<i>Table of contents</i>	<i>vi</i>
<i>List of Figures</i>	<i>viii</i>
<i>List of Tables</i>	<i>ix</i>
<i>List of Maps</i>	<i>ix</i>
<i>List of Pictures</i>	<i>ix</i>
Chapter 1:	
Introduction	1
1.1 The introduction.....	2
1.2 Thesis outline	5
Chapter 2:	
Participation, local knowledge, and environmental education	10
2.1 The history of participatory development	10
2.2 Critiques of participation.....	17
2.2.1 The costs of participation.	17
2.2.2 The meaning of participation	19
2.2.3 Power, empowerment, and community	21
2.2.4 Western values.	25
2.2.5 Role of the State and NGOs	27
2.2.6 The outcomes of participatory projects	30
2.2.7 Participation and space	31
2.3 Local knowledge in development.....	32
2.3.1 A history of local knowledge in and before development	33
2.3.2 A critical approach to local knowledge.....	36
2.3.3 The methodological challenge.....	39
2.3.4 The contribution of Geography.	41
2.3.5 The future of local knowledges	43
2.4 Education and development	44
2.4.1 Critical approaches to local knowledge and participation in education	48
2.4.2 Environmental education in Tanzania	53
2.5 The key questions.....	57
Chapter 3:	
Methodology	59
3.1 Context	59
3.1.1 Tanzania.....	59
3.1.2 The NGOs.....	63
3.1.3 Kawe	65
3.1.4 Bagamoyo	69
3.1.5 Rukwa	73
3.2 Methods	78

3.2.1 Interviews	78
3.2.2 Interviews with state officials, NGO staff and academics	83
3.2.3 Interviews with teachers	84
3.2.4 Focus groups with young people.....	86
3.2.5 Interviews with local people.....	92
3.2.6 Observations.....	96
3.2.7 Document analysis.....	98
3.3 Ethical considerations	99
3.4 Summary	106
Chapter 4: What is the environment?	
A critical exploration in the spaces of local knowledge.....	107
4.1 Defining the environment	107
4.2 Local environmental knowledges.....	125
4.2.1 Extra-local	126
4.2.2 Specificity in place	128
4.2.3 The temporality of the local	139
4.2.4 Western and local environmental knowledges	145
4.2.5 The knowledges of young people.....	149
4.2.6 Local power relations and spaces of knowledge expression.....	156
4.2.7 The limitations of local knowledge.....	162
4.3 Local traditional knowledges and beliefs	166
4.4 Summary	187
Chapter 5: Whose education?	
NGOs, environmental education, and a spatial approach to learning.....	190
5.1 Formal environmental education: the way in for conservation	190
5.2 Assembling the spaces of informal and formal learning.....	199
5.3 Who wants to go to school?.....	208
5.4 The contribution to local environmental knowledges	213
5.5 Summary	227
Chapter 6: Participation, community, empowerment:	
What do these mean in Tanzania?	229
6.1 Participation in environmental education.....	229
6.2 The role of the State and NGOs in participation	239
6.3 Individual and collective responsibility	251
6.4 Knowledge, behavior and agency	259
6.5 Who are the local community?	268
6.5.1 A Tanzanian understanding of community.....	269
6.5.2 The student is not the fisherman	279
6.5.3 A lack of 'community' does not equal a lack of action	285
6.6 Summary	292

Chapter 7: Conclusions at the crux of development:	
What does environmental education in Tanzania reveal?.....	294
7.1 How can local knowledge be re-conceptualised, and how can it be a part of judgement making in development?	294
7.2 Can young people be empowered through education?	300
7.3 What role should NGOs and the state play in development?.....	305
7.4 How can a focus on environmental education further critical debates about participation and community in development?	308
Appendices	315
References.....	319

List of Figures

Figure 4.1 The cover of the Jane Goodall Institute book	108
Figure 4.2 Excerpts from the Jane Goodall Institute book.....	110
Figure 4.3 A primary school textbook	112
Figure 4.4 A secondary school textbook	113
Figure 4.5 Excerpts from a Tanzanian primary school textbook.....	112
Figure 4.6 Excerpts from a Tanzanian secondary school textbook 1	114
Figure 4.7 Excerpts from a Tanzanian secondary school textbook 2	115
Figure 4.8: Front covers of three textbooks used in Tanzanian state schools.....	115
Figure 4.9: Adults definitions of the environment	117
Figure 4.10: Environmental problems as expressed by adults and young people.....	122
Figure 4.11: Percentage responses of young people to defining the environment.....	123
Figure 4.12: Frequency of environmental problems as expressed by respondents	126
Figure 4.13: Defining the environment: adult responses from 3 areas of Tanzania	127
Figure 4.14: A ranking of environmental problems	134
Figure 4.15: Environmental problems at different scales	150
Figure 4.16: Adults who discussed environmental problems at different scales	152
Figure 4.17: Young people who discussed environmental problems at different scales.....	152
Figure 4.18: Adult definitions of traditional knowledges.....	170
Figure 4.19: Adults' overall opinion on traditional knowledges	172
Figure 4.20: Adults: are traditional knowledges currently used in this area?	175
Figure 4.21: The places that adults recalled traditional knowledges from.....	176
Figure 4.22: Young people and adults' knowledge of local traditional knowledges.....	180
Figure 4.23: Should traditional knowledges be taught in schools?.....	187
Figure 5.1: Responses from young men and women during school-based workshops.....	204
Figure 5.2: The quality of primary school children's environmental knowledge.....	214
Figure 5.3: The quality of secondary school pupils' environmental knowledge	216
Figure 6.1: Local adults awareness of environmental education.....	235
Figure 6.2: Community responses to who is responsible for local environmental problems..	252
Figure 6.3: A comparison of those adults that feel responsibility and those that participate	259
Figure 6.4: Why did individuals not participate in environmental activities?.....	261
Figure 6.5: The percentage of adults and young people who took part in practical activities	264

List of Tables

Table 3.1: Summary of the participants from school-based focus groups	90
Table 3.2: The sample of respondents, by gender, age and area sampled.....	95
Table 4.1: Summary of rankings of environmental problems.....	135
Table 5.1: Environmental topics discussed with young people at home	200
Table 5.2: Is school attendance a problem in this area?.....	209
Table 5.3: Problems which prevent school attendance	210
Table 6.1: Were respondents willing to participate, given the opportunity?	260
Table 6.2: Did young people take action in the environment?	264
Table 6.3: Did adults observe young people taking practical action?.....	265
Table 6.4: Where did young people participate in environmental activities?	266
Table 6.5: What environmental activities did young people participate in?	266
Table 6.6: The birthplaces of interviewees in Kawe.....	271
Table 6.7: The birthplaces of interviewees in Bagamoyo	272

List of Maps

Map 3.1: The population density of Tanzania shown by region	60
Map 3.2: Tanzania: administrative areas and case study locations.....	65
Map 3.3: Dar es Salaam: Kawe Ward	67
Map 3.4: Kawe.....	68
Map 3.5: Bagamoyo and the surrounding area	71
Map 3.6: Bagamoyo	72
Map 3.7: Rukwa area.....	75
Map 3.8: Three study areas in Rukwa	75
Map 3.9: Ilemba village	76
Map 3.10: Land use around Ilemba village	77
Map 6.1: The birthplaces of migrants to Kawe	271
Map 6.2: The birthplaces of migrants to Bagamoyo	272

List of Pictures

Picture 4.1: A typical home in Kawe, Dar es Salaam	120
Picture 4.2: Cattle in the compound	120
Picture 4.3: Fishermen on the beach of Bagamoyo	130
Picture 4.4: Fish cleaning.....	130
Picture 4.5: Rubbish in Kawe	131
Picture 4.6: The official rubbish dump in Kawe.....	132
Picture 4.7: A typical small house in Rukwa	133
Picture 4.8: River erosion in Kawe.....	137
Picture 4.9: Collecting water	138
Picture 4.10: Lake Rukwa	140
Picture 4.11: Paths to the Lake.....	140
Picture 4.12: The plains of Lake Rukwa.....	141
Picture 4.13: Memories of extra-local knowledge	142
Picture 4.14: The Sakalilo irrigation scheme	147
Picture 4.15: Nets used to catch small fish	155
Picture 4.16: Spaces of empowerment	158

Picture 4.17: Spaces of marginalisation	159
Picture 4.18: Litter at the beach.....	163
Picture 4.19: Chinese modernity?	174
Picture 4.20: Sacred peak.....	177
Picture 4.21: View from the top of the escarpment	178
Picture 4.22: A house attacked in the witch hunt.....	184
Picture 4.23: On Lake Rukwa.....	185
Picture 5.1: A typical primary school classroom	196
Picture 5.2: Young people collecting worms to use as bait.....	201
Picture 5.3: Two young people herding cattle	202
Picture 5.4: Young people working around their school.....	217
Picture 5.5: Contrasting schools.....	217
Picture 5.6: Environment day.....	218
Picture 5.7: At the event	219
Picture 5.8: Sit up straight?	221
Picture 6.1: Posters.....	243
Picture 6.2: A visit from the NGO	249
Picture 6.3: Bare land in Kawe.....	254
Picture 6.4: Large fish for sale on Bagamoyo beach	276
Picture 6.5: Illegal fishing	277
Picture 6.6: Small fry	277
Picture 6.7: No more mangroves	278
Picture 6.8: Destruction of the mangroves	282
Picture 6.9: Young people beach cleaning	282
Picture 6.10: Young people destroying mangroves	283
Picture 6.11: Young people working on the family farm	284
Picture 6.12: Bank erosion on the river.....	286
Picture 6.13: Forest management in Rukwa	290

Chapter 1

Introduction

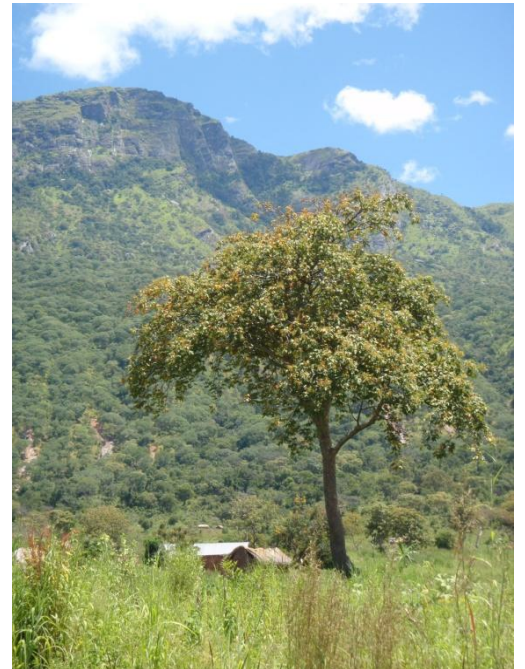


“Beyond doubt there are problems with fishing. The nets we use which are between 1 inch and 3 inches are prohibited by the government, but most of the people here are financially bankrupt. But why does the government prevent us from fishing if they do not provide any other activities? ... This is the only way our families survive so how can we stop?”

Male, age 40-49, Bagamoyo

“In those days all the areas around here were forested. You could hear cobras and other wild animals, the environment was good. But now most have been cut down. This tree near the house marks the end of the area that used to be settled, but now people have expanded beyond here.”

Female, age 50-59, Ilemba (Rukwa)



“Some people collect and bring the waste from far away, once they reach this area around the house they can't be bothered to go all the way to the rubbish tip. So they dump it here on the poor people. Even for us, the proper place is very far away. So we go to a quiet place and dump it there as it is too far.”

Male, age 30-39, Kawe

1.1 The introduction

Tanzania, like many countries in the 'Global South', faces a wide range of environmental challenges, and, again like many other countries in the 'Global South', these environmental challenges are intimately tied up with development. The quotes and illustrations above describe just a few of these, from depleting fishing stocks on Tanzania's east coast, to rapid deforestation of the Rift Valley in the far west, to the typically urban environmental hazard of waste disposal in Tanzania's growing metropolis, Dar es Salaam. In a country where the majority of the population are still directly and immediately reliant on natural resources, for their food, cooking, energy, water, and building materials (NBS Tanzania 2006), it is no surprise that their livelihood needs are deeply intertwined with the use of these resources. This leads to questions of how these environmental resources can be used 'sustainably' for their current and future livelihoods.

From their colonial history to the present day many countries in Sub-Saharan Africa, including Tanzania, increasingly became a focus for Western environmentalists and conservationists seeking to preserve wildlife and habitats (Nelson and Agrawal 2008; Leach and Fairhead 2000). In response the Tanzanian government has, from the 1980s onwards, progressively brought large areas of land under state control as national parks, game reserves, conservation areas, and forest reserves (NEMC Tanzania 2004), with the aim of conserving biodiversity (Schroeder 1999), but also of attracting valuable tourist revenues. As such, Tanzania now has one of the world's largest networks of protected areas, estimated to be as much as 40% of the land area of the country (NEMC Tanzania 2004). In the recent past, attempts to 'conserve' the natural environment in Tanzania have often been heavy handed, including the forcible moving of populations, and cutting off local access to these natural resources which have sustained their livelihoods through curtailing local users' rights (Nelson and Agrawal 2008; Schroeder 1999). As a result, the recent history of practically dealing with the complex people-environment interaction in Tanzania has often favoured 'nature' and the 'environment' over people, their livelihoods, and their needs.

From the late 1990s onwards, however, some seemingly fundamental changes in development paradigms, away from 'top down' modes of control to more 'bottom up' and 'participatory' ideals, which aim to involve local inhabitants more closely in development, appear to have filtered down into Tanzanian conservation practices (Blomley et al 2008; Myers 2002; Nelson and Agrawal 2008; JGI 2009b¹). Rather than impose ideas of protecting and conserving the 'natural environment' on local people, increasingly the Tanzanian state and a number of Non-Governmental Organisations

¹ As well as those of other countries in the Global South, see Twyman (2000), Sahu (2008), Naur (2001a), Motteux et al (1999), McKinnon (2006), Klooster (2002), among many others.

(NGOs) have been taking a whole range of approaches aimed at increasing the participation of local people in environmentally sustainable practices. One of the key ways in which they have done this is through education about the environment, both to adults and young people, and it is the area of environmental education which this thesis seeks to explore. Why is it important to investigate environmental education in Tanzania? Firstly because, as a form of 'development', its conception and delivery as a 'development project' appears to embody a relatively recent development paradigm which has yet to be fully put to the test, and with it comes fundamental practical and theoretical questions about what development is and how it should be done, the questions which are ultimately the crux of development itself. The concept of 'participatory development' comes from a broad assembly of reactions against modernist development paradigms, which, like much of the Tanzanian approach to environmental conservation until very recently, focused on delivering development from the top down, often with the consequence of marginalising those people who development was supposed to be for, and in some cases, making their lives significantly worse off (Potter et al 2003; Elliot 2002; Sharp and Briggs 2006). Participatory development instead suggests that 'local people', often the 'poorest' who development should be for, must be involved at every stage of the development process (Chambers 1994a, b, c; Kesby 2000b; Motteux et al 1999), and that their 'local knowledge' will often offer a better understanding of the local development situation, and may even offer local solutions (Briggs 2005). Such ideas have become very popular over the last two decades in the development establishment (Agrawal 1995; Green 2000), and appear to be influencing Tanzanian approaches to the environment. Environmental education, adopted by the Tanzanian state and a number of environmental NGOs in Tanzania from the 1990s, seems to embrace some of these ideals, including engaging local communities in the context of their local environmental problems, and making education 'locally appropriate', as well as seeking to engage with people's 'indigenous' or 'local' knowledge (NEMC Tanzania 2004; Hoza 2009; Mbuta 2009; JGI 2009b).

A critical appraisal of this kind of participatory project has only just begun, at least in academic research. This research has highlighted that often 'participatory' development does not meet the high moral and ethical standards which advocates assume (Goebel 1998; Kapoor 2002b), that there is a range of practical problems in engaging with local communities and their knowledges (Brett 2003; Mohan 2002), and that, in some cases, the assumptions of participatory development may be flawed, including ideas that local communities will become 'empowered' through participating (Cleaver 1999; Mohan and Stokke 2000). There have also been many assumptions made in the area of 'local knowledges', with critics suggesting that such knowledges, and the communities they originate from, have often been highly romanticised (Adams et al 1994; Leach

and Fairhead 2000). Both participation and local knowledges' research and development projects have themselves been criticised for ignoring certain marginalised groups, including young people (Bourdillon 2004). Much of this critical work has only emerged in the last five to ten years, and appears only to scratch the surface of examining the terrain in which participatory, local knowledge based development projects operate. In particular, only a small amount of those contributing to this debate come from a geographical tradition, and there is arguably a need to apply a spatial approach to what is a highly geographical issue. Environmental education in Tanzania offers an interesting case study in which to begin to explore some of the important issues still to be resolved in the participatory development debate, in part because environmental conservation and development concerns sit exactly within this current negotiation between past top-down approaches to development and current participatory approaches.

Secondly (and perhaps more importantly), how the people-environment relationship is negotiated in Tanzania has a significant impact on individuals' lives throughout the country. As illustrated above in the quotes and photos, it should be apparent that how the Tanzanian state and NGOs go about dealing with environmental issues can have a considerable impact on local people's livelihoods. Equally, as has emerged from the critical debate about the place of 'local knowledges' in development, how local people's practices and knowledges interact with the environment are still, in many contexts, poorly understood. Bettering our understanding of both these processes does then have the potential to make real practical impacts on the lives of those at the forefront of development challenges, in this case, the people of Tanzania whose livelihoods still very much depend on environmental resources. Tanzania also has many parallels with other countries, not only those in Sub-Saharan Africa that have similar ecologies and face similar development challenges, but throughout the Global South many of the same questions about livelihoods and environmental management are being asked. Some suggest (e.g. Jones 2008; McFarlane 2006) that the 'West' also has much to learn from these projects, and debates about how young people and adults are educated about the environment are also highly relevant to 'Western' countries (Uzzell 1999; Bonnett and Williams 1998).

It is in this context that this research project aims to explore issues surrounding the geographies of participation, local knowledge, environmental education, and young people in both urban and rural Tanzania. I do so through exploring the outcomes of an environmental education project, run by an international NGO, which specifically embodied a participatory ethos in the delivery of its project, according to its own project literature and the staff who worked on the project (JGI 2009b). Specifically, the broad research questions are:

- How can local knowledge be re-conceptualised, and how can it be a part of judgement making in development?
 - *How are local knowledges relating to the environment reproduced and performed in communities in Tanzania, and how do these knowledges interact with those produced through environmental education projects?*
 - *Can local environmental knowledges in Tanzania inform how we conceptualise local knowledge in development?*
- Can young people be empowered through education?
 - *What role do young people have in environmental management in communities?*
 - *How do the knowledges of young people, adults, and those that come from education projects interact, and what can we learn from this about the potential for young people's empowerment?*
- What are the roles adopted by the Tanzanian state and NGOs in providing environmental education, and in the context of a participatory development paradigm which appears to prioritise 'the local'?
- How can a focus on environmental education further critical debates about participation and community in development?
 - *What role does 'participation' in local development have in the context of environmental education in Tanzania, and what can we learn from this example to further critical debates about participation in development?*
 - *How do Tanzanian communities function, how do they deal with environmental issues, and what impact might both of these have on the potential for environmental education to make positive changes?*

These broad questions run throughout the three empirical chapters of this thesis, and whilst some are answered more discretely than others, it should be clear that they are all variably entangled with the other, and throughout I attempt to keep drawing links between all of these key issues. In the survey of the literature that follows this chapter, I outline some of the significant questions within these much broader themes, and in both Chapter 2 and Chapter 3, I outline in more detail the context of this study.

1.2 Thesis outline

Chapter 2 provides a survey of the literature concerning debates around participation and local knowledge in development, and how both of these are played out through the field of education, and more specifically, environmental education in Tanzania. I first outline the history of participatory and local knowledge approaches to development theory, and provide more contemporary examples of development practice which highlights how the participation and local knowledge paradigms have been highly successful. I then go on to introduce a detailed critique of the 'participatory orthodoxy' (Green 2000), as well as a more contemporary critique of local knowledges. Throughout these critiques I highlight those areas which need to be further explored by research, which this thesis will seek to address. In the final section of this Chapter, I consider the place of both participatory and local knowledge theory and practice in the context of education development, outlining first numerous challenges, including the current lack of attention to young people in research, and the important role that education more generally might have in debates concerning the interaction of local and 'outside' knowledges. I go on to more specifically address a range of critical questions for this thesis relating to environmental education. Lastly, I attend to the current research on environmental education in Tanzania, and here I highlight the need for research on how 'environment' is defined locally, what the role of NGOs and the state should be in environmental education, and the interaction of 'conservation' knowledges with 'other' knowledges about the environment.

Chapter 3 outlines the context and methodological approach of this research. Firstly I give a contextual background to Tanzania and the three study areas which formed the case studies for this research, and provide details of the NGO project that formed the main focus of this study. I discuss the methods used in this research, and justify each in light of the qualitative/participatory approach in which this research is founded. I begin by describing the overall methodological approach, followed by each of the research methods used, including interviews with state actors, NGOs, and local people in each study area, focus groups with young people in schools, observations, and document analysis. I then proceed to elaborate on some ethical considerations, particularly issues associated with working with young people, but also more generally with regards to engaging in research in the context of the Global South.

Chapter 4 is the first empirical Chapter, in which I aim to appraise the concept of 'local knowledge' critically by exploring how local knowledges relating to environmental issues have been conceptualised through three lenses. Firstly, I focus on how the 'environment' is defined by the Tanzanian state, NGOs, and local people, in order to investigate how local knowledges of

environmental issues compare with official definitions of the 'environment'. I do this through examining how NGOs and the Tanzanian State conceptualise the environment through the material they produce relating to environmental education, as well as the discourses of state and NGO actors, and compare these to 'local discourses' of adults and young people. Through such an examination I seek to explore how different knowledge systems interact, and in particular how, within knowledge systems, there may be different and competing knowledges. This leads secondly onto a broader discussion of local knowledges relating to environmental management and conservation, using examples not only to draw out the limitations of current conceptualisations of 'local knowledge', but to realign thinking on 'local knowledge' in development. I do this through examining closely the local environmental knowledges of both adults and young people in the study communities, and consider how the current conceptual framework of 'local knowledges' may be limiting our understanding of how local knowledges are constructed and communicated. I particularly consider how local environmental knowledges exist in both time and space, how they interact with knowledges from 'outside' communities, and how knowledges and power relations become entangled. Finally, I consider the place of 'traditional knowledges' relating to the environment, which provides further analysis of the limitations of 'local' approaches to knowledge, and highlight some of the dangers of pursuing development knowledge only at the scale of 'the local'. I particularly consider issues which have previously been 'taboo' in local knowledge research (Kesby et al 2006), specifically considering the place of witchcraft and other belief systems. I also focus on how knowledge may be tied to culture and ethnic groups, again by reflecting on how certain 'traditional knowledges' are tied to particular groups in both space and time.

In Chapter 5 I examine critically the practice of environmental education programmes in Tanzania. I begin by evaluating formal environmental programmes conducted by NGOs, and consider how the learning and teaching techniques they employ impact on the environmental knowledges of young people and adults. I further examine the roles of NGOs as actors, in particular how they interact with the Tanzanian state, and what impact this relationship has on the outcomes of the projects. I go on to consider the impact that these projects have on teachers as key 'participants', and assess how NGOs work with their participants or the 'recipients' of their projects at the local level, again picking up arguments about how NGOs might make development more 'locally appropriate'. In the second part of this chapter, I take up budding debates concerning spatialising both local knowledge and participation agendas (Cornwall 2002; Kesby 2005), by considering how both formal and informal spaces of learning are constructed discursively in communities. Here I argue that a focus on the spaces in which knowledges are produced within communities can be

particularly enlightening in explaining why different social groups may hold different knowledges, and I explore what implications this might have for education development. I then move on to think about environmental education in the broader context of education development in Tanzania, and I examine some of the more 'fundamental' challenges to the formal education of young people, and what impacts this has on education programmes that run through schools. Finally, I deal with the key question of what contribution environmental education projects make to the knowledges and behaviours of young people. I highlight some of the major problems with evaluating NGO projects more generally, and again use this to question the role of NGOs in the 'alternative' development paradigm constructed through participatory and poststructuralist development discourses.

Participation has been held up as a mantra for local development by participatory and postdevelopment writers, and, whilst a substantial critique exists, in Chapter 6 I illustrate how there still remains much ground to be covered in picking apart the fundamental notions that are tied to participatory rhetoric. I initially explore how participation and inclusion operate at different scales, again dealing with the lack of attention to 'scale' in participatory theory, and particularly highlighting the regional and the national scale. I consider how a range of exclusions can operate through development projects, and what implications this might have for the participation agenda more broadly. I then explore the role that the Tanzanian state and NGOs take in developing the participation agenda in Tanzania. Specifically here I consider the motivations behind participatory, local, NGO-driven forms of development, and what forms of participation exist in environmental education projects as a result. I use this analysis to reflect on the role and position of NGOs and the state in Tanzanian society more generally, and consider what implications this has for the participatory agenda which strongly advocates for NGOs as a catalyst of local development. In the third section I move on to consider how participation, in its 'Western' form, conflicts with the cultures of responsibility, volunteerism, and participation in the Tanzanian context. Here I think specifically about how critiques of participation, which consider it to be imbued with Western values (Kothari 2001; Green 2000), are demonstrable by examining how Western ideas of participation and community compare with those of the communities involved in this research study. I examine some of the presumptions of participatory development, including those which assume a change in knowledge will lead directly to a change in behaviour along voluntaristic lines for those that participate, and in particular I will again consider how debates about spatialising participation (Cornwall 2002; Kesby 2005) may be useful. The notion of the 'community' has been central to the participatory and local knowledge paradigms, and finally in this chapter I pick apart what 'community' means in the context of

Tanzania. I explore how communities are constructed through a diversity of social relations and knowledges, which, I argue, is quite different from the concept of community regularly adopted in participatory theory. I begin to build a picture of Tanzanian communities which is quite unlike the Western, idealised notion of (particularly rural) communities, and question therefore the community as the necessary site of 'empowerment'. In particular, I draw attention to the place of young people in communities, and consider how the notion of the 'young person' is constructed and reproduced through discourses that operate at the state, NGO, and local scale. In light of this critical appraisal of Tanzanian communities, I examine the kind of environmental actions that do exist at the community level. I illustrate here that actions in the environment conducted by locals do not always 'fit' into Western ideals about community development, yet do more accurately reflect how individuals approach environmental issues in Tanzania. I reflect on what implication this has for the participatory agenda, and consider again the potential role of the state and NGOs in light of this re-conceptualisation of community.

Finally, in chapter 7, I summarise the critical appraisal that this thesis applies to environmental education projects in Tanzania, and consider the likely implications this has for local knowledge, participatory and empowerment agendas. I explore the wider implications of my key findings for the development agenda. I discuss the role of local knowledge in development in light of a critical approach to its application to development issues, and in particular consider practical ways through which a range of knowledges can 'meet' in development. I look at the role of education in empowering young people, specifically focusing on the positive and practical steps that might be taken in light of the findings of this research. The role of NGOs and the state in local development is an important theme for this thesis, and I bring together some of these issues to consider the role of both these actors at present in development, in particular questioning the role that NGOs should have in the future of both locally and nationally-orientated development, and what implications this has more broadly for international funding and national governance of development. Finally, I use Tanzanian conceptualisations of participation and community to question the ethics of development. I consider how such conceptualisation challenge fundamentally the way that participatory development should be done, and I outline both the practical and theoretical implications such a challenge brings to development.

Chapter 2

Participation, local knowledge, and environmental education

In this chapter I review the history of participation and local knowledge in development, and critically examining more contemporary literature and research studies. I begin by illustrating how the lineage of theories and practices associated with participation and local knowledge in development are important for understanding the critical questions which both face in contemporary development practice. I use examples from current research to illustrate instances where the execution of these paradigms of local development have been successful, but go on to demonstrate how contemporary research has produced a detailed critique of participation in development, which provides the setting for the research questions addressed in this study. I explore these critiques of participation and local knowledge in development within the context of environmental education, firstly by focusing on how education development has been shaped by participation and local knowledge debates, and I then secondly consider the impacts of these theories and practices on environmental education in Tanzania. I draw attention specifically to the current lack of attention to young people in these fields of research, as well as identifying specific challenges faced by Tanzania in relation to education development. Finally, I revisit the aims of this thesis in the light of the literature, outlining the critical questions raised in this review which will be considered in the empirical chapters.

2.1 The history of participatory development

Participatory development strategies come from a lineage of development thinking and practice, and are, in part, defined against previous development strategies. Interest in participatory development largely began during the 1990s, but its current popularity is part of a wider reaction to ‘top-down’ development strategies which began during the 1960s. At this time there emerged a recognition that centrally-driven, top-down development practices had, on the whole, failed significantly to deliver development in many contexts, and especially so in Africa (Binns et al 1997).

The ‘top-down’ strategies that participatory development arguably reacts against began during the ‘development age’ (Binns 2002), which can be dated back to the post-World War Two reconstruction of Europe², heralded in by US President Truman who described development as

² Although arguably the pattern of current global development began much earlier, and it is only the current ‘modernist’ form of development which began in the post-World War Two era. Wallerstein (1973)

the transfer of capital, knowledge and technology to allow economic growth (Dodds 2002), believing that welfare improvements would follow (Elliot 2002). These ideas were derived from classical economics (Potter et al 2003), which assumed a unilinear path to development. This neoclassical paradigm dominated development thinking for three decades (Binns 2002), set partly by the US geopolitical agenda (McKinnon 2006). Others have recognised the roots of modern development in the European enlightenment (Power 2002), where social reform and temporarily 'linear' forms of progress became a concern. However, this development paradigm began to break down, as during the late 1970s and 1980s a series of 'reversals' in development became apparent, for example, decreases in school enrolment throughout Africa (Elliot 2002), and the recognition that most Africans were no better off in real terms than in the 1960s (Sharp and Briggs 2006; O'Connor 2002). It is from this point that development thinking differentiates into a range of both theoretical and practical terrains (Potter 2002), all of which have influenced the current status of participatory development.

The first of these was a radical approach in reaction to the modernist 'development'. Dependency Theory was highly critical of the capitalist world economy (Martin 2000), and structuralist thinkers highlighted how the development of core countries was dependent on the underdevelopment of those on the periphery (Clarke 2002; Gowan 2004). Andre Gunder Frank "maintained that development and underdevelopment are opposite side of the same coin" (Potter et al 2003, p109), and that incorporation into global capitalism was part of "the development of underdevelopment" (Wallerstein 1974, p392). Dependency theory understood that inequalities are permanent and increasing (Andreasson 2001; Wallerstein 2000), and that some regions may be even falling out of the world economy (Agnew 2001). However, this radical development thinking was criticised for being methodologically vague and economic, much like previous modernist theories, whilst also ignoring questions of culture and individual agency (Kapoor 2002a).

Postcolonial studies shares with dependency a critique of classical development. However, postcolonial writing focuses on deconstruction which challenges constructions of the Third World, grounding work in the French post-structuralists, and in literary and cultural studies (Sparke 1994). Geography discovered postcolonialism in the 1990s (Gilmartin and Berg 2007), critiquing 19th Century British colonialism, and contemporary studies in the Third World (McGregor 2007;

argues that the structural roles of states within the world-economy began during developments in Europe during the 16th Century, in which European countries became provisionally locked into particular roles. Further developments in the 19th and 20th Centuries absorbed African countries into the capitalist world-economy, and thus establishing the current pattern of global inequality.

McKinnon 2006). However, postcolonial studies often offer little practical change; Postcolonialism has indulged “arm chair decolonisers” (Goss 1996, p248), or has been part of an intellectual fad (McEwan 2002), only leading to change in discursive practice (Mohan and Stokke 2000). Importantly for more recent developments in participatory thinking, postcolonial critics have challenged power relations bound up in knowledge (Radcliff 1994), claiming the imposition of Western knowledges has led to the failure of development (Escobar 1995), and recognising that knowledge is limited and partial (Sidaway 2002). There should, postcolonial writers would argue, be a focus on valuing local knowledges (Jones 2000), and recognition of inter-subjectivity (Goss 1996) and the voices of the marginalised (Sylvester 1999).

Despite these two radical approaches to development, at the same time, development policy remained dominated by neoliberal thinking: pro-market politics which have prevailed since the 1980s (Potter et al 2003; Kydd and Dorward 2001). Oil price rises in the 1970s perpetuated recession, which triggered ongoing debt crisis in Third World countries (Simon 2002). Abandoning post-war developmentalism (Martin 2000), deregulation and promotion of free trade became the norm, expanding to the global South through aid policies of international organisations. Structural Adjustment Programmes (SAPs) cut government expenditure and promoted trade and exports. The impacts on economies were typically harsh, although blame was often placed on domestic problems (Hettne 2002). Heavy criticism levelled at neoliberal regimes has led to a change in discourse, if not practice. Policies now contain ‘extra economic’ concerns, allowing some expansion of the state (Harrison 2005), funding channelled through Non-Governmental Organisations (NGOs), and emphasising ‘good governance’ (Hart 2001). However, much of the decision making power in funding remains with international institutions, which shows little deviation from neoliberal policies.

With a number of ‘reversals’ taking place in development indicators during the 1980s and 1990s (Elliot 2002), and the prevailing neoliberal order appearing to lack serious challenge from other, more theoretical approaches to development outlined thus far, development both practically and theoretically appeared to be at an ‘impasse’ (Schuurman 2002; Sharp and Briggs 2006). To some extent, in reaction to this impasse, a poststructuralist critique of development emerged which sought to challenge the very fundamental notion of ‘development’. Rather than displacing earlier approaches which challenged development thinking (for example, dependency or postcolonial approaches), poststructuralist theories of development have attempted to expose their reigning assumptions (Agrawal 1996). So, for example, both Escobar (1995) in *Encountering Development*, and Ferguson (1994) in *The Anti-Politics Machine*, argued that development itself must be

deconstructed, as practices served post-colonial ambitions (Dossa 2007), and that the current development paradigm should be dismantled (including, for example, ideas such as ‘technological progress’), in favour of ‘post-development alternatives’ (Agrawal 1996; Blaikie 2000). They argue that post-development futures should be context-specific (Hettne 2002), and introduce plurality and hybridity so that third world ‘others’ are empowered (Potter et al 2003). But, these ‘alternative futures’ were themselves quickly critiqued, as few suggestions are tendered as to how postmodern development might be tangibly realised (Blaikie 2000), and vague statements on ‘alternatives’ and ‘hybridity’ are unlikely to reach those who hold power. Whilst the deconstruction of development is, and remains, a powerful critique, its “methodological and practical nihilism” (Diawara 2000, p365) does little for the developing world.

Alongside these other theoretical turns in development, some development thinkers began to focus on internal and material factors rather than on more theoretical deconstructions of the development paradigm. By taking into account that development did not necessarily mean economic growth (Potter et al 2003), and with the disillusionment that ‘top-down’ development policies were not working, they sought to tackle the material aspects of development ‘on the ground’. The Basic Needs approach of the 1960s and 70s (Elliot 2002) focused on rural areas and employment, inspired in part by socialist principles employed in Tanzania’s ujamaa project (Parnwell 2002), and later, ‘bottom-up’ development advocated for indigenous resources, appropriate technologies, sustainable and social development (Thirwall 2002).

Participatory development practices came to prominence in the 1990s, although ‘bottom-up’, poststructuralist, and postcolonial approaches have contributed much to the methods and theories. Participatory approaches were synthesised and in part popularised by the work of Robert Chambers (1994a, b, and c) concerning methods of research to inform development through Participatory Rural Appraisal (PRA). This evolved from a range of methodological approaches which came into practice in Third World settings (Motteux et al 1999). By incorporating methodologies to involve local people, PRA seeks out what matters to communities (White 2002), implying that ‘local knowledge’ may hold the solutions to local development. Much of the focus of early PRA was on methods of participatory research for use in development (Potter et al 2003), and Chambers also emphasises the importance of the behaviour and attitudes of outsiders (Chambers 1994a), who should enact reversals of learning, be empowering rather than extractive, and for facilitators to “hand over the stick” to local people (Chambers 1994b, p1255). Such methodologies, it was argued, can be highly flexible, and can be developed in situ (Motteux et al 1999). PRA was argued to be largely experiential; theory is induced from practice, and

diversity is sought rather than consensus (Chambers 1997; Mohan 2002). The methods of PRA quickly became encompassed within the much broader concept of 'participatory development', where the same participatory techniques which Chambers argued for research and development could be used as a guiding force for development projects, whereby local people could inform, steer, manage, and ultimately control all aspects of locally-driven development initiatives, with 'outsiders' adopting a facilitating role, rather than a managerial one. Much of what is prized in participatory development embodies postmodernist and postcolonial thinking, values relativism and multiple realities (Chambers 1994c), and demands methodologies of interaction that disrupt traditional notions of the researcher and research (Goebel 1998). By questioning the authority of the West, in terms of both Western development experts, and knowledges and solutions which are derived from the 'West', participatory development adopts many of the epistemological challenges highlighted by postcolonial studies (Mohan 2001). PRA practice and participatory approaches to development also evoke many post-modern epistemological challenges: knowledge is situated, partial, biased, researchers should be reflexive, and power is implicit in all acts (Hoggart et al 2002; McGregor 2007).

Participatory research and development quickly worked their way into development practice during the 1990s, such that "the discourse of participatory development has come to constitute the new orthodoxy in development circles, from NGOs to the World Bank" (Green 2000, p67). Over the past two decades, participatory development has become part of a wider shift in public sector management thinking towards decentralisation and greater local involvement, and in the development context this has meant that 'participatory solutions' have percolated through the policies of both local and national NGOs, towards major donors, national governments, and international organisations (Brett 2003). The arguments for a 'participatory' approach to development are manifold, and encompass ethical and ideological concerns for empowerment, as well as material and economic benefits for those who are the poorest and most marginal.

The ideological arguments for participatory development largely revolve around the concept of 'empowerment', in particular, empowering those who are the poor, marginal, and often 'recipients' of development. Proponents of participatory development argue that this can be achieved through a number of tactics, which may involve taking the knowledge of local people seriously to understand better local needs and aspirations (Binns et al 1997), and involving 'users' in decision making, monitoring, and evaluation of projects (Brett 2003). More progressively, participatory techniques may develop the skills and capacities of participants, such that they can take full control of development initiatives (Kesby 2000b), for example through involving

participants in problem definition, finding solutions, and taking action (Pain 2004). This 'empowering' approach has a number of benefits to those who are the 'beneficiaries' of development beyond improving their lives materially, including establishing more reciprocal power relations between the 'expert' and the 'recipient', such that the marginalised are given a voice and feel 'empowered' to act for their own development (Kesby 2005). Participatory techniques may then build and strengthen the capacity of local people, as well as increase their understanding of local problems (Mayoux and Chambers 2005). A number of studies have illustrated the kind of outcomes aspired to by the discourse of participatory theory. For example, Motteux et al (1999) describe how PRA methods employed in South Africa stimulated community actions, such as environmental conservation projects, which were evidence of individuals and the community feeling empowered to take forward their own development. Kesby (2000a) has illustrated how participatory community action-research for HIV/AIDS awareness in Zimbabwe can inspire individuals to feel empowered to tackle high risk behaviour in their community, particularly for women who felt marginalised compared to their male counterparts. Sanderson and Kindon (2004) demonstrate how participation at the level of the organisation (rather than the local, rural level) between New Zealand and Indian NGOs helped generate new knowledge and organisational practices which were more 'participatory'. In line with both poststructuralist and postcolonial theory, participatory development aims at creating more ethical development, not only for those who are the recipients, but also for the organisational structure of development itself. By casting the researcher/practitioner/organisation as a learner/facilitator in the development process, participation reverses the traditional hierarchies of development (Chambers 1994a, b, c), which in itself should build a more ethical development establishment. Reversals of learning can even be scaled up to the national, institutional level, for example, and Jones (2000) highlights how participatory techniques can inspire learning between the UK and India, whereby 'First World' NGOs working with young people in the UK can learn from the practices of NGOs in India working on similar issues. This kind of 'mutual dialogue' helps reverse the traditional dichotomies of development, leading to collaborative, non-hierarchical approaches (Pain 2004), that ultimately will help empower the most marginalised.

Participatory development has also been shown to produce material and economic benefits for local people. Timsina (2003) illustrates how forest user groups in Nepal have been more efficient in equitably distributing forest natural resources than state level governance, whilst community organisation in forestry has been the catalyst for cooperatives run by women to generate income, and some forest user groups have been successful in bringing in marginal actors. Timsina (2003) further argues that community organisations of this kind produce a more equitable and efficient

form of natural resource management. Naur (2001b) has demonstrated that the use of traditional healers in Tanzania to treat the symptoms of HIV/AIDS has been successful, not only in terms of treating people locally, but also in empowering communities to deal with the social consequences of the pandemic. Easton (1999) has shown in the context of Ghana how communities have been able to initiate and drive their own development in local education, which has provided schooling in communities which previously had only very limited access to education. These 'success stories' appear to back up the claims of participatory proponents that local level decision making is more likely to produce successful local development, as local people have better access to information 'on the ground', and generally have lower organisational cost (Agrawal and Gupta 2005), thus development based on local people's knowledge is more efficient, and more locally sustainable (Kothari 2001). Where local participation is a legitimate response to state failure, or a lack of provision from the state, participatory development strategies appear to reduce poverty and exclusion through empowering local people (Brett 2003).

Participatory research has also continued to illustrate its value. Through utilising participatory research techniques, those who are normally 'subordinate' have an outlet through which to express their realities, for example, as a result of participatory methods of research, the priorities of women have been highlighted as quite different from those of men in several contexts (Chambers 1997). Participatory research techniques can further be useful for discussing sensitive topics with local people, such as violence and power relations (Mayoux and Chambers 2005), and HIV/AIDS (Kesby 2000a), as well as actively challenging social exclusion (Pain 2004). One of the key underlying assumptions of participatory research methods, from these examples, is that they aim to initiate action at the local level, as well as understand local needs, and, as this is the case, the values, attitudes and behaviours of researchers and other development professionals become of central importance, as their ethics and actions may inform action amongst communities (Cornwall and Pratt 2003). There is with participatory research still an economy of efficiency associated with participatory methods, as Temu and Due (2000) argue, participatory methods of research are as equally reliable and valid as more traditional, quantitative/qualitative social research, yet may indeed be quicker and more efficient. Participatory techniques start from the idea that 'the poor' have a better knowledge of local problems than the outside 'expert', and that research should be a process of mutual learning and interaction, rather than data extraction (Green 2000). The centrality of 'local knowledges' to participatory development is a substantial topic in itself, and is dealt with in more detail in section 2.3, but the importance of this for participatory development is that, through being driven by 'local knowledges', the research process is 'reversed', presenting marginal people with a powerful means to express what they know (Kesby 2000a). The role of the

researcher, or 'expert', is, according to Kesby (2000b) to become an 'activist', facilitating participants to take greater control. Examples from several contexts appear to confirm that participatory research has this empowering potential. Harpham et al (2005) illustrate that participatory techniques are particularly useful for working with children and young people, whilst Kapoor (2004) illustrates how participatory methods can be successfully used for evaluating the governance of NGO projects.

2.2 Critiques of participation

As participatory forms of development have emerged as a 'new orthodoxy' in development thinking (Green 2000), so a substantial critique has surfaced, which focuses on both the evidence for the success of 'participation' for development, but also examines some of the more theoretical and ethical/moral issues associated with participation.

2.2.1 The costs of participation

In material terms, participatory projects have been shown to be costly, as well as beneficial, to those who participate (Mohan 2002). This is particularly true in terms of the costs to a participant's time. Participating in research and development activities takes time, and may not be directly paid or produce direct livelihood benefits to compensate (Sanderson and Kindon 2004), whilst they may also disrupt people's daily lives (Brett 2003). Even though participants may 'take part', it cannot be assumed that they gain any material, livelihood benefits from participatory research, particularly in the short term (Mayoux and Chambers 2005; Nelson and Agrawal 2008). This is especially an issue when considering those who are most marginalised in a community, as it is likely that it is these people who can least afford to spend the time off work or from their daily activities, but it is also the poorest who are those which participatory researchers or development practitioners most want, in theory, to participate (Easton et al 2000; Smith 2008). This has gender implications, for example, as women may have significantly more commitments than men in communities (Kapoor 2002b), and therefore participatory practices may only exacerbate the marginalized nature of particular groups. Blomley et al (2008) demonstrate how participatory initiatives in forestry in Tanzania are highly costly, as individuals are 'participating' in a state scheme to help conserve forest resources, yet see few benefits in the short term, and often see their own access to these resources diminish. Participatory projects can also raise the expectations of those who participate in terms of perceived benefits and actions, which can often not be met by the actual outcomes of the projects (Mayoux and Chambers 2005; Brett 2003).

Participatory projects may also allow and encourage participants to reveal information in a public arena which they otherwise might not do, which could potentially be socially damaging to them (Mayoux and Chambers 2005). Those who advocate for participatory development have yet to fully resolve the issue that, if participation is to be fair and credible, communities have to invest much time and energy, yet may not receive for their energies adequate material incentives in the short term (Kapoor 2002b). Whilst this focus on 'material' benefits may overlook the 'noneconomic' incentives of participatory approaches, for example, empowerment for individuals and communities, and the potential for preservation of culture (which may, to some, be more valuable than direct economic benefits (Schroeder 1999)), it still remains highly problematic that material concerns remain overlooked.

Discourses of participatory development (and, indeed, those of poststructuralist writers) have been further criticised for neglecting to consider the capacity of their participants to 'participate'. Brett (2003) highlights that, quite plainly, it is often the poorest people who have the fewest skills, and the least capacity in terms of time and finances, which in itself raises questions about how appropriate participatory development initiatives are for poverty focused projects. There are many examples from development projects: Anderson et al (2003) illustrate how in Afghanistan local people may not necessarily come up with 'local alternatives', and may be highly reliant on external interventions. Green (2000) demonstrates, in the context of Tanzania, that local people may not act together as a 'community' to tackle important development issues, and instead focus on their individual needs. Anello (2003) finds that local leadership structures may be highly resistant to 'participatory' modes of cooperation, and that outside facilitators are needed if local people are to be trained to work along more 'participatory' lines. The focus of participatory development on 'the local' as the site of development itself neglects that local people may not have the capacity for particular activities which should, arguably, be developed at higher levels of social organisation. So, for example, Anello (2003) argues that certain elements of healthcare cannot be handled by local capacity alone, whilst Green (2000) finds that local people in Tanzania are highly aware of their limited local capacity, and may place significant authority in the state to deal with issues that exist beyond the local. This evidence makes the investment that participatory and postdevelopment theories place in the capacity of local people, or 'the grassroots', as the source of development initiatives, to be highly problematic (Sylvester 1999). Local people may simply not want to participate (Twyman 2000), or may not have solutions or capacities that are beyond the realms of their current means, and may, as a consequence, not be able to see the same 'alternatives' as participatory and postdevelopment theorists seek. Although Green (2000), and Mercer (2000) point towards issues of 'responsibility', in terms of who assumes

responsibility for development initiatives, and who local people perceive responsibility to rest with, and, indeed, who, in the development nexus, is best equipped to deal with particular development issues at particular scales, these areas are seriously under-researched and, at present, poorly understood.

2.2.2 The meaning of participation

Although participatory development is accompanied by a positive outlook on community development and local capacity, the rhetoric of participatory practice can be easily employed, and may 'disguise' practices which do not necessarily fit into the ethics which supposedly define the participatory movement (Mohan 2002; Goebel 1998). This is partly because the 'buzzwords' of participation, empowerment, community, and the local, have multiple and competing meanings which can very easily be adopted and employed by a range of agents (Brock 2003; Brett 2003; Mercer 2002; Mayo 2001), such that participation "has taken on a diversity of forms and meanings" (Cornwall and Pratt 2003, p1). This has left the term 'participation' as both politically ambivalent and vague (Cornwall and Brock 2005), and whilst participation has become popular and institutionalised (Mercer 2002), this has only served to increase the diversity of practices and policies associated with it. For example, at the level of the nation state, participatory rhetoric has often been tagged onto projects which seek to decentralise state services, when such strategies are being employed for reasons of economy and state cutbacks, rather than for the moral reasons associated with the participatory movement (Agrawal and Gupta 2005; Asthana 2003). In participatory research for development, 'participants' may still only be involved in generating data. Although researchers may be using participatory-like methods, data are still taken away and used by scholars, researchers, and development professionals with little subsequent involvement from communities (Alumasa 2003), such that it is eventually only their 'knowledge' which is included (Anderson et al 2003).

In some development contexts, participatory approaches have been seen as 'fashionable add-ons' to more traditional techniques, allowing projects to be given the 'tag' of participation without actually providing real participatory insights (Mayoux and Chambers 2005). For example, projects may still largely be determined and run by external experts, rather than fully engage with the community, and 'misuse' of participatory research (whether in theory or in practice) can obscure social complexity, and may validate dominant views at a variety of scales (Goebel 1998). Outcomes and evidence from participatory projects can similarly be used to support a range of worldviews, some of which apparently conflict with the 'radical', 'liberal', or 'alternative' origins of

participatory research practices (Brett 2003). Indeed, it has been illustrated that participation fits well with current neoliberal forms of governance, which associate participation with economic decentralisation, small states, and open market philosophies (Brett 2003). From a neoliberal political standpoint, participatory principles are useful, as they replace previously class-conscious, emancipatory struggles (as, in part, dependency perspectives advocated for, albeit on a more 'global' scale), with a non-adversarial community development theory. Here participation is seen, and used as, not a method to resist, but instead assumes social homogeneity and may even be used as a method to 'co-opt' local populations (Blomley et al 1998).

There have been some attempts to categorise or understand the different 'types' of participation. For example, Donnell-Roark (1998) suggest four types, ranging from 'mobilisation' at the 'bottom' end of the scale, where projects are designed and controlled by outsiders, whilst locals provide the subjects of research, to 'empowerment' types at the 'top' of the scale, where communities and actors/participants are in full control of development projects. The 'bottom' end of this scale, where communities are simply 'mobilised' to conduct and often provide the labour for projects, with very little say in their design or direction, is a common criticism of where participatory practices have been adopted by a host of international and national agencies (Brett 2003). A more simple distinction suggested by Brett (2003) is that of 'strong' versus 'weak' participation, where 'strong' participation is both a means and an end, and fits very much with the 'empowerment' type cited above, whilst 'weak' participation might also be termed 'shallow' participation, where participatory methods are simply used to extract information from communities in a rapid way (i.e. a typical academic research project) (Kesby 2000b; Brett 2003). More complex models of participation, such as Arnsteins 'ladder of participation', often arrive at similar conclusions, even though they may have more stages in between these 'strong' and 'weak' ends of the spectrum, they represent very similar concepts (Mayo 2001), and again indicate that most forms of participatory research fall 'somewhere in between' the two extremes. Brett (2003) argues that, if we accept that communities have limited capacities, it makes no sense to think in terms of 'maximum participation', as increased participation may entail costs as well as benefits. Such thinking makes the question of 'what kind of participation?' more complex than early participatory advocates (e.g. Chambers 1994a, b, c; Binns et al 1997) initially campaigned for. Kapoor (2004) highlights that it is important to ask 'how much, and what type of participation' is best? Whilst this question is clearly highly context dependent, and potentially complex, it is one which still needs much analysis in the context of participatory development.

2.2.3 Power, empowerment, and community

In early versions of participatory research practice (e.g. Chambers 1994a), 'communities' were largely treated as homogeneous groups, often conceptualised as 'natural' with 'desirable values' (Cleaver 1999). As a result, development and research projects which were 'participatory' in nature tended to over-simplify power relationships within communities (Cleaver 1999; Guijt and Shah 1998), often assuming that they were 'harmonious' (Goebel 1998), or, as Green (2000, p73) puts it, the community is "imagined as a homogeneous mass of the poor and very poor, with an inherent tendency towards collective action". Poststructuralist thinkers were similarly guilty of essentialising communities in this way. Despite their attention to power relationships in development, poststructuralists often similarly placed their faith in the 'local' as a discrete place, with a homogenous community, capable of taking collective action (Hart 2001). Both postdevelopment and participatory development discourses have tended to posit the local, cohesive community as the solution to hegemonic development paradigms, and in the process of so doing, have highly romanticised how local communities function (Jakimow 2008; Blaikie 2000).

Several studies have now shown that communities are made up of competing individuals interwoven with local power dynamics, which often make participatory research and participatory practice far from inclusive (Mohan 2002; Desai 2002), and sometimes conflictual. Communities are generally not homogeneous or harmonious, and may be split in several dimensions (Mohan and Stokke 2000; Cleaver 1999). Agrawal and Gupta (2005) illustrate how rural communities in Nepal are often highly differentiated and stratified in terms of power, income, and social status, including strong caste distinctions, whilst Sahu (2008) illustrates how heterogeneous class/caste distinctions in India have meant that local irrigation schemes have often failed to deliver to the poorest, and increased local conflict. Gender relations can also affect local power dynamics (Sharp et al 2003). Goebel (1998) illustrates how, in Zimbabwe, men and women live in very different 'resource worlds', and that women's access to certain natural resources is very much mediated through their relationship with men. How both women and men use resources is then itself embedded within unequal power relations at the local level. Twyman (2000) demonstrates through research in Botswana that, at the community level, there can be different ethnic groups and local sub-groups who are divided by cultural differences as well as language, and may have complex and conflicting resource relations within the same area. Community values and ethics may also come into conflict with certain development goals. For example, Aggarawal and Rous (2006) show that prejudice towards people with HIV/AIDS in communities in India can enhance the spread of the disease. Clearly then wealth, status, knowledge, social positions, ethics, and a

host of other characteristics define the makeup of any community or group of people, which to some degree challenges any notion of an actual 'community' as conceived by participatory development theory, where it was assumed that some kind of community 'consensus' could be reached through participation (Chambers 1994a). The idea of community has further come to imply that those who are located within a certain geographical locality are assumed to be a part of the 'community', when in fact the boundaries and the people that inhabit a particular locality may be fluid and dynamic. Communities, family members, and associations will be spread among networks beyond 'the local', whilst 'outsiders' to communities may exist within the same locality, and be equally important for the local development context (Smith 2008). Often in the context of environmental resource management, by assuming that local knowledges and traditions could be the answer to local development problems, participatory theory further made the assumption that such knowledges had existed, unchanging, and in 'harmony' with the local environment, for a lengthy period of time (Leach and Fairhead 2000). More recent studies have shown, however, that local traditions may themselves cause conflict amongst local people, as Chambers (2008) illustrates with reference to fishing practices in the Cook Islands, even though they may have a significant historical basis within their communities. The makeup of local communities, both in terms of populations, knowledges and power structures can be dynamic and fluid over time. These issues raise a host of questions for participatory development initiatives, about how communities should be conceptualised, and how a more fluid, dynamic, and complex 'community' can be married with ideas about how development can be 'done' at the local scale.

Participatory development practice has further been critiqued for enhancing inequality at the local level through, in some cases, enabling those who are more powerful, rather than assisting those who are most marginalised. The public nature of participatory projects has been criticised for not fully addressing these issues of local power dynamics (Kapoor 2002b). As much participatory development and research is conducted in a public forum, with groups of people from a 'community', it can be argued that local relations of power will simply be reproduced through the participatory process, disguising the diversity of voices within any group. Potential women participants may feel alienated from participatory research when the methods echo those of 'male forms of participation', for example at village meetings (Sanderson and Kindon 2004). Agrawal and Gupta (2005) have demonstrated how, when power over natural resources has been decentralised to the local level in Nepal, it is wealthier, upper class castes who tend to appropriate greater levels of benefit, as less well-off households often cannot afford (either financially, or in terms of personal time) to participate. Myers (2002) also illustrates, with a case study from Zanzibar, how participatory initiatives may cause greater conflict because they only

serve to highlight how certain communities lacked social cohesion in the first place. Participatory structures set up by external agents may also come into conflict with existing local power structures (Myers 2002; Goebel 1998). There are many cases of where participatory projects have been dominated by elite, powerful, and better-off individuals or groups, therefore either enhancing existing power relations and wealth structures, or creating new ones (Anello 2003; Blomley 2008; Brett 2003; Mercer 2002; Smith 2008). Mercer (2002, p104) understands local participation as not an empowering, equitable, or inclusive activity at the local level, but instead “participation is more usefully understood as an individual strategy for gaining access to social status and material resources”. The pattern of who participates may be even more complex than this, as often both the very poor and very rich do not participate, whilst it is those of higher to middle wealth who do (Mercer 2002; Smith 2008). Cornwall (2002) highlights how few studies have focused on exactly how ‘participatory spaces’ function, in terms of who is invited to participate, who is excluded, and what exactly happens ‘within’ the space of participation in terms of power dynamics between participants and others who are part of the ‘community’, but may not be part of the participatory process. Unfortunately, it is often the case that participatory research does not problematise the notion of community, or who participates, such that issues of power and control in local groups are not overtly dealt with (Guijt and Shah 1998; Cleaver 1999).

Some critics have pointed to the uncertain theoretical and conceptual underpinnings of participatory development as the problem behind some of these practical issues of power and empowerment (Kapoor 2002b). Robert Chambers (1994c) asserted that much of PRA emerged from empirical experience, rather than from theory, and that what theory accompanied PRA was deduced from practice. However, Kapoor (2002b) suggests that this attitude towards theoretical insights in participatory development has led to the whole enterprise being insufficiently theorised and politicised, thus leading to the various situations described above, in which power relations at the local level are not adequately dealt with. Kapoor argues that participatory development has no ‘legitimizing force’ (p105), or systematic rules, to govern participatory actions. This means that there is no mechanism to prevent the powerful from assuming a dominant position, for preventing the elite from capturing benefits, and maintaining their position over already marginalised groups. There is the underlying assumption in participatory development that the powerful will informally and voluntarily cede their positions of authority in favour of collective benefit, placing onus on the ‘facilitator’ to mediate this (Kapoor 2002b). But, as has been illustrated above, there is no guarantee that they will do this, nor that ‘local’ people will necessarily operate democratically or inclusively (Jakimow 2008). Participation is assumed to be empowering, but it is unclear who is to be empowered, and how this can be achieved in

communities with diverse politics and power dynamics (Clever 1999), and, as Desai (2002) points out, participation cannot be implemented in a vacuum, as all communities have an existing local structure of political discourse (Green 2000), yet proponents of participatory methods do not provide guidelines as to how these might be negotiated (Brett 2003). Kothari (2001) points out how power operating through communities may be even more complex. For example, individuals may adopt discursive and embodied articulations of power which have become readily accepted as cultural norms, allowing local power relations and inequalities to become normative, and thus they remain firstly very difficult to 'detect', but also, secondly, they may remain unchallenged. Kothari argues that, if we accept (as poststructuralists do), that knowledge is produced out of power relations, and, if participatory practitioners accept 'local knowledge' as some kind of 'objective truth', they risk reifying the local inequalities which have produced these knowledges. Radcliffe (1994) also argues a similar point, that communication is not neutral, and that it is instead born out of social relations of power, and thus knowledges expressed will reflect these. By privileging the public, and the 'community' as the space of development, without providing a critical method through which to cross-examine community power relations, participatory development may simply re-enforce the current social relations of power at the community level. This view of participation and power is, however, according to Kesby (2005), overly negative, and leaves, just as poststructuralist arguments do, a large vacuum in the development agenda of how to address these issues in practice. Kapoor, Kothari and others may have identified the lack of legitimising force in participatory development, but what should fill this gap? And if participation is a form of power, what should, if anything, 'replace' this? Kesby (2005) points out that whilst participation does engender power (like any other social process), this does not mean that it should be outright 'resisted', and he points out that, if power is unavoidable, then perhaps ways need to be found of 'working with', as well as challenging power relations. Poststructuralism itself offers some hope here, as it recognises that power is everywhere, and all actors hold a form of power (Kesby 2007), and the outcomes of these and participatory processes can be very complex, and not as simple as elites always 'capturing' benefits. Equally, whilst participation may not resolve inequalities at the local level, neither is it the most oppressive form of governance. For example, in the case of HIV/AIDS education, it may be more important to help local people resist transmission of HIV than to urge them to resist the power effects of participatory HIV projects (Kesby 2005). This still opens up a range of questions for participatory development, as to how we can identify the power that marginal actors hold, and to what extent power relationships at the local level may be 'challenged' by outside actors.

2.2.4 Western values

Further criticism of participatory development has been aimed at its core values, accusing them of being embedded within Western values, ethics, and morals. This in itself seems almost paradoxical, as participatory development is founded on listening to the voices and knowledges of the marginalised. Brett (2003) and Cornwall and Pratt (2003) point out that, firstly, participatory projects are rarely demanded 'from below', but are instead often delivered from 'outside', and again often demand that some form of organisation be set up which is different from the current organisations in action within a particular community. These 'participatory organisations', for example, 'user groups' for particular natural resources, often embody Western ideals of how such organisations should operate, for instance, using democratic, 'equitable' negotiation. Such organisations are frequently set up even when there are pre-existing systems in communities (Schroeder 1999). Cornwall (2002) highlights how this makes some participatory projects not too dissimilar to colonial administrations, where local decentralised government was not very different to the type argued for by participatory theorists today, and, as colonial history has shown, there is nothing inherently democratic about decentralised governance of this kind. Cornwall (2002) further points out that those colonial administrations, like some contemporary governments, have used community-based institutions to shunt provisioning burdens onto local people, as Blomley et al (2008) has also shown in the case of Participatory Forest Management in Tanzania³. Such participatory development projects may serve the purposes of those 'above', imposing particular types on institutions, rather than forming institutions which are compatible or congruent with local culture.

Secondly, participatory projects may embody 'Western' values, and in so doing impose them onto local people, or may have agendas which are predetermined by 'Western' notions of what makes 'good' development. Easton et al (2000) illustrate how, whilst practices of 'indigenous curricula' in schooling, which involves locally-determined school curriculum content, appear superficially to be 'good' due to their attention to local context, such concepts are heavily tainted from colonial

³Although I would argue that direct comparisons with colonial institutions would be going too far, Cornwall's (2002) point is that the principles of decentralised governance in some colonial administrations are not dissimilar from the decentralisation apparatus argued for by participatory advocates, and that, in both cases, decentralisation was and can be used to impose the will of the governing regime, rather than promote genuine local decision-making (Cornwall 2002; Twyman 2000). Cornwall suggests too that colonial anthropologists used techniques similar to 'participatory methods' to render native populations 'legible' to colonial regimes, just as some critics of participatory development suggest that participatory methods only serve to make local populations legible to Western academics (Mohan 2001). The argument is then that just because 'local' institutions are a form of decentralised governance does not inherently make them democratic or locally empowering, as previous colonial decentralised administrations have demonstrated (Cornwall 2002).

times when it was common to distinguish between 'native' education and that of the urban elite. Both Green (2000) and Mercer (2002) show that, in the context of Tanzania, many development programmes of a participatory ilk often rest on assumptions about what 'development' is, for example, bettering local democracy, and focusing on local empowerment, which may contradict the development goals of local people. Green (2000) finds that in southern Tanzania, ideals of personal development include a range of lifestyle aspirations, some of which are material, such as individually building a good house, others focusing on having a good education and good access to healthcare. However, the emphasis is on the 'personal' and 'individual', rather than the collective or community. Green (2000) argues that this is not unique to the area of study, and the work of Mercer (2002) in northern Tanzania, and Sylvester (1999) in Zimbabwe, appear to confirm this, suggesting that the development discourse of people in these areas again fits into this paradigm of personal material development, rather than community empowerment. Kesby (2005) suggests that, as well as the ideological goals, the methods synonymous with participatory research for development also embody Western ways of knowing. Using diagrams, group discussions and a 'relaxed perspective' are all laden with Western values and priorities of what should be 'known', and the practices adopted tend powerfully to govern the possibilities for behaviour and action. Community members may also resist the 'values' associated with participatory practice, or find 'western' visions of empowerment incompatible with their current local culture and situation (Briggs et al 2003; Sharp et al 2003). For example, participatory research that has focused on female education (both in general school education and specific HIV/AIDS education) has encountered resistance from men and women (Intili and Kissam 2006; Kesby 2007). The evidence from these sources appears quite seriously to undermine the ideology of participatory development. Whose ethics are 'good' or 'bad' is largely beside the point, what is important is that, contrary to participatory claims of listening to local people, in fact there appears to be evidence to suggest that 'participation' is imposed on local people as much as any other form of development.

It is this argument that Agrawal (1996) picks up when questioning the more theoretical insights of the poststructuralist development movement. He argues that poststructuralists only question previous metanarratives, such as 'development' or 'modernisation' or 'progress', by resorting to other metanarratives, including 'participation' and 'empowerment', created largely by Western thinkers and practitioners. In many ways, 'participatory development' has become similarly paradigmatic and institutionalised as other forms of development, with discourses and 'buzzwords' which are uttered, understood, and utilised to maintain and potentially widen the gap between the 'novice' and the 'expert' (Cornwall and Brock 2005). Dossa (2007) argues that

participatory development is no less a façade for imperialism, exploitation, and dependency as any previous paradigm of development, as the discourses of participatory development cast communities as passive agents awaiting emancipatory interventions. Such comparisons with imperialism may be too extreme, and other authors such as McGregor (2007), and Sanderson and Kindon (2004) more constructively use such arguments to critique how ‘participation’ has been systematised and become routine in current development practice, leaving the role of the professional ‘expert’ largely unchanged in practice and unable to embrace alternative knowledges. Mohan (2001) argues that the Western academic production of participatory development protects the authorial voice of the Western expert, whilst preserving the ‘local community’ of the non-West as ‘other’. Much of this critique is itself not dissimilar to postcolonial critiques of development (McEwan 2002), yet it is interesting that such critiques are not readily applied to participatory development, perhaps reflecting the lack of communication between postcolonial and development studies (Briggs and Sharp 2004).

2.2.5 Role of the State and NGOs

If participatory development picks up where poststructuralism left off, where there is a focus on the ‘local’ scale of development, it also picks up several ‘hangups’ from poststructuralist thought, in that in focusing on the ‘local’, there is a neglect of other actors beyond the local (Agrawal 1996), as Mohan (2001, p163) puts it: “Another effect of going local is that the state seems to disappear”. In development more generally, the failure of Structural Adjustment Programmes and the previous perceived failures of states to bring about development has led to the neglect of the state as a viable agent of development, and increasingly they are bypassed by NGOs and international organisations (Batley 2002). The rhetoric of participatory development reinforces this trend, and in some cases ratifies NGOs as agents of development, whilst in other cases this rhetoric ignores the agency of all actors beyond the ‘local’. An extreme case of this is represented by post-development writers, for instance, Ferguson calls for ‘disengagement’ from the state and other agents of development (Agrawal 1996). Whilst advocates for ‘the local’ point to the importance of local agency for delivering development, others have argued that local agents often lack control over external factors which impinge significantly on their lives (Sillitoe 1998b). Local people may have little influence, as an individual community, on the wider political arena, yet policies determined at the national level still affect people’s lives (Blaikie 2000). Others have argued that for particular services, for example, water supply, the economies of scale at the level of the nation state cannot be ignored, such that the state can deliver these services more efficiently and at a lower cost than those at the ‘local’ level ever could do (Astana 2003). The state

may also have positive role, utilising its power at the national level to bring about positive developments at the local scale. Aggarawal and Rous (2006) discuss how the state can have a positive role in education delivery relating to HIV/AIDS education in India, whilst Klooster (2002) illustrates how the state can have an important bearing on forest use in Mexico, creating a framework in policy through which community use and management can evolve. Astana (2003) demonstrates that, despite the assertions of participatory writers, corruption may actually be higher at the local level, such that decentralisation and local community control may actually enhance inequality. Klooster (2000), again in the example from Mexico, also highlights how local people may actually not have the skills, incentive, or capacity to manage local resources themselves, in which case bodies beyond the local, such as the state, have an important role to play.

Neglecting the role of the state not only ignores it as a positive force at the local and national scale of development, but also risks not paying sufficient attention to how functions beyond the local can act on local development in less positive ways. For example, Nelson and Agrawal (2008) show that, in the case of the Tanzanian wildlife sector, the powerful interests of state actors, accumulated over many year of building patronage networks around the sector, has led to current community-based wildlife reforms largely marginalising local communities from the actual decision making processes, despite the 'participatory rhetoric' that reforms appear to embody. The same authors compare this with an example from Namibia, where community decentralisation of wildlife management has been far more robust as public officials have less investment in patronage networks. Comparing the two case studies clearly illustrates how the structure of the state can both have positive and negative effects on local community development. Research from other countries has shown similarly that the state can 'co-opt' participatory rhetoric to disguise a continuation of top-down, state-led approaches. For example, Sahu (2008) illustrates how Indian irrigation schemes remain largely in state control despite responsibility for them nominally passing to the 'local community', and Twyman (2000) shows how 'participation' in natural resource management in Botswana has been 'hijacked' by the state to reinforce top-down agendas. Mohan (2001) suggests that advocates of participation have neglected both the positive and negative role of the state in part based on the liberal assumption that participatory research, and a better understanding of 'the local' will make bureaucrats more aware and in touch with locals. This makes very broad assumptions about the technocratic nature of the state, that it will respond to 'inputs' in a rational and balanced manner, when in fact, as several of the examples above demonstrate, power politics at the state level are just as important for an understanding of how development works, as are power relations and politics at the local

level. Much of the apparent ignorance of the role of the state within the participation agenda could be due to the movement's lack of appreciation of power relations more generally, as illustrated earlier in this chapter, much of early participatory work was inclined to neglect politics at the local level, and this tendency has also be translated onto the wider political field.

Arguably, much of this neglect of the state has also been due to a lack of focus on scale. As already discussed, participatory development is very much fixated on 'the local', which makes programmes and projects conducted under its scope largely concerned with small-scale development (Brett 2003). Kapoor (2002a) argues that such a critique could also be levelled at postcolonial, post-development, and poststructuralist thinking, as all tend either to neglect, or fail to examine fully, the important role of capitalism and economics, and that such thinkers cannot assume that epistemological and theoretical deconstruction of prevailing development paradigms and agencies means that they have 'disappeared' politically or practically. Focusing on 'the local' and 'alternative' participatory modes of development intervention assumes that poor people should provide their own services, and ignores the benefits of the division of labour, and of regional, national, and global cooperation (Brett 2003). This includes large-scale projects, such as transport or education, and essential services, such as healthcare, all of which require complex technology and decisions taken at a broader scale (Brett 2003). It might be misguided to assume that local, participatory alternatives can somehow radically replace how currently complex societies operate. Cleaver (1999) points out that this oversight in participatory development has meant that the linkages between the individual and the local, and broader structures and institutions beyond the local has, thus far, been ill-modelled, and needs significant attention from research to resolve. Others have called for local scale interventions to be accompanied by collective action at the wider scale (Kesby 2005), or to development 'active partnerships' across scales (Brett 2003). However, such calls are short on detail as to how this might specifically be done.

The broad participatory development movement has tended to embrace NGOs as agents for participatory change, arguing that they have the advantage of being closer to poor people, that they tend to promote participatory approaches, they better understand local contexts, and will encourage local democracy, as well as being smaller, and therefore more flexible, efficient, and cost effective than the state (Bashyam 2002; Mercer 1999). Working with NGOs also has important ideological attractions not only for participatory advocates but also for donors and governments. As Lewis (2002) argues, they offer a way for states to 'roll-back' their own services and replace them with NGOs, whilst international donors understand them as able to bypass

states which have previously failed to bring about 'national development'. As with other aspects of the participatory movement, the role of NGOs has become largely uncritically accepted as part of the new 'development orthodoxy', and, as such, their position has not always been fully critically examined. Some critical work on NGOs has begun to explore their role, and, as Bashyam (2002) finds, their impacts are hugely mixed. Davies (2002), utilising one of the most comprehensive surveys of NGO impacts, suggests that there is still a lack of reliable evidence to indicate that, overall, NGOs make a positive impact on development. One of the key issues is that, unlike governments which are (generally) democratically accountable, NGOs are often not accountable either to the state in which they operate, or to the local people with whom they work (Brett 2003; Lewis 2002). There are commonly no basic accountability mechanisms for NGOs, which partly explains why their overall impacts, particularly locally, are so difficult to determine. Lewis (2002) indicates that there is likely to be massive variation amongst NGOs, in part because NGOs themselves are so varied. Within this variability are examples which are conflicting with the participatory development 'vision' of how NGOs should be; for example, NGOs can function bureaucratically and use formal procedures, and are not always 'progressive' (Desai 2002). Mercer (1999) highlights how, in the context of Tanzania, the plethora of NGOs, that have recently sprung up across the country as the state has 'opened up' to them, are not dominated by 'grassroots' organisations which represent the poorest, but are instead largely urban, elite-centred organisations based in Dar es Salaam. Alumasa (2003) suggests that NGOs have been, in some circumstances, responsible for commercialising participation, with consultancies taking advantage of the need for 'participatory middlemen' who operate between local communities and the state. Equally, NGOs may be co-opted by states to cover for service provision left behind by 'retreating states', rather than acting as 'empowering' advocates of the poor (Mercer 1999). Although this research has gone some way to examining the role of NGOs, much remains to be done in terms of determining how NGOs function in the context of particular projects and contexts, and what their place can and should be in driving participatory development.

2.2.6 The outcomes of participatory projects

Critical research on participatory development has highlighted a serious lack of reporting of where projects have failed (Brett 2003; Mercer 2002). Part of the problem, according to Davies (2002), and Blomley et al (2008), among others, is that NGOs, who often are the drivers of participatory projects, are poor at conducting evaluations. This raises questions about how participatory practice can improve without critical reflection. The critical literature has begun to

illustrate examples of where participation may have failed, and to shed light on why this is the case. Cornwall and Brock (2005) discuss their experience of participatory local projects in Uganda, where community members were simply 'communicated to' about local development goals at meetings without any actual negotiation or discussion. Twyman (2000) finds that participatory agendas in conservation management in Botswana have led to a 'planner centred' form of participation, where goals, processes, and outcomes are defined again by those outside of the community. These examples, among others, have led some critics to question seriously the perceived benefits of participatory development. Goebel (1998) argues that there is currently no way to assess the quality and reliability of participation, whereas Cleaver (1999) goes further to argue that there is little evidence to show that participation has materially improved the lives of the most marginal people, or that it is effective as a strategy for social change, such that evidence for 'empowerment' relies on assertions of rightness from proponents rather than concrete proof of outcome. Green (2000) discusses how participation and empowerment are difficult to assess and evaluate, precisely because of their 'moral' weighting. Both are moral imperatives which have not been fully critically examined, as discussed earlier, the key concepts of participation might indeed be imbued with Western values, morals and ethics, and it may be important to examine these critically against how local people, the recipients of development, perceive the significant outcomes of development projects. Despite these critiques, it is still difficult to establish why evaluation and reporting of impacts is currently poor. It may in part be due to institutional reasons; for example, NGOs may not want to report 'failures' to funders as this may impact their future funding, or it may be due to the difficulty of assessing participatory impacts in the short term, when benefits may only play out over longer periods (Sillitoe 1998b). This area is again one which is important for research to explore, not only to examine critically participatory outcomes, but also to assess how such projects should be deemed to be 'successful' or otherwise (Twyman 2000).

2.2.7 Participation and space

One important omission from participatory development discourse which has been highlighted by geographers is the lack of attention to space. Although this is apparent, as discussed above, in the lack of attention to the different scales at which participation operates, such as those spaces beyond the local, there is also a need for research to examine the spaces through which participation takes place (Cornwall 2002). Kesby (2005) illustrates that participation and empowerment are generally understood in temporal terms, similar to the linear mode of 'enlightenment' (and indeed, the linear mode of early modernist development paradigms), and

this is compounded by the linearity of the project cycle. However, this temporal focus neglects how patterns of power and empowerment might play out spatially. Cornwall (2002) suggests that it is useful to think about 'official' or 'invited' spaces of participation, which exist alongside 'unofficial' or 'popular' spaces and spaces of everyday life, but highlights that these two are not separable, and that no 'newly' created space can be entirely cleared of traces of social relations that exist in others. This has important implications, as it draws attention to how existing relations of power will be suffused through any spaces which are 'introduced'. Kesby (2007) critiques Cornwall's taxonomy, suggesting that it dismisses the empowering potential of 'invited' spaces, brought into being by external forces, and privileges 'popular' spaces which, in emerging from 'the local', will somehow be more authentically empowering. According to Kesby (2007), although invited spaces can have limited potential as there may be a limited sense of 'ownership' of such spaces in the community, and they may be 'risky' in exposing an individual's thoughts and knowledges in public (Kesby 2005), this does not necessarily mean they lack empowering potential. Different participatory spaces may in part determine the possible actions for different social groups, for example, gender behaviour may be different from one space to another, which might explain why particular participatory projects do not have the desired impacts, but equally certain 'invited' participatory spaces can also open up new spaces for empowerment for particular groups, including women, precisely because they are 'outside' the community space (Kesby 2007). Kothari (2001) suggests that, up to this point, participatory development theory has tended to 'purify' spaces of participation in terms of politics and power, when in fact, as the examples above illustrate, such spaces may demand particular performances to be enacted, whilst excluding others. How these different spaces interact is still a question which remains to be answered, but it is one which Geography is well placed to research (Kesby 2007). Investigating the spaces of participation may also reveal how empowerment is played out as a performance, repeated in particular spaces (Kesby 2005), or to what extent such spaces are specific to communities, and whether they might be replicated across different contexts (Sillitoe 1998b)

2.3 Local knowledge in development

The use of local knowledge in development has become a central part of the participatory agenda, yet it is of significance as a subject of its own right in development, as the focus on local knowledge raises questions about the nature of knowledge more generally, what development should itself be about, and who should be driving development initiatives. Local knowledge is, very simply, the knowledge that people who live in a particular place have about their area. Outsiders, development 'experts', do not always know as much, or as much detail about a

particular area, because they are often not from the localities within which they work. Until the mid 1970s, those 'experts' of development took little notice of what those people (who development was supposed to be for) actually knew, in line with modernist ideas of development. The lineage of using local knowledge in development is then, like participation, relatively recent, but to understand where this thought on local knowledge has come from, it is useful to consider the longer history of Western engagement with 'other' knowledges. The positioning of these two knowledges, either 'Western', or 'local' goes back beyond recent debates in development, and these earlier conceptualisations have played a key role in how these knowledges are framed in development at present (Smith 2011).

2.3.1 A history of local knowledge in and before development

In the classic post-World War Two development paradigm of 'modernisation', technology and knowledge transfer from the West were understood as the solution to the problems of development and poverty, and the local knowledge (often referred to as 'indigenous knowledge') of people in the 'Third World' was dismissed as non-scientific, backward, and a part of the problem (Blaikie et al 1996; Grillo 2002). In this sense, local knowledge was viewed as 'anti-development' by the development establishment. However throughout the history of development practice, it has become apparent that these strategies of 'modernisation' were often highly irrelevant and inappropriate for the rural poor (Briggs et al 1999; Diawara 2000; Donnell-Roark 1998). From the mid-1970s, the alternative development approaches to 'modernisation', including participatory approaches, instead highlighted the need to take account of, and 'use' the knowledges of local people in development.

This was the advent of 'local knowledges *in development*', but beyond the confines of development theory, the practices of differentiating local/indigenous knowledges from those of the West have a much longer lineage. In an article on Arctic knowledges, Huntington and Fernandez-Gimenez (1999) consider the historical uses of local knowledges. They highlight how Western explorers of the Arctic used the local knowledge of Inuit people for making clothing, building snow shelters, and, often employing them as guides, used their knowledge of the terrain. Indeed this type of interaction is likely true of all Western 'explorers' from the 15th century onwards, for example, European interactions with Native Americans. From the 1940s, scientists in the Arctic used 'indigenous' people as field assistants, and although their use of this indigenous knowledge went largely unrecorded (Huntington and Fernandez-Gimenez 1999), it serves to illustrate how scientists/researchers/explorers from the 'West' were beginning to interact with,

and to differentiate between, the knowledge of 'other' local people, and those of their own. It is here, in the first interactions between 'Us' and 'Them' that the separation in (modern) Western thought begins between Western and 'indigenous' or 'local' knowledges. Beyond these encounters, the prize for developing local knowledges as a legitimate focus for academic study belongs to the discipline of Anthropology (Sillitoe 1998b). Anthropology is indeed rooted in research into what 'others' know and practice, and has been doing so, as Sillitoe (1998b) argues, for a greater part of a century. In the 1960s, anthropologists including Levi-Strauss were making distinctions between 'primitive' and 'modern' cultures (Agrawal 1995). Wallerstein (1983) even goes as far to contend that, before 1950 (coinciding with the beginnings of the 'modernisation' paradigm) the study of Africa was confined largely to the domain of Anthropology (although some Geographers would probably disagree). Unlike the advent of local knowledge for development, in Anthropology the study of these knowledges and practices was seen as an intellectual pursuit, rather than being *for* development (Sillitoe 1998b). Local knowledge for development is different from this, in that there is an implication that the study of local knowledge will effect some action.

If it is the current thinking in development that "to ignore people's knowledge is almost to ensure the failure of development" (Agrawal 1995, p2), how is it that the opinion of local knowledge has changed so radically since the modernisation era, when the 'backward' practices of 'the poor' were understood as obstructive to progress? In reaction to the failings of top-down approaches to development, 'alternative' theories and practices emerged from the mid 1970s, culminating in 'participatory development' (Binns et al 1997; Potter et al 2003). The methods and techniques associated with participatory development, such as Rapid Rural Appraisal (RRA), which emerged in the mid 1970s, surveyed local people's 'technical' knowledge to find 'solutions' to development (Chambers 1994a). This approach later evolved into Participatory Rural Appraisal, which sought to work with local people in a more participatory way (Potter et al 2003; Chambers 1994a). These more participatory approaches advocated for the direct involvement of the recipients of development, which necessitated accessing their knowledge of local issues in order not just to better understand development problems, but also to reach more appropriate 'local' solutions (Chambers 1994a, b, c). Local people participating in development therefore prioritises their knowledges (McKinnon 2006), participation is itself about accessing and using these knowledges, making participatory approaches to development and local knowledges intrinsically linked (Mosse 2001). Various studies have illustrated how detailed local knowledge is, from local people's knowledge of marine environments in Tanzania (Semesi et al 1998), to farmers' knowledge of soils and local environmental conditions in Malawi (Moyo 2009) and New Guinea (Sillitoe 1998a), to detailed histories of local forestry in Côte d'Ivoire and Sierra Leone (Leach and Fairhead 2000).

From a broader perspective, however, we might see this attention to the knowledges of local people as part of a wider, contemporary movement which spans beyond development. Leach et al (2008) argue that the turn towards a more pluralist understanding of knowledge, underway in development in the 1990s, parallels constructivist and feminist approaches that explored the 'myth of science', which illustrated how knowledge is highly situated (e.g. Haraway 1991; Latour 1986). McFarlane (2006) too highlights, through a reading of Foucault, that the attention to marginalised knowledges is part of a wider 'insurrection of subjugated knowledges', or 'local critiques' of 'global theories' like Marxism, Psychoanalysis, and, in the case of development, of modernisation and dependency theories. McEwan (2002) demonstrates the important connections between the local knowledge movement and postcolonial studies. Postcolonial critiques sought to disrupt the legacy of colonialism and destabilise the dominant discourses of the 'West', problematising the way things are 'known'. All of these theoretical turns chime well with poststructuralist approaches in development studies, which theoretically challenged the fundamental Western assumptions of development (Escobar 1995), as, it was argued, the Western thought which had driven development since the post-World War Two era had led to the failure of development (Agrawal 1996). For poststructuralist thinkers, local knowledges offer 'alternatives'. In this conceptualisation, Western assumptions about knowledge are fundamentally destabilised. Science becomes just one form of knowledge (Briggs et al 1999), losing its hegemonic position in recognition of many 'other' forms of knowledge (Briggs and Sharp 2004).

In the context of the web of theoretical heredity outlined here, local knowledge has been heralded as one possibility for finding progress beyond Western development (Briggs et al 2007). A further aspect of the movement for local knowledges in development is that they are not just to ensure that development is more appropriate and effective, but that there is also a moral and ethical right in their inclusion. For some, part of the aim of the local knowledges movement is to foreground the voices of the poor and marginalised (Sanderson and Kindon 2004; DeGrauwe et al 2005), or to support part of the wider goals of the participatory movement (Pain 2004; Cornwall 2002). In the early stages of the incorporation and recognition of 'local knowledges', several agencies including the World Bank (1998), in their widely-cited report, understood local knowledge as a technical solution to be extracted, used locally, or transferred for the purposes of development (Sillitoe 1998a; Briggs 2005). From this viewpoint, local knowledge is only an 'asset' held by the poor (Gorjestani 2000), a discrete parcel of knowledge. Instead, the now widely popular conception at least in academic circles is that, by utilising knowledges through

participatory means, a degree of empowerment can be engendered amongst marginalised people at the local level (Blaikie et al 1996). Rather than simply 'applying' knowledge, the focus should be on generating it locally (Jakimow 2008), through these processes shifting the site of empowerment, and the site of development, to 'the local' (Mohan and Stokke 2000). For example, Green (2004) illustrates how local solutions to the spread of HIV/AIDS, by encouraging partner reduction through various social channels, have been more effective in the African context than 'global' models of AIDS prevention (such as condom use).

2.3.2 A critical approach to local knowledges

The highly positive way in which the local knowledge agenda was greeted within both the development and research community led to a whole range of agencies, NGOs, and states taking 'local knowledge' on board (e.g. the World Bank, 1998). As the use of local knowledge for development has become an essential part of the rhetoric of development practitioners, so a critique has emerged as to how this has been employed in practice and alongside it a critical approach to the theoretical justification for the use of local knowledge. Firstly, much of the earlier (and still current) writing has tended to romanticise the notion of 'local knowledge' (Adams et al 1994). This is perhaps a throwback to the anthropological study of local knowledges, which, according to Wallerstein (1983), tended to focus on the a-historical nature of indigenous people, and the unchanging nature of their societies. In development discourse, local knowledges are constructed in particular ways; for example, they are often viewed as being 'in harmony' with nature, such that communities are able to exist sustainably with their natural environment (Leach and Fairhead 2000, and for examples of where this trend is still apparent, see Steiner and Oviedo 2004). Early work on local knowledges tended to see the knowledges themselves, and the communities from which they emerged, as timeless, unchanging, evolving in isolation from 'outside' influences, and therefore fundamentally rooted in 'the local'. By implication, such knowledges are understood as inherently 'good' or 'useful'. Several critical studies have challenged this view. Local knowledges do change over time, for many reasons, outlined by Blaikie et al (1996) to include the influence of rapid population growth, migration, disasters, and environmental change. Empirical studies have shown that knowledges respond dynamically to changes (Briggs et al 1999; Ortiz 1999). Most societies have not evolved in complete isolation (Chambers 2008), as historically most communities have interacted with the 'outside' (Grillo 2002). Critics argue that essentialising and romanticising about local knowledges in this way is dangerous (Goebel 1998), as it can lead to 'ethnic triumphalism' (Bourdillon 2004) in which all local knowledges are seen to have worked perfectly well in the past, so they should continue to

do so. Furthermore, when 'the local' is understood as essentially 'good', the role of 'outside' knowledges is neglected. As well as implicitly accepting the 'status quo' and denying change (Kapoor 2002), there is also a danger of rejecting anything that does not stem from 'the local', including anything which may come from 'Western science' (Erdelen et al 1999).

A clear problem with assuming that local knowledges are always appropriate for local development is that these knowledges are never critically assessed. In some cases, local knowledges and practices may be restrictive, conservative, lined with misconceptions and prejudices, or may reflect a lack in local capacity to deal with a particular issue (Chambers 2008). Bodeker et al (2000) illustrate that local traditional healers and the medicines they use may be completely inappropriate for dealing with HIV/AIDS, as they may be based on local superstitions and prejudices which can persecute those who are HIV positive. Local prejudices about HIV/AIDS may encourage the spread of the disease, as they can prevent communication about the associated dangers (Kesby 2000a). Studies have also shown that local practices of resource use may not lead to that particular resource being used sustainably, for example in forestry resources (Klooster 2002), or in wetland management (Dixon 2001). Other authors have gone so far as to suggest that there is a lack of conclusive evidence that development based on local knowledge equals 'better' local development (Brett 2003; Cleaver 1999; Jakimow 2008). They argue that there is little evidence that initiatives based on local knowledge actually improve material conditions, suggesting local knowledge perspectives are employed on ethical and moral grounds, rather than because of overwhelming evidence of their success. Local people may not always have the capacity to implement local solutions (Andersson et al 2003; Munyanziza and Weirsum 1999). Local people may need training, guidance, knowledges, or materials from outside of their communities in order to achieve significant change (Anello 2003). Bebbington's (2000) work in Ecuador offers a useful balance to these arguments. By contesting that "almost everything in development is 'coproduced'" (Bebbington 2000, p514), Bebbington suggests that local people must engage 'externally', over a range of networks that extend beyond the local, as a part of their individual and collective development. Rather than assume that local knowledges exclusively hold the 'answer' to development, recognition must be given to where the practices of development interventions, from the state, churches, or NGOs, may open up new spaces and opportunities for local people (Bebbington 2000; Brett 2003). Such arguments therefore acknowledge that there are limits to what local people can be expected to know, and that solutions do not emerge solely from local knowledges.

More recent research on local knowledges has begun to recognise its previously neglected political dimensions. Where previous work suggested that local knowledges were held 'collectively' (Sillitoe 1998b), in reality local communities are often far from consensual and homogeneous (Cleaver 1999; Green 2000), and therefore do not produce a uniform 'knowledge' (Bourdillon 2004). Indeed, there may be significant conflict amidst 'the local' about understandings of particular issues (Brett 2003; Goebel 1998). A number of studies have shown how the knowledges of women are significantly different from those of men largely because of different gender roles in local societies (Briggs et al 2003; Myers 2002; Goebel 1998). Local knowledges are also highly political (Blaikie et al 1996), in the case of gender roles, what is known and done locally can be bound up with maintaining male hegemony (Bourdillon 2004). The political nature of local knowledges then serves to highlight how knowledge within local communities is intimately entangled with power, which in itself is tied to, and a constituent of, social difference (Diawara 2000; Green 2000). Although this is perhaps a lesson which development perspectives should have learnt from postcolonial studies some time ago (Briggs and Sharp 2004; Sylvester 1999; Sharp and Briggs 2006), now it is well recognised, at least in academic research (Desai 2002; Jakimow 2008). Myers (2002) and Tobison et al (1998) both illustrate this point well with case studies from Zanzibar, which highlight how political divisions within communities, poor local leadership, and a lack of social cohesion have led to conflict over natural resource use at the local level and a failure to maintain resources sustainably. Their evidence flies very much in the face of the poststructuralist and post-development theorists, such as Escobar (1995) and Ferguson (1994), who have put considerable faith in 'alternatives' to Western development appearing from the 'grassroots' (Sylvester 1999).

Further to this, earlier local knowledges work has been criticised for constructing binaries between 'local knowledge' and 'Western science', quite possibly again inherited from the anthropological tradition, or even from historical 'encounters' with 'others'. Earlier research suggested that 'local' and 'Western' knowledges differ on substantive, methodological and epistemological grounds, particularly as local knowledges are deeply rooted in the local environment (Agrawal 1995). However, such claims are wrought through with echoes of the colonial past, taken to an extreme they might suggest that there are somehow differences in the thought processes of those of the 'West' and the 'Others' (Sillitoe 1998b). Separating these two 'knowledges' essentially fails because it seeks to separate and fix in time and space particular knowledges that can never be so separated and fixed (Agrawal 1995; 1996). It becomes impossible to distinguish the difference between science and non-science when we take into account the influence of 'local knowledges' on the development of science (e.g. Huntington and

Fernandez-Gimenez 1999). Likewise, many communities combine both local and 'outside' knowledges in pragmatic ways (Briggs 2005; Moyo 2009), and essentialising either knowledge into one category or another is fundamentally unhelpful. Indeed, if we compare such a discursive binary with other such constructs, for example the distinction between 'First' and 'Third' Worlds, between the 'Local' and the Global', or between 'Society' and 'State', it becomes apparent that constructing such a dichotomy is not only unhelpful but also, according to McFarlane (2006), ridiculous. On top of this developing critique of how local knowledge is theoretically constructed has been a critical approach to how local knowledge is used in and for development. From the early stages of its entry into development discourse, local knowledge was seen as highly local, and agencies such as the World Bank were critiqued for assuming that it could be taken 'out of context'. However, if we take this critique to its logical conclusion, and local knowledge is then so place specific in its utility, how can it then be used realistically as a 'development tool' (Briggs et al 2007), or at a scale beyond the local (Sillitoe 1998b)? The answer to this question partly lies in the 'non-local' nature of local knowledge. Green (2000) argues that in fact local knowledge is constructed very much from beyond the community. Green (2000, p74) goes on to argue,

"The eclectic nature of what people in an area actually 'know' implies that 'local knowledge' is neither inherently 'local' in its orientation and application, nor in its origins, which are not confined to a single self-generating source or range of practices. People living in rural areas listen to radios, attend schools and travel widely to work and visit relatives."

This suggests that knowledge derived 'locally' can still have a part to play in influencing other knowledges beyond the local. There has further to this been a well recognised disjuncture between the rhetoric of local knowledge inclusion by various development agencies and their actual practice (Jakimow 2008). Although many agencies of development now include 'local knowledges' in their policies and plans, in practice the institutional conditions of states, NGOs and academic researchers often prevent the incorporation of multiple voices. As McKinnon (2006) illustrates in a case study of Northern Thailand, and Twyman (2000) in relation to participatory conservation initiatives in Botswana, it is all too easy to adopt the rhetoric, yet in practice this often hides the 'standard' development approach, sometimes even hiding discourses of subordination and manipulation.

2.3.3 The methodological challenge

The local knowledge perspective raises a number of interesting challenges for those conducting research. Researchers must initially tackle the question of exactly how local knowledge can be studied, how it can be recorded or experienced, and at what scale (both temporal and spatial) it exists. Several studies have discussed the problem of expression of knowledge in the spoken word form, for example, what is spoken can be tied up with what local people may expect an 'outsider' wants to hear (Mosse 2001; Andersson et al 2003), leading us to question if what is expressed verbally can be directly correlated with what is known. Indeed, knowledge may be expressed as embodied performance (Briggs and Sharp 2004), or may be considered a skill rather than a spoken 'knowledge' (Sillitoe 1998a). These questions have stimulated a range of experiments with research methods; for example, Kesby (2000a) uses participatory diagramming to deal with the sensitive issue of HIV/AIDS in communities in Zimbabwe. Similarly, Pain (2004) has illustrated how combining photography and the spoken word allows young people to express their knowledges. A range of participatory and participant observation techniques has been seen to be highly appropriate, as they go 'beyond' the spoken word in allowing participants to express themselves in different ways, often in collaboration with, rather than directed by, the researcher (Kesby 2000b). These methods themselves are problematic in their 'public' and 'collective' nature, which may simply rehearse local power relations and the marginality of some who may feel that, in public, they cannot speak out (Cleaver 1999). Without significant attention to local power dynamics the research process itself may engender conflict (Sillitoe 2000; Tobison et al 1998; Timsina 2003). Such techniques also often focus on the 'moment', a discrete point in time and space, in which knowledges are expressed in the instant of research. Anthropologists may contest the discrete nature of many recent local knowledge studies, which miss the longitudinal nature of knowledge change over time (Intili and Kissam 2006). Davidson (2010) goes even further, to question, in the light of the particular cultures of knowledge she identified amongst rural Diola in Guinea-Bissau, the assumption that those 'asking' about an individual's knowledge have a right to an 'answer'. Davidson highlights the highly 'secretive' nature of Diola public life, that in many circumstances it is socially damaging to 'know' something publicly, and that asking about what an individual knows may seriously challenge local cultural norms. This complicates the assumption that the pursuit of knowledge is an unequivocal right, an assumption which underlies the local knowledge agenda (Davidson 2000). The challenge still remains then, of how local knowledge should be accessed by researchers, and what methods are the most appropriate for this task, and whether, more fundamentally, there is an existing right to access such knowledge.

Beyond accessing knowledge, local knowledge perspectives further question the place of the researcher not only in the field but also in the process of representation. By positioning local people as those who are knowledgeable, the traditional role of the academic/researcher as the 'expert' is significantly destabilised, instead becoming a 'facilitator' of knowledge creation (Goebel 1998). Such a position, as with participatory development, rejects the notion that the 'expert' knows best (Mohan and Stokke 2000), and at the same time changes the site of the expert, not bestowing the title instead on local people, but rather inducing a multiplication of sites of the expert, acknowledging the ways in which knowledge is constructed through multiple actors (Jakimow 2008). Much of this is all very well in theory, but how this exactly translates into practice remains to be fully realised. Firstly, the power relations between the research subject and the researcher have not (arguably) fundamentally changed. The communication of local knowledge from local people to and through research is shaped by the context of that research, much of which is still determined by the researcher (Radcliffe 1994). Even with participatory-type methods, there is still a danger that a very specific type of local knowledge is constructed (Sanderson and Kindon 2004). McFarlane (2006) and Sylvester (1999) usefully here point to the postcolonial critique of representation, and highlight Spivak's much cited concern for speaking for the subaltern. Spivak argues that the subaltern (in this case, our 'marginalised', 'local' subject) is always caught in translation (subjected to being translated through Western discourse), and therefore they *cannot* speak. Such a critique is rather damning for those wishing to 'represent' local knowledges, as ultimately any process of representation serves to secure the marginality of those the researcher wishes to represent. This seems overly pessimistic, and positive moves have been made in methodology in terms of moving beyond 'extraction' of local knowledge (Alumasa 2003) to a more collaborative, reflexive toolkit of research methods that have allowed those who take part in research in the Global South to self-represent (Pain 2004).

2.3.4 The contribution of Geography

Research on local knowledges, is, by its nature, an interdisciplinary venture, which, according to Sillitoe (2004), should draw not only from the social sciences but also from virtually all fields of science. Geography, as a subject which branches both into the human and natural sciences, is well placed to offer a significant contribution to our understanding of what people know locally, and how this may become part of local development (Leach et al 2008). Geographers further have a lineage of dealing with the complexity of how knowledge is tied up in social organisation (Adams et al 1994), and many of the methodological techniques advocated for in local knowledge research, for example, participant observation, and various qualitative methods, are already

familiar to geographers (Pain 2004). Human and Social Geography has an important role to play in spatialising debates about local knowledge, as they do with participatory development, and, through this, analysing the relationships of power inherent in knowledge production and use. The work of Kesby (2000a; 2000b; 2005; 2007) has highlighted the divergence in knowledges about HIV/AIDS between women and men in Zimbabwe, considering how knowledge is expressed in relation to social roles and social inhibitions, and therefore the ways in which gendered power relations govern knowledge production and expression. Goebel (1998), and Briggs et al (2007), in the contexts of Zimbabwe and Egypt respectively, have further highlighted how knowledge can be highly gendered, but importantly how gendered knowledges are constituted through and by gendered spaces. Again in the context of Egypt, Sharp et al (2003) have illustrated that the roles of women are highly dynamic and that their knowledges are linked to changing spatial practices, themselves tied to changes in the local environment. To return to the work of Kesby (2007), but also expressed thought the work of Sharp et al (2003), there is an important discussion of how spaces and knowledges associated with the marginalised should be conceptualised. Both sets of authors suggest that there is a tendency to associate local knowledges of the marginalised with a 'resistance' to Western hegemony, or indeed a 'resistance' to local relationships of power. In reality, this is quite false, as changes in knowledge and practice, for example, for local women, may not be acts of resistance to male dominance but may be bound up with survival strategies, some of which may be viewed locally as 'disempowering'.

Other geographers have drawn attention to how local people may conceptualise certain 'taken for granted' concepts in development. Mercer (2002) illustrates how local people may use 'local knowledges' in development projects for individual, rather than collective, gain, and value material empowerment, rather than 'fuzzy' ideals of 'empowerment' associated with the local knowledges/participation movement. This adds up, for Mercer, to a unique 'development subjectivity', which may disrupt 'Western' preconceived values. McFarlane (2006) takes up similar conceptual problems, critiquing how development knowledges are produced in the West, which reproduces established knowledge binaries. McFarlane instead argues for a radical attempt to be made to engage with different kinds of knowledge and ways of knowing, rather than a liberal attempt to integrate local views into a given position. This is indeed a task for Human Geographers in development research, to advance new ways of imagining research and places, and to discover how the world looks, and indeed to consider how to represent the world from, 'other' locations. Geography's long association with studies of resource use and agriculture may be key to an understanding of how local knowledges are associated with these specific issues. Moyo (2009), through a study of farmers in Malawi, illustrates the dynamic nature of local

knowledges in response to changing environmental conditions. Moyo highlights how farmers conduct their own cropping experiments, evaluating 'introduced' agricultural technologies based on what works locally. Such a focus serves to demonstrate how local farmers are active agents in re-producing local knowledge, which is illustrative not only of an already present dynamic interaction between 'outside' and 'local' knowledges, but that also local people are not 'passive' in receiving knowledges and technologies. Moyo also makes a keen observation, that farmers do not care where knowledges come from, they simply want and will use what works best. This again is important in disrupting the moral and ethical imperative often implicit in arguments from advocates of alternatives to development.

2.3.5 The future of local knowledges

There still remains work to be done on improving our understanding of how (local) knowledges are (re)produced across, through and in space. If local knowledges are constituted not just from 'the local', then how are particular knowledges communicated and constructed across distance (Dixon 2001)? Conversely, if 'local' knowledges are constructed through networks across space, how much are they then rooted in the local context (Blaikie et al 1996; Easton 2004)? Agrawal (1995) draws our attention to the fact that knowledges do exist both temporarily and spatially, yet we cannot fix knowledge either in time or space, which is apparent for both 'local' and 'scientific/Western' knowledges, bringing into question the spatial scale at which knowledges might operate. Green (2004) suggests that there may be a 'national' scale of 'local' knowledge, citing the distinctly Ugandan (or perhaps, African) approach to HIV prevention, or a distinctly 'Tanzanian' approach to development aspirations (Green 2000). More research is clearly needed here to broaden 'the local' to account more fully for how (local) knowledge is constituted, and to expose their links, networks and spatiality.

Although there have been calls to move 'beyond' the bounded realms of knowledge constructed through the dichotomy of Western/local (Jones 2000), the actual practicality of really 'blending' or providing negotiated dialogue between knowledges appears only to occur in a slim number of pioneering research studies and projects (e.g. Easton and Belloncle 2000). One avenue yet to be fully explored is to challenge the 'place' of both of these knowledges (Chambers 2008). Western knowledges are commonly conceptualised as 'placeless', 'global', counterposed to the rooted nature of local knowledge 'in place'. However, science is neither monolithic nor hegemonic (Leach and Fairhead 2000; Diawara 2000), it is as culturally embedded as 'local' knowledges. Clearly then, there is an important step which has yet to be fully made in development practice, in which

practitioners must think quite differently about science and 'technical' knowledge (Leach et al 2008). There are further questions here about what is learnt and the process of learning beyond the 'local' scale, for example, McFarlane (2006) argues that the 'South' is still largely understood as a place to which knowledge goes, and little has been done practically to build relationships of exchange (Jones 2000). What McFarlane (2006) suggests is required as a practical step is to begin to open channels to learn indirectly, arguing that much constructive learning occurs circumstantially, unexpectedly, rather than through formal, designed learning opportunities. The challenge remains to build these kinds of linkages proactively and with this to understand how knowledges interact and are constituted through such channels (Ortiz 1999).

Kesby et al (2006) very effectively reveal that certain areas of local knowledge study remain relatively 'taboo' in research studies, for example, sexual knowledge and practice, particularly relating to young people, remains poorly studied, yet an understanding of these is vital in development for research into HIV/AIDS prevention. Similarly, 'other' categories of knowledge, within and beyond the local, remain relatively ignored, including how religious conviction, or indeed local practices of witchcraft, interacts with local knowledge (Easton 2004). There has been little work on how local people themselves begin to delineate between what they conceive as traditional/modern/religious knowledges. Whilst there has been substantial research on gendered knowledges, there have been comparatively few studies into other social groups, particularly young people (Bourdillon 2004). More broadly, there remains a gap in the critique in examining how certain local knowledges may be privileged above others in the development process, and exploring how local knowledges create exclusions and differentiation amongst societies. The work of Davidson (2010) begins to investigate this ground through illustrating how, amongst communities in Guinea-Bissau, elder women maintain control over particular realms of knowledge, for example concerning pregnancy and birth, which act to exclude and maintain power over younger women. Knowledge then can be privileged within communities (Davidson 2010), and whilst there has been substantial critique of who is included or excluded in participatory development, this has not been mirrored in critiques of local knowledge, where we should be asking 'whose knowledge counts?' within communities. Other authors have probed the avenues of thinking about local knowledge and its dynamic nature through the process of learning. For example, Easton (1999; 2004) and Easton et al (2000) illustrate how local schooling may have a significant role in the current and future interaction of knowledges. For geographers, it is important here to develop an understanding of how sites and places of learning are constitutive of, but also constituted by, the interactions that take place through and within them. The focus of local knowledge enquiry can then shift to be more focused on learning, how

knowledge is acquired and reworked, as well as what role channels of education can play (Lucarelli 2001; Pence and Shafer 2006).

2.4 Education and development

Education development offers a lens through which to examine some of these key questions for both participation and local knowledge in development. Although much of the work on participatory practices and research has focused on marginal social groups, such as women and marginalised ethnic/caste/class groups, comparatively little attention has been given to young people (Kesby et al 2006; Bourdillon 2004). This is despite the fact that the importance of young people to livelihoods in many third world contexts has been well recognised, including at the international level, through the UN convention of the Rights of the Child (1989), and the African Charter on the Rights and Welfare of the Child (1992) (Bourdillon 2004), as well as several research studies (Harpham et al 2005; Mayo 2001; Kesby et al 2006; Katz 2004). Attention to young people in development dates back further than this, as Porter and Abane (2008) point out, in the 1970s 'child-to-child' approaches to health education were being implemented with some success. However, Mayo (2001) argues that, although inclusion of the marginalised is seen as a priority for participatory development, children are often perceived as a 'different category', and generally their participation is not on the agenda. That young people are being ignored is problematic, in the first part because for many countries in the Global South young people make up a very significant proportion of the population (Harpham et al 2005), for example, in Tanzania 44% of the population are under 15 (NBS Tanzania 2006), in Zimbabwe, by way of comparison, this figure is very similar at 45% (Kesby et al 2006). Young people are often essential for the maintenance of family livelihoods in the Global South. For instance, in Zimbabwe it is young people who are the key water collectors for households, yet they are not involved in development planning processes (Bourdillon 2004). Young people are also becoming important active agents in communities where adult populations are increasingly incapacitated due to the AIDS epidemic (Bourdillon 2004). Yet children, despite their apparent agency, are also particularly vulnerable among the poor, and dimensions of their poverty should, according to Harpham et al (2005) include their access to education, as educational attainment is linked specifically to poverty. Intili and Kissam (2006) highlight how in Afghanistan over half of young people are significantly compromised in functional literacy, a fact that has wider implications for the stability of Afghan society, and the country's future economic viability.

There is an acceptance, then, amongst international bodies, but also from academic research, that young people need significantly more focus on as a marginal group in the development process. Mayo (2001) illustrates that there has been an increased focus on listening to young people's voices, and that their participation may work towards ethical/moral goals of promoting young people's 'empowerment'. Others have described how the local knowledge of young people has also become important (Pence and Schafer 2006; London et al 2003; Katz 2004), for example, engaging young people through participatory research methods (or 'child-centred' research), can promote 'empowerment' through allowing young people to plan and carry out their own research (Porter and Abane 2008), and effectively analyse their own livelihoods and needs (Mayo 2001). Pain (2004) and London et al (2003) illustrate how participatory research can uncover the experiences of young people which, importantly, are significantly different from those of adults. Whilst such studies are pioneering, Bourdillon (2004) highlights that the ability of young people to express themselves in the world of adult politics is still very limited, whilst Pence and Schafer (2006) point out that it is very difficult to integrate the knowledge of local young people into development interventions because institutions are not set up to listen to young people. Porter and Abane (2008) show that, again despite the increased focus on young people in development, their needs are still largely unknown in particular sectors, citing the example of young people's transport needs as a case in point. They suggest that development research has failed to engage fully with young people's issues. This is in part because working with young people comes with a range of ethical concerns, as well as particular challenges, such as the competence of young people to engage in research (Porter and Abane 2008). Kesby et al (2006) argue that academic research has not gone far enough in recognising 'other' childhoods, those which are quite different from Western ideals of childhood, yet recognising and working with these raises ethical issues with which, as yet, few researchers have been keen to engage.

Debates around local knowledges have frequently also crossed over into research and practice that focus on young people and education, not only in terms of learning about young people's local knowledges, but also through considering how various forms of education interact with, and may be a vehicle for, local knowledge. This debate calls into question how local knowledges are 'passed on' from one generation to the next, and what role formal (but also other forms) of education might have in this process. Easton et al (2000, p142) argue that "For Indigenous Knowledge to have significant bearing on the future of West African societies, it must gain some currency in schools". However, they also highlight how there is significant resistance within the education sectors of African societies to embrace local knowledge. They suggest that it is more likely that local knowledges are passed on through nonformal and informal education

programmes, which are targeted at community needs. More radically, “traditions of indigenous knowledge and learning may themselves offer models or patterns for organising the provision of education” (Easton 2004, p9), which suggests that local knowledge may offer a model for education locally, for example, by delivery through local language, or delivered by locally skilled people. There has, Easton et al (2000) argue, been an increased recognition of the legitimacy of such approaches, eroding the hegemony of the ‘Western curriculum’, and opening space for ‘alternative’ modes of education. There is also an acknowledgment that formal education in African communities remains largely decontextualised (Easton 2004), a hangover from systems based on ‘Western’ models, implying that there is still quite considerable work to be done in terms of considering how local knowledge might ‘contextualise’ or be integrated with education systems.

Debates around education in development have also begun to focus on the decentralisation of education to the local level. Over the past three decades, many developing countries have been increasingly adopting reforms which ‘decentralise’ education, including mechanisms which support increased participation locally (Gershberg 1999). Such efforts have been encouraged by international development institutions and donors (Gershberg 1999), and NGOs have often been at the forefront of ‘local education’ project delivery. Decentralisation of education can take many different forms, as Caillods (2005) points out, it may range from giving more power to local schools, to local government, or to parents, and giving control of different aspects of education, such as the curriculum, or human and financial resources. Decentralisation may be introduced for a range of reasons, some fitting with the ethical goals of participation, others more focused on efficiency and passing the financial burden to the local level. These ‘economic reasons’ may, according to Easton et al (2000), be due to reduced resources at the state level due to structural adjustment policies which have been in action since the 1980s, leading to governments turning to ‘alternative formulas’ of education to meet the elusive goal of universal primary education. Easton et al (2000) argue that, partly as a result, but also in part because of the arguments associated with the local participation agenda, formal schooling has become increasingly in competition with community schools and other experimental schooling programmes. In several contexts in the global south, NGOs, private foundations and local associations are increasingly authorised and encouraged to create their own schools, and, Easton et al (2000) argue, community-based schooling has, as a result, become increasingly significant. Lucarelli (2001) illustrates how, in Thailand, decentralisation of curriculum development has had positive results both in improving learning, but also in preserving local knowledge. Lucarelli (2001) describes how traditional herbalists are brought into formal schooling environments to teach young people

about herbal medicines, allowing future generations to preserve both practical and more spiritual aspects of this knowledge. Pence and Schafer (2006) show how participants from a number of African countries worked towards a 'generative curriculum', which created curriculum content that was more context-appropriate and incorporated African resources. They argue that this allowed for culturally relevant material to be incorporated into local teaching, thereby, through 'participation' making local education more locally appropriate.

This thesis focuses on local education quite specifically about environmental issues. 'Environmental Education' has been within the lexicon of local, participatory education for some time (Bourdillon 2004; Hoza 2009; Mbuta 2009), and has in some cases found its way into national curricula in both the Global South and the Global North (Bonnett and Williams 1998). Education about the environment offers an intersection of many of the debates not just around local knowledges and participation, but also with regards to issues of Western and more 'local' forms of knowledge and development. Environmental resource management has been, for some time, an area where Western and 'local' knowledges and practices have often met and may come into contention (Leach and Fairhead 2000; Briggs et al 1999), and education about the environment may seek to inform how natural resources are managed both in the present and in the future. When focused on young people, considering how environmental education is carried out in practice brings to the fore not just how young people, as marginal actors, are engaged in the processes of local development, but also on how knowledges (be these local or otherwise) are communicated and passed on, and what influence this process has on young people's role in society. As education about the environment may also incorporate Western knowledges regarding ecological conservation (Blomley et al 2008; Leach and Fairhead 2000), it also offers an avenue to explore how both the content and methods of the education of young people may be influenced by Western and more 'local' forms of teaching. The role of the state can also be important in this process. Formal education is generally national, and allows the state, and increasingly in Tanzania, NGOs, to influence the knowledges of young people, which may also in turn influence their practices of environmental resource management. Other studies have illustrated how projects involving young people have been successful in influencing their ability to 'protect' their local environment (Bourdillon 2004), as well as increasing their potential to be influential in their family with regards to managing the environment. Whilst there is some critical reflection on education about the environment in academic literature from the context of the Global North (e.g. Bonnett and Williams 1998), there has yet been little critical appraisal in the Global South. There is, however, a growing literature which looks critically at young people, participation, and local knowledge more generally.

2.4.1 Critical approaches to local knowledge and participation in education

As the previous section has illustrated, local knowledges are not always essentially 'good', something which advocates of participatory, local development often assume (Aggrawal and Rous 2006), and this can be highly problematic when applied to arguments for local education. For example, an important factor in fuelling the spread of HIV/AIDS in the Global South has been the poor knowledge, particularly at the local level, about its mode of transmission and prevention (Aggrawal and Rous 2006). Misconceptions still persist, discussing HIV/AIDS can be locally taboo and evoke deep prejudices, and these are passed on through local, informal forms of education, despite the fact that such 'local', informal education systems have been held up as 'good' for local development (Easton 2004). However, this calls into question how much teachers, or other educators, should be responsible for challenging values, or attempting to reinforce different values through the formal education system (Bonnett and Williams 1998). There are clearly important questions here about what happens when local values and those of outsiders meet, and what role education should play in influencing young people, questions which have not yet been fully addressed by research.

A further oversight of research on education and young people to date has been a lack of conceptualisation of the agency of young people, and what impact they can potentially have in their 'local' society. Education projects, and particularly environmental education projects, have relied on the notion that young people can, and will, take educational messages home and communicate these to other young people, as well as their parents and families (Bonnett and Williams 1998; Andersson et al 2003; Uzzell 1999), and often this is said to be part of what constitutes their 'empowerment'. Porter and Abane (2008) illustrate that in the context of Ghana, young people are generally at the bottom rung of family and community hierarchies, and therefore the possibility of children challenging adults on particular issues about which they were educated would have been completely unacceptable. Andersson et al (2003) demonstrate how young people, educated about mines in Afghanistan, were supposed to 'take the message home' to parents, but failed to do so, again possibly due to familial hierarchies. Some have suggested that purely focusing on young people in education projects is problematic, as young people's lives and social positions are so heavily bound up with those of their parents, families, and others in the community. Community mobilisation around particular issues may be essential for particular education projects to succeed for a number of reasons, firstly because taking time to 'participate' for young people takes them away from essential work as part of their family livelihood (Harpham et al 2005; Inili and Kissam 2006), but also because community, family and parental attitudes are

just as, if not more, influential on young people than 'formal' education (Intili and Kissam 2006; Bourdillon 2004). Several research studies have illustrated how education campaigns with young people have failed because they are contradicted at home by parents (Intili and Kissam 2006; Bourdillon 2004). Working with local adults may also involve working with particular notions of 'childhood' which are very different from 'Western' values, which, Kesby et al (2006) argue, many education projects and research conducted into young people have failed to do. Beyond their immediate contact with adults, young people also do not have access to influencing debates in wider society, for example at the level of policy (Mayo 2001). In the context of environmental education, Uzzell (1999) has pointed out that, because of their limited agency in the present, young people actually have very little potential to make immediate impacts on environmental problems, particularly those which require some form of 'immediate' action. This more fundamentally questions the role of education and young people in particular development issues, as Uzzell (1999) finds, significantly, that often as a result of the marginal agency of young people, education campaigns alone can be insufficient to bring about change. This is perhaps an overly negative analysis of the agency that young people do have in the present, but still presents some important challenges. These debates about the agency of young people in a world of adults have often been ignored by those promoting the young people's participation agenda, and need much further exploration in order to understand the impact of education projects on young people, and on the development issues they seek to tackle.

Tied up with this issue is the largely unexamined assumption amongst education development projects that a change in knowledge will equate with a change in behaviour. In part, this issue revolves around a lack of evidence from research, as Andersson et al (2003) point out, particularly for NGO projects, evaluations tend to focus on outputs of service providers (e.g. the number of young people educated) rather than the impacts in terms of the behavioural output they seek to inspire. Other evidence suggests that education does not change behaviour, because of other significant barriers in society. For example, Uzzell (1999) finds that environmental education does not lead to action competence amongst young people. This is, in part, Uzzell argues, because of barriers which relate to the social status of young people, but also in part because of how such projects are conceived. Using the example of environmental education in the UK, Uzzell (1999) suggests that the emphasis is on education about the environment, and changes at the individual level (such as individual recycling), rather than focusing on the social and political context in which attitudes and behaviours are formulated and action undertaken. In this sense, environmental education can lack authenticity, because young people do not acquire hands-on experience of environmental problems, and when they do, this is often looking at the 'environmental' symptom

(e.g. measuring air pollution), rather than the societal cause. Bonnett and Williams (1998) also suggest that a 'scientific understanding' of environmental problems is often not helpful, and that environmental education should instead focus on the more difficult task of helping young people develop a critical understanding of the values that inform everyday life, and in what contexts these can be changed. Bonnett and Williams (1998) find that, as a result of education campaigns that do not deal with this issue, young people could often identify environmental problems, but not necessarily their solutions at a societal level, or the impact that certain solutions would have on society. This lack of education about societal solutions can leave young people with a sense of powerlessness, where they fail to see how their individual actions can have an impact at the broader scale (Bonnett and Williams 1998). In more extreme cases, education may have negative effects on those that participate. Andersson et al (2003) describe how direct training for young people about the risk of land mines actually increased the likelihood that the participant would be involved in an accident with a mine⁴. Such evidence is very concerning, but significantly highlights how education programmes, aimed at delivering knowledge, are insufficiently thought-through in terms of what their outcomes might be in terms of behaviour, "they assume that, with a given *amount* of information, people will change their actions" (Andersson et al 2003, p875), which, as has been highlighted above, will often not be the case. Again this raises important questions for research, about how knowledges from 'outside' interact with those which are 'local', and how these might influence behaviour both in the long and short term.

In much of the Global South, national governments face serious difficulties in expanding and improving education services, and other actors have often taken over responsibility as a result (DeGrauwe et al 2005), including NGOs and local associations, yet some research has begun to question this process. For example, Caillods (2005) argues that the decentralisation of education from state level is generally introduced on ideological grounds, and not based on any form of evidence that it works. Caillods goes on to point out that "In several cases decentralisation has led to increased inequalities where no effort had been made to strengthen the poorest and weakest districts and regions" (2005, p2). As with decentralisation in other sectors, decentralisation of control of education to the local level, or to NGOs and other actors, can expose a lack of capacity

⁴ Andersson et al (2003) argue that this could be because the training provided to young people, in this case in Afghanistan, tended to increase their curiosity around mines, and might promote a sense of 'confidence' because young people simply knew more information about mines. Interestingly, the education programme in this case study tended to communicate information about 'mine stuff', i.e. describing what a mine was, what the component parts were, and how they worked. There was little education about the long term consequences of tampering with mines, for the individual or for their family. By simply 'knowing more' about mines, young people's curiosity and confidence was arguably increased, and, worryingly, those that participated in education projects were eight times more likely to have been involved in an accident subsequently compared to those who had not participated.

at these levels (Caillods 2005; DeGrauwe et al 2005), and leads to similar issues associated with other participatory development schemes, such as elite capture, and lack of transparency and accountability at the level of the local institution (DeGrauwe et al 2005). Local teachers, or local people expected to contribute their 'local knowledge', may not have the capacity to develop their own curricula, particularly when they are used to receiving direction from the state (for example, lesson plans, or schemes of work), as Lucarelli (2001) demonstrates is the case in Thailand. Easton et al (2000) point out that teachers in the Global South have comparatively little training and education, and building any form of 'alternative curriculum' takes both experience and insight which may be beyond their current capacity. There may be issues with how much time parents, teachers, and other local actors are prepared to commit to such initiatives, particularly when previously they were handled by central authorities (Gershberg 1999). Access to resources may also be an issue at the local level, such as accessing educational materials, and resources on the internet, for example, which may only be possible in urban centres (Lucarelli 2001). There may be costs involved that teachers, and members of the local community, are poorly prepared to pay, be these financial or otherwise (Easton et al 2000). All of these constraints on decentralised education, which requires participation from local people, bring serious quality and equity concerns to bear on such projects; for example, how can local teachers, poorly trained and equipped, be expected to produce a quality education? Furthermore, as Easton et al (2000) suggest, there are concerns that, as a result of decentralisation, a 'two-tier' system may become apparent, where both the rural and urban poor do not receive a 'real' or 'official' formal education, which then undervalues informal or other types of local education. This has led Gershberg (1999), DeGrauwe et al (2005), Andersson et al (2003), among others, to question the wisdom of participatory, decentralisation schemes which put a great deal of stake in local capacity. Andersson et al (2003) point out that, in Afghanistan, households are often very dependent on external interventions, and also suggest that, particularly concerning issues such as education which operate at the national scale, it is only the state which has the capacity to take 'local' projects to this scale. Aggrawal and Rous (2006) also point to the importance of the state as an actor in terms of influencing policy, and creating policy environments which are conducive and supportive of education initiatives which respond to local contexts. They also argue that the state has influence over educational outlets other than formal education, such as the media, which again local actors have little capacity to influence. Whilst this critical research has begun to point towards the negotiation of the role of the state in participatory education initiatives, there is clearly scope for more investigation into what the state should, and should not, be responsible for in terms of education at the local level.

There are many specific issues which remain still unanswered in debates surrounding environmental education. Bonnett and Williams (1998) hint at issues which concern the interaction of different knowledge systems when they discuss how the term 'environment' is defined. They illustrate how, in the UK context, the term 'environment' may be defined by young people in a range of different ways, for example, some associated the environment more with the natural rather than the human built environment, whereas others more broadly discussed the 'surroundings'. This clearly has implications for other contexts, including the Global South, as definitions of terms such as environment may come from a whole range of sources, and there is at present little research into this. Andersson et al (2003) also address how 'education' itself can encompass a range of different types of training, some of which are 'practical', others are more 'academic'. This is clearly of importance in debates concerning education about the environment, particularly if this is aimed at a practical purpose, such as engendering a more sustainable use of environmental resources. Uzzell (1999) finds that in environmental education, programmes often adopt traditional teaching and learning models which are 'top-down' in nature, with young people as 'passive recipients' of knowledge, which does little to encourage practical knowing.

2.4.2 Environmental education in Tanzania

Interest in education for the environment has been brewing at the international level for some time, but it has not been until the 1990s that these have begun to trickle into Tanzanian policy on formal education. Pronouncements on the importance of education about the environment have emerged from a range of international fora, including the International Conference on Environment in Stockholm (1972), UNESCO's International Environmental Education Conference in Tbilisi (1977), the Brundtland Report (1987), and the Rio Earth Summit (1992) (NEMC Tanzania 2004, Hoza 2009). Both UNESCO and the United Nations Environment Programme (UNEP) have also been instrumental in driving environmental education at the international level, with a range of charters and declarations since the 1970s. 2005 to 2014 was 'The UN Decade for Sustainable Development', a further initiative which urged governments to make efforts in education about the environment (Hoza 2009). In Tanzania, official interest in environmental education began in the 1990s, when it became introduced into a range of government policies with support in particular from the World Wildlife Fund (WWF), although the National Environment Management Council (NEMC) of Tanzania argues that sentiments towards education for environmental sustainability date back to Nyerere's 1967 Arusha manifesto, which had a strong bias towards education and self reliance (NEMC Tanzania 2004). The NEMC, WWF, and a number of other Ministries and NGO actors have been promoting environmental education in schools through a

range of means from the late 1990s, including training school inspectors, teacher educators, head teachers and teachers, which has led to elements of environmental education being incorporated into the formal curricula. The NEMC (2004) estimates that at present over 100 NGOs and other community organisations, both international and local, have some form of programme which is focused on environmental education. National fora organised for environmental education are also active in the country, including the Nile Trans-boundary Environmental Action Project (NTEAP), which held a forum for practitioners of environmental education in Morogoro in 2009, and a National Stakeholder Workshop was also organised in Dar es Salaam in the same year.

Evidently environmental education has come to prominence in Tanzania, yet in some of these recent fora there has already been raised a range of context-specific issues. It has been noted that the sheer number of agents involved has created some problems, including a lack of coordination between government agencies and NGOs, as well as 'competition' between different NGOs, which has generally led to a 'compartmentalised' and fragmented approach to official delivery, with few links available to share evaluations and practices (Hoza 2009; Mbuta 2009). Mbuta (2009) suggests that this has already created a duplication of efforts, which might lead to confusion for the public and for schools. Others have suggested that issues also exist at the state level, for example, the frequency of curriculum changes is a challenge for schools, whereas the number of ministries officially identified by the NEMC as being 'involved' in environmental education creates unnecessary bureaucracy and confusion⁵. This has the implication that coordination at government level is quite poor (NTEAP 2009). An illustrative example is the problem of 'definitions' of environmental education at the state level. The NEMC policy on environmental education in Tanzania (2004) is not clear in itself as to how environmental education should be defined in policy, and presents, within the document, several different definitions. This has been recognised by some researchers in Tanzania (Mbuta 2009; NTEAP 2009), who highlight that there has been some confusion at government level between what should be 'environmental education' and 'education for sustainable development'. However, the offering from Mbuta to help define these two terms is also not particularly clear in terms of establishing distinct differences:

⁵ To illustrate, Hoza (2009) indicates that the following ministries and agents are supposedly 'involved' in environmental education in Tanzania: the Ministry of Environmental Affairs, Ministry of Community Development, Gender and Children, Ministry of Health, Ministry of Communication, Science and Technology, Ministry of Information, Culture and Sports, Ministry of Labour, Employment and Youth, as well as public institutions including the National Environmental Management Council, Universities, Colleges and others, but also CSOs, and many NGOs. It is not surprising, in this context, that there are issues of coordination between this vast array of actors.

“Environmental Education (EE): Is the process where people gain awareness of the environment and acquire knowledge, skills, values, concerns and experiences which enable them to act individually and collectively.

Education for Sustainable Development (ESD): Is the vision of education that seeks to balance human and well-being with cultural traditions and respect for the earth’s natural resources”

Mbuta 2009, p3

The definition for environmental education given by the NEMC in Tanzania is equally broad, yet does not quite fall clearly into line with either definition above:

“[Environmental education is] a life-long process whereby individuals and the whole Tanzanian society acquire knowledge and develop ethics and come environmentally aware/conscious, responsive and relevant skills in identifying, managing, monitoring, evaluating and solving environmental issues and problems.”

NEMC Tanzania 2004, p7

All three definitions above are clearly very broad in scope, and are largely interrelated, but the fact that there is significant confusion about what environmental education is at the policy level remains problematic, despite Mbuta’s attempt to resolve it. Other more practical issues have also been identified, including some fundamental challenges for the Tanzanian education system as a whole, for example the size of classes, the lack of training of teachers (particularly in environmental education), the lack of materials, such as textbooks, and problems of distribution of existing resources (NTEAP 2009), but there is also, albeit briefly mentioned in some research, a lack of community involvement in education projects (NTEAP 2009). Although in policy there is reference to the inclusion of ‘indigenous knowledge’ in environmental education (NEMC Tanzania 2004), the use of ‘indigenous knowledge systems’ (IKS) outlined in the NEMC Tanzania policy (2004) is interesting and potentially problematic in the light of current critical indigenous knowledge research:

“Environmental education should thus take cognisance of IKS as a component of social processes of linking humanity with its ancient origins – carrying forward the treasure of knowledge to enhance and facilitate sustainable utilisation and conservation of national resources.”

NEMC Tanzania 2004, p12

The definition provided here very much reflects the use of 'indigenous/local knowledge' from the early days of participatory development approaches, linking them with sustainable use of the environment, and assuming that they are inherently useful for conservation, an approach which has already been heavily critiqued (Leach and Fairhead 2000). There is also little evidence from current research in Tanzania of how local knowledge is in any way being integrated with environmental education, which is in part symptomatic of the current lack of evaluations of NGO projects and of the states work in promoting environmental education (NTEAP 2009; Mbuta 2009). Interestingly, although there is clear recognition of 'indigenous knowledge' in the national policy, there is, somewhat conflictingly, an assertion that environmental education should also be concerned with 'conservation'. The NEMC (2004) outlines that one of the main objectives of environmental education is 'enhancing support and commitment in environmental conservation' (p16), as well as "to enable a rational use, management, and conservation of the environment" (p10). This, potentially, might cause conflict with local practices and knowledges, if examples from other research studies are to be taken seriously (e.g. Leach and Fairhead 2000; Twyman 2000), yet there is little evidence that this has been considered in the Tanzanian context. For example, the NEMC (2004) identifies 'six major environmental problems' in Tanzania, which include 'Land degradation; Lack of accessible, good quality water for urban and rural inhabitants; Loss of wildlife habitats and biodiversity; Deterioration of aquatic systems; Deforestation; and Environmental Pollution', but there is little to tell us exactly who has established these, or where they have come from. Are they based on the priorities of urban and rural Tanzanians, or from scientific research studies?

There is clearly a range of challenges for environmental education which have been emphasised here, particularly with reference to the use of local knowledge, community participation, and the involvement of the state and NGOs. The policies and research studies highlighted thus far which are specific to environmental education in Tanzania are not entirely uncritical, yet they largely focus on failures and challenges to the 'system' of implementing environmental education at a government/NGO level, and do not tackle many of the broader issues highlighted in this chapter, such as those concerning the participation of communities, and those involved in the projects (such as teachers), how local knowledges may be engaged and negotiated with as part of environmental education, nor do they consider the agency of young people and what kind of impacts environmental education might have on their lives. Much of the policy (e.g. the NEMC 2004), and the current research being circulated at fora for practitioners in Tanzania (e.g. Hoza 2009; Mbuta 2009; NTEAP 2009) are very general in nature and often vague, rarely citing specific case studies, and where critique is present, there is little attention to exactly what the

consequences of failure are, and what possible solutions might be. In part, this comes from policy, as the NEMC (2004) policy on environmental education gives few specifics about exactly how it should be coordinated at a state/NGO level, but it is also largely a result of a lack of critical evaluation at the NGO and local level, particularly through a neglect of specific issues concerning participation and the use of local knowledge.

2.5 The key questions

This chapter has reflected on the concerns raised by the participation and local knowledge agenda, and has positioned these concerns within the landscape of environmental education in Tanzania. It is from the key challenges to these areas of development that the aims of this thesis emerge, and environmental education offers an interesting 'way in' to addressing these aims. It allows us to consider what participation might mean in the context of education development, in terms of costs, benefits and notions of empowerment, which may contribute to greater theoretical and practical understanding of how participation works. Kapoor (2002b) calls for a set of systematic rules to govern participatory encounters, and this thesis aims to explore what these might look like. If, as Kesby (2005) suggests, power is unavoidable in participation, then how should this power be used positively, or alternatively, how might it be challenged constructively? This thesis also aims to explore both the ethics and practice of participation, ultimately asking, in the Tanzanian context; has the participation agenda really made a difference to education development? Participation also makes a number of assumptions about how communities function, yet existing work in Tanzania (Green 2000; Mercer 2002), hints at the possibility that communities may not fit into these assumed patterns, and I aim to confirm this, in particular considering how individual (Tanzanian) ideas of responsibility might fit in with notions of community action. Although there is already a substantial critique of the notion of 'community', there are few concrete empirical examples of what the alternative 'community' is; I aim to provide one.

The education setting of this research also offers avenues for exploring the local knowledge agenda. As I consider the role of state curricula, NGO projects, and local understandings of the environment, I aim to analyse how these knowledges interact. As Bonnett and Williams (1998) suggest, how the environment is defined at the local level by young people, adults and organisations, may offer a starting point here. Much has been discussed about hybridising local knowledges and those of the West, but is this happening, and how might it happen? The dynamic nature of local knowledge has too been highlighted, but this thesis aims to illustrate if and how

this occurs. Bebbington (2000) points to the limits of local knowledges, but what are the 'limits' to local knowledges of the environment in Tanzania, and what does this tell us about local knowledge more generally? As this thesis also focuses on the role of young people, there is further scope for considering the question which McFarlane (2006), Sharp et al (2003) and Kesby (2007) all hint at, which is what a 'radical' approach to engaging with different ways of knowing might look like, particularly those of the most marginalised. Through answering this question, it might indeed be possible to follow up the research of Green (2000), and Mercer (1999, 2002) to think about how a distinctly Tanzanian ideology of local development, participation, and environmental management might be conceived. It should be evident from this review that there is also need for more focus on young people in participation and local knowledge debates (Boudillon 2004; Mayo 2001), but more specifically I aim to consider what role NGO projects, and education more generally, can have in promoting young people's empowerment. Does environmental education offer the possibility for young people's marginal status to be challenged (Kesby 200a; Pain 2004), and more simply, does a change in knowledge equate to a change in behaviour for young people? This is not just a question for education projects, but for participation more generally.

There is also a need for more critical reflection on the role of NGOs as 'local' actors in development, along with a re-assessment of the role of the state in local development. Environmental education as a focus provides an opportunity to do this, as it represents the crossroads between an NGO project, the state curricula, and local-level action. Ultimately the question here is: who is best placed to deal with particular aspects of development, at particular times, and in particular spaces? Participation sidesteps this issue when it celebrates the power of the local, but there is clearly a dangerous terrain exposed here between promoting local empowerment and shunting responsibilities onto local people who are ill-prepared for them. Participation often assumes that more local participation is better (Mayo 2001), but is this really the case? Brett (2003) and Kapoor (2004) ask: what kind of participation is best? But neither provides the answer. This thesis aims to explore what the answer might be. There is also a need throughout all these questions to focus both on space (spaces of participation, and knowledge), and on scale (beyond/within the local). This research seeks to apply a distinctly geographical perspective to the key questions above, in particular considering how patterns of empowerment/participation/social negotiation play out over space. Finally, the education focus of this thesis draws attention to sites and places of learning, and the influence these might have on how knowledge is reproduced.

Chapter 3

Methodology

3.1 Context

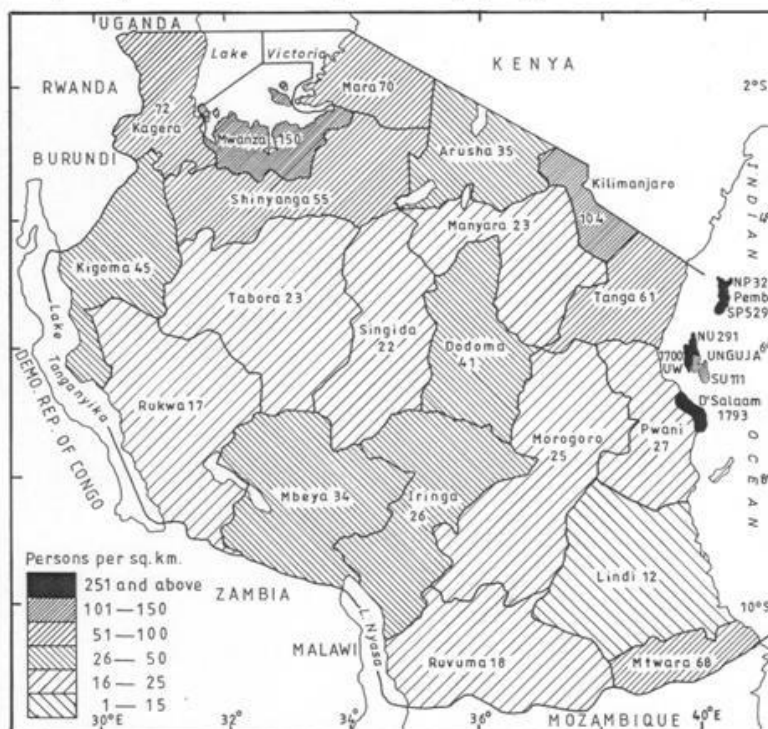
The methodological strategy of this thesis is one informed by qualitative techniques, participatory methods and teaching and learning methods from pedagogical techniques. Rather than a 'deep' anthropological study, this research, in investigating the issues associated with environmental education in Tanzania, adopts a broad strategy that incorporates three research sites, several NGOs and their projects and over two hundred individual respondents, in order to provide detailed qualitative data which is aimed to reflect different experiences in Tanzania, which are tied to different study sites and therefore different environmental situations. As well as more formal qualitative techniques, this study also utilised informal observations and encounters with research participants in order to gain some in-depth insight into the participating communities. In this chapter I outline the contextual setting for the field study, firstly discussing Tanzania as the national context in which this research takes place, then going on to describe the participating NGOs, their projects and the three research sites. I describe and provide explanation for the overall methodological approach taken, and then give more detail on the various methods used in the course of the field research. Finally, I outline some of the ethical considerations which applied to this study, particularly those concerning working with young people.

3.1.1 Tanzania

Tanzania provides the overall context for this research project, and represents a useful case study as the various themes of community participation, the use of local knowledge, environmental conservation, and environmental education are at present being played out by state, NGO, and local actors in the country. Tanzania has a population of 34.4 million people (as of the 2002 census), in an area of 945,000 km². The population is growing relatively rapidly, having tripled since 1967, with an annual growth rate of 2.9%. Despite the increased urbanisation of the population, the country remains a predominately rural one, with 77% living in rural areas compared to 23% in urban centres (see Map 3.1 below) compared to 1967, when only 6% of the population were urban, and 94% were rural. The importance of young people in the context of Tanzania is in part represented by their important presence in the overall age structure of the population, where 44% are below 15 years of age. This is similar to other countries in East Africa,

with Malawi, Zimbabwe, Zambia and Swaziland (among others) having similar population structures (NBS Tanzania 2006).

Fig. 3.3. Spatial Distribution of Population Density by Regions in Tanzania, 2002



Map 3.1: The population density of Tanzania shown by region, illustrating the density of population around the urban area of Dar es Salaam in the East, the two other largely 'urban' areas in Kilimanjaro and Mwanza (in the north), with less-densely populated areas to the west and south of the country (source: NBS Tanzania 2006)

Although the presence of environmental education has been outlined in the previous chapter, Tanzania as a country still faces many challenges in terms of education more generally, which in itself provides the context in which environmental education projects must work. Overall primary school attendance in Tanzania is generally good compared to similar countries in the Global South, with 69% attending primary school, whilst literacy rates have also markedly improved, from about 50% in 1978 to 70% in 2002 (NBS Tanzania 2006). Otherwise, there are still a number of challenges. 32.8% of those aged 5 and over have never attended school, and after 16 years of age school attendance drops rapidly, such that by the 18-19 age group only 16% are still at school. Although there is little difference in male/female attendance at primary school age, after age 18 there is a significant prioritisation of males (NBS Tanzania 2006). There are notable disparities between rural and urban areas, for the 7-13 age group school attendance is 65% in rural areas compared to 84% in urban ones, which is even more significant when the percentage of the

population living in rural areas is taken into account. Young people are economically important actors, not untypical of East African countries, and others in the Global South, and this clearly will have impacts on their participation in education, but also their place as actors in society. According to official statistics (NBS Tanzania 2006), 39% of young people aged 5-14, are economically active. If this category is divided, then 29% of those aged 5-9 are economically active, compared to 50% of 10-14 year olds. This is clearly an important challenge for the formal education system, yet also reasserts the place of young people as important economic actors in Tanzania. Gender relations are, at a national level, also typical of East African countries, which can in part be illustrated through national statistics, for example, 67% of households are male headed, with 33% led by women.

Importantly for this study, Tanzania is a country where there are significant negotiations over the use of natural resources both at the national and local level. Most of the population in Tanzania are still heavily reliant on natural resources, yet there is a growing interest from both the international and national conservation community in conserving the country's natural resources. Overall, 72% of the population is engaged in agriculture, with 9% (the second largest group) working in forestry, fishing, livestock, and hunting. Natural resources are directly relied upon for many elements of Tanzanian daily life, for example, firewood is the main source of fuel for cooking in Tanzania, used by 77% of private households. In rural areas, 96% of all households use firewood for cooking, whereas in urban areas charcoal predominates with 53% of all households using it as their main source of energy for cooking. Throughout Tanzania, only 10% of households have access to electricity, 32% in urban areas, but only 1% in rural areas. Only 34% of people on the Tanzanian mainland have access to piped water, the remainder using naturally occurring water sources. Tanzania's population is therefore highly reliant on natural resources. Although current interest in preserving Tanzania's wildlife and biodiversity more generally dates back to the mid-1980s (Schroeder 1999), the increased control of wildlife resources by the state can be traced back to the colonial era when large areas began to be gazetted for hunting (Nelson and Agrawal 2008). Current interest from the international conservation community has highlighted Tanzania's importance to global biodiversity and more recently (since the 1990s) has been encouraging the creation of conservation projects with participatory components (Myers 2002; Blomley et al 2008; Nelson and Agrawal 2008). Tanzania now has one the world's largest protected area networks, estimated by Nelson and Agrawal (2008) to be 30% of the country's total land area, although the National Environmental Council of Tanzania (2004) estimates the total 'protected area network'⁶ to cover about 40% of the total land area. Balancing the national and international interest in

⁶ Including national parks, game reserves, conservation areas, and forest reserves (NEMC Tanzania 2004)

biodiversity and wildlife conservation, with the country's populace being still reliant directly on natural resources for their livelihoods, has been highly controversial and problematic. During the 1990s, increased numbers of people were moved off their land in Tanzania as wildlife depletion also increased (Schroeder 1999). It is in this uneasy tension that education about the environment sits in Tanzania.

Politically, Tanzania also provides an interesting case study. Tanzania became independent from British rule in 1961, and in 1967 Julius Nyerere committed Tanzania's ruling party to his vision of 'African socialism'⁷, which he announced in the 'Arusha Declaration' (Smyth and Seftel 1998). Tanzania remained a one party state until 1994 when multiparty elections were first held. During this era, Tanzania became 'Africa's socialist experiment' (Mercer 1999), with a large state dominating most aspects of public life, and a range of variably successful socialist policies, including most famously the ujamaa project which attempted to rapidly collectivise Tanzania's agriculture, with disastrous consequences for the population (Smyth and Seftel 1998). In the current multiparty democracy era, Tanzania has remained dominated by the ruling CCM party, now in power since independence in 1961, yet economically and politically the country has changed significantly, with economic and political liberalisation occurring from the mid-1980s, under pressure from Structural Adjustment Programmes and international organisations. As the state has retreated from its significant presence in public life, there has been a subsequently huge growth in the NGO sector (Mercer 1999). NGOs are a relatively recent phenomenon in Tanzania, as prior to the mid-1980s they were effectively discouraged by the state. This again creates an interesting context for this research, as whilst NGOs are large and significant service providers in Tanzania (Mercer 1999), their place within the space of the nation state is still contested and being negotiated. Similar to many other countries in the Global South, the rhetoric of participatory development, from around the late 1980s, has become institutionalised in the Tanzanian state and NGO sector (Mercer 2002), apparent particularly in the natural resource conservation agenda (Blomley 2008). This is again important for this research, as it provides a context in which the broad issues of participation can be investigated.

⁷ Nyerere's vision of African socialism was one which was distinctly different from the socialism of Western European states. Nyerere's African socialism emphasised interdependence within the family and the community, and focused on ideas of self-reliance, particularly at the national level in the post-independence state. Yet, arguably, over the course of Nyerere's reign, his socialist policies also created a state-heavy country (similar to Western socialist states) which, intentionally or otherwise, promoted a high degree of dependence on the state (Smyth and Seftel 1998, Mercer 1999).

3.1.2 The NGOs

In order to investigate both the use of local knowledge and participatory techniques for the purposes of environmental education, a number of NGOs conducting such projects were surveyed as part of a pilot study which took place during August-September 2009. These were the Jane Goodall Institute Tanzania (JGI), the Tanzanian Forest Conservation Group (TFCG), Joint Environmental and Development Management (JEMA), and Tanzania Youth Environmental Network (TAYEN). Interviews were conducted with representatives from each organisation in order to determine and negotiate which NGO and project would become the main focus of the study. The JGI environmental education project was eventually selected for a number of reasons:

- Out of the four NGOs, JGI ran the best-established environmental education projects, which focused on educating young people, whereas other NGOs combined teaching young people and adults, and their projects were less well-established in schools.
- In discussions with JGI staff, and after consulting some of their documentation regarding environmental education, it was clear that their projects aimed to contain significant participatory components (JGI 2009b).
- JGI's involvement with schools meant that there was potential for investigating the interaction of both formal and informal environmental education.
- JGI projects were also outside of Dar es Salaam, unlike some of the other NGOs, which offered scope for investigation in contexts outside of the urban area.
- JGI staff were the most helpful and accommodating in terms of organising visiting projects and providing information.

The Jane Goodall Institute is an international NGO, whose primary mission is based around wildlife research and conservation, although currently their activities span a broad range of other development projects, particularly in education about environmental issues. JGI was founded in 1977 by Dr Jane Goodall, famous for her Chimpanzee research in Gombe, located in the Kigoma region in the west of Tanzania. Although the NGO was established in California, USA, it has a large national registered organisation in Tanzania, with offices based in Dar es Salaam. JGI began their environmental education project in 2006, which, according to the organisation, had the following objectives:

- *“To increase knowledge of youth in coastal communities on coastal and marine ecosystems and engage them in actively addressing conservation issues through Roots & Shoots service learning methodology*
- *To deepen students’ understanding of conservation and coastal and marine ecosystems through the development and dissemination of environmental education materials.*
- *To inspire, support, and increase awareness of environmental conservation actions in the coastal regions through a targeted awards and promotions scheme”*

(The Jane Goodall Institute 2009b, p5)

The project itself, as can be seen from the objectives, focused on ‘coastal’ environmental issues, and the organisation only worked in schools in the coastal regions of Tanzania, and on Zanzibar⁸. The main focus of the project was the training of primary school teachers to deliver environmental education in the classroom. However, there were a number of other activities conducted under the scope of the project, including conducting various ‘events’ for schools which promoted environmental activities; producing and distributing environmental education learning materials; facilitating young people and teachers to establish practical conservation projects; and establishing youth clubs in schools focused on environmental issues (called ‘Roots & Shoots Clubs’). The project is broad in scope, and JGI’s own figures estimate that they have trained just under 1,500 teachers, engaged over 47,000 students and community members through school teaching and environmental events, and reached 103,000 children (JGI 2009b). The JGI Environmental Education project in Tanzania is funded internationally by USAID (JGI 2009a), an independent federal government agency of the United States whose budget is directly from the US federal government, whilst other environmentally-themed projects at JGI were also funded by the Norwegian Embassy.

The JGI environmental education project was selected to be the focus of this research study in part because both JGI staff who worked on the project, and documentation about the project, made explicit reference to adopting a ‘participatory’ approach to environmental education. Summary documentation produced by the organisation suggested that their environmental education projects aimed to be ‘participatory’ in a number of ways, for example:

“Environmental Education activities are a useful tool for increasing community participation in natural resource conservation... EE activities have been integrated into all

⁸ The project was operating in 22 districts of Tanzania, 12 districts on the coastal mainland and 10 districts in Zanzibar. On the mainland, these included: Bagamoyo, Rufiji, Kilwa, Kinondoni, Lindi, Mkuranga, Mtwara, Mkinga, Muheza, Pangani, Tanga, and Temeke.

JGI projects and programs for the aim of promoting skills and knowledge on natural resource concepts including the ability to evaluate environmental issues, and the development of action skills necessary to invoke environmental solutions... This project seeks to empower, and inspire children and teachers”

(The Jane Goodall Institute 2009b, p6)

Similarly, interviews with JGI staff also suggested that they aimed to employ a participatory approach in engaging with project participants:

“The key task of the project... is to engage primary school students in a participatory way to give them knowledge of the environment and environmental issues which will lead to practical action”

Environmental Education Coordinator, JGI

There is evidence in the quotes above of a participatory ethos embedded in the aims of the project, including suggestions which closely relate to some of the proposals made by participatory proponents such as working with local people to develop their skills (in this case by enabling them to manage their own natural resources), and the emphasis on seeking to ‘empower’ both young people and teachers, again in this case to take action in their local environment. The quote from the project coordinator also suggests that ‘participatory methodologies’ were employed, implying that participatory modes of engagement were used, although this respondent did not go into more detail as to what exactly these were. It was clear from the documentation (JGI 2009b) that the project was aimed at increasing participation in environmental conservation activities, and further examples existed of this ethos in the discourse of the document, including: *“We aim... to increase public awareness and participation in coastal conservation issues”* (JGI 2009b, p6), *“More than 1500 students have attended Youth Summits and participation in practical field excursions has increased”* (JGI 2009b p7), The forms of participation discussed here do not necessarily meet the high ideals of participatory development suggested by some participatory advocates, as it did not appear, at least in this particular document, that the project aimed for either young people or local adults to take full control of the project itself. However, one quote from the document did suggest that *“Over five hundred participatory environmental project activities have been implemented by participants... such as tree planting, restoration of mangrove swamps, [and] beach cleanup campaigns”* (JGI 2009b, p7). This last quote illustrates that, according to JGI, practical projects were instigated by participants, perhaps suggesting that they did have more control rather than just participating ‘in’ pre-designed projects. Therefore whilst it was clear that

the environmental education project aimed at being participatory in a number of ways, it was not clear exactly *how* participatory or in *what ways* participatory methods were employed. Participatory rhetoric was certainly suffused throughout the project, and whilst participation as a method of engagement with communities has been significantly critiqued (Cleaver 1999; Cook and Kothari 2001; Mohan and Stokke 2000), this thesis aimed to assess how this participatory rhetoric, still so prevalent in this project despite academic critiques, translated into a participatory approach on-the-ground in the practical activities of the project.

In order to research and evaluate the environmental education projects conducted by JGI, including their level of participatory engagement, three case study areas were decided on based on geographical location and their involvement with the JGI project, as well as their status as urban or rural areas of Tanzania (Map 3.2). The first two case study areas in Kawe (Dar es Salaam) and Bagamoyo were selected based on the location of schools working with JGI who were prepared to take part in the research project, whilst the third, in the rural area of Rukwa, was chosen as representative of a rural area which had not had contact with the Jane Goodall Institute project.

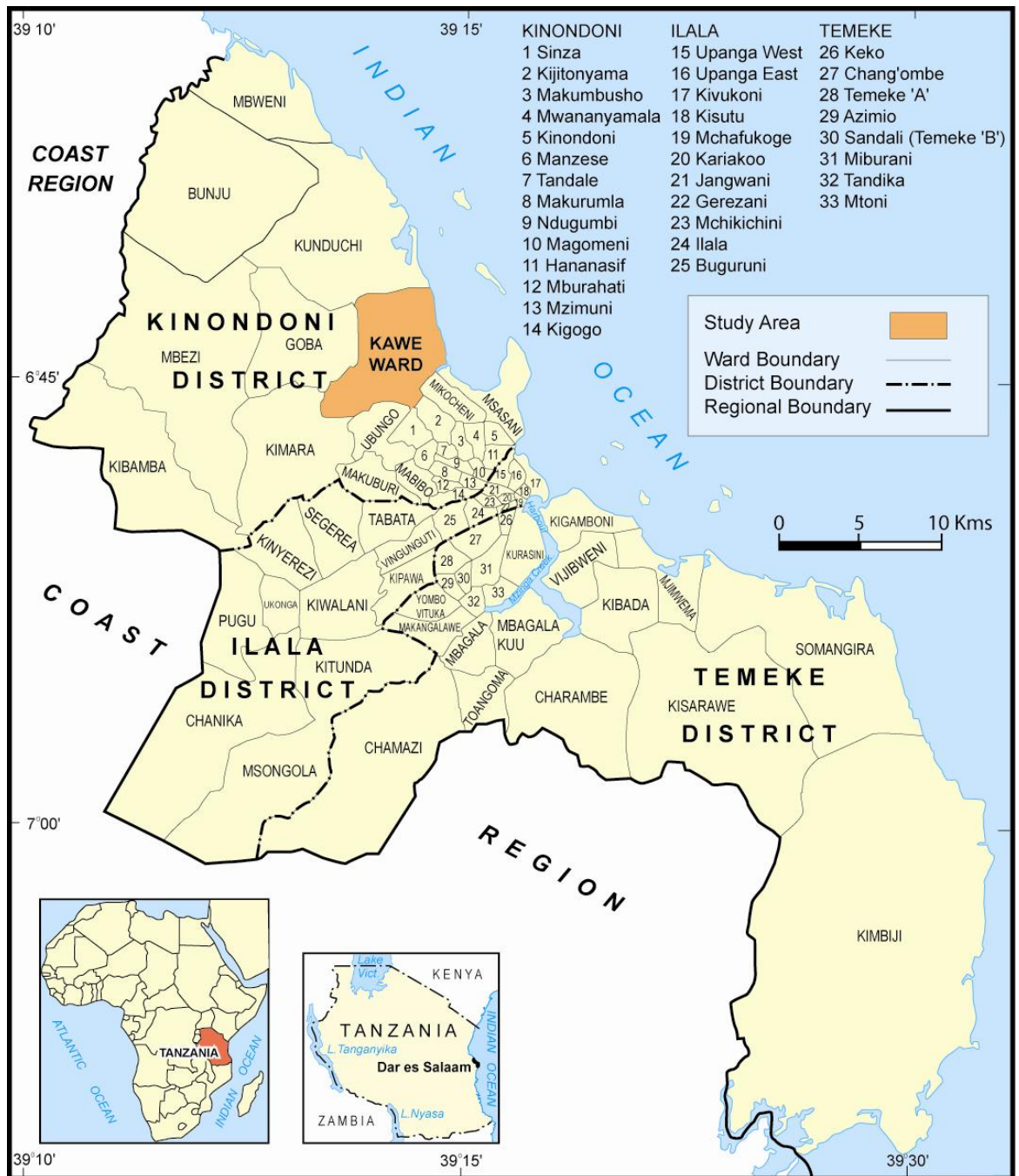


Map 3.2: Tanzania: administrative areas and case study locations (Source: Mike Shand, School of Geographical and Earth Sciences, The University of Glasgow).

3.1.3 Kawe

Kawe is located in the north of Dar es Salaam (Map 3.3), and was decided upon as a study area because the particular primary school which worked with JGI in this area was forthcoming in agreeing to participate in the research study, but also because the area may be regarded as representative of a densely populated area of urban Tanzania. Dar es Salaam city has a population of 2,487,288 according to the 2002 population census (NBS Tanzania 2006), although the urban area is now likely to be significantly larger in population, as in 2002 the Dar es Salaam region had an annual population growth rate of 4.3%. It also has the highest population density of any region in Tanzania, with 1,786 people per sq. Km in 2002 (NBS Tanzania 2006). Dar es Salaam also has

the largest migration turnover of any region in Tanzania, with 49% of the population born outside the city. Dar es Salaam has the smallest proportion of people working in agriculture in Tanzania (13%), and the highest proportion of people working in some form of business (46%), and in office work (19%). This in part makes it the most 'urban' area of the country. However, Dar es Salaam also has the highest official rate of unemployment (12%), and 'inactivity' in terms of employment statistics (43%). Kawe is an 'urban ward' of Dar es Salaam, with a total population of 94,166 (NBS Tanzania 2006), and although there are no such specific figures for Kawe as there are for Dar es Salaam (e.g. in terms of migration etc), we can assume that Kawe will be similar to other urban wards of Dar es Salaam and is at least, in part, representative of some of the figures above. The school which took part in the study, 'Kawe B Primary School' is located near an old industrial area of Kawe (Map 3.4), principally based around the now abandoned Tanganyika Meat Packers factory. This area of Kawe was dominated by the operations of the factory, an abattoir and cattle meat canning factory, which was closed in 1993. Until that point, the factory employed a significant proportion of those who lived in the area, providing both housing and social amenities for local people. Since the demise of the factory, local residents believe that official employment in the area has fallen, as have standards of living, as services previously maintained by the company have deteriorated. The area around Kawe B primary school comprises old factory housing around the factory itself, and a newer urban settlement which comprises tightly-packed, concrete housing. Towards the coast in Kawe, there are increasingly large, gated homes for wealthier residents of Dar es Salaam, as well as a few hotel resorts, which take advantage of the beach area to the east of the ward. Although it has some specific peculiarities, particularly the presence of the Meat Packers factory, Kawe is likely to be representative of other urban and peri-urban wards of Dar es Salaam, with residents engaged in the formal and informal economy, small scale urban pastoral and farming activities, as well as a small number involved in fishing.



Map 3.3: Dar es Salaam: Kawe Ward (the study area) highlighted to the north of the city. Central Dar es Salaam largely comprises of Wards 17, 18, 19 and 20 on the map. (Source: Mike Shand, School of Geographical and Earth Sciences, The University of Glasgow).



Map 3.4: Kawe. The map (central) illustrates the extent of the study area in Kawe, with key features highlighted (Source: Google Earth).

Kawe B Primary School.

Areas of old factory housing

Mix of wealthy beachfront housing, small hotels, and old factory houses.



More recent, dense concrete housing.

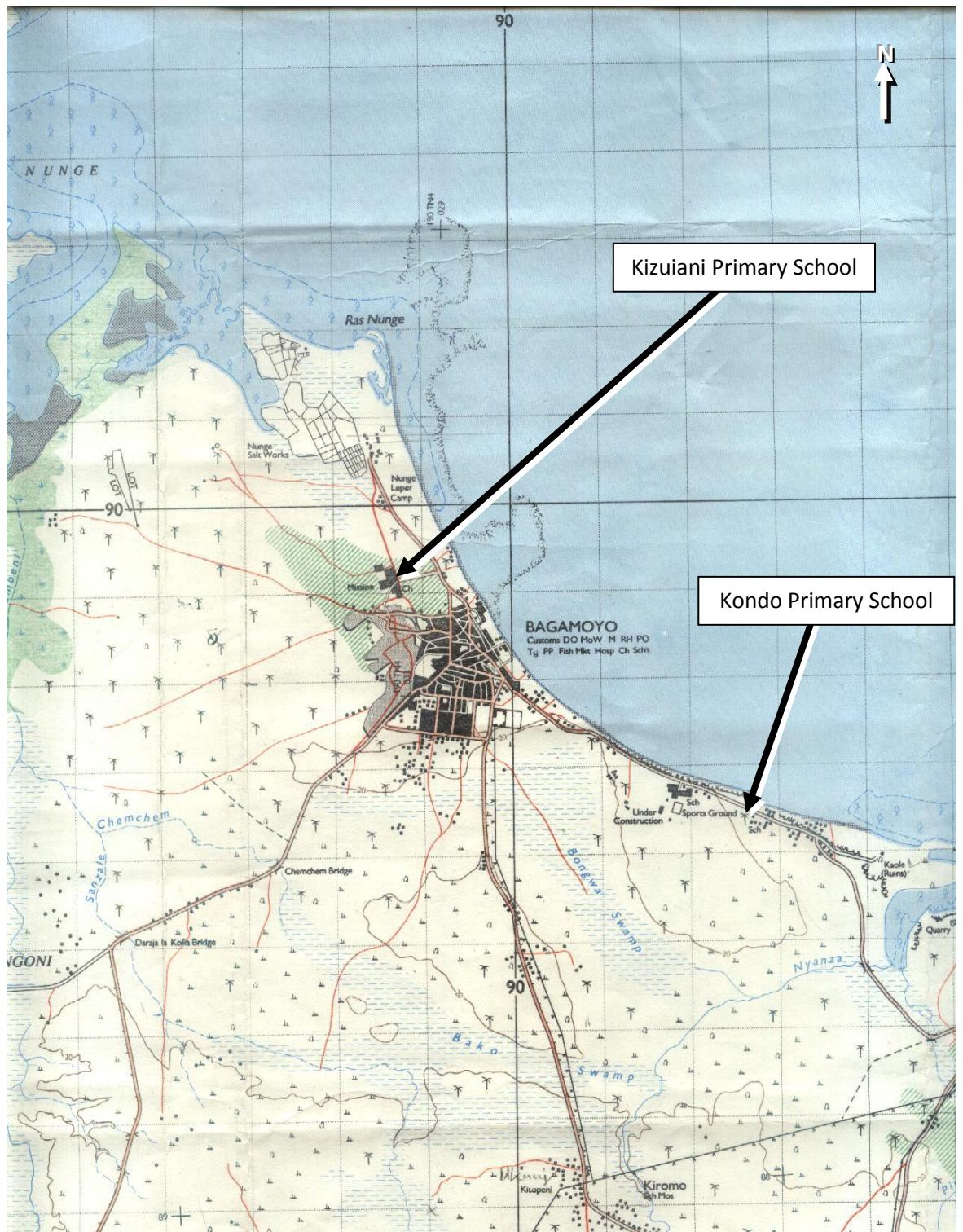
Abandoned Tanganyika Meat Packers factory



3.1.4 Bagamoyo

As this research was concerned broadly with environmental knowledges in Tanzania, it was decided to investigate the impact of environmental education in a range of different environmental settings. Bagamoyo as a research location offered a number of advantages for this purpose. Bagamoyo is a distinctly urban area, what, in Tanzania, would constitute a significantly sized town, with a total population of 228,967 people, comparatively small compared to Dar es Salaam, and with a much lower growth rate of 2.4% per annum (NBS Tanzania 2006). The Pwani region in which Bagamoyo is the principal town has a significantly lower population density compared to Dar es Salaam, with 27 people per sq. Km (although this is likely to be higher in Bagamoyo town itself). As a coastal town, it has a distinct history and economy. Bagamoyo has historical significance as a major Arab and Indian trading port from the 13th Century, and in the 18th and 19th century it was again an important port for the ivory and slave trade (NBS Tanzania 2006), which made it the most important market centre on the mainland coast, second only to Zanzibar in terms of trading importance. Bagamoyo became the headquarters for German East Africa from 1886-1891, until Dar es Salaam became the capital of the colony. Although the town's economy has since been dominated by fishing, agriculture, trade and handicrafts, it has become a site of increasing investment in tourism, largely focused around the beach which lines the town to the east (Semesi et al 2008). In contrast to Kawe, where much of the natural vegetation has been cleared for urban growth, the surrounds of Bagamoyo's coastline is characterised by sandy/muddy tidal flats, mangroves, coral reefs, lagoons and estuaries. These ecosystems play a major role in supporting local people as sources of cash, food and energy (Semesi et al 2008). Some of the main natural resources which are exploited locally include the fish stock; mangrove forests which are cut for firewood, charcoal production, and building; salt production; and a range of small-scale farming practices (Semesi et al 2008). Despite Bagamoyo's urban status, it remains a town very much focused on utilising particular natural resources, making it a significantly different case study area to that of Kawe. Economically Bagamoyo is distinctly less well off in terms of GDP compared to Dar es Salaam, according to Semesi et al (2008), between 1990 and 1994 the regions GDP was on average 20% lower than that of Dar es Salaam. Bagamoyo has a significant migrant population, with 21% being born in other regions, but this is also less than half those who are migrants to Dar es Salaam. The region of Pwani has an urban population of 21%, making the surrounding area to Bagamoyo town much more rural in nature, again offering a contrast to Dar es Salaam.

Bagamoyo is located on the coast north of Dar es Salaam, and the connecting road has been recently improved within the last ten years, making the town much more accessible from Dar es Salaam than it previously had been. The Jane Goodall Institute worked with ten schools in Bagamoyo, and two of these were selected to take part in the study, namely Kizuiani Primary School and Kondo Primary School. Kizuiani is located in the town itself, and Kondo is located outside the main town to the south (Map 3.5). The maps of Bagamoyo and the surrounding area (Map 3.5 and Map 3.6) illustrate the situation of the town. Although Map 3.5 is the most up to date map available in Tanzania, the data are old (late 1960s), and the town has grown significantly since, particularly with hotel developments along the sea front. Map 3.6, based on more recent satellite imagery, shows some of these more significant hotel developments along the sea front.



Map 3.5: Bagamoyo and the surrounding area (squares are 1km²). The urban area (shown in black) is now significantly larger than shown on the map.



Map 3.6: Bagamoyo. The main map (below) illustrates the central area of Bagamoyo town, and the second map (left) illustrates an area just north of the main town illustrating beachfront hotel developments and small areas of mangrove forest. (Source: Google Earth)

Area of Mangroves

Typical hotel developments on the beachfront



Typical iron roofed houses in Bagamoyo town.

Main landing area for fishing and small trading craft.

3.1.5 Rukwa

With 77% of the Tanzanian population living in rural areas, it was important to collect data in a distinctly rural area to reflect the experiences of those living in rural locations. It was also considered important to focus on an area which had not been a part of the JGI project, in part to offer a point of comparison for evaluating the role of the NGO in influencing local environmental knowledges. To offer an even more significant contrast, it was also decided to focus on a rural location which was appreciably remote from urban Tanzania, which would therefore have limited contact with NGOs, and significantly far from other popular national parks and reserved areas, such that it therefore would receive less attention from state agencies working on the environment. For this reason, a rural area relatively remote from urban eastern Tanzania was sought. The final decision to locate the research in Rukwa, and specifically in the villages of Ilemba, Sakalilo, and Solola, was firstly based on the fact that the region matched the criteria, and secondly because a Research Assistant who worked in Dar es Salaam had personal contacts in the area, thus offering important introductions to local leaders, from whom permission had to be sought to conduct the research.

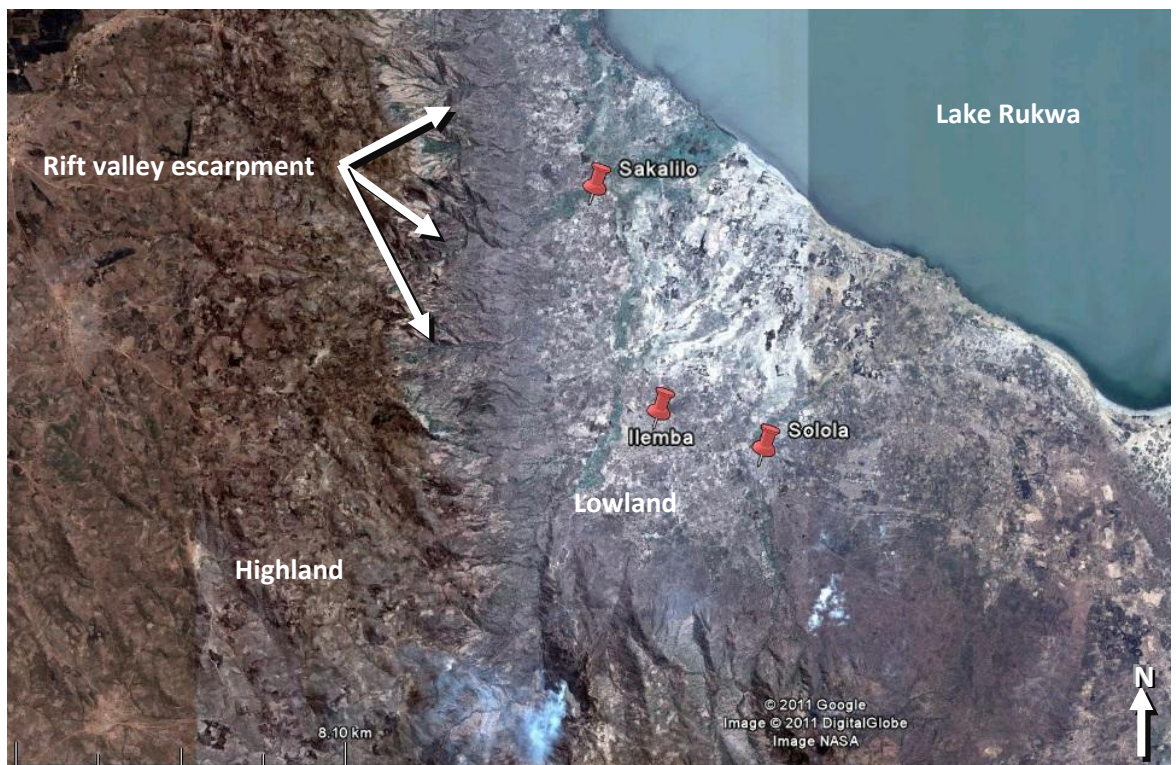
Rukwa, located in the far west of Tanzania on the border of the Democratic Republic of Congo and Zambia, is relatively remote from the urban east and north of Tanzania. The region is largely rural, with on average 17 people per sq. km and an urban population of 17.6%. For a rural area, Rukwa has an interestingly high growth rate, in part due to an influx of refugees into the region and surrounding areas, particularly from the Democratic Republic of Congo, Rwanda and Burundi, although such refugee populations are largely located in the north of the region. However, overall, the population of migrants is relatively low compared to Dar es Salaam and Pwani, with only 10% born in other regions. Rural areas of Tanzania also offer a significantly different context for studying the place of young people, and Rukwa is, broadly, a typical example. Overall, rural areas of Tanzania have a higher percentage of young people under the age of 20, with urban areas having 49% and rural ones 57% (NBS Tanzania 2006). More specifically, Dar es Salaam has a 0-14 age population of 33%, Pwani has 40%, and Rukwa has 49%. The status of young people may also be different for other reasons. For example, in Rukwa, the age at first marriage (age 21.6) is significantly lower than that in Dar es Salaam (26.6). The total fertility rate is much higher in Rukwa compared to Dar es Salaam, with the average being 5.0 in Rukwa, and only 1.9 in Dar es Salaam. There are broad differences in education and educational attainment in Rukwa, and rural areas more generally. In urban Tanzania, 91% of the 15-19 age group are literate in Kiswahili, whereas in rural areas this is 73%. In the three specific study areas these differences are more

pronounced: in Dar es Salaam literacy levels are 89% for this age group, for Pwani this figure is 59%, and in Rukwa it is 61%.

This research study was conducted in three different villages in Rukwa, namely Ilemba, Sakalilo and Solola. These three villages are located within a few miles of each other along the shores of Lake Rukwa, in the east of the Rukwa region (Map 3.7 and Map 3.8). They are relatively remote, particularly from the capital of Dar es Salaam, where they can be reached in 2/3 days journey overland. The nearest urban centre is Sumbawanga, the capital of Rukwa region. However, this is an approximately 5 hours' overland journey in a good four-wheel-drive vehicle on unsealed roads. The remote nature of the three villages is enhanced by the poor quality of the roads and the terrain crossed to reach them from Sumbawanga. The three villages are located at the bottom of a steep escarpment, a branch of the rift valley, and in the east are bordered by the large expanse of Lake Rukwa (Map 3.8). The one road down the escarpment from Sumbawanga is very steep, in poor condition, and is impassable to vehicles after heavy rain, making it difficult and, potentially, expensive both in cost and time for inhabitants in Ilemba, Sakalilo and Solola to reach areas outside their villages, particularly problematic for accessing services such as health care.



Map 3.7: Rukwa area. The location of Ilemba village is shown relative to the town of Sumbawanga (the capital of Rukwa Region). The main road to Mbeya is running south of Sumbawanga, whilst the road north goes to Mpanda and Kigoma. Lake Rukwa can be seen to the right, with the rift valley escarpment running across its Western shore, and to the left of the image is Lake Tanganyika, bordering Zambia and the Democratic republic of Congo (Source: Google Earth).



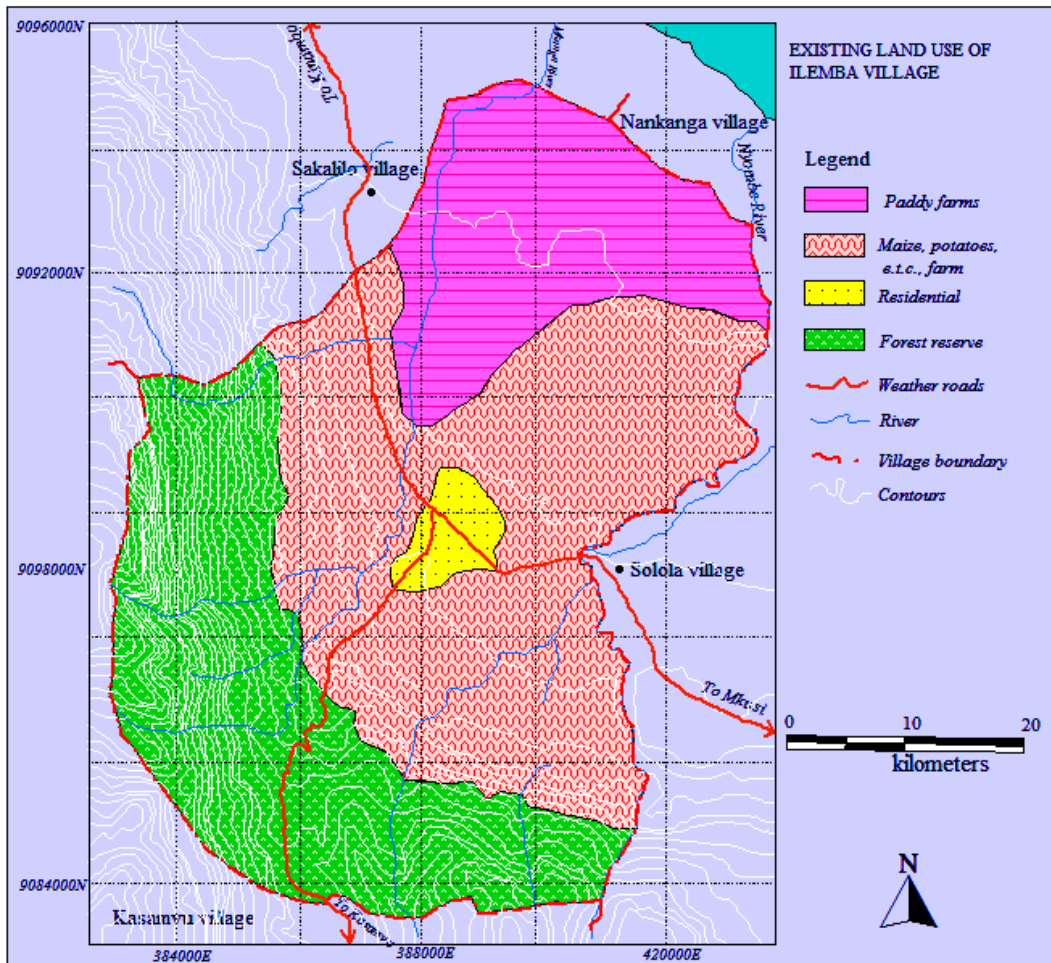
Map 3.8: Three study areas in Rukwa. The location of the three study villages are shown in Rukwa, their position relative to the shore of Lake Rukwa, and the surrounding country. The lowland around the villages is clearly in a white/grey colour, whilst the highland area to the west is in a darker brown (Source: Google Earth)



Map 3.9: Ilemba village, showing typical iron roofed and thatched roof houses in the central village. The dirt road to the south runs to Sumbawanga up the rift valley escarpment, whereas the road running to the south leads to Solola and to other villages along Lake Rukwa (Source: Google Earth).

According to the 2002 census, Ilemba village (Map 3.9) has a population of 5,176, Sakalilo has 4,688, and Solola has 1,608; however each of these includes the distinct 'village' area and the surrounding farms. To date, very little research has been conducted in this area, and much of the information gathered about the area prior to the field study itself came from several personal contacts in The University in Dar es Salaam⁹. From the information provided by residents during the course of the study, the three villages are largely dominated economically by those working in agriculture, with a small number devoted to pastoralism, and a smaller percentage involved in fishing in Lake Rukwa. There is a relatively small number of traders and small shop owners in the villages themselves. Much of the agriculture and pastoralism in the region is semi-subsistence, in that the majority of the agricultural product is consumed by the families and households, and small excesses are sold. A rare piece of research conducted by a student at the University of Dar es Salaam has mapped the land use of the surrounds of Ilemba village using information from local villagers (Map 3.10)

⁹ These included a graduate student who had conducted an undergraduate dissertation study in this area, and a second graduate student (who later became a research assistant on this research project), both of whom also had family in Rukwa. Due to their personal experience, they were able to offer first-hand advice about the suitability of this area of Rukwa for the field study. However, in the literature review, no academic research was found which referred specifically to the area. Clearly this does not preclude the fact that there may be existing research studies, either of a scientific or social nature.



Source: Field data-July 2009

Map 3.10: Land use around Ilemba village, showing Sakalilo and Solola villages to the north and south of the main Ilemba residential area, shown in yellow in the centre (Source: Simo Vena, University of Dar es Salaam, July 2009).

The land use map illustrates the area that is mainly used for maize and other crops, including sweet potato, sorghum and other vegetables in smaller quantities (shown in red), whilst the area in purple to the north and east of this is largely used for paddy fields producing rice, which, as can be seen on the map, is on relatively flat land very close to Lake Rukwa. To the south and west of the map on the steep and elevated land of the escarpment are forested areas (marked as ‘forest reserves’ in the key¹⁰). Debates about land use were important for residents of this area and their local environmental management, and will be returned to later in this thesis.

¹⁰ The ‘reserved’ nature of these forests was not ‘official’ in terms of their recognition by the Tanzanian state, but was variably maintained as ‘reserve’ areas by the local leadership. Their status as such was controversial and not recognised by all, as will be discussed later in this study.

3.2 Methods

Fieldwork for this research study was conducted in Tanzania over a period of approximately six months, incorporating three separate periods of study, taking place during August to September 2008, August to September 2009, and January to May 2010. This offered several advantages, as data from two previous, shorter, field visits, could be analysed before the bulk of the field study was undertaken in 2010, allowing for significant revisions to the plan for field study. This study focuses on environmental education as a 'development project', but also the role of local knowledge, community participation, and young people in development. As such, a number of different research approaches were adopted to investigate both 'formal' environmental education, through the Tanzanian state, NGOs, and local schools and school pupils, but also the practices and knowledges of adults and young people who were a part of communities where projects both did and did not take place.

Although this research is concerned with the use of participatory methods, established qualitative methods were important in terms of gaining key information. Interestingly, many of these qualitative techniques have been adapted, or taken wholesale, into the toolbox of 'participatory' techniques by particular researchers (e.g. Chambers 1994a, b, c; Binns et al 1997). In open, semi-structured interviews, group discussions, interviews and informal discussion, the agenda for the conversation was largely left open, thus, to some degree, making them in line with some 'participatory' methods. One of the key reasons for adopting largely qualitative techniques (rather than 'participatory' techniques per se) was that these methods were more appropriate for the context of the research. Participatory techniques are largely public in nature, and certain individuals may be inhibited in public space (Cornwall 2002), and conducting individual interviews, at times, created a more appropriate place to discuss individual views and opinions in detail, although group interviews and focus groups were also used. As this research is also targeted towards a wider understanding of the environmental education development context, a crucial part of the study was to interview and discuss with key informants from NGOs and the state, as well as local leadership groups. Conducting interviews with these actors was more appropriate to the context than using more radical 'participatory' techniques, for example.

3.2.1 Interviews

Interviews were conducted with a range of actors, including state actors involved in environmental education, NGO employees, local leadership groups, teachers and people who

lived and worked around the study areas. These interviews ranged from being semi-structured, formal interviews to largely informal, unstructured discussions. Brymen (2004, p319) states that “The interview is probably the most widely employed method in qualitative research”, attractive because of the flexibility that is offered and the potential for gaining detailed data, and it is this flexibility which made interviewing the key technique employed in this study. As the research sought to gain information on the level of involvement of individuals in the communities, their knowledges with regards to the local environment, and the role of NGOs and the state, there was a need to focus on gaining the “interviewees’ point of view” (Brymen 2004, p319), that may not be gathered in detail through more formal techniques such as fully structured questionnaires. The interviews were largely semi-structured, in part due to the need to focus interviewees on the topics specific to this research, particularly when conducting interviews with NGO and state actors, as well as people in the study communities, as many of these interviewees had a limited time available and a completely unstructured conversation might have meant that important information may not have been elicited. However, unstructured or informal interviewing did take place, particularly in the context where relationships had been established with NGO staff and repeat visits made, or with people in the local communities who again were met on several occasions.

Semi-structured interviews offer flexibility in structure, the potential to change the content and order, and allow for interviewees to diverge from the structure to express what they see as relevant. This was particularly important in this project in order to address the priorities of individuals in communities and to enable individuals to “express their realities” (Chambers 1997, p1747). This regularly changed the focus of discussions during the course of interviews (Brymen 2004), being “open to serendipitous opportunities offered during the research encounter” (Nairn et al 2005, p237). Furthermore, Sinding and Aronson (2003) argue that through the interview process participants can draw new conclusions about events, another element which was valuable when assessing community projects, or when discussing how different knowledges about the environment existed in communities. Interviews also allow the researcher to reflect on data other than the ‘spoken word’ (Nairn et al 2005). This was particularly important in terms of assessing how comfortable interviewees feel by observing body language and manner (Nairn et al 2005). As this research focuses in part on power relations, both at the individual and group level, Sinding and Aronson’s (2003) assertion that interview methods can offer insight into subjective meanings of social phenomena, networks of social relations and power (p95) is also of importance. During the course of interviews, observations were noted both during and after the

interview process, and often, with permission, photographs were taken of interviewees and their situation which were valuable in analysing the interview material.

Feminist researchers have posed a number of objections to interviewing methods, particularly focused on the one-way, extractive nature of interviews, the imbued hierarchical power relations between the researcher and the researched, and the potential to exploit participants (Sinding and Aronson 2003). Much of this has been echoed by postcolonial, postdevelopment, and participatory theorists, as discussed in the previous chapter. These arguments were especially important for this research project in terms of cultural sensitivities and ethical issues, particularly of dealing with Tanzanian village community members, and with young people in school environments. To address these imbalances, a range of techniques was used, including working both collaboratively, in participation with, and negotiating methodological strategies with local people. Nairn et al (2005) argue that although it is always a risky enterprise interviewing 'the other' with reference to the issues above, by not doing so, responsibility to the social cause that one wishes to study can be neglected. So for example, by not conducting research studies of, for instance, young people, their voices and opinions on a particular issue may never be heard, particularly at levels which exist beyond their immediate environment. Research studies can therefore highlight a particular social cause at a range of levels in society, causes which may be neglected if such studies did not take place. However, Nairn et al (2005) also illustrate further issues when dealing with cultural sensitivity, that notions of voice, silence and speaking are cultural constructs that must be adhered to, and that interviews must be renegotiated if necessary. This very much fits in with the concept of allowing participatory input into interviews, their contents, and how they might be conducted, making interview practice highly reflexive. Such participatory approaches to interviewing allowed a degree of rapport and reciprocity to be built up with interview participants, again attending to participatory approaches to interviewing. However, Sinding and Aronson (2003) critique the feminist approach in discussing how the level of engagement and rapport in the interview process may allow people to risk exposing themselves, and they remind the researcher that it is their responsibility to minimize harm. During interviews, vulnerability may be produced (Sinding and Aronson 2003), and in this research project this might include details which are critical of NGO partners, or might expose participants in a range of ways, perhaps through expressing conflicting opinions to those of the local leadership. Sinding and Aronson (2003) suggest that participants should be enabled to control the degree of exposure, which may include the researcher abandoning lines of investigation, and allowing participants to withdraw. Such techniques were employed throughout the field research,

including fully explaining the interview process to participants, answering their questions about the study, and gaining their oral consent to use material produced in the interview.

Roulston et al (2003) highlight other practical issues that may emerge in the interview which pose issues for this research project. They include issues of phrasing and negotiating questions, a problem which may be apparent if interviews have to be translated. During the course of this research, some interviews were conducted entirely in English, such as those with NGO actors who spoke fluent English. However, the majority of other interviews were conducted in Kiswahili, through the medium of a research assistant who also acted as a translator. Working through a translator can result in clarification or phrases having to be changed, and answers (and even questions) may be open to the interpretation of the translator. There are other practical limitations, including the speed at which interviews can be conducted, and the interruption of the 'flow' which arises from 'normal' conversation conducted in one language. A number of techniques helped, in part, to overcome some of these issues. My limited knowledge of Kiswahili allowed my interpretation of the interview to be negotiated with the translators, and often field notes were written up with the assistance of the translator so that any inconsistencies could be dealt with. In total, three research assistants were employed during the course of the research, largely due to their availability during the split nature of the fieldwork timing. All were either current undergraduate students or graduates of the University of Dar es Salaam, all having studied Geography at undergraduate level and all had experience of conducting fieldwork. That three different research assistants were employed will have an influence on translation and interpretation throughout the project, but, as a research assistant, rather than simply a 'translator', each brought their own ideas to the project. The research assistants provided important insights, including contributing their knowledge of a particular issue in order to explain it in the Tanzanian context to the researcher, and often the research assistant would help explain particular words or phrases during interviews. Research assistants were involved in the design and revision of the questions, and would contribute to the analysis of the interviews when they were being written up in the field. They also contributed to the choice of study sites, and to the design of the methodology at various stages of the research process, and as a result, the research became much more of a collaborative enterprise.

Another practical disadvantage of using interview techniques is that they were time-consuming in terms of setting up interviews, contacting interviewees and transcribing/writing up notes. Although Brymen (2004) argues that recording should be used, and recording of interviews is the norm in qualitative interviewing, in this study, note-taking was employed for a number of

practical reasons. Firstly, when interviewing people in local communities, it would have been, for the most part, culturally insensitive to use tape recording. Whilst many respondents were happy for written notes to be taken, recording voice would have aroused suspicion from local people, particularly in more rural areas such as Rukwa, where interacting with people from significantly different cultures is in itself very unusual. Secondly, and particularly whilst interviewing local people, there was little potential for appropriate places to record interviews. Many interviews were conducted outside, including outside of individuals homes, outside of shops or businesses in which they worked, and in other locations where people worked, such as in agricultural fields, and at beaches where local fishermen launched and landed their fishing vessels. This made potentially recording interviews problematic, and the decision was made early on in the research process to use hand-written note taking. Using shorthand notes, of course, introduces inaccuracies. It is impossible to record, using notes, all the nuances of a conversation. This was in part remedied by the timing of the writing-up process. During fieldwork, notes were written up usually on the same evening when the interview had been conducted, or no later than the same week, and often with the assistance of the research assistant who had been at the interview. This allowed for some subtleties of conversation to be more readily remembered and recorded.

In keeping with the conventions of a semi-structured interview, the majority of questions that were employed in interviews were open questions, around which interviewees could discuss as they saw fit. This allows respondents to answer “in their own terms” (Brymen 2004, p145). To address problems of understanding and meaning, questions were regularly reworked and rephrased, offering both alternatives and clarification. Such open structures have disadvantages in terms of note-taking and post-coding of answers (Brymen 2004), but also in the sense that they require a great deal of effort from respondents. This is potentially counterbalanced in terms of the value of the data collected, as alternative closed style questions would not allow for varying possible answers, or for questions to be negotiated during the interview itself. The ordering of the questioning was also important. Following the advice of Sinding and Aronson (2003), in general, interviews began with a general introduction, then factual questions, and some introductory material. Interviews then moved to issues with which respondents might be most familiar (the role of the NGO they work for, for example) to those which might be more challenging. In terms of piloting interviews, this was done during the first phases of fieldwork in 2008 and 2009, where particular interviews were piloted with key informants and members of communities, before more interviewing took place in the longer phase in 2010. As Roulston et al (2003) discuss, such piloting allowed questions to be first formulated and then to be revised, and this remained an

ongoing process throughout the study. As Sinding and Aronson (2003), and Roulston et al (2003) advocate, a research diary was also kept to supplement notes.

'Selection' of interviewees was a significant challenge. There has been criticism of qualitative interviewing of a lack of transparency on how interviewees are selected (Brymen 2004). Selecting interviewees for this project was very dependent on access, which was in part controlled through 'gatekeepers' or elites such as NGO staff and community leaders. Research has shown that this may have practical implications of bias in the selection of interviewees (Nairn et al 2005). Access to interviewees from NGOs and the state, and those involved directly with NGO projects, was often based on snowballing through contacts in NGO agencies and academics from the University of Dar es Salaam, and was certainly opportunistic. However, following Brymen (2004), the access to interviewees was carefully documented, and the research aimed to be as broadly representative of officials, NGO staff and members of a community as was possible.

3.2.2 Interviews with state officials, NGO staff and academics

Semi-structured interviews were conducted with state officials, NGO actors and academics who had been involved in environmental education initiatives. These interviews were, for the most part, conducted in English, and often took place in the offices of the respondent. Many of these interviews were conducted during the pilot phases of the study, in 2008 and 2009, and were in part used to assess the context of environmental education in Tanzania. In total, 12 such people were interviewed, and below is a summary of these interviewees (all are referred to by title only):

State actors

- Representative from the National Environmental Management Council, Tanzania, male, age 40-49
- Two local government officials involved in environmental education, Bagamoyo:
 - One female, age 30-39
 - One male, age 40-49

NGO actors

- Jane Goodall Institute (JGI):
 - Programme Director, male, age 40-49
 - Programme Officer, Environmental Education, female, age 30-39
 - Programme Worker, Environmental Education, male, age 30-39 (3 interviews)
- Joint Environment and Development Management Actions (JEMA):
 - Programme Director, male, age 30-39
- Tanzania Forest Conservation Group (TFCG):
 - Environmental Education Coordinator, male, age 40-49

- Tanzanian Youth Environmental Network (TAYEN):
 - TAYEN Secretary, male, age 20-29

Academics

- University of Dar es Salaam (UDSM), academic staff involved in environmental education either through research or teaching:
 - male, age 50-59, involved with NGOs including the WWF and TFCG
 - female, age 30-39, involved in teaching environmental education at UDSM
 - female, age 30-39, involved in teaching environmental education at UDSM

Brett (2003), concerned for the local specificity of participatory research, indicates the need for making local participatory research relevant to those who work in development, including both NGO and state actors who operate at a range of scales. The aim of involving NGO, state and academic actors directly in the research was to make locally-based research relevant to the wider development community. Other studies in local-scale development have employed key informant interviews, particularly when working with NGOs, to inform research into development practice, to formulate the direction that research will take, and to understand the context in which local development takes place (Binns et al 1997; McKinnon 2006), for example by attending to the relevance which local developments have for national policies, and examining how the two interact (Green 2004). Whilst local people are most likely to be those who know the most about their local development situation, those actors who operate beyond the local scale in NGO and state apparatus are those who are most likely to understand how local actions fit (or do not fit) within the regional, national or international agendas (Green 2004). These respondents were also asked about the key themes of the research, including about participation and local knowledge in the context of the interview. Appendix 1 is an example of an interview schedule used for NGO actors. Whilst these of course differed when discussing with academics and government officials, the general topics and ideas discussed were very similar.

3.2.3 Interviews with teachers

In order to investigate the effects of JGI environmental education programmes in schools, interviews were conducted with both teachers and headteachers who had been involved in the programme. One of the main elements of the JGI programme was to train teachers to incorporate environmental education into their classroom teaching, and therefore interviewing teachers was important for evaluating the project, and considering how aspects of the participation and local knowledge agenda might be a part of the programme. In total 15 teachers were interviewed:

Kawe B Primary School, Kawe, Dar es Salaam

- Three teachers interviewed as a group:
 - Teacher, female, age 50-59
 - Teacher, male, age 40-49
 - Teacher, female, age 30-39

Kizuiani Primary School, Bagamoyo

- Two teachers interviewed as a group:
 - Teacher, male, age 30-39
 - Teacher, female, age 30-39

Kondo Primary School, Bagamoyo

- One head teacher: male, age 40-49
- Two teachers interviewed as a group:
 - Teacher, female, age 60+
 - Teacher, female, age 20-29

Ilemba Primary School, Rukwa

- Seven members of staff interviewed as a group:
 - Headteacher, male, age 50-59
 - Teacher, head of academics, male, age 30-39
 - Teacher, male, age 40-49
 - Teacher, male, age 40-49
 - Teacher, male, age 30-39
 - Teacher, male, age 30-39
 - Teacher, female, age 20-29

The teachers from Bagamoyo and Kawe were those who had taken part in the environmental education programme run by JGI, and had all participated in training. Whilst only one school was visited in Kawe, two were visited in Bagamoyo, in part to negotiate access to conducting focus groups with young people in the schools. After discussions with both schools in Bagamoyo, Kizuiani School was the most practical to conduct focus groups, based on the availability of the staff. In Rukwa, primary schools were not a part of the JGI programme, but, as with the rest of the case study in Rukwa, it was important to gain the perspectives of teachers who were not involved in environmental education projects. When it was requested that we might interview teachers in the school, the head teacher arranged for all school staff to be present, therefore leading to many more teachers in total being interviewed. Appendix 2 is a sample interview schedule which was used with teachers.

3.2.4 Focus groups with young people

In order to research the effect of environmental education projects on young people, a series of focus groups/workshops were conducted in the primary schools which had taken part in the JGI programme in Kawe and Bagamoyo, as well as primary schools in Rukwa which had not taken part. Workshops were also conducted with secondary schools in Kawe, Bagamoyo and Rukwa, although none of these secondary schools had taken part in the programme. During the course of the research it became apparent that it would be useful to examine the education and knowledges of young people who had not taken part in the programme in the same area, and the advantage of speaking with young people at secondary schools was that they had been exposed to state education about the environment (through the state syllabus), but not the JGI environmental education programme. As well as this, their responses, along with those of young people from primary schools, would provide a broader scope of the knowledges of young people through the age ranges. The education system in Tanzania, although similar to that of the UK, does have some differences in year groups and the ages at which young people take examinations. The formal education system is structured as such:

- 7 years of Primary education: ages 7 - 13
- 4 years of Junior Secondary (Ordinary Level or O-Level): ages 13 - 18
- 2 years of Senior Secondary (Advanced Level or A-Level): ages 18 - 20

Although primary education is free (but often families have to pay for uniforms and supplies) and compulsory, for secondary education there is a charge (around 20,000 Tanzanian Shillings per year for state schools, although this can vary substantially), and it is non-compulsory. For the practicalities of this study, ethical clearance allowed for research to be conducted with young people aged 13+, such that in primary schools it was only the oldest age group who were included in the study. At secondary level, the junior and senior secondary schools are normally combined in a single school, and the research sought to be representative of the range of ages. Although there are guideline ages in the structure above, in actuality many young people have to repeat at least one or several of their secondary school years, so they may graduate from senior secondary schooling much older than age 20. The medium of teaching in Tanzanian primary schools is Kiswahili, with pupils having only a limited understanding of English, and thus focus groups were conducted in Kiswahili. Secondary schools are, in theory, supposed to be taught through the medium of English. However, this is widely ignored in secondary schools, and pupils'

understanding of English generally remains basic until their final few years¹¹, and so for secondary schools the focus groups were conducted in Kiswahili (although, on occasions, some young people answered questions in English).

The decision to use a focus group/workshop format with young people in this study was taken for several reasons. Focus groups are a long-established method in qualitative studies, developed in the early 1940s (Madriz 1998), and they allow groups of participants to discuss a specific topic in depth. The history of conducting focus groups, and their lineage as a qualitative methodology, prevents me here calling them a 'participatory' methodology, even though this term is employed by other researchers in relation to their own methods (e.g. Kesby 2000a; 2000b; Chambers 1994a; 1994b). Whilst there are elements of 'participation' in these focus groups, their design and implementation were very much guided by the researcher, and they do not match more 'child-centred' methodologies which might make them more fully participatory in scope (Porter and Abane 2008). Although using this kind of group discussion is often included in the toolbox of those who engage in participatory techniques, I choose to differentiate them from more participatory forms of engagement. There were several advantages to conducting focus group/workshop style methods with young people. The first of these was largely practical. In order to gain the views of a significant number of young people in the restricted time of the study, it was useful to conduct the method in a group. It was also felt, particularly for those young people from primary schools, that they would be more comfortable discussing issues in a group setting, rather than individual interviews with the researcher and research assistant, which may have been perceived as more intimidating. More generally, focus groups can offer the opportunity for questioning of individuals by others in the group (Brymen 2004), and moderators can relinquish an element of control to participants, an objective which chimes well with participatory techniques. Observing group dynamics can also be useful, and as young people are often working in education settings in groups, conducting focus groups can offer the opportunity to observe how power dynamics might play out in these groups. Feminist researchers have often expressed preference for focus group techniques for this reason (Brymen 2004), as they address issues of power relations between the

¹¹ This is an interesting 'quirk' of the Tanzanian education system with several, problematic consequences. Pupils are expected to be able to adapt to the medium of instruction being completely in English in their first year of secondary schooling, having come, almost immediately, from primary schools where the medium of instruction is Kiswahili. As many (if not virtually all, unless they are privately schooled and tutored) young people are not fluent in English in secondary school, their teachers generally continue to teach them in Kiswahili, even though their text books and exams are all in English. By the time pupils take their O-Level and A-Level exams (in English), it is hoped that they will be sufficiently fluent. However, this is often not the case. In this study, young people in secondary schools were far more comfortable and confident conducting workshops in Kiswahili, even those at a relatively advanced stage of secondary schooling (for example, 20-21 year olds). Although not central to this study, it remains troubling that this tactic of conducting schooling, in theory, through the medium of English remains in Tanzania, as it clearly causes significant issues in the education system.

researcher and the researched. Focus groups can offer the opportunity for participants to take more control of the research process, including the direction of discussions, and a group situation puts the participants in the majority which may make them feel more secure, an element which may be particularly important when working with young people. Warr (2005, p.202) supports this claim, arguing that “the potential to enhance participant control in the research encounter means that focus groups may be a particularly appropriate method when working with powerless and vulnerable social groups”. It was felt that this would be particularly the case with young people, and that conducting research activities with them in a group, rather than as individuals, would afford them more power as a group in the research situation, and potentially make them more comfortable expressing their opinions. Further to this, a focus on group interactions can reveal how collective constructions of meaning may take place, for instance in relation to the role of young people in community education or development programmes. Warr (2005) argues that familiarity may allow participants to question each other in ways that the researcher may choose not to, again eliciting data with regards to power dynamics. Others have indicated how focus groups can be particularly attentive to marginalised groups (Claderon et al 2000) and vulnerable people, as if groups are selected correctly, it can allow them to express their realities collectively where individually they may not be so willing, enhancing “validation of group attitudes and thinking” (Fallon and Brown 2002, p196). It was felt that this made the group situation particularly applicable to working with young people.

In collaboration with the research assistant, a series of focus group/workshop activities were designed which would allow the young people present in the group to express their knowledge of the environment in a number of different ways. This combined a number of methods, including a card sorting and ranking exercise, a series of group questions, and a ‘kinaesthetic’ exercise which required the participants to ‘move about’ to express their ideas. Ranking and scoring exercises have been variously used by researchers using participatory techniques to generate data, including numerical data on environmental practices and social issues (e.g. Chambers 1994a, b; Briggs et al 1999; Harpham et al 2005; Kesby 2000a; Mayoux and Chambers 2005). Although some have advocated for using ‘local materials’ (Briggs et al 1999; Chambers 1994b), it was decided in this context that young people in primary and secondary schools would be familiar enough with using marker pens and card to create cards to sort. One advantage of this was that the ‘final product’ of score-cards could easily be viewed by others in the group, and this indeed proved very effective for comparing different approaches that separate groups adopted, which could be immediately interpreted and understood by the young people participating. The repeatable nature of the exercise meant that it generated results which could be compared across

communities, and could be quantified (Harpham et al 2005). Kinaesthetic techniques involve movement, people and the local environment to produce information and data in forms that may eventually be visual, but may also simply be enacted at the time of the event. Although instigating such activities can be challenging, in the context of the school environment, simple methods such as the 'vote with your feet' activity described in appendix 3, are relatively simple to conduct, and are well-established methods in both primary and secondary school pedagogy in the UK, particularly to engage students who are not typical oral or visual learners. As with ranking exercises their outputs are visual and designed to promote discussion and to stimulate conversation through action. They are also useful to engage young people who are less confident at speaking in public. The method was first piloted to Kawe B school, then adapted, and the final method used throughout the schools in Kawe, Bagamoyo, and Rukwa. The questions and activities were designed to be used uniformly across both primary and secondary schools, and to elicit information about what the young people knew about the environment, and their opinions on environmental issues. The method is described in appendix 3.

The focus group/workshop was designed to last approximately one hour, although in some situations it was made shorter, by reducing the length of particular activities. The majority of the questions and activities were directly focused on the research questions, however, others were designed to more broadly engage young people in considering their ideas about the environment. For example, the final activity about urban and rural areas was designed to make participants think about how they considered their own 'local' environment in the context of 'other' environments, and how the environment might relate to social concerns. Although the set of activities and questions were fairly rigid in their outline, during the course of discussions there was much scope for the participants to take the discussion in a direction that they saw fit, and often activities and questions were adapted in response to the respondents' interests.

Access to young people through schools was mediated at first through JGI. As I wanted to conduct focus groups with young people in the schools in which the NGO worked, the primary schools in Kawe and Bagamoyo were first visited with a member of staff from the NGO, and we negotiated with the headteacher and teachers to be able to conduct focus groups with their students. Access to primary schools in Rukwa, and secondary schools in all three regions, were all acquired through personally approaching headteachers in these schools. All the schools approached were very forthcoming and helpful, and few problems were encountered in arranging access. Table 3.1 is a summary of the schools and groups of young people who took part in the study:

Area and School	Groups
Kawe	
Kawe B Primary School	Group 1: 3 female, 4 male, age 13-14 (pilot) Group 2: 3 female, 4 male, age 13-14 Group 3: 7 female, 1 male, age 13-14
Kawe B Secondary School	Group 1: 2 female, 4 male, age 14-18 Group 2: 5 female, 2 male, age 14-18
Bagamoyo	
Kizuiani Primary School	Group 1: 3 female, 3 male, age 13-14 Group 2: 3 female, 3 male, age 13-14
Bagamoyo Secondary School for Boys	Group 1: 8 male, age 18-20 Group 2: 3 male, age 18-20
Rukwa	
Ilemba Primary School	Group 1: 4 female, 4 male, age 13-14 Group 2: 3 female, 5 male, age 13-14
Sakalilo Primary School	Group 1: 4 female, 4 male, age 13-14
Ilemba Secondary School	Group 1: 3 female, 3 male, age 18-21 Group 2: 3 female, 3 male, age 18-21

Table 3.1: summary of the participants from school-based focus groups.

In total 94 young people took part in the focus groups. At the primary schools, there were 30 females and 28 males, making the groups relatively balanced overall, whilst from the secondary schools there were 13 females and 23 males. This was largely skewed because the secondary school which allowed us access in Bagamoyo was an all-boys secondary school. Whilst groups remained mostly balanced in terms of numbers and male to female ratios, the group selection was largely based around ‘selection’ of young people by the teachers themselves. Random samples were requested from teachers, and each group was asked to be 3 males and 3 females. However, often, as can be seen in the table above, this sometimes resulted in quite different ratios or slightly larger groups, which could have been due to ‘keenness’ of pupils to be involved¹², or the misinterpretation of instructions by the teachers. Leaving teachers to ‘select’ groups was also problematic, as it potentially made the sample far from random. For example, at Kawe B

¹² Although this may have been ‘keenness’ to get out of the classroom, or the normal routine of school life and do something different, rather than an overwhelming desire to contribute to qualitative research on participation and local knowledge in environmental education.

primary school, myself and the research assistant strongly suspected that the first group of pupils had been selected based on their involvement with environmental activities (being part of an environmental club) at the school. Groups 2 and 3 were far less involved in these environmental groups and generally provided less detailed answers. This situation, whereby teachers may have selected some of their 'best' pupils, could have been a result of the research team being associated with JGI, and the school wanting to put on a 'good show' for the NGO. This clearly had a relatively unknown impact on the results, although this was partially balanced by multiple groups being undertaken at each school.

A further practical limitation of the focus group study was the location and set-up of the activity. Accessing young people to take part in this study was made significantly easier through utilising schools and school environments. Working through schools was also done, in part, because NGO projects ran through these schools. However, the school environment certainly imposed particular relationships of power and prescribed performances on the focus group. Focus groups normally took place either during or immediately after the school day, and school classrooms were used as a space in which to conduct the activity. Myself and the research assistant were normally introduced fairly formally to the students. This situation undoubtedly created a certain teacher/student relationship between the participants and the researchers. Although attempts were made to make the students more at ease, such as reinforcing the 'informality' of the session, conducting non-conventional activities for Tanzanian schools, and allowing the young people to express themselves freely, it is still likely that the students responded to the researchers as if they were figures of authority. This has potential disadvantages, in that the participants may not have expressed their thoughts as freely as they might have done in less formal settings. However, it is difficult to measure or predict these outcomes, and some were unexpected, as will be discussed later in this thesis. The nature of conducting such focus groups in the school also makes the 'participation' of young people more 'forced' than on their own terms. Allen (2005) found that when conducting recruitment through a mediatory or gatekeeper, an element of compulsion will be present. Recruitment can be difficult if not through personal contacts and social networks (Madriz 1998), and gatekeepers may want to push their own agenda (Fallon and Brown 2002). In the setting of the school, it cannot be ignored that these young people may have felt a sense of 'compulsion', either directly from their teachers, or more subtly from simply being in the school environment itself, where students may feel that they should participate to please their teachers. Again this is difficult to measure, but makes the nature of the research activity potentially less than 'participatory'.

One further limitation with the focus groups/workshops was the use of Kiswahili as the medium of interaction. This was necessary, as it allowed participants to express themselves fully, as Madriz (1998) states categorically in reference to her own focus groups “that conducting the groups in the native language of the participants was key to the groups’ success” (p123), and Fallon and Brown (2002, p202) suggest that use of a second language “would have constrained the group members’ freedom of expression”. However, the nature of translating during the focus group slowed the pace and made conversation less ‘natural’ than it might have been. Other authors have argued that being attentive to language use is important (Warr 2005, p209), as subtlety may be lost in translation. Facilitating the focus groups, such as focusing conversation and ensuring all participants get to speak (Allen 2005), was also in part problematic due to language difficulties. Research has indicated that focus groups themselves have other limitations as a methodology. It has been argued that focus groups are not inherently ‘naturalistic’, and maintain a degree of artificiality (Brymen 2004; Fallon and Brown 2002). Focus groups certainly also produce less coherently sequenced data than interviews, which can be problematic in analysis (Warr 2005). ‘Group effects’ were also potentially problematic here, as natural group leaders may override more marginal respondents (Allen 2005; Fallon and Brown 2002). Such group effects were evident at times during focus groups, as in some cases particularly assertive young people did try to dominate discussions. This was interesting to observe in itself, but we did try to mediate these situations as they arose, for example, by encouraging those less confident to speak at particular times.

3.2.5 Interviews with local people

The final part of the interview/focus group methodology of this study was to engage with those who lived and worked around the schools in which JGI environmental education projects took place, and those around the villages in Rukwa. An important part of the research project was to consider how much these programmes engaged with the ‘local community’ in which they were situated, including the extent to which local knowledge and local environmental issues were incorporated into projects, and whether differences existed between the formal realms of environmental knowledge of the school, and those of the wider community. Engaging with members of the study communities was also important for understanding local environmental issues from the perspective of local people, which could then be considered in assessing the kind of impacts which projects were likely to have. Interviews with ‘local people’¹³ were focused on

¹³ ‘Local people’ refers to those who both lived and worked in the study areas. Whilst this is an issue I will discuss in more depth later, it is important to combating the local-centric views of participatory and postdevelopment thought to make it clear that those who live and work locally have expansive networks

much the same topics as those conducted with NGO staff, teachers and young people, and generally included questions on their knowledge of environmental issues, their knowledge and awareness of projects in the area and their opinion on participation, more general discussion of participation concerning environmental issues, as well as some discussion of the role of young people. An example of the interview schedule can be found in appendix 4.

Sampling was a key challenge. In the context of both urban and rural Tanzania, and the resources available to this study, sampling a population using statistical survey methods to determine sampling for interview would have been problematic¹⁴, so instead a more informal method of sampling took place. In each study area, myself and the research assistant would walk around different parts of the area, approaching local people to interview. In Rukwa, this situation was slightly different in that we were commonly accompanied by local leaders for the first day in each village to introduce us to people who would be willing to be interviewed. If the person or persons consented to take part in the interview, this would be held at a location convenient to them, often in or outside their home, or where they were working. There were certain advantages to this technique. Often this meant that local people would be responding to questions in a place comfortable to them, such as in or around their home. It tended to add a relaxed, informal atmosphere to interviews, and participants often felt sufficiently confident to challenge certain questions or discuss topics. Although many interviews were with individuals, a greater number were conducted with small groups, and some with larger groups. In Kawe and Bagamoyo interviews tended to be with individuals or small groups, normally 2 to 4 people, whereas in Rukwa the norm was to interview in groups, ranging from 3 people to as many as 13 in the largest discussion. In Rukwa, these large groups tended to occur around an interview situation quite naturally. Some were conducted in 'public' spaces outside family homes, and often other local people passing by would join in and contribute. It was common for families to want to include much of their immediate family in the interview. There were of course some disadvantages to this informal method of sampling and interviewing, firstly because there was sometimes a distinct lack of control on the part of myself and the research assistant as to who we interviewed, and in some situations it was difficult to speak to individuals on a one-to-one basis. In groups, particularly in

beyond the local, and in fact several interviewees could be classed as 'temporary residents' of an area. Some were interviewed who only worked, but did not live, in the immediate area of study, for example. This does not make their contribution any less valid, yet the focus on 'the local' sometimes appears to imply this.

¹⁴ There was simply not enough time and resources in this research study to conduct comprehensive household surveys in each area in order to establish the local population and then design a representative sample of them for interview. Equally, there was no up to date existing household level data available for each area, particularly in the context of their fluid and rapidly growing populations (the last published census results were based on data from 2002).

Rukwa, there was clearly evidence of power dynamics at play, for example, men speaking before women, which were important to observe, but may have also had a bearing on what either group (men or women) may have wished to discuss in public. Participatory techniques have been criticised for prioritising the group in a public setting (Clever 1999). This could be seen as detrimental, as rather than respecting local diversity and multiple realities, such a group environment might 'force' some kind of group consensus (Kapoor 2002b), and also, by privileging the public domain, the private sphere and individuals private opinions are neglected (Kapoor 2002b). It is important to bear this in mind also for this study, although interestingly, group dynamics did often lead to very revealing discussions on local environmental issues, and there was certainly value in being able to observe local issues being debated in an open forum setting (and, in the experience of this research, rarely meeting 'consensus'). Allen (2005, p42) indicates how collective interaction can generate data about the "public production of discourse", whilst Madriz (1998, p116) argues for focus groups "as a form of collective testimony", and "a sensitive tool...a vehicle for listening and capturing the socioeconomic, political and human voices", clearly again meeting some of the goals of this research in addressing community priorities, where to "spotlight group norms and processes" (Warr 2005, p200) is of importance to appreciating community power dynamics. Both myself and the research assistant often had to mediate such group situations carefully, and would at times intervene to encourage others to speak. In line with the example from Sharp et al (2003), where women were spoken to separately from men to gain their opinion, in this research the opinions of women were sought separately to those of men, often by requesting individual or small group interviews with only women. This was, inevitably, hampered at times by both myself and my research assistant being male. One research assistant, who worked on the project during the 2009 and early in the 2010 research phase, was female, and this was noticeably beneficial for interviewing women. The eventual sample taken in each area is presented in Table 3.2 below:

Age	Kawe		Bagamoyo		Rukwa	
	Male	Female	Male	Female	Male	Female
13 – 17	0	2	8	4	1	0
18 – 19	2	3	3	2	4	0
20 – 29	7	11	12	7	26	13
30 – 39	9	6	9	7	37	8
40 – 49	5	7	8	4	23	9
50 – 59	6	3	3	0	13	8
60+	8	4	1	1	3	1
Total	37	36	44	25	107	39

Table 3.2: The sample of respondents, by gender, age and area sampled.

In total, 288 individuals were interviewed, with a similar number from both Kawe and Bagamoyo (73 and 69 respectively), but considerably more from Rukwa (146). This was largely due to the high number of ‘group’ interviews that took place in Rukwa, often when the size of the group was beyond my control. In Kawe, male to female ratios are balanced, but in Bagamoyo, and even more extreme in Rukwa, male interviewees significantly outnumbered women. Particularly in Rukwa, it was difficult to access women for interviewing. Each of the three village leaderships is entirely male dominated, and generally we were introduced to senior men to interview. Often we had to request specifically to speak to women. These requests were usually met without difficulty, however, but the general dominance of men in public life meant that interviewing women was more difficult. In Bagamoyo similar problems were encountered, although in much less an extreme. In each area we were also able to interview a limited number of young people, with their parents’ permission. However, the sample does not include a significant number of young people under the age of 19, which is clearly not reflective of the population. This was somewhat offset by the data gathered through the focus groups in schools. It is interesting that this largely public selection of interviewees meant that both women, and even more so, young people, were marginalised in terms of their selection, hinting at their more marginal status in Tanzanian society, and this raises questions about more marginal actors who were not included in the interviews. For example, no person with a disability was interviewed during the course of the study, perhaps a reflection of their marginalisation in public life.

3.2.6 Observations

Voices of others, particularly those who are marginalised, may not be expressed through standard methods. They may be embodied practices of everyday life (Briggs and Sharp 2004; Goebel 1998), or visual expressions which are not discussed orally. Equally, Intili and Kissam (2006) have illustrated through their research in Afghanistan that site visits and observations are important to support and triangulate qualitative information gained at interview, and provide opportunities to follow up on topics raised in interviews. For both these reasons, observations formed a critical part of this study, and took a number of forms as a method. In each of the study areas, myself and the research assistant would spend time walking around the study area and recording observations about the local area, including noting apparent environmental issues, the observable standard of living, employment and the types of work available in the area, amongst a range of other points of interest. In each of the areas, it was common for a small number of respondents to offer to take us on informal tours. Often this involved a particular point of interest that the respondent wished to demonstrate to us (e.g. the site of an important environmental issue to them, such as a local river), but this frequently turned into a wider tour of the area. Interestingly, these tours are comparable to similar techniques to those of PRA (Chambers 1994a; Binns et al 1997), particularly 'transect walks' (White 2002), and placing researchers in the role as learners (Chambers 1994b), being 'taught' by members of the community about their locality through practical observation. In very simple terms, it was often much easier for people participating in the research to show the researcher what they do, rather than try to explain it in words. Such a method also clearly puts the participants in the role as 'knowers', whilst the researcher assumes the role of a 'learner'. Informal observation tours also took place to some degree when visiting both Bagamoyo and Kawe with NGO representatives from JGI, who would comment and describe observations during travelling to and from project locations. Again, these were invaluable, and observations were recorded either at the time or during the same day, and digital photography was used to capture much of what was observed. In Rukwa, people were keen to take us around local projects, and we were taken on formal tours of a local irrigation scheme and a crop experimentation scheme by the respective organisers of these programmes. These offered excellent opportunities for informal discussions, using both the social and physical landscape, and the activities that take place within it, as visual prompts and discussion points, bringing out meaningful points that may not have come about in other research techniques.

More formal observations also took place relating to environmental education events. Working with the JGI environmental education programme, I was invited to attend two events. The first of

these was a 'Community Environmental Award Scheme' organised by JGI to make awards to local schools, which had made progress with their environmental education, and youth clubs. Interestingly, I was asked to attend this as a 'favour' to one of the JGI members of staff, so that there would be a 'representative' of JGI attending, as otherwise no member of staff from the NGO could attend. Although this provided an excellent opportunity to observe such an event, clearly myself and my research assistant were also being 'used' by the NGO to assist with their project. As the JGI 'representatives', myself and the assistant were positioned in a role which was not purely one of 'observers', and in this role we were asked to say a few words to the audience during the event as the representatives of the NGO. Although little else was expected of us in terms of participating in the event, it drew attention to us as fully participating public figures in the foreground of the occasion, rather than 'observers' in the background. This may have influenced how other participants reacted or spoke to us, and clearly changed the dynamics of the research process. This level of involvement was not necessarily 'negative' in its effect on the research, as other individuals at the event were very keen to talk to us once we became 'public' figures, noticeably more so than at the second event when we were just 'observers'. The second JGI event attended was a Schools Day, where teachers and a selection of two or three pupils from each school travelled to an event in Dar es Salaam aimed at celebrating their achievements in environmental education. Here I was much more an 'observer' (although I was also asked to say a few words to the audience, yet afterwards we were largely left to our own devices), and again it provided an interesting insight into the scope of the project beyond primary schools.

Some of the above observations could arguably fall into the realm of 'participant observation' particularly when visiting NGO sites as a 'representative'. Working with JGI brought some 'participant' elements to the research encounter, such as providing feedback from the research during the trip, and complementing their own evaluations. Beyond this, some element of participation was involved in some of the study areas, most often in Rukwa. Staying in Rukwa for a period of four weeks, and being accompanied by a research assistant who had contacts in the nearby villages, there was often some 'participation' involved during interviews and visits to local people. For example, during visits to family farms in Ilemba, both myself and the research assistant helped around these farms, and we participated in canoeing on Lake Rukwa and hikes up the rift valley escarpment, trips which local people also made for fishing and to move cattle to different pastures. Although many of these participant observation type encounters were unplanned, the act of doing activities, observing them and discussing them whilst 'in' the environment in which they take place was important to the research process. These encounters were quite substantially different from discussing activities in a 'participatory space' (Cornwall

2002), such as the focus groups, or the spaces in which interviews were conducted, all of which take place in a 'research space', potentially less 'natural' than taking the research and discussion into the participants' spaces of everyday life. However, it was also important to record observations whilst in these spaces too, and this was often done immediately after interviews, and frequently offered important insights into local power dynamics.

3.2.7 Document analysis

The research project entailed an element of qualitative document analysis to complement the data collected in the field. This was largely comprised of the analysis of documents from a number of sources, which include:

- State documents:
 - Tanzanian state primary and secondary school syllabus material
 - Tanzanian state documents relating to education and environmental education (e.g. The National Environmental Education and Communication Strategy 2004)
 - Tanzanian state statistics (e.g. National Bureau of Statistics census analysis 2006)
- Education materials:
 - JGI environmental education material (e.g. teacher resource books)
 - Published teaching aids (e.g. textbooks for schools)
- Other documents:
 - Presentations and papers from national workshops on environmental education (e.g. National Environmental Education Forum, Morogoro, 2009)
 - Other NGO and international organisation documents on environmental education (e.g. Southern African Development Community Regional Environmental Education Programme 2008)

The importance of document analysis to this study was in part establishing and understanding the context in which environmental education operated, and therefore state and NGO documents were evaluated to this end. Education materials, for example those produced by JGI, and the Tanzanian state (such as syllabuses), and other publishing companies, such as textbooks to accompany the state syllabus, were subject to discourse analysis in order to assess how the NGO and the state communicated their ideas about environmental education both to young people and to teachers. Brymen (2004) provides several of the most cited arguments for the use of secondary documents, as they are non-reactive in that they are not produced specifically for research purposes, and secondly, that they are unobtrusive. This second point was of particular importance for this study. In the first instance, gaining original data from individuals working in NGOs, the state or in schools could only yield so much information, and often these individuals only had limited time to discuss their projects, whilst secondly, important information on policy

from the state can be obtained from these documents without pestering officials. Such official documents could also be used to triangulate with evidence given in interviews, allowing a comparison of official written discourses with those that reflected the actuality and practicality of conducting projects. For example, Abraham (1994) also outlines how an analysis of documents can indicate inconsistencies and contradictions within state and NGO policy and between officials (Abraham 1994). Weick (1990) indicates how documents of past events are important in terms of environmental conditions and contexts which may have effects on present activities. This again is pertinent to the analysis in this project, where environmental contexts are of particular interest.

Access and obtaining documents was relatively straightforward, however some NGO documents (for example, project specifications and evaluations) were difficult to obtain. This was in part because not many printed versions of documents were available, NGO staff were often too busy with other tasks to locate documents, and there was evidence that sometimes such documents could simply 'go missing'. In Abraham's (2004) study, access to company documents was refused, which led to certain avenues of enquiry being closed off, and although this was not directly the case with this study, it is possible that some difficulties in obtaining documents may have reflected a lack of cooperation from NGO and government staff. Documents from state and NGO sources may have issues of credibility and biases, although, as expressed in Abraham's study (1994), exposing such contradictions can be of value because of the biases they reveal, which is why this study adopted a critical approach to analysis of such texts. Brymen (2004) emphasises that documents cannot be considered as objective accounts, and may not fully represent the NGO concerned. Although authenticity can be corroborated with NGO staff, there may still be issues with documents being out of date, or not representative of current activities. In terms of secondary data, a clear limitation is that there is no control over data quality (Brymen 2004), despite sources being from such institutions as the state.

3.3 Ethical considerations

In the traditional relationship between the researcher and the research subjects, the local population are 'mined' for data, which is then taken away, worked up, analysed and presented in the institutions of the West, with little more to do with the people from whom the data originally came. Often local communities have become fatigued by academic research (particularly in areas that receive considerable attention), and as a result become cynical about working with researchers (Alumasa 2003). Postmodern and postcolonial writings have questioned the authorship of the 'expert' investigator and the representations which they produce (Blaikie 2000).

Researchers are in a position of power such that, once they have 'extracted' data from the field, they then have the power to represent other voices as they wish (Diawara 2000). Researchers themselves are never neutral, and therefore never neutrally, objectively or accurately represent their research subjects (Dossa 2007). The reality of all research is that it is, by its very nature, extractive. No matter how participatory it aims to be, or how much practically grounded with local people, there remains always an element of extraction, which cannot and should not be denied, or covered up with a whitewash of woolly linguistics that cite participation, empowerment, capacity building, etc, as excuses for 'extracting' information from a community (Brett 2003). Part of the reason for academic research remaining extractive, even with the best participatory principles, is a result of the current system in which research exists. To conduct a PhD requires writing up a thesis (unlikely to be read by participants), to maintain a job at a research institutions requires communicating research results to 'peers', when funded by an external body they will want to see reports. All of these activities require, in development research, extracting information from somewhere else, and presenting it somewhere else. I am not going to debate if this system is right or wrong, it is the current reality. I might also suggest that extracting information from people is not by its nature 'wrong', it is a way of doing research, and it is the way that this research is enacted which is important, not, by necessity, the fact that extracting information has taken place. This does not mean that participatory, on-the-ground, local action and outcomes cannot be attempted, only that the extractive nature of academic research needs to be recognised.

As Brett (2003) describes, accountability is a key concept, and one that is far more complex than proponents of participatory, local-scale development assume. Partly because of these issues, creating a true culture of genuine accountability towards those who participate in research is hugely problematic (De Grauwe et al 2005). As a researcher, it is important to be honest and open with research participants from the start about the potential outcomes of the research, the process and the nature of the participation, and to strive for accountability through the process. This does not mean that an ideally accountable and fully participatory process will be achieved, because as Kapoor (2002b) argues, there are no legitimacy standards to which participatory research can be held. However, an element of responsibility can be assumed towards research subjects, which was adhered to in this project, partly by considering how their voices are represented and how accountability towards them can be achieved (McKinnon 2006). This was done in the early stages of the field research, by negotiating the research objectives with both NGO actors and research assistants, as well as leaving much of the methodology open (for example, allowing participants to follow their own thoughts in interviews). This process had

significant effects on the research, including changing the focus not only to be on 'local knowledge' and practice in the environment, but to draw distinctions between this and 'traditional knowledges', as participants understood them. The aims and objectives of the study were relatively open before fieldwork commenced, and they remained flexible and open to negotiation throughout the fieldwork process. The aims and methods were given more direction and specificity after the initial pilot studies, partly to ascertain how relevant the initial aims and objective were to both NGOs worked with and to local people in the particular localities that are involved in the study.

Central to the issues of accountability is the researcher, and the role assumed when conducting research in the field. One of the lessons from postcolonial theories, and postmodernism, which has been assimilated into much of the theory on participation, is that researchers are by the nature of their position the holders of power over their research subjects, creating a power relationship which is unequal. A partial answer to addressing these unequal power relations born out in participatory methods is to construct the researcher quite differently from 'traditional' strategies of research. Rather than the researcher being a person from the outside, studying or conducting research on people, and assuming an objective viewpoint, instead the researcher can be considered variously as a facilitator, participant, learner, activist, consultant, or perhaps a member of the overall team that produces research (Goebel 1998; Routledge 2001; 2003). All these strategies of repositioning the researcher seek to enhance the sense of connection with communities, by working with them collaboratively (Briggs and Sharp 2004). The researcher then is cast in a different role, one that attempts to hand over or distribute authority more equally in the research process (Chambers 1994b), and which tempers their expert status (Kesby 2000b). This could be taken further still to consider the researcher as a person who seeks to have a positive impact on the communities in which they work. This could include building skills, knowledge or capacities through the research process (Kesby 2000b). Although such examples do well to illustrate some of the positive aspects of this kind of action-orientated epistemology (Binns et al 1997; Easton and Belloncle 2000), in the same way as research can never get away from being extractive, so these kinds of participatory techniques do not entirely do away with the power relations that are inherent in research. As Kesby (2000b, p425) explains "This epistemology does not transcend the power-relations of the research process but rather than getting hung up on the politics of representation in the text, the focus of PRA [Participatory Rural Appraisal] is the production of knowledge for action 'in the field'". This research only aimed to accomplish some of the lofty goals of participation, and was much more in tune with Kesby's suggestion. Attempts were made throughout the field research to redress the relations of power that existed in the act

of conducting qualitative social research, in the examples described earlier in this chapter, attempts were made to negotiate gendered power relations, as well as the power relationships which existed between the researcher and young people in schools. In all cases, it was never evident that such relationships were 'reversed' or flattened by these efforts; in fact both myself and the research assistant were acutely aware that our relatively powerful positions were having significant impacts on the way in which participants behaved. However, the informal, negotiated approach to the research was, largely, successful in creating a 'relaxed', informal environment, where often participants in all phases of the research appeared, at least superficially, to be able to express themselves confidently.

A further consideration here is that power relations between the researcher and researched do not necessarily act in one dimension (as in, it is the researcher who is powerful, and those who are researched who are powerless). Instead, following poststructuralist accounts of power, power exists everywhere. Power is dispersed, if unevenly, amongst actors in the research process (Kesby 2005). In many senses, those who are researched also have power. They may choose to attend, take part in, or alternatively refuse to be involved in research, and this did happen at times, for example, with potential NGO interviewees not turning up to meetings, or with local people who did not want to take part in the research, or who questioned directly the nature of the research. Such uses of power may have included subverting the research processes altogether, by withholding information, by using researchers to forward an agenda, or through negotiating with and making demands of researchers. Such tactics were encountered and, as discussed earlier, myself and the research assistant were 'used' as NGO 'representatives' in place of their staff for an event, and it became apparent in some interviews that local people would use the interview to foreground their own agendas. Again, this does not mean that power relations between the researcher and researched were 'balanced', only that we must recognise all forms of power within the process, and by doing so not cast those who are researched as passive, or even 'victims' of the research process. Indeed, such power relations and uses of power should not be inherently regarded as negative in themselves. Use of power can have positive outcomes (Kesby 2005). Communities or individuals may 'use' research outcomes or the research process to forward an agenda which may have a positive impact for those people (Mercer 2002). Again, it was quite likely that local community members used the research process to highlight their own goals, and, in another example, teachers would use the presence of myself and NGO staff to highlight their needs in a public forum. The ambiguous nature of the power relations between the researcher and researched was perhaps most vivid in my relationship with JGI. It was clear that I was conducting research 'on' them, and 'on' their projects, yet I was also working 'with' them in

the project in a limited sense. I accompanied their staff to schools, and conducted some interviews with teachers whilst JGI staff conducted evaluations of their project, although some school visits also took place without JGI representatives. This, and encounters at the educational events, may have made us appear to be working 'for' JGI to other participants, and steps were taken to assure participants that we were not employees of the NGO. However, staff at the NGO were interested in our results, and to some degree there was collaboration with them on elements of the research project (such as the choice of study sites and schools). Therefore, the relationship built up with JGI certainly had some bearing on the course of the research process. Although JGI staff were throughout very honest, open and helpful, they also guided the nature of the research encounters, for example, by influencing the choice of schools.

There remains a difficult question as to firstly how researchers should authorially depict those that they study, and secondly resolving issues about whether they should be represented at all through traditional accounts (Radcliffe 1994). One way of dealing with this ethical dilemma of representation is to consider what happens if researchers, because of their inability to truly represent those who they study in a fully equitable way, simply disclaim the right to speak for others. Radcliffe (1994) argues that if this line is taken, effectively the responsibility we have inherent in our current positions of privilege and authority are abdicated, whether we currently like this position or not. Instead of becoming entirely consumed by the ethics of this situation, it is better, at present, to work with these power relations, but at the same time use positions of privilege to strive towards methods of representation that seek to more accurately and collaboratively represent those who take part in research. Researchers themselves can then use their powerful position positively for those with whom they work, and by doing so can recognise their responsibility to those whom they research, and to represent them in a way that is ethically sound and in tune with their needs, desires and priorities (McKinnon 2006). Although arguments adopted from postcolonialism and postdevelopment thought should destabilise the construction of academic analysis of knowledge 'gathered' from research subjects (Goebel 1998; Briggs and Sharp 2004), this does not mean that the researcher should feel paralyzed to represent other voices. As such, the best attempts are made throughout this thesis to represent accurately the voices, thoughts and opinions of those people who participated in this study, for example, by using their own words (admittedly, translated) to represent particular issues and problems, and to highlight where, for example, local agendas were significantly different from those of NGOs and the aims of the research. In this context, however, it must be accepted that the voices which are marginal within the research process are still expressed in and through the institutions and languages of the West (Briggs and Sharp 2004).

It has also to be accepted that this research made little short-term material difference to participants. One of the most difficult ethical dilemmas for this study, as for much development research, is that research on particular topics does not yield immediate material 'development' to participants, an issue for research in the global north as much as it is for research in the global south. Local respondents often associated myself (as a white, male, Western researcher), and the research assistants (all Tanzanian, but well educated, and relatively successful), with development projects, rather than development research. This was in part not helped by, in some areas, working with an NGO. For example, we arrived for the first time at some schools in NGO vehicles, immediately singling ourselves out and being associated with a development NGO. However, the distinction between our research work and development work was always made clear to respondents and local people, and often considerable time was spent describing the research and what the intended outcomes were. No secret was made of the 'academic' nature of the research, and it was always made clear to participants what we hoped to achieve, but that this might have little material benefit for them in the short term. This sometimes led to disappointment, however participants were generally accepting and understanding of this. It was decided early on in this research that no payment of any kind could be given for participating. This was in part because we did not want to encourage people to participate simply for an immediate, small monetary gain, nor did we wish to inspire minor jealousy within small communities between those who did or did not take part. Also important was to distance ourselves as researchers from those conducting material development projects, such that it was clear that we were there to conduct development research, and there could be no lingering misconceptions about our ability to bring about local development. This tactic did not entirely eliminate these misconceptions, however, but it did make our position clear, avoiding the potential dangers of 'participatory' methods of research in which communities mistake 'research' for 'development'. This tactic did mean that a very small minority of people did not want to participate (perhaps one or two per study area), but it also made our position more honest and less ethically ambiguous.

None of the above clearly provides an 'answer' to the ethics of the researcher and researched relationship, and does not provide a field checklist for how researchers should position themselves when working with communities and individuals in less developed countries. It does outline the complexity of this relationship and various ways in which steps can be taken for this relationship to be negotiated better and overall more positively. 'Positive impacts' should not be read in a way which necessitates that researchers need and must make a material, measurable contribution (although obviously this is one form of positive impact), but that in some way the

relationship must be worked so that power relations are recognised and worked with constructively, and that research outcomes should be understood collaboratively and with the intention of making a responsible contribution to those with whom you work, at whatever level.

Important also for this study was the process of gaining formal ethical clearance, gaining consent from participants, and in particular gaining ethical approval and consent to work with young people. Ethical consent was gained from the University of Glasgow specifically to work with young people aged 13+. Research consent then was gained from The University of Dar es Salaam, and consent to research had to be sought from each of the administrative areas in which research was conducted (Kawe Ward, Bagamoyo, and Rukwa). These administrative bodies at the district level then provided us with consent to go to local leadership groups (e.g. village-level leadership, or ten cell leadership), which would then offer their consent to conduct research. In the case of working with NGOs and Schools, consent letters from the University of Dar es Salaam were provided. When interviewing adults, including state and NGO officials, teachers and local adults, oral consent was sought from each individual, after a brief explanation of the research, its purpose, and the way in which the data would be used. It was decided during pilot studies that gaining written consent from participants would be highly problematic, particularly with local people because of problems with illiteracy, and in some cases, a lack of knowledge of what 'official' looking paperwork would mean, and what consequences it might bring. During the process of obtaining consent, participants had time to ask questions, and there was further space for this after the interview. It was made clear that participants could withdraw, or not answer questions, if they did not feel comfortable. For all respondents anonymity was preserved through anonymising their responses throughout the text of this thesis. Respondents are only referred to by their age, gender and the study area in which they were interviewed. Some respondents agreed to have their photo taken as a part of the study, for which I gained oral consent from them to use the photo in reports based on the study. A minority of respondents were uncomfortable when asked about the use of photography, or were unhappy about their image being used, and their wishes were respected, however many were also keen to have their image used and associated with the study. For working with young people in schools, access was negotiated first with teachers, and there was always a teacher present either in the room or in the next classroom during focus groups. After gaining consent from teachers, the young people themselves were also asked to give their oral consent after having the process explained to them. We were also able to speak to a limited number of young people (aged 13+) outside of the school environment. In these rare cases, express permission was sought from their parent/guardian, as well as consent from the young person. Parents/guardians were requested to stay with them during the

interview, although for the most part this happened naturally as opportunities to talk with young people generally arose in situations where myself and the research assistant were present in a family household. It was important throughout the research process to adopt this approach to working with young people, as they are particularly vulnerable members of the communities studied, and although often the consent process was, to some degree, long-winded, it helped establish a relationship of respect and reciprocity with young people as participants, and those local adults who were responsible for them.

3.4 Summary

Tanzania, and the three areas selected as field sites, all provide an interesting case study through which to explore issues concerning participation, local knowledge and environmental education, and in the first part of this chapter I give a detailed contextual background to these sites. This contextual detail draws attention to the particularities of Tanzania and the study areas within it which make them interesting in themselves, but should also highlight how such case studies may also be representative of particular areas of Tanzania (e.g. urban and rural) but also more broadly of countries which face similar development challenges. The methodological strategies adopted and described here are reflective of the qualitative tradition in geography, but also absorb elements of participatory research and various teaching pedagogies, which aim to reflect the focus of this study on education and working with young people. This mixed approach, in which techniques are 'borrowed' from a range of disciplinary and methodological backgrounds, is purposefully designed to echo not only the interdisciplinary nature of this study, but also to reflect and build on the ethics of participatory research which, as may be observed from the discussion above, have an important influence on the research design. This thesis aims to study participation not only a strategy for development, but also to explore participatory ethics and debates through the employment of some participatory methodologies and ethical concerns. Many of the ethical and practical matters highlighted in this chapter are very similar to those debates concerning participatory development projects, and resonate with some of the discussions that will take place later in this thesis with regards to the uses of participation as a tool for development. In the following chapters, the methods themselves will appear under some scrutiny, and I will consider how these ethics have had a bearing on the results and analysis, particularly with references to spaces of participation and the observable power relations which took place during the methods being employed. The discussions here are then only a starting point from which I begin to interrogate the ethics of participation in development.

Chapter 4

What is the environment?

A critical exploration in the spaces of local knowledge

“Pupils should be able to explain the meaning of the environment.”

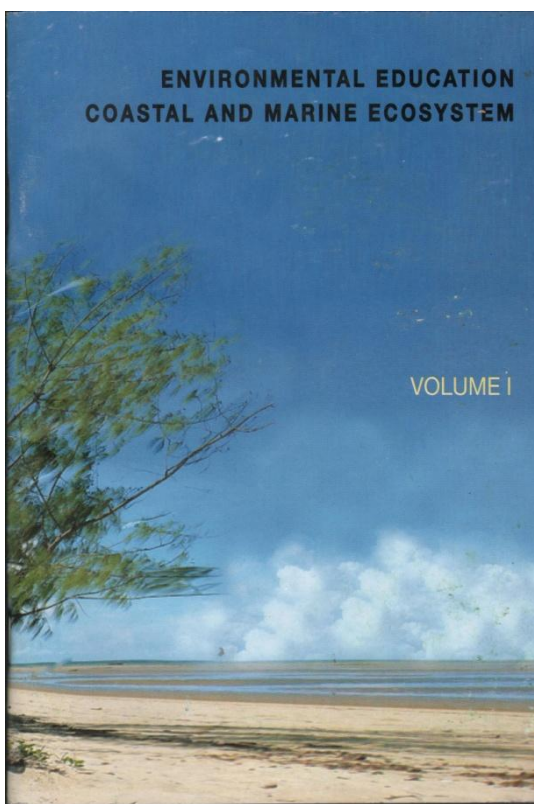
(MEVT 2006, p2)

A critical approach to local knowledge is only in its infancy within the development arena, and in this chapter I interrogate the concept of local knowledge. First I explore how the ‘environment’ is defined by the Tanzanian state, NGOs and local people in order to examine the interrelationship between local and official knowledges of the environment, through which I draw attention to how they are produced at a range of scales. I go on to tease out the limitations of current conceptualisations of local knowledge by reflecting on how knowledges of environmental management are performed and reproduced within communities. From a distinctly geographical perspective I examine the spaces in which knowledges are reproduced, and I consider what impact these processes of reproduction have on the knowledges of communities. Focusing on young people, I not only begin to reveal the unexplored terrain of their environmental knowledges, but also consider how local knowledges, power relations, space and time are all fundamental elements in the production and expression of knowledge in Tanzania. I do this to help piece together the complexities and realities of local knowledge, and in the final part of this chapter I delve into these further by exploring traditional knowledges, including local superstitions and witchcraft, previously ‘taboo’ areas of local knowledge research which themselves reveal important aspects of how knowledges behave over time and space, but also between ethnic and cultural groups. I seek in this chapter to reconsider the conceptual framework through which local knowledge has been thus far described, and bring to the fore a critical but balanced account of what ‘local’ people know about the environment.

4.1: Defining the environment

The importance of not imposing ‘Western’ values and knowledges on other communities has been a key feature of development literature on local knowledges and participatory development (Leach and Fairhead 2000; Kesby 2000; Sharp et al 2003). In Tanzania, both the state and a number of NGOs seek to contribute to, and change, local adults’ and young peoples’ understandings of the environment through environmental education projects and the formal education system. In order to explore this process, in this section I investigate how NGOs, the

Tanzanian state, and local people define the 'environment'. The quote above, from the Tanzanian Geography syllabus, is in itself interesting, in that it is exactly the 'meaning of the environment', and how different groups attribute meaning to the environment, which drives the first part of this study. In the terms of the contemporary local knowledges' literature, an understanding of how local people interpret their environment is essential for a project that involves negotiating local environmental knowledges (Tobisson et al 1998; Twyman 2000; Uzzell 1999). Here I will discuss to what extent NGOs and the state engage with local knowledge when they draw up their own conceptualisations of the 'environment', and consider the ways in which these understandings are shared with people from the study areas of this research.



In the Jane Goodall Institute (JGI) environmental education project, and in other environmental NGO projects, it was argued that the content of their environmental education was locally appropriate. But was this really the case? An educational book was produced by JGI to distribute to teachers who were trained as part of the project (Fig. 4.1). Titled 'Environmental Education: Coastal and Marine Ecosystem', this book focused on environmental problems which were deemed as relevant to coastal areas of Tanzania. The initial definition of the 'environment' given in this book is very broad.

Figure 4.1: The cover of the Jane Goodall Institute book.

"Our environment can be defined very simply as our surroundings. The environment consists of everything from the school you study at and the country you live in to the people you interact with every day. All of the plants and animals we see each day make up our environment. They are living things. Non-living things make up the environment too. Rocks and soil and water in lakes, streams, and rivers are considered non-living parts of the environment."

The environment also includes such things as the economy and the political and social situation we live in. Other non-living things, like cars, trucks, houses and businesses affect our lives each day and are considered part of our environment.”

(The Jane Goodall Institute 2009a, p1)

A summary of the book, however, illustrates how the material almost exclusively describes ‘natural’ parts of the environment, and the detrimental effects that humans have on them.

Summary of content of *Environmental Education: Coastal and Marine Ecosystems*, The Jane Goodall Institute (2009a).

- Ecosystems and food chains (p1-4)
- Oceans and the water cycle (p5-8)
- Beaches and shorelines (p9-11)
- Mangroves (p12-14)
- Corals and sea grass (p15-21)
- Marine debris (p22-25)
- Harmful fishing practices (p26-28)
- Animal facts (p29-39)
- Glossary of terms (p40-44)

On reading the detail of each of these sections, the overriding focus of the material is with environmental problems created by people, and possible solutions to these problems through conserving the environment. Whilst there is recognition of human uses of the environment, the discussions of environmental issues are largely concerned with conserving the natural environment. Fig. 4.2 is an excerpt which focuses on mangroves and illustrates this trend. Interviews with employees of JGI and the Tanzania Forest Conservation Group (TFCG) are further revealing of how NGOs choose to define the environment in the scope of their projects.

“We organise excursion, which might include visits to coral reefs, mangrove planting in coastal regions, or going to see the impacts of illegal fishing along the coast. We might take pupils to see evidence and impacts of beach pollution.”

Environmental Education Coordinator, JGI

“Overall the aim is to raise awareness of conservation issues and the conservation of natural resources and the environment.”

Environmental Education Coordinator, TFCG

4.0 Mangroves of Tanzania

Mangroves are salt tolerant trees or shrubs that live in inter-tidal zones. These zones consist of salt water and fresh water. Mangroves can grow in marshes, bays, inlets, estuaries, channels and creeks. There are nine species of mangroves in Tanzania; eight on the mainland and one on Zanzibar. Mangrove forests provide the backbone of the tropical and subtropical mangrove ecosystems.²⁴



Figure 10: Mangroves in Pangani



Figure 11: Roots & Shoots members planting mangrove in Bagamoyo

What do mangrove forests do?

Mangroves serve a whole variety of functions in an ecosystem. Mangroves provide large amounts of organic matter which feed lots of different organisms, from small worms to large ocean dwelling fish. They also provide valuable breeding, nursery and feeding grounds for many varieties of fish and invertebrates. Crocodiles, hippos, migrating birds, crabs, oysters, shrimp, monkeys and numerous other animals seek shelter in the mangrove forests. Some of the animals which live in the mangrove forests are endangered.

The mangrove forests help to filter river water, removing sediments which can harm sea grasses and corals. The mangroves also help to filter out toxins and pollutants in the environment, cleaning the water before it flows into the ocean, making it safer for both wildlife and people.

The complex root systems of mangroves prevent erosion and assist in stabilizing the coastline. There are three types of mangrove roots; knee roots, stilt roots and peg roots. These different root types evolved to allow the mangroves to live in a challenging environment that many plants cannot tolerate.

1

Mangroves provide a direct value for the human community in Tanzania. Locals can harvest fish, oysters, crabs and other shellfish in and near mangrove forests. The forest can also supply firewood, charcoal, boat building materials, tannins and traditional medicines. The mangrove forests attract tourists to Tanzania as well, helping local communities to attract business and revenues from the tourism industry.²⁵

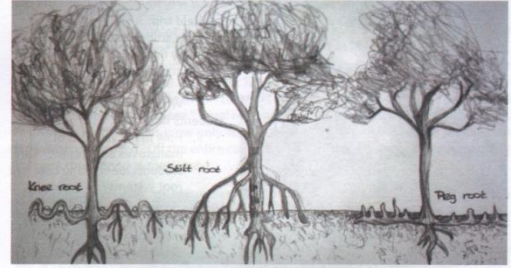


Figure 12: Mangrove root systems which help stop erosion

Unfortunately, many threats to the mangrove forests have emerged in recent decades, putting wildlife, the environment and the human community at great risk.

What are the threats to mangrove forests in Tanzania?

Mangrove forests are threatened in many ways in Tanzania. The mangroves are cleared for aquaculture (fish farms), agriculture, hotel construction, to create farm land and for timber. When the trees are cleared the benefits of mangrove forests are lost; there are less fish because there is less food; more sediments find their way into the ocean, which affects corals and sea grasses, which in turn affects fisheries and impacts local fishing communities; toxins are not absorbed and thus pollute the marine environment; erosion increases; salt water, which would normally be absorbed by the mangroves, can infect farmers' fields, destroying the land and making it unfit for agriculture; increased risk of fires in areas where the land has dried out; loss of important habitat for endangered animals; and loss of tourist revenue.²⁶

12

2

In order to help save the remaining mangrove forests of Tanzania we must understand that mangroves are more than just 'mosquito infested swamps'. Mangrove forests are a necessary component and vital part of the marine ecosystem of Tanzania, without which life would be very difficult.



Figure 13: Destruction of the mangroves; this man is digging out the roots to find worms; without the roots holding down the soil the ground will erode

Suggested Activities

1. Field trip:
 - a. Have students take a walk in nearby mangrove forests and observe nature.
 - i. What animals can students find?
 - ii. How many varieties of mangroves are present? Can students identify the different root systems?
 - iii. What human activities are taking place in the mangroves? Are those activities sustainable?
 - iv. Can the students find any examples or evidence of degradation? Conservation?
2. Class discussion: What would happen if the mangrove forests disappeared? How would that affect your life, the lives of those in your community?
3. How can the mangroves be managed better? What are some examples of sustainable uses of the mangroves and unsustainable uses of the mangroves? Make a checklist of ways people and animals can benefit from healthy mangrove forests.²⁸

14

5.0 Corals of Tanzania

What are coral reefs?

Though they may look like rocks coral are really living organisms made up of tiny creatures called **polyps**. These polyps are similar to sea anemones and jellyfish. They eat tiny organisms by filtering water through their systems.

Coral reefs are made up of the skeletons of old polyps, along with the remains of mollusks, sea sponges, and other marine life. Only the very top layer of a reef is alive, though the entire reef supports life. Many different species of fish and marine organisms depend on coral to survive. There are 950,000 species represented in the world's reef system. Because of this tremendous diversity of life reefs have been called "tropical rainforests of the sea." Coral reefs are very delicate, and they take many years to grow.²⁹ Many species grow only about 1 cm per year. It takes decades for them to grow when destroyed. Off the entire coastline of Tanzania coral reefs live and grow, but they are threatened in many ways.



Figure 14: Corals in Nungwi-Zanzibar

There are three types of coral reefs: fringing reefs, barrier reefs and atolls. **Fringing reefs** grow at the edges of continents and islands. **Barrier reefs** are further off-shore, separated from the coast by a deep channel. **Atolls** grow in a circle and often have a lagoon at their heart and tiny islands around. Most of the coral reefs in Tanzania, and in the Indian Ocean in general, are fringing reefs.³⁰

What do coral reefs do exactly?

1. Corals serve many functions in nature and are very important in maintaining a healthy ocean ecosystem:

15

Figure 4.2: Excerpts from the Jane Goodall Institute book. Although human uses of the environment are recognised (box 1), the majority of the material focuses on threats to the natural environment which come from human use (box 2).

The focus is clearly on a message of conservation of the natural environment, and all of the NGO actors interviewed mentioned that their projects were focused on 'environmental conservation'. When these NGO actors discuss their particular type of environmental education in this way they begin to construct the 'environment' discursively as *about* these issues, rather than more broadly concerned with some of the elements quoted in the introductory sentences of the JGI book, which include human activities as an integral part of the environment. Such discursive constructions of the environment as about conservation is very similar to the evidence found by Leach and Fairhead (2000) of Western conservation rhetoric being suffused through the 'deforestation discourses' of the state and conservation NGOs in West Africa. This conservation rhetoric has specific origins in Western scientific ideas of ecology, including the theory of 'climax communities' existing before 'human intervention', and Leach and Fairhead argue that such a conservation rhetoric has been heavily used in understanding environmental issues in West Africa. We have already seen in chapter 2 how Tanzanian policy on environmental education is predominantly concerned with 'environmental conservation' (NEMC 2004), and here there is evidence that NGOs too promote a conservation ethic which is concerned with the preservation of the natural environment, with a tendency to prioritise this over human uses of the environment. The way in which the environment is defined by NGOs is echoed through state education documents which are used by teachers and pupils. At primary and secondary school level, the Tanzanian state Geography syllabus contains significant content on the environment. At primary level, topics relating to the environment are present from Standard 3 to Standard 6. For example, Topic 1.4 of Standard 3: 'Conserving the Environment', involves showing pupils the environment around their school and local area, and teachers setting up projects for pupils to help conserve the environment (MEVT 2006). Topic 1.0 of Standard 4 is titled 'Components of the Environment', in which *"Teachers to guide pupils to tour their division to observe the natural vegetation, animals, relief features and weather conditions."* (p14). Later, there is greater focus on the interaction of people and the environment, for example, Topic 2.0 of Standard 6: 'Economic Activities and their effect in the Environment' discusses industry, forestry and tourism and their impacts on the environment. It is interesting that at the earlier stages of the syllabus the focus is on defining the components of the 'natural environment' and it is only at the later stages that the 'human' element makes an appearance.

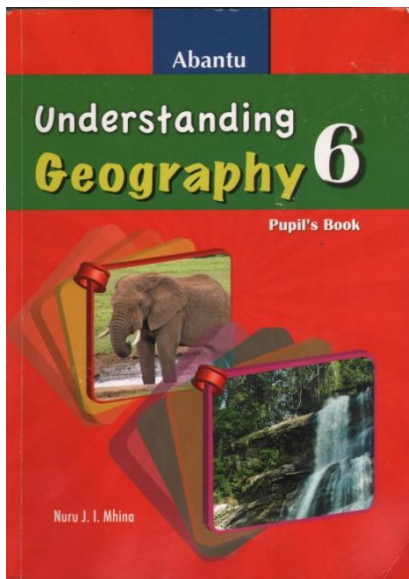


Figure 4.3: A primary school textbook (Mhina 2009)

The textbooks associated with the syllabuses are also revealing of how the Tanzanian education system seeks to define the environment (Fig. 4.3). In these textbooks the focus is largely on the negative effects of people on the natural environment, and how these can be mitigated for the purposes of conservation. In Standard 6, the topic 'Economic Activities and their effect in the Environment' has a section on deforestation which illustrates how the focus is clearly on the detrimental effects of human activities and how these might be mitigated with conservation-based measures (Fig. 4.4, p113).

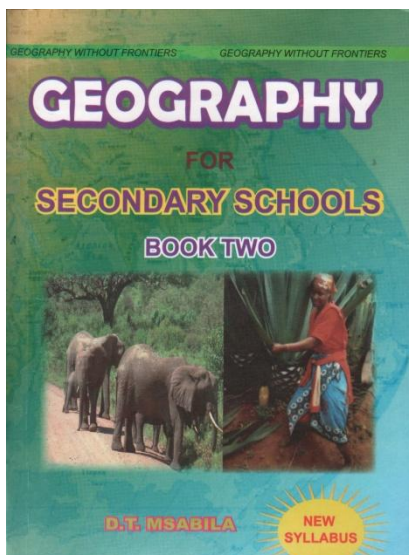


Figure 4.5: A secondary school textbook (Msabila 2007)

The secondary school syllabus content also remains firmly rooted in a 'conservation discourse'. In the section on 'forests' in 'Geography for Secondary Schools: Book Two' (Fig 4.5) much of current forest management practice is described as 'poor management' and the proper type of forest management is described as a 'scientific' enterprise (Msabila 2007, p122). The text does recognise the economic value of forests, but it gives precedence to conservation and sustainable use, without recognising specifically why particular people find it impossible to conform to these ideals. The example below, from 'exploitation of forest resources', exemplifies this (Fig. 4.6 and Fig. 4.7, p114-115).

Destruction of forests

Some human activities contribute to the destruction of forests. The following are some of the activities that lead to destruction of forests.

1. Commercial logging companies cut down mature trees for their timber. This results in large areas of forests being destroyed in order to remove only a few logs. Trees have also been cut down for firewood and charcoal.



Figure 2.23 Logs being transported by a lorry

2. Agriculture which include shifting cultivation. Shift cultivators move into the forest. They cultivate a piece of land. After a while the soil loses its fertility. Thus, they shift to clear and cultivate on another part of the forest. In addition, cash crop farming and cattle ranching have contributed to destruction of forests.
3. In some areas or regions, large areas of forests have been cleared so as to pave way for construction of hydro-electric dams.
4. Large areas of forests have been cleared to allow mining activities to take place.
5. Urbanisation and industrial development have led to clearance of forested lands. This is because roads are constructed through previously inaccessible land, opening up the forested areas.
6. Carelessness and irresponsible behaviours such as throwing burning cigarette ends into forests have been known to cause forest fires. This contributes to destruction of forests.
7. The rapid increase in population and the need to feed them has led to clearance of forests for settlements and farming.
8. Paper industries also contribute to deforestation. This is due to the fact that these industries use large amounts of trees to manufacture paper.
9. When young tree seedlings are planted where tree harvesting has taken place, their chance to survive is low. This is because they are destroyed by wild and domestic animals.

Sustainable use of forests

Sustainable use of forests includes efforts made to conserve and protect forests so that they can be available over a long period of time. Due to the importance of forests to the economy and to the environment, the need to use them in a sustainable manner is important. The following are some of the ways in which forests can be used in a sustainable manner.

1. **Afforestation:** Afforestation is the planting of trees in areas where they did not exist. Trees such as cypress and pines are commonly planted in these areas. This is because such trees grow fast.
2. **Reforestation:** Reforestation is the planting of trees in areas where they have been harvested or destroyed. Reforestation is also termed as **reafforestation**.
3. **Agro-forestry:** Agro-forestry involves planting trees such as the silk oak together with crops on the same piece of land. The trees increase soil fertility, provide firewood and timber for building and construction.

4. **Public education and awareness** should be carried out so as to educate local people on the importance of sustainable use of forests. Public education and awareness may be done through local meetings, radios, newspapers and other print media, television and even the Internet.

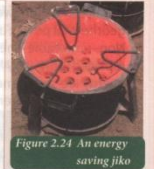


Figure 2.24 An energy saving jiko

5. People should be encouraged to **develop and use of alternative sources of energy**. Alternative sources of energy include biogas, coffee husks and sawdust. These alternative sources of energy help to save trees which would otherwise have been cut down for firewood and charcoal. People should also use solar and energy saving jikos as well as fireless cookers. Energy saving jikos use little firewood.
6. The government should encourage and finance research into better ways of managing forests.
7. A country should have clearly written policies to serve as a guide to management of forests. In Tanzania, such policies are under the Ministry of Natural Resources.

Exercise 2.3

1. Define the term forest.
2. List down any three challenges that face forestry in the Democratic Republic of Congo.
3. What do you understand by the following terms?

(a) Deforestation	(b) Reforestation
(c) Forestry	(d) Agro-forestry
4. Give any three benefits of forests.
5. State any two types of forests.

Energy harnessing

Energy harnessing refers to different processes of making use of and controlling the various types of energy sources available. Energy sources can be **renewable or non-renewable**. A renewable energy source is any source of energy that is not expected to get finished through constant use. Renewable energy sources can be replaced or grown within a relatively short period of time. Renewable sources of energy are sometimes referred to as **alternative sources, inexhaustible sources or sustainable source of energy**.

Figure 4.4: Excerpts from a Tanzanian primary school Geography textbook (Mhina 2009). Here human activities are clearly discursively constructed as detrimental to the environment, whilst solutions are largely couched in terms of conservation and sustainable use.

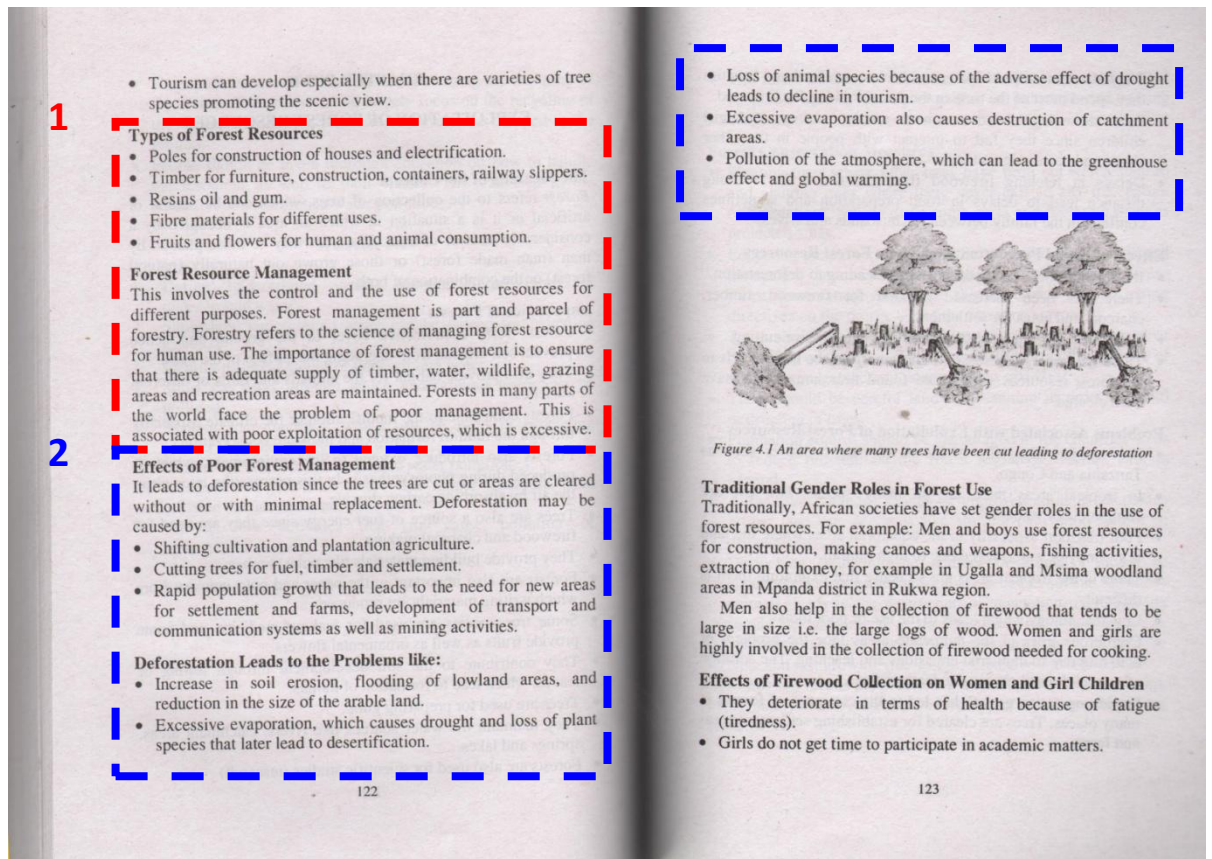


Figure 4.6: An extract from a Tanzanian secondary school textbook 1 (Msabila 2007, p122-123). The 'Forest Management' section (box 1) constructs management of forests as a 'scientific' enterprise, and 'excessive use' as 'poor management'. Those activities which are deemed as poor management are the typical agricultural practices of rural Tanzanians, including shifting cultivation and use of trees for fuel and building materials (box 2). 'Sustainable' management is underlined as something 'other' than what local farmers are currently practicing.

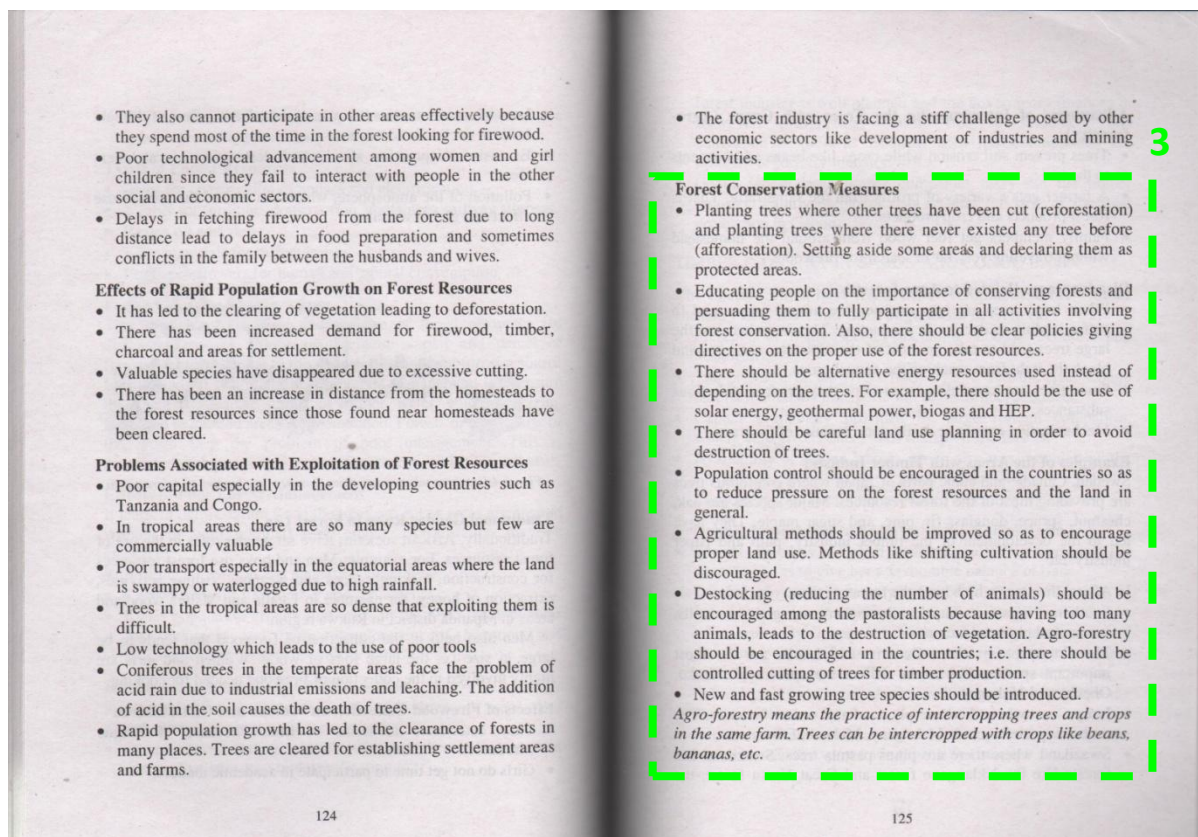


Figure 4.7: An extract from a secondary school textbook 2 (Msabila 2007, p124-125). In box 3 the importance of conservation measures to the preservation of natural resources is evident. Several of the suggested methods rely on local people reducing their impact on the environment through changing agricultural practices, which again will ensure ‘conservation’ of forests.

The illustrations on the covers of the three textbooks are evident of a further way in which the ‘natural’ environment is prioritised. It is interesting to note where humans appear, or, importantly, do not appear (Fig. 4.8).

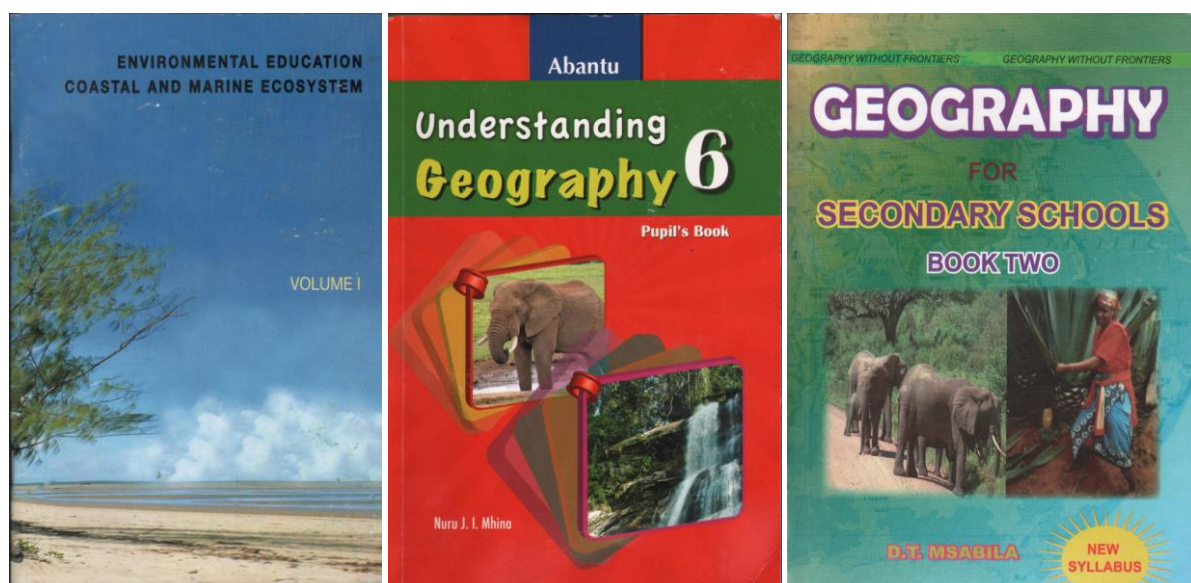


Figure 4.8: Front covers of three textbooks used in Tanzanian state schools. From left to right: The Jane Goodall Institute 2009, Mhina 2009, Msabila 2007.

The two books on the left are for primary school children. Note that there are no humans on either of the front covers. The beach scene on the JGI publication, and the waterfall on the cover of Mhina (2009) both present nature in a pristine, 'natural' form. There is no evidence of human activities; for example, there is no litter on the beach, which is typically so prevalent on Bagamoyo beaches and those around Dar es Salaam. This presentation of nature is seemingly in line with the contents of the syllabus, which brings the components of the 'natural' environment to the attention of young people *before* the nature-human interaction is introduced throughout the years of primary education. Interestingly, the secondary school text book, on the right, does have a person on the front cover, in line with the fact that the secondary syllabus does feature the interaction between humans and the environment. The order in which these concepts are introduced is significant. By focusing on the 'natural' environment first in the learning process, there is an indication that this is the 'fundamental' knowledge which must be learnt and understood first, before the more 'complex' learning about human-nature interactions. This suggests that the 'natural' environment, in its 'natural' form is the more fundamental thing which young people must learn.

Environmental NGOs and the Tanzanian state discursively construct the environment as something which is natural and to be conserved. A similar western 'conservation rhetoric' to the one identified by Leach and Fairhead (2000) appears to have become the official conservation discourse of the Tanzanian state. These official versions of the environment contrast with those of the local people from all three areas of this study. When asked to define their 'environment', local people tended to discuss a far broader range of issues than those of the 'natural' environment. Local respondents variously prioritised issues such as cleanliness, rubbish, the home and community, local health and disease, agricultural activities, alongside elements of the 'natural' environment, such as forests, oceans, rivers and animals. The histogram below summarises (Fig. 4.9) these responses.

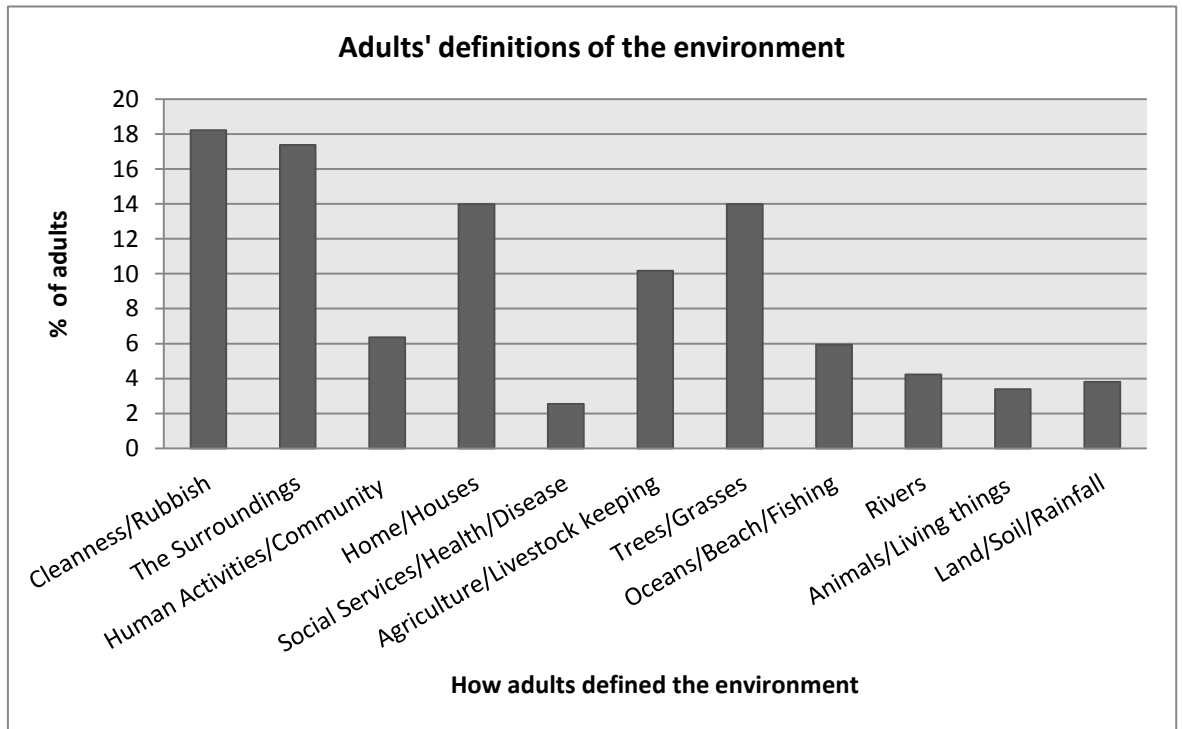


Figure 4.9: Adult respondents' definitions of their environment, based on % response per category. Although almost 30% used 'natural' features of the environment in their definition, significant proportions used other terminology, such as 'the surroundings', or highlighted concerns for cleanliness and health, as well as agricultural activities.

Local people's understandings of the environment appear to be quite varied and complex, comprising a series of both natural and human elements which are variously prioritised. Whilst they recognise 'natural' components as important, equally and sometimes more important to respondents were issues of health, the urban environment and activities that take place within and through their surroundings. There is no single, clear definition of the environment. This contrasts with NGO and state material, which constructs the environment as being concerned with the 'natural' environment, and human efforts to 'conserve' it. For example, in each of the study areas, the percentage of adults who made some reference to livelihoods, and the value of the environment to livelihoods, when they were asked to define the 'environment' was very high, in Kawe 90%, in Bagamoyo 87%, and in Rukwa 80%. In contrast, those who mentioned some more 'abstract' definition or value of the environment associated with a conservation ethic, for example, understanding diversity of animals and vegetation as valuable in itself, was relatively low, in Kawe 18%, in Bagamoyo 25%, and in Rukwa 13%. From the responses of local people it becomes apparent that they commonly define the environment in terms of its value to livelihoods, and the actions that take place within it, which are intertwined with the issues such as health and agricultural practices.

“The environment is the part which surrounds people particularly the community. It should contain important amenities like healthcare and electricity.”

Woman, age 20-29, Bagamoyo.

The respondent here does not understand the environment as a series of ‘natural’ phenomena, instead she highlights how social amenities are an important part of her environment. This, in some respects, tallies with the definition presented at the beginning of the JGI booklet, but not with its remaining content, nor the content of the state syllabus. Highlighting such things as part of the environment was common amongst adults, tying the importance of particular facets of the environment, as they saw it, to their livelihood needs.

“There are a range of things in the environment, including conservation and preservation... we should make sure that there is no standing water, that there is no rubbish left around... We need to get away from diseases. Some are transmitted because of the poor environment, like malaria, typhoid and other chest problems.”

Male, age 20-29, Kawe.

As can be seen in the reference to ‘conservation and preservation’, for a small percentage of respondents the environment was partly understood as ‘valuable’ in itself. But it is important to note that this respondent quickly moves on to discuss how ‘conservation’ of the environment is linked to health, by making connections between a clean environment and preventing disease, and illustrating how adults linked their understanding of the environment with livelihoods. Rather than defining the environment by its constituent ‘natural’ parts, 17% of respondents defined it as the ‘surroundings’ (Fig. 4.9), 23% defined the environment as about community, the home, or local services, 12% used agricultural activities in their definition, and 18% referred to cleanliness. For those who used the term ‘surroundings’, this made reference to their immediate area, including the home or farm. Only 30% included elements of the environment that were both ‘natural’ and beyond the individual’s immediate environment, such as a nearby forest, the ocean or a lake. The following quote describes a respondents’ immediate surroundings.

“The environment includes your house, home, the farm, the area where you live and the surrounding area. But also the farm environment, apart from the house, including the trees.”

Male, age 60+, Ilemba (Rukwa),

As the quote above illustrates, 'environment' was also not always defined by physical and human features, but rather what is done within or through the environment. It was common for respondents to define the environment through actions which are performed in it. Cleaning was one such practice, but also agricultural and pastoral activities, managing waste, planting trees, business activities, and even education (Fig. 4.9), were all regarded as part of the environment. These practices could, in part, be connected to an individual's direct experiences. Farmers would describe agricultural activities, cattle herders would describe pastoralism and livestock. 'Cleanness' and 'rubbish' were identified by 18% of respondents, including sweeping, keeping utensils and pots clean, and disposing of waste. This was further extended to the personal body, with 3% expressing a direct link between environment and health. For a significant number of respondents, performed actions in the environment were of greater or equal importance in defining what the environment is compared to the physical or human components of it. This supports evidence from other studies which suggests that local knowledges can often be embodied or performed (Briggs and Sharp 2004), or might be recognised as a 'skill' rather than a 'knowledge' (Sillitoe 1998a). The evidence from Fig. 4.9 and the quotes above indicate that individuals can express their 'skills' and performed practices in words (they can describe them), but their understanding of the environment is defined by practices performed through it rather than more abstract conceptions of what the environment is. This indicates that local knowledge can be defined by practices, and that local peoples' knowledge of the environment *is* their knowledge of the practices they perform in and through it.

Respondents would not always draw overt distinctions between the human and physical elements of the environment. Specific efforts would not be made to separate the home and business from more 'natural' parts of the environment, such as rivers, mountains, and farmland; these were regarded also as parts of the 'surroundings' (see Pictures 4.1 and 4.2 for examples of typical homes). Similarly, clear distinctions were not always made between the actions performed in the environment and the natural or physical environmental components. These were, for some respondents, simply all regarded as part of the environment.



Picture 4.1: A typical home in Kawe, Dar es Salaam. Respondents often listed things done in the environment as a part of the environment, for example, cooking and maintaining a clean home.



Picture 4.2: Cattle in the compound. Compounds in rural and peri-urban areas are often shared with livestock. It is possible that respondents did not want to 'separate' human and non-human components of the environment because these environments were not so separated in their lives.

Although the natural components of the environment are not ignored by local people, in fact they are often cited as key elements, they evidently have a more practice-based definition of the environment, when compared to the discursive ideology of environment as constructed through environmental education of NGOs and the state. These tend to define the environment as a 'thing' or a 'place', as in 'Western' use, a definition which comes quite specifically from a conservationist perspective. The consequence is that the working definitions of the environment utilised in environmental education do not always match, and frequently come into conflict with, those derived from local people. A conservationist perspective that focuses on the natural environment and its conservation ignores the complex and varied nature of local understandings (Myers 2002; Semesi et al 1998; Tobisson et al 1998). It ignores how local people understand their environment as more than just 'natural' features, and fails to take into account that local people see the value of the environment in terms of its importance to their livelihoods, not necessarily the abstract 'value' of the natural environment in itself. One of the consequences of this disjuncture is that official definitions and the educational material can appear abstract when compared to the everyday, lived realities and experiences of the environment for local people. This may have consequences for young people who are engaged through environmental education, who fall between the environment as constructed by their community and those which are taught to them through formal education.

When adults and young people were asked to define environmental issues in their local area (Fig. 4.10), young people were more likely to focus on environmental problems which caused harm to the natural environment (such as deforestation, land degradation, fishing and hunting), whereas adults were more likely to mention other problems which were not directly related to the natural environment or its conservation, such as disease, population, infrastructure and education.

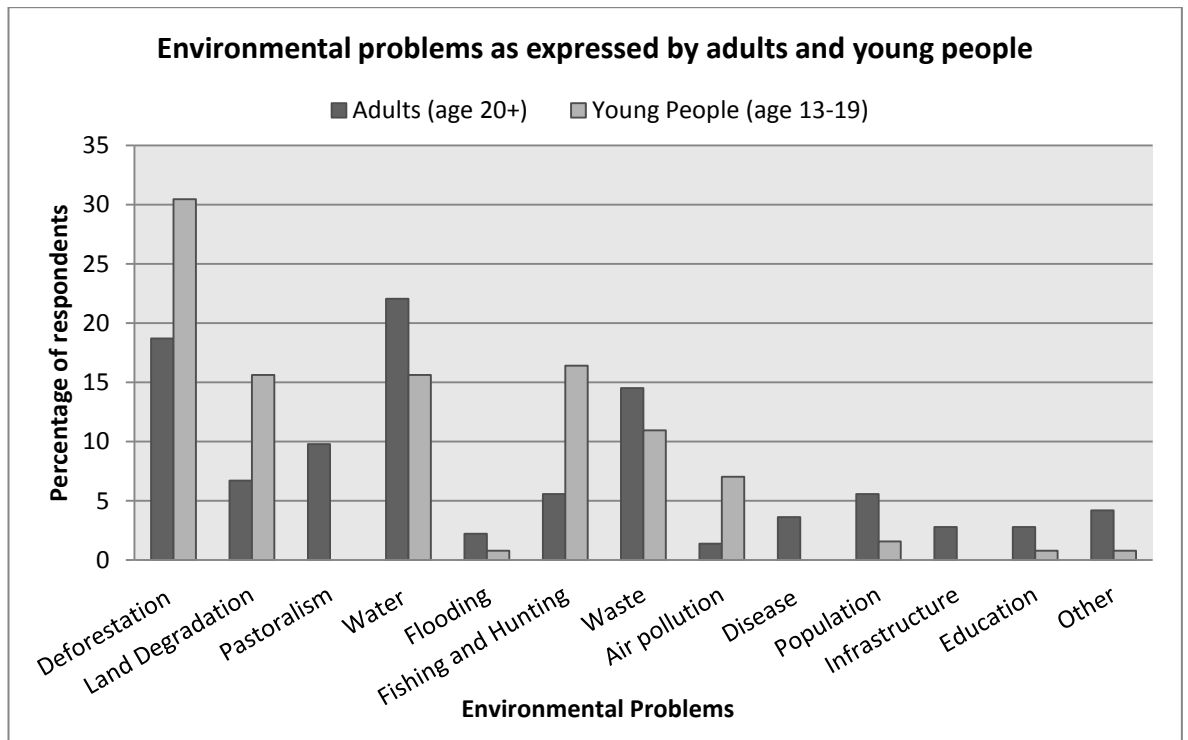


Figure 4.10: A comparison of adult and young people’s responses to describing important environmental problems in their area. Adults also included issues which referred to the ‘human environment’, which can be seen on the far right of the graph, whereas young people tended to be more concerned with issues which affected the ‘natural’ environment.

When young people were asked to define the components of the environment (Fig. 4.11) their focus was overwhelmingly on the ‘natural’ elements, rather than on the human/built environment or more utilitarian concerns with what is done in the environment. The last two bars in Fig. 4.11 show the two ‘human’ elements to the environment which were commonly used by young people, which make up only 11% of responses. The remainder (89%) were concerned with ‘natural’ components. When compared to adult responses (Fig. 4.9), it is clear that young people are far more likely to define the environment in terms of natural components rather than human elements. In contrast, only 30% of adults defined the environment purely by the ‘natural’, whereas the remainder (70%) chose other elements as part of their definition.

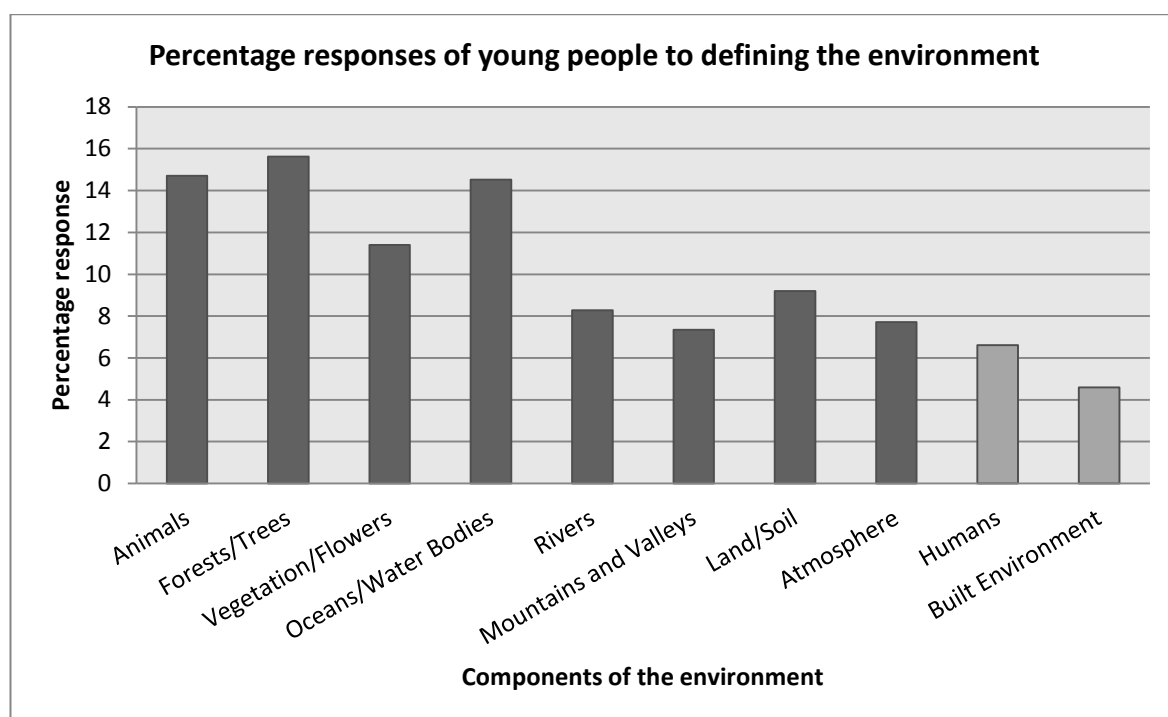


Figure 4.11: Young people’s responses to defining the components of the environment. The definitions associated with human components of the environment are shown in a lighter shade.

The evidence here shows that young people’s understandings of the environment are far more in line with those of the Tanzanian state and NGOs than those of adults in their own communities. It is highly likely that young people have been influenced by their recent and current experience of how the environment is defined through the education system, either through NGO projects delivered through schools, or through the state syllabus. This potentially creates a gap between how these young people understand the environment and how adults do so within the same community, reflecting the gap between formal understandings of environment, and the lived realities of local people. This is one clear distinction within ‘local’ knowledges between adults and young people. Figures 4.9, 4.10, and 4.11 illustrate that both within groups of adults and young people there is a range of different responses to how the environment can be defined, a fact that is recognised in other studies of Tanzanian communities (Myers 2002; Semesi et al 1998; Tobisson et al 1998). This evidence complicates the goal of engaging with local knowledges concerning the environment, particularly for NGOs, the state, and those concerned with conservation and sustainable use of local resources, but also for researchers. It is also important to note here how ‘divisions’ in local knowledge can be *created*, in this case by outside actors. Other studies have highlighted how knowledges within communities can be differentiated between groups, for example, between men and women (Briggs et al 2003; Myers 2002). In research by Goebel (1998), men and women are said to live in different ‘resource worlds’ because of their different social roles, which impact on their mobility and therefore the natural resources they can access. Here, however, this division between the knowledges of young people and adults is, in part, created by

education, which is purposely directed from outside of the community, rather than because of the social norms of the community itself. Young people's environmental knowledges are different to those of adults in part because of their participation in education, illustrating how local knowledge, and divisions within it, can be informed by outside actors.

By constructing the 'environment' as a concern for the conservation of natural features, both the state and NGOs deny the possibility of fundamentally negotiating the concept, and implicitly assume that this understanding must be shared. But local people do not always understand their environment in ways that are concurrent with official definitions. The use of idealised conservation values is very evident in state and NGO material, but these values have been developed out of context, and the 'Western' conservationist doctrine itself originates from outside of these communities (Leach and Fairhead 2000; Twyman 2000). This conservation rhetoric, identified in other African contexts (Leach and Fairhead 2000; Twyman 2000), and in the Tanzanian context (Myers 2002; Semesi et al 1998; Tobisson et al 1998), makes assumptions about landscape and environment (for example, that they can be in 'balance' with human use, and have a previously 'untouched' state), which are at odds with local conceptualisations. State and NGO discourse, in line with conservation rhetoric, can criminalise and discredit particular acts which are considered a normal part of the environment in the understandings of local people, for example, forest use, fishing, and some agricultural practices, as is evident in the Tanzanian textbook material (Fig. 4.6 and Fig. 4.7). Without sensitivity to how local people understand their environment, the environmental education programmes risk challenging and undermining local notions of environment, rather than engaging and negotiating with them. Within the formal system, official definitions preclude alternative conceptualisations which exist at present in communities. As will become evident later in this thesis, these fundamental issues of definitions have implications for the impacts of the project and state education on the relationship between young people and adults, and how knowledge is transmitted between the two.

Academic and popular debates on local knowledges, which have highlighted a need to be sensitive to and negotiate with local understandings (Sillitoe 1998b; Kesby 2000; Sharp et al 2003), have only been adhered to superficially in the JGI environmental education project. Whilst attempts are made to make some materials 'locally appropriate', the decisions about what constitutes 'local environmental problems' have been made within NGOs, and without negotiation with local people. None of the NGO actors interviewed mentioned that any of their materials had been produced 'collaboratively' with local people, also evident from the material itself. The NGO understanding of environmental education lacks engagement with how local

people define their environment and focuses instead on the conservation message which matches their individual organisational goals.

Interestingly, this problem does not go entirely unrecognised by those who work at government level. One government interviewee highlighted that debates on defining what is meant by 'environment' also took place within the Tanzanian state, which came into conflict with both NGO actors and local people.

"In the government there is no common definition of 'environment'. For example, some people might only understand forests as a natural resource... There are varied agro-ecological zones around the country, with different environmental problems and issues. Also there are differences in the social and cultural makeup around the country. Therefore to develop a common understanding of environmental education from the national to the grassroots level is very difficult. This is to some extent what we are expecting NGOs to do, but this is definitely very hard."

Representative of the NEMC, Tanzania

This quote illustrates that defining the environment is recognised as a difficult enterprise, at least among some levels of the Tanzanian government. There is tension in this statement between how this term is defined by parts of the state, and that developing a 'common understanding' is fraught with difficulty, particularly as both environmental and cultural differences undoubtedly influence local understandings of the environment. It is in this context that conceptual debates on local knowledges should come into play, whereby the idea of a 'common understanding' is abandoned in favour of a negotiated, local understanding (Uzzell 1999). However, the space to do this is currently lacking in the NGO project and the national drive for environmental education. What is required is a change in emphasis away from a *need* for a common understanding to perhaps discarding the idea of a common understanding altogether.

4.2: Local environmental knowledges

This section considers in more detail local knowledges relating to the environment, in order to tackle issues concerning the conceptual and theoretical makeup of the term 'local knowledges'.

4.2.1 Extra-local

At the ‘community’ or ‘local’ scale, the three case studies represent not only how communities vary across space in terms of their environmental knowledges and concerns, but also how within those communities a wide range of issues are at stake for individuals and groups. When respondents were asked to recount environmental issues, their answers illustrate that, within these communities, no single issue dominates, and that there is instead a wide range of complex environmental problems acting on their particular area. Fig. 4.12 illustrates responses across the study areas, and demonstrates the degree of complexity with which local people regarded local environmental issues. No single issue stands out in any particular area. Some are not what might be conventionally defined as ‘environmental’ problems, for example, transport and infrastructure, lack of education, and ‘moral’ problems. Certainly respondents’ individual development priorities have influenced their choice of ‘environmental’ problems, and for some ‘environmental’ issues are not as important as problems associated with education and health, which might not conventionally be defined (in the West) as ‘environmental’ concerns. Individual respondents may have been using the opportunity to speak to us as a vehicle to voice their other concerns (rather than those associated with the environment directly), but it is also likely that their conception of ‘environment’ is also much broader than the strict conservationist stance.

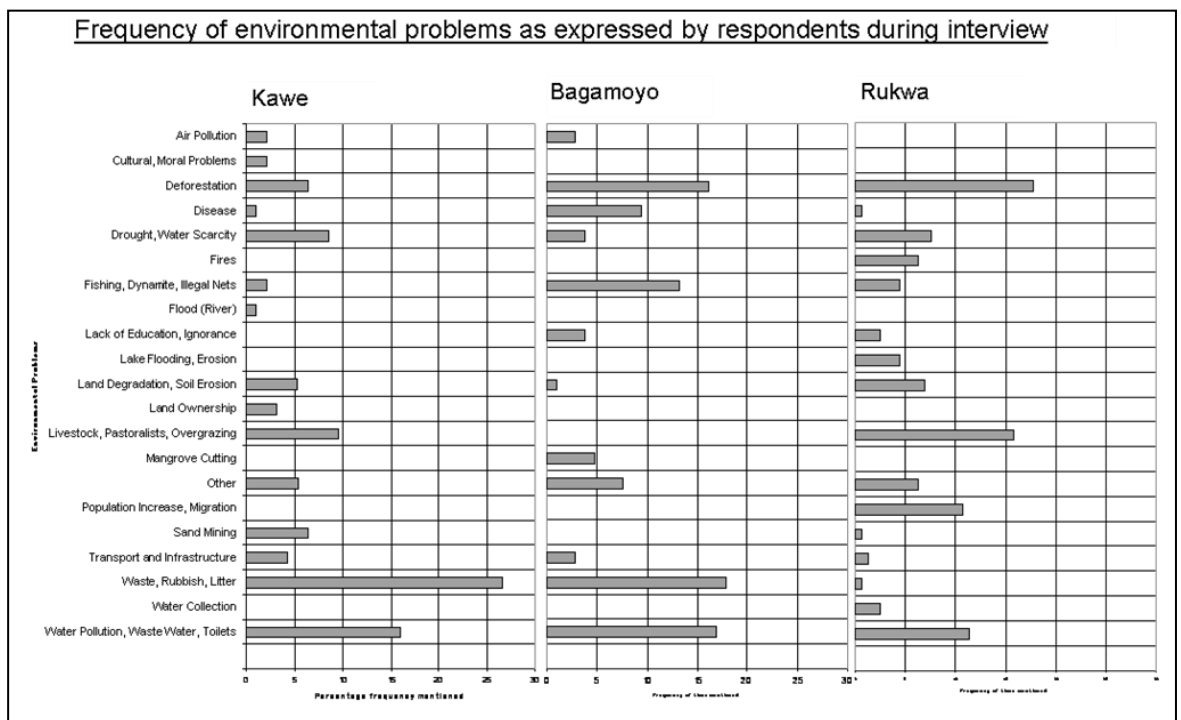


Figure 4.12: The frequency of responses to identified environmental problems across the three study areas. Although particular issues stand out as important in the individual areas, it is clear that each area is differentiated from the others in the complex of different issues which are highlighted by local people.

Broader delineations between areas are to some degree determinable from collating the categories in Fig. 4.12. Fig. 4.13 illustrates that there are issues which are more prominent in particular areas than others. For example, in Rukwa more respondents were concerned with agricultural issues and deforestation than in the other study areas, a reflection of the rural nature of the area, whilst problems with waste are more prominent in Kawe and Bagamoyo. From Fig. 4.12 and 4.13 it should be evident that in terms of priorities each of the study areas is unique. 'Local' areas do have distinct priorities, and this is where 'the local' is important to development *at this scale*, but it should be recognised that even at this scale (the 'local community') there is complexity, which encompasses a broad range of individual development priorities. It is also important that some of these environmental problems do, broadly, cut across the three areas. The shared as well as the varied nature of what has been conceptualised as 'local knowledge' is significant. Issues of deforestation, agriculture, pastoralism, fishing, waste and clean water are all, broadly speaking, *common* problems (Fig. 4.13) across these three areas of Tanzania. They are 'extra-local', in the sense that they are shared. This is imperative for debates concerning local knowledge, as it illustrates that there is potential for knowledge to transcend its 'local' specificity, rather than to assume that knowledge is only workable within the context in which it is generated.

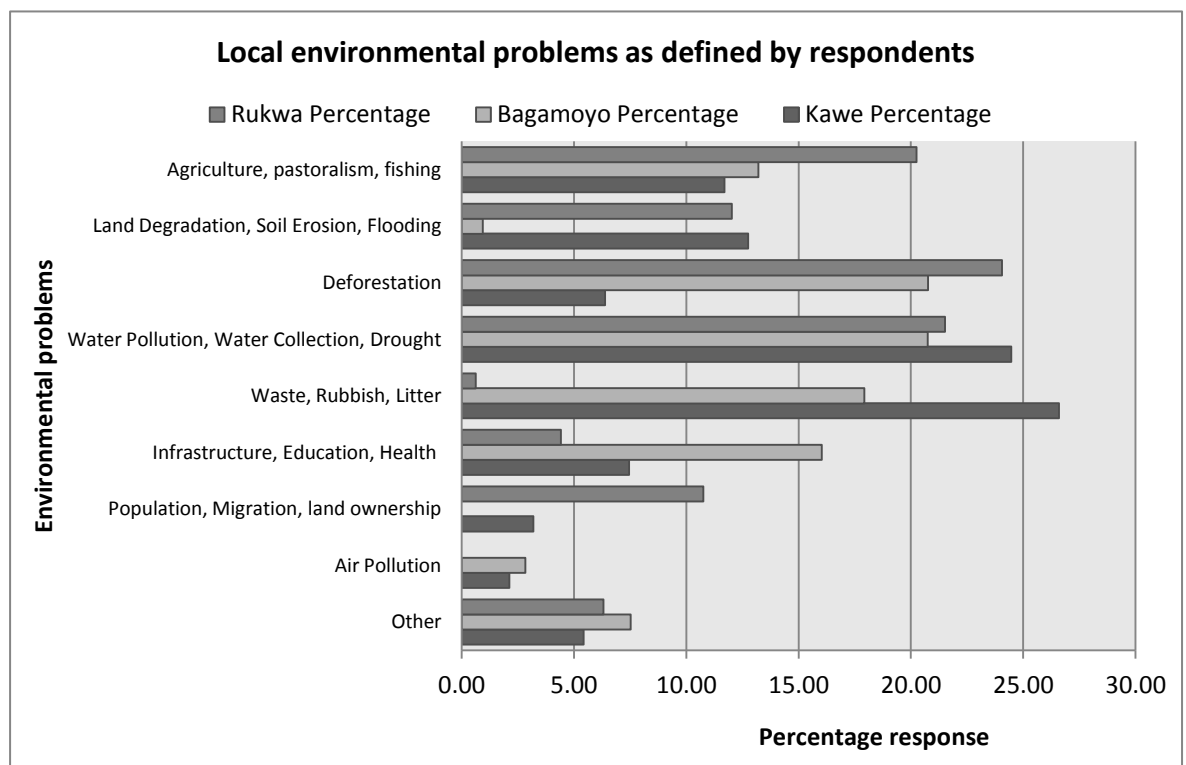


Figure 4.13: The frequency of responses to identified environmental problems across the three areas, in collated categories. Whilst there are considerable differences between areas in terms of their priorities, there are also significant overlaps, demonstrating how local problems can be common across space.

Although the recent literature on local knowledge has highlighted problems associated with taking knowledges 'out of context' (Briggs 2005), and with concerns that local knowledge should not be abstracted as culturally disembodied, technical knowledge (Sillitoe 1998a), this should not preclude the possibility of sharing local knowledge and practice where it makes sense to do so. Those who argue against the 'extraction' of local knowledge to be used beyond 'the local' should instead be more focused on really asking how much local knowledge is, at any point, rooted in the local context (Blaikie et al 1996; Easton 2004). There may be commonality between environmental issues, despite their apparent local specificity, such that any problem or solution should not, necessarily, be fixed in time and space (Agrawal 1995), as this may prevent useful knowledge being shared (Green 2004). For environmental problems that are shared, for example, problems with plastic waste in all three communities, solutions may be derived from 'more experienced' communities. Rural dwellers who are in the early stages of dealing with plastic and other non-biodegradable waste may be able to learn and benefit from solutions derived from urban places which have been tackling this issue for some time (in Kawe or Bagamoyo). These opportunities need to be identified, rather than assume that local knowledge is unique to and bounded within its locality.

4.2.2 Specificity in place

Whilst many local environmental concerns are often part of broader problems, other issues are also highly locally place and temporarily specific. This 'fits' with current thinking on the local specificity of local knowledges (Sillitoe 1998a; Easton 2004). However, I seek to illustrate how attention to the complexity and specificity of local knowledge has not gone far enough. Taking some of these broad problems and addressing them in each area can illustrate how they may be very different concerns depending on the place in which they occur. A good example of this is deforestation. Deforestation is an environmental issue that is high on the agendas of the residents in each area, but there are quantitative and qualitative differences. In Rukwa the frequency with which this problem is mentioned is highest out of the study areas, in Kawe it is the lowest (Fig. 4.13). This fits nicely with the idea of a rural/urban divide in awareness of this particular environmental issue. However, the detail of how this problem is discussed by residents illustrates some key differences. In Rukwa, respondents often discussed deforestation before they tackled any other environmental issue. They were able to describe the causes and impacts of deforestation in considerable detail, leading to lengthy discussions. By contrast, residents of Bagamoyo and Kawe were aware of deforestation, but it was commonly described as something which happened elsewhere, still typically in a nearby forest, but not one with which they

themselves had any immediate contact. In Rukwa, respondents normally collected their own firewood or charcoal, had farms adjacent to forested land, or had to pass through forest areas frequently. Those in Kawe, and to a lesser extent Bagamoyo, did not have this level of contact with forests, typically buying charcoal and firewood from local markets. The examples below illustrate the differences.

“There has been a trend that if cutting fresh trees, you leave the fresh logs to dry and come back to collect them later. We used to be able to collect dry trees but now this kind of wood is very scarce... In this area people cut down fresh trees in September, and make heaps of wood. Then they either carry them on their heads or with a cart. So they always take in September so they hope that this might be enough for the rest of the year and the rainy season.”

Female, age 20-30, Ilemba (Rukwa)

In the quote above, the respondent expresses detailed knowledge of firewood collection and storage, illustrating the typical level of knowledge people in Rukwa have of issues related to deforestation. This quote from Kawe offers a contrast:

“If you are not around at home then people can come and mine for sand around the area and chop down the trees. This has happened here. People who are coming from far away cause this problem... They do this to earn income by selling the wood.”

Female, age 30-39, Kawe

The evidence from these quotes exemplifies some of the key differences between these areas on a ‘national’ issue. In Rukwa, deforestation is discussed at length, and is more prominent in the priorities of local people (Figs. 4.12 and 4.13). It is also discussed in terms of personal fuelwood collection as well as local political concerns with wood collection and consumption. In Kawe it tends to be ‘outsiders’ who are those who cut down trees and deforestation occurs for the sale of wood. Waste was also a widely different issue depending on the area. Respondents in Bagamoyo were able to go into considerable detail with regards to problems concerning waste associated with fishing and the beach. Perhaps this is not surprising, as the economy of Bagamoyo is heavily reliant on fishing (Semesi et al 1998). The example below illustrates a typical discussion.

“The biggest problem here is the waste on the beach. The remains of fish are being distributed around the beaches. The cause is the fishermen. They leave waste around the

beach. The customers and visitors also leave a lot of waste... During the rainy season the beach is covered in waste. Water mixes with the fish remains and it rots on the beach.”

Male, age 30-39, Bagamoyo



Picture 4.3: Fishermen on the beach of Bagamoyo. Fish waste is typically discarded on the beach.



Picture 4.4: Fish cleaning. When fish are brought into the beach they are immediately cleaned and scaled. Fish waste is then left on the beach or buried under the sand.

In Kawe and Rukwa, problems of waste are perceived differently. In Kawe, the focus is on waste associated with the urban environment, concerning the disposal of particularly plastic waste where there are limited options for proper disposal. Residents in Kawe are also greatly concerned with contamination of local water systems, and the consequences for health.

“Some people collect and bring the waste from far away, once they reach this area around the house they can’t be bothered to go all the way to the rubbish tip. So they dump it here on the poor people. Even for us, the proper place is very far away. So we go to a quiet place and dump it there.”

Male, age 30-39, Kawe



Picture 4.5: Rubbish in Kawe. Near the old Tanganyika Meat Packers factory in Kawe rubbish is frequently tipped. Much of this is plastic and non-biodegradable waste.



Picture 4.6: The official rubbish dump in Kawe. The area is poorly managed, and many local people regard it as 'too far away' from them.

In Rukwa, as illustrated in Figs. 4.12 and 4.13, problems with waste disposal are relatively small compared to their prominence in Kawe and Bagamoyo. When waste disposal is mentioned in Rukwa, it is normally associated with keeping the home clean of litter, but this is a relatively minor issue compared to its prominence in the more urban areas. In fact, it was common for people in Rukwa to perceive their environment as being relatively 'clean' when compared to urban environments. The following quote illustrates this.

"The rural environment is always clean. In the towns people stay in a compact way, their houses are all very close together. So automatically rubbish will be there because of that."

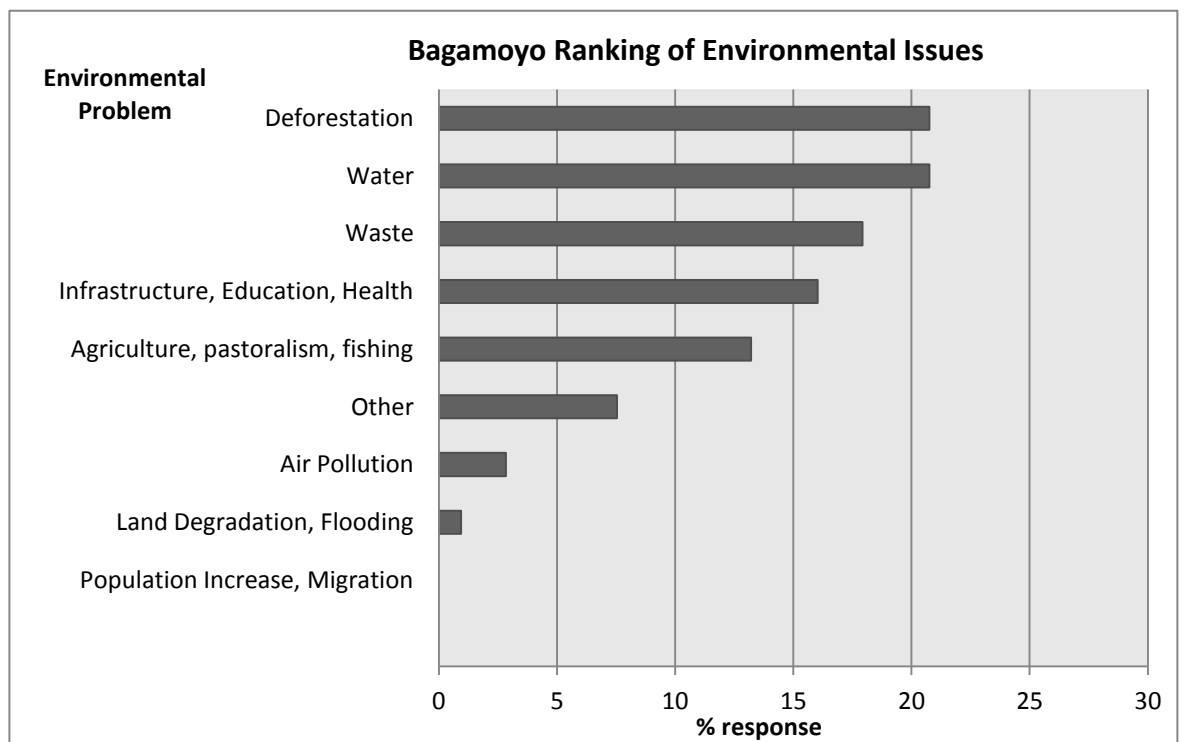
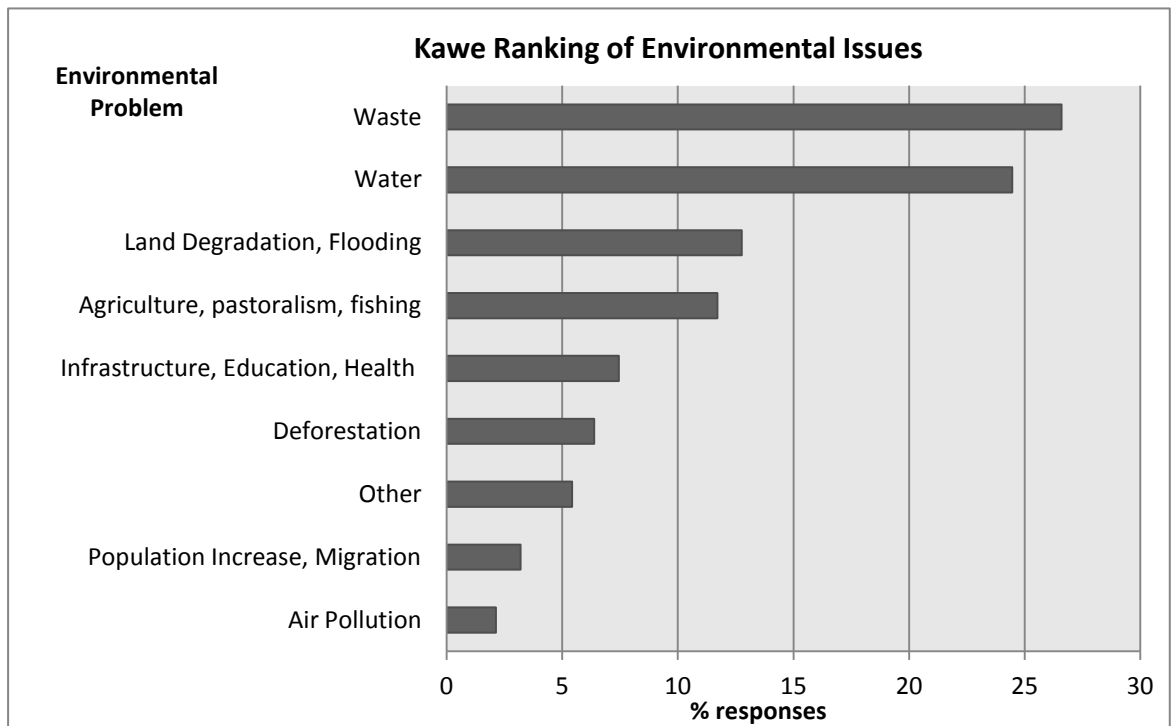
Male, age 30-39, Ilemba (Rukwa)

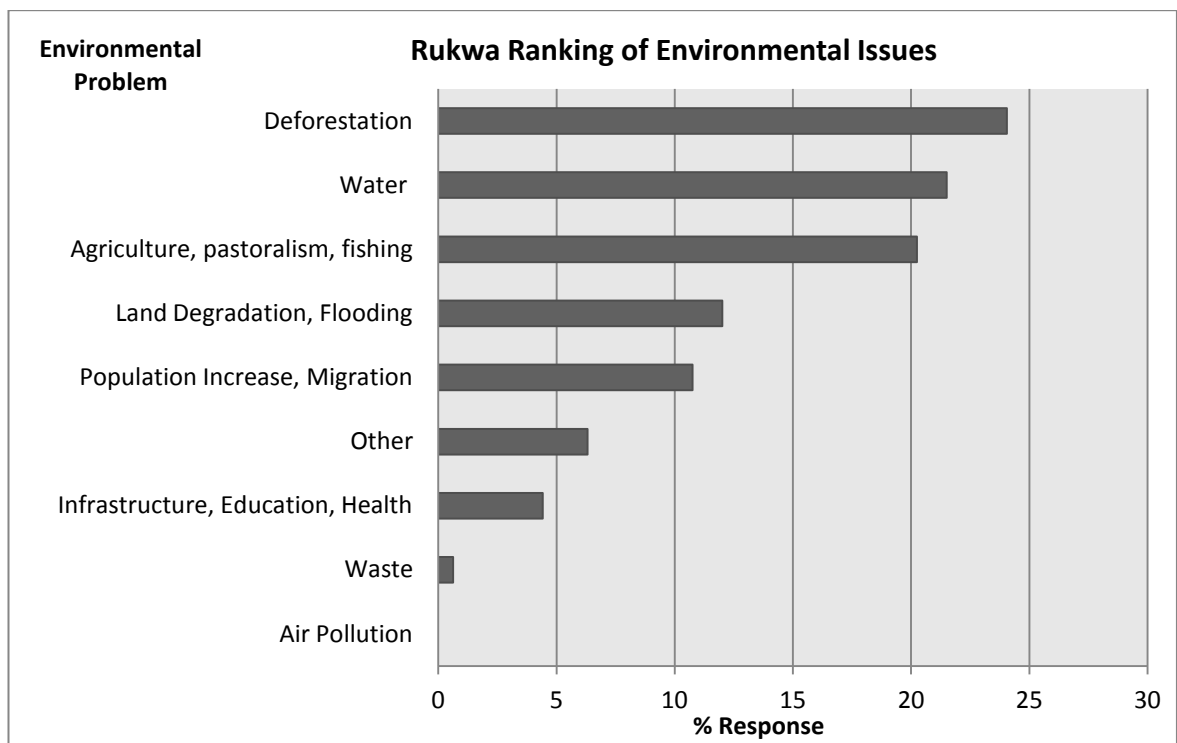


Picture 4.7: A typical small house in Rukwa. Here there are few perceived problems with waste disposal compared to Kawe.

The differences in local priorities with regards to environmental issues are summarised in Fig. 4.14 and Table 4.1.

Figure 4.14: A ranking of environmental problems as identified by respondents for each study area





Ranking	Kawe	Bagamoyo	Rukwa
1	Waste	Deforestation	Deforestation
2	Water	Water	Waste
3	Land Degradation	Waste	Agriculture
4	Agriculture	Infrastructure	Land Degradation
5	Infrastructure	Agriculture	Population
6	Deforestation	Other	Other
7	Other	Air Pollution	Infrastructure
8	Population	Land Degradation	Waste
9	Air Pollution	Population	Air Pollution

Table 4.1: Summary of rankings of environmental problems for each of the three areas, with some key differences highlighted.

From Table 4.1, we can see that whilst waste (red arrows) is of the highest priority in Kawe, in Bagamoyo it is less so, and in Rukwa it is a minor problem. Deforestation (green arrows) was the top problem identified in Bagamoyo and Rukwa, yet in Kawe it was of less significance. Population pressures (purple arrows) was of very little significance in Kawe, but relatively high in Rukwa¹⁵.

¹⁵ This is interesting in itself, as Dar es Salaam has the highest proportion of migrants (over 40%) compared to Bagamoyo (21%), and Rukwa (10%), yet the perception of population pressure and migration as a problem appears to almost have an inverse relationship to the actual number of migrants. However, this category of 'population' also includes those who are concerned about the growth rate of the population,

The evidence from these examples illustrates how the significance of environmental issues differs over space, and that, in detail, each of these issues is highly place-specific. However, whilst there are key differences in environmental priorities between the study areas, this level of analysis does not encompass the complexity of knowledge within the local, at the level of the individual. The current conceptualisation of 'local knowledge' is sufficient for the scale and detail of the evidence above, yet it does not adequately describe or explain how individual and localised in place knowledge actually is (other than recognising that local knowledges may in some respects be fragmentary within a community, see Sillitoe 1998; Brett 2003; Easton 2004). Individual priorities in each area were very dependent on exactly where an individual was positioned spatially within that particular area. In Kawe, for example, those near to the river which runs through the north of the area were concerned predominantly with river erosion and pollution. Those who were not positioned close to the river did not mention these problems. The following is from an interviewee who lived close to the river.

“Here a big problem is land degradation. People are taking sands from this area. The water has also eroded the sand over there. The river is moving towards our house so it might undermine it and destroy the house... The people who are helping are the ones who are around the affected area. But the residents above here don't care because the problem is far from them.”

Male, age 50-59, Kawe.

particularly with the number of children that families have. As the birth rate is significantly higher in Rukwa than in Dar es Salaam or Bagamoyo, it is perhaps this factor which most influences the place of 'population' in Table 4.1. With this in mind, it was still common for people in Rukwa to be concerned about migration (which will be discussed more later), which may indicate that in Dar es Salaam individuals are less vocal about migration because of the already high proportion of migrants, whereas in Rukwa migrants, being more recent and a smaller percentage of the population, 'stand out' more as an issue for some local people.



Picture 4.8: River erosion in Kawe. This photo was taken immediately outside the house of the respondent quoted above. The small river can be seen at the bottom, and the steep banks which are eroding on the left. The grass-like vegetation on the left has been planted by local residents to mitigate against erosion of the river banks which are encroaching on their houses.

Although the study area was no larger than 1km square, individual priorities remained highly place-specific, focusing on the spatial environment immediate to them, and only discussing in passing issues which were not so immediate. This kind of specificity in environmental knowledge within a 'local' area was similarly played out across Rukwa and Bagamoyo. The example below focuses on local women identifying their immediate problems.

"Sometimes in the dry season we go to collect water from far away. In the rainy season we can collect it nearby, but there is no path to certain areas which is not good. You cannot even use a bicycle, so you just have to carry water on your head."

Female, age 40-49, Ilemba (Rukwa)



Picture 4.9: Collecting water. Without a more immediate water supply, local people (mostly women) have to walk considerable distances to reach a source of water for drinking and washing.

The quote highlights how the respondent was clearly aware of her spatial position with regards to fetching water, being variably close to and then far away from available drinking water, and it was this position in space which, in part, defined that environmental problem for her. Priorities and knowledges of individuals within a particular locality are tied to their specific place within that locality, exactly where an individual is positioned spatially. This example of water reflects a further dimension in the variation of local knowledges within the same space, that of gender. In Rukwa, women were more likely to mention the collection or scarcity of water as a problem than men, with 64% of women in Rukwa identifying this, and only 42% of men. Whilst other studies have illustrated that women do have different knowledges and priorities to men (Briggs et al 2003; Myers 2002; Goebel 1998), this has often been associated with women's restricted access to resources due to their reduced mobility, based on their social role (Goebel 1998). This may still be the case in Rukwa, but it is also evident that within the same space, for example, the space of the village and the home (Picture 4.9), women may still have significantly different priorities. The spatial and gendered nature of local knowledges interplay with each other, and may overlap, as it is clear that men do still have a concern for local water problems. Women's concern for water, in Rukwa, may well be tied to their role in the social division of labour in the household, where women are responsible for cooking, cleaning and fetching water, and are therefore more aware of water scarcity.

When the 'local' or a 'community' is associated with a body of knowledge, this does not take into account that within this defined space individuals have highly varying knowledges, which are related to that individual's experience in space, as well as over time. 'Local' knowledge is a collection of highly individualised knowledges, and is by its nature highly place-specific and should not be essentialised in an unproblematic manner (Briggs 2005; Briggs et al 2007). The sheer multitude of local, individual perspectives makes any framework of conceptualisation or representation of local knowledge exceedingly difficult, and any form of representation will inevitably struggle to find a place for these multiple perspectives. Although research has demonstrated how local knowledge has worked effectively in the context of some institutions (in education, Easton et al 2000; Easton 2004; and in HIV/AIDS treatment; Naur 2001a), it is impossible to see how this local knowledge could have been a form of local consensus as such. In the examples here, we see that within even the small areas of Kawe and Rukwa there are widely different priorities of environmental problems. In light of this, it is quite impossible to suggest that each 'community' has a well-established set of priorities and knowledges. Individuals within communities have highly individualised knowledges based on their own circumstances. These are linked, in the examples above, to gender, and, importantly, to place. Even within what might seem a relatively small space, it is clear that men and women might have quite different priorities. It remains crucial not to brush over the complexity of local knowledge, to assume that any form of local consensus either exists or can be reached, and instead to attempt to find ways of building these realities into development practice and research.

4.2.3 The temporality of the local

The temporality of local (and individual) knowledge has only been alluded to in the literature, at the most incorporating 'heritage' or traditions from the past (Easton 2004), or referring to the 'long-term' perspective necessary to understand local livelihood contexts (Briggs et al 1999). Individuals in this study can draw on environmental knowledges from past places and times, and, importantly, these may not be tied to the current locality in which they live. The temporal nature of environmental knowledges is highlighted below.

"There has been dramatic change in this area. Before villagization in the 1970s there used to be only a few houses in this area. When villagization came in 1975 they made a few clusterings of houses. At that time we have very few services... This area used to be forested, you found giraffes, elephants and antelopes, but as the population has increased

and so has the demand for land, and fuel and other things, there was more momentum to cut the forests... [and] I think that the lake is expanding."

Male, age 60+, Ilemba (Rukwa)



Picture 4.10: Lake Rukwa, the level of which has changed significantly over time, according to the respondent quoted above.



Picture 4.11: Paths to the Lake. Previously, as described by those I was guided by, these 'paths' to the lake were not so waterlogged, and it was 'easier' to walk out to the lake.

In Rukwa, a further example of temporal change is the problem of deforestation. Most residents are highly aware of the changes to the forest cover, and older respondents could recall the changes over their lifetimes.

“In 1997 there were only about 6 families here... So population growth really is a problem. In those days all the areas around here were forested. You could hear cobras and other wild animals. The environment was good. But now most have been cut down. This tree in the house marks the end of the area that used to be settled, but now people have expanded beyond here.”

Female, age 50-59, Ilemba (Rukwa)



Picture 4.12: The plains of Lake Rukwa. According to local people this area of plains used to have a far greater forest cover. The more dense forest cover, at the foot of the steeper ground that rises to the rift valley escarpment, marks the current extent of local farmland.

The quote above illustrates how age can significantly impact on the local knowledge of individuals. The quote is from an older member of the community, who is able to recall environmental changes through their time in the area, yet younger adults could not recall such details. An individual's understanding of the environment can also be 'broader' than the local, in the sense that they know of environmental issues not situated in their current locality, or in terms of temporal change, when they have had either a wider experience (adults who are more mobile such as traders or migrants), or if they have received some form of education with regards to environmental issues. The following quote illustrates.

"I come from Morogoro. In my village my grandfather was a chief priest. So if we want to ask something from the gods we go to him. There are prohibitions to go into a forest without seeing this chief priest... I was involved in an environmental project initiated by Sokoine University of Agriculture but it was funded by French people... I was taken to be trained at the University and then appointed to be a trainer to other people."

Male, age 30-39, Bagamoyo



Picture 4.13: Memories of extra-local knowledge. An example of photos kept by a respondent in Bagamoyo from when he was involved in an agricultural training project.

This quote and Picture 4.13 illustrate how extra-local knowledges from past experiences of individuals can have a significant impact on their knowledge in their current place and time. Interestingly, the respondent draws on both spiritual traditional knowledges from his home, and extra-local knowledges from his formal education, illustrating different influences on his environmental knowledge at different times during his life. In picture 4.13 are photographs kept by the respondent from his time training in agricultural practices. He spent quite some time showing me these and elaborating on his experience, illustrating how he, as an individual, had a rich history of environmental knowledge gathered through his life course, which also traces a history across a range of places. Through these movements and experiences, an individual's knowledge, and therefore local knowledge, may be reworked over the course of a lifetime. Local/individual knowledge can then be defined not only in terms of the specific place or time in

which an individual lives, and by factors such as their gender and age, but may also extend beyond the present time, in the form of environmental knowledges from the past, which may be extra-local in space. Significantly, these knowledges recalled from the past do not necessarily have to align with 'traditional' forms of environmental knowledge (e.g. local traditions) which are rooted 'locally', as the respondent illustrates above, past experiences may be associated with contemporary ideas of environmental management. Local/individual environmental knowledges are accumulated over a life course or through histories passed down, through experiences that are tied spatially as well as temporarily, and therefore not necessarily 'in' the present time, but may be tethered to 'other' places recalled from the past. 'Local' knowledge then is a meeting point of both highly localised, individualised, place and time specific knowledges, and extra-local, broad concerns which do, in many respects, transcend the boundaries of any spatially defined 'community' in a particular locality. The evidence also suggests that local knowledges travel beyond their locality through individual and group movement, and that these networks of knowledge sharing and movements have existed for some time (Gorjestani 2000). This conceptualisation of knowledge was expressed too by respondents. The quote below is a particularly explicit example from a respondent who discussed both local and extra-local concerns in the context of teaching about the environment in schools.

"People in this area should be taught how to care for the rivers, the lakes, and the mountains and trees. These are all important because these are parts of the environment in this area. But they should not just be taught these things. People move around these days. There may be a day when they move to another area and the problems might be different. For example, they might be in a place with many industries. The problems here might be due to pollution from the industries. But if you have just been taught about the local area then they will not know anything about it! So they should be taught about these local issues practically but also they need to know about wider issues theoretically at schools."

Male, age 30-39, Solola (Rukwa)

The quote points very directly to the mobility of people and knowledge, not just contemporarily but also potentially. This clearly puts the term 'local' into the critical spotlight. No single knowledge is ever local, in the sense that it may be highly individual, or it may draw on extra-local knowledges. To confine any particular knowledge to the 'local' would be false and misleading, as it would hide both individual specificity and how it may draw on and fit into much broader

concerns. For these reasons, no collection of knowledges, however spatially defined, can ever be considered conceptually 'local'.

It is important then to critique both 'local knowledge' and 'the local' as a definable space in which a particular knowledge can be theoretically situated. Indeed, the notion of scale has been largely neglected throughout the history of research on local knowledge, and consequently the scale of the 'local' has remained assumed, rather than interrogated (Pain 2004). Both 'local knowledge' and 'the local' are bound up with notions of 'community'¹⁶, and how all three of these terms have been theorised is important because their theorisation will reflect how they are interpreted in development practice. Where previous studies have spoken of 'the local' they commonly fail to define what the local actually means spatially. In this study, an individual who lives in a particular area can have a wide network of associations across space. Even in 'remote' rural communities in Rukwa some residents have access to television, radios and mobile phones. This is not uncommon across Africa and indeed much of the 'Global South' (Green 2000). All three communities in this study had a significant population of migrants amongst the respondents questioned, in Kawe 44% were not born in Kawe, in Bagamoyo this figure was 32% and in Rukwa it was somewhere around 25% (based on local estimates¹⁷). Under current theories regarding local knowledge, is their knowledge valid as part of 'local' knowledge?

In light of this it would be completely arbitrary to insist on drawing lines between what knowledge is 'local' or 'locally relevant' and what is not. Should knowledges, practices and ideas accumulated through an individual's life history be excluded from a 'local knowledge', even though they originate from spaces and places outside of a community? If we are to question the spatial nature of local knowledge, evidence from this study suggests we should also question the temporal nature of it too. Green (2000) suggests that 'local knowledge' is not just fixed in the 'project present', the point at which it is accessed by the researcher/NGO, it is historical. As with the spatial delineation of the 'local', the historical definition should be open to interrogation. The spatial nature of local knowledges is intimately bound up with their temporal nature; some knowledges have both temporal and spatial histories which transcend the 'local', yet they, in the present, exist in a locality. These knowledges are not irrelevant because they are extra-local, yet this is the implicit assumption in the conceptualisation of local knowledge as it has appeared in development discourse.

¹⁶ See Chapter 6 for a more in-depth discussion of the conceptualisation of the concept of 'community' in the Tanzanian context.

¹⁷ This is significantly higher than official estimates for the Rukwa region, of around 10% being migrant residents in the region.

4.2.4 Western and local environmental knowledges

Much has been made of the dichotomies that have been discursively constructed in both academic and policy material between 'Western' and 'local' knowledges (Mohan and Stokke 2000). But literature in this field has so far failed to identify how local people perceive these divides between knowledge systems, and I will explore this further here. A significant number of respondents made a clear distinction between what they understood as 'traditional' and 'modern' knowledges. In Kawe, 47% made this distinction, in Bagamoyo 39%, and in Rukwa 35%. This example is from Bagamoyo:

"Fishing using small nets, such as mosquito nets causes them to catch the baby fish which affects the population of the fish... Most people do this because they just like using simple methods for fishing. They are not educated about modern methods... In the current situation the government wants to use modern methods, such as modern boats and materials... but these are expensive."

Male, age 40-49, Bagamoyo

Traditional and modern knowledge, often conceived of as practices, or in the case of 'modern' knowledges, as 'technologies', are discursively constructed throughout the three study areas as different. There is a distinct divide drawn between what has been practiced traditionally in the environment, and what is or might be used as a 'modern' practice. The quote above highlights how traditional methods are conceived of as 'simple' when compared to 'modern methods'. Traditional practices, for this respondent, are associated with backwardness, and crucially, a lack of option to do otherwise. One of the reasons for this, cited by several respondents, is that 'modern' methods are seen as 'more expensive', and therefore unattainable. Interestingly, the respondent above appears to make a value judgement, he understands 'modern' methods as 'better' than traditional ones, which was commonly a key part of the distinction between the two. The overriding theme is that traditional, local knowledges are 'outdated' compared to modern practices. What is interesting for the local knowledge debate is, firstly, that local people are just as likely to construct these dichotomies as outsiders, yet also interesting is why such dichotomies are constructed locally. It is apparent from the quote above that local people are aware of 'better' technologies, which are out of reach in the context of their livelihoods. The respondent mentions 'modern boats and materials', but makes it clear that these are things that others have. It is perhaps precisely because this respondent is aware of these 'modern' technologies, yet they are

unattainable for him, that causes him to make clear delineations between what he has, the 'traditional', and what he does not, the 'modern'.

Therefore it is a common practice, not simply the reserve of academics and those who work in development, at least discursively, to create a dichotomy between modern and traditional knowledges, practices and technologies. But, interestingly, the fact that such knowledges are put into different camps by all parties in the process of development obscures the actual relationships between knowledges and how they are produced, utilised and practiced. Evidence from this study indicates that knowledges are produced in engagement with landscape, histories, and exposure to different knowledges and experiences over time. So although local people may discursively divide modern and traditional knowledges, in practice these people are actually very pragmatic in their use of particular knowledges and technologies. As other studies have illustrated, local knowledges and practices do not exist in a vacuum (Grillo 2002), and have been frequently hybridised with 'modern' practices from 'outside' of the local. This process is not new. Historically in each of the study areas, practices, knowledges and technologies have changed over time in interaction with knowledge systems and practices that originated outside a particular area. Thinking of local knowledges in this way, in terms of local practices, ties knowledge to how it is incarnated in specific activities and practices, rather than simply as a discursive construct which is only evident through linguistic expression. Knowledge is evident in practice, and there may be a significant disjuncture between what is said and what is practiced. Local people's discourses of knowledge and their practices may even be contradictory (Myers 2002).

Rukwa offers an example of a remote, rural region which has a history of knowledge, practice and technology hybridisation and change. In living memory for residents, Sukuma migrants have brought ploughs and other more intensive farming practices, whereas recently an initiative has established an irrigation scheme (Picture 4.14). These changes have brought benefits (although selectively) to local people. Although in each case the change has involved 'new' technologies brought to the area, in the more contemporary case they rely on the knowledge of local people to initiate and successfully carry out changes in their environment. An example follows:



Picture 4.14: The Sakalilo irrigation scheme. This is being constructed to supply around 200 farmers with water throughout the year.

“We aim to ensure that people can farm twice a year, in the rainy and dry season, so they can get two harvests a year... It is not necessary that they will always plant rice. In the dry season you might have onions, potatoes or tomatoes.”

Male, age 30-39, Sakalilo (Rukwa)

Changes to practices may not always be positive. The examples below comment on destructive changes to fishing practices in Bagamoyo, which have integrated more ‘modern’ techniques.

“10 years ago the fishermen here were getting more fish. Now many fishermen and other people are using harmful methods, so the fish are more scarce. Divers go to the coral, they distract the fish using poles and round them up, scaring them out into the net. They get a lot of fish though using this method. They can maybe get 2 to 3 cars of fish¹⁸. But it is a very bad method. It can destroy even the eggs of the fish.”

Male, age 40-49, Bagamoyo

¹⁸ Note here the unusual measurement used for how much fish is harvested. The respondent refers to ‘cars’ of fish, I believe referring to the pickup trucks which are used to transport fish once they are brought on shore. We see here perhaps the influence of a ‘modern’ form of measurement, but not ‘modern’ in the sense of a weight (e.g. kilograms of fish), but using a modern form of transport as a guide for the total amount of fish caught.

“There is a problem with bombing the water and using poison to get fish. I lost my brother due to this kind of bombing.”

Male, age 20-29, Bagamoyo

These non-traditional, ‘modern’ methods of fishing are illustrative of how individuals are using what are perceived as ‘modern’ methods, in the sense that they are non-traditional, but they also demonstrate how such practices are recognised as detrimental to people and the environment, whereas the previous examples are largely concerned with the positive impacts of integrating local/traditional and modern knowledges and practices. Respondents also identified where traditional local methods were no longer appropriate to the current environmental situation.

“Conserving the environment locally, the traditional ways have not been good. [But we] lack alternative ways to conserve the environment... waste from toilets is a big problem. People fail to get rid of it and to have proper drainage. When it rains they just open their tanks to let in the water, which carries away the waste. But it spills into other areas, even into other people’s houses.”

Male, age 30-39, Kawe

This challenges literature which constructs local people’s understandings of development problems and their local solutions as *the* solution to development issues at the local scale (for example, The World Bank 1998; Chambers 1994a; Binns et al 1997; Escobar 1995; Steiner and Oviedo 2004; McKinnon 2006). Local traditional practices are not in all cases capable of dealing with changing environmental circumstances. Taken with the understanding of local knowledges as something which has been influenced both historically and contemporarily by extra-local knowledges, it is very unlikely that ‘a knowledge’, completely unique and indigenous, could provide the ‘answer’ to local development problems. This is partly because it is very unlikely that such a ‘pure’ local knowledge ever existed/does exist. As early critiques of the participatory development agenda have also noted, such an understanding of a purely local knowledge has explicit links to romantic notions of community, when in fact community populations and therefore their knowledges have been both mobile and dynamic over time (Guijt and Shah 1998). But it is also partly because, as has been brought to the fore by the last quote, local practices can become ‘outdated’ or unable to cope with changing environmental circumstances, therefore requiring a change in both knowledge and practice, which is likely to require innovation and input which is (not necessarily, but likely to be) extra-local (or extra-‘traditional’). Previously ‘sustainable’ practices may no longer be appropriate when local conditions change, as has been

the case with waste in Kawe, fishing in Bagamoyo, and forest use in Rukwa. Importantly, local people are often aware of this, and the limitations of a purely 'local' approach. As other studies have shown, local people are aware of and often aspire to 'Western' forms of development (Sylvester 1999). Local knowledge is not 'timeless' (Grillo 2002), a presumption still alive in some development literature (e.g. Steiner and Oviedo 2004). Local knowledge can change significantly over time (Adams et al 1994; Twyman 2000; Sharp et al 2003). As a result of the process of hybridisation and change, what might have been a distinctive local knowledge may even disappear from use and memory (Briggs et al 2007). As I have suggested, this finding has often been linked with critiques of the notion of 'community' in the participatory agenda (Guijt and Shah 1998), and others have also highlighted that local people's capacity to come up with indigenous development solutions may be limited (Bebbington 2000; Davidson 2010), yet this evidence suggests that there perhaps needs to be more explicit links between these critiques of community and understandings of the place of local knowledge in development.

Respondents' discussions of modern and traditional knowledges, as well as their actual practice, are revealing then of three things. Firstly, that discursively, 'modern' and 'traditional' practices and knowledges can be constructed by local people as separate, distinct, and in some cases, opposed. Secondly, this discursive understanding does not prevent or preclude local/traditional knowledges being hybridised, or used in parallel with, modern techniques (Easton and Belloncle 2000). Also, and significantly, there is a range of experiences, both positive and negative, with regards to this process of utilising outside knowledges locally, as in the case with fishing presented above. Thirdly, local people recognise when current/traditional practices are no longer adequate, and the assumption that 'local' solutions will materialise ignores this. The exclusive validity of local knowledge precludes any analysis of how multiple knowledges are utilised in current local practice, but also ignores the potential for these multiple knowledges of varying origin to be used in local development (Jakimow 2008), such that privileging local knowledges may simply marginalises other forms of knowledge. Such thinking should contribute to the re-conceptualising of 'local' knowledge. The practice of hybridising 'local' knowledges with those from beyond the local is a historical one, and not indigenous to the 'modern' era of development. The communities in this study have not in living memory been isolated, and in the present continue pragmatically to hybridise a range of knowledges in their everyday practice. This experience is not always positive (often the implicit assumption in the local knowledge literature, e.g. Easton and Belloncle 2004). Whilst this could tie in with arguments which suggest that local knowledges are 'eroded' by external knowledges (Steiner and Oviedo 2004), the reality is that the utilitarian and pragmatic nature of local people is historical, and the ideal that local knowledge in

some way needs ‘protecting’ from the ‘outside’ is naïve in light of these historical processes. In recognising the historical hybridisation of knowledge, and the limitations of existing local knowledges to deal with environmental changes, there is no longer a need to pretend that somehow local solutions will (on their own) solve local problems.

4.2.5 The knowledge of young people

Whilst several studies have made significant steps in demonstrating the divisions, differences and unequal distributions of environmental knowledge within communities, particularly with respect to gender (Myers 2002; Sharp et al 2003), the role of young people has thus far been largely ignored (Bourdillon 2004; Mayo 2001). Firstly, young people’s priorities of environmental issues were different to those of adults (Fig. 4.9); they were more likely to identify problems associated with the ‘natural environment’ over the human environment. Fig. 4.15 also illustrates that young people were more likely to discuss issues on a broader scale than adults.

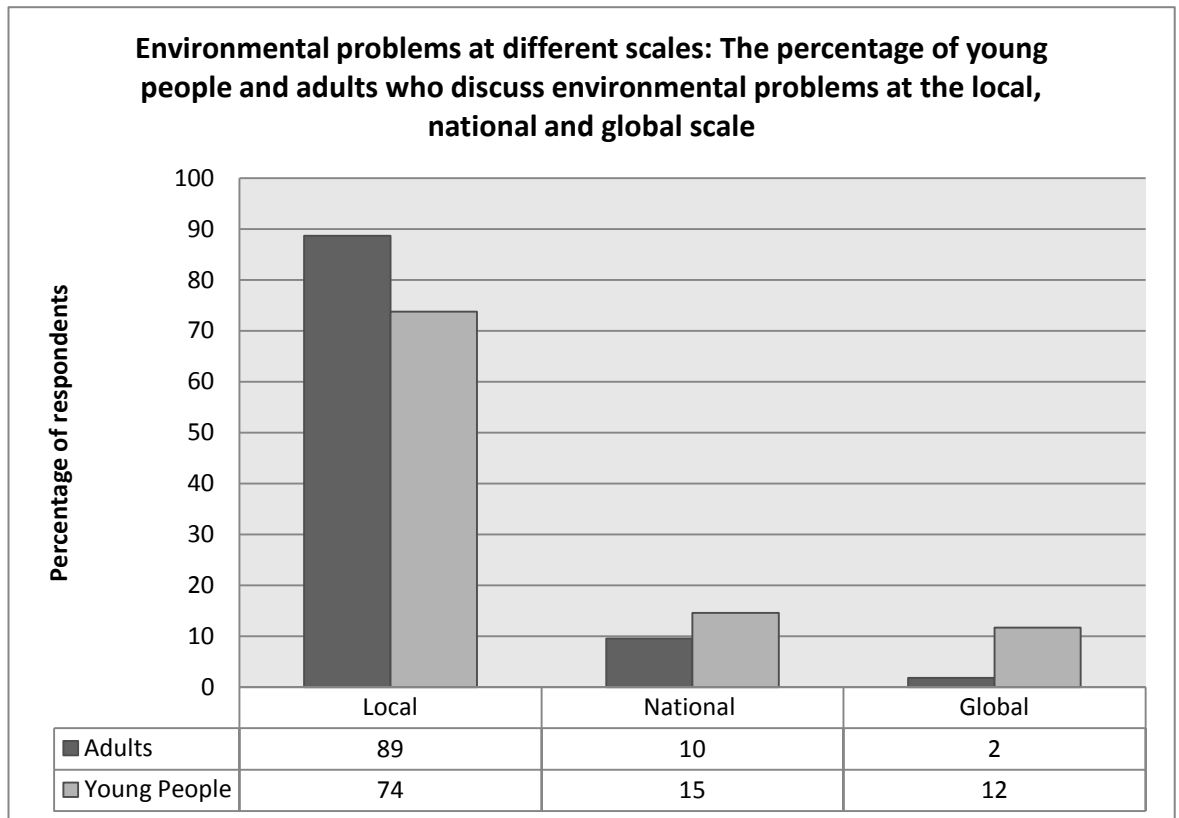


Figure 4.15: Environmental problems at different scales. Although the trend is similar, adults tend to focus more on local issues, whereas young people in general are more likely to discuss extra-local concerns than adults, particularly ‘global’ scale issues such as climate change.

Here I return to a quote from an adult respondent (see section 4.2.2) to illustrate how adults could discuss local issues, in relatively simplistic terms, which relate to their everyday lives:

“People come and mine for sand around the area and chop down trees... People who are coming from far away cause this problem. They come from other parts of Kawe, chop down the trees here and take them away. They do this to earn income by selling the wood.”

Female, age 30-39, Bagamoyo

This respondent notes sand mining and chopping of trees as local problems, but they do not go into detail about the consequences of these actions. Their knowledge is based on what they have experienced locally, and there is no evidence of more ‘abstract’ environmental discourse. The examples below from young people offer a contrast.

“I’m concerned with the ozone layer and the chemicals that affect the ozone layer, and how this can affect the air. In developed countries and developing countries there is deterioration of the ozone layer. Industries are emitting gasses which are bad for the ozone layer so it gets destroyed. Rays from the sun reach the ground, and eventually this leads to global warming. This is a problem for all countries... Cutting down of trees is linked to this, as they are cut beyond their rate of replacement.”

Male, age 18-20, Kawe

“There is a trend in illegal hunting which is a big problem. It has increased a lot, which is a big problem for tourism... elephants are particularly very endangered. In Katavi where they have Black Elephants, they are very rare.”

Male, age 15-17, Kawe

The first quote illustrates a clearly more detailed knowledge of the wider processes involved in an environmental problem. Importantly, there are links to the global scale of these environmental issues. The second quote demonstrates the knowledge that young people have of ‘national’ issues, showing awareness more abstracted from the local scale. At each of the three study areas, there were some differences in awareness between adults and young people of national and global issues (Figs. 4.16 and 4.17)

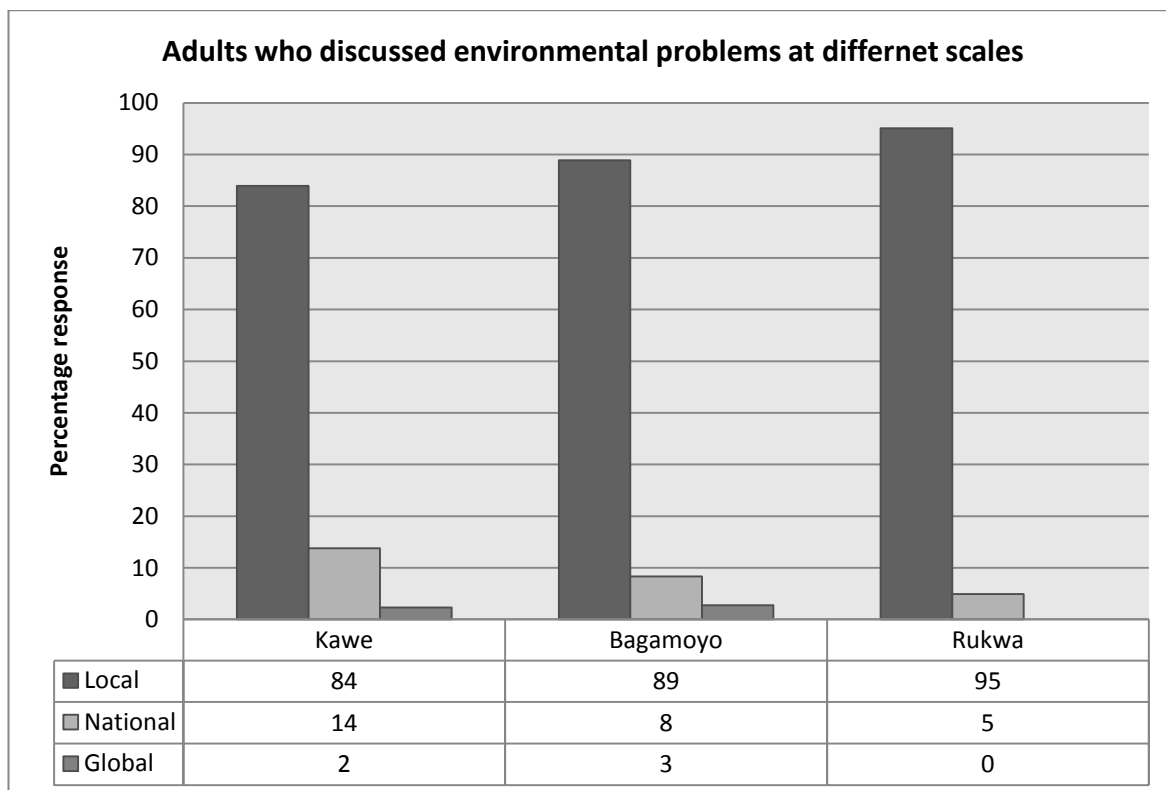


Figure 4.16: As the study areas become 'more rural' and 'less urban', the number of times national and global environmental concerns are mentioned by adults declines slightly. However, overall, local issues still dominate in each area.

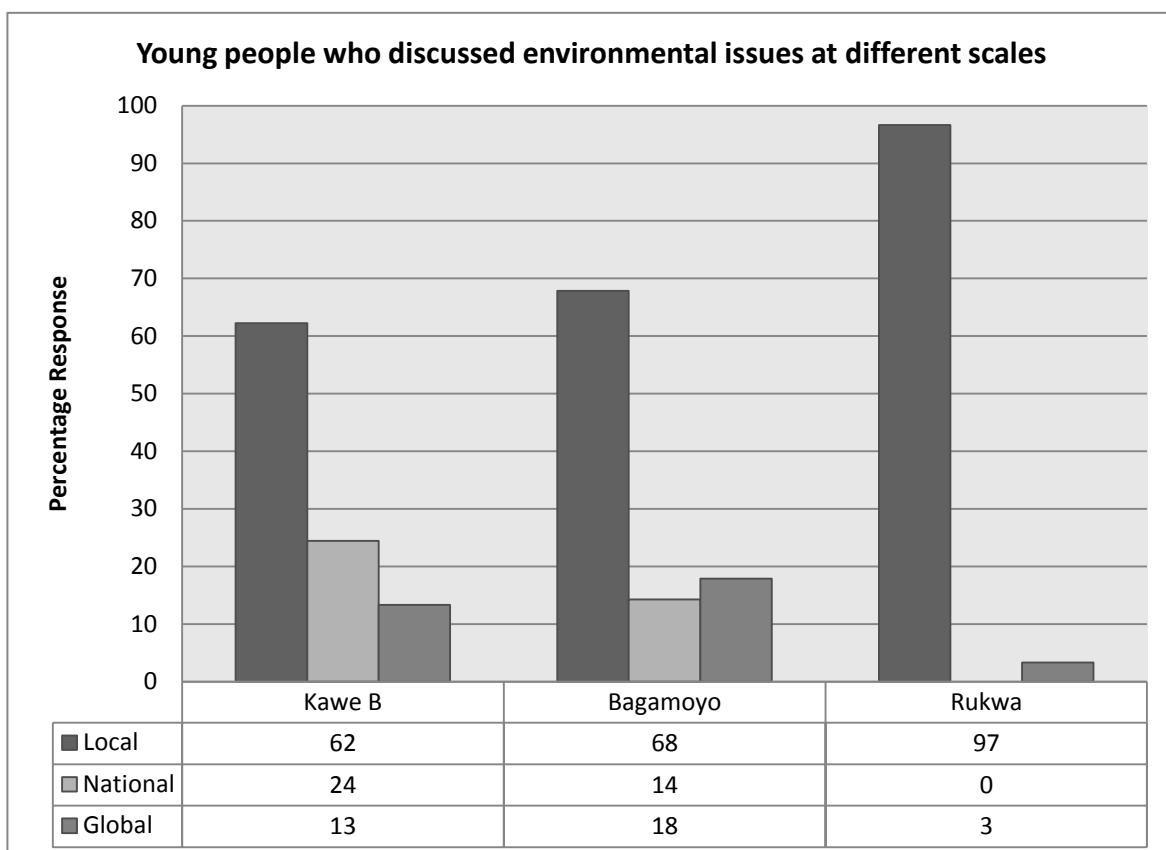


Figure 4.17: This trend is more pronounced amongst young people, where in Kawe and Bagamoyo the percentage of respondents discussing national and global issues is clearly higher than for adults, whereas in Rukwa the figures are much the same.

These two figures illustrate how the gap between the knowledges of young people and adults are more significant in the urban study areas (particularly Kawe, but also in Bagamoyo in terms of 'global' examples), than in rural areas. Although the general trends are similar, it is possible that both the availability and quality of schooling, higher NGO activity in providing education about the environment, and more migrants from outside the area may have contributed to a greater awareness of national and global issues in Kawe and Bagamoyo, with the first two factors being particularly important for young people. The differences in environmental knowledges between adults and young people can also, therefore, be differentiated across space, across the national space of Tanzania. However, it is important to stress that the way in which young people discuss environmental issues is still very much couched in environmentalist understandings in Rukwa, as it is in Kawe and Bagamoyo. The following example demonstrates this.

"Fishermen use poison in the rivers and lakes, which causes water pollution and then air pollution. So the fish cannot breath. Also there are bush fires which can cause smoke, like smoke from industries, which can also land in water bodies and cause pollution."

Male, age 17-19, Ilemba (Rukwa)

There are critical differences between the environmental knowledge of young people and adults within and between particular localities. This supports evidence which describes local knowledges as delineated by social groups within a 'community', yet brings particular attention to young people as a distinct group in their own right (Bourdillon 2004). Although young people tend to have an understanding of the environment which conforms more to a conservation approach, and also tend to be better informed about national and global environmental issues than adults, this is not to suggest that young peoples' knowledge of the environment is in any way 'better' than that of adults' more practical, utilitarian knowledge. What it does show is that young people have a significantly different kind of knowledge. It illustrates that the influence of extra-local knowledges can act differentially throughout a single 'community', in this case likely to be operating through access to the formal education system. Despite their wider knowledge, young people often lacked the ability to think through solutions to environmental problems and the social and economic consequences of particular actions to their locality, suggesting that their more 'formal' knowledge may lack practical, local applicability. The quotes below provide illustrations.

"For fishing in Rukwa people can do what they want to, so there should be rules and regulations to monitor them."

Female, age 17-19, Ilemba (Rukwa)

“People should be taught not to cut down trees.”

Male, age 13-16, Ilemba (Rukwa)

These are two of the responses from young people with regards to ‘solutions’, and highlight the ‘simplistic’ nature of their ideas. Although they identify a problem, and that it should be ‘stopped’, they do not recognise the social consequences of the solutions suggested. The second quote, for example, does not suggest any complications with the effect of ‘not cutting down trees’ on people’s livelihoods. Although adults could have equally simplistic solutions, which like young people did not always engage with social and economic realities, they did tend overall to cite some of these local complexities, as the quotes from adults below demonstrate.

“The nets we use which are between 1 inch and 3 inches are prohibited by the government but most of the people here are financially bankrupt. The government wants us to use advanced methods of fishing but this is very expensive. How can we afford 5 million shillings or more? We are willing to stop fishing, but we need an alternative. This is the only way our families survive so how can we stop? ... I’m willing to declare openly that no one is in need of destroying their own environment. The problem is that our lives necessitate this.”

Male, age 30-39, Kawe

“Formerly the environment here was very nice and attractive. The people here took responsibility and it was much cleaner. Now life is expensive so we can’t afford to do this... you don’t have so much time to look after the environment. But it can also be a matter of laziness. There is good grazing around here, some is further away but it is still possible to go there, but they don’t and they let their cattle graze on other peoples land.”

Male, age 60+, Kawe



Picture 4.15: Nets used catch small fish. They are banned by the government, and local fishermen recognise this as a 'solution', but economic pressures prevent them from adopting more 'modern' fishing practices.

It appears that adults have a deeper appreciation of the social and economic consequences of coping with environmental problems. The first quote above illustrates an awareness of the livelihood consequences to the possible, and enforced, solutions to problems associated with fishing, whereas the second illustrates the economic problems of balancing livelihood practices with actively caring for the environment. These adults are aware of multiple solutions, but cite them within the local livelihood context. This level of detail in framing solutions was largely lacking from young people. Their lack of engagement with local social realities demonstrates that their knowledges are differently positioned to those of adults. Although there are projects in Tanzania to educate adults, it was difficult to ascertain, what, if any, education about the environment these adults have had. The more utilitarian understanding of adults may be due to their attention to the lived realities of their daily lives, which appear to be greater than those of young people¹⁹. Young people, in contrast, spend a significant amount of time attending school, and have less experience of the consequences of some of the 'solutions' to environmental problems that they suggest.

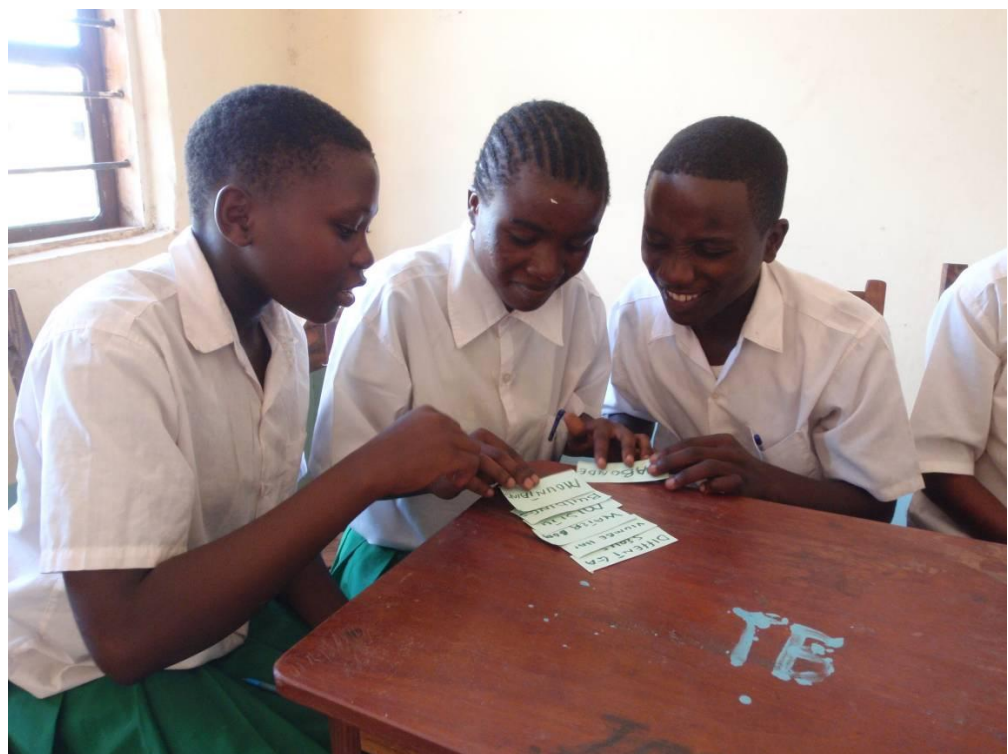
¹⁹ Although young people are highly involved in participating in the maintenance of family livelihoods, as will be discussed in more detail in Chapter 6.

4.2.6 Local power relations and spaces of knowledge expression

It has been well recognised in the local knowledge literature that knowledges are not evenly distributed amongst communities, they are instead bound up within social difference and therefore local power relations (Diawara 2000; Leach and Fairhead 2000; Easton 2004). Although there is recognition of these power relations at the local level, this has so far been under-theorised and lacks complexity in the literature (Kapoor 2002b). Focusing on the power relations between adults and young people can help unveil some of the multifarious facets of knowledge, and aids a deconstruction of the notion of 'community' (Kapoor 2002b; Kesby et al 2006). Local knowledge, in terms of access to knowledge (for example, access to learning opportunities or experiences), is bound up not only with relations of power but also social position. For young people, the opportunity to access knowledge through formal education is not due to their position of power within a community as such (although, it might be argued, this may allow them to accrue particular kinds of power), it is more due to their age and expected social norms/responsibilities at that age (attendance at school). Importantly, however, there is a difference between the knowledge that an individual holds, and their ability to express this knowledge. It is the latter which is most closely bound up with power relations.

Through their attendance at school, young people have access to knowledges that adults do not have, and with this comes different (and possibly conflicting) ideals concerning local environmental management, development, and education itself. However, these knowledges and ideals/opinions are rarely shared or expressed by young people within the wider community; young people are restrained by local social hierarchies so that they are unable to speak in the wider community forum. The authoritarian nature of local leadership and the restrictions of local social hierarchies has been recognised by others (Bourdillon 2004; Timsina 2003; Anello 2003), yet there remains insufficient attention given to these power relations particularly in the development context. The workshops and interviews with young people took place within schools, using mostly school classrooms, but also including tours around the school grounds. In these spaces, the young people were often able to express themselves eloquently and confidently, and they would be able to relay not only their knowledge of environmental issues but also express strong opinions on how to tackle these problems. Although clearly power relations were still at work in these workshops, directed by the researcher and an assistant (both of whom had been teachers themselves), nonetheless in the space of the school young people were able to express their environmental knowledges. In stark contrast, in other public and private spaces within their wider community, young people were restrained in expressing their environmental

knowledges. Interviews and focus groups in communities took place in respondents' homes, as well as open public places such as places of work (shops, fields, pastures), and public space (streets, forests, beaches). Often young people were present, particularly in the respondents' homes when family members would 'join in' with interviews. In these spaces, strict social hierarchies delineate who can and cannot speak. In Tanzanian society, it is normally the oldest male or 'head of the household' who should speak first, followed by more senior men (uncles, older sons). Normally other men will speak after the 'head man' has said his piece, and occasionally older or more senior women, such as the man's wife if she is of sufficient age. Women are usually only able to speak once the leading man has given them indication that they can do so, or they wait until the men have spoken. Young people (up to the age of 18) are at the 'bottom' of this hierarchy. Usually in a family group they are unable to speak up unless they are specifically invited to do so. Only very occasionally would adults recognise that a young person might have been learning something about the topic of discussion at school, and invite them to speak, but as a rule this was not the case. As a result of these social hierarchies which operate in public and private spaces of communities young people are socially marginalised (see below for examples).



Picture 4.16: Spaces of empowerment. In the space of the school, young people are more empowered to express their knowledge and opinions concerning the environment than they are in other spaces throughout the wider community. The two photographs above illustrate young people expressing their environmental knowledges through the workshops undertaken as part of the research.



Picture 4.17: Spaces of marginalisation. These two photographs illustrate typical focus group interviews held at respondents' homes. Social spatial relationships determine how and where people sit (women and children sit together, often apart from the men – highlighted), and also restrict who can speak and at what time they can speak. Young people are far more restricted to express their knowledges concerning the environment at home than in the school.

These examples intimately tie the expression of knowledge to space, and illustrate how knowledge, space and power relations are part of the same parcel. Whilst participation in the activities of environmental education projects was supposed to be 'empowering' for young people, it became evident that having this knowledge was in fact often 'disempowering' for some. Young people expressed frustration at their inability to bring their knowledges into the wider community space. Their environmental knowledges remained 'trapped' in space, specifically the space of the school, whilst the community 'miss out' on their knowledge because there is no avenue for its expression. The quotes below provide examples of how young people were aware of their social position.

"Because of my age now though I cannot just talk to elders, so I cannot tell them what to do in the environment."

Male, age 17-19, Ilemba (Rukwa)

"My parents at home are not caring for the environment. I told them to sort out the rubbish but they never sorted out this problem."

Female, age 13-16, Kawe

Whilst writers on local knowledge had emphasised the empowering potential of incorporating the knowledge of local people into development (Chambers 1994b; Briggs et al 2003), it can be equally disempowering when an individual's knowledge is ignored, or fails to be socially powerful, within that community. The environmental education projects, and the state education system, enhanced young people's environmental knowledge (although in particular ways), but, without a mechanism to share or engage this knowledge with the wider community, this knowledge fails to 'empower' them within the local space. The result is an enhanced feeling of disempowerment, highlighting the non-equal status of young people within their community. Education and 'having' knowledge is not in some fundamental way 'empowering', particularly in the short term for young people. It can be frustrating, sometimes disempowering, highlighting their marginal status in communities and sometimes leading to further marginalisation in space. If 'local knowledge' is not investigated through the whole spectrum of individuals and groups within a community, then bringing this 'local knowledge' into the development discourse of a particular project will empower some, but not others. Harnessing knowledges *within* a community empowers those who are able to express their knowledge, whilst disempowering those who cannot (Donnell-Roark 1998). The existence of local knowledge is not inherently empowering in itself, and enhancing or

building on the knowledges of particular groups within that locality (in this case, young people) may also not necessarily engender empowerment either, especially when the fundamental power relations within a community have not been addressed. The social power relations within a community that allow an individual to express his or her knowledge are therefore as equally important as the knowledge itself. One cannot come without the other, and 'knowing' about local knowledges, without understanding local social power relations relevant to their expression in the local context, neglects the way that knowledges operate socially and spatially.

The position of young people within local social/spatial power relations in these communities further allows an interrogation of thinking on knowledge and power from both a postcolonial/postdevelopment and poststructuralist perspective. These theoretical endeavours have variously sought to valorise and raise the profile of local knowledges. Postcolonial critique has called for prioritising local knowledges (McKinnon 2006) and raising awareness of recovering voices of the marginalised, including the valuing of local knowledges over 'Western' ones (McEwan 2002; Slater 1992; Goss 1996; Radcliff 1994; Sidaway 2002). Postdevelopment arguments have sought too to validate the 'local' or 'grassroots' as the place of alternatives to the Western hegemony of 'development' (Escobar 1995). However, the power-knowledge critique which has deconstructed the powerful position of Western knowledges has not been applied to the local scale which has been so revered (McKinnon 2006). Postcolonial and postdevelopment critiques appear to have, to some degree, ignored poststructuralist theorisations of power which recognise how knowledge is indivisible from and constructed through power (Sanderson and Kindon 2004). Poststructuralist accounts see power as diffuse, not necessarily top-down or domineering, it cannot be avoided, it is decentred and everywhere (Kesby 2005). This helps us to break down the 'local community' by the power relations that cut across it, and to identify how particular groups may be marginal, yet may also exercise power.

When we apply this power-knowledge critique to the local/family/individual scale, focusing specifically on adults and young people, it becomes clear that local knowledge systems are bound by similar power relations of knowledge expression (Goebel 1998), which play out across the local space, in a similar way to the global scale between Western and local knowledges. Knowledge is not evenly distributed amongst communities (Diawara 2000), nor is there equal space for its expression. Through the perspective of young people, the dangers of prioritising and romanticising 'the local' as a site of empowerment become even more vivid (Mercer 2002). Local

social hierarchies, even within social groups²⁰, are of fundamental importance, rather than simply the knowledge that exists within them. Only deferring to local knowledge, and assuming that this will reduce power relations in the development process (e.g. Mosse 2001) is dangerous, as existing social hierarchies allow only particular knowledges to be expressed in particular spatial and temporal configurations. There is no basis for assuming that local communities will be more democratically inclusive than social organisations at any other scale, yet this is what previous arguments for ‘the local’ have assumed (Jakimow 2008). As poststructuralist understandings of power help bring to the fore, the fact that power exists at all scales negates the possibility for a single scale (‘the local’) to be the site of empowerment, and relying on ‘local knowledges’ is equally as problematic as relying on ‘Western’ ones (Kesby 2000b). Young people have a unique perspective, but only through a focus on their marginal status within local social hierarchies can this be revealed.

4.2.7 The limitations of local knowledge

The discourses of academic writing, and NGO and state policy, have been accused of romanticising local knowledge (Adams et al 1994; McGregor 2007). There is a danger of over-valourising local knowledge, assuming that because it exists it must be ‘of value’ to local development (Mohan and Stokke 2000). The exclusive validity of local knowledge precludes analysis of other knowledges, and omits the possibility that local knowledge can be inappropriate and misguided (Jakimow 2008). In all three areas some residents were unaware of the consequences of disposing of plastic waste in particular areas, or were unaware of the effects of fishing practices on stocks.

“If there is waste put along the coast then the sea will take it away and it will be clean. This won’t have an effect on the local environment. Putting waste in the sea is the proper thing to do. In the mangroves, when seawater comes it cleans out the mangroves.”

Male, age 50-59, Bagamoyo

²⁰ Although I have not covered this in detail here as I have chosen to focus on young people as a distinct social group, there are likely to be significant differences between the knowledges and priorities of different groups of young people, as well as social hierarchies which exist within groups of young people. For example, in focus group discussions it was evident that some young people were dominant, whilst others were less so, even within the same age groups. Other authors have also made the same observation for groups of women (Mercer 2002, Sharp et al 2003), and an important avenue for future research would be to examine the social hierarchies and power relations that operate within the social category of ‘young people’, with particular reference to debates on participation, local knowledge and empowerment.



Picture 4.18: Litter at the beach. Litter is regularly dropped on Bagamoyo beach, and is repeatedly washed up by the tide (left). Mangroves (right) typically trap plastic waste, including fishing nets and other plastics and fabrics. The quote above illustrates that some local people are unaware of the environmental consequences of dumping waste in the sea, and they assume that the sea will wash litter away, which, these photos illustrate, is clearly not the case.

The quote above, juxtaposed with the pictures of Bagamoyo beach and the mangroves (Picture 4.18), illustrates how local people may be unaware of, or unwilling to discuss, local environmental problems. Individuals may disagree with the majority with regards to what exists as a problem, or may be denying particular problems, either due to lack of knowledge or for other social/political/personal reasons. In Bagamoyo, waste disposal was the third most mentioned environmental problem in the area (Fig. 4.14), yet this one respondent clearly disagrees.

Local agricultural methods may not be in harmony with the ‘natural environment’ (Briggs et al 2007); in Rukwa the local people are stripping back the forest at an increasing rate to make space for agriculture and pasture. In Bagamoyo and Dar es Salaam, locals are utilising natural resources such as charcoal, firewood and fish at an increasing rate to support growing populations. It is not that such limits of local people’s knowledge and practices should be branded as ‘bad’, as many practices are often based on the limitations of local livelihoods, such as not having a proper waste disposal system, or having no access to an alternative source of fuel. Local people are often aware

of their practices as environmentally destructive, yet weigh this against their livelihood demands. They may simply lack the knowledge to discuss and describe workable solutions to their problems, in some cases because they see no way out of their current livelihood situation.

Local people may have solutions to problems, but these can be controversial (Semesi et al 1998; Matthews 2004; Myers 2002), not just in terms of environmental conservation, but also in terms of social measures.

“The expansion of farms is caused by the population increase in the area. The solution is that the present forest reserves should be used for agriculture. This is no problem as long as the present generation is ok. We should not be thinking about those in the future but of the people who are here today... let those other people worry about it in the future.”

Male, age 50-59, Solola (Rukwa)

The quote above expresses a preference for the livelihoods of the ‘present generation’. This is relatively controversial to an environmentalist, conservation ethic, which often emphasises conserving environmental conditions for those in ‘the future’, yet for this respondent making sure livelihoods are satisfied in the present represents a solution to current problems. Solutions may also be controversial within their own communities, or may challenge current social hierarchies. The example below, a dialogue between two local people, is illustrative of this point.

An exchange in a focus group in Sakalilo:

1. Male, age 30-39, Sakalilo (Rukwa)

2. Male, age 40-49, Sakalilo (Rukwa)

1. *“The issue of overgrazing is caused by the Sukuma people. They are settling in the mountain. They cut down trees for areas to put their cattle... The best way is to get rid of the Sukuma.”*

2: *“No. But they should be educated about the amount of livestock to keep, and be given specific areas for grazing, not just be told to leave the area...There was an area near here which was supposed to be used for livestock.”*

1. *“But now it has been occupied. This area belongs to the Fipa people and the problem is with the Sukuma.”*

2: *“It is very difficult in today’s world to say to chase these people away. The cause of these issues is poverty. The pastoralists come and take some areas of the indigenous.”*

In this debate conflicting solutions are offered for problems with overgrazing. Whilst one respondent offers a highly controversial opinion (to 'get rid' of a particular tribal group), the other respondent counters this with an approach which highlights a range of complex associated livelihood problems, which have caused the current situation. This kind of debate is ongoing in these communities, and opinions can be highly polarised. Gender issues can cause controversy within a community:

"I think that it is good here to have family planning. But I am worried about my husband. If you start talking about family planning with them they will think that you want to be a prostitute."

Female, age 20-29, Solola (Rukwa)

In Rukwa it was common for people to discuss family planning in association with the problem of a rapidly growing population and the effects of this on the environment. This response was the only time in which a woman so directly addressed this issue of contraception, yet it illustrates the controversial nature of issues which are linked to the environment, conflicts which are played out in each family within that community.

It is also very important here to distinguish between local knowledge and local practice. Local people may have knowledge of how best to 'conserve' their environment, and the harmful effects of some of their activities. However, the practices that they employ are not always in line with these knowledges because of the realities of local livelihoods, which limit their capacity to instigate particular actions (Anello 2003; Twyman 2000; Easton et al 2000). An attention to both knowledge and practice illustrates how the two may be contradictory (Myers 2002). Clearly, 'local' knowledge, or more accurately, some individual/group knowledges within the 'local', can be partial, uninformed, political, destructive, inappropriate, controversial and, in many senses, limited (Sidaway 2002; Bodeker et al 2000; Munyanziza and Wiersum 1999)²¹. This may seem to be 'common sense', in that no knowledge, be that individual, group, local, or existing even beyond these scales, can ever be complete and total. Yet the local knowledges' literature, by suggesting that solutions to local development problems arise from the 'local level', does just that, particularly in the field of the environment where local peoples' knowledges and practices are often constructed as in harmony with the natural, and that therefore they must have a deep, detailed understanding of their local conditions (Briggs et al 2007; Adams et al 1994; Cleaver 1999; Leach and Fairhead 2000; Klooster 2002). This is not to argue that local people do not know

²¹ Other examples exist with reference to the detrimental effects of local knowledge of AIDS and HIV prevention and treatment, see Kesby 2000a; Kesby et al 2006; Naur 2001b

about local conditions, only that any such knowledge must be treated just like any other form of knowledge, with critical reflection that considers its subjectivity, partiality, and situated nature in space, time and person. To treat local knowledge as untouched by these fundamental facets of knowledge is equally as damaging as treating scientific, Western knowledges as 'solutions' to local development issues (Kesby 2000b; Pence and Schafer 2006). Any suggestion that 'local knowledge' will, under all circumstances, provide the answer to environmental problems, because of local people's proximity to and understanding of their environment, should be treated with caution, and whilst cultural sensitivity remains important, this should not imply that existing behaviours and knowledges are beyond challenge (Kesby 2000a). Equally, local knowledge *may* offer solutions (Green 2004; Naur 2001b), and Western knowledges/outside knowledges *may* be inappropriate (Jones 2000; Sillitoe 1998). However, entering any local development situation with the assumption that local people have 'better' knowledge than those from outside is highly problematic.

4.3: Local traditional knowledges and beliefs

Local traditional knowledges are distinct from local knowledges more generally as they are recounted by local people as being linked historically with 'traditional' knowledges and practices which relate to the environment. Although these traditional knowledges form an important part of a local conglomerate of knowledges, they merit separate investigation for a number of reasons. Pilot studies found that these knowledges were distinctly highlighted by respondents as an important 'category' of local knowledge, and although some studies have also referred to 'traditional knowledges' (Easton and Belloncle 2000; Naur 2001a), how these are distinct from 'local knowledges' has not entirely been made clear. Firstly, traditional knowledges are an important part of how local people make discursive and practical distinctions between what they understand as 'modern' and 'local' ways of doing and knowing of the environment. A deeper understanding of these traditions, and how they are socially constructed, may help to draw a picture of the historical nature of local knowledge, and how the boundaries between practiced knowledges, traditions, and in some cases, witchcraft, inform how respondents understood their environment. Secondly, with regards to environmental education, local traditional knowledges have been utilised positively in several studies in teaching about the environment, but also to aid with other local development issues, including health and resource management (Pence and Schaefer 2006; Adams et al 1994; Easton 1999; Easton et al 2000). Whilst the NGO projects engaged in this study did not incorporate local traditional knowledges, here I investigate the

possibility of this through examining local traditional knowledges and beliefs in some detail, and, from this, extrapolate the issues with their use in local education.

Defining 'traditional knowledge' in the Tanzanian context is not simple, in fact the concept is multi-faceted and the term 'traditional knowledge' can be reinterpreted and misinterpreted with surprising regularity, contesting to the range of different meanings which are locally attributed to the term. 'Traditional knowledge' relating to the environment is generally not understood as a single category by respondents. In the Tanzanian context, this term is commonly used in discussions with regards to local environmental knowledges, yet may variously refer to practices, beliefs and, more controversially, witchcraft. To aid understanding, the following three categories can be used: *'traditional knowledges'*, *'traditional beliefs'* and *'rural superstitions/witchcraft'*. These categories were all used by respondents, but when translated into the Kiswahili they can mean quite different things to different individuals. The categorisation is not exhaustive, and disguises the fact that ultimately the boundaries of these are highly blurred, and therefore I use these categories in part to aid an 'academic' understanding of the range of meanings associated with 'traditional knowledge' in Tanzania. Although these terms were interchangeable for some respondents, they remain useful in conceptualising how practices and beliefs are understood by local people, as many used these categories to make distinctions.

'Traditional knowledges' in most circumstances translates to the traditional or 'older' methods of conserving the environment. These include traditional methods of waste disposal such as digging pits for rubbish, or using cow dung as fertiliser. These are often compared by respondents with more 'modern' or 'technologically advanced' practices, such as modern waste disposal systems or chemical fertilisers. When asked about 'traditional knowledge' relating to the environment, respondents tended to elaborate on traditional practices, juxtaposed with what they understand as modern practices, exemplified in the quotes below:

"We practice traditional ways here at home. We keep animals, collect animal waste, and collect grasses used by the cows. We rot it down and mix it with other materials to create fertilisers which we put on the soils in the farm."

Female, age 20-29, Kawe

Not all interpreted the term in this way. Some chose to refer, when asked about traditional knowledges, to traditional spiritual or religious beliefs. *'Traditional beliefs'* normally translates to belief systems, either religious (but not Christian, Muslim or other major religion, referring often

to local/tribal religious beliefs) or spiritual, normally referring to local gods, prayers, or other belief-based practices which are often related to the environment. This might include reference to a locally sacred area, for example a forest, mountain or water source, which is revered as the home of a spirit or god, or is protected by a local leadership structure and is therefore regarded as sacred. Elders or local leaders tend to maintain access to these places. The activities conducted at such sites also come associated with both 'good' and 'bad' outcomes, or rewards and punishments. If someone goes to pray with permission she or he might expect a good event to occur, but if the area is disrespected, such as by cutting the trees, or failing to give the correct sacrifice, then bad things might happen, such as becoming lost in a forest or disappearing altogether. For example:

“My grandfather was a traditional chief and after he died he was buried in a particular place. People now are prohibited from going near there and to take trees and grasses from there. To go there you have to ask permission but still you are not allowed to cut a tree near that grave, so there is still a small forest near the grave.”

Female, age 30-39, Kawe

These traditional beliefs are common, and this study found that remarkably similar beliefs are held in Dar es Salaam, Bagamoyo and Rukwa, although the exact details of the gods, places and access to them are defined locally. Many of the resulting behaviours associated with these beliefs are very similar, in that access to resources are controlled or restricted. These beliefs are markedly different from traditional environmental practices, and it became important to differentiate between the two with respondents. Both are seen as 'traditional', associated with the past, or non-modern, but clearly one has spiritual connections, whilst the other concept is more focused on practices which concern day to day life.

Traditional beliefs can be associated with witchcraft. The concept has different connotations for different individuals. Some respondents appear to regard 'traditional beliefs' as witchcraft, but certain practices are more associated with witchcraft than others. Some view traditional beliefs, particularly those associated with environmental practices, more in terms of a traditional religious practice than 'witchcraft'. *Rural superstitions* and *witchcraft* are, along with traditional beliefs, interchangeable categories, but whilst several respondents were happy to talk about these practices openly, others regarded them as taboo. Some individuals, including politicians and local residents, are known to 'use' witchcraft as part of their daily lives, according to some respondents in Bagamoyo. The respondent in the first quote below highlights how he believes that political

figures have used such witchcraft practices. The second quote illustrates that young people could also show some considerable awareness of witchcraft, and that such practices could act to conserve the environment.

“There is a place near here called Kalabaca Forest. People go there into the forest, they go to pray. For example, if you have killed someone, or you have no job, or you want to be a member of parliament, you go there. You don’t pay, but if you are successful you have to pay a black sheep as a sacrifice to that place... Many people go there and they are achieving. But if you succeed you must come and pay, if you do not pay you will meet some punishment or some problems. If you go with a sacrifice you cook it but you don’t eat it yourself. Others can eat some parts and then you leave the rest there, but you go back and find that the remains are not there, even the bones! So something must have taken it. There are many people that do this, even I have been there and I have been successful so I believe that it works!”

Male, age 50-50, Bagamoyo

“I’m aware of some of these things to do with witchcraft. You may find a forest where witches and wizards meet frequently. So a person can go there if they have problems. But you can’t go there if you need a tree as building materials. People fear to cut the trees there as they might encounter some problems... the area that I am talking about is just near here, near the school, where you can see big trees where the witches meet.”

Male, age 17-19, Bagamoyo

There are distinctions between study areas as to how local people defined traditional knowledges (Fig. 4.18). In Rukwa, 81% referred to traditional knowledges as ‘traditional beliefs’; however in Kawe, the majority (89%) referred instead to knowledges and practices which had no connotations with belief systems. In Bagamoyo this was more balanced, however Bagamoyo also had the highest proportion make reference directly to witchcraft. According to a number of respondents, Bagamoyo has a reputation as an area for witchcraft, and people would travel from Dar es Salaam to observe particular practices.

Adults definitions of traditional knowledges

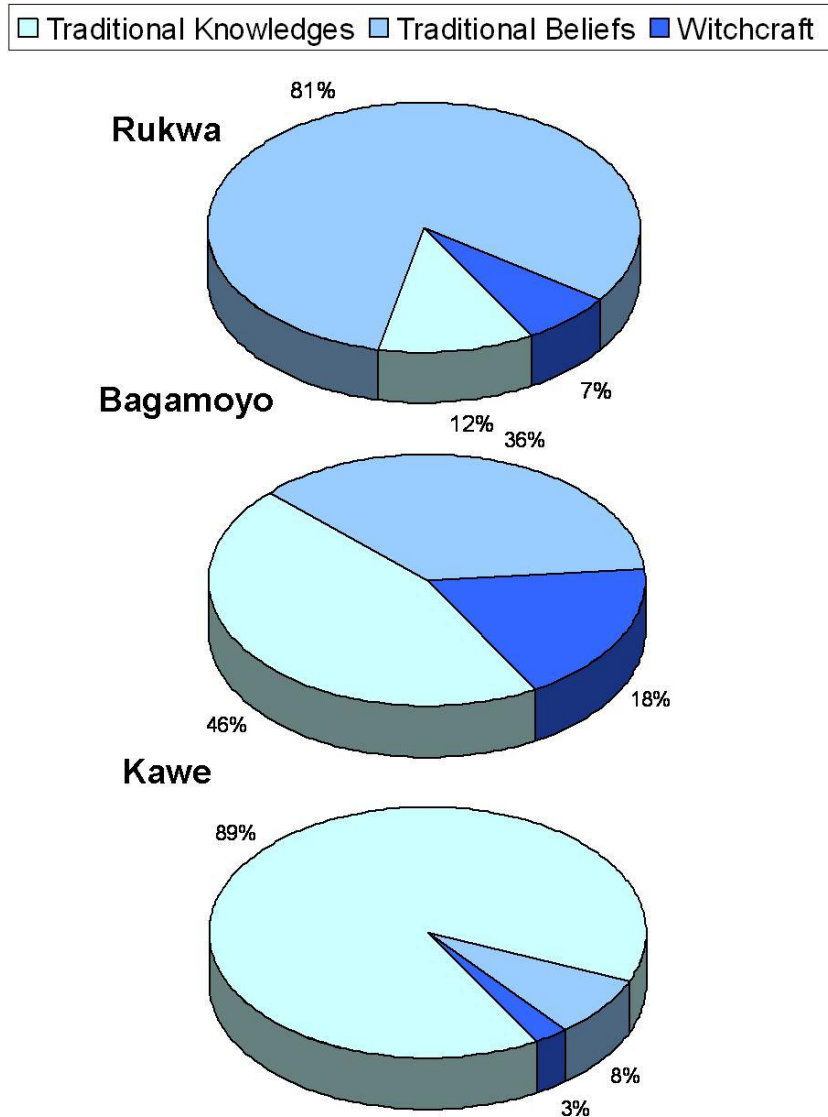


Figure 4.18: Percentages of adults who defined traditional knowledges, beliefs and witchcraft, from all three study areas.

Some of the differences between areas (Fig. 4.18) might be explained by the population makeup in each area. Rukwa is dominated by one main tribe, the Fipa, who make up as much as 75% of the population²². This might explain why traditional knowledges are largely defined as ‘traditional beliefs’ here, as the Fipa people, being ‘indigenous’ to this area, shared a number of traditional practices and belief systems. Kawe, with the highest migrant population (44% of respondents were born outside of Kawe), has the lowest percentage who understand traditional knowledges as ‘traditional beliefs’ or ‘witchcraft’, whereas Bagamoyo, with 32% of respondents born outside,

²² And, more generally, Rukwa has a much lower migrant population (10%) than both Dar es Salaam (49%) and Bagamoyo (21%), suggesting that there will be more ethnic homogeneity within the region.

is somewhere in the middle in terms of those who use ‘traditional beliefs’ as their definition of traditional knowledges. Traditional beliefs can be highly culturally specific in Tanzania, and therefore the higher populations of migrants in both Kawe and Bagamoyo may explain why such beliefs are not highlighted by respondents as being important, and instead they tend to refer more to generic ‘traditional practices’.

A commonality between these categories of traditional knowledge is that, in general, they all act to conserve the environment or a particular natural resource at a specific location. In the past such practices and beliefs were used by the community to promote continued use of a resource, or to control access to prevent over-use, rather than for any intrinsic, ‘conservation’-based value of a particular place (Leach and Fairhead 2000; Munyanziza and Wiersum 1999; Myers 2002). Often such rules and beliefs were administered by elders, although it was also the case that rules were shared amongst individuals within the local area. This largely relates to the ‘belief’ definition of local traditional knowledges. Although there has been work to illustrate the value of traditional knowledges, beliefs and practices in conserving local environments, and arguments for their use in education towards an environmental conservation end (Easton et al 2000; Easton 2004; Lucarelli 2001; Steiner and Oviedo 2004), the reality is more complex. Whilst local traditional knowledges and beliefs did have an important part to play in conserving local environments in the past²³, some respondents indicated that, in the present, their adoption wholesale might be problematic. Although some members of a community may be supportive of the use of traditional practices, traditional beliefs, and even some witchcraft practices, others are more sceptical. Fig. 4.19 summarises this range of opinions.

²³ And, importantly, in this study we only have the word of local people to prove this. Whilst many local people were adamant that local traditional beliefs helped to preserve and conserve particular local environments in the past, it could, just as likely, be that other factors are more important. For example, the growing population in the villages of Rukwa may be the most important factor in increased forest depletion in the area, even though local people may perceive the decline of traditional beliefs controlling forest use to be the key factor. In this case it is important not to accept local people’s accounts as ‘the truth’, but instead to understand them as one, locally-based perception on the issue at hand.

Adults overall opinion on traditional knowledges

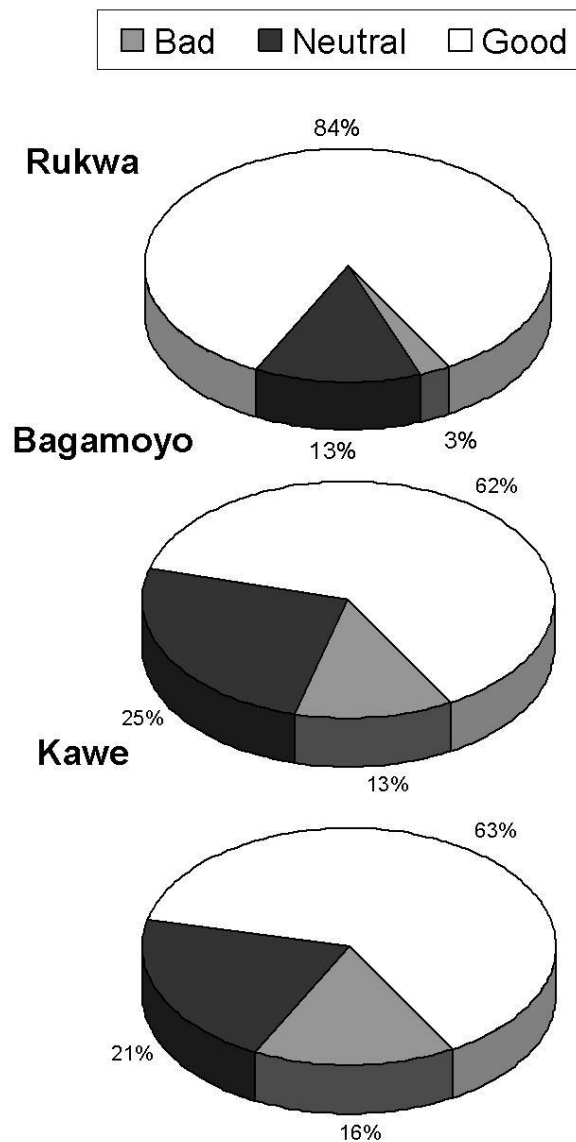


Figure 4.19: Percentages of adults' opinions on the practice of traditional knowledges.

Whilst in Rukwa the majority of respondents thought traditional beliefs were valuable, in Kawe and Bagamoyo opinion was more divided, although the overall trend is similar. What one individual regards as an environmentally beneficial belief, another may regard with deep suspicion. The following quotes illustrate the variety of opinions on local knowledges in Bagamoyo, also reflecting on each of the types of knowledges identified above, including witchcraft and rural superstitions.

“Modern methods become a dream to attain in this country. A farmer must wait for a long time in rural areas for some modern materials and chemicals to be delivered... Traditional

knowledges are simple and attainable, and you can apply them direct without much training, so they can be done by anyone.”

Male, age 60+, Bagamoyo

“I don’t think that these traditional knowledges should be taught at schools. If you are teaching pupils about local beliefs you will prohibit the initiative of kids... Rather than go to the hospital they will dig for roots to heal them.”

Male, age 40-49, Bagamoyo

“There can be a problem with killings... If you have a problem you can go to a witchdoctor... If you are told that a particular person is doing bad things to you, you might go and try to kill that person.”

Male, age 17-19, Bagamoyo

The three quotes above represent a gradient of how respondents from Bagamoyo regard traditional knowledges. The first is positive, highlighting their utility and attainability. The second contradicts this; in their opinion, traditional knowledges are ‘anti-modern’, seeming to indicate that teaching young people about them would be ‘backward’. The final quote illustrates how one respondent understands the dire consequences of involvement in witchcraft practices. The responses illustrate that more ‘modern’ solutions to environmental issues were often cited by respondents as the reason why they considered traditional practices to be of little benefit. Practically, however, whilst some perceived modern solutions to be ‘better’ than traditional ones, they also recognised that modern solutions were “*a dream to attain*”. Traditional practices are seen here as the less expensive and often the only means for environmental management, whereas ‘modern’ practices were associated with greater cost.



Picture 4.19: Chinese modernity? 'Modern' agricultural methods and technologies are far more expensive than 'traditional' methods which use local tools. This farm machinery was provided to people in the village of Sakalilo on a government scheme. It is interesting to note that this rotavator is of Chinese origin. When respondents then talk about the 'modern' and 'technology' they may not be referring to 'Western' modernity but, perhaps, a 'Chinese modernity', challenging the Western/Traditional binary.

There were also significant differences between the study areas on opinions about how traditional knowledges and beliefs were utilised. The responses to this question were governed partly by how people defined traditional knowledge (see Fig. 4.18). Fig. 4.20 demonstrates how many adults perceived traditional knowledges, beliefs or witchcraft to still be in practice in their locality.

Adults: are traditional knowledges currently used in this area?

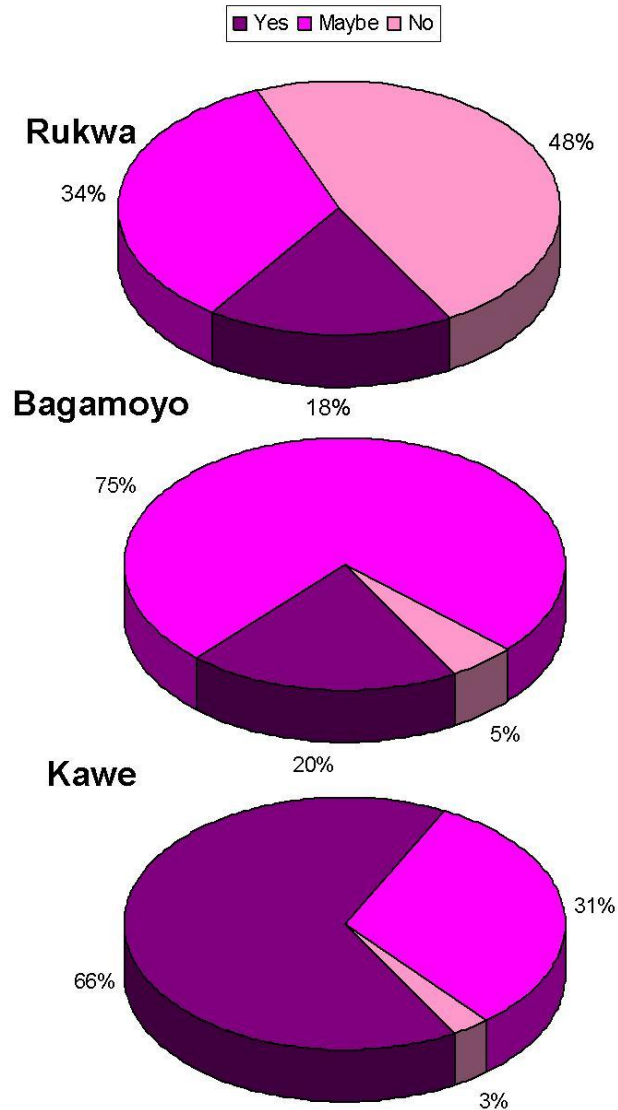


Fig. 4.20: Percentages adult's perception of the current utilisation of local traditional knowledges, beliefs or practices.

There are some differences between the three areas, which reflect to some degree the differences in definitions from each place. In Rukwa, where traditional knowledges were largely associated with beliefs, a significant proportion of respondents (48%) believed that traditional beliefs were no longer practiced. Commonly the Rukwa 'maybe' category consigned certain beliefs and practices to the past. The example below illustrates this.

"Most of the elders who know about these things no longer are alive. Even the teachers do not know so much."

Male, age 50-59, Solola (Rukwa)

In Bagamoyo, the majority (75%) were uncertain if traditional practices were still active. They may consign such practices to the past, or in the case of witchcraft, several respondents were uncertain if such practices continued. In Kawe, 66% believed that traditional practices were still active, in line with the fact that the majority understood traditional knowledges to be concerned with traditional practice (rather than belief systems), and such practices were still being used (including methods of creating fertiliser, or disposal of waste, often observed on field visits), whereas in Rukwa traditional beliefs (such as praying to gods) were seen as declining. A key reason why those in Bagamoyo consigned the use of traditional knowledges to the 'maybe' category was that relatively a high percentage (25%) cited their knowledge of traditional practices to come from other areas outside of Bagamoyo (Fig. 4.21). Kawe also had a relatively high proportion of people who drew on traditional knowledges from outside their current area, whereas this was less the case in Rukwa.

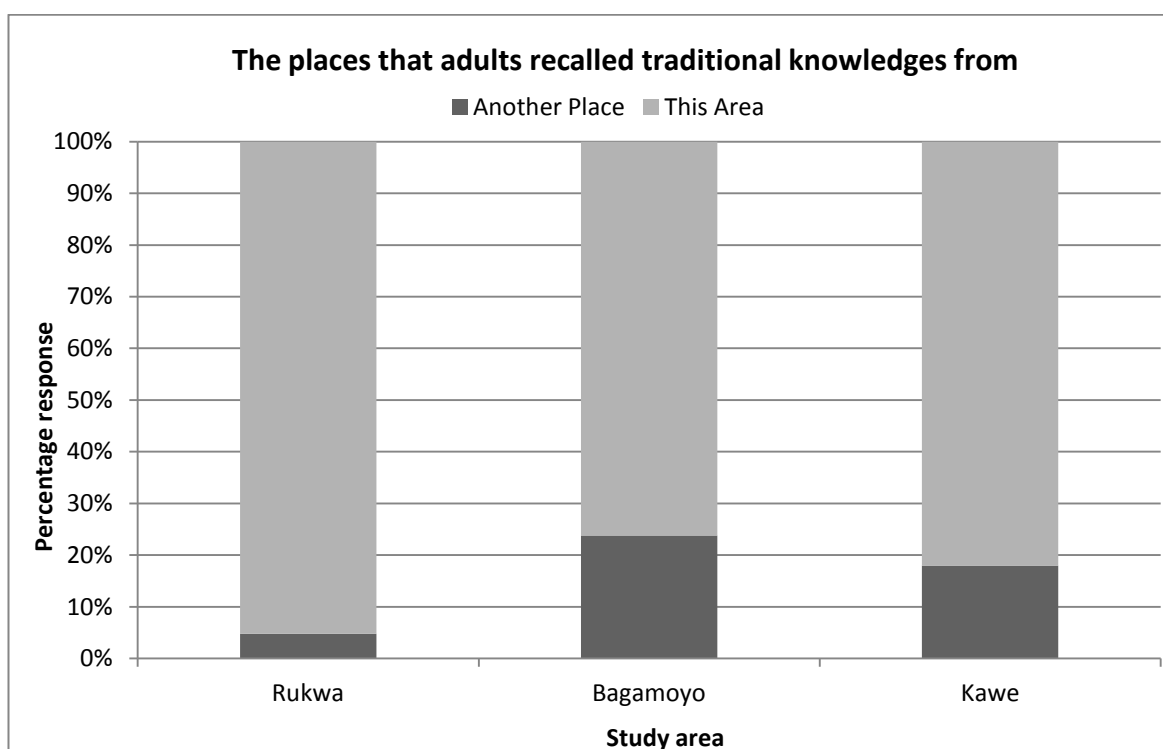


Figure 4.21: Percentages of adults who drew on traditional knowledges from within their current location, and those who discussed traditional practices from areas outside of their own.

In Kawe and Bagamoyo, the 20-25% who drew on traditional knowledges from other places were commonly migrants from outside of the area. They had knowledge of practices from outside of their current homes, but were uncertain if such things were in practice where they now lived. This adds further evidence to the complex nature of traditional knowledges, and disrupts the link between the 'local' and the 'traditional'. Migrants bring traditional knowledges from 'home'

places, which although may be traditional in nature, are not 'local'. The fact that a high percentage of traditional knowledges were quoted as 'non-local' in Bagamoyo and Kawe reflects the higher numbers of migrants compared to Rukwa.

Following the arguments for the place-specificity of local knowledges, traditional knowledges relating to the environment can also be highly place and culturally specific. As with local knowledges, however, there were also some common properties to traditional knowledges. Most knowledges and beliefs act to preserve a particular resource, and relate to places within the 'natural' environment, such as forests, rivers, or a lake. However, the individual places were specific to the locality from which the knowledge or belief came from. Respondents illustrated that practices and beliefs are specific to these places, but also that beliefs are specific to the community. In some cases, this means that knowledges cannot transfer from one tribe to another, even though both tribes may live in the same locality. The quote below illustrates the specific places to which traditional beliefs relate.

"The peak of the mountain is a respected area where no normal people can go, so no one can just cut trees or throw rubbish around in that area."

Male, age 30-29, Ilemba (Rukwa)



Picture 4.20: Sacred peak. The highest peak in the escarpment above Ilemba is regarded as a sacred place.



Picture 4.21: View from the top of the escarpment. Much of the hillside has areas of forest and river sources which were, in the past, protected by local beliefs systems.

Tribal differences can also be of significance for how traditional knowledges are defined, similar evidence for which has been found by other authors (Twyman 2000; Briggs et al 1999). Tribal groups living in the same area can have different values and attitudes towards the environment. This is particularly apparent in Rukwa, where there is a strong conviction amongst local people that traditional beliefs cannot be transferred from one tribe to another. Local people in Rukwa understood traditional beliefs relating to the environment to belong to the Fipa, the ‘indigenous’ tribe, whereas the Sukuma, most being relatively recent migrants (within the last 20 years), could not adopt these. Some Fipa blamed the arrival of the Sukuma for the decline of these traditional knowledges, and some Sukuma residents acknowledged that they could not adopt such beliefs, as they were ‘intruders’ to the area. For some, particularly Fipa people, this was a highly controversial topic, and related to land ownership and resource use issues. The quotes below provide examples.

“The Sukuma are the problem... These beliefs that used to be there now don’t exist because of this tribe. We used to protect the water sources, and used to pray in various places but now this does not happen because of these Sukuma people.”

Female, age 20-29, Sakalilo (Rukwa)

“Traditional beliefs are mostly done by indigenous people, but for intruders like us to be involved in this might be a problem. So it is only really done by the indigenous of the area.”

Male, age 40-49, Ilemba (Rukwa)

Consequently, traditional knowledges are not only specific to place, they are also specific to tribal groups, and may be bound up with conflict between them. Whilst these knowledges may be highly ‘local’ in place, this does not mean that all ‘local’ people necessarily subscribe to, or have access to them. In Rukwa, this may be because only the indigenous tribe are perceived as the holders of these beliefs. The second quote above illustrates how even some Sukuma people acknowledge that they cannot partake in these customs because they are not their own. This may be related to the place-specificity of these knowledges, as the indigenous Fipa have developed a series of knowledges associated with specific places. The Sukuma, having moved to the area, have not been a part of assigning these practices to place, and therefore they cannot, seemingly, adopt these practices/places as their own. The historical process of knowledge change is therefore influenced by factors from outside communities, in this case, migration of other tribal groups. It is not just specificity in space and time which bounds local knowledges, but also their cultural specificity.

To illustrate further the differences in ‘local’ knowledge within communities, I turn again to young people and their knowledges of traditions relating to the environment. Although young people had a broad knowledge of environmental issues and problems, often more comprehensive than adults because of their access to formal education, conversely their knowledge of local traditions was poor compared to adults. Young people tend to be much less aware of traditional knowledges (Fig. 4.22), and, particularly according to adults, hold them in less regard.

The percentage of young people and adult's knowledge of local traditional knowledges

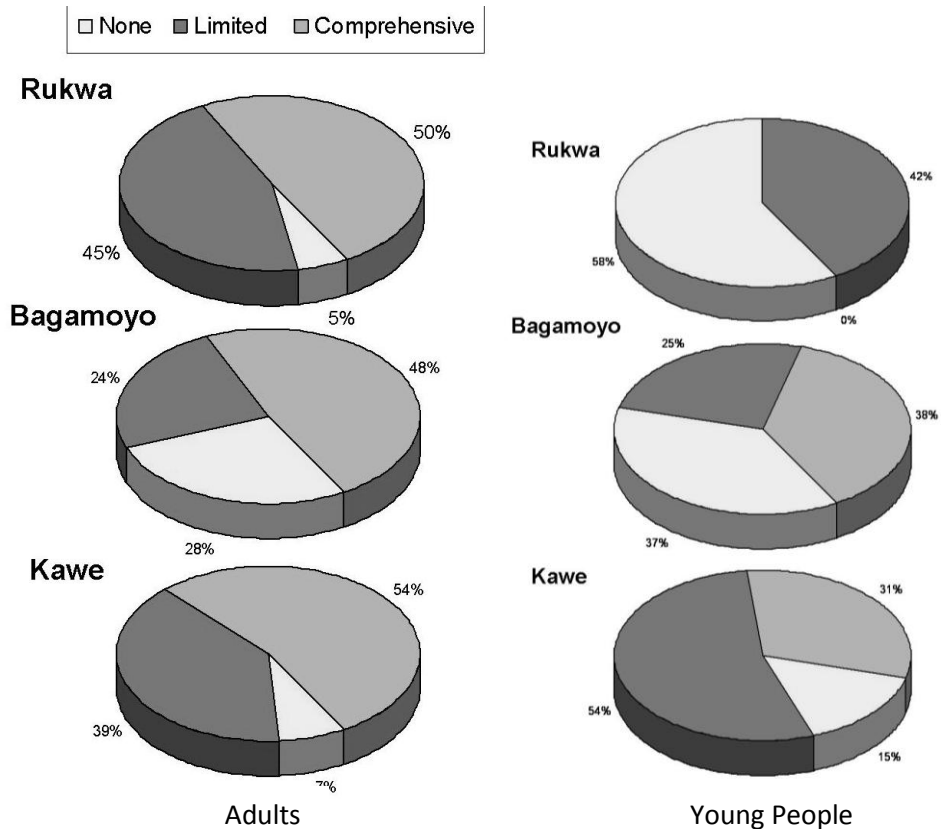


Figure 4.22: In all areas, a higher percentage of adults had a more comprehensive knowledge of local knowledges and traditions than young people in the same area.

For Fig. 4.22, interview responses were put into categories of having ‘no’ knowledges of local traditions, having ‘limited’ knowledge, and having a ‘comprehensive’ knowledge, based on the level of detail and understanding given in each statement. Fig. 4.22 illustrates that young people in all three areas had much less of a comprehensive understanding of traditional knowledges than adults. This was starkest in Rukwa, whereas in Kawe and Bagamoyo the trend was less significant. There were examples of young people who had a good understanding of ‘traditional knowledges’, but these were the exception. The examples below illustrate both those with limited and more comprehensive knowledge.

Limited knowledge:

“We are not much aware of traditional beliefs, but there are some places where you are not allowed, like in the mountain.”

Female, age 17-19, Rukwa

Comprehensive knowledge:

“There are areas preserved ceremonially by local leaders. These can be feared by everyone in the local area so they are preserved. Some trees are thought to be of significance, for example a type of tree where their god lives. If you do anything wrong you will be punished so this prevents people cutting down trees, because they have some spiritual significance.”

Male, age 17-19, Bagamoyo

The fact that young people were generally less well versed in local traditional knowledges was not lost on adults, several of whom reflected on the decline of traditional knowledges and belief systems. This decline over time was not solely due to the lack of knowledge of young people, but this was clearly considered an important factor. The quote below illustrates this.

“Currently traditional knowledges seem to wither, to disappear... If you teach the kids in schools about them then it will just be like a history lesson, what our ancestors did in the past.”

Male, age 40-49, Bagamoyo

Adults not only attribute the loss of traditional beliefs to the attitudes of young people, there are wider issues concerning ‘modern’ techniques, knowledges and technologies, which as previously discussed, are discursively constructed as separate from these traditional practices. The displacement of traditional practices and beliefs with modern ones is, for some adults, a process with negative connotations.

“Traditional knowledge and methods are all based on ‘fearness’, creating people to fear something. But currently they seem irrelevant, because people don’t fear anything, which is a bad situation. In the past they might not go into the forest because the spirits of their ancestors were there, and they feared them, but now they will go because they need the charcoal. Now we need laws and forceful methods.”

Male, age 50-59, Bagamoyo

“The modern education system has caused the younger generation to ignore traditional knowledge.”

Male, age 50-59, Kawe

Evidently there are various reasons which local people perceive as the cause of traditional knowledges being abandoned. In the first quote above, there is evidence of a change in culture associated with the practical needs of those who live locally. Traditional beliefs and practices which once controlled access to particular resources are no longer enforceable and individual livelihood needs outweigh traditional cultural constraints. Other respondents see this change in a positive light. They regard traditional beliefs as anti-modern, not progressive, and outdated. This provides further evidence that local people create their own binaries between 'Western scientific knowledge', referred to as 'modern knowledges', and 'local knowledges', particularly here 'traditional knowledges'. This further resonates with the perceived bifurcation between traditional/rural cultures and modern/urban society (Easton and Belloncle 2000), conceptualisations which have been found in state and development discourses, but which are also echoed by local people too.

The quotes above also reflect on how traditional knowledges, over time, can be lost. This is not a wholly unrecognised phenomenon (Briggs et al 2007; Myers 2002). Knowledge is lost due to changing circumstances, as Fig. 4.22 illustrates in terms of the absence of these knowledges amongst young people. This can be due to influxes of migrants, increasing population pressure, particular practices being replaced with others, or a change in community opinion against such practices if they are seen as anti-modern. Knowledges and practices may be lost in one generation, illustrated by the 'gap' in traditional knowledges between the old and young. The fact that traditional knowledges can be 'lost' to communities diminishes the impression generated by early work on indigenous knowledges that they are in some way the 'timeless' knowledge of an indigenous group (Grillo 2002). Part of the cause of this loss is that over time, traditional beliefs and knowledge have been unable to cope with the changes in a particular environment as well as changes to the livelihood situation of local people (Myers 2002; Semesi et al 1998). In the case of these communities, the range of causes includes population pressure, increasing amounts of plastic waste and increased pressure on natural resources.

Witchcraft proved to exemplify how local knowledges can be highly controversial.

"No! They should not be taught in schools. It is time to look back to cultural aspects and to change them. Many things are outdated, they are not all good... A person who believes in this is often connected with witchcraft."

Male, age 20-29, Bagamoyo

The quote above is illustrative of how some adults closely aligned traditional knowledges with witchcraft, and of how practices regarded as witchcraft could be understood as distinctly dangerous by local people. This close association between witchcraft and other beliefs about the environment meant that a significant number of respondents were deeply suspicious of any of these kinds of beliefs. Many respondents had good reason to be fearful of witchcraft and associations with it. For example (also see p.176):

“Superstitious beliefs in rural areas are a problem. This was a problem with killing albinos. People bring these ideas from rural areas.”

Male, age 17-19, Bagamoyo

Although such statements were rare, the serious nature of them demanded attention, and suggest the ‘danger’ of being associated with witchcraft. Field observations in Rukwa further highlighted the dangerous and controversial effects of witchcraft practices. In the villages of Ilemba and Solola, whilst fieldwork was being conducted, a group of people were subject to a ‘witch hunt’. Overnight an organised group of men attacked and set fire to fourteen houses in the two villages, destroying buildings in family compounds (Pictures 4.22), and severely beating men who were accused of using witchcraft to harvest other people’s land. Those who were accused of witchcraft were generally older (it is often elders who are associated with traditional beliefs), relatively wealthy members of the community. After the event, the main protagonists of the beatings, who were well known within the community, were arrested. Amongst the communities opinion was divided about this issue. Several were sympathetic to those who were beaten and accused of witchcraft, suggesting that those who performed the attacks were jealous of their wealth, and used ‘witchcraft’ as an excuse. Others were less sympathetic, and suggested that those who were attacked should not have associated themselves with witchcraft.



Picture 4.22: A house attacked in the witch hunt

The example above provides vivid evidence that the controversies surrounding witchcraft and traditional beliefs are far from merely discursive. For many respondents, the practices of ‘witchcraft’ and ‘traditional beliefs’ relating to the environment were largely inseparable. Some respondents were keen to dispense with traditional beliefs because they associated them with witchcraft, and for many, ‘modern’ laws were preferable. Whilst some members of community may expound the benefits of traditional ways, for others in the same area, they are (rightly or wrongly) associated with witchcraft, making them unacceptable. For some, this is an expression of a want to embrace Western/modern/urban development rather than local/traditional/rural activities (Easton 1999; McGregor 2007; Sylvester 1999).

Some local traditional beliefs may be controversial to ‘Western’ values, which are associated with the movement in development towards goals of local participation and empowerment. As an example, some local traditional beliefs in Rukwa acted to prevent women from entering ‘male spaces’ of the environment, at least in the past, when such traditions were enforced.

“There were some areas preserved for sacred issues. In those days women were not allowed to go to the lake, for washing pots or other things, they were not allowed around the water sources. But nowadays even these things are ignored... It was an ancestral

belief that there was a link between the presence of women and the presence of fish in the lake. So now many women are going to the lake and antagonising the fish.”

Male, age 40-49, Solola (Rukwa)



Picture 4.23: On Lake Rukwa. Local traditions apparently reserved this as a ‘male space’ through customs that prevented women from visiting or using it.

Evidently, this local custom, associated with the use of a particular resource (Picture 4.23), reinforced local gendered power structures by controlling the activities of women and the spatial domain in which they live and work. Although it appears that such restrictions are no longer active, the tone of the respondent suggests that he believes that these practices should return, and that women going to the lake are “*antagonising the fish*”. Such knowledges prejudice women with regard to access to natural resources and reinforce male hegemony, both of which run counter to the values associated with current thinking in local development which views the empowerment of women as one of its main goals (Sharp et al 2003; Timsina 2003; Mercer 2002). It is interesting that women have more recently been ‘allowed’ to go to the lake and other water sources, which may reflect the changing status of women in this community, possibly suggesting positive trends in women’s empowerment. It is equally possible that women have been ‘allowed’ to the water sources for practical reasons; it may be that the availability of water for women to accomplish their tasks has changed over time, such that it became more practical for them to use previously ‘sacred’ areas. It may also reflect an overall trend in changing attitudes towards traditional beliefs, such that, as over time less people in a community hold them with regard,

women now find it easier to access areas that were previously prohibited. Whatever the reason, it is clear through this example that traditional beliefs relating to the environment can be controversial, not only within their own communities, but also to 'outsiders' who have contradictory value systems to some locals. This should lead to further caution in the way that traditional knowledges, beliefs and customs are valued. They should not be beyond challenge, yet discourse on these knowledges and practices has been unhelpful by universalising them as 'good' for managing local environments, without considering the social implications of their use (Chambers 1994c; Klooster 2002).

In line with recent thinking on local knowledges, some studies have associated local and traditional practices of environmental management with sound conservation practice (Easton and Belloncle 2000; Klooster 2002; Pence and Schaefer 2006; Myers 2002), and have therefore advocated their utilisation in local conservation projects as well as in formal and informal education systems, arguing that they are locally appropriate as they are founded in local experiences. In this study, adults were asked if they believed that traditional knowledges should be taught in schools, as an indicator of their regard for them (Fig. 4.23). Whilst over half believed traditional knowledges relating to the environment should be taught in schools, almost the same percentage again were unsure or said that they should not. This is again illustrative of the divisive nature of this element of 'local knowledge'.

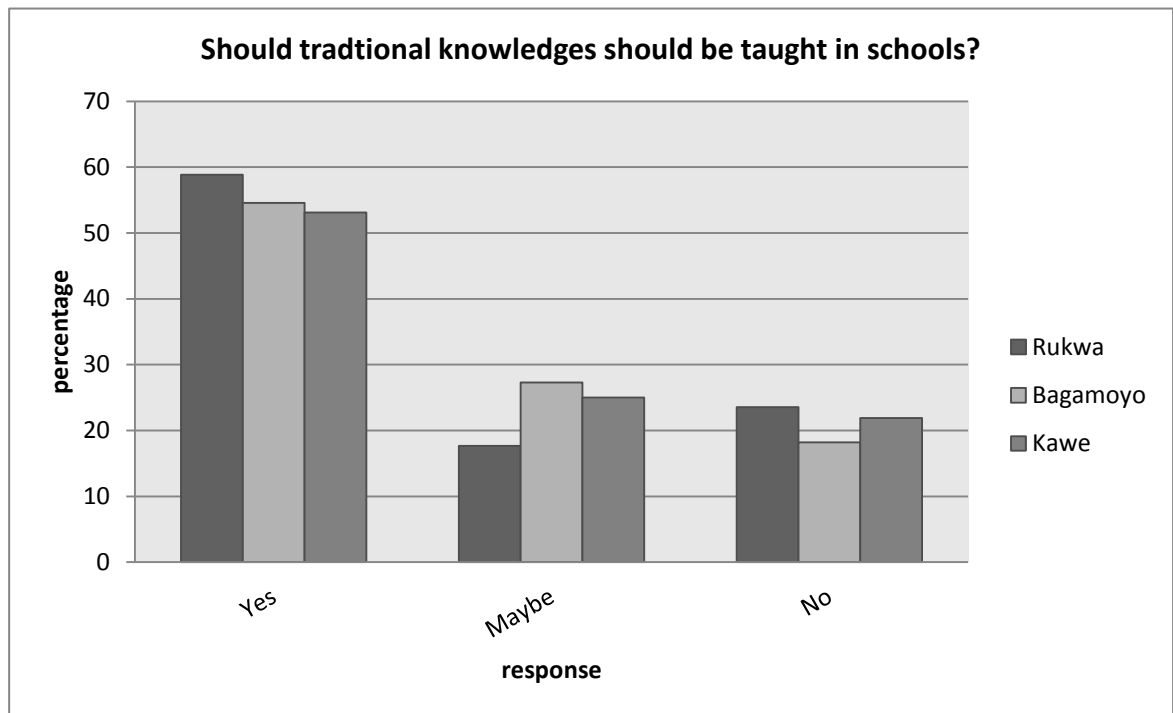


Figure 4.23: The responses with regards to the teaching of traditional knowledges and beliefs in schools suggest the divided nature of local people's opinions.

Traditional knowledges, practices, beliefs and witchcraft, all relating to the environment, are controversial topics which split communities in terms of their access to these knowledges, and divide their opinion as to their use and applicability in resource management. Integrating local traditions and beliefs into local services, for example in health services (Naur 2001a; Naur 2001b; Green 2004), in local forest management (Klooster 2002), and in education initiatives (Easton and Belloncle 2000), has been shown to be highly successful. My evidence suggests that such local traditions must be approached with caution, and more specifically they cannot be assumed to be appropriate for the local environmental education context simply by virtue of arising from a particular 'local' area. As well as the local specificity of traditions to place, they also have a temporal and cultural specificity which is bound up with changing environments, changing social and cultural contexts, and the influence of 'other' knowledges. Knowledges and practices which have, in the past, been appropriate, may no longer be so.

4.4 Summary

I have sought here to tackle some of the key debates emerging from the critical local knowledges literature. By examining local and official discourses of the environment, I illustrate how the progress which has been made in local knowledges research and policy has only been superficially adhered to in environmental education in Tanzania. Local people have a series of complex, broad and challenging notions of the environment, making official versions appear simplistic and

abstract when compared to the lived realities reflected in local definitions. An approach founded in the ethics of local knowledge, in the current climate of environmental education practice, would appear to be far too challenging to the conservationist organisational goals of NGOs. Whilst there are hints that at state level some acknowledge the difficulties in reaching a 'common understanding' of the environment in Tanzania, this is still a long way from the possibility of truly renegotiating what the environment is.

Conceptualisations of local knowledge have not delved deep enough to develop an understanding of how knowledges are reproduced and performed in communities. I illustrate that local knowledges can be 'extra-local', both common and shared whilst at the same time may be highly context specific. Knowledges are indeed so highly individual that the idea that a 'local knowledge' based consensus can be reached is highly spurious. Local knowledge is a collection of highly individualised knowledges, and an attention to space, place, and time are all key to understanding how and why this is. Individual knowledges are both rooted in, and specific to, place, and at a community or group level some shared knowledge, such as traditions knowledges, can also be specifically tied to particular places. The spatial nature of knowledge interplays with social factors, such as cultural groups, and I illustrate how traditional knowledges may be highly culturally specific, such that they are not always shared between those who occupy the same space because they come from different cultural backgrounds. A focus on the temporal nature of knowledge also takes conceptions of local knowledge to task, as it illustrates how knowledges are assembled over the course of time and over space, for example, in the course of a lifetime an individual will accumulate knowledges in a range of different spaces and contexts. The 'local' level only serves as a meeting point of these knowledges from different places and times. These facets of knowledge suggest that finding a form of representation for 'local knowledge' is very difficult, and previous studies have not really dealt with its complexity, often instead choosing to essentialise what is a highly complex phenomenon so that it is understandable to development professionals.

Young people have a distinct environmental knowledge, which is partly created by actors outside of communities, illustrating the influence of 'external' actors on 'local' knowledge. Whilst their knowledge is in some ways more comprehensive than that of adults, there is an apparent 'gap' in the knowledges of young people concerning the social consequences to various 'solutions' they proposed to environment problems. To understand the knowledges of young people within the context of their community it is important to appreciate the social-spatial hierarchies associated with knowledge expression. I illustrate that attention to these can show how 'having' knowledge can be socially disempowering, and there was evidence that young people were marginalised

because they had different knowledges to adults. I argue that poststructuralist understandings of power relations are very useful for beginning to understand how knowledges are unequally distributed within communities, and how social-spatial power relations control its expression.

Do local knowledges provide the solutions to environmental management issues at the local level, or do they offer a 'better' understanding of local environmental situations? I suggest, unlike the general thrust of the local knowledges literature, that they do not, at least not exclusively. Local people themselves do not see their knowledges as the 'solutions' to various environmental problems. The history of hybridisation and change to local knowledges suggests that the very idea of indigenous or local solutions is flawed, and that privileging local knowledge may be unhelpful. Some local knowledge may even be misguided and highly controversial to the ethics of the West as well as to some within the same community, and some traditional practices offer a good example of how these controversies are played out. In light of this, there is a serious need to reappraise, and reconceptualise what 'local knowledge' means to development.

Chapter 5

Whose education?

NGOs, environmental education, and a spatial approach to learning

In this chapter I will critically examine the practice of environmental education programmes in Tanzania. I begin by evaluating NGO projects, and consider how the learning and teaching techniques they employ impact on the environmental knowledges of young people and adults. I examine the role of NGOs as actors in development, in particular how they interact with the Tanzanian state, and what impact this relationship has on the outcomes of their projects. I go on to consider the effects of these projects on teachers as key ‘participants’, and assess how NGOs work with their participants at the local level, picking up arguments about how NGOs might make development more ‘locally appropriate’. In the second part of this chapter, I take up budding debates concerning spatialising both local knowledge and participation agendas (Cornwall 2002; Kesby 2005), by considering how both formal and informal spaces of learning are constructed discursively in communities. I then move on to think about environmental education in the broader context of education development in Tanzania, and I examine some of the more ‘fundamental’ challenges to the education of young people. Finally, I tackle the question of what contribution environmental education projects make to the knowledges and behaviours of young people. I highlight some of the problems with evaluating NGO projects, and again use this to question the role of NGOs in the ‘alternative’ development paradigm of participatory development discourses.

5.1 Formal environmental education: the way in for conservation

Comparing environmental education programmes run by different NGOs and the approach adopted by the Tanzanian state uncovered some interesting parallels and conflicts. JGI had attempted to introduce elements of environmental education in all school subjects. The two quotes below, one from JGI, another from a government representative, exemplify how organisations thought about the integration of environmental education into all subjects:

“We train teachers to incorporate EE into many different subjects. Some are fairly obvious, like science, but we want to also encourage teachers to be teaching about the environment in Maths lessons, or English. E.g. in Maths they can do garden layouts, or plant shapes in geometry.”

JGI Environmental Education Project Coordinator

"[Environmental education] is done through a multidisciplinary approach, such that EE can be taught in all subjects, rather than being introduced as an entirely new subject."

Government Representative, NEMC

Seemingly, such an approach deals with criticisms of environmental education in other contexts, that projects lack 'authenticity' because young people do not have hands-on experience with, and in, the environment (Uzzell 1999), in effect only learning *about* the environment, not *through* it. However, the apparent 'use' of the environment here is rather superficial. It is questionable how much young people will learn *about* the environment by simply doing garden layouts in a maths lesson. This is not tackling environmental issues, merely using the environment as an object. Secondly, this approach is contradictory to how, at present, the written Tanzanian state curriculum handles environmental education. Confusingly, the curriculum is contradictory to the sentiments of the government representative above, as it calls for environmental topics to be taught in particular subjects, rather than *using* the 'environment' in all subjects. All four NGOs in this study (JGI, JEMA, TFCG and TAYEN) also provided outdoor education activities. These typically involved tree planting, managing the school grounds (such as litter picking and gardening), cleaning areas of the nearby beach and educational excursions. Such activities are outside the content of the Tanzanian curriculum, yet unlike 'integrating' the environment into all subjects, these practical activities do offer young people 'hands-on' experience of acting *in* and *through* the environment. Consequently there are two distinct approaches to formal environmental education, one in which it is integrated into all subjects in agreement with the state (from the quote above), although not present in the curriculum, and another which is a separate practical extra-curricular activity, and not part of the state strategy. Beyond these, the NGOs adopted a wide range of different approaches:

"We work with both schools and communities... We have used radio, TV, newsletters, theatre groups, song, dance, drama, study tours, and environmental clubs in schools... We also take students to mountain areas to see the forests there... We also carry out practical activities in schools and with adults, such as tree planting."

TFCG Environmental Education Project Coordinator

"We produced learning and teaching materials... Also we have the youth summits, where we teach about the environment."

JGI Environmental Education Project Worker

“The project is a climate change education project... The idea of the project is for young people to exchange ideas about climate change.”

TAYEN Project Coordinator

It is evident that an ‘environmental education programme’ can be translated into a whole range of approaches. The strategies here are similar, as they educate about environmental issues, yet use different tactics with different emphases, TFCG work with adults and young people, whereas TAYEN and JGI are solely focused on schools. Whilst JGI work broadly on environmental issues, TAYEN is concerned with climate change, TFCG with forest conservation. None of the four NGOs was able to offer a coherent reasoning as to why they chose particular activities and projects. There is little consistency in approach, or a reasoned justification for those adopted. When questioned about this, a representative from the National Environmental Management Council outlined how they understood the situation with multiple NGOs conducting projects under the same theme:

“[The NGOs] tend to carry out isolated projects in particular areas. Many NGOs really have no background in EE at all. At times it can be difficult to work with and coordinate NGOs... they are not really answerable to the government. Many are not actually ‘doing EE’ as I understand it... they may not be actually following the guidelines... many of their projects are overlapping, as well as competing for often the same funding...”

Government Representative, NEMC

There are several key issues here. Firstly, he suggests that many NGOs have ‘no background’ in environmental education. That NGOs are often not specialists in their field has been discussed in other studies (Davies 2002), and in this case, all the NGOs involved focused on providing education, yet their backgrounds were in promoting environmental conservation. For example, TFCG has worked on Participatory Forest Management (Smith 2008), and JGI emerged from Jane Goodall’s work in chimpanzee conservation in western Tanzania. Secondly, a number of projects ‘overlap’, yet there is no ‘coordinating’ body (e.g. the state). The range of different approaches is also problematic because they clearly come into conflict with what this official understands as ‘environmental education’. The government representative goes into more detail on this issue:

“Many NGOs say they are doing EE in schools when in fact they are actually only doing extra-curricular activities, such as running environmental clubs... [They] are focusing on

things, possibly particular environmental issues, which are outside of the curriculum, and are therefore not strictly doing what the Ministry of Education understands as EE.”

Government Representative, NEMC

It is his understanding that NGOs should be delivering environmental education in line with the existing curriculum, suggesting their role as ‘sub-contractors’ of the state. However, many of their activities are understood as ‘extra-curricular’. Thus there are contradictions and conflicts between state and NGO understandings of what environmental education is and how it should be delivered. The NGO approach has other failings, according to this respondent, in that to a certain degree their projects are ‘isolated’. This is also evident in the quotes from the NGOs above; their projects are not in any way linked, they are discreet, yet aim generally to provide the same service. According to our same government representative, the state is in part to blame for this:

“The Ministry of Education is supposed to be coordinating and implementing EE... but often they are not doing this effectively.”

Government Representative, NEMC.

Similarly, a spokesperson for JGI acknowledged weakness in government-level coordination. Although this issue was only mentioned by one respondent, it is of significance as it corroborates with the submission from the state respondent:

“The Ministry of Education in Tanzania established a new department for EE in 2002. But this department was very small, had few resources, and was new, so was inexperienced to some extent.”

JGI Environmental Education Project Coordinator

The ‘isolated’ nature of NGO projects is also apparent from the number of schools each NGO has worked in. JGI has worked with a total of 440 primary schools, JEMA with ‘over 100’ primary schools in Dar es Salaam, TAYEN in 10 secondary schools. Teachers themselves are acutely aware of this inconsistency in provision, as one Head Teacher in Bagamoyo stated: *“There are 120 primary schools in Bagamoyo and only 10 schools are in the project.”* The projects can be considered ‘isolated’ not only in space, but also in content and focus, as projects are discretely constructed and run by individual NGOs with different specific priorities.

There is a double-bind in the current situation with formal provision. The Tanzanian state relies on NGOs to deliver environmental education because it is under-resourced, but this lack of resources has meant that NGO projects are not coordinated at a national level. NGOs are not an 'alternative' to development in a moral or ethical sense here, but the state turns to NGOs because it cannot provide itself (DeGrauwe 2003; Easton et al 2000). NGOs are partly state-focused, as the imperative for environmental education comes from above, yet they are also independent because they are free to instigate and run projects they see as appropriate. This independence comes from their funding, which is largely outwith the Tanzanian state (for example, the JGI project is funded by USAID). NGOs also retain independence because they have no formal accountability to the state (Lewis 2002). This partly makes Tanzanian NGOs more answerable to their funders than to the state. The multiplicity of projects is a result of the many NGOs involved, yet each NGO is relatively small (although they have varying capacities), such that none are in a position to deliver environmental education nationally or even regionally. Kapoor (2004) and Davies (2002) have both argued that NGOs often have very broad goals and ambitious expectations, which are unrealistic in scale, and again here the goal of 'providing environmental education' in Tanzania, shared by a number of NGOs and the state, seems unrealistic considering the scale of each individual organisation's resources.

There is a significant impact of the above issues on teachers, whilst the example of teachers as participants also underlines these many problems with NGOs as agents of local development. Although several studies have advocated the merits of 'local education' (Easton et al 2000; Lucarelli 2002), they have not dealt explicitly with the role of teachers, not only as participants but also delivers of local education. As the curriculum does not correlate with NGO activities, teachers are receiving mixed messages about environmental education. 33% of all teachers stated that this was a significant problem. A quote from one teacher demonstrated how he felt confused about the state syllabus and the books provided by NGOs and other sources:

"The curriculum has a lot of confusing elements. There are books that guide the students and books for the teachers, but there can be a contradiction between the content of these books, so what should we teach?!"

Primary School Teacher, Male, Ilemba (Rukwa)

Furthermore, for teachers, NGO projects do not deal with their main concerns for teaching about the environment, and in addition they increase their overall workload. Their principal complaint was the lack of materials and support:

“They [the NGO] don’t provide tools for doing environmental work... Lack of teaching aids and materials is a major challenge.”

Primary School Teacher, Male, Bagamoyo

“We planted fruit trees from the nursery. But there is a problem of water. Many of the trees do not survive a long time because of the scarcity of water.”

Primary School Teacher, Female, Bagamoyo

“We only had 3 days of training, and should really have had more time. Also, there were very few teachers trained.”

Primary School Teacher, Female, Kawe

“There are 1650 children at this school, and 12 teachers. The ratio is very bad, and this will affect the quality of the teaching.”

Primary School Teacher, Male, Ilemba (Rukwa)

It is evident that the main concern for teachers was not the *content* of the material, but the lack of support. The most pressing issue was the lack of materials, with 67% of respondent teachers highlighting this, whilst 53% also drew attention to the lack of tools to conduct environmental activities, 33% complained about inadequate water supplies, and 47% drew attention to a lack of comprehensive training. Such sentiments chime with criticisms of participatory development which relies on the willingness of local people. As Cleaver (1999) has argued, local people are not infinitely resourceful, and here teachers are explicit about their restraints. The first quote above illustrates that problems with resources were a wider issue throughout schools, rather than simply a problem with environmental education. Teachers in Rukwa and Kawe, in informal discussions, both drew attention to the lack of materials to teach the basic subjects, such as Science and Geography. Instead, projects place another burden on teacher’s time and resources, without providing them with sufficient resources for conducting the task. Other studies in participatory development have highlighted the importance of training and support (Anello 2003; Lucarelli 2002), and the potential for increased workload as part of a ‘decentralisation agenda’ (DeGrauwe 2003). Environmental education projects take up extra resources and extra teachers’ time, creating a *burden of participation*. The deliverers of ‘development’, in this case local people participating in delivering an education project, are given an extra burden, yet returns are not tangible or material. Teachers are commonly called on to run activities and clubs, attend training

events and implement initiatives in schools, yet they do not have enough materials to support the basic state syllabus as it is.

The normal work of teaching in schools is chronically under-resourced in Tanzania. Classrooms suffer from not having enough desks or chairs and from not having enough space to accommodate the students (Picture 5.1). The limited capacity of teachers in the global south is well known (DeGrauwe et al 2003; Easton et al 2000; Intili and Kissam 2006), however this has not altered the high expectations placed on teachers by NGOs and the state. NGOs have made significant contributions in conducting outdoor activities in schools where previously there have been none, but the sustainability of these activities has been muted by the lack of resources, time and training given to teachers. As a result, practical activities in schools have largely been 'one-offs'. The quote below is from a primary school student, and is typical of the limited nature of what had been achieved at schools participating in the JGI program.

“At the beginning we were going to clean the beach, and also trying to ensure that environmental education was provided around the school. Then we went to the beach only three times in total to do cleaning.”

Female, age 13-17, Kawe



Picture 5.1: A typical primary school classroom. Schools are poorly resourced and do not have many materials available to them.

Outside of these issues, a further problem is that environmental education projects are not context dependent, despite the pretence by NGO actors that they are locally relevant. Other studies in education have drawn attention to the need for projects to be context dependent and relevant (Intili and Kissam 2006; Easton et al 2000), and that NGOs are the most appropriately positioned actors for delivering locally relevant material (Bashyam 2002; Bourdillon 2004; Mercer 1999). Several NGOs, particularly JGI and TFCG, claimed that their projects were 'context dependent' because the content focused on what the NGOs defined as 'local problems'. However, there was a disjuncture between how NGOs and local people define these. Chapter 4 contains evidence to contest to this (Fig. 4.2), particularly how the problems defined by the NGOs do not match the environmental priorities of local people. But NGOs still assert that their education projects are locally relevant:

"On the coast some of the big environmental problems are deforestation, illegal fishing, and pollution. We try to focus our EE on these."

JGI Environmental Education Project Coordinator

But these were not the problems exclusively highlighted by local people, who, in each of the three areas, spoke of a range of issues beyond these narrowly defined 'big environmental problems' (Table 4.1). The quote below, from TFCG, illustrates how the aims of the organisation had a direct bearing on the nature of their environmental education.

"Overall the aim is to raise awareness of conservation issues, and the conservation of natural resources and the environment. Usually we also work with villages adjacent to Forest Reserves, as TFCG primarily is concerned with forest conservation."

TFCG Environmental Education Project Coordinator

Quite clearly, the focus is not on addressing local problems *as defined by local people*, but instead on the objectives of the organisation *as defined by the purpose of the organisation*. This calls into question whether this educational content can be described as 'context dependent' or 'locally appropriate' (Easton 1999; Easton 2004; Lewis 2002). There was no evidence that the environmental issues which were prioritised by local people informed environmental education materials. Furthermore, the environmental issues that were taught as part of the NGO programmes failed to address the social complexities of locally sustainable solutions. A representative from WWF, an organisation which also produced environmental education materials, described the practice of dynamite fishing in the following way:

“It is a straightforward case of criminal behaviour... they need a strong judicial process and enforcement. It is just an illegal act, and should be dealt with as such.”

WWF Tanzania Representative

This conservationist stance is again illustrative of the way in which local issues were constructed by NGOs. This attitude clearly informed the material produced, which was not sensitive to the complexity of local people’s livelihood demands. The language employed in the quote above, describing activities as ‘criminal’ and the solution as ‘enforcement’, has worrying echoes of ‘modernisation’ development theory and colonial discourse in which ‘natives’, and local ways of doing, are a ‘part of the problem’ (Blaikie et al 1996; Grillo 2002). A lack of local sensitivity was clearly reflected in young people’s responses to questions about ‘solutions’ to environmental problems (chapter 4), illustrating how their engagement with local issues was relatively superficial. There is evidently a narrative here from how NGO organisational values and attitudes inform their materials and projects, which then feed into the knowledges of young people who are the ‘recipients’ of the project. The simplistic, punitive solutions of environmental NGOs (an exemplar being the quote above) are mirrored in the responses of young people:

“To get away from people settling near water sources or forest cutting, there should be guards of these areas to stop people doing this.”

Male, age 13-16, Ilemba (Rukwa)

In participatory development theory, which holds up ‘the local’ as the site of development, NGOs are, in theory, much closer to the local and the ‘grassroots’ than states and governments (Bashyam 2002; Kesby 2005; Mercer 1999). In this case, the reality is clearly different. NGOs have not consulted local people, instead relying on conservation issues appropriate to particular environments, and their own organisational goals, to determine what is ‘locally relevant’. This partly negates arguments which understand decentralisation of education provision to NGOs as being of benefit to local education (Caillods 2005; Easton 1999), coupled with the fact that the local capacity of teachers is limited. Indeed, this chimes with existing critiques of NGO-led local development where in reality NGOs rarely respond to demands ‘from below’, and instead they are far more influenced by demands ‘from above’, from donors or the state (Blaikie et al 1996; Brett 2003; Davies 2002; Uzzell 1999). Therefore, the assumption that NGO involvement somehow makes projects more democratic, or more in touch with the grassroots of society, is in this case problematic, and might even be accused of extending and imposing Western ideals of

environmental conservation through the Tanzanian education system, what some critics have labelled 'development imperialism' (Dossa 2007). Such rhetoric may be too strong in this case. However it remains highly problematic that NGOs are not accountable to local people, to the schools with which they work, or indeed to the state, and are instead more accountable to and driven by their own agendas and those of their donors (Lewis 2002). Rather than a coordinated attempt to build on and support current formal education provision on the environment, efforts to improve provision have resulted in a range of uncoordinated projects promoting a range of different educational activities, the focus of which is largely driven by individual NGO conservation priorities, rather than local consultation.

5.2 Assembling the spaces of informal and formal learning

Several research studies have illustrated the importance of informal learning in the context of the global south (Easton 1999; Easton et al 2000; Kesby et al 2006), often in reference to the use of traditional knowledges (Easton 2004; Lucarelli 2001; Pence and Schaefer 2006), but also through considering ways of integrating local knowledges, with formal, often decontextualised, state education systems (Lucarelli 2001; Easton and Belloncle 2000). During this study, it became apparent that formal and informal spaces of learning are discursively constructed by local people as distinctly different. Parents and young people were very modest about what they learnt at home about the environment. Adults suggested that they only educated young people about a limited number of environmental activities, including keeping the home clean, disposing of rubbish, personal hygiene, planting trees and not wasting water. Young people also attest to the 'limited' nature of what they are taught at home. The quotes below are typical examples.

"We need a child to know first about cleanness outside the house, and also about fetching water. A child needs... to use toilets properly, and to keep general hygiene for yourself and your clothes."

Male, age 30-39, Ilemba (Rukwa)

"At home I have been advised by my mum that if cooking you should ensure that the environment is clean. You should also wash your body to be clean and wash your clothes to look smart."

Female, age 13-17, Kawe

The first quote is very typical of the practical issues which adults taught their children. Only 28% of adults said that they did teach their children at home about the environment. 12% said they explicitly did not, whilst 60% did not mention that they taught young people at home, but did not explicitly suggest that they did so. As a rule, agricultural and other livelihood activities which interacted with the environment were not included. Table 5.1 illustrates the topics discussed, as a percentage of adults who did talk about environmental issues with young people.

Environmental topics discussed with young people at home (as a percentage of those who did discuss the environment at home)	
Topic	Percentage response
Cleaning	24
Conservation and planting	14
Only teach a small amount	12
Looking after the home	12
Farming	5
Fetching water	5
Showing 'safe environments'	2

Table 5.1: Environmental topics discussed with young people at home.

These percentages are not cumulative, and many adults did not go as far as to specify what exactly they discussed. Of those who did, only very small percentages indicated activities such as farming and the water supply (and all of these were from Rukwa), by far the largest topic was 'cleaning' the home. Whilst other research has illustrated that local knowledge can be quite poor about particular issues (Aggarawal and Rous 2006), or may not be passed on between generations (Briggs et al 2007), despite the lack of evidence from interviews that certain environmental knowledges were discussed at home, observational evidence suggests otherwise. Young people do have a broad range of environmental knowledges built up informally through their home, parents, friends and siblings, which they did not attribute discursively to being about 'the environment'. Evidence for this comes from observation of the homes and local environments of those who took part in interviews. These encounters were largely incidental in the research, yet remain of importance for gauging how young people engaged with their local environment. Young people were observed taking part in activities around the home which require 'environmental knowledge'; collecting water, tending animals, assisting on the family farm (harvesting, planting, and tending to livestock), fishing and disposing of rubbish (Pictures 5.2 and 5.3). The fact that evidence comes in the form of observation should perhaps not be surprising, as such knowledge may be more readily be expressed as embodied performance (Briggs and Sharp 2004), or may be considered a skill rather than a spoken 'knowledge' (Agrawal 1995; Sillitoe 1998a).



Picture 5.2: Young people collecting worms to use as bait. This activity requires a series of connected 'environmental knowledges': knowing where these worms are located, when they can be reached, and how they are used.



Picture 5.3: Two young people herding cattle. This shot is taken just outside a village in Rukwa. Young people often know of the best places to take cattle for grazing, and it is particularly young men who are involved in this.

Neither young people nor adults considered these as ‘environmental knowledge’ when they were asked what was learnt at home, all are conspicuously absent from the verbal responses (Table 5.1). This seems contradictory to the broad definition of the ‘environment’ expressed by respondents (chapter 4), but it is significant that such, mainly agricultural, activities were not taught at school in the scope of environmental education. Further to this, there was an apparent lack of necessity to construct links discursively between what was done ‘practically’ at home, and what was learnt ‘theoretically’ as part of formal education. Adults constructed this divide by delineating between what they considered to be ‘practical’ and ‘theoretical’ knowledge.

“Yes I heard about this [environmental education] but they have no practical education. The kids are also destroying the environment so practically this kind of education is not existing. They are just learning about it theoretically.”

Male, age 50-59, Bagamoyo

“It is important for children to be given more practicals, not just theories because these can be forgotten quickly.”

Male, age 20-29, Bagamoyo

These adult respondents understood the knowledge young people learnt at school to be 'theoretical' rather than 'practical'. This was not a statistically significant number, but the sentiment is important in how it links in with previous observations. These adults observed that, despite young people learning about the environment at school, this did not change their behaviour in the environment at home. To some degree this opinion on the 'theoretical' nature of environmental education was well-founded, as the content of the programmes and the state curriculum are both principally based on classroom learning, and practical outdoor activities were very limited.

As well as distinctions in local discourse between formal and informal spaces of learning, there are further social-spatial differences in the way knowledges are learnt and enacted in spaces of learning in the school and in the home. There are distinctive observable differences between the ways in which young men and women act and are 'taught' at home and at school, largely apparent during observations conducted in Rukwa. Here, the spaces of the home were highly gendered, young men and women worked separately within the home environment, often sitting apart to do tasks. Picture 5.3²⁴ is illustrative of particularly 'male' spaces outside of the home. Young men typically would take cattle away to graze, whereas this was not a task for young women. Young women were engaged in cooking and cleaning activities, however young men were never observed doing these tasks. Some activities were conducted by both, for example, to strip maize from the cob, but interestingly it was done separately by men, at different times.

In the informal spaces of the home, young people are learning different environmental practices through their typical gender roles. This is particularly apparent in cattle herding, which will take young men into the wider area, often further from the village than young women would venture. To some degree, this is in agreement with the work of Bourdillon (2004) suggesting that young women are 'doubly marginalised' (as both women, and young people), and with the work of Briggs et al (2003; 2007), Goebel (1998), and Sharp and Briggs (2006), all of whom point to how spaces of knowledge production are distinctively gendered. Yet in this study gendered spaces of knowledge production and expression were significantly different for young men and women in the space of the school. Observational evidence suggests that the space for expression of knowledge was far more equal in the classroom than in the home. In schools in Rukwa young men and women were far more egalitarian with taking turns to speak, and there was no observable divisive factor between young men and women that would serve to separate their learning in that

²⁴ Picture 4.17 is also illustrative of how this division was played out in the space of the home.

environment (Picture 4.16). Statistics from the percentage responses of young men and women during school workshops further support this (Fig. 5.1)

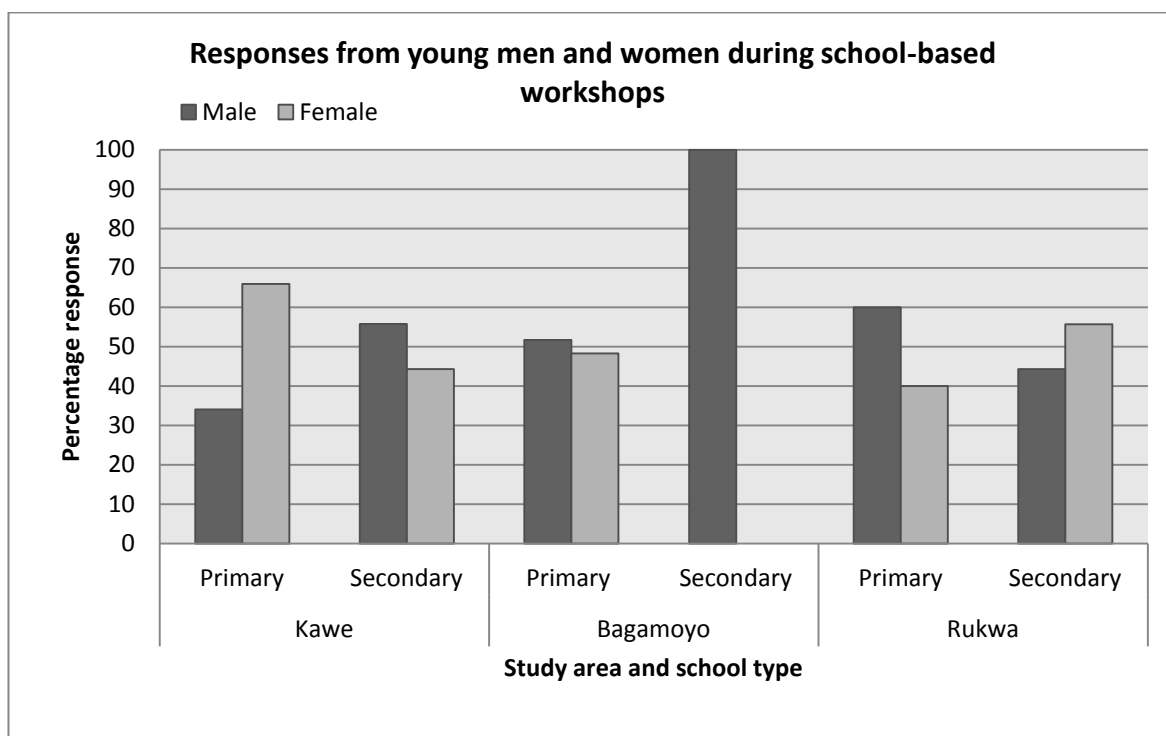


Figure 5.1: Percentage responses of young men and women during workshops

Percentage responses were largely equal between young men and women in schools. The outstanding anomaly is the Bagamoyo secondary group. Here an all-boys secondary school was the only one available to the research. Amongst the other areas, it is interesting that, although there is no observable pattern, there are instances where young women have dominated discussions (for example, Kawe B Primary schools), and vice versa. If we exclude the Bagamoyo secondary school from the statistic, then over all three areas, young women accounted for 52% of responses, and young men the remaining 48%. This evidence is not to deny that there are other ways in which spaces of learning were divided along gender lines (for example, the accessibility of schooling²⁵), and it is a limitation of this research that more detailed observation could not be made of the day-to-day routine of learning, however, there are notable and observable differences in the way in which young men and women are involved in the spaces of learning between the formal (school) and informal (home) environment. Although previous studies have highlighted how local knowledges can be gendered (Klooster 2002; Kesby 2000a; Sharp et al

²⁵ Young women are clearly marginalised in Secondary education in Tanzania, according to official statistics (NBS Tanzania 2006). Although in primary school attendance rates for young men and women are similar, at secondary, particularly upper secondary school, young men are clearly prioritised (see Chapter 3 for detailed statistics)

2003), this evidence suggests that the gendered processes of learning and knowledge production and reproduction can be played out differently in different spaces, depending on how gender roles are structured in such space. Interestingly, it is apparent that formal spaces in Rukwa offer a more gender equal space of learning, where roles are not so well defined, whereas the environmental knowledge acquired in informal settings are far more structured by gender roles. This spatial approach to learning and knowledge is significant. It counters suggestions by Cornwall (2002) that official/unofficial spaces are not separable, and instead illustrates how local people do in fact discursively and practically construct places of learning and knowledge as distinctive. Undoubtedly the boundaries of these spaces are permeable, yet there remains an important separation.

There is evidently a distance assembled between formal and informal learning about the environment through local discourse and how particular spaces are constructed, through the way that adults and young people describe and assign particular knowledges, and also practically, as school syllabuses and environmental education projects focus on particular *types* of knowledge, associated with a conservation ethic. Both adults and young people prescribed particular knowledges to certain camps, to formal/theoretical, and informal/practical, and see little interaction between the two, aligned with spaces of the school and of the home respectively. Adults doubted that young people were being taught about the environment at school because of the way they perceive young people to behave in the environment, which seemed, to them, to run contrary to what they have learnt 'theoretically' at school, but also because they do not see the 'theoretical' knowledge learnt in school as relevant to the 'practical' activities that take place outside of the school.

Further to this, it was typical for parents and adults to undervalue their own knowledge, or the informal knowledge of others. Teachers were also critical of the environmental knowledge of adults, suggesting that parents' actions and knowledges acted against the conservation practices learnt at school. This was based on the premise that parents knew little about the 'environment', or of 'modern' practices, thus excluding particular environmental knowledges from the nexus of what should be taught about the 'environment'. Some examples follow this theme below.

"There is a low level of awareness in the community... The kids might plant a tree, but the parents might pull it out!"

Male Teacher, age 30-39, Rukwa

“Frankly I know that EE is being taught... it should not just be taught at school but it should also be taught to local people. If parents cannot reinforce this at home then the kids will not learn.”

Female, age 30-39, Bagamoyo

“If they are being taught something about the environment and they don’t say anything then how am I supposed to know about it? So I am not interested in this”

Male, age 40-49, Solola (Rukwa)

Across the three areas, 52% of adults suggested that the school was the ‘correct’ place for young people to learn about the environment, rather than the home, again indicating that the ‘home’ was not the place to learn about such things. Not only are adults’ knowledges undervalued, but also the place of the home as the site of learning is rejected, whereas some (the second quote) highlight the necessity for what is taught at school to be underwritten in the home. This second quote still positions the home as a space in which the formal environmental knowledges of the school are not reinforced. The first quote demonstrates how teachers posited local adult knowledges and practices as working *against* the conservation ethic taught in schools. These discursive constructions juxtapose the space of the school against the space of the home. It is important to emphasise that this discursive binary is not the construction solely of the actors who prescribe the knowledges associated with the formal system, but also one which is repeated in and replete throughout the everyday life of adults and young people in communities.

The key question remains as to why adults value their own environmental knowledges so poorly, and why these spaces of learning have been so separated? Other authors have usefully illustrated (Huntington and Fernandez-Gimenez 1999), that in some cultures it can be improper to claim to be the ‘expert’ in particular areas of knowledge. There was incidental and circumstantial evidence for this, as several adults expressed that they were not the ‘correct’ person to discuss ‘environmental issues’. For example:

“I can’t talk about it because I am not the person to talk about it. There are people who are supposed to talk about it... Here you should do things in a proper way with a letter, go to the man in the District... they should have directed you, to tell you the right place to go to ask about this.”

Male, age 60+, Kawe

Several such responses were encountered (although not statistically significant), and it was typical to be referred to local leadership. There is an evident lack of personal 'authority' on such issues, which is bound up with local social and political hierarchies. It is not that local adults lack knowledge, only that in the context of local social/political hierarchies expressing such knowledges might be inappropriate. This in itself illustrates that environmental knowledges are inherently political at the local level. A further explanation for the lack of mentioning or 'valuing' informal learning about the environment may be that, as what is known is highly practical and based in skill or performance rather than spoken knowledge (Sillitoe 1998a), these 'knowledges' may not pass readily into the discursive realm. Adults were asked what they teach young people at home about the environment. If 'teaching' is associated with speaking to young people about particular issues, or equally if 'environment' is associated with particular things (such as cleanliness, planting trees), then passing on practical, embodied, knowledge and skills, through young people taking part in agricultural and livelihood activities, may not be understood as 'teaching about the environment'. Simply, they may not consider the act of 'passing on' such skills to be 'teaching', and they may not consider the 'skills' to be 'environmental knowledge'. The evidence illustrates that both adults and young people have similar discursive constructions of the bounds of 'environmental knowledge' and what constitutes 'teaching', perhaps partly due to the narrow way in which the 'environment' is taught through classroom-based learning in schools.

Informal education can be important to the transfer of local knowledges, as has been shown here through practices maintained in the home (see also Pence and Shafer 2006). There has also been a focus in the local knowledge literature on bringing informal education into the formal system (Lucarelli 2002). However in Tanzania the two largely remain separate due to the lack of interactions and their perceived distinctions. Other studies have shown that there has been little evidence of interface between local knowledges and more formal/scientific knowledges (Briggs et al 1999), and there is plenty of evidence for this in the Tanzanian education system and in NGO environmental education projects. However, in light of this research, it would be wise to question to what extent it is desirable to place 'western' and 'local' knowledges on an equal footing in the education system (Steiner and Oviedo 2004); who is this a desirable goal for? Not all local people value traditional, informal knowledges (Figs. 4.19 and 4.20), and some see the education system as the correct place for environmental knowledge to be learnt. Traditional knowledges and beliefs can contradict formal, modern knowledges (chapter 4), so suggesting that such contradictory understandings be brought into the same forum is likely to be met with resistance from state and NGO actors, particularly because they do not always comply with the 'conservation' agenda. There are further practical issues. Who would be capable of bringing local and traditional

knowledges of the environment into an environmental education programme? Although there are examples of 'local curricula' being successfully developed (Lucarelli 2001), this has required intensive participation from local people. Furthermore, the idea of various 'radical alternatives' to the education system (Easton 2004) would be counter-intuitive to many respondents, for whom it would take a substantial imaginative leap to consider replacing elements of the formal education system with a local one based on traditional values, partly because local people 'undervalue' their own knowledge. Indeed, there is a distinct lack of 'radical alternatives' forthcoming from local people, a reality of local development highlighted by others (Agrawal 1996; Diawara 2000; Jakimow 2008). Yet, there remains a strong case for why such links should be built. Formal spaces of learning can serve to be 'empowering' for some, such as young women in Rukwa, when compared to their home environment (see also Kesby 2005), yet this empowerment is confined to the space of the school, when embedded gender roles are reinforced through the home environment. The lack of link established between formal and informal learning serves only to stiffen this divide.

It was clear that JGI had not paid full attention to what knowledge already existed in communities (Adams et al 1994; De Grauwe et al 2005; section 5.1). It is therefore difficult to see how environmental education programmes 'build' on already existing knowledge within a community; at best they run parallel to the 'informal' knowledges reproduced outside of formal education. Some studies have shown that when certain systems are re-thought and re-worked, so that they are more locally appropriate, there may be significant change (Green 2004), but here the formality of the schooling system coupled with a lack of local engagement has led to a gulf between formal and informal learning, hampering the ability of young people to incorporate formal education into practical action. That the space of the home and the knowledges of local adults are rejected by those delivering formal education has dangerous implications for education purposes. It reinforces the division between the formal and informal spaces of learning, which may play a part in how such knowledges are transferred in the attitudes and behaviours of young people towards their local environment.

5.3 Who wants to go to school?

The value that local people place on education, and how such values tie in with local livelihood priorities, has an important impact on the potential for environmental education projects delivered through the formal system to create significant change. By operating through formal schooling, the project conducted by JGI in some respects effectively bypasses participation

debates that question how participants ‘buy-in’ to projects; the audience is instead ‘captive’. Although schooling is compulsory, in actuality attendance at school is often poor in Tanzania, and the factors that contribute to this, and thus to ‘participation’ in such projects, are many. As Cleaver (1999) has argued, the model of the individual in participatory rhetoric has been poorly theorised, and by attending to the lives of young people (as Kesby et al 2006 suggest), it may be possible to understand not only the multiple draws on young people’s lives which compete with schooling, but further how the livelihoods of young people and their parents impact upon the perceived value of education.

Adults in the global south tend to value education very highly (Kesby et al 2006), and here the majority (89%) of adults professed to value the education of their children, as opposed to a minority (11%) who did not. For most, education was viewed as something which would allow their children to progress in their lives, often seen as a way of moving beyond their current status in society.

“When you educate a child you make him or her free to do what they like and go where they like. If you don’t then you tie your child down to fighting for a life here. They will be tied to the place they were brought up and they won’t be able to move away and improve their life.”

Male, age 40-49, Bagamoyo

In the quote above, we see echoes of how local people valued particular places, and associated learning with practices in space. Education, through the formal system, opens up worlds beyond the ‘local’, whereas by implication knowledge learnt locally, and thus informally, is only relevant to that specific place. Despite the overwhelming recognition of the importance of schooling, evidence from interviews and observations suggests that in practice this does not translate into all young people attending school. A high percentage of adults believed that attendance in school was a problem in their area (Table 5.2).

Is school attendance a problem in this area?	
Yes	61%
For Some	12%
No	27%

Table 5.2: percentage response of adults from all three study areas

This level of adult concern is certainly more alarming than national statistics would suggest, where 69% of young people have attended primary school²⁶, but perhaps adult concern is not surprising when the same census shows that 29% of those aged 5-9 and 50% of 10-14 year olds are 'economically active' (NBS Tanzania 2006). This highlights one of many fundamental problems with the Tanzanian education system at the local level, and represents a serious challenge to the participation of young people in environmental education projects. This problem is not expressly dealt with by NGOs working in environmental education, along with other, again perhaps more fundamental concerns with education in Tanzania, such as rates of illiteracy²⁷ and the context-relevance of the curriculum. Most importantly, many young people do not attend primary school. The reasons for this are multiple and quite complex. Those adults and teachers who suggested that school attendance was a problem were asked to comment as to why this was so (Table 5.3).

Problems which prevent school attendance	
Parents: <i>Parents lack of interest in education, not sending young people to school</i>	24%
Money: <i>Poverty, school fees, buying uniform, poor household income</i>	19%
Teachers: <i>Teachers pay, teachers punishing students, teachers not attending school to tend to other livelihood activities</i>	16%
Young people: <i>Young people not interested in education, truancy, going to play with friends</i>	16%
Young people go to work: <i>Young people working for their families, on farms, selling in the streets, earning for themselves</i>	11%
Education not practical: <i>Young people were not learning about practical skills relevant to their livelihood</i>	7%
Hunger or disease: <i>Young people were too hungry, or too ill, to attend school</i>	4%
Pregnancy: <i>Young girls became pregnant and had to marry or stay at home</i>	4%

Table 5.3: The percentage response for reasons cited by adults and teachers in the study communities for non-attendance at school.

Many of these factors relate to livelihood constraints of young people, their parents, families and teachers. The inability of families to afford the costs of education was important, and although in theory primary education is free, parents often have to pay extra 'school fees' to help cover teachers' salaries. 16% referred to the problems faced by teachers, who have poor salaries, which often act as a disincentive to teach their classes and instead tend to other livelihood activities.

²⁶ Although without knowing how these statistics are compiled, it is clearly possible that many young people may be 'attending' primary school, as in registered on the role, but may not be actively attending school on a day to day basis.

²⁷ About 30% in the Tanzanian population according to the 2002 census (NBS Tanzania 2006)

11% highlighted the need for young people to work. This could be split into a range of contexts; some of the respondents here were referring to parents ‘forcing’ their children to work at home, others were more sympathetic towards the needs of parents to have their children contributing to family livelihoods. Young people are commonly involved in livelihood activities, and the quote below help illustrate some related concerns.

“For some they use their children for business so they don’t go to school. Sometimes it is a financial problem... you should pay 20,000 Shillings per year at a secondary school. But you might find that they ask for five times that. They might call it a ‘security contribution’ or a ‘facilities contribution’. This can be a big burden for parents.”

Male, age 60+, Kawe

A child’s ill health, sometimes associated with the poverty of their family, was seen by 4% as an important contributing factor:

“If a child goes to school but comes back and finds there is no food, how can they go to school the next day? If they have nothing in their stomach they cannot concentrate on learning.”

Male, age 30-39, Sakalilo (Rukwa)

Outside of issues concerning livelihoods, to which respondents were largely sympathetic, there was a tendency towards a ‘blame’ culture based on the behaviours of particular groups. 24% blamed the attitude of parents for showing lack of interest in education. Just over 10% did admit to not seeing the value of schooling.

“The parents don’t like their kids to study. They want to get their women married. They prefer wealth to education.”

Male, age 20-29, Bagamoyo

Teachers were also blamed for lack of attendance. Although some respondents had sympathy with the livelihood plight of teachers, others blamed teachers for being lazy and inattentive, whilst others highlighted the overall poor quality of the schooling. 16% of adults placed the blame on young people for lacking motivation to attend school, but others were more sympathetic, as this particular respondent demonstrates when he reflects on the factors that affect young people’s lives.

“Many children don’t make it through the whole education system... This is mostly due to the hardship of many people’s lives here. Some children die, some leave the area, catch HIV or other diseases... But there are other problems too, like drug abuse, [and] commercial sex.”

Male teacher, age 30-39, Kawe

Despite the testaments of adults and parents that education is of high value to them, in reality this nexus of factors can intervene to prevent young people attending school. Alongside livelihood constraints exists a set of less tangible factors, such as truancy from school to play with friends, parents’ perceptions of the value of education, and teachers’ motivation and training. These factors are of considerable importance for education more broadly, but also for aspects of participation in education and specifically the impact of environmental education projects. As Kesby et al (2006) suggest, it is not just the necessity of livelihood, or the financial burdens of poverty, which influence the lives of young people in Africa. Young people have an agency separate from their families (Harpham et al 2003), and they are active agents with their own agendas and priorities (Anderson et al 2003; Bourdillon 2004). We might begin to recognise, for example, that acts of truancy are evidence of young people asserting their agency in an otherwise adult-dominated world (Kesby 2005). It is interesting that education projects are tackling young people’s environmental knowledge, rather than on issues such as their ability to attend school, as well as their motivations for participating in environmental action. These could be of more fundamental importance, and may reduce the potential of environmental education projects to have a lasting impact. Green (2000) also illustrates that in Tanzania investment in formal education can offer poor returns to families and young people. Particularly in rural areas, such as Rukwa, there are few professional jobs that require a good level of schooling, and those who graduate from secondary school will often move away to find work to which they can apply their qualifications (Green 2000). This situation is somewhat different in Kawe and Bagamoyo, where there are more professional employment opportunities, but even here only a minority progress beyond primary school (Green 2000; NBS Tanzania 2006). As the tangible returns on schooling are so poor, parents, teachers and young people do not necessarily prioritise attendance. This highlights the serious pitfalls of NGO education projects which only operate through formal education.

Consequently, valuing formal education does not equal attendance, just as Anderson et al (2003) highlight, knowledge does not equal behaviour, yet so much of participatory theory relies on the

assumption that knowledge equals agency (Green 2000), when quite patently here this is not the case. Many of the constraints described by respondents in terms of school attendance in the global south have been highlighted by other research studies (Easton et al 2000; DeGrauwe et al 2005), and a lack of both material incentives and the presence of several, important, material disincentives to participate in formal schooling in Tanzania form the costs of participating. The important place of young people as economic actors within families should not be ignored (Bourdillon 2004), as this is a major factor that prevents their participation. This is revealing perhaps of a flaw in the participatory delivery mechanism adopted by the NGO here. There is no doubt that some young people will receive environmental education through the formal system, yet it is likely that those most marginalised, those from families with the greatest livelihood restraints, will not.

5.4 The contribution to local environmental knowledges

Evaluating the impacts of environmental education projects in terms of what is learnt by participants and what is transcribed into behaviour is difficult and complex, particularly to prove unequivocally that the knowledge of young people and their practical behaviour are drawn directly from participation in environmental education programmes. Having evidence to evaluate these projects critically should be of primary importance. However, the issue of evaluating young people's knowledges, particularly over the long-term in relation to behaviour change, is one that is not tackled effectively or critically by the NGOs in this study. Using qualitative and observational evidence, I have evaluated the environmental knowledge of young people, but without information on their knowledges prior to the project it is difficult to make definitive statements about changes in knowledges and behaviours, and instead I offer some tentative conclusions.

The overall 'quality' of young people's environmental knowledge was assessed based on responses in workshops held at schools. Each young person's knowledge, based on statements made about environmental issues, was categorised as either, good, fair or poor. Statements which expressed detailed knowledge were classified as 'good'. For example:

"Dynamite fishing is a big problem in the oceans. It pollutes the water, which causes environmental destruction... Also they are using small nets so they catch the small fish which are needed in the future."

Male, age 13-17, Kawe

Here, there is some detailed knowledge of a particular issue, illustrating several problems relating to fishing and knowledge of the long-term impacts. 'Fair' statements tended to recognise an element of the environment, or a particular problem, without going into any detail, for example:

"Land is very important for all living organisms. They all live on the land."

Female, age 13-17, Rukwa

"In this area rubbish disposal is a big problem."

Male, age 13-17, Bagamoyo

Statements which were regarded as 'poor' were either incorrect or illustrated that the young person had no knowledge of an issue. No discrimination was made between whether these ideas 'fitted' with the conservationist education which they had been taught through the projects. The results are in Figure 5.2.

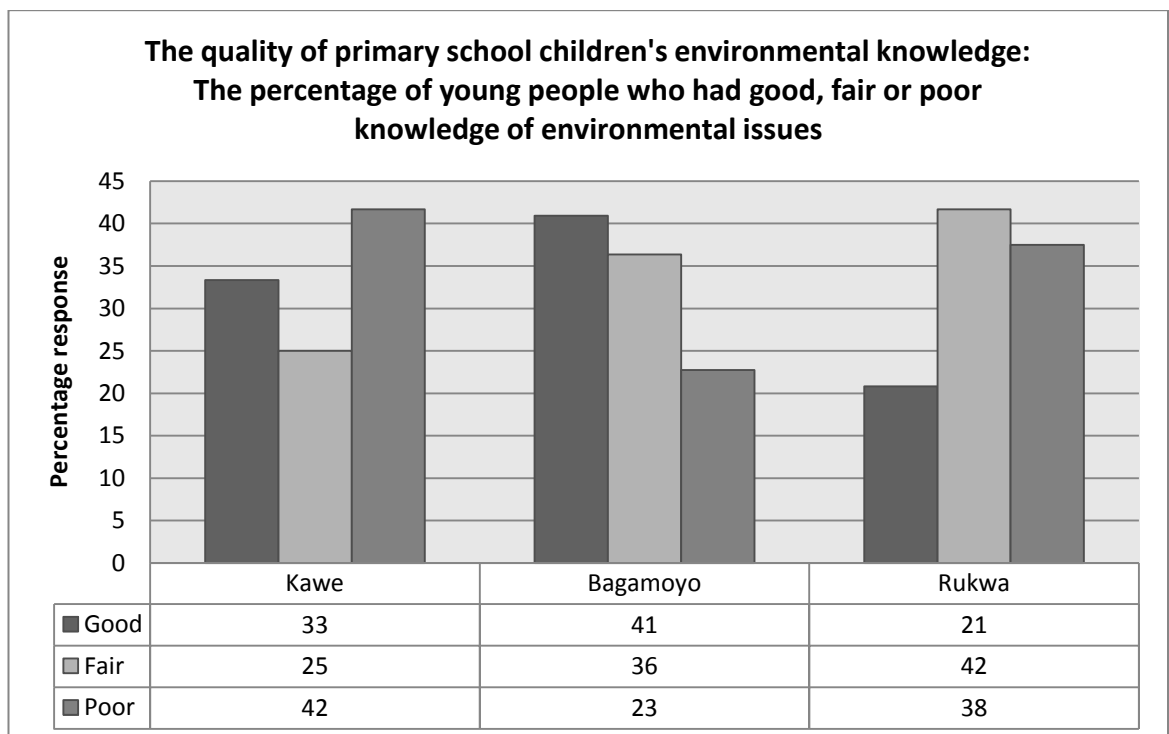


Figure 5.2: The quality of primary school children's environmental knowledge, measured as the percentage of respondents who have a good, fair, or poor knowledge of environmental issues.

Evidently in schools in Kawe and Bagamoyo, where environmental education projects had been conducted, there was a higher percentage of young people with good environmental knowledge (33% and 41% respectively) than in Rukwa (21%) where there was no such project. Despite this, Rukwa had a higher percentage with a fair knowledge, as well as having a marginally lower

percentage than Kawe of respondents with poor knowledge. There are clearly other intervening factors, such as the rural, remote position of schools in Rukwa which are therefore likely to be less well resourced in terms of teachers and materials compared to schools closer to Dar es Salaam, which observational evidence in this study confirmed²⁸. Whilst these figures indicate some improvements in young people's knowledge in schools where environmental education projects took place, the differences are arguably not highly significant, and the pattern for those with fair or poor knowledge are less simple than evidence in the 'good' category.

Another reading of the evidence is that in each area there is still a significant number of young people who either have a fair or poor knowledge of environmental issues. In Bagamoyo and Kawe all of the pupils who participated in the workshops had, in theory, participated to some degree in environmental education, yet 23% of those young people in Bagamoyo and 42% in Kawe had a 'poor' knowledge. During the workshops, it was typical for two or three young people to dominate discussions in a group of six to eight, and often it was these who expressed 'good' knowledge. In each school there are a significant number of pupils who have evidently not benefitted from the environmental education programmes. On a broader scale, the marginal difference between participating and non-participating schools is concerning. Further comparison can be made between primary and secondary school pupils (Fig. 5.3). When pupils reach secondary school their knowledge of environmental issues improves markedly, even though no secondary schools were involved in a specific environmental education project. This can, in part, be attributed to the strong environmental content already in the secondary school curriculum, although clearly the maturity of the pupils and their progress through schooling more generally will be reflected here too. This might lead us to question the role of NGOs in the drive for environmental education, where in the case of secondary schools the existing state syllabus has evidently provided these young people with a relatively sound knowledge of environmental issues.

²⁸ Evidence from national statistics also suggest that rural areas, such as Rukwa, have poorer school attendance, higher rates of illiteracy, and higher rates of economically active young people than more urban areas such as Kawe and Bagamoyo (NBS Tanzania 2006, see also Chapter 3)

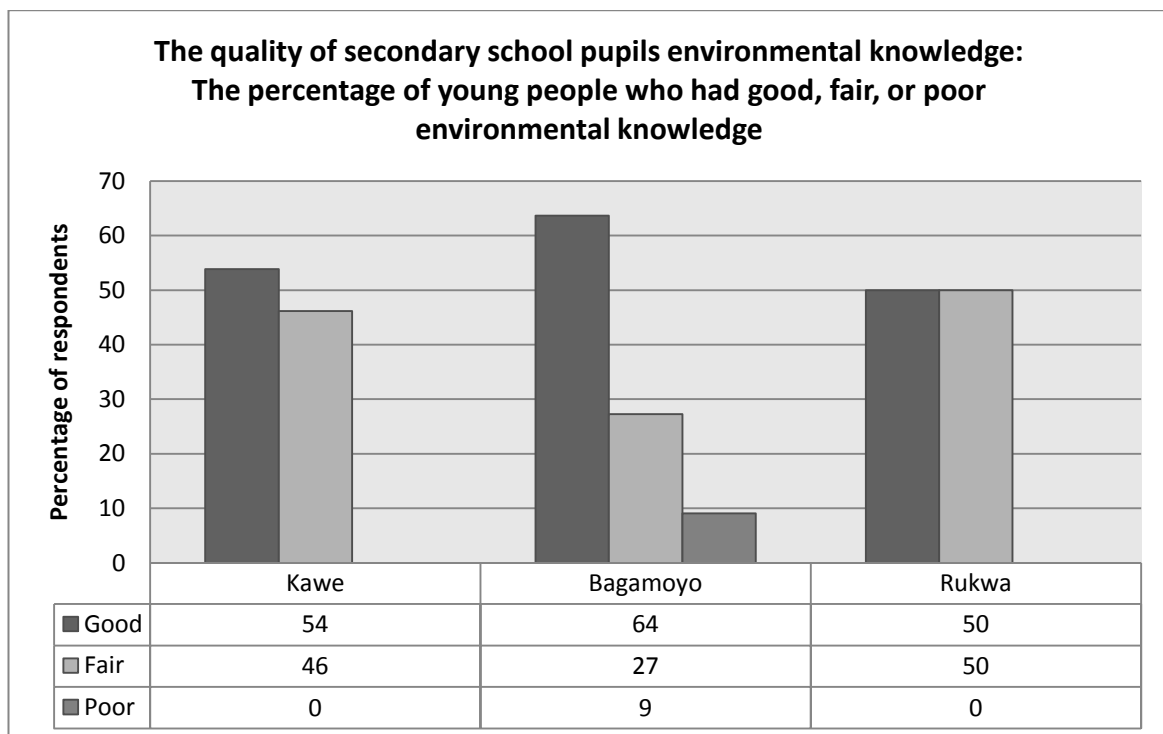


Figure 5.3: The quality of secondary school children’s environmental knowledge, measured as the percentage of respondents who have a good, fair, or poor knowledge of environmental issues.

Environmental education projects have made other, observable impacts. Those schools participating with JGI had made visual improvements to their grounds when compared to non-participating schools. Young people were seen maintaining the school grounds on visits to schools, including watering plants, digging trenches for planting, and managing waste (Pictures 5.4 and 5.5), although it is difficult to ascertain exactly how regular such activities were, and exactly what their educational value was.



Picture 5.4: Young people working around their school. Such observations were common during visits, which did demonstrate that young people were engaged in practical activities.



Picture 5.5: Contrasting schools. Schools that had taken part in environmental education projects had much 'greener' surrounds than primary schools which had not. The top photograph illustrates a typical school which had taken part in JGI projects. The bottom picture is a primary school in Kawe which had not taken part in a project, with grounds which are largely empty of vegetation.



Environmental education projects also delivered other practical-based education about environmental issues which schools had typically not experienced before. Schools had taken part in visits to nearby beaches to clean them of litter. They had engaged in ‘environmental days’, which celebrated the work that young people had done towards environmental conservation (Picture 5.6), and some young people had participated in events organised by JGI (Picture 5.7).



Picture 5.6: Environment day. Young people participating in an event held at their school to celebrate achievements in conservation. These events involved parents and local government officials, and often included presenting prizes to schools, normally in the form of books or materials and tools.



Picture 5.7: At the event. Young people and teachers taking part in an environmental day organised by JGI to celebrate their environmental education project.

Picture 5.6 depicts young people performing songs and dramas on environmental issues, which the rest of the school, as well as some local adults, watched on an 'environmental day'. This did represent a 'link' between the school and the wider community, the adult audience being mostly local leaders and teachers. However, notable by their absence from this event were local parents. Picture 5.7 is particularly illustrative of issues with the appropriateness of 'content' in both practical and taught activities. These young people were taking part in another 'environment day' organised by JGI. I was invited to this day to observe, however it became apparent during the event that the content was inappropriate for the age group involved, largely theoretical and all based indoors, and it lacked much meaningful engagement with environmental issues. For example, the structure of the day itself was as follows, with each session being approximately an hour long:

1. School Presentations

16 schools presented their practical activities over the project

2. 'Leadership' Lecture

A 'lecture' format PowerPoint presentation on leadership skills

3. 'Setting up a Club' Lecture

A step by step guide to how to set up a club, another PowerPoint lecture

4. Video Show: Deforestation

A short video show, hampered by technical difficulties

5. Discussion: 'Mission and Goals'

An adult-led discussion defining the difference between these terms

6. 'Setting up a Project' Lecture

Another PowerPoint lecture about setting up a project

Each 'lecture' was not specifically focused on 'environmental' issues, rather on organisational ones, mostly about setting up a club. These seemed inappropriate for the audience of young people, aged between 13 and 15, who sat through a series of lengthy 'chalk and talk' style lectures. Field notes from the day illustrate thoughts and observations from the event:

Extracts from field notes:

From the lecture on 'leadership':

A speaker from JGI is 'lecturing' the young people about leadership

"It is also very important that leaders are accountable and respectable to others... They should show cooperation with others, and they should also be a facilitator..."

Do the children understand what these 'buzzwords' mean?

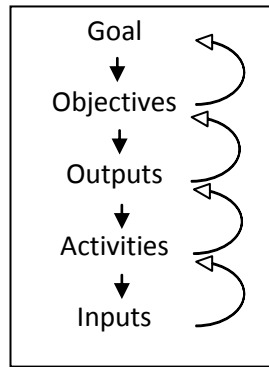
He then points to the pictures of famous leaders. Several are from Tanzania but also have a selection of 'great leaders' from around the world. These include Margaret Thatcher, Gandhi, Mao Zedong, Dali Lama (Mao and the Dali Lama are right next to each other!) Mother Teresa, and Colonel Gaddafi!?

Later in the day:

Me and Alfred [field assistant] leave to take a break. We walk around the site. I discuss that I think it is boring. Alfred sort of agrees... He does say in a positive way that "at least they are getting something for it", in that they are getting some useful information and some materials which they can take back to their school, and also they might be more motivated... But he also agrees that some of it is quite boring.

We are observing the final lecture of the day:

Alfred remarks that he can see that the kids are tired, some are sleeping, some are just not listening... the next slide comes up and I copy down the diagram from it...



Alfred says: "He cannot be serious!" when he sees this slide... It seems to me as if it has been lifted from a lecture on basic business/NGO strategy, but delivered to primary school pupils and their teachers! Some students are still keeping notes but most look to be despairing.

Picture 5.7 is taken from the first session of the day, when the young people remain largely engaged. Picture 5.8, however, is from this final lecture.



Picture 5.8: Sit up straight? Young people disinterested at the end of the JGI environment day.

The slumped position of the young people in Picture 5.8 clearly exemplifies their lack of attention and interest. This evidence supports the views of adults that these environmental projects were

highly ‘theoretical’, whilst the events were also inappropriate for the age group, calling into question the potential learning outcomes for the young people attending. In this event, it is very difficult to define what young people gained from participating, yet they were seen as an important part of the project by the NGO.

These ‘practical’ activities and events were, at least, extra to what had previously been incorporated into the Tanzanian curriculum relating to the environment. Several teachers and young people were positive about them, expressing interest in expanding them beyond their current provision, as this quote from a teacher illustrates.

“We would like the environmental education we have here to be for all schools. Some people went to another school and saw that the environment was not as good. But they came to this school and saw that the environment was good here.”

Female teacher, age 30-39, Kawe B Primary School

Despite this positive feedback from teachers, the JGI project is very limited in scope and impact, yet this was not recognised by the NGO itself. The evaluations conducted by the NGOs were non-critical, lacked sufficient detail and failed to analyse their impact qualitatively. In the case of JGI, the success of the project is largely judged on a quantitative survey of target numbers reached during the life of the project. The following quote from a JGI member of staff working on the project illustrates this.

“In terms of our targets, we wanted to reach 946 teachers, and so far we have reached 938 through teacher training. Our target was to impart knowledge to 75,000 students, and so far what we know is that we have reached 61,800 in September 2009. So we are still to collect the final data but we are optimistic that we will meet this.”

JGI Environmental Education Project Worker, Male, age 30-39, Dar es Salaam

This discussion is typical of the way projects are evaluated, based on targets, rather than detailed qualitative analysis of how young people’s knowledge and behaviour has changed. As Fig. 5.2 and the accompanying quotes above demonstrate, this is not a simple task. Such quantitative measurements do not reflect on the quality of participants’ knowledge, or what they have actually learnt. In line with evidence from Anderson et al (2003), education projects, such as this one, are often only evaluated based on the output of the service provider (the NGO), rather than the actual impact on participants. The lack of baseline information, another criticism made by

Davies (2002) of NGO evaluation, again makes the outcome resistant to evaluation, there is no real way to assess the impact of what has been done, only the output of the NGO measured in simple, quantitative terms. As the evidence in Fig. 5.2 illustrates, the impacts on young people's knowledge of environmental issues was questionable, yet nothing of this is revealed in the NGO evaluation. The practical activities were not critically evaluated such that it was not clear why young people were performing particular activities, and exactly what their learning value was. Bourdillon (2004) has found in Zimbabwe that when young people are taught explicitly practical activities in school, there is not always a connection made between what is learnt and done in the school, and what is done practically in the parents' fields. In the Tanzanian case, practical activities are indeed limited and infrequent, and difficult to evaluate in terms of their learning value. Discussions about practical activities with young people often only revealed relatively simplistic information about what they did.

"We are taught both inside and outside the classroom, and we conduct practical activities. We plant trees and water them, and we are doing some environmental education with other pupils."

Female, age 13-17, Bagamoyo

Young people could not explain in detail why they did particular activities, only that they took part in them and that these were 'good' for the environment. Much of the scope of practical tasks in schools was focused on cleaning the area and planting trees. It was difficult to ascertain what was learnt from this other than that it was important to keep an area clean and to plant trees. No pupils discussed the sustainability of such practices, and how they might link in with environmental behaviours of the wider community. This is not to say that they did not have knowledge of these things, only that they did not readily associate such ideas with the practical activities they conducted. One of the key aims of this project was that young people would be able to transfer their practices, learnt in school, to the spaces beyond it, and to share their knowledge with others in the community. It is well recognised that adults are also key actors in dealing with environmental issues which require immediate action (Uzzell 1999), yet it is not evident that young people were significantly empowered to transfer their behaviours beyond the school, or to 'teach' adults. As I have emphasised in the previous section, the assumption that knowledge equals agency (Green 2000) in these projects is fraught with pitfalls, in part because it is unclear what young people have learnt (and therefore, what they know about the environment specifically from the project), and also because it remains unknown as to whether they can transfer such knowledges in meaningful ways beyond the place of the school. The formal-school-

theoretical/informal-home-practical divide, both discursive and in many ways socially 'real', puts up many barriers to this transfer.

Adults in the study communities were concerned that environmental education in schools should be practical. Although practical activities were encouraged by JGI, these were very limited in scope. Schools already have issues conducting practical activities associated with existing subjects, as teachers are generally under-resourced and under-trained. The following quote expresses some of the frustration that teachers felt.

"There is a scarcity of facilities. For example, when teaching about the weather, we are supposed to have a barometer, a hydrometer, rain gauges, wind veins, an anemometer... but we have none of these."

Male teacher, age 50-59, Ilemba (Rukwa)

Whilst the state syllabus and NGO projects contain much potential for practical activities, these are often impossible to complete with the resources, time and trained individuals available to schools. The expectations of the Tanzanian state curriculum are high in terms of the capacities of local schools. The curriculum expects schools to be able to carry out activities such as those quoted above, but it is very clear that they do not have the capacity to do so. Clearly schools and teachers were heavily constrained in terms of the practical work they could do by the lack of resources available to them, partly due to lack of funding for such resources in the Tanzanian state schools more generally (NTEAP 2009), but also perhaps because of unrealistic expectations of the ability of schools to teach particular aspects of the curriculum and the environmental education project when certain resources were not available. As well as NGO goals and expectations from teachers, it is also clear that the state curriculum should be tuned more realistically to a school's current material and financial status. One particular teacher addressed these problems:

"The main problem is that we don't have the tools to work in the local environment. We don't have the tools for doing proper cleaning and other things like this... We only had 3 days of training, and should really have had more time. Also, there were very few teachers trained..."

Female teacher, age 20-29, Kawe

Teachers found it difficult and time-consuming to organise their own practical activities in schools. A frustrating process of needing to gain 'permission' from local government officials to take pupils out of schools put many teachers off organising and carrying out such activities. Other than those who took part in training provided by the NGO, both secondary and primary school teachers have very little training in taking pupils out of the classroom. Whilst the issue of a lack of resources and the frustration experienced by teachers due to lack of state support (for instance, needing local government permission to organise practical activities) were particular to this case study, it should not be ignored that these issues are pertinent to education systems throughout the Global South. Several authors have recognised the constraints of costs and resources in delivering environmentally- and locally-orientated curricula (in Thailand (Lucarelli 2001), and West Africa (Easton et al 2000) among others), whilst Easton et al (2000) have highlighted that commonly teachers throughout the Global South have poor training and little access to resources, particularly when compared to their counterparts in the Global North. Others have suggested that, again more broadly in the context of the Global South, decentralisation of education (for example, to NGOs) is often a result of poor state capacity, yet often exposes further poor capacity at the local level and at the level of the intermediary actor (DeGrauwe et al 2005; Caillods 2005). The evidence from teachers in this study highlights that the experience of this environmental education project clearly reflects much wider pedagogic issues in Tanzania, many of which are practical and as a result of under-funding (NTEAP 2009), high curriculum expectations, and a lack of teacher capacity as well as bureaucratic restraints placed on teachers, but also this experience fits within much broader pedagogical issues for the Global South. Evidence from NTEAP (2009) and from the observational evidence of secondary and primary schools in this project (Picture 5.1) suggests that this experience of poorly-resourced activities in schools in Tanzania is most likely common across all state schools and curriculum subjects in the country. Again this perhaps suggests that, in this case, decentralising one part of the education system to NGOs has not necessarily tackled broader structural problems of resources and funding for education in Tanzania.

The focus of environmental education on formal, more theoretical knowledge, rather than practice and practical activities (through intention, or due to the restraints on conducting practical activities) reinforces the perceived gulf between formal/official knowledges and informal/local knowledge. Local knowledge is typically gained through participation in particular practices, not from 'reading' (Easton 2004). It is rare for what is learnt locally (practically) and what is learnt through education (formally) to be brought together, and whilst environmental education has the potential for being a highly appropriate forum through which this might take place, in the reality

of the projects and of the state syllabus in Tanzania, this has not happened, so as it stands, there is little interaction between environmental education and local practices. Local people and teachers do not see links between local practices and the formal knowledge system, and therefore find it difficult to make links between what is learnt, and what is done.

This evidence calls into question how the NGOs that conduct environmental education projects function, and how they are held accountable, not just by other authorities but also by those who participate in their projects. The evaluations conducted by NGOs were almost entirely quantitative and non-reflexive. Whilst NGO staff were prepared to discuss limitations in terms of time and resources, they do not evaluate at a more fundamental level how successful projects have been based on learning outcomes. In none of the discussion conducted with NGO staff were causal links made between the project outputs and the knowledge/behaviour outcomes. Here a respondent was asked to reflect on the challenges of the project.

"I can say that there are not so much in the way of challenges. The only one that I know of is that firstly so many of the teachers find the project very useful, but they think that more people should be included. But how do we make more people, school and teachers included with limited funds?... It is the same situation with the materials, I think they expect more abundant resources but unfortunately we can only provide limited amounts..."

JGI Environmental Education Project Worker, Male, age 30-39, Dar es Salaam

This lack of reflexivity and critical evaluation is in part a product of the necessity for NGOs to demonstrate 'success' in order to continue to receive funding from donors and support from the state. As such, reporting failure, lack of success, or even complex outcomes which are not clearly labelled as successful, becomes problematic. The outcome of this situation is that evaluations assume that involvement demonstrates participation and therefore learning. Other studies have shown the assumption that 'directly involved citizens' are by default 'better citizens' to be false (Cornwall 2002), and in this case study it is evident that those young people who were 'reached' by the NGO evaluation do not necessarily have a better understanding of environmental issues. As Kapoor (2004) has stated, there is an issue here with making evaluations meaningful. The quantitative, target-focused data churned out in this NGO evaluation lack meaning. Nothing is revealed about what has been learnt by young people, and how, most importantly, this has influenced behaviour. There is no understanding of the quality of education delivered, such as how well teachers have been trained, and how training has been translated into learning.

The restrictions of the 'project cycle' for NGOs are of genuine concern for the outcomes of education programmes, and perhaps projects which are not just education-orientated across the Global South. As is typical of many NGO-led projects, funding is tightly defined into a particular period. For JGI, funding was coming to an end after 4 years, and the project was winding up during the final phase of the field research. Whilst environmental education that takes place within this time frame may be of value to those involved, it is more likely that real impacts will occur over the long-term, as part of an ongoing negotiation with communities (London et al 2003; Matthews 2004). Local leaders and teachers were clearly interested in continuing and expanding the project, and expressed frustration that it was coming to an end.

"We want to expand the project because Bagamoyo has a lot of primary schools, but at the moment only a small number of schools are involved. We face some challenges from other schools because they are cut out of the programme."

Male, Local Leader, age 40-49, Bagamoyo

The quote implies that, in the short term, this local leader is pleased with the project, however they are evidently concerned with its long term sustainability. Without being able to carry out long term projects, and without the ability to conduct longitudinal studies, the real impacts of environmental education in Tanzania will remain elusive. Although not explicitly recognised in much of the recent literature in local knowledge and participation (e.g. Leach et al 2008), it is important to acknowledge that organisations such as NGOs are just as 'socially constructed' as any other element of society (Lewis 2002). NGO actors are caught up in an institutional framework which governs what is expected of their outputs. The difficulty with measuring educational outcomes, particularly in the context of the global south (Anderson et al 2003; London et al 2003; Intili and Kissam 2006), is only a part of the picture here. The products of NGO evaluations, largely 'target-driven', and focused on the 'output' of the organisation, are governed in part by what is expected by funders, and, have the dual role of presenting the work of the organisation in a positive and uncritical light.

5.5 Summary

Throughout this chapter I have examined critically the role of NGOs as agents of local development. In Tanzania, the place of NGOs in local education is highly problematic, which seriously questions their role in local development more generally. The range of NGOs delivering environmental education in Tanzania has led to a plethora of discrete, poorly coordinated

approaches, the choice of which is rarely thoroughly justified. They have little prior experience of environmental education (their background is in conservation), and there is evidence that this has led to some inappropriate educational activities for young people, and a lack of attention to local environmental and educational priorities. Rather than being local agents, NGOs are subcontractors of the state in delivering education, employed out of necessity rather than a moral imperative towards more locally-appropriate development. The focus of NGOs on their organisational goals, and their role as state subcontractors, seriously challenges arguments for the decentralisation of education (or any other service) to NGOs (Caillods 2005; Easton 2004), as well as challenging their privileged place in participatory rhetoric as more ethically and morally suitable agents of local development. The experience of teachers provides evidence to corroborate this. Teachers felt unsupported, their practical and material needs were not being met, and they received mixed messages about environmental education, all suggesting that NGOs were not listening to their needs. There is a further flaw in participatory development theory revealed here, as it relies on the willingness and capacity of local people (Cleaver 1999), yet environmental education appears to disclose the many burdens of participation, particularly for teachers as key participants. The evidence also highlights wider pedagogic issues for Tanzania and the Global South more generally, as the environmental education project and teachers participation in it were largely constrained by already well-recognised problems including issues with resources, training and the expectations of the curriculum (NTEAP 2009; DeGrauwe et al 2005; Caillods 2005; Lucarelli 2001). Such issues transcend the specificities of the project, and relate to issues common throughout education systems in the Global South, highlighting the importance of wider structural problems which require attention at the national and international level.

Participatory and local knowledge advocates have highlighted the importance of informal knowledges and education to local development, yet this chapter challenges this through a focus on space. Formal and informal spaces of learning are divided in communities, both discursively and practically, hampering interaction between the two. The general thrust of local education and knowledges literature has held up local knowledges passed through informal space as important for local empowerment and development, but the gendered nature of spaces of learning in Tanzania challenge this notion. Formal spaces can have more potential for the empowerment of young women in rural areas than the informal spaces of the community, suggesting that formal spaces and knowledges have an important part to play in reconfiguring local gendered power structures. This spatial approach is significant, as it draws attention to distinct spaces of learning, which do not operate in ways which are concurrent with participatory and local knowledges

theory, illustrating their current lack of attention to space and place. Finally I return to evaluating NGOs and the effects of environmental education programmes. I find their impact to be, at best, marginal, and I draw attention to the 'resistance' of NGO projects to qualitative evaluation. This is in part due to the institutional framework in which NGOs work, but also reflects their inability to operate as 'local' actors, in part because they ignore important local factors such as spaces of learning, and the multiple issues that inhibit young peoples' participation in schooling. NGOs are not 'locally' focused but rather are upwardly and inwardly orientated, suggesting a need to fundamentally reappraise their role in local development.

Chapter 6

Participation, community, empowerment: What do these mean in Tanzania?

Participatory development is supposed to be about listening to local people, and for these people, the 'community', to participate in their own development, which will not only be about better development but will also engender 'empowerment' (Binns et al 1997; Chambers 1994c; Mohan 2001; Pain 2004). By suggesting that development should listen to local people, participatory and postdevelopment theories argue that this helps tackle 'Western' assumptions about what development is and how it should be done. But participation also makes assumptions. Terms that are regularly employed in participatory rhetoric, 'participation', 'community', the 'local' and 'empowerment', are left unexamined both in practice and in theory, which is worrying, because they often form the fundamental backbone of what participatory development is supposed to stand for. But what if 'local people' interpret these terms differently, what if they do not share the same values as appear to be imbued in them from participatory discourse? In this chapter I examine these assumptions, and others, which are associated with participatory development. I begin by examining the environmental education projects from a participatory stance, and scrutinize what participation means at different scales, as well as the role of the state and NGOs as providers of participatory forms of development. I then go on to Tanzanian notions of participation, specifically considering ideas of individual and community responsibility towards the environment and community development. From this, I explore what a Tanzanian conceptualisation of 'community' might look like, and compare this to the assumptions of participatory development. I go on to consider how these different notions of community and participation might impact on the empowerment of young people as environmental actors, as well as the potential in Tanzanian communities for environmentally sustainable actions.

6.1 Participation in environmental education

Participation in development has predominantly been discussed as something which happens at the 'local' level, and there has been much debate about how inclusive and participatory such approaches have been at the local scale (Binns et al 1997; Easton 1999; Timsina 2003). This focus on the local has also been a key part of the arguments supporting NGOs as the most appropriate actors for participatory development, as they are considered to be more likely to deliver inclusive participatory development because they are 'closer' to the local level. But should participation only be thought of at the 'local' scale (Agrawal 1996; Batley 2002)? With institutions such as

education, should we not also think about participation, and therefore inclusion, at the national scale? NGOs themselves are never just 'local'; they have connections 'upwards' to the national and international level as well as 'downwards' to the local. In this first section I question the role of NGOs in generating 'national' participation in environmental education, as well as the applicability of a participatory development narrative to environmental education at a range of scales, including the local.

Before NGO involvement, environmental education in Tanzanian schools was designed as a national programme run through the state apparatus. A respondent from the government explained the approach of the state.

"Interest in EE at the national level started in 1992, where it was decided that it was important to introduce environmental issues into school teaching... but the major problem was how to get teachers trained to teach it with only limited resources. Initially the government trained school inspectors in EE assuming that they would be 'trainers of trainers'... this did not work, as mutual relations between the inspectors and teachers were not good. They then decided instead to train District Education Officers, but similarly this did not work, as again there were not always good relationships between them and the teachers... Inspectors were giving orders from above, which the teachers did not always like. Now we work closely with some NGOs to accomplish the same task."

Government Representative, NEMC

The respondent highlights how environmental education was conceived as a national (and nationally inclusive) project, where, in theory, all schools would incorporate it into their teaching. Various 'top-down' strategies failed because teachers resisted direction coming 'from above'. Importantly though, this quote illustrates how state strategies were initially inclusive. This history is illustrative of how a national development objective, initially conceived of as an inclusive programme, has been now filtered down into a series of selective projects. Importantly, there is no indication in the quote above that the goal of national inclusivity has changed, so we can assume that this remains important to this state actor. Although the representative here suggested that accomplishing the 'same task' is being done through NGOs, the reality is quite different. Individual NGOs lack the funding or resources to deliver a programme of environmental education nationally. For example, in the Bagamoyo region JGI worked with a total of 10 primary schools and 10 Madrasah schools, whereas there is a total of 120 schools in the region. Local government officials in Bagamoyo were highly aware of this exclusivity.

“We want to expand the project... but at the moment only a small number of schools are involved. We face some challenges from other schools because they are cut out of the programme. They are complaining.”

Local government representative, Bagamoyo

According to this respondent, local schools, and those in local government, are aware of the exclusivity of this supposedly national programme. The differences between local schools that had and had not taken part in the programme were particularly clear in teachers' minds. Teachers commented on the visible differences between the grounds of local schools (Picture 5.5), and further suggested that there might be some resentment between those schools which had been 'selected' for the programme and others who had not. There was also evidence of exclusivity within individual schools. For those schools which are included in the JGI programme, only a small number of teachers have been trained by JGI to integrate environmental education into their teaching. A teacher from Kawe commented that:

“Some [teachers] are appointed or selected, then transmit the knowledge to other people in the school. We are responsible to do this, so that all the teachers are involved.”

Primary school teacher, Kawe.

Although this teacher suggests that they are responsible for passing on knowledge to others in their school, the ability to 'train' other teachers was highlighted as problematic by several other respondents. 75% of teachers who were involved in the JGI project commented that the limited number of teachers trained posed a problem because all teachers in the schools were expected to integrate environmental education into their teaching, yet relied on the small number trained (normally one or two per school) to pass on this knowledge. The quote below is typical of teachers' concerns.

“There were very few teachers trained... If only one teacher goes, then they might get tired and miss something.”

Primary school teacher, Kawe

The teacher here expresses reservations that this task of training fellow colleagues can be accomplished by a single teacher. It might be inferred from this quote that not all teachers in participating schools were trained by those who attended the initial training, or, that training all

teachers in a school may take some time, and therefore not all were necessarily including environmental education in their lessons. Exclusivity in provision, through the NGO programme, trickled down through from the national, to the regional, to the school level, and then to individual teachers within schools. This exclusivity at all levels of the projects suggests that it is not fulfilling the goals of 'inclusivity' associated with participatory development theory, or the desires of the state for an inclusive national form of environmental education. Such exclusivity also links to more broader concerns for under-resourcing of education in the Global South (Lucarelli 2001; Caillods 2005; DeGrauwe et al 2005), and suggests again that resourcing issues faced by the state in Tanzania are shared with many other contexts.

Participatory development can also be costly for individuals who participate, a fact that has already been identified by a number of authors (Meinzen-Dick et al 2002; Sahu 2008; Sanderson and Kindon 2004), yet this is worth highlighting in this case study, as it helps to explain further the exclusive nature of these projects. Often these associated costs mean that only the relatively wealthy can participate (Gershberg 1999; Mercer 1999; Mercer 2002), which in the context of environmental education programmes, has significant impacts on the scope of the project to include those who are marginal in communities. In JGI environmental education projects, teachers in particular incurred costs for participating. They incurred financial costs for attending training, but most importantly, taking part in the project cost them time. For many school teachers in Tanzania, time outside of teaching is often spent on other livelihood activities to earn extra income, such as working on their farms or other small businesses, and spending extra time in training or running school environmental clubs takes time away from these. Of the teachers who were involved in the JGI project, 78% expressed problems with personal costs associated with working with the programme. The cost to teachers' time was a problem mentioned by 38% of teachers in the project. 16% of local adults also made reference to teachers' poor pay and the need for them to perform other livelihood activities. The quote below highlights how participation which asks extra time of teachers without paying them will impact on their other livelihood activities.

"Those [teachers] who are employed as form 6 leavers don't get full time teachers' pay... Often they get paid through parents' contributions to the school... so they won't get paid as much... Many full time teachers have other livelihood activities too because the pay is not good."

Secondary school teacher, Dar es Salaam

There is the implication that only those teachers who can afford to do so, in terms of their time and personal finances, will participate in training activities, and may volunteer to run projects. Participation by teachers then is crucially determined by their individual capacity to participate. Although local 'social capital', in terms of willingness to take part in such projects and feed back into the community is of importance (Mohan and Stokke 2000), from this evidence it is clear that material capacity to participate is imperative. Much of participatory development rhetoric is founded on assumptions about the existence of 'social capital' and 'civil society' (Potter et al 2003), and indeed the JGI programme relies heavily on local teachers' willingness to participate, as the lack of material financial incentives is clearly problematic. The capacity, financially, for any individual to participate in a project which does not offer short term material incentives is one of the most crucial factors in determining how 'successful' or otherwise a project which relies on participation will be. Without attention to this, and it is evident through these responses that there was a lack of attention to the material circumstances of those participating from the NGO, 'participatory' projects may simply embody familiar local biases (Sanderson and Kindon 2004), in which the better-off are able to be involved, whilst the less well-off will be excluded.

Of course, the importance of individual costs and incentives to the inclusive aspect of participation has been well recognised in the criticisms of the participatory research and development agenda from the late 1990's (Guijt and Shah 1998; Cook and Kothari 2001; Mohan 2002). Yet it is important to highlight it here to illustrate how this sustained academic critique has not 'filtered down' into a contemporary, on-the-ground development project. That the JGI programme was highly reliant on voluntary forms of participation from teachers with little in the way of livelihood incentives, particularly in the short and intermediate term, indicates that, in spite of JGI's international links (both as an international organisation based in the USA, and through its international funding), suggestions about how participation works which have been sustained in the academic literature for over ten years have not become part of the current project agenda. Also, although much of the criticism of the participatory agenda has focused on the need for long-term engagement and incentives (Guijt and Shah 1998; Blomley et al 2008), and the need for immediate incentives for taking part in participatory research and activities (Murthy 1998; Mayoux and Chambers 2005; Nelson and Agrawal 2008; Kapoor 2002b), my evidence suggests that there is perhaps more scope to focus on 'intermediate' material benefits to encourage a more inclusive form of participation. Although this environmental education project perhaps offered 'intangible' returns for the community (educating young people about the environment, which may lead to better local environmental management in the future), there was little in the way of material incentives for teachers in the 'intermediate' term. The fact that teachers were willing to

participate at all perhaps suggests that they did see some value in educating young people about the environment (either that or they felt compelled to do so), yet intermediate material benefits were lacking. This evidence suggests two important points for the academic critique of participation: Firstly, that, in this case, there is evidence of an at least 10 year gap between theory and practice (or perhaps a lack of linkage altogether between the critical literature and practice); and that, secondly, there is a need, in current projects, to think practically about what intermediate, tangible benefits can be offered for those who participate in projects aimed at long-term, intangible returns, particularly in education projects.

It was also apparent during this study that not all young people were participating equally in the programmes run by JGI. It can be inferred from the evidence above that this will in part be due to the lack of full participation by teachers. Further, some elements of the environmental education programme run by JGI were openly selective in terms of young people participating. Special events in the programme only involved a limited number from each school. For example:

“We took the best three students from schools all over the country and had a big event which involved some trips to other parts.”

JGI environmental education programme worker

For projects run by other organisations, those pupils involved within a school were also 'selected'. In JEMA programmes this was the case.

“Classes of school kids visited were normally 50-80 pupils in size... This group, if they agree, will be selected as the Environment Club in the school.”

JEMA Programme Director

To a degree, some of these programmes were deliberately selective, rather than openly inclusive. Whilst JGI employees claimed that their programmes were designed to include all pupils in the schools with which they worked, this also neglected the issue of non-attendance at schools, which 61% of adults in all three study areas believed was a serious problem. This issue of non-attendance was not addressed by any of the NGOs, yet this made the inclusive and participatory nature of the project, for young people, highly problematic. There is evidence from young people who supposedly 'participated' in the project that there was variance in their levels of participation. It was clear from young people's knowledge of environmental issues that there was a wide variance in the quality of their understanding in participating schools (Fig. 5.2), where a

significant number of young people had a comparatively poor knowledge of environmental issues compared to their peers. In Kawe 68% of young people who took part in the workshops had a fair to poor knowledge of environmental issues, whereas in Bagamoyo the figure was 41%. Although not a direct measure of participation, indeed the figures could be due to the variation in young people's learning capacity, it is likely that either projects were not effective in reaching these young people in terms of improving their knowledge, or that a significant percentage of young people in these schools were not receiving environmental education. For Rukwa, where primary schools were not participating in the JGI project, the comparable figure was 79%, illustrating that there may have been some improvement in young people's environmental knowledge in the participating schools. However, if we compare just those young people who had 'poor' environmental knowledge, the figures are 42% of the pupils at primary schools in Kawe compared to 38% in Rukwa, illustrating how the outcomes of the project were unclear.

A further illustration of the limited participation of young people was the lack of evidence to suggest that they passed on knowledge to their parents or local adults in the community. In part, this may be explained by the place of young people in the prevailing power relationships in Tanzanian communities. However, the fact that adults were not aware of the project through local children again adds evidence to suggest that young people were not participating fully within the aims of the project, which were that environmental education should reach out to the community through the young people who participated. Whilst Andersson et al (2003) illustrate that young people often only take home very simplistic messages from education projects, in this study it was difficult to ascertain if any message was reaching the home or the local adult population at all. Throughout the three study areas there was a generally low awareness amongst adults that environmental education was being conducted in local primary schools, and in Kawe and Bagamoyo, virtually no awareness of the JGI project (Fig. 6.1).

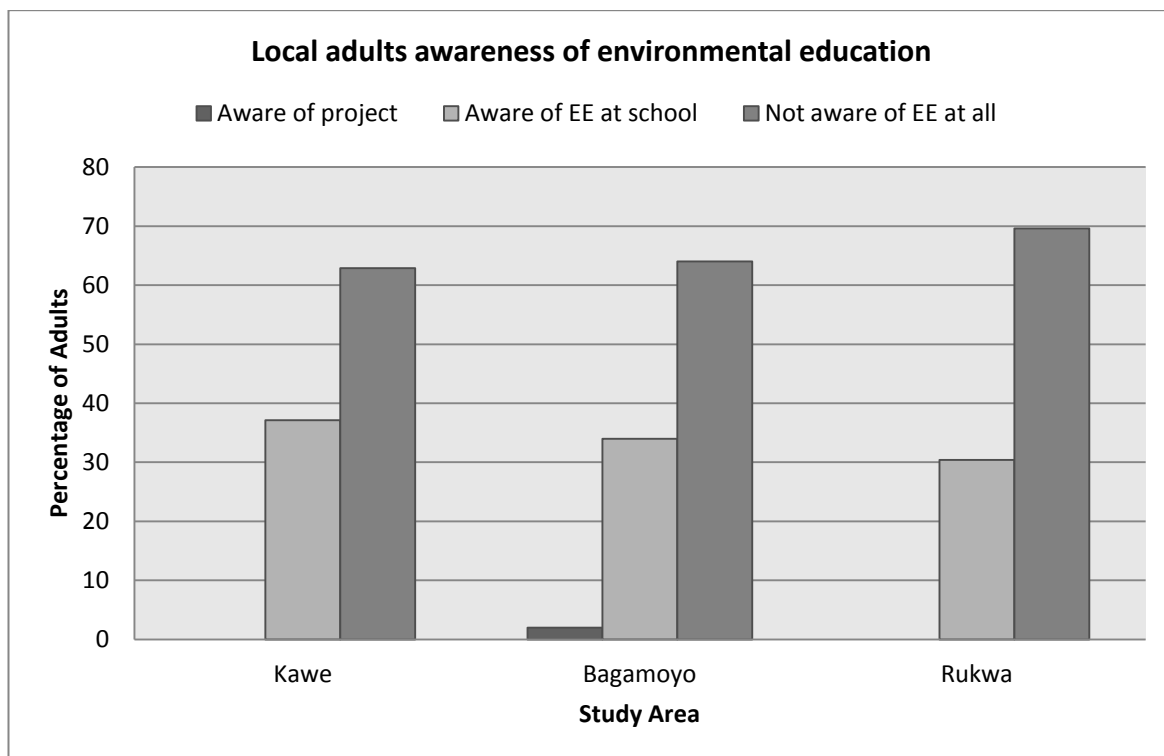


Figure 6.1: The awareness of local adults about environmental education being conducted at their local primary school.

From Fig. 6.1 it is overwhelmingly clear that adults lacked awareness of environmental education or of specific projects. Only 2% in Bagamoyo knew specifically of the JGI project, whilst in Kawe there were none. In both areas, around two-thirds did not know that there was any environmental education conducted at their child's school, only marginally lower than respondents in Rukwa, where there was no project conducted by an NGO. Only two adult respondents in Kawe reported that their children had spoken to them directly about what they had learnt at school about the environment, and none did so in Bagamoyo. Although again this indicator does not illustrate directly the actual numbers of young people participating, it does provide indirect evidence that the project was not reaching out beyond the school into the community, possibly because young people's participation is already quite low and selective.

Evaluating the role of young people in these projects from a participatory development stance reveals the limited scope of the NGO programmes in terms of 'participatory' goals, particularly through the aims of the project itself, to enable young people to be environmental actors and to educate the wider community. Young people appear to be positioned as 'passive receivers of knowledge' (Bourdillon 2004), rather than active participants. They receive knowledge on the environment, but not through opting into a particular project. Environmental education is delivered through the school system, leading to an element of 'compulsion' to participate, rather than genuine engagement. Yet it is also clear that young people are not transferring this

knowledge to the wider community. This draws attention to another form of exclusion that emerges from the project conducted by JGI, that of local adults, again highlighting the selectivity of the programme at the 'local' level of society.

The 'participatory' element of these projects only gives the impression of inclusivity (Parfitt 2004). To return to the first quote in this chapter, this 'impression' is discursively maintained by the state, suggesting that the national programme (which failed under the state) can be delivered through NGOs *“to accomplish the same task.”* NGO actors are aware of this inherent exclusivity in their projects, indicating funding issues as the main cause for the lack of a national, inclusive approach.

“How do we make more people, schools and teachers included with limited funds? The districts really want all schools to be involved but ask us, why only ten? So this is difficult but obviously we are limited by the budget and the time.”

JGI environmental education programme worker

It is largely because of this limited capacity of individual NGOs that turns participation and inclusion into exclusion and, in some respects, increased marginality for some (Easton 1999; Twyman 2000). Due to the exclusions created both directly and indirectly in environmental education projects, some young people, some teachers, many schools and indeed entire regions of Tanzania are excluded from what began as a national project. As Mayo (2001) also illustrates, despite goals of inclusion, in reality participatory development programmes can be fundamentally exclusive in their very nature. In this case, it is in part the 'NGO approach' to development which the state has adopted, motivated by necessity because of the state's limited capacity, which has led to these exclusions. No NGO in Tanzania has the capacity to be a truly national organisation. From this context a narrative of development emerges in which participation and local empowerment driven by NGO actors, when scaled up, does not meet the demands for equitable development on a national scale. Participation in development rhetoric is so often associated with local inclusion, increasing the participation of the marginalised in society and empowering the 'grassroots' (Chambers 1994a, b, c), yet this focus on the local diminishes the importance of national and the regional inclusivity. Whilst NGOs may work closely with the 'local' scale of development, their ability to deal with similar principles of inclusion and equitable development at the national scale is severely impaired. At the 'local' level, the evidence from these projects suggests strongly that, just because the project operates at a 'grassroots' level, does not guarantee that it will somehow be inclusive. In fact the programme ignores several existing issues with inclusion and participation in Tanzanian education, including the attendance of young people at

schools. Why should principles of inclusion only apply simply to the local scale, why have they not been 'scaled up' in participatory rhetoric to the national? Perhaps the answer to this lies in part with the fact that such attention to this question exposes the failure, at the national and regional levels, of both NGO and state actors to deal with issues of making development equitable at these scales.

When examining the environmental education projects through a 'participatory development' lens, it is clear that in many respects they fall short of meeting the ideals of participatory development, despite the intentions of those actors who drive them. This is not to suggest that these projects are inherently mistaken in their approach, or that the failing necessarily lies completely with any particular actor within the whole scope of the projects encountered. Instead, this narrative of, to some extent, non-participation and a limited, exclusive participation, should perhaps lead to a serious questioning of the appropriateness of the participatory orthodoxy which has pervaded development discourse. The assumption of this participatory orthodoxy is seemingly that there should be a 'participatory' element to everything in local development (Timsina 2003), yet in the context of the JGI project this mantra seems problematic. Firstly, it might appear that a 'participatory' perspective might resolve some of the apparent issues with these programmes. It is evident that, with both teachers and students, the 'participatory' element of the programme would have to be characterised as 'low' on any chosen scale of participation (e.g. Meinzen-Dick et al 2002; Leeuwis 2000; McGregor 2007). If there were greater levels of participation, for example by consulting local community members on project design and local community needs, then this may have aided the tailoring of the project towards the goals of the community, and may have made local people, particularly adults, more involved. If local adults were then more involved, tensions between what is learnt at home and what is learnt at school for young people, as highlighted in the previous chapter, may have been resolved.

However, there is an underlying tension between two of the key aims of participatory development: between the need for inclusivity, and the need for projects to be 'locally appropriate', a tension which largely exists between two spatial scales of development and the practical implications of working at both. For inclusion to work at a 'national' scale, for all young people to receive environmental education, there is an apparent need for a national coordinating body to ensure this, i.e. the state. This is quite in keeping with Brett's (2003) and Babbington's (2000) assertions that particular projects, goals and development objectives need state or other external apparatus to function at a national level. That the national inclusive goals of environmental education have broken down, as an 'NGO-approach' has been adopted, is

illustrative of how limited in capacity NGOs are, and that their employment to meet national development objectives is highly likely to create exclusions at the national scale. The NGOs studied here, similar in operational scale to many NGOs in Tanzania, are not able to manage a nationally inclusive programme. Yet, paradoxically, even though NGOs are in theory closer to the 'local level' in participatory rhetoric, the evidence here suggests that, caught between national objectives and local-level projects, NGOs conducting environmental education programmes in Tanzania do not deliver particularly 'participatory' projects that engage with the local level. In part because of the pretence to create a nationally inclusive programme, NGO-led projects have taken their direction from the state, and, working with schools, have delivered a very much 'top-down' project.

But, as Brett (2003) argues, it is perhaps not appropriate for 'maximum participation' to be the 'best' option in all development projects, and it is with this in mind that this problem can be partly resolved. In the case of young people's participation, it is unlikely that a project based around environmental education is capable of, or should necessarily be aiming at resolving issues of 'social justice' for young people (Timsina 2003). Their place as being 'marginal' and 'subordinate' is heavily embedded in all societies, including those in the West, not just in Tanzania. This does not mean that their position in society should not be challenged, but this is clearly a wider issue that such a project can only contribute towards, not necessarily solve. Equally, 'maximum participatory' rhetoric ignores the positive role of power in the participation process (Agrawal 1996), power is not simply domination, and it may be possible for teachers and adults to use their powerful positions to influence and guide young people in a positive manner. Therefore, to challenge and seek to destabilise these power relations outright may not be in the immediate interests of young people or adults. Whilst other research studies have highlighted the benefits of locally-driven education (e.g. Easton et al 2000), this has relied on significantly more input from local teachers than in the environmental education projects studied here. Greater participation can entail even greater costs for participants (Brett 2003), and it is questionable how much more local teachers would wish to participate in light of their already limited capacity. The limited capacity of teachers, adults and young people, and, importantly, NGOs themselves, suggests, from this evidence, but also from other authors (Anello 2003; Brett 2003), that local development and inclusive, equitable participation will not always spontaneously emerge from the grassroots, or from NGOs as supposedly 'grassroots' operators. The implication is that for particular development objectives to be achieved, especially those that exist beyond the local scale, there is potentially a need for intervention and guidance to come from beyond communities at the regional and national levels (Babbington 2000). In this case, local 'participation' in its purest form may not be appropriate (Leeuwis 2000; Nelson and Agrawal 2008), particularly if an element of national inclusion is to be

achieved. This is not to deny the importance of making development initiatives locally appropriate and engaging with local communities, but calls into question the appropriateness of participatory rhetoric when applied to scales beyond the local.

6.2 The role of the State and NGOs in participation

I have discussed the problems of applying some of the fundamental assumptions of participatory development to Tanzania, those most associated with how communities and individuals function. But participatory and post-development theory and practice also invest much in NGOs as the best placed actors in development to deliver participatory, 'grassroots' development. Here I explore this assumption.

As discussed at the beginning of this chapter, those working in the Tanzanian government recognised that the state had, in the past, failed to meet its own targets in building environmental education into the curriculum, and had made it explicit that NGOs were employed, to some extent, to take over this task. I return to the quote at the beginning of this chapter:

"The Ministry of Education is supposed to be coordinating and implementing EE... but often they are not doing this effectively... Now we work closely with some NGOs to accomplish the same task"

Government Representative, NEMC

Decentralisation of services to NGOs is not, from this statement, part of a 'local participation' agenda (Mohan and Stokke 2000), as the respondent makes no reference to this. The move to NGOs is instead situated within a discourse of state failure, of necessity, rather than a choice based on some kind of ethical imperative. NGO actors were also aware of state failure.

"We reprinted some of the books created by the Ministry of Education. They had been distributed to the district education officers, but we found some of those books were just left in a box in the district office. No one had distributed them to the teachers. Maybe they lacked funds."

Project worker, JGI

"The Ministry of Education in Tanzania established a new department for EE in 2002. But this department was very small, had few resources, and was new, so was inexperienced."

They had few people working for them, and few who were trained in dealing with EE.”

Project manager, JGI

In the first quote there is evidence of relatively small-scale state failure, however the second highlights the limitations of the state at the national level. The implication is that the department could not 'deal' with environmental education as a national project. State retreat is also apparent to local people, to residents of areas where state provision of services, some in relation to the environment, are dwindling.

“The government is not assisting us in this and are no longer helping, even though we have been making efforts to conserve the environment.”

Male, age 40-49, Kawe

“This was a project of the village to get all the suburbs provided with water. They have not dealt with it for a long time so we think that the government has failed.”

Male, age 30-39, Ilemba (Rukwa)

The quotes suggest that, in the past, the state had a more active local presence, contributing to environmental management and services, and both draw attention to a notable retraction of state intervention. Semesi et al (1998), working specifically in Bagamoyo, have also identified that state withdrawal has been accompanied by relative economic decline and poorer quality of services. In Bagamoyo, a head teacher echoed these sentiments:

“We’ve not had any support from the government... so we don’t rely so much on the government, we can’t rely on them.”

Primary School Head Teacher, Bagamoyo

The links to Semesi et al's (1998) study are quite apparent. It is clear from these statements that there is a general perception of state failure, from the local, to the school, to the regional and right the way up to the national level. Crucially, the statements from the state actor and the NGO employees appear to illustrate the need for NGOs to be adopted as the deliverers of environmental education, not because they are likely to produce a more participatory form of local education, but simply to deliver where the state has failed. There is no apparent moral or ethical imperative, and the reasoning appears to be purely practical. Participatory rhetoric can suit both the left wing, radical agenda, and that of the retreating, liberalising state (Mercer 1999).

There is evidence to suggest that, in the case of environmental education, local participation, and the use of NGOs for delivery, has been adopted by the Tanzanian state largely as a result of state retreat and state failure.

It seems that NGOs have, in the case of environmental education, become service providers, rather than being mobilised for local advocacy reasons. As Mosse (2001) has illustrated, supposedly 'participatory' approaches can be compatible with 'top-down' planning structures, and this appears to be the case in environmental education, where NGOs 'taking on' the responsibility for environmental education have adopted top-down delivery strategies that do not engage with local people in a meaningful way. This is despite the fact that JGI documentation and staff professed to adopting participatory approaches in their environmental education projects (JGI 2009b, also see section 3.1.2), and this evidence again illustrates how ongoing critical debate on participation from the last decade (Guijt and Shah 1998; Cooke and Kothari 2001) has not filtered down into current development practice in this case. That NGOs have simply picked up where the state has left off with environmental education was apparent from discussions with NGO actors. One of the main goals for NGO projects was to provide education materials for schools; however, initially for JGI they simply began by reprinting state materials. One NGO project worker stated that when the project began to provide materials they *“reprinted some of the books created by the Ministry of Education”*, demonstrating continuity from state actions, rather than initial engagement at the local level. But more explicitly, that NGOs were taking initiative from the government, rather than engaging in the priorities of communities, was clear from how NGOs described the direction they received from the government. At JGI, those who worked on the environmental education project described how it had been designed to fit within government guidelines:

“The JGI project in EE is designed to be complementary to the policy of this government department”

Project Manager, JGI

“It is important to maintain the schools already involved and expand to more districts... so that all teachers get to integrate EE into their teaching. Actually this is stipulated in government policy, that all teachers should integrate environmental issues into their teaching.”

Project Worker, JGI

The first quote describes how JGI work is designed to complement government policy, but the second respondent is more explicit: integrating environmental education into teaching is 'stipulated by government policy'. JGI is training teachers to do this, thus their role is to act as direct agents of the Tanzanian government, sub-contracted to provide training. Such sentiments are evident from other NGOs. The following makes quite explicit these links between government policy and NGO output:

“In Tanzania we have both a range of policies and acts which cover conservation issues... However, Tanzanians are not as aware of these... Therefore TFCG produces plain language guides to these policies and acts, and distributes them to communities to read, and we go over and explain them at workshops and meetings.”

Environmental education programme manager, TFCG

Here again a conservation NGO is explicitly delivering the policies of the Tanzanian state, by making sure that local people understand state laws and policies. The exact motivations of NGOs here are difficult to determine for sure, but there are two possibilities. Firstly, the Tanzanian state environmental policy does fit well within the conservation ethic which percolates through environmental NGOs (which, in itself, is in part because Tanzanian state conservation ethics have been, arguably, highly informed by Western discourses of conservation). Therefore, it is both tactical and convenient for NGOs, in terms of meeting their own agendas, to regurgitate state policies on the environment. However, the second possibility is that NGOs are being guided by the state, which is perhaps telling through how projects simply parrot state material. How much either possibility influences NGOs is, in this context, not possible to determine fully. In another example, TFCG also produced posters to 'educate' communities about state laws that protected local forests (Picture 6.1)



Picture 6.1: Posters. This illustrates a TFCG poster (highlighted), alongside other NGO posters and village records. The poster is on display inside a building used in the village for village meetings.

The poster highlighted uses picture images and relatively simple (as the TFCG spokesperson suggested, 'plain language') Kiswahili to describe laws with regards to conservation of local forested areas. The messages are straightforward, for example, communicating that people are not allowed to cut down trees or set fires inside forest reserves. The posters are produced externally by the NGO and use government policies as a guideline for what is communicated. This clearly suits the NGOs 'mission' as the state laws are aimed directly at preserving forests in this area, yet do not involve local people in any way that might be considered 'participatory'. The posters seek to encourage 'good practice' with regards to local forestry, for example, and to encourage the more sustainable use of local forests. However, they do so through a 'prohibitive' message, by informing people of what they are not allowed to do inside forest reserves. The NGOs that produce such material are not operating in a 'grassroots' fashion, for example by negotiating these rules locally. They instead appear to be 'softening the blow' of state regulations by communicating them in a means that local people are, perhaps, more likely to understand. There is no intention in such material to negotiate with local people, only to 'involve' them in pre-determined doctrine. State representatives saw this work as important:

"Laws and policies about the natural environment and resources are still very weak. They are weakly enforced and poorly understood by most people"

Government Representative, NEMC

This quote above is illustrative of the lack of state capacity to communicate and enforce their laws on the environment, relying instead on NGOs. Whilst the state lacks control over what NGOs actually do on individual project basis, the evidence suggests that the state has retained some power to set the context in which NGOs work. Blomley et al (2008) illustrate that in Tanzania participatory rhetoric has been adopted by the state to co-opt communities into doing the work of the state for minimal tangible returns, but this co-option also exists at the intermediary level between the state and NGOs, where in effect NGOs have been co-opted to do the job of the state. There is still reciprocity here, as clearly many government policies of conservation and protection suit the goals and missions of conservation-based NGOs. This draws attention to the fact that whilst many of these NGOs are working with communities, and are working 'in' education, their overall aims are rooted in a conservation agenda rather than a social one. The arguments which I have drawn on here, that 'participation' can be used to suit those who do not necessarily aim at social inclusivity or empowerment, and may reflect 'top-down' agendas, are indeed not new ones, as is illustrated in earlier critical concerns over the use of participation in development (Guijt and Shah 1998), as well as more harsh denunciations of participation as a method of reproducing established power relations (Cooke and Kothari 2001; Kothari 2001). The evidence here also appears to support critical literature which has illustrated how there has been a lack of 'local social context' in some participatory development approaches (Guijt and Shah 1998; Cornwall 1998; Twyman 2000). Whilst in line with these critiques, this evidence illustrates a more nuanced position towards these arguments. Although participatory critiques have illustrated how participation may reproduce established power hierarchies at a number of scales, and ignores local context, others within the same critical agenda have also argued that the local approach to development (often through participatory mechanisms) has occluded the state from development (Mohan 2001; Brett 2003). By examining the power dynamics between NGOs and the state in more detail here we might build perhaps a more nuanced position around how the state and NGOs operate and negotiate the reproduction of power hierarchies.

This relationship between the state and NGOs is further reflected in the way that NGO projects are set up in terms of the hierarchical relations in education delivery between NGOs, teachers and young people. NGOs generally access schools through the hierarchical system of local government, as they are given 'permission' to work in particular schools by district officials. This can give the impression to schools that NGOs are working under and with the authority of local government. Several NGOs commented on how they accessed schools.

“Now the project is coming to an end... [we are] particularly speaking to the district officers about sustaining the project.”

Project Worker, JGI

“JEMA always goes to the schools through the local government. We must go to the local government first to declare the project, receive permission to conduct the project, and then to have local schools selected to participate in the project.”

Project Manager, JEMA

The first quote illustrates how district officers (rather than teachers or young people) are the first port of call for JGI staff when discussing continuing the project. The second quote illustrates how NGOs, JEMA in this case, need to 'go through' the hierarchy of local government in order to work in particular schools. This may give teachers the impression that being involved with the NGO is compulsory. A headteacher involved in the JGI project made this comment:

“I was not forced to take part in this training, but a law had been passed which said that we should be involved. [JGI] themselves also said to us that we should be involved.”

Primary School Head Teacher, Bagamoyo.

The headteacher was clearly under the impression that he was required by law to be involved in the JGI project. This feeling of compulsion, rather than volunteering to participate, is then commonly passed on from the headteacher to teachers who are involved in training. Several commented that they had been 'selected' rather than having volunteered.

“Some are appointed or selected, then transmit the knowledge to other people in the school.”

Primary School Teacher, Kawe

The hierarchical relationship that operates through the state school system was a key part of how the JGI projects, and others, were run and did not go unrecognised by the NGOs themselves. Several NGOs commented on the advantages of using the school system, and the access that they gained through the government, as a useful means of delivery exactly because of the compulsion that was embedded in the school system. The environmental education manager for TFCG described why the NGO chose to deliver education through schools to young people:

“Providing EE to communities is not as easy as to schools... In schools, if instruction to conduct EE comes from the headmaster, a teacher, or from the local authority, then teachers and students can be persuaded that it is a worthwhile activity. However, in communities, the people have to be persuaded about the value of EE and of environmental conservation, and this can be more difficult. Also there are no demands from schools, whereas community members tend to demand things, such as food, money for taking part or doing jobs or other things, so it is more expensive.”

Environmental Education Project Manager, TFCG

This illustrates how NGOs use their place in the hierarchy of education delivery to meet their project goals. The respondent suggests that conducting environmental education through schools is easier than through communities, as the local authority and headteachers can use their authority to get teachers and students involved, and, crucially, they can do so without having to provide incentives, as they will feel the compulsion to participate through the power hierarchy of the school system. The respondent counterposes his opinion on working with school to working with local communities (presumably local adults), where the lack of a hierarchical mechanism through which to deliver education will make it more difficult. NGOs are also aware of the power that they wield as bestowed on them by and through government patronage. In an interesting turn of events, I was asked to attend an environmental awards event for local schools in Bagamoyo. During the course of proposing this to me, one of the staff on the JGI environmental education project made this comment:

“I will let them know that you are coming. I am not sure what activities they are planning but if they know someone is coming they might be able to do something or arrange something. If you just go to some schools, you might find that they will not do much, but if they get the direction from me they are more likely to do something.”

Project Worker, JGI

The clear implication is that schools are more likely to 'perform' if they know someone from the NGO is 'watching' them. This is illustrative again of the element of 'compulsion' present in these projects, with the direction clearly coming from above, from the NGO. There is the implication in the quote above too that, without this element of compulsion and direction, participants would be inclined not to do as would be expected, again demonstrating the forced, rather than participatory, nature of the project.

Somewhat contrary to the experience of TFCG and JGI, a smaller NGO, TAYEN, found it more difficult to work through state schools, and instead opted to work with private schools. The head of the NGO made this comment:

“It is much easier to work with private schools... it is possible to approach private schools directly, whereas with government schools you must first send a letter to the District, speak with the District Education Officers, then get an approval letter”

Project Manager, TAYEN

This illustrates from another perspective the importance of the hierarchy at the government level. The comment on the position of the government as a 'gatekeeper' to working in state schools demonstrates the power that the state retains to govern what NGOs do. A government official also commented on the need to use state power to 'force' schools to take part in projects:

“One strategy adopted by the government has been to use the national examination council to put exam questions on the environment into national exams... This has forced teachers to teach EE in their classes, to look for relevant resources, and to learn about EE.”

Government Representative, NEMC

This government strategy of forcing teachers to become involved adds to the element of compulsion from above. As Mercer (1999) has illustrated in her study of NGOs, it is apparent, when the system of state-NGO-local people is examined, that some Tanzanian state actors are not solely interested in promoting grassroots empowerment or local participation in development projects, rather they are clearly interested in utilising and maintaining existing systems of hierarchy when services are delivered through NGOs rather than directly by the state. This has its roots in the history of a heavy hand of the state in Tanzania, where all services and most businesses were under their control, and grassroots, local organisations were largely suppressed under the one party system. In this context, it is understandable that NGOs have not solely positioned themselves as being advocates for the empowerment of local people, as this is, to some extent, discouraged through the way in which state apparatus constructs the space in which NGOs operate. In environmental education, the control of access to schools, and the dictating of the curriculum from the state level, makes it very difficult for NGOs to work outside of the state. This can work in favour of NGOs, clearly aware of the difficulties of working directly with local communities, and delivering their education projects through the state system makes it easier for them to achieve their objectives. Whilst other authors have illustrated that state withdrawal from

local education provision can, in some circumstances, offer opportunities for more locally appropriate education (Easton et al 2000), in the Tanzanian context the space that the state has built for NGOs to work in prevents real grassroots engagement.

That Tanzanian NGOs have evolved in this context has meant that how they actually operate and conduct their projects is far removed from the idealised portrait of NGOs constructed through the rhetoric of participatory development. NGOs became fashionable amongst international donors, in part due to disillusionment with state governments during the 1980s in terms of their ability to deal with development issues (Lewis 2002), but also because they were perceived to be more flexible, closer to the poor, could promote participation and better understood local culture (Bashyam 2002). In part because of this, NGOs can attract funding to conduct projects, where the state cannot. Yet, in Tanzania, this idealised vision of the NGO, as described by Bashyam (2002), is not evident. The NGOs providing environmental education were not local, grassroots organisations. They are largely staffed by urban, relatively well-educated elites who work in Dar es Salaam, often in air-conditioned offices, who visit projects in expensive four-wheel-drive vehicles, and who live relatively comfortable lives in the context of Tanzania. This is not to suggest that this is inherently 'wrong', NGOs may feel that having well-educated staff to run their projects is highly appropriate. However, it is illustrative of the fact that NGO workers are not 'in touch' with local people necessarily any more than state actors might be. For example, NGO actors working for JGI often travelled all over the country to review projects that they were managing. One project worker interviewed for this study was involved in running projects along the coast from the north in Tanga to the south in Lindi, yet lived in Dar es Salaam. In many cases, there were not 'local' operatives managing these projects 'on the ground', rather they were administered centrally from offices in Dar es Salaam. Extracts from field notes taken after a meeting with staff at the JGI office in Dar es Salaam provide an example of this in practice:

[The JGI staff member] also talks about how busy he is and this is linked to travelling around the country. He is going to Pemba for two weeks, then later going to Kigoma, and various other places over the country in the next couple of months. This seems not unusual... to me the NGO worker lifestyle in Tanzania is one almost of a company/business employee. Smartly dressed working in smart, air conditioned offices, and travelling around the country to see projects... staff seem well resourced (all the staff in the JGI office have decent PCs or laptops)... many speak excellent English (and therefore are probably well educated, up to degree level)... it appears that working for an international NGO is a good, professional, well-paid job in Tanzania, certainly well above most others in the country.

This serves to illustrate the impression one might gain on entering a typical NGO office in Dar es Salaam. Picture 6.2, from a visit to a school with an NGO, shows how NGOs presented themselves.



Picture 6.2: A visit from the NGO. NGO staff arrive at a school in Bagamoyo. NGOs typically use expensive four-wheel-drive vehicles to reach project sites. There are practical reasons for this, as many of the roads are difficult without such vehicles, however their use often highlights the disparity in wealth between the NGO, which is well funded, and those with whom they work in local schools who are comparatively poor. NGO staff made relatively brief flying visits to schools to perform evaluations and speak to head teachers, with the aim of visiting several schools within a single day. This suggests the 'professional' rather than 'grassroots' nature of the organisation.

That NGOs have evolved and developed in this way is perhaps not surprising in the Tanzanian context which does not encourage them to engage in local advocacy, but instead to provide state-like services to communities. This illustrates, as Kapoor (2004) suggests, how important institutional traditions are in determining how particular NGOs work. This particular NGO in Tanzania did not offer a radical, participatory 'alternative' to development, which should lead us to seriously question whether others can do so within the same national and institutional context. It is a mistake of post-development thought and those who advocate for participatory approaches to assume that 'alternative' development thinking and NGOs are in some way compatible. There is little incentive for NGOs in Tanzania to break away from established state-led, top-down and hierarchical norms. The architecture of the state-NGO system actively discourages them from doing so.

As a result of the culture of NGO activity in Tanzania, there is a strong tendency for NGOs in environmental education to promote their own pre-determined project agendas on communities and participants, rather than open these for negotiation and meet community needs, again despite their project objectives being suffused with the rhetoric of participation (JGI 2009b, see also section 3.1.2). As Mosse (2001) has described, NGOs and projects have their own needs, which may not bear much relation to the needs and interests of local people. The NGOs engaged in environmental education were largely from a conservation background, and much of the evidence suggests that the specific agenda for environmental education has been set at the NGO and state level, rather than through engagement with the local. For TFCG, as a group concerned with forest conservation, their environmental education projects, not surprisingly, focused on conserving local forests.

“In terms of practical activities, TFCG aims to combat forest degradation and deforestation.”

Environmental Education Project Manager, TFCG

There are clearly explicit links in the quote above between the overall purpose of the NGO and the activities that are promoted as part of their environmental education work. JGI, although not driven as specifically by a particular area of conservation, had similar pre-determined conservation objectives, which again showed no evidence of prior engagement with local communities. TAYEN, an organisation which was established as to be broadly about environmental concerns, had determined the objectives of their environmental education project as an organisation, and as the quote below illustrates, these organisational objectives were also in part determined by the agendas of donors.

“It's a climate change education project. We are funded by a climate change foundation, based in Switzerland. The idea of the project is for young people to exchange ideas about climate change”

Project Coordinator, TAYEN

State actors were aware of this issue and were often critical of how particular projects went in the guise of 'environmental education', when in fact this was not what the state had determined to be under the remit of environmental education.

“Another problem is funding and the fact that the emphasis of projects is dictated from outside, which may not be locally relevant. Now many projects are orientated towards climate change, because there is a lot of money in this, but this is not the right focus... NGOs generally focus on their own problem or topic... They have their own goals and objectives.”

Government Representative, NEMC

The quote quite clearly encapsulates the tension between NGOs, the state and participatory objectives in Tanzania. Firstly, there is evidently a tension between state direction and those demands on NGOs from 'outside', from their funders. There is frustration targetted at NGOs for not always being fully answerable or accountable to the state. How this frustration is directed is significant. The state respondent here is not frustrated because NGO objectives are determined in part by external agencies and their own internal goals because this takes attention away from local-level, participatory engagement, instead this frustration comes from their lack of accountability to the state. The implication is that the state is better placed to determine national objectives, and again by implication that the state is closer to the needs of the Tanzanian people than these NGOs, and, crucially, their external funders. This is an astute observation on the part of the state respondent, and embodies one of the key problematics with NGO-led development. Do NGOs, with projects funded, and determined in part, by agencies that are based and run outside of Tanzania, have more legitimacy in determining what local Tanzanians need than a state which is, in Tanzania, democratically elected by the people of that country? There are implications here for the ongoing debate within the participatory literature. Somewhat contrary to the arguments made by Mohan (2001), and Brett (2003), the state clearly does retain important forms of power here. It has not been eclipsed by participatory forms of local development. Instead, forms of 'participation' are being 'used' by both the state and NGOs to deliver their own goals. This clearly reinforces and validates the arguments of those critical of the participatory agenda, which were posed over ten years ago in academic literature (Guijt and Shah 1998; Cooke and Kothari 2001), which also suggests that these well-established criticisms have failed to influence development practice either at the state or NGO level in this context. The inability of this seemingly engaged critical literature to affect change in policy and practice is perhaps worrying in itself, and suggests that those working on a critical participatory agenda have little influence over the contemporary 'on-the-ground' enactment of participatory development. The final quote, above, which implies that international and NGO agendas are overtaking those of the democratically elected state, perhaps suggests one direction in which this debate can go forward. The state is still powerful in Tanzania, yet this position of power is in constant negotiation with international and NGO actors.

From the perspective of the state actor, the state has more democratic legitimacy here, and perhaps at the national scale, the state at least represents the current best possibility for national inclusion, as it at least it is democratically accountable, unlike other actors that work at scales 'above' the local. There is need here for more consideration of how a democratically, national-scale body can 'fit' within the locally-orientated participatory agenda, as any policy initiative which comes from this scale of democracy is likely to appear 'top-down', despite having full democratic legitimacy. Questions remain about how local forms of participation can be negotiated with democratic governance at the state level, whilst also negotiating the increasing power and authority of intermediary actors such as NGOs, and indeed questions also need to be asked about why critical literature has failed to be policy-relevant in this context.

6.3 Individual and collective responsibility

A further key concern for participatory projects in Tanzania is not just the organisation and delivery of the projects themselves, but, perhaps more fundamentally, there is an existing tension in Tanzanian society between the state and communities with regards to who has responsibility for local development and the local environment. Participatory development makes significant assumptions about responsibility. By assuming that a local population will 'participate', participatory theory presumes that local people are willing to, or already do accept, responsibility for local environmental management. This assumption is fundamental to participation, because if individuals and communities will not accept responsibility, then the presumption that they will act for their own development begins to fall apart. In a research study also conducted in Tanzania, Green (2000) finds that rural populations in Tanzania tend to consider responsibility for local development to lie with the state and other external agencies. In the communities studied here, there was a prevailing belief amongst a significant percentage of respondents that responsibility for dealing with local environmental and, in some cases, more general development issues, lay with the Tanzanian government, rather than the individual or the community (Fig. 6.2).

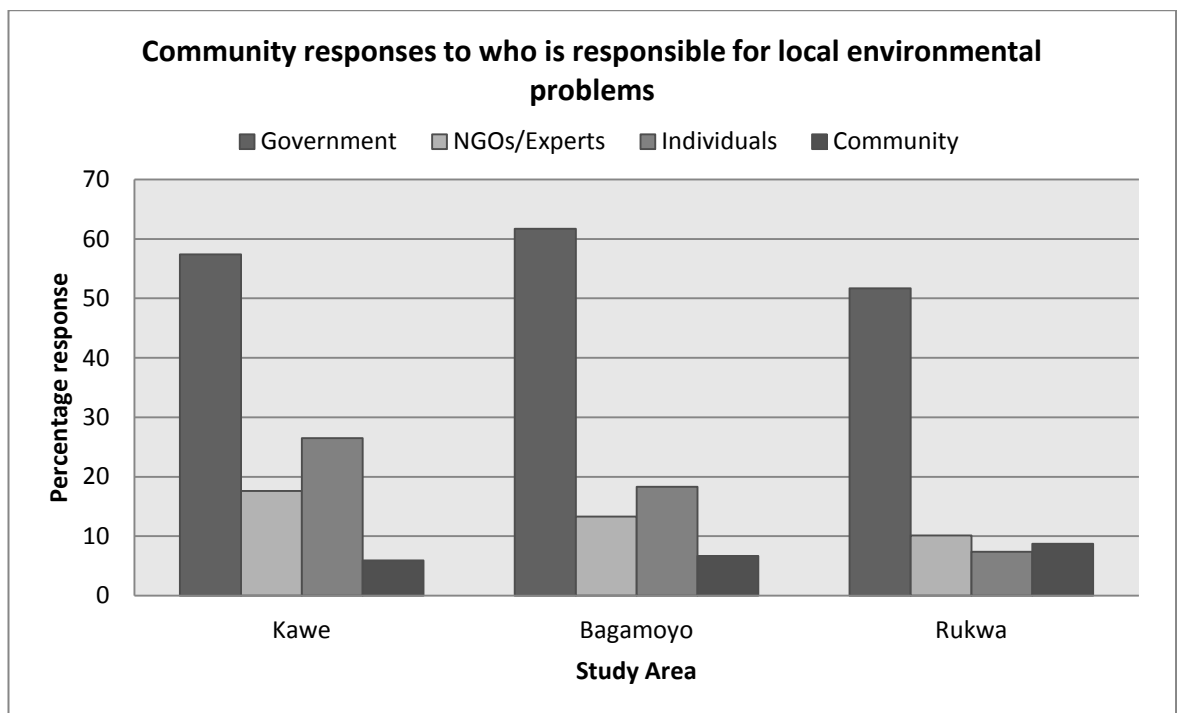


Figure 6.2: Community responses to the question: who is responsible for dealing with local environmental problems? Percentages are not cumulative.

The pattern of response to this question of responsibility was remarkably similar across all three study areas. In each area, over 50% stated that the government was responsible for dealing with environmental problems. This is particularly interesting, as this evidence appears contradictory to earlier discussions of how local people suggested they could not rely on the state due to government retreat from public services. There is an important distinction to be made between the ways that respondents think responsibility should be, and their descriptions of the way things actually are. There is an overwhelming impression amongst local people that external actors should be responsible for maintaining the local environment, yet, they do not see this responsibility being fulfilled. It is interesting that in such circumstances a significant number of respondents still understood the state to be responsible even in the light of this apparent failure, perhaps attesting to the strength of the ‘strong state’ ideology in Tanzania dating back to the post-independence Nyerere government.

There was a range of detailed explanations from respondents which highlighted their perceptions of government responsibility. One prevailing trend was to suggest that common land or resources were the responsibility of the government, which largely meant that most environmental resources came under the responsibility of the state. This quote is a typical example:

“Areas which are not owned by individuals like the beaches... here the government should take control... It is very difficult for local people to do this because they don’t own it and

cannot organise themselves or take responsibility to do this.”

Male, age 30-39, Bagamoyo

Respondents also suggested that the state was responsible for local services, as well as enforcing laws which govern the use of local environmental resources:

“The residents can’t look after the sewage systems, or implement the laws. The government have the responsibility to implement the laws.”

Male, age 60+, Kawe

Both quotes above express a distinct feeling of powerlessness amongst local people to govern 'common' resources, highlighting their perception of their own limited capacity, as well as that of others in their communities. In Kawe, more specific issues concerning land ownership meant that local residents were not legally empowered to do anything with their land, as they did not own the land on which they lived:

“The land here is still in the hands of the government. The residents have no way to conserve the environment because the land has not been put in their hands. If it did belong to them then the residents would be able to work for the future.”

Female, age 40-49, Kawe

This was clearly a specific problem for the area of Kawe (Picture 6.3), yet similar sentiments exist, in the quote above from Bagamoyo, with regards to common land or resources. Importantly, the respondent suggests that, should they be entitled to the land, residents would feel empowered to take action to improve their surrounding environment.



Picture 6.3: Bare land in Kawe. In the first picture, the abandoned Tanganyika Meat Packers factory sits on open land which is frequently now used for grazing and waste dumping by local people. The second photo illustrates the dry landscape of Kawe, the vegetation worn through by vehicles, people, and grazing cattle. Both these 'communal' spaces are officially government property.

Whilst some respondents did explain their reasoning for attributing environmental responsibility to the government, several simply placed responsibility on the state without explanation.

“The government should provide an alternative source of energy.”

Female, age 30-39, Bagamoyo

“The government is the one who is in charge of everything... the government should put restrictions on people wanting to cut trees.”

Male, age 50-59, Ilemba (Rukwa)

For these respondents, it was an assumed fact that the Tanzanian government would be responsible. Importantly, as Green (2000) also finds, there is a significant proportion of Tanzanian society which understands the government as responsible for local development, in this case related to environmental issues. However, it was also evident that local people placed responsibility not just with the state, but they also extended this perception to other actors who might be understood as operating ‘outside’ of the community at broader scales. A notable percentage placed responsibility for the local environment with an ‘external’ agent other than the government. This was largely divided between mentioning NGOs in a general sense, or more specifically ‘experts’ who would be able to ‘solve’ local environmental problems. The sliding scale in responses from the more urban area of Kawe to the rural and remote area of Rukwa may reflect the presence and visibility of NGOs in each area as they become more remote and further removed from the main city of Dar es Salaam. The response below outlines an interesting sentiment:

“You the experts should be responsible. Because we know nothing about trees and other things, so it is the experts who should deal with these issues.”

Female, age 30-39, Ilemba, Rukwa

Myself and my research assistants were on occasion referred to as ‘experts’, and the quote above not only directly suggests that experts are ‘responsible’ for dealing with environmental issues, but equally paints the local people, including the individual speaking, as not knowledgeable, and therefore not responsible, for local environmental issues. This clearly ties in with evidence in Chapter 5 which illustrates that local adults tend to undervalue their own knowledge. Local people evidently not only attribute responsibility to the government, but more broadly to those outside of communities. The reference to the research team as the ‘experts’ and therefore responsible is an interesting manifestation of this sentiment, perhaps attributing responsibility to those nearest ‘outsiders’, fitting in with the more general perception of responsibility in these Tanzanian communities. Other organisations perceived as being outside of the community, not shown in Fig.

6.2 for clarity, were attributed by a small number of people as being responsible for the local environment. In Kawe, 'Tanganyika Meat Packers', a large company that used to operate a factory in the area, and employed many of the local people, was suggested as being responsible for dealing with particular local environmental problems by 7% of Kawe residents. In Bagamoyo, 5% suggested that the hotels which occupied the beach area should be responsible. In Rukwa, 9% of respondents, all Fipa people, suggested that the Sukuma people of the area should be responsible for particular environmental problems as they were perceived to be the ones who created them. Although these are all relatively small numbers, coupled with those who understood the government, NGOs and experts to be responsible, in all three study areas there is an overwhelming perception that responsibility for the local environment lies with authorities who are outside communities.

Yet the picture of the cultures of responsibility in Tanzanian communities is more complex than this. As Mercer (1999) also alludes to in her work in Tanzania, the evidence in Fig. 6.2 suggests that there is not a strong sense of collective 'community' action in Tanzanian communities. In terms of who is responsible for environmental action, respondents were more likely to cite individuals taking action 'by themselves' rather than as a 'community'. In Kawe, 27% of respondents referred to individuals being responsible by themselves, with only 6% suggesting that the community collectively was responsible. In Bagamoyo there was a similar relationship, and it is only in Rukwa where these two percentages, both still relatively small, are similar, with 7% alluding to individuals and 9% suggesting community responsibility. The specific discourse with which respondents described this individual responsibility is important here. The quotes below are illustrative of typical responses.

"The household are responsible to conserve the environment on their own. There is no real group to do it."

Male, age 20-29, Kawe

"It is only individuals who are involved, there are no groups organised... People cannot organise themselves as groups because they don't have the capital."

Male, age 20-29, Bagamoyo

This perception of the individual 'on their own', or 'by themselves' being responsible for the environment appears to be congruent with Mercer's (1999) finding that Tanzanian communities perceive development as something that an individual does 'by themselves', rather than as a

community. As the two respondents suggest above, groups aimed at maintaining the local environment simply do not exist.

This perception of abrogating responsibility for the environment can be understood when placed in the context of the history of the Tanzanian state. From independence in 1961 to free elections in 1995, Tanzania was a one-party state, and since 1995 the ruling party, Chama Cha Mapinduzi (CCM, *Party of the Revolution* in Kiswahili) has maintained control of the government. From 1961 to the early 1980s Tanzania was 'Africa's socialist experiment' (Mercer 1999), with a hugely expanded state apparatus nationalising most services and companies, and largely suppressing most autonomous organisations, such that the state was the largest employer, and participation in any form of local, regional or national development programme was only possible through the state. It is highly likely that this history of heavy state dependence in Tanzania is partly answerable for the current culture of responsibility in these communities. Although it was rare for respondents to comment on this directly, one teacher provided this explanation:

“They say that the first president, Nyerere, spoilt the nation. There was free everything, free water, free electricity, all from the government. So they expect everything from the government. All they say is ‘Serikali’ [government] all the time.”

Secondary School Teacher, age 20-29, Dar es Salaam

A distinctive culture of responsibility and reliance placed on the state comes itself, in part, from the history of the state in Tanzania, and the resultant expectation that local people have of its role in society. This culture appears to filter through all levels of these local communities, with local people largely seeing the responsibility for the environment, local development and services to lie still with the state. This is not a culture exclusive to these communities in Tanzania. Dixon (2001) discusses similar findings in Ethiopia, where state ownership of land, following the communist revolution in 1974, has again fostered a culture of responsibility in which local people often refer to the state. This has particularly interesting echoes with the situation in Kawe, where state ownership of land has, in the eyes of some local people, prevented them from taking action, as they assume that the state has responsibility for the management of the area and will not make changes themselves because they do not own the land. The situation in Kawe highlights how, for some in Tanzania, there is then a tension between the existing cultures of responsibility, and the current and continuing retreat of the state from public life. The relationship with the state in terms of responsibility for the environment and local development is, as Sutton and Zaimche (2000) discuss, somewhat contradictory. Despite a continued perceived reliance on the state, local

communities, particularly rural communities in Tanzania, have often suffered at the hands of state failure, the Villagisation project being the most vivid example, and in addition to this most communities are currently faced with the reality of state retreat from public services, again apparent in many other contexts of the 'Global South' (DeGrauwe et al 2005). In this context, it is clear that many local people in these Tanzanian communities are still highly influenced by the culture of responsibility fostered during the state-heavy era of the Tanzanian nation, and many do not have a strong 'community' sense of responsibility towards environmental issues. This is illustrated too through the situation described in Kawe, where local people understand responsibility for land to be with the state (as it is owned by the state), which leads to community and individual inaction as they perceive the state to be failing to fulfil its responsibilities. Yet their inaction suggests, despite many years of evidence of state failure, that they still firmly believe that the responsibility for land management is not theirs as a community. If there is a sense of local responsibility, this largely lies with individuals.

The implicit assumption of much participatory development rhetoric, that communities are prepared to act collectively for the benefit of their collective development, is seriously challenged by the nature of these Tanzanian perceptions of responsibility. It is important to recognise that typical Tanzanian understandings of individual and state responsibility might be quite different from distinctly Western ideals, embodied in participatory development discourse, and that these Western values, adopted by NGOs when they assume a participatory element in their projects, may run counter to local people's understandings (Brett 2003). It is almost paradoxical that participatory development discourse draws attention to the need for organisations to listen to local people, yet participatory development theory also makes significant assumptions about responsibility and community which appear to universalise western ideals (Blaikie 2000). Participatory development appears to assume that a kind of a-historical community exists, which has desirable values based on idealised (Western) notions of how individuals and communities will assume responsibility. It is important here not to make a value judgement about whichever conception of responsibility, either framed in a 'Western' or 'Tanzanian' mode, nor to suggest that Tanzanian cultures of responsibility are not dynamic and may change, indeed Fig. 6.2 does show a small percentage who accept either some individual or collective responsibility. But, importantly, the evidence challenges assumptions about responsibility, and therefore participation, to take account more fundamentally of how local people conceive of these ideas, and not to assume that these local understandings conform to Western values.

6.4 Knowledge, behaviour and agency

Participatory development makes assumptions about responsibility, but it also makes assumptions about links between feelings of responsibility, or willingness to take action, and the act of actually doing something about it. Participatory theory and practice assumes that, given a certain amount of knowledge, and willingness 'to do', that individuals and communities will take action to better their own lot. This is particularly the case with education development (Easton 1999; Intili and Kissam 2006), but also with practical participatory projects (Blomley et al 2008; Binns et al 1997), which assume that communicating knowledge to local people will also lead to a change in behaviour, that knowledge engenders agency, and therefore, empowerment. But, like the assumptions about responsibility discussed above, do these assumptions about knowledge, behaviour and agency hold true?

For adults and young people, knowledge, feelings or responsibility, and a willingness to participate, did not automatically and directly translate into action in the community. Amongst adults, those who did feel responsibility towards the environment did not always transcribe this into a change in behaviour, and Fig. 6.3 illustrates this discrepancy. Although as a part of the environmental education projects adults were not expected to 'participate' directly in environmental action, the figures below offer a measure of how adults' behaviour compares to their feelings of responsibility towards the local environment.

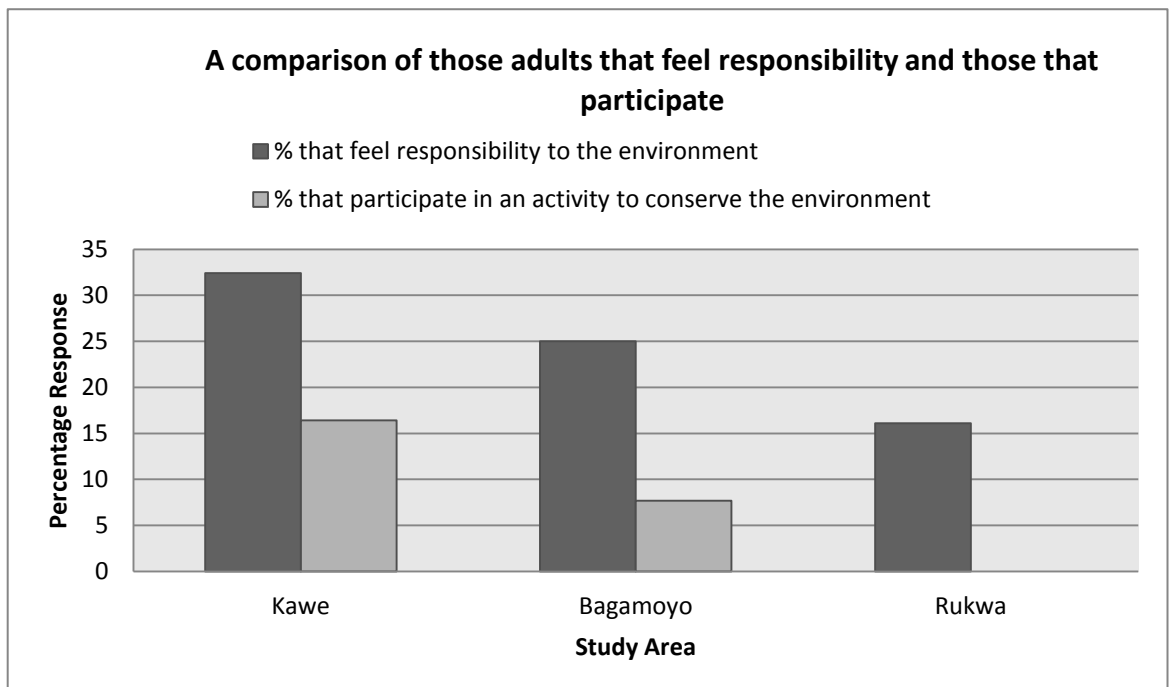


Figure 6.3 illustrates the difference between those that feel responsible for the local environment and those that took action towards environmental conservation.

Whilst a relatively small percentage of adults did feel responsible, this did not translate, for most, into environmental action. Interestingly, despite relatively low levels of feelings of responsibility, a greater percentage of adults did say that they were willing to participate in an environmental activity if there was the opportunity to do so (Table 6.1).

Were respondents willing to participate, given the opportunity? (%)			
	Kawe	Bagamoyo	Rukwa
Yes	58	35	33
No	8	7	5
Did not respond	34	58	62

Table 6.1: % respondents who were willing to participate in an environmental conservation-based activity should they have the opportunity.

In each area the percentage who were willing to participate in a 'hypothetical' activity was higher than the percentage of those who felt responsible. There is a clear distinction between the willingness to participate, and actual participation of adults in environmental conservation. Other research studies have also highlighted that local people are often unwilling to participate, through changing behaviour or taking action on acquired knowledge, because of the limitations of their individual livelihoods (Andersson 2003; Anello 2003; Brett 2003), and, particularly in studies conducted in Tanzania, there has been a some evidence that a lack of immediate and direct livelihood incentives are the most common reasons for local people not to engage in taking action to conserve their surrounding environment (Blomley et al 2008; Mercer 2002; Myers 2002). This was certainly the case for some adult respondents, as highlighted in the quote below. This suggests that, although local people may be willing to participate (indicating that they see the value in maintaining the local environment), the lack of direct financial incentive makes their participation not viable in light of their livelihoods.

“Sometimes people are willing, but there must be money. Where is the money to ensure that they will put in the effort in in an effective way?”

Male, age 30-39, Kawe

The need for a financial incentive in order to participate in maintaining the local environment was highlighted by 20% of respondents on average between the three study areas. However, in some respects contrary to previous research, this was not the sole key reason as to why local people felt that they could or did not participate (Fig. 6.4).

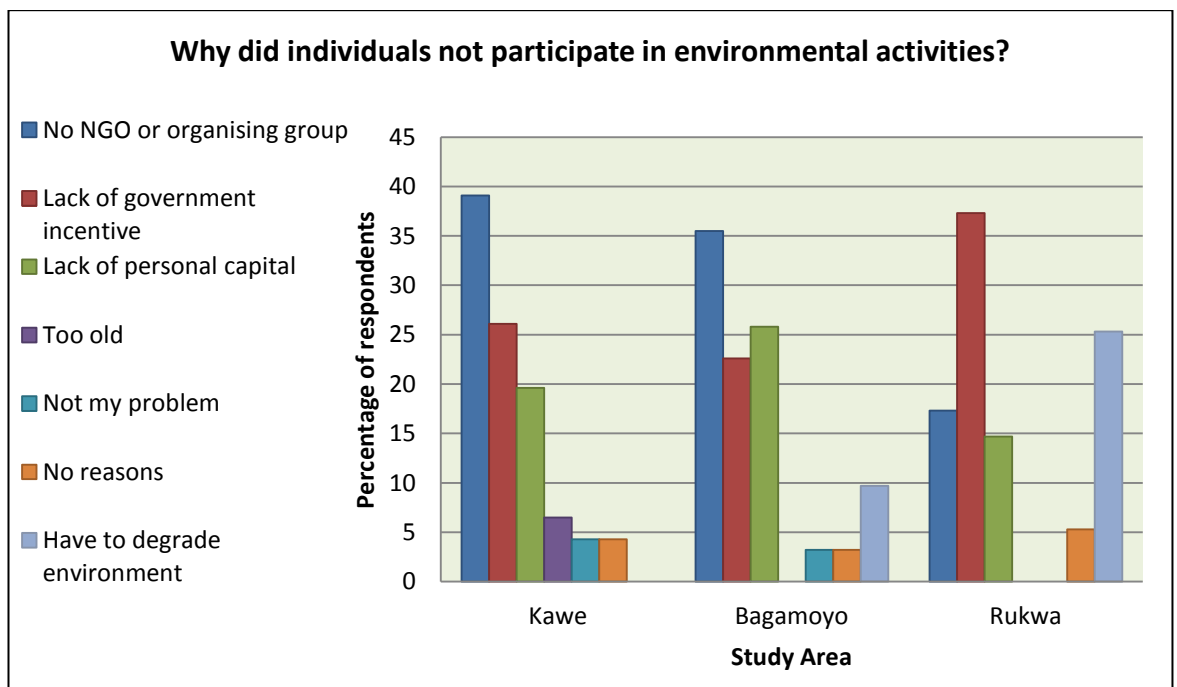


Figure 6.4: The range of responses cited for not being able to participate in local environmental conservation.

Whilst a lack of personal capital and financial incentive was clearly important, several other reasons exist. For both Kawe and Bagamoyo, and to a lesser extent Rukwa, a significant percentage said that their lack of participation was because there was no NGO or group to organise such an activity. Equally, a high percentage also suggested that their lack of participation was due to the national or local government having not organised any activities. The reverse trend in Rukwa, compared to Kawe and Bagamoyo, in terms of those who cited NGOs or the state as more important, might be explained by the lack of exposure to NGOs in the more remote situation of Rukwa. Below illustrates a typical response.

“If there was the opportunity then I would participate, but I have not been involved because there are no activities or NGOs here.”

Female, age 20-29, Kawe

Clearly, there are close links here between participants suggesting that they have not taken part in activities because none are available, assuming that they should be 'provided' by an external body, and the evidence to suggest a general abrogation of responsibility for the environment to these external agents. The perception of responsibility and voluntarism in the relationship between individual and government in Tanzania is therefore perhaps more complex than it first seems. When respondents describe their action in terms of the environment, this is often not framed in their lack of capacity, or in terms of willingness, or personal livelihoods, or even their physical

capacity to work, but instead in their capacity to self-organise at the community level. Again, this is an important critique of participatory development. Communities do not necessarily self-organise to produce development activities that would be 'expected' under the participatory and postdevelopment paradigm.

There were further reasons given by respondents which together were of significance, and point towards other limitations of community capacity. In Kawe, 7% of people said that they thought themselves 'too old' to participate. In all areas a small percentage of respondents did not regard environmental issues as their problem personally, and some could not give a reason why they would not be willing to participate, illustrating perhaps a certain level of ambivalence. In Bagamoyo and Rukwa (but, interestingly, not in Kawe), respondents reported that they had to degrade the environment in order to fulfil their livelihoods, and therefore could not participate in activities of conservation. This was only a small percentage in Bagamoyo (10%), but much more significant in Rukwa, with 25% of respondents indicating this as an issue. Such frankness with regard to environmentally 'destructive' practices was rare, yet significant, as it demonstrates another level of awareness of problems associated with local livelihoods. They recognised that conservation practices contradicted their own current livelihood practices.

“Cutting forests cannot be avoided. People must get charcoal for firewood. Most people are poor... we need living standards to be generally raised... This will stop environmental degradation.”

Female, age 30-39, Bagamoyo

This respondent reflects that they, as well as others in the community, need to use natural resources at intensive rates. They do this because their livelihood is so much a part of the problem that to deal with local environmental problems effectively would require an unsustainable shift in their livelihood activities. It is interesting that in Fig. 6.4 there were no responses which linked non-participation with a 'lack of time' to do so, as other studies have highlighted (Harpham et al 2005; Kapoor 2002b; Mayoux and Chambers 2003; Sanderson and Kindon 2004; Sharp et al 2003). A possible explanation is that some responses may reflect that respondents cannot commit their time to 'participating' in such an activity. For example, several respondents highlighted that there was no present NGO or organising group which may indicate that they did not have time to organise activities themselves, whereas a 'lack of personal capacity' may also include those who do not feel they can spare time. Despite this, it remains interesting that there was a distinct lack of direct reference to a 'lack of time'.

As with conceptions of responsibility, perceptions of what it means to volunteer and give time to a particular local issue are also culturally specific. The assumptions of participatory development, that local people are willing and have the skills to participate in local activities do not hold water, as Brett (2003) also argues, because local people cannot be expected to participate if they do not have the necessary skills and an adequate pay-off for their time. Yet the evidence shows more than this, that willingness and feelings of responsibility are not always enough to ensure that people will take action, and it is therefore important to separate an individual's understanding of responsibility towards society and their actual behaviour. Livelihoods are clearly important (Caillods 2005), and respondents often expect direct financial incentive for their participation, rather than being willing to volunteer. However, just as predominant and in some areas more significant was the lack of an organising body to create opportunities. That this was an important theme for respondents highlights how the 'grassroots' of society are not, necessarily, able to create spontaneous local development in the ways that poststructuralist and postdevelopment thinkers might wish us to believe (Agrawal 1996). This illustrates how some of the basic concepts on which participation is founded are culturally constructed in the West (Blaikie 2000), and that both poststructuralist and participatory understandings of local responsibility and local voluntarism may be just as much Western constructs of how development should be as previous paradigms. Recognising the cultural constructions of responsibility, voluntarism and participation should not though be allowed to overpower the importance of the specificity of the individual or the community. As Figs. 6.3 and 6.4 illustrate, there are individuals who do take action in the environment, there are also individuals who may not want to participate in environmental activities regardless of incentives, and there are individuals who, because of their age or position in society, may not be able to participate. Therefore whilst it is possible to identify distinctly Tanzanian cultures of responsibility and voluntarism, these should not be applied universally to individuals or communities.

Thus far I have discussed the participation of adults, however, it is young people who are the key beneficiaries of environmental education, and it is through a focus on them as environmental actors that we can examine another assumption of participatory development: that a change in knowledge, through education, will lead to both short and long term behaviour change (Andersson et al 2003). This is tied closely to the notion of empowerment, in that through participatory mechanisms knowledge will become agency, which will itself engender empowerment (Green 2000). Young people were asked about their actions (Table 6.2).

Did young people take action in the environment (%)?			
	Kawe	Bagamoyo	Rukwa
Yes	27	26	36
No	19	0	36
Did not mention	54	74	29

Table 6.2: The percentage of young people who reported that they took part in environmental action, collated between primary and secondary schools.

Between a quarter and a third of young people suggested that they did take some form of environmental action, the remainder either did not, or did not mention that they did so. When compared with adult respondents in the surrounding communities (Fig. 6.5), it is evident that young people tend, on average, to report that they are more likely to take action. In Kawe and Bagamoyo this might be expected, as in these areas young people have been engaged in environmental education projects.

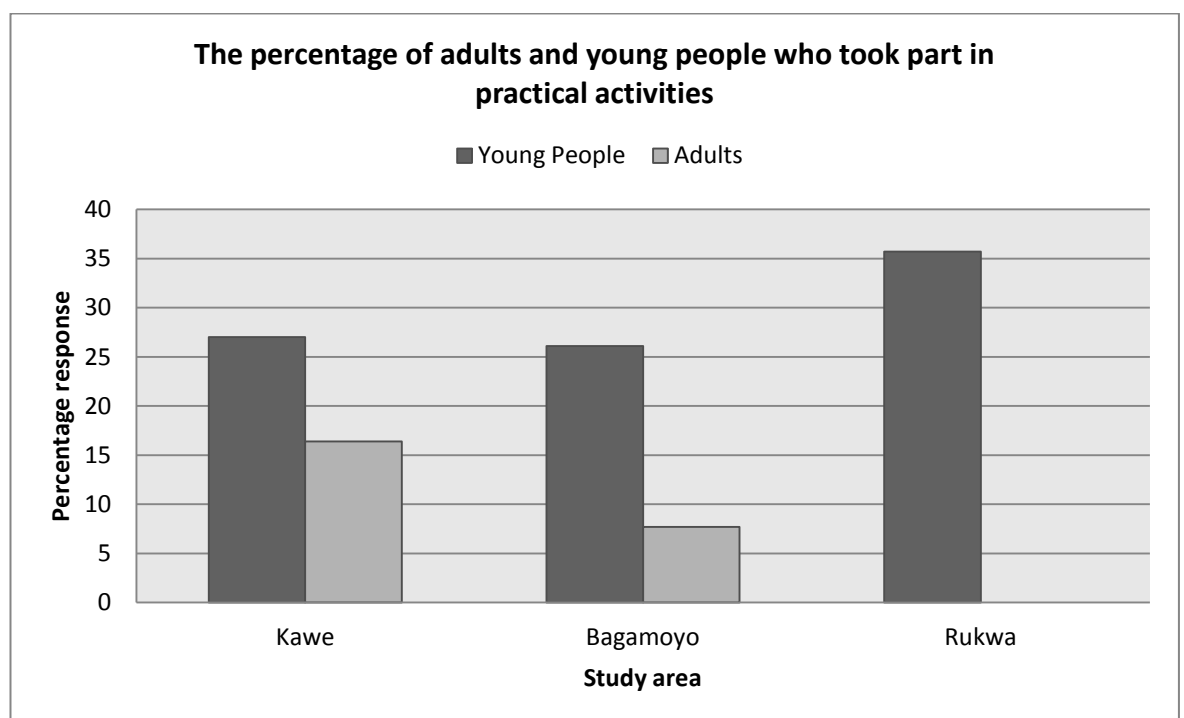


Figure 6.5: illustrating the difference between young people and adult's self-reported participation.

However, this pattern does not follow in Rukwa, where no adults reported that they had taken part in any activity aimed at environmental conservation, yet it is here that the highest percentage of young people reported that they did. Whilst we might attribute the higher percentage of young people reporting that they did participate in Bagamoyo and Kawe compared to adults to their participation in the JGI programme, the evidence from Rukwa throws doubt on this assumption.

Further contradiction to young people’s self-reporting of taking part in environmental activities comes from adult respondents. Very few adults reported that they had witnessed young people participating in environmental conservation activities. In fact, many adults went out of their way to describe their observations of young people acting in an environmentally destructive fashion, and for some this was evidence that young people had not been engaged in environmental education. These were typical responses:

“The pupils are only involved in a national environmental day.. Otherwise they are reluctant. But I’ve seen no difference over the last 2 years in the local environment whilst the EE project has been running.”

Female, age 20-29, Kawe

“Even if children and youth are taught in schools then they don’t care really about the environment. I see them chopping trees... If they are taught it in school then they are not practising it.”

Male, age 60+, Kawe

The first respondent highlights that environmental education was only visible in one-off 'events', and not in the general behaviour of young people. The second respondent has not seen any 'practical' changes amongst young people, relating this back to the notion, common amongst respondents, that young people are only taught theoretical knowledge in schools, rather than practical application. Table 6.3 illustrates the percentages of adults who gave similar responses.

Did adults observe young people taking practical action (%)?			
	Kawe	Bagamoyo	Rukwa
Yes	4	4	0
No	26	26	20
Did not mention	70	70	80

Table 6.3: Adults who observed young people taking action towards environmental conservation in their community.

Only a small percentage in Kawe and Bagamoyo reported that they had seen young people actively involved, whilst in Rukwa there were none, again interesting considering the numbers of young people who reported that they did take action. This might be explained by the fact that young people were taking part in practical activities in their school grounds, as was often observed in visits to schools. However, young people themselves contradicted this by stating that those that

did take part in environmental activities predominantly did so in the community (Table 6.4).

Where did young people participate in environmental activities (%)?			
	Kawe	Bagamoyo	Rukwa
School	30	17	30
Community	70	83	70

Table 6.4: Those that did report that they took part in environmental activities were asked where they did such activities.

Yet this evidence is clearly refuted by reports from adults. Without another, directly observable measurement for the behaviour of young people, it is difficult to discern what the reality of the situation is. What can be suggested is that, based on their own self-reporting, young people's participation in environmental activities is still very limited, even if it is higher than that of adults. If young people are actively participating in environmental activities, these are at least not visible to adults, again highlighting problems with the JGI projects in terms of communication between the official spaces of the project in the school and the wider spaces beyond in the community. Whilst from this evidence overall it is difficult to make definitive conclusions about the effect of these education projects on young people's behaviour, indeed this would require a longitudinal study which did not rely on self-reporting, it is apparent that their participation, particularly in the community, is limited, even for those engaged through the programme.

The direct relationship between knowledge and agency, as assumed throughout participatory development theory and practice (Green 2000), is in this case highly spurious. There are several possible explanations for this. Firstly, the 'type' of participation in which young people appear to be engaged could be classified as rather 'shallow' (Parfitt 2004). Young people were only being asked to volunteer their time, not to be actively involved in decision making. Evidence for this comes from young people themselves. Those who did take part in an environmental activity were asked to describe what they did (Table 6.5).

What environmental activities did young people participate in (%)?			
	Kawe	Bagamoyo	Rukwa
Planting trees	80	67	80
Cleaning	20	33	0
Stop cutting trees	0	0	20

Table 6.5: Young people who did participate were asked to explain the type of environmental actions they took part in.

The range of environmental actions was relatively limited. All but this last category (Table 6.5), where young people said they helped to prevent people cutting down trees, could largely be classed as 'shallow' participation in that they were simply involved in the physical aspect of 'doing' something in the environment, not actively engaged in making decisions or influencing the social behaviour of others. The final category in Rukwa shows some sign that young people were engaging beyond being the labour for environmental projects, although interestingly no young people in Kawe or Bagamoyo, where the projects were taking place, mentioned that they were socially engaged in this way. That young people were only taking part in relatively 'shallow' forms of participation might explain their general lack of participation, in that they have little 'ownership' of the project, and perhaps cannot see how their actions are engaged with the social realities of the local area (Parfitt 2004).

Other authors have also highlighted how environmental education projects have not always succeeded in changing behaviour. As Uzzell (1999) points out in the context of the UK, environmental education does not always lead to the action competence of young people. Dixon (2001) and Green (2000) find similar results in other contexts, that knowledge and training does not necessarily lead to a change in behaviour. This is certainly the case for many young people in this study, and it might be possible to interpret adult responses that they do not see young people participating in environmental activities in the wider community as part of another explanation for the apparent lack of agency amongst young people. Here, Cornwall's (2002) distinction between 'invited', official spaces of participation, and demand for participation in unofficial or 'popular' spaces is useful. In the case of these environmental education projects, the 'official' spaces of participation are the schools, and there is evidence that young people do take part in practical activities within the space of the school. Yet, in these spaces there is no apparent 'demand' for participation, in fact participation is somewhat 'expected' of young people as it is delivered through the strict power hierarchies of the school²⁹. Here young people are not 'invited' to participate, it is expected of them. If participation does 'work' in the official participation space, then it is clear that, at least from the perceptions of local adults, it becomes faded and disjointed

²⁹ In the current Tanzanian education system there is evidence that the hierarchies between teacher and student are much stricter in schools than perhaps is the current experience of schooling in the Global North. Observational evidence confirmed what others have also noted with regards to education systems elsewhere in the Global South (Easton et al 2000; Easton 2004), that teaching pedagogies are still largely dominated by dictatorial 'chalk and talk' style, discipline and punishments are generally much stricter, and students tend to be highly subservient to teachers. Whilst the maintenance of such pedagogies may be in part due to practical circumstances (such as controlling classes of considerably greater size than is common in the Global North), they equally reinforce much stricter power hierarchies between teacher and student, which may, in the case of this project, reproduce greater expectation that students should 'do as they are told' when it comes to activities which are run through schools. The evidence in this context is only circumstantial and based on incidental observation, yet perhaps does illustrate that such expectations are linked to wider pedagogic issues for the education system in Tanzania and the Global South more generally.

in the unofficial spaces or 'spaces of everyday life' (Cornwall 2002). Just as has been illustrated in Chapter 4, young people do not translate their knowledges from the school into the wider community, nor does it appear that they successfully translate practical action from the official space of participation into the wider community.

These spaces for participation are partly constructed by the conditions of the project. The JGI programmes operate in and through the space of the school, linking what is learnt with that particular space. But these spaces are also partly constructed through the knowledges which are enabled to be expressed within them, as I have demonstrated in Chapter 4. That the participation and environmental action of young people may not be enacted in the space of the community, or the 'unofficial' space of participation, may be in part because there is already an existing conflict of knowledge, between the 'other' knowledges of conservation, associated with particular types of behaviour, and the 'local' knowledges of the environment (Ortiz 1999). Because the 'unofficial' space of participation for young people, in the home and around the wider community, is largely controlled by adults, they are not free to act in ways that may be potentially contradictory to adult understandings of environmental management. There is evidence here of distinct participation spaces, as described in part by Cornwall (1998; 2002). That young people are unable to express their knowledges in the space of the home, to some extent due to prevailing hierarchies in communities, may also act against them making changes to their behaviour in these spaces. If their knowledges are not accepted, or not given space to be heard, then it seems equally unlikely that they will have the encouragement to change their behaviour.

Yet Cornwall's (2002) schema of 'popular' vs 'invited' spaces appears to posit a binary logic (Kesby 2007), assuming that somehow 'popular' spaces are more authentic than those which are produced from project or official circumstances. In this study, young people were able to enact and (re)produce particular types of empowered performance in 'official' space (Chapter 4), which they were unable to translate into 'popular' spaces, or 'unofficial' spaces of the home and the wider community. It might be argued that in this circumstance the 'official' space, despite the particular power dynamics of 'expected' participation within it, offered a different space through which young people could produce and reproduce forms of empowerment. To some extent this evidence adds weight to Kesby's (2007) critique of Cornwall, disrupting the assumption that 'popular' space outside of the 'project' will somehow allow for more authentic and 'better' forms of participatory empowerment. Whilst the evidence in this section points to the fact that there are distinct spaces, and that empowered performances produced in particular spaces under specific power dynamics may not translate well onto other spaces, this should not diminish the

importance of the performances of empowerment which are achieved in 'official' spaces. Indeed, it may be that it is only under the specific power dynamics of the 'official' project space where, at present, performances that may in the future be reproduced in the wider community can be rehearsed, and that the perceived boundaries of the official nature of the space offer a form of rehearsal space which is perceptibly separate from the more 'oppressive' power dynamics of the community. The evidence throughout this chapter suggests that participatory development theory and practice need to take account of how notions of responsibility and voluntary action are culturally and spatially specific. For adults in Tanzania, these concepts appear to be understood differently to the ideals embodied in participatory and postdevelopment theory. Crucially, individuals and communities do not spontaneously self-organise, nor do they necessarily create 'popular' spaces of participation (Cornwall 2002), and without direct livelihood incentives, are unlikely to take action which, in some cases, they perceive as potentially altering their livelihoods. The lack of will towards community organisation, a cornerstone of participatory and postdevelopment thought, should force us to think about how participatory type development might work in the context of Tanzanian conceptualisations of community and individual action, rather than western ones. Careful analysis of both adults and young people, their individual and group cultures of responsibility, behaviour and action, and how these play out across space, are essential for understanding the impacts and potential impacts of participatory development processes.

Concerns for the spatial nature of participation have clearly already been recognised in research (Cornwall 1998; Cornwall 2002), as has the lack of attention to the specifics of local social-spatial contexts in which participation is enacted and reproduced (Guijt and Shah 1998; Cornwall 1998; Kambou et al 1998). Yet, as I illustrate earlier, some participatory spaces and actions can be empowering for young people (Chapter 4), despite the fact that these spaces may themselves be laden with 'traditional' relationships of power. This perhaps offers a counterpoint to those who appear entirely hostile to the broad participatory agenda and the power dynamics that can be present through it (Cooke and Kothari 2001). In this case study, whilst the environmental education project did illustrate a lack of understanding of, or an ability to account for, the local power dynamics which prevent transference of empowered performances from one space to another, it did allow for certain kinds of empowerment to be (re)produced within spaces which are equally replete with relationships of power. Some instances of participation can be empowering in particular ways and in particular spaces, illustrating that there is need for ongoing debate about the potential of participatory processes to work with, in and on particular reproductions of social power, rather than to assume that all forms of participation necessarily

reproduce norms of community power dynamics (Cooke and Kothari 2001).

6.5 Who are the local community?

If Tanzanian communities do not 'fit' into western ideals of community which are embodied in participatory development, if they do not always operate collectively for the benefit of the environment and community as a whole, and if individuals do not accept responsibility for the environment in ways that are desired by participatory projects, then why is this? I have already discussed how ideas of responsibility and environmental behaviour are contextually dependent, but here I seek to build a more detailed and concrete picture of what 'community' means in the context of Tanzania, and what impact this Tanzanian conceptualisation of community has for participatory development and notions of 'empowerment', particularly for young people.

6.5.1 A Tanzanian understanding of community

I have already discussed how communities are far from the consensual and 'harmonious' ideals of participation though describing how local social strata, in families but also village leadership organisations, are largely male dominated, as well as reflecting the hegemony of age over youth. Local older male-dominated leadership groups control access to communities for outsiders, they have some control over access to natural resources, and they enforce local laws. But the conflicts and divisions that exist in these Tanzanian communities are more complex and more subtle than traditional male-dominated hierarchies of power. Those individuals who specifically constitute particular communities also has a significant bearing on how communities function, and an examination of this can help partly explain why there is a lack of western 'community development ideology' and 'local community' consensus.

It is important here to reflect on the detailed nature of divisions in Tanzanian communities which prevent forms of community consensus being reached. Divisions and significant conflict can exist within communities along tribal lines. In Rukwa, there are conflicts between the two main tribal groups in the three villages: the 'indigenous' Fipa³⁰ and the 'migrant' Sukuma. There is much open resentment between the two, in part because the Sukuma are understood locally as 'invaders'

³⁰ The Fipa were, like many 'indigenous' groups, once also migrants to the area, although not within living memory of any respondents here. This goes more deeply into debates about what is meant by 'indigenous' in reference to a particular people in a particular space than I wish to go into here, although it is worth noting, as it is interesting in the context of their relationship with the Sukuma. Rather than be understood as (as the Fipa perceive themselves to be) the indigenous of this area of Rukwa, it might be better to understand them as to have settled in the area before the Sukuma arrived two or three generations ago.

who have increased pressure on land and resources. According to local people's accounts, Sukuma people began to arrive in the early 1990s. Many of these migrants came from Shinyanga and Mwanza (Map 3.2), largely because parts of these regions had become too dry for cattle. Prior to the arrival of the Sukuma, the Fipa were more confined to land around the villages and conducted small-scale farming using less intense farming methods, and overall there was a lower population. The arrival of the Sukuma increased demand for land due to their more intensive agricultural and pastoral practices and because of their tendency to have large extended families³¹. There are also points of cultural difference that cause conflict. Fipa people remarked that Sukuma tended to marry their daughters off earlier, and that their culture was one in which women were more subservient to men. Whilst most people in these three villages speak Kiswahili, both Sukuma and Fipa have their own language. Some Sukuma cannot speak Kiswahili, or speak it very poorly. As a result of these natural resource conflicts, compounded by cultural difference, the Sukuma are often 'blamed' by local Fipa people for the rapid destruction of local forests. Although there is no history of violent conflict, there was a sense of underlying resentment.

"All these problems are caused by the Sukuma. They are the ones who come here without farms so they are the ones who are clearing all of the land."

Female, age 40-49, Solola (Rukwa)

Here the respondent represents a trend amongst Fipa people to directly blame the Sukuma for the stress on natural resources. For some, this may have been partly underwritten by feelings of resentment towards the Sukuma, who are generally successful farmers. Far from being excluded from the community, several Sukuma men were prominent in local village authorities because of their wealth and power.

Whilst Erdelen et al (1999) have illustrated that different ethnic groups who live close to each other may use, for example, the same plant or crop differently, the evidence here illustrates how these different environmental knowledges and practices are significantly entwined with other local conflicts which act divisively within communities. These local tribal conflicts in Rukwa are significant as they illustrate another one of the lines through which communities can be divided, divisions which are interwoven through knowledge and culture, as well as relationships of power and wealth. These conflicts reveal more than 'simple' relationships of power between the two

³¹ The Sukuma practice polygamy to a far greater degree than Fipa people or other tribes in the area. Successful Sukuma men may have upwards of 5 wives and over 30 children, leading to large extended families. In Rukwa, this has contributed significantly to the expanding population and demands for land amongst local people.

groups. Whilst the Sukuma represent a smaller percentage of the population that are somewhat persecuted, some Sukuma have attained locally powerful positions. Relationships of power between the two groups are still in the process of negotiation. As other authors have highlighted, defining community level power relationships can be very difficult (Clever 1999; Diawara 2000), and this evidence of conflict between tribal groups illustrates the complexity of defining these relationships, yet also highlights how important understanding them is to develop a fuller appreciation of how communities are not 'cohesive'.

The migration of the Sukuma also highlights a further point about the fluidity of communities in terms of their social constitution. The implication of current and existing conceptualisations of community in development is that they are relatively 'static', and there is little theorisation about how, particularly rural communities, are affected by migration in terms of their local knowledge and ability to act collectively. Both communities in Kawe and Bagamoyo were significantly influenced by influxes of migrants from throughout Tanzania. Kawe has numerous histories of migration, from migrants that came to work in the Tanganyika Meat Packers factory, to those who have migrated more recently from rural areas looking for work in Dar es Salaam. Compared to the other two areas, Kawe has by far the greatest spread of migrants from over Tanzania (Map 6.1, and Table 6.6).

Birthplace of Interviewees in Kawe	
Birthplace	Number
Did not mention	21
Kawe	18
Songea	5
Dodoma	4
Outside of the area	3
Tanga	2
Mtwara	2
Singida	2
Arusha	2
Bukoba	2
Kigoma	1
Kilimanjaro	1
Morogoro	1
Tabora	1
Mara	1
Moshi	1
Iringa	1
Shinyanga	1
Kibaha	1



Map 6.1: The birthplaces of migrants to Kawe from the sample in the research study. (Source: Google Earth)

Table 6.6: The birthplaces of migrants to Kawe indicating actual numbers from each area.

The effect of this high proportion of in-migrants on the ‘community’ in Kawe, where in this sample at least 44% came from outside the area³², is difficult to assess fully. For some, the large proportion of migrants was problematic because the ‘mix’ of people, and their different environmental knowledges, meant that the community was less likely to reach a consensus.

“In Kawe people are too mixed up, there are lots of people from different areas and cultures, who do not share the same values... It makes it difficult for people to have a common understanding of the environment and how to look after it.”

Male, age 30-39, Kawe

This respondent suggests that those who have different cultural experiences will have different values about the environment, and the statement rejects the idea that the community of Kawe can have a common understanding on environmental issues. There are clearly links drawn

³² Slightly lower than official statistics for Dar es Salaam in 2002, which give the migrant population of the city as 49% (NBS Tanzania 2006)

between the diverse make-up of communities and the apparent lack of a ‘cohesive’ community. By contrast, in Bagamoyo, there is less apparent cultural difference in the social make-up of the community (Map 6.2 and Table 6.7).

Birthplace of Interviewees in Bagamoyo	
Birthplace	Number
Bagamoyo	24
Did not mention	16
Dar es Salaam	6
Morogoro	4
Iringa	2
Outside of the area	1
Songea	1
Singida	1
Mtwara	1
Mara	1
Kilimanjaro	1
Tanga	1

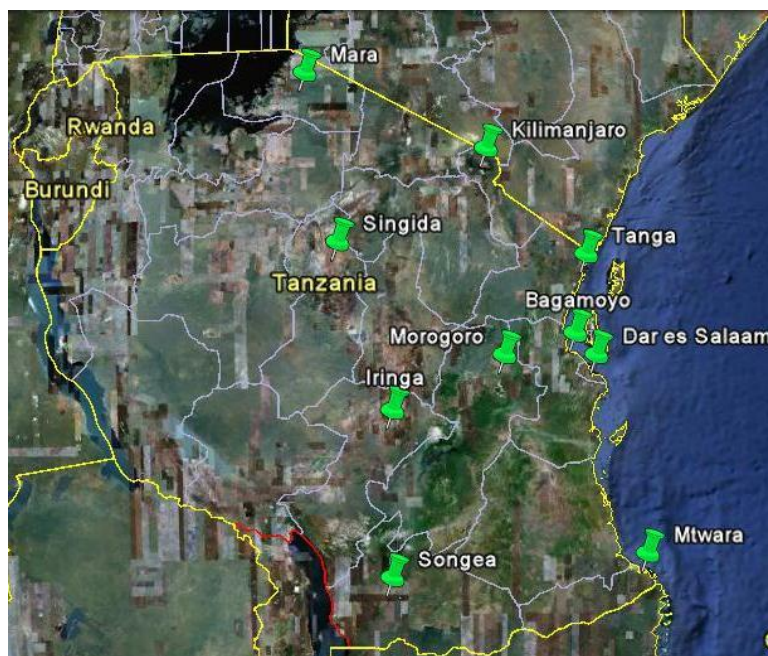


Table 6.7: The birthplaces of migrants to Bagamoyo.

Map 6.2: The birthplaces of migrants to Bagamoyo from the sample in the research study (Source: Google Earth).

The trend of in-migration is less significant than for Kawe, but there remains a relatively high percentage of people who were not from the area (32%)³³, whilst a higher percentage were born in Bagamoyo (41%), compared those who were born in Kawe (26%), and there is a significant reduction in the number of different locations that migrants come from. It is of significance then that respondents in Bagamoyo did not make similar comments to those in Kawe with regards to the ‘mixed’ nature of the community and the perceived detrimental effects.

The make-up of communities in Rukwa, Kawe and Bagamoyo, calls into question not only the assumed ‘cohesive’ nature of a community, but also highlights the dynamic nature of their populations and knowledges. This further draws attention to the geographical scale at which one considers a ‘community’ to exist. Whilst contemporary development discourse has placed the community in the ‘local’, fixed to a particular place, and that those knowledges within them are then also fixed in place, this evidence shows that communities exist ‘beyond’ the scale of the immediately local. This is not to deny that a sense of community does exist at the local scale, but

³³ Higher than the official statistics for the area in 2002, which give the migrant population of Bagamoyo as 21% (NBS Tanzania 2006)

instead takes into account how the broad spatial networks of community contribute to how they should be conceptualised. For example, the respondent quoted above from Rukwa has a distinct sense of community in terms of who does and does not belong, and several Fipa people define their community by those who do not belong in it, i.e. the Sukuma. Some Sukuma also have a strong sense of 'not fitting in', as has been illustrated in Chapter 4. Equally, those from Kawe and Bagamoyo in part define their communities by those who are 'outside'. Many of these facets of 'community', however, are informed by divisions within 'community', as, whether the Fipa people like it or not, the Sukuma do live within the same geographical space as them, and, importantly, take part in constructing their 'community' in particular ways. Also significant is how these ideas of local community are constructed through many 'external' facets to the 'local'. All three 'communities' are made up of people who are, in one way or another, 'outside' of the local. In light of this, it is important to distinguish between 'community' and 'local', often employed together in development discourse as 'local community', in fact there is much about communities which is not 'local', and much about the 'local' which is not completely defined by those who live within its geographical boundaries.

To further illustrate this, there are also those within communities who exist temporarily at a particular place that create networks of knowledge which span beyond the physical space of any locality. Some pastoralists in Rukwa stay in the villages for as much as 6 months of the year, herding their cattle to make use of the grazing land, before moving on. Other migrant workers come to the villages in Rukwa to work as farm labour during harvest time. In Bagamoyo, some residents are only temporarily there to work in fishing, or are studying at local colleges. In both Rukwa and Bagamoyo there was evidence of traders paying temporary, but repeated, visits to those localities³⁴. This questions at what point one considers any individual to be a part of a 'community'. The communities here were defined by both 'local' and 'external' facets, and equally by fixed and transient persons, but they cannot be defined completely at either. For many the boundaries are blurred; for the Sukuma, they are distinctly 'outside' of their current community in Rukwa, yet also exist as an important part of it. In development, the community needs to be conceptualised as a varyingly fluid series of partially transient networks that span beyond the place in which it is temporarily, or more permanently, rooted for an amount of time. In terms of social organisation, the 'community' cannot be assumed to be 'consensual' or always capable of acting 'together', because this is not always the nature of communities. Those who live in remote

³⁴ Indeed, in Ilemba, Sakalilo and Solola, temporary workers generated an economy based on their work patterns. In Ilemba several individuals operated temporary workers' accommodation, individual rooms, often organised in a quadrangle, with shared facilities. These were rented to traders, agricultural workers and even preachers, who were staying temporarily. Many of these temporary residents made repeat visits over the course of many years and had established friendships and a 'place' in the community.

places are likely to be less socially mobile than those in the 'West', but the social mobility over space that does exist should not be ignored. This fluidity, dynamic range of origins and expansive networks contribute to the range of knowledges available, but also shape how internal relationships of power unfold. Conceptualisations of community such as this have been present in the critical literature on participatory development for some time (Guijt and Shah 1998; Cornwall 1998; Goebel 1998; Green 2000), yet it remains important to reflect on this understanding of community might apply 'on-the-ground' in these specific social-spatial contexts, and the implications this has for 'local' forms of empowerment.

The fact that there is not necessarily a strong 'community spirit' is not unusual in Tanzania. Myers (2002) also finds a distinct lack of community cooperation in Zanzibar, and both Green (2000) and Mercer (2002) demonstrate that in Tanzania development is often seen as personal and individual, and that any 'community' action is often aimed at improving individual livelihoods. This lack of 'community development ideology' (Green 2000) may be due to the absence of an 'ideal' community in the first place (Guijt and Shah 1998), as the lack of fixity in both time and geographical space of the community may, in fact, dampen the potential for performing local development as a collective. The fluidity of the population of a community may prevent a consensus forming around particular issues, as different cultural and land use traditions may not be easily reconcilable. The romantic notion of the 'local community' does not exist in the context of these three communities, which should lead us to question *where* it exists. If 'local development' discourses of 'community' do not apply to these communities in Tanzania, where do they apply? Whilst employed readily throughout participatory and postdevelopment writing, the idea of 'community', as a 'local' group that will act together, equitably and inclusively, for a collective good is just as much of a constructed metanarrative as any other concept of development (Agrawal 1996; Guijt and Shah 1998; Mohan 2002), and this is not how these Tanzanian communities function. The Tanzanian conceptualisation of community is one which is underpinned by specific ideas of responsibility and behaviour, largely focused on the individual and the importance of outside agents, and it is one which reflects the social makeup of communities which is wrought with divisions, marginalisations and broad networks of knowledge.

That communities are a complex of negotiations defined by power and knowledge, and are constituted by individuals and groups whose knowledges and social relations span into networks beyond the local place, calls into question the site of 'the local' as a space for 'empowerment'. In participatory and alternative development thought, 'the local' has often been held up as a site of empowerment (Diawara 2000; Kesby 2005), yet the local level itself is constituted through a series

of social barriers that actively prevent empowerment for some, as indeed others have recognised in other contexts (Cornwall 1998; Murthy 1998; Kambou et al 1998). The local is then as much a site where social marginalisation is reproduced. Both the marginalisation of women and young people in male-dominated societies, and the example of the Sukuma, illustrate this. But it is important to highlight that these marginalisations do not act completely on all within these social groups. Although the focus has been on marginalisation for both women and young people, neither of these marginalisations is complete. Women in Rukwa may be outside of official community decision making, but may influence decisions in other ways. For example, at the household level, individual older women may be relatively powerful, and may influence community decisions in other ways.

Holding up the local as a site of empowerment can also significantly risks overplaying local agency at the expense of broader structural features at other spatial scales (Leach and Fairhead 2000), and the 'community' focus of participatory development may have served to 'marginalise' attention to broader concerns (Green 2000; Mohan and Stokke 2000), for example, by ignoring the importance of decisions made at the state or regional levels (Brett 2003), and by not taking into account how actors that operate at this level influence the local (Bebbington 2000). In Bagamoyo, local fishermen expressed concern that they were being economically marginalised by government restrictions. Although this problem was only recognised by 13% of the sample, the rhetoric with which local fishermen discussed their dilemma was significant.

"We had a statement from the government which prevents the poorer fishermen from doing any fishing... The nets which are banned, from 1.5 to 2.5 inches trap only small fish... over 3 inches are ok, but they only trap fish which you can only find far away. We are not powerful economically, how can we do this? ... We are sorry for this work, but it is the only work that we can do."

Male, age 20-29, Bagamoyo

Poorer fishermen, fishing for domestic consumption, are pushed out of fishing because of government restrictions, and only larger-scale fishermen can afford to continue (Picture 6.4). Observational evidence confirmed that these now illegal, small-scale, fishing practices continue (Pictures 6.5 and 6.6).



Picture 6.4: Large fish for sale on Bagamoyo beach. These fish were caught using legal methods, using nets with a width of 3 inches or more, indicated by the size of the fish.



Picture 6.5: Illegal fishing. A fisherman on Bagamoyo beach using an illegal net.



Picture 6.6: Small fry. Fish caught using illegal nets. These fish are much smaller and are largely used for domestic consumption.

External powerful interests from private sources can influence community dynamics, particularly relating to the environment. In Bagamoyo, hotel building on the coast by private investors also has significant impacts. A security guard describes how supposedly protected mangroves have been cut for hotel building.

“It was chopped down for the construction of the hotel. We know it is illegal to cut the mangrove... To be allowed to cut the mangrove you have to be known by some stakeholders in the government who will assist you... One belongs to a certain minister... This place belongs to a Canadian... The country has been sold to foreigners! Even us, we have been sold to foreigners!”

Male, age 20-29, Bagamoyo

Again relationships of power are operating on the local level from these ‘more powerful’ interests from outside the area, yet there is also evidence of relationships of power beyond the local, where those wishing to build hotels, according to this respondent, must gain a good relationship with the government. The respondent later makes a more pragmatic statement:

“Yes of course it is bad to cut down the trees, but what our boss wants to do is also for development. The mangroves are one good thing. But also development is one good thing here. You must lose one good thing to gain the other.”

Male, age 20-29, Bagamoyo



Photo 6.7: No more mangroves. The land being guarded by the respondent above is an area previously covered in mangroves, now cut for prospective hotel building.

The respondent above demonstrates an acceptance of the contradicting effects of the exercise of this extra-local power, both the negative effects on the environment, and the positive effects on the local economy. For these people, the agency of external actors exercising their power on the 'local' space has both positive and negative effects, and, importantly, there are evident links between the environment of their local place and networks of power that operate beyond the local. In terms of conceptualising how communities operate, it is clearly important to take account of extra-local concerns, as they contribute to social, economic and political relationships at the local level; Extra-local concerns create marginalisations, yet also open up opportunities. Tanzanian conceptualisations of responsibility place great emphasis on the importance of external actors, and these examples illustrate how important external actors can be in creating social marginalisation and influencing environmental concerns in communities. This Tanzanian emphasis on external responsibility and influence itself offers an important critique of participatory conceptualisations of community, which rarely recognise external forces in this way.

Although much of the participatory development literature hinges on the notion that participation should equal empowerment at the 'local' scale, and that therefore participation is a 'good' in itself (Agrawal and Gupta 2005; Leeuwis 2000; Chambers 1994a, b, c; Mayo 2001), the reality is different precisely because the conceptualisation of the 'community' from which some participation and postdevelopment thinkers work from is too narrow. The complex internal social

structure which is nested in and entangled with wider networks is ignored by many participatory theorists in favour of a 'simple' (often rural) community, which fits Western idealised notions of community, rather than matching the reality of the context. The social make-up of communities, and the dynamics of marginalisation and empowerment that exist through them, means that the 'local community' should not necessarily be regarded as inherently a site of 'grassroots empowerment' which can reach consensual agreement, nor will communities necessarily engender space in which marginalised groups have the opportunity to better their lot. Rather than an exclusive site of empowerment, as some participatory development theory assumes, communities might more usefully be thought of as a site where both local and broader processes are brought together to be negotiated (although not necessarily fully resolved), and, importantly, where 'external' actors and processes may have a defining influence. Importantly, this helps to explain why participation in the environmental education projects studied here does not always equal empowerment for all young people within a particular community, as a broad and more networked, complex conceptualisation of community helps to build a picture of the multiple marginalisations and barriers that act against their empowerment.

6.5.2 The student is not the fisherman

Whilst I have discussed the place of young people in local community hierarchies, I now wish to use this conceptualisation of Tanzanian communities to address in more detail how young peoples' identities are constructed through communities, and what impact this has on their potential to be 'empowered' in community space. I have discussed briefly how, because of the way in which communities are constituted, they may not be the ideal spaces of 'empowerment' as assumed in participation, and here I use the positioning of young people, and their agency and identities as environmental actors in communities, to explore this further.

Whilst conducting fieldwork, questions arose, principally from teachers, with regards to why young people should receive environmental education. 60% of teachers made reference to young people as the 'future' of society, which was central to their argument for why they should be educated about the environment.

Children will be the leaders of tomorrow, and they will practice what they have learnt here in the future. "

Male Teacher, Primary School, Bagamoyo.

This discourse was common amongst teachers, casting young people as actors 'in the future'. There is no mention here of their ability to effect change in the present, nor reference to young people's action in the present time, their agency instead is prescribed in time to 'the future', which discursively removes young people from the 'destructive present'. The respondent below contributes to this through his description of the agency of adults.

"Adults are somehow reluctant to adhere to what they are told. Many have been here a long time and don't think there will be a problem. Their forefathers were here doing the same thing, therefore we need to educate their kids."

Male Headteacher, Primary School, Bagamoyo.

This headteacher prescribes adults a 'static' attitude towards the environment which is rooted in the past, and their behaviour in the environment has remained as it is for 'a long time'. The emphasis of the quote suggests that it is unlikely that adults will change their current behaviour. This description is counterposed to the ideals associated with young people. For this respondent, adults embody the environmental knowledges and practices of the past, and they are the actors of the present, therefore associating them with destructive behaviour.

"We are growing grasses around the school, but the parents come to the school and cut grasses to give to the animals."

Male Teacher, Primary School, Kawe.

There is then a dichotomy assembled between young people and adults, with young people cast as the agents of the future, implying their lack of action and, in some respects, 'innocence' in the present, and parents who are the destructive past and present. A relatively small number of adults in Kawe (26%) and Bagamoyo (28%) echoed this discourse from teachers, whilst in Rukwa, interestingly, this was not present, despite the fact that teachers from Rukwa did make similar statements as teachers in the other areas. Local adults tended to have a broader range of descriptors for how they conceived of young people as the 'future'.

"They [Young people] are the source of the community. So when they grow up they will be aware of the environment and have a good foundation of how to conserve it."

Male, age 40-49, Kawe.

Other phrases were employed on the same theme. One adult said that young people would eventually *“be responsible citizens of the nation”* (Female, age 18-19, Kawe), and another stated that *“In a generation they will be able to save the environment”* (Male, age 50-59, Bagamoyo). Echoing the sentiments of teachers, local adults also separated young people and adults into domains of the future and the present/past respectively, and restricted either group’s agency to these domains of time. This, to some degree, discursively denies young people’s agency as environmental actors in their communities in the present, and contributes towards how young people, and their agency, are actively marginalised by local adults.

Teaching resources created by JGI contained indicators that they constructed and positioned the agency of young people in communities in similar ways. In the booklet ‘Environmental Education: Coastal and Marine Ecosystems’ (JGI, 2009), a handbook for teachers, young people, positioned in the booklet as ‘students’, are often cast as being outwith the adult community in terms of their actions. An example is provided below: a list of ‘suggested activities’ to conduct with students on the topic of ‘fishing methods’:

‘1. Possible questions for class discussion:

b. How can students reach out to fishermen and communities to explain the harmful effects of fishing? What could students say to convince a fisherman to stop unsustainable practices?’

(JGI 2009a, p.18)

‘3. Interview local fishermen. What types of fishing practices do they use? What are the pros and cons of each method? How do their methods affect fish, the environment and people? Have a debate in the classroom between students playing fishermen and local conservationists’

(JGI 2009a, p.21)

Here the ‘student’ is positioned as ‘not-the-fisherman’, the fisherman is positioned as an actor (presumably an adult), who is an active member of the community. The identity of the student is assumed to be one who knows about ‘conservation’, evident in question 1.b., and in question 3, by referring to the fishermen as ‘they’, it is made explicit that this is not the identity of the student. There is no ambiguity between the role of the student and the fisherman, and there are assumptions about both, including that the student is inherently interested in ‘conservation’, and that the fisherman must be convinced that his practices are ‘unsustainable’. The illustrations

throughout the book also carefully position young people and adults by their assumed roles and possible actions, based on identities that are assigned by the assumptions of the writers. On page 14 we see a man digging up mangrove roots to find worms (Picture 6.8). These practices are the ‘Destruction of the mangroves’, as the caption states. Counter to this is the role of the young person, the student, who on page 25 of the booklet is seen cleaning the beach (Picture 6.9).



Figure 13: Destruction of the mangroves; this man is digging out the roots to find worms; without the roots holding down the soil the ground will erode

Picture 6.8: Destruction of the mangroves. Source: JGI 2010, p14



Figure 22: Roots & Shoots Club members cleaning up the beach at Mikocheni, Dar es Salaam

Picture 6.9: Young people beach cleaning. Source: JGI 2010, p25

Although Picture 6.9 asserts some limited agency to young people, it denies their actual agency in terms of what they might actually do in their day-to-day lives. The practices of these adults are positioned as ‘bad’ for the environment, and not associated with young people. This positioning of the identity of young people within the community, from teachers, local adults and NGO material, denies their present agency, and ignores the fact that young people are active agents with an equally destructive potential. The agency that young people are expected to have is consigned to particular activities which are seen as ‘good’ for the environment (such as beach cleaning), which clearly separates them from ‘adult’ spheres of action. The discourses produced through the NGO materials suggest that they adhere to what Kesby et al (2006) call the ‘Universal (Western) Model’ of young people, whereby young people are not understood as significant actors in the ‘adult world’ of the present. In the course of this research, young people were observed taking part in the same practice as the man in Picture 6.8 (Picture 6.10).



Picture 6.10: Young people destroying mangroves. These young people are of primary school age and are digging for worms in the mangroves

This is just one example of where young people are engaged in the same environmentally 'destructive' practices as adults. Indeed, throughout this study, young people were observed conducting livelihood activities also done by adults. In Bagamoyo, they were observed fishing (Picture 4.4). In Kawe young people were tending cattle and maintaining small plots of agricultural land. In Rukwa, young people are integral to livelihood activities, particularly providing labour on farms (Picture 6.11), and they also collected and chopped firewood.



Picture 6.11: Young people working on the family farm in Ilemba, Rukwa. Here young people provide essential labour in both agricultural and pastoral activities.

It is clear that young people can also be ‘the fisherman’, and in fact their identities blur the lines between the assumed identity of the ‘student’ or ‘child’ in the community, and that of the adult, ‘the fisherman’. With NGOs and teachers sidestepping this, young people are not taught as if they are part of the local community who have active agency in the local environment. Yet young people are active agents in any development issue, a fact well-recognised in the development literature (Bourdillon 2004). It appears that, for local adults and teachers, young people can exist as active agents in the environment, yet be also discursively ‘packaged’ into particular roles which are assigned to the future. This may be part of a wider production of local power relations, the hegemony of age over youth, in which young people are positioned by some adults as the ‘next generation’ in order to avoid having to take their agency seriously in the present. If adults were to have to take young people’s agency seriously, this may involve a quite fundamental challenge to existing power relations which are present in the home, the school and the wider community. For NGOs, framing young people as agents of the ‘future’ avoids having to confront their agency in the present, it avoids challenging their (sometimes destructive) behaviour in the environment, and it avoids thinking about how they can make constructive contributions to environmental sustainability in the present. It is much easier, in that it is less confrontational with current community hierarchies, to provide education in the hope that this will somehow naturally translate into behaviour change in the future, rather than tackle thorny issues head-on in the present.

This discursive construction of young people as environmental actors may in itself be contributing to the lack of environmental action amongst young people in response to environmental education. As Kesby et al (2006) indicate, it is dangerous in development to ignore the agency of young people in society, and here the displacement of young people's agency into an undisclosed time in the future creates a community in which young people do not have to act now, and are not encouraged to consider their present actions as playing a crucial part in the local environment. Development projects should be framed and built around the existing social structure and social agency of the communities in which they work (Timsina 2003), yet the NGOs involved in this study have evidently not paid attention to where young people are placed within the environmental agency of Tanzanian communities. Young people, their agency and constructed identity, illustrate a concrete example of some of the facets of 'community' that I have outlined about Tanzanian communities. In order to understand the position of young people in communities it is essential to understand how the relationships within communities are constructed by networks of internal and external actors, who contribute to constructing their role in the 'local' space. The temporal changing and fluid nature of young people's identities are also important, young people will become adults and their position and agency will change, a fact recognised by local people, and this temporal and changing nature of one element of the community is even used by local people to describe and position young people's identities. This example also importantly demonstrates how, precisely because of the nature of Tanzanian communities, neither the 'local' nor the 'community' offer, in the present, a site of empowerment for young people, precisely because of the way in which their role in communities is constructed. Empowerment, and indeed local participation, is impeded for young people in particular ways because of the structure of Tanzanian communities, and because of the way in which the participatory project also contributes to the construction and reproduction of young people identities.

This has important implications for the participatory development agenda more broadly. Katz (2004) illustrates in her continuing study in Sudan that processes of development produce (rather than simply 'access' or 'develop') communities, in terms of individuals' environmental knowledges, community power dynamics, and in turn the identities of individuals. Similarly here, NGO projects appear to actively produce young people's environmental knowledges and empowered performances (Chapter 4), in ways that are contradictory to many within their community, in the process making particular environmental knowledges 'outdated' (those of parents and adults), whilst producing new kinds of 'relevant' environmental knowledge. Yet the same projects also appear to actively reproduce the social identities of young people as future

actors within the wider community space, reinforcing traditional power dynamics that exist in communities between young people and adults. The parallel processes here of the production of 'new' environmental knowledge and empowered performances in the space of the school, alongside the reproduction of young people's identities within the traditional power dynamics of the community illustrate the complex power dynamics of participatory development (Kesby 2007), in which the impact of one particular project can have parallel and contradictory power effects. As Kesby (2007) points out, and Katz (2004) illustrates with her research, participatory development projects may produce domination alongside powerful instances of empowerment, and this evidence demonstrates these parallel processes happening on-the-ground. As I have demonstrated through this example of young people's environmental knowledges and identities, it is only with a detailed contextual analysis of the power effects of participatory development practice (and perhaps of the processes of educating young people more generally), that a full assessment of the impacts of participatory projects can be made. Such an assessment clearly illustrates that participatory projects may be implicated in reproducing certain uneven power dynamics, yet also the workings of community power relationships themselves contribute to this reproduction.

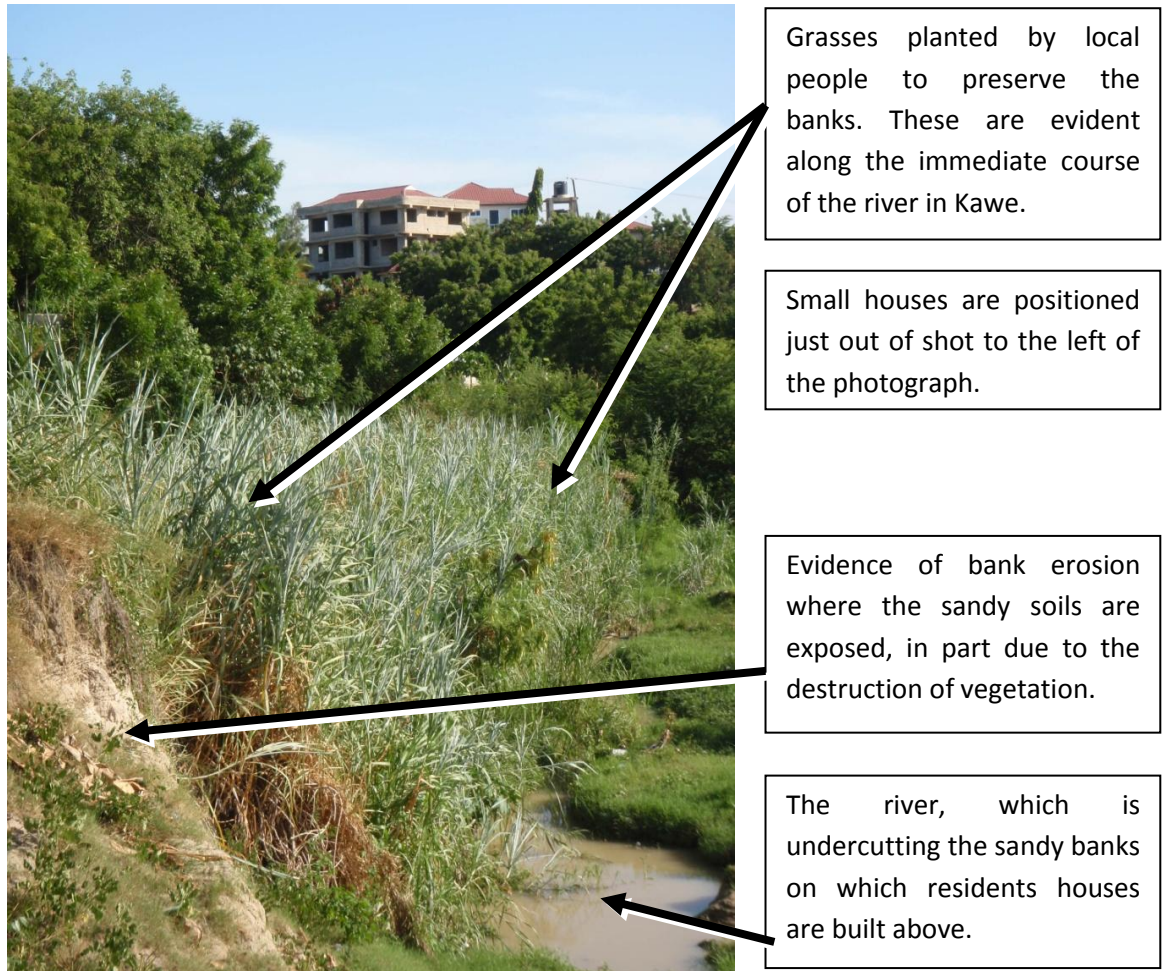
6.5.3 A lack of 'community' does not equal a lack of action

With this conceptualisation of community in mind, then what type of activities aimed at environmental sustainability are likely to succeed in Tanzanian communities? Here I consider the current capacity and future potential of environmentally sustainable actions in Tanzanian communities, and reflect on what impact a Tanzanian conceptualisation of community has on how we might understand the 'conservation ethics' which exist in these communities.

Despite the apparent lack of 'community cohesion', there are many individual and small-group organisations which have an impact on environmental sustainability. As is consistent with Tanzanian understandings of collective responsibility, actions which contribute to sustaining the environment are largely carried out by individuals and small groups, who often are taking action because it makes sense to do so within the context of their current livelihoods. A number of such activities were encountered. In Kawe, small groups of individuals had taken action when faced with environmental changes which detrimentally impacted on their livelihoods. A group had come together to stabilise the banks of a river:

“The river is moving towards our house... there are also people sand mining in the same spot causing the land to erode more... There is a certain plant that we have used called Mianzi. These absorb the water and stabilise the soil to prevent the river migrating and destroying the land up to our houses... The people who are helping are the ones who are around the affected area. But the residents above here don’t care because the problem is far from them.”

Male, age 50-59, Kawe



Picture 6.12: Bank erosion on the river. As described in the quote from the resident above.

Here, a group of individuals are acting because they are concerned about the impact of changes in the immediate environment, but others, who are further from the river, are not addressing these problems because they are not of immediate concern for them. There is also clearly conflicting environmental use in terms of livelihoods, between those who mine sand, and those who will be impacted by river erosion. Also in Kawe, a small group operated a glass recycling business, illustrated below.

“We are recycling the glass. I separate the green glass from the white and take out all the other rubbish. A single person can maybe fill 3 or 4 bags a day and for each bag we get paid 400 Shillings. But it is dangerous because it can cause a cut to your fingers from the glass...”

Female, age 60+, Kawe

The above quote illustrates how this work, which again can be classed as contributing towards environmental sustainability (through recycling), is carried out as a livelihood activity, not one which is particularly concerned with wider environmental issues. The work is hard, does not pay well and comes with a level of risk. It was mostly older women who worked there to supplement their families' incomes. These two 'environmentally sustainable' activities in Kawe exemplify how small groups of local people will, in the interests of their own livelihoods, take part in such activities; they are contributing to environmental sustainability, yet they are working for their own self interest, and in the first example this may conflict with other groups in the community. As such, neither action 'fits' into the collectivist model of 'community' or 'participatory' development, nor does it reflect the conservation ethics embodied in the work of conservation NGOs, illustrated in Chapter 4.

Similar evidence was also found in Solola, where a small group comprising 25 individuals was experimenting with new varieties of rice, a project which began in collaboration with local government who had provided seeds and fertilisers. This group were experimenting with the fertilisers: *“The intention is not necessarily to compare fertilisers and not using fertilisers. We want to know if the land can hold the fertilisers or not. If it makes sense to use the fertilisers”* (Female, age 40-49, Solola). They were testing its use locally, before they considered committing to using it more widely. They hoped the new varieties of rice would help with population pressure, and would be of benefit to poorer farmers. Interestingly, the quote below describes how the group were 'selected'.

“We plan to begin with a few identified farmers. We can then sell some of the seeds on to others so gradually it will spread... We know each other, we know who are the hard workers. We will give the seeds to hard working people, we won't give them to lazy people.”

Male, age 30-39, Solola (Rukwa)

This project was, arguably, contributing to environmental sustainability, in that increased yields will help deal with population pressure on land, which may prevent clearing of natural vegetation³⁵. But again there is evidence of a lack of ‘community spirit’, the respondents initially base their small group on who they consider to be ‘hard working’. Small groups can have the capacity to conduct such experiments, but this is done within the ‘personal development’ paradigm that is widespread in Tanzania (Green 2000). This, to a large extent, contradicts participatory development ideology, with its assumptions about local people acting towards some form of ‘community development’, but also the Tanzanian state’s assumptions about the ‘collectivist’ values of African rural communities³⁶. Yet, at the same time, it illustrates, along with the previous examples, that small groups of individuals can and do work together, that they can do so in ways that may contribute to the sustainability of their local environmental resources, and that this can contribute to improving livelihoods.

Communities, or more accurately, individuals and groups in particular localities at particular times can and do respond to environmental change, they respond to their changing livelihoods, and, if this fits within the more important issue of livelihood maintenance, they can work towards environmental sustainability. The concept of ‘biodiversity conservation’, however, or any other form of ‘conservationist’ discourse, was never mentioned by adults as an explanation for any livelihood activity, illustrating, as Naur (2001a) also suggests, that such concepts may seem too abstract for the context of these peoples’ livelihood demands. It is the practical restrictions of local livelihoods which are, for individuals, the most important factors in preventing them from

³⁵ Although, clearly, this would be controversial amongst the development and particularly the environmental community, as the use of fertilisers and different varieties of crops may have long term ecological impacts. ‘Dependence’ on fertilisers and varieties of seeds which are imported have again been controversial for tying communities to outside suppliers, as well as being potentially more costly than those varieties in current use.

³⁶ The most disastrous result of which was the Villagisation project, arguably Tanzania’s most extreme experimentation with ‘African Socialism’ and enforcing collectivist values. Julius Nyerere’s ideas about development and participation largely informed Tanzanian ‘African Socialism’ (Mercer 2002), echoes of which arguably, and interestingly, remain today in discourses of participation. Tanzanian socialism was based on Nyerere’s assumptions about the collectivist values of Tanzanian rural communities. Nyerere believed that Tanzanian rural traditional ways of life were already akin to socialist values, and that Ujamaa, (meaning ‘extended family’ or ‘familyhood’), which was the ‘traditional’ way of life for rural Tanzanians, should be returned to in order to boost agricultural output, as communities and extended families would work collectively to be more productive. Much of this formed the ideas behind the ‘Arusha Declaration’ in 1967, and in a later book, ‘Socialism and Rural Development’; Nyerere wrote “The essential thing is that the community would be farming as a group and living as a group” (Smyth and Seftel 1998). It is interesting again how these ideas of the collective community formed much of the theory behind what became enforced Villagisation campaign from 1973 to 1976, which met with disastrous consequences for Tanzania’s agricultural output in the 1970s (Smyth and Seftel 1998), illustrating that perhaps Nyerere’s assumptions about the collectivist values of Tanzanian rural people were wildly misplaced. Arguably, these assumptions about what can be achieved collectively through participatory means have resonance today with current participatory development literature and the assumptions of NGOs and state projects in Tanzania which rely on participatory rhetoric.

sustainably managing the environment, not necessarily their lack of knowledge of conservation dogma. The conservation ethics of these communities and individuals are very different to those of NGOs, rather than focused on the 'abstract' values of nature, they are concerned with immediate livelihood benefit. Equally, 'open-ended' ideas of participation (Mohan and Stokke 2000) are not good enough; for these people, the woolly and abstract idea of 'empowerment' is not enough as a goal in itself, there is a need for specificity to local capacities and local needs. What is currently being 'done' in communities reflects and represents their current capacities and ethics of environmental sustainability, and the examples above seek to illustrate these limits and potentials. These examples also show, however, that 'popular spaces of participation' (Cornwall 2002) do not necessarily emerge organically from 'communities'. Some actions take place because individuals or small groups deem it necessary to do them, and, significantly, some actions take place because of the impetus of external actors. This is clearly shown in the example of the experimental farm in Solola, where the mix of local and outside agency has come together. This is again illustrative of the processes by which a combination of external and 'internal' community impetus may act together to actively produce local environmental knowledges (Katz 2004; Bebbington 2000).

The examples here highlight the importance of potential, not just of local people, but also of outside actors to interfere positively with local development (Brett 2003; Bebbington 2000). However, it is a potential that exists within a very different concept of 'community' to those currently in use in popular development discourse. Many individuals in Tanzania view the state and NGOs as having both authority and power, as they often understand these outside actors as having responsibility for dealing with environmental issues. Common to all three communities, the existing structure of local leadership can act to promote sustainable use of environmental resources. In Rukwa, each village has its own locally elected village council, each of which has an 'Environmental Officer', who tackles problems relating to environmental resource use. In the village of Solola, Rukwa, we were taken on a tour of the nearby village forest reserve by the Environmental Officer to highlight the problems of sustaining use of the local forests (Pictures 6.13).



Picture 6.13: Forest management in Rukwa. The village environmental officer overlooks land that was previous forested, outside of Solola village.

In Solola, the Environmental Officer's role was to enforce local regulations which governed the use of the forest, including educating people about what type of trees they could cut. Other local organisations also exist which deal with issues of environmental sustainability. In Bagamoyo, a member of the local leadership was involved in a fishermen's group, which sought to tackle problems of sustainable fishing. This local leader, himself previously a fisherman, still retained links with the local fishing community. It is significant that a local-level governance structure already exist to promote the sustainable use of the local environment. By not engaging with this governance structure, NGOs working in education are missing out on their existing potential, for example, their potential as local leaders to educate young people. By circumventing, rather than engaging with, these local political structures, NGOs and the national government may undermine their authority, causing tension, rather than active and collaborative engagement.

The three community understandings of responsibility that I illustrate here may suggest a broader Tanzanian understanding of responsibility which frequently bestows the state, local authorities and NGOs with a powerful potential to act, and thus the potential to modify existing community structures and actions to make them more equitable. They have the potential to exercise their power positively (Kesby 2005), just as those who hold power in communities also have the potential to do so. That the Tanzanian state at the national level is currently attempting to shed its responsibility (Blomley et al 2008) may be detrimental both to communities and their

environments, as there is the potential for a large hole to be left in the development imaginaries of individuals throughout Tanzania, who often see the state as a focal point of development initiative. It is necessary to emphasise here the importance of working through existing structures, both those which are formal (government, local leadership, NGOs), and informal (local social power relations). However, this does not mean that current 'norms' should not be challenged (Kesby 2000b). It is in the action of working through and with existing structures that these can be changed to be more equitable. Young people are a case in point. They are not in a position, on their own, to challenge the established rules of communities, and it is indicative that they are not 'involved' in any of the above examples directly. The participation of young people in local development projects does offer a possible space through which power relations can be challenged (Kesby 2007), yet only tackling one side of the equation (the marginalised, young people) ignores the other (the powerful, adults), leaving the problem unsolved.

NGOs can be weak in contextual analysis of the societies in which they work (Lewis 2002). They often do not know enough about the social, political and economic context of communities before projects are initiated, and, as Kesby (2007) argues, community participation should be highly context dependent. But this is not enough. Communities should be engaged in determining the context, because, as Sillitoe (1998a, p191) skilfully puts it, "you cannot meaningfully participate in a process you see no point to". Neither the 'conservation ethic', nor the participatory engagement, nor the understanding of community functions and capacities, were determined in the JGI environmental education project by communities. What I have sought to illustrate here is that, through detailed context analysis, it is possible to begin to understand a more Tanzanian conceptualisation of community and a Tanzanian 'conservation ethic' (Myers 2002) based on the commonalities between the local understandings of the three study communities. Understandings of community and a 'conservation ethic' appear to be determined in part by the understandings of responsibility and group behaviour which are present in Kawe, Bagamoyo and Rukwa, and both are focused on networks of actors that exist over a range of scales. Utilising both these understandings of community and conservation, it becomes clear that environmental sustainability is something which must go hand-in-hand with, and evolve out of, local livelihood improvements, not the other way around. Those who are more marginal do have the potential to be benefited from NGO engagement with issues of environmental sustainability, but this must be based on a sound understanding of how communities function, and must work in collaboration with those who do have power, rather than circumventing their agency. Indeed, if, like all other aspects of social life, participatory and community development is entangled with complex power effects (Kesby 2007), and if community understandings of responsibility,

volunteerism, participation and empowerment are equally embedded in complex, sometimes competing power relationships, and on top of this, if external actors have an important role to play in local development, then it makes little sense to outright 'resist' all aspects of development that have some component of 'power' to them (as Cooke and Kothari (2001) do). Indeed, the evidence of locally-orientated initiatives from these communities in Tanzania suggests that locally-orientated development can work with internal and external power dynamics, although the outcomes may not necessarily generate immediate inclusivity and social justice, or immediate solutions to local environmental problems, they do work towards these goals through a negotiation of the complex entanglements of power that exist at multiple scales of development.

6.6 Summary

I have sought throughout this chapter to critically examine the fundamental assumptions of participatory and postdevelopment theory and practice, namely those concerning participation, community, the local and empowerment, with the aim also of illustrating a distinctly Tanzanian understanding of these concepts. Environmental education projects do not live up to the ideals of participatory development, despite the intentions of the state and NGOs, because they do not deliver inclusion at all spatial scales, in fact projects might generate exclusions. There is also a tension between national and local scales of participation. In Tanzania, a national approach to inclusive environmental education may have broken down partly because NGOs have become the key actors in its delivery rather than the state, yet the NGO in this study is also sufficiently top-focused that it fails to deliver local inclusiveness, generating instead exclusive projects in communities and schools. This should lead us to question whether NGOs are the most appropriate actors for the delivery of participatory forms of development, and whether participatory local development is compatible with programmes aimed at national inclusion, for example, in education. Kapoor (2004) questions 'legitimacy' in participation, and I suggest that in the case of environmental education it may be the state which is better placed and more accountable than NGOs to coordinate forms of national inclusivity. The fact that there is no apparent moral or ethical imperative for NGO involvement seems to support this. In this situation, Western funding might be better directed towards states and government bodies, which are democratically elected by their people, rather than towards NGOs who are more accountable at present to their international (Western) funders than they are to the national governments in which they work, even if their values, in this case those of environmental conservation, are so attractive to international donors.

Participatory development also makes assumptions about individual and collective responsibility which appear to be quite different to the understandings of these three Tanzanian communities. Respondents were far more concerned with the responsibilities of the state and other outside actors than they were with those at the community level, and when they did discuss their own responsibilities, this was very much couched at the level of the individual, rather than as a collective. Neither were understandings of volunteering and participating concurrent with those assumed in participatory development. The lack of community capacity to self organise was a major factor in the apparent lack of practical action in communities, questioning postdevelopment assumptions about the grassroots of society. Young people demonstrated that assumptions about links between knowledge and agency, made particularly in education-focused participatory projects, are highly questionable. All of this evidence points to the fact that these Tanzanian communities, and individual roles and responsibilities within them, do not conform to the idealised notions of community apparent in participatory development theory. In the final section I demonstrate how the complex internal structure of communities, which is nested in a wide network of power relations and knowledge, can lead to a lack of consensus on both knowledge and actions, as well as help produce marginalisation at the local scale. This understanding of community suggests that it therefore will not 'naturally' be a site of empowerment. The reproduction of young peoples' identities as environmental actors is a case in point, illustrating how both local people and outside actors (NGOs) can reproduce the marginalisations which structure what young people can and cannot do. Again it is worrying that NGOs appear to reinforce, rather than challenge, the position of young people as environmental actors. However, the outlook for environmental action in communities is not totally bleak. Groups of individuals do take actions towards environmental sustainability, but only if it fits within this Tanzanian paradigm of community and individual action. Finally, I suggest that the state, NGOs and other outside actors do have a great deal of potential to make a positive impact in Tanzanian communities, in particular because local people put a great deal of stake in their power as actors.

Conclusions at the crux of development:

What does environmental education in Tanzania reveal?

This thesis has sought to provide a detailed critical appraisal of environmental education projects in Tanzania, and through this I have discussed the likely implications for the local knowledge, participatory and empowerment agendas in the context of Tanzania. In this chapter I use these findings to explore more broadly the questions that they raise for the current participatory development paradigm, whilst also providing some practical conclusions for how these findings might reshape current thinking and practice in development. I return in each section to the research questions in chapter 1, and tackle further questions which have emerged from the empirical material.

7.1 How can local knowledge be re-conceptualised, and how can it be a part of judgement making in development?

One of the purposes of local knowledge should be to contest the fundamental assumptions of development. Local people have a series of complex, broad and perhaps most importantly, challenging notions of the environment (section 4.1). They are challenging in the sense that the continual production and reproduction of local environmental knowledges in communities often make official conservation-based knowledges of the environment appear somewhat simplistic and abstract when compared to the lived realities which are reflected in local, Tanzanian definitions. These definitions can be controversial compared to environmental values associated with the West, and they can also be controversial to the values of others within the same community, as can be seen with environmental knowledges associated with witchcraft (section 4.3). McFarlane (2006) argues for a radical attempt to engage with different knowledges and ways of knowing, and to achieve this in environmental management, local understandings of environment and development must be harnessed to directly challenge the hegemony of conservation rhetoric which currently dominates Tanzanian official environmental discourse (NEMC 2004), and which also dictates policy in many other developing world contexts (Leach and Fairhead 2000; Twyman 2000). Local Tanzanian knowledges of the environment challenge environmentally themed development to put the social equally alongside the science of environmental issues, to put the issues of people and the human environment equally alongside those of nature and the natural world, just as local people do in these communities (Fig. 4.9 and Fig. 4.10). Bringing such a challenge about is difficult. Environmental education has offered an avenue to explore local and

official/Western knowledges of the environment, but it is currently a one way process and not one which seeks to 'hybridise' knowledges. JGI environmental education resources and the design of the projects themselves were not developed collaboratively with local people, as evidenced in part by the contradictions between their education materials and the environmental knowledges and practices of local people (section 4.1). Those who work in environmental concerns at the state and NGO levels in both Tanzania and other contexts in the global south need to be involved in forums which represent these local understandings. For example, those who work for JGI who design and run environmental education projects must have contact with not only teachers and pupils whilst projects are being conceived and planned, but also they must have the opportunity to explore the environmental knowledges of the communities in which they work. Those who have experience of daily life in both rural and urban Tanzania should have input into education resources and syllabuses, as should research on the social aspects of local environmental sustainability, rather than the majority of the input on environmental education coming from an ecological conservation and science perspective. But how might this be done whilst taking into account the complexities of local environmental knowledges?

To partly address this requires a more accurate conceptualisation of local knowledge, to which the evidence of how local environmental knowledges are reproduced and performed in these communities can contribute significantly. Several studies have illustrated that local knowledges are not homogenous (Cleaver 1999; Green 2000; Bourdillon 2004) and are dynamic rather than static (Briggs et al 1999; Ortiz 1999; Grillo 2002), but the evidence from Tanzania suggests that even current critical local knowledges theory is too simplistic. Local knowledges can be extra-local, yet also individual and tied to the local. Chapter 4 provides a range of evidence to support this, for example we see in Kawe how knowledges are produced at a highly individual level: individuals can hold different environmental knowledges and prioritise different issues highly specific to their locality 'within' the local, such as problems with river bank erosion (p. 136), which were only highlighted by those directly affected by them, whereas elsewhere in the community issues such as waste and fishing were prioritised (chapter 4). Knowledges can be extra-local in the sense that they come from or are associated with places outside of an individual's current locality, illustrated by examples of migrants in Kawe and Bagamoyo discussing environmental traditions and practices learnt from their 'home' area, as well as the knowledges and environmental practices of the Sukuma which again recollect knowledges from other localities rather than their present place (chapter 4). Local knowledges can also be extra-local in the sense that there are common environmental issues which are shared throughout the three regions, including deforestation, agriculture and waste (Fig. 4.13), illustrating that environmental problems do

transcend their local specificity to become more general concerns, perhaps suggesting that more generalised environmental knowledges and discourses can be reproduced on a national scale. Local knowledges can be highly culturally specific within the local, as I have illustrated in Rukwa, where traditional knowledges of the Fipa and Sukuma tribes appear to be culturally specific yet exist within the same locality (chapter 4), and are differentiated to the extent that the Sukuma people cannot adopt the local traditions of the Fipa which relate to environmental protection. Knowledge can also be spatially defined and produced in a range of ways: tied to place (in the case of traditional knowledges, see chapter 4) but also broadly networked across space and time. The example of one respondent in Bagamoyo (p. 142 and Picture 4.13) clearly illustrates this, as his testimony describing his personal experience of environmental knowledges draws on formal, informal and traditional environmental understandings which have been acquired throughout his lifetime and from a diverse range of places. Local knowledge should perhaps be more accurately conceptualised as a spatial 'meeting point' of knowledge, which has been unfortunately essentialised to make it easy to understand for development professionals (e.g. The World Bank 1998). Local people do not always understand their knowledges as the solutions to local development; some see 'modern' solutions, which commonly rely on technologies that they cannot currently access, as 'better' solutions, as we see in discussions over fish stocks in Bagamoyo and Kawe (p. 153). A significant percentage of respondents did not see traditional practices as 'good' for environmental protection (Fig. 4.19), whereas there was a tendency among some to de-value informal environmental knowledge and the knowledges of parents which were taught at home in preference for those taught in school (chapter 5). The long history of hybridisation and change of knowledges (illustrated particularly in Rukwa and the influx of Sukuma migrants, see chapters 4 and 6) further suggests that the very idea of purely locally derived solutions is a flawed one. Local knowledges in these communities are therefore reproduced and performed in a series of complex ways which draw on experience and knowledge from both within and beyond communities and localities. They come from various times and places, and are tied to conceptions of what is modern or traditional. Imagining 'local knowledge' as a spatial and temporal meeting point of knowledges provides a way of understanding how local knowledges are both reproduced and utilised at any given time.

In light of this I argue, as do others (Briggs et al 1999; Briggs and Sharp 2004) that local knowledges should be treated with the same critical eye as Western, scientific knowledge. But what does this mean for locally-grounded development, and what does it mean for the future of local knowledge research? With a more complex conceptualisation of local knowledge in mind, and if we accept that local knowledge has its limits (Bebbington 2000; Katz 2004), then how can a

judgement on the applicability of certain knowledges and 'ways of doing' to development issues be made, and where is this judgement made from? This is an important question which also hits at the heart of concerns for participatory development: ultimately, where should decisions be made? Who decides if Western or local knowledges are more or less appropriate for a specific issue? We have seen how in environmental education, when the decisions about which knowledges are 'used' are made only by certain actors (in this case, NGOs and the Tanzanian state, and less directly the conservation agendas of Western environmental organisations and funders), there are serious conflicts of knowledge and practice, which contribute towards a failure to act on these imported knowledges at the local level.

If, as Bebbington (2000, p514) argues, "almost everything in development is 'coproduced'", then perhaps the most useful way of practically making judgements on which knowledges or strategies are most useful for a particular development scenario is to think about methods through which coproduction can happen. Conceptualising local knowledges as a spatial 'meeting point' of networks of knowledge is also helpful in conceptualising a place, a meeting point of knowledges, where judgements may also be made. There is a need to think radically about how collaborative democratic judgements can be facilitated. Practically bringing a range of actors together, including those that represent local people, local government, state and 'expert' actors (including researchers) to make democratic decisions about what solutions are likely to be most effective for that specific issue, is one possible solution. For example, to decide on the content of what schools teach on the local environment, or the management of a local area of forestry, a group of these actors would meet to make a decision, or decisions, about the best possible range of local solutions, based on the knowledges and possibilities brought to the discussion. This would have to be underwritten by prior and ongoing detailed qualitative research on the range of knowledges and solutions available from a range of scales, including a method to represent the range of knowledges in a community, driven by local social research. Introducing forums in which these actors have equal sway in making a judgement on development 'solutions' to some extent harks after a Habermasian 'ideal speech situation', which would require the elimination of power relations between all these actors, a situation which, in the immediate future, would be difficult, if impossible, to realise. This does not mean that attempts to bring about local democratic decision-making should be abandoned, and there may be a range of tactics which could be adopted to help facilitate a process which leads towards this ideal. The need to bring actors together on an equal footing to make judgements suggests a need to create mechanisms which restore links between individuals and society, and links which work in both directions of this relationship, pointing towards the democratic accountability of current decision makers to be strengthened. There must

therefore be mechanisms and an established set of rules which allow the decisions of actors outside of the local to be influenced and moderated by local people, but it is also vital for local people to have the opportunity to listen to the solutions and knowledges of others, and then to make decisions on these. Kapoor's (2002b) criticism that such participatory democracy relies on elites ceding power is important here, and of course creating forums where judgements are made, and in which local representatives do have equal sway, does rely on current elite decision makers (including those running projects in NGOs) to cede power. There is a strong argument then for international funding and attention to be directed towards strengthening democratic governance and accountability at all levels of the Tanzanian state and in NGOs.

All of the above suggestions are, of course, very much in line with those of proponents of participatory development (Chambers 1994a; Motteux et al 1999; Binns et al 1997), and hark after much of the same ideals advocated for by the participatory movement. Whilst much of the evidence in this thesis has contributed to a highly critical appraisal of an on-the-ground participatory education project, this is not to suggest that the ethos and aims of the participatory agenda are somehow fundamentally flawed (as suggested by Cooke and Kothari (2001) among others), rather, it is the current simplistic application of 'participation' which is at fault. As I illustrate in chapter 4, some participatory elements of these projects did allow young people to produce and rehearse empowered performances which allowed them in turn to express their knowledges confidently in particular spaces, yet, as I go on to illustrate in chapter 5 and 6, there was little scope for translating these performances into the wider community. Indeed, to some extent the participatory component of the project produced local environmental knowledge amongst young people (see also Katz 2004), rather than engaging with local understandings of the environment, which in turn produced a 'gap' between competing knowledges of adults and young people within the same community. Had the participatory ethos been extended to encompass the knowledges of those in the wider community, and then sought a more negotiated (and participatory) approach to local environmental knowledges, then a more 'coproduced' form of local participation may have been generated. Such an approach would not necessarily dispel the power dynamics of participatory local development (Kapoor 2002b; Kesby 2007), but it would begin to open a space through which these power dynamics would be negotiated. In the JGI project, instead of this negotiation taking place, the simplistic application of a participatory component has in part served to reproduce local power dynamics and hierarchies, whilst at the same time it does promote forms of knowledge expression for young people.

In light of this, there are several reasons why forums of knowledge exchange and judgement-making should be the ideal for local development. Firstly, it would allow a collaborative judgement to be made about what will work best in a local situation, which represents the interests of all actors equally. This would require a set of rules of judgement, which govern the behaviour of actors, and govern how decisions are made in the forum. For particular development issues, it may be that local people should have the final say in what is applied or introduced to their area. Local people, with the assistance of outsiders, do have the capacity for experimentation, and it may be that the judgement about what solutions work best are based on trials and experiments at the local level. Secondly, it would allow for a radical challenge to take place towards some of the fundamental assumptions of development. If state, NGO and other actors in development must listen to the knowledges and priorities of local people, and if then their decisions must be made on an equal footing with them, and particularly if the final decisions are in the hands of local people, this may begin to forge a radical engagement with different knowledges, rather than a 'liberal' one which simply incorporates them into a given position (McFarlane 2006), or one which actively produces the environmental knowledge of a particular group within a community, as we see with young people in the JGI project, rather than actively engaging with it in the first instance. If current decision-makers in environmental issues have to make decisions jointly with those who have very different conceptualisations of the environment, then this may begin to radically change their perspective on environmental management. But, to go back to Bebbington (2000), this is 'coproduction', and such forums would allow local people to also radically rethink their understanding of the environment. Outsiders have just as much right to represent their knowledges to local people as local people have to represent their knowledges to outsiders, it just so happens that at present power relations are such that Western understandings are dominant. Some individual environmental knowledge may be unsustainable, for example some individual waste solutions in Bagamoyo advocate for dumping waste into the sea and on the beach. Such a radical engagement with knowledges also needs to be radical in the sense that all actors, including local people, NGOs, state actors and researchers must rethink their own position. This practically meets the suggestion made by Kesby (2000a) and Kesby et al (2006) that local knowledges should not be unchallengeable in the development process, and ongoing forum discussions allow for this kind of challenge to take place.

Of course this form of judgement making is loaded with questions of representation and power relations. By suggesting that it is possible, through the medium of a decision-making forum, to represent local knowledge suggests that there is some 'objective truth' (Kothari 2001) or 'local knowledge' (singular), which is problematic, and would justify current power relations which

reproduce dominant knowledges at the local level. If such forums were to exist, where the interests and knowledges of local people are represented, then how could this take place? One way to work towards a solution is to combine the efforts of both social researchers and local people. Social qualitative research can reveal and engage with the multiple knowledges which are suffused through a community. Whilst there are clearly still serious representational issues with social researchers as representatives of local knowledge (McFarlane 2006; Kothari 2001), if social research is spoken for in the same forum alongside local representatives, then this may begin to build a fuller representation of the knowledges in a community. Researchers along with all other actors should be bound by a series of rules based on ethics of representation and research engagement. For example, researchers and local representatives should be ethically bound to represent all interests, opinions and knowledges, and not just those that suit their (hypothetical) agenda. Just as scientists have to declare conflicts of interest, so should social researchers declare their own ethics, knowledges and understandings, and have a code of representation when working in communities. Such a code may be determined in collaboration again with local people, and could include specifically who is represented (perhaps by social group), how they are represented and to whom. It may also encourage researchers to think about how they can actively use their powerful positions positively in communities and in the development agenda more broadly, rather than attempting to disempower themselves as actors by 'handing over the stick'.

This is all very well in theory, but how could a judgement making forum, a meeting point of knowledges, work in practice? If this method were followed in environmental education, what would environmental education look like? First, a decision would have to be made that environmental education for young people at the local level was necessary and important locally. This would be made by a forum of people which included local leaders, state actors, social researchers and selected representatives from community groups (such as women and young people themselves), of whom a significant number would highlight it as a priority. If this were the case, then a period of research would begin, which would again involve all of these actors, and may take place over several weeks (or longer) to establish what environmental priorities are and what solutions and appropriate knowledges exist both locally, nationally and even internationally. Once done, this would feed into a suitable programme of environmental education, which would be defined by this forum and final approval given by local representatives, which, for example, might include teachers and headteachers. There is no reason why this programme could not be governed by an outside actor (for example, local government or NGOs) with the input of local people, as long as the content was cleared by the forum in which local actors had final approval.

There is also no reason why such a programme would have to be based on consensus. Environmental education could represent the standpoints of multiple actors, or suggest multiple solutions within a community, for example the difference between traditional and more 'modern' solutions. The project could be qualitatively re-evaluated at intervals and adapted or changed based on the judgements of community actors and again discussed in a forum situation.

There is still a very important role for social research here beyond practically forming a part of a judgement making process. A number of unanswered questions remain about how knowledge is produced, reproduced and circulated, and how it changes over time, as well as its place in networks of power relations. Exploring this terrain further will be particularly important for considering the responses of knowledges and practices to environmental change. Building a picture of how knowledge and environmental change interact, as well as how knowledges are reproduced and circulated in response to changing environments, should be a priority for interdisciplinary attention over longitudinal timeframes. Longitudinal social, qualitative and geographical research is needed, but it must be put into environmental contexts by collaborative work with scientists in order to continue to build our understanding of how knowledges function and change. There is further a need in knowledge research to explore 'taboo' areas (Kesby et al 2006), as I have done here in the case of traditional knowledges and witchcraft, and this kind of exploration is also needed in other areas of the global south, as well as in the Western world, to increase our understanding of how less visible knowledges operate. This should in particular explore the realm of the 'non-public'; the opposite of public participatory knowledges, which itself should be driven by an attention to a spatial approach to knowledges expression.

7.2 Can young people be empowered through education?

Whilst young people's role in environmental management, in terms of decision making in these communities, appears to be very limited (chapters 4 and 5), they play an important role in practically managing the environment and working with and in it, even if key decisions are ultimately made by adults in communities. We see for example in section 4.2.6 that young people are largely constrained when attempting to discuss their own environmental knowledges with adults, and that in the spaces of the home and the wider community they have little input into decisions about local environmental management. Yet we see later in section 5.2 that young people actively engage with the environment through tasks that contribute to family livelihoods in a number of ways, including fishing, cattle herding and agricultural practices. Within the community and the home, young people appear largely to do the physical work of environmental

management, without input into the decision making process. But the young people in these communities do have distinct environmental knowledges, and this is important because it establishes them as a significant social group in their own right within communities. They have a considerable environmental agency, even if their capacity for making decisions at the community level is hampered by the social norms of Tanzanian societies. Their knowledge expression is governed by social-spatial hierarchies and controlled by the social rules that govern particular spaces. Young people are marginalised in part because their knowledges are different to those of adults, a fact which seriously challenges participatory theories of development which often associated having knowledge as socially empowering. NGO projects reinforce the distinctions between adult and youth environmental knowledges, which is of great concern as this has the potential to enhance the marginality of young people. The social position of young people highlights how knowledges within communities are intimately entangled with, and inseparable from, relations of power, which are further constituent of social difference (Diawara 2000; Green 2000). There is again a problem of representation (Pain 2004); how can young people represent their knowledge? What kind of outlet for engaging young people in society can be more than tokenistic? Development projects, including those in education, need to directly address power relations. For young people, this should involve looking for ways of making their knowledge socially empowering by creating spaces through which their knowledge can have agency. But what might this look like?

Here a spatial approach to young people's empowerment reveals a range of possible solutions. As I illustrate in chapter 5, learning is tied to space. The importance of informal knowledge and education to local development, where informal spaces of learning and the local knowledges passed through them have been seen as significant for local empowerment (Easton et al 1999; Easton 2004; Gershberg 1999; Lucarelli 2001), is seriously challenged by a focus on spaces of learning. Formal and informal spaces of learning are divided in communities, both discursively and practically, hampering interaction of informal and formal knowledges. The fact that NGO projects are delivered to young people through the formal environment of the school appears only to enhance the division between the environmental knowledges of adults and young people, as well as the division between formal and informal environmental knowledges, or as many respondents chose to define them, between practical and theoretical knowledges (chapters 4 and 5). Indeed, not only are spaces of knowledge expression produced by this environmental education project, the environmental knowledges of young people are too produced by this intervention (Katz 2004), in part producing new forms of knowledge as well as (re)producing particular power dynamics within the community. Further, the gendered nature of these spaces illustrates that

formal spaces of learning in Tanzania can have more potential for the empowerment of young women in rural areas than informal spaces. Contrary to local knowledge, participatory and local education literature (e.g. Cornwall 2002), formal or 'official' spaces have a very important part to play in reconfiguring local gendered power structures, as well as those associated with age, highlighting the positive, empowering effects that this particular participatory project brings, which exist in parallel with other power effects which reinforce the marginal positions of young people in their communities. To envisage a form of empowerment for young people, we must think about a practical temporal process that operates through both of these spaces and makes use of their power dynamics, rather than a single and temporarily discrete event of empowerment. Formal spaces can be used to offer young people the opportunity to rehearse empowered performances, where they can express their knowledges and even perform practical tasks. In this respect, environmental education projects that use formal spaces are helpful, and more work should be done to enhance young people's experience in this space. Those who work in formal spaces (teachers, NGOs, the state) should be encouraged to create opportunities for young people in 'less threatening' formal spaces to enact radical and challenging performances, without these being dismissed by the norms of social power relations that operate in the community. The separation of these spaces is therefore, up to a point, empowering.

But there also must be mechanisms through which young people can translate these performances into the wider community, or at least be able to see the potential for this translation of empowered social agency to occur. There are numerous possibilities for this. One might be to conduct social fieldwork with young people (rather than physical fieldwork, such as planting trees) allowing young people insights into how local decisions are made, and showing them how they might influence local decision making practice and the decisions of others in their community. They could be shown how local leadership structures work or how local cooperative groups have sought to go about making environmentally sustainable changes. There are many of these small groups in communities (chapter 6), and young people could be encouraged to participate in them and witness how they make decisions. Such experiences of influencing social behaviour which are coupled with increasing an understanding of lived local social realities may help illustrate to young people how they can work towards having an empowered social agency in the community, with an example set by local adults who are making decisions and taking practical action.

The 'environment day' activities held by JGI (chapter 5) were a small step towards young people representing their ideas to adults, and bringing adults 'on board' with environmental education,

but such performances were largely tokenistic and, in the future, efforts to educate young people about the environment must involve adults in greater measure. Organised encounters between young people and adults may also address this. For example, whilst there must be avenues for adults to appreciate the work of young people, adults also need to show young people what they are doing about environmental issues, where young people have the opportunity to question them, and for adults in return to express what they find challenging about environmental sustainability. By working with local adults in projects which focus on environmental education, opportunities to take environmentally sustainable actions which also contribute to family livelihoods might be identified for young people by local adults. For example, in rural areas adults may take young people to identify dead wood and collect it, they may show young people, and use young people, to collect and dispose of waste properly, or get them involved in decisions of where to plant trees on farms or around the house. Clearly this does not 'resolve' inequalities in power relations, in fact it may involve adults 'using' their positions of power over young people, but it does suggest how adults can use their power positively to partly incorporate young people into decision making in the family whilst at the same time benefiting family livelihoods. To achieve this, adults and parents must become a part of educating young people about the environment, a very difficult prospect which demonstrates that working with the environmental challenges adults face in their daily lives may have to be the leading edge of any projects which seeks to tackle the education of young people.

These suggestions also seek to engage with local, NGO and wider societal understandings of the agency of young people. There is clearly a dichotomy assembled by teachers, adults and NGO/state actors between the place of young people and adults as environmental agents (chapter 6). Young people are commonly cast as agents of the future, implying their lack of agency and to some extent their 'innocence' in the present, whereas adults are understood as the destructive past and present, a discursive dichotomy which is reproduced by external development actors (see also Katz 2004), but also by the local community themselves. To some extent this discursively denies young people's agency in the present, and contributes to their marginalisation as environmental actors. Yet perhaps this model of young people's agency is not something which only needs to be challenged in the Tanzanian context, but should also be addressed much more widely, including in the West. Kesby et al (2006) suggest that this model of young people as actors of the future rather than in the adult world of the present is part of a 'Universal (Western) Model' of childhood, which is clearly harnessed in Tanzania to allow relationships of power between adults and youth to become normative and remain unchallenged. But we might ask how normative these values are throughout all societies. The fact that NGO

conservation discourse, heavily influenced by Western understandings, also contributes to these norms of young people's agency suggests that this (re)production of young people's identities occurs at a much wider scale, in both the West and the global south alike. Such a positioning of young people's identities avoids NGOs and other actors tackling the tricky questions about their (destructive) agency in the present. Engaging adults in environmental education, encouraging them to integrate young people into family decision making on environmental issues, is one possible solution to this, yet it requires that adults become considerable actors in purposefully educating young people about the environment whilst at the same time taking on a quite different approach to the place of young people in families. Although Uzzell (1999) argues that young people need to learn about social decision making in the environment, rather than simply their own individual environmental behaviours, which I indeed also argue for, there is still a need in Tanzania to also focus directly on the destructive agency of young people. Education materials and educational strategies more generally must tackle their current behaviours, discussing the barriers to changing behaviour and how these might be dealt with. Integrating young people into the decision-making processes of adults also has an important part to play, steps which may also allow young people to see their individual agency as an important part of societal agency, rather than being left with the impression that what they do in the present is of little consequence.

Environmental education does offer powerful possibilities to address young people's marginal status in society, as education does more generally (Kesby 2000a; Pain 2004). Changes in knowledge can lead to a change in behaviour, but only at present in the official or invited (Cornwall 2002) spaces of participation. Yet just as power can be used positively (Kesby 2005; Kesby 2007), distinct spaces in communities and the power relations which govern behaviour in them can also be used in a positive way to build empowered performances. Kothari (2001) argues that participatory development tends to 'purify' space, where particular performances are enacted and others excluded, but I would argue that such a critical approach is overly negative. This may occur in participatory space, but a more positive approach identifies how social separation of space provides opportunities for empowerment. For example, we see that in the formal spaces of secondary and primary schools in these three communities young people are empowered to express their environmental knowledges, their performances appear to be 'empowered' in the sense that young people are able to express knowledges in these formal spaces but are largely restricted in expressing similar knowledges in their homes and communities (see section 4.2.6). Therefore, the fact that the space of the school is socially distinct from the home may actually be of benefit to young people in terms of their ability to enact and practice empowered performances. Arguably, the formal space of the school and the power relations

within it are being used positively through a participatory process to build a sense of empowered knowledge expression for young people, the 'purified' nature of the power relations within the space has a positive outcome for young people. The most challenging aspect is to find avenues through which these performances can be translated, which requires adults to use their power positively, and again this suffers from Kapoor's (2002b) criticism of the powerful having to voluntarily give up power. This analysis explains why the language of participatory development, where thinking about 'maximum empowerment' or 'full control' of development initiatives is the norm, is largely inappropriate for young people, as realistically reversing the power relations between adults and young people, embedded throughout global societies, seems largely ridiculous, especially considering the important responsibilities adults have towards the care and development of young people.

It is here that critiques of participation which appear only to suggest 'resistance' to the power effects of participation (Cooke and Kothari 2001) seem unhelpful, particularly for young people. As the evidence in this thesis shows, young people can produce empowered performances within the context of spaces laden with power relations (schools) which largely place them in a subordinate position. The potential for translating these empowered performances into other spaces of the community is unlikely to arise from young people outright 'resisting' the hegemony of adult knowledge expression on environmental issues in their homes or communities. It is far more likely to come from working with the power dynamics that exist in the relationship between adults and young people to produce opportunities for young people to become engaged in present environmental decision-making, such that adult, NGO and state 'authority over' young people might eventually translate into 'authority among' the community for these young people. This is a process which is clearly situated within a participatory ethos and ideology, yet is not yet present in the on-the-ground context of this project. Here, simplistic and superficial application of participation has had some positive empowering effects for young people, but it has equally and in parallel reproduced young people's social identities such as to entrench their marginal position. Whilst a substantial, positive and constructive critique of participation is ongoing in the academic literature (Kesby 2007; Sanderson and Kindon 2004; Porter and Abane 2008; Pain 2004; Nelson and Agrawal 2008) this does not appear to have filtered down into current development practice in this context. The evidence in this thesis suggests that there is an immediate need for this constructive critique of participation to become actively engaged in on-the-ground development projects. There is a need here also for research which considers relevant ways of describing what constitutes empowerment for young people, to allow the participatory agenda to move beyond simplistic and often binary notions of power and empowerment. Although this research does

provide some pointers as to how empowerment might work for young people in a specific context, much work still needs to be done to more broadly theorise this empowerment and develop it in practice. A focus on understanding what empowerment means for young people must not exclusively be about young people, but needs to maintain a strong focus on families and communities, and how power relations are structured through them.

7.3 What role should NGOs and the state play in development?

I have discussed the roles adopted by the Tanzanian state and NGOs in providing education, but what impact does this analysis have on how we conceptualised, both practically and theoretically, how development is done? NGOs are attractive to international organisations and funders because they bypass previously failed states and appear to be more locally-orientated (Lewis 2002; Bashyam 2002), and as a result have largely become uncritically accepted as the agents of development in the new participatory development orthodoxy. Caillods (2005) asks if the decentralisation of education to NGOs has worked, and in the Tanzanian context the answer is inconclusive, but the evidence is not overwhelmingly in favour of NGOs.

The place of NGOs as agents of local and national development is highly questionable. In Tanzania, as in other contexts, there is a large number of individual NGOs with their own goals, yet limited capacities, leading to a plethora of discrete, poorly coordinated approaches to environmental education. The NGOs in this study were focused on their own organisational goals which are determined 'elsewhere' from the communities in which they work, and these are not necessarily focused on local needs and priorities. Conservation NGOs running education projects offer a prime example of this process (chapters 4 and 5), and partly as a result of the orientation of projects towards NGO objectives, participation becomes more of a burden than empowering, particularly for teachers. In Tanzania, NGOs do not operate in line with the ethical expectations of the participatory orthodoxy because they act as service subcontractors of the state, employed out of necessity because of a lack of state capacity rather than a moral and ethical imperative. International funders are partly to blame for this. By channelling their funds to NGOs rather than the state they undermine state capacity and thus contribute to the national terrain in which NGOs work, which is to fill the gap left in public services from state retreat. The evidence challenges participatory rhetoric which sees NGOs as the ethical and moral champions of local development. The independence of NGOs and their lack of accountability upwards to the state or downwards to the local means that they lack legitimacy as actors in the local and the national space. In the case of environmental education it may be the state which is more accountable and therefore better

placed to coordinate forms of national inclusivity. NGO environmental education projects have only made questionable marginal impacts, which are difficult to detect in part because NGO projects are so resistant to meaningful qualitative evaluation. Poor cultures of accountability and evaluation are due to the institutional framework in which these NGOs operate (partly the responsibility of the state), but also reflect the non-local nature of these Tanzanian NGOs, who tend to ignore important local factors such as the inability of young people to translate their learning between different spaces (chapters 4 and 5). The NGOs in this study are not locally focused; they are upwardly and inwardly orientated. This suggests that there may be a need to fundamentally reappraise the role of NGOs more generally in local development.

If NGOs are to survive as legitimate actors that live up to the moral and ethical imperatives of participatory development, then they must become organisations that actually represent local interests. In Tanzania the apparent culture of NGOs needs to change, and one important way this could happen would be to allow them to report failure both upwardly and downwards. To achieve this there need to be mechanisms by which they can be held accountable to local people and the state, with reduced accountability to funders (who could gain accountability for the projects they fund through evaluations by local people and the state). In order to facilitate this, there should be a disconnect between funds donated to an NGO and expectations that they should follow a particular project or agenda, allowing the agendas for NGOs to be determined by local people and the Tanzanian state rather than attached to funding. A second way to facilitate this would be through the types of forums discussed earlier in section 7.1, where local and state interests are represented to decide what forms of action are practically needed in communities, what they or particular social groups need assistance with. Decisions made in these forums and at the state level should drive NGO agendas, and should also be the bodies to which NGOs are accountable. There should be mechanisms through which NGOs are able to share failure. All projects are to some extent experiments, but the current forms of accountability to funders mean the NGOs only report quantitative delivery success, rather than qualitatively assessing their project outcomes for local people. We see this in the comparisons between NGO quantitative evaluations which appear to report success, and the qualitative evidence of outcomes (chapter 5) which are inconclusive but suggest that this success is highly questionable. Without qualitative evaluations which highlight points of difficulty, failure or questionable outcomes, projects and approaches to development cannot and will not significantly change. There must be a mechanism to report the outcomes of these forms of experimentation, through which NGOs, the state and local people can access, learn and adapt from. This perhaps requires the state and NGOs to accept what would be highly controversial in their current organisational paradigms, that failure is a natural part of the

development process. As theorists of development began to recognise in the 1970s, development does not follow a linear path, there is no consistent upward trajectory in development 'progress' (Binns 2002; Power 2002; Wallerstein 1974). Therefore some projects will not succeed as they intend, but without mechanisms for legitimacy and accountability, nothing will be learnt.

For NGOs, this kind of accountability might also be achieved by tying them into longer term projects. Educational outcomes require a longitudinal outlook, as do many other aspects of development, much longer than the standard '5 year project'. Because NGOs are only answerable for these limited timescales, in which the actual 'delivery' of a project may be only in the final years, this makes it difficult to qualitatively hold them accountable for its impacts, but also makes it difficult to change NGO practices over the long term. Again a solution is to clearly restructure how projects are funded and governed. But this raises a more fundamental question: Who is ultimately best placed to deal with particular aspects or scales of development? The participation agenda has completely sidestepped this issue when it celebrates the power of the local, conveniently ignoring what happens beyond this level (Agrawal 1996; Mohan 2001). As a result, projects that appear to be locally focused, including the JGI environmental education projects, actually generate exclusions at the regional and national scale. For education, and other national services and institutions, we must think about participation at scales other than the local (Astana 2003; Brett 2003). NGO approaches to development are not always compatible with national inclusivity. International funding might therefore be better directed towards states and government bodies, which are democratically elected by their people and also have a 'national' outlook and potential capacity, rather than towards NGOs, and therefore bolster the capacity and democratic accountability of the state. This should come hand-in-hand with strengthening the democratic accountability of local government and the capacities of local people in the democratic process, again potentially through the local forum-style interactions.

In light of this, postdevelopment theories have been extremely unhelpful in encouraging 'disengagement' from the state (Ferguson 1994; Escobar 1995), which have, at least theoretically, contributed to fostering a will to bypass the state through funding NGOs (Batley 2002). But there is a need to re-engage with the state, a need to strengthen democratic governance and to build and strengthen links between the state and the local, between individuals and society, rather than cut across, bypass and disrupt them with unaccountable 'middlemen' of development. For research, the links between the individual and the state in development are presently ill-modelled (Clever 1999), and this needs to be addressed to deliver insights which might aid 'active

partnership' across scales (Brett 2003). NGOs, which in Tanzania currently lack mechanisms of accountability to the Tanzanian people, should not at present be a part of setting this agenda.

7.4 How can a focus on environmental education further critical debates about participation and community in development?

Notions of participation and community in policy and academic writing are heavily imbued with Western values, morals and ethics (Green 2000; Mercer 2002; Sylvester 1999; Kesby 2005), and communities and individuals who have been part of this study do not always share the ideals of participatory development. Participation makes assumptions about individual and collective responsibility which appear to be very different to the understandings of Tanzanian respondents in this study. They are commonly far more concerned with the responsibilities of the state and other outside actors than they are with those at the community level (Fig. 6.2). When people do discuss their own responsibility to society, this is very much couched at the level of the individual and the family rather than the community. These local ideals of responsibility have a strong influence on behaviour, and the local understandings of volunteering and participation gathered from respondents of this study are also not concurrent with those which are assumed in idealised versions of participatory development. For example, in both Kawe and Rukwa, respondents were more likely to cite individual responsibility as more important than collective, community responsibility towards the environment (Fig. 6.2, and p.256), and many respondents did not take part in or were unwilling to take part in community environmental activities because they did not perceive there to be any individual material benefit to them by doing so (section 6.4). The lack of community capacity to self-organise is a major factor in the apparent lack of practical action to benefit the community (Fig. 6.4). This clearly questions the assumptions of postdevelopment about the capacity of the 'grassroots' of society (Escobar 1995; Ferguson 1995; Blaikie 2000). Reliance on external intervention appears to be deeply embedded in these communities, as research has show in other contexts of the global south (Anderson et al 2003; Intili and Kissam 2006).

We see in section 6.5 that these three communities far from fit the ideal of community that some early participatory writing has sought to create. There is no universal sense of 'community' which individuals within a locality feel. Responsibility is rarely understood at the community level, and actions are not often taken at the community scale (see section 6.5). As I illustrate in section 6.5, this is in part a result of the fact that communities, rather than being a coherent group of people who act 'together', instead have a complex internal structure of individuals and groups which is

nested within a wide network of power relations and knowledge. This can lead to a lack of consensus on what action should be taken to deal with a particular issue, and can reproduce marginalisation within the community. Some of these arguments about the nature of communities have already been made (Gujit and Shah 1998), yet it is important to put these issues with the notion of 'community' into the context of Tanzania and specifically the communities that engaged with this project. This conceptualisation of community, based on the evidence from these three study areas, helps us to understand why environmental education projects may have failed to make a significant impact on young people's empowerment. The local reproduction of young people's identities as environmental actors (section 6.5.2) illustrates well how both local people and outside actors can reproduce the marginalisation which structures what young people can and cannot do. Community power dynamics and the norms of spatial knowledge expression for young people within the power stratifications of these communities means that young people are not positioned as empowered environmental actors, and indeed the evidence shows that NGO discourses of the agency of young people re-assert local conceptions of young people's agency within communities (p.281-283). Through this example we can see that one of the functions of the 'local community' is to reproduce social power relations, limiting the potential for any participatory project to make radical change to the social empowerment of any marginalised group at the local scale. In this case, a project aimed at promoting empowerment and local participation (JGI 2009b), by avoiding challenging directly local social power hierarchies, only serves to reinforce the structure and functionality of existing power dimensions. This in itself suggests that communities are therefore not a 'natural' site of empowerment as some participatory and postdevelopment theorists suggest. The functioning of these communities can reproduce local marginalisation, they do not necessarily and 'naturally' foster empowerment, nor do they provide a secure grounding from which empowered performances can emerge. Equally, it is worrying that these broad critiques of community (Gujit and Shah 1998) have not filtered down into on-the-ground development projects, particularly to an NGO project which has considerable international links. The environmental education project appeared to adopt simplistic notions of 'community' by assuming that young people would be able to transfer their learnt environmental knowledge unhindered to the rest of the 'community', yet there were considerable operations of social power which prevented young people from doing so, none of which were addressed in the project. In fact, the evidence suggests that these projects may have served to reproduce young people place as marginal environmental actors in their communities (chapter 6).

But what does this mean for the participation agenda? Although the metanarratives of participation have been defined by Western thinkers and practitioners (Agrawal 1996; Kapoor

2002b), equally others have argued that actually the meaning of participatory development has remained vague (Brock 2003; Cornwall and Pratt 2003; Mohan 2002; Goebel 1998). Whilst this has been a common criticism of the participatory agenda (Cooke and Kothari 2001), this vagueness may in fact be a positive attribute of participatory thought because it opens up opportunities to decide what participation means in specific contexts. The 'diversity' of meanings which Cornwall and Pratt (2003) discuss is not necessarily a 'bad' thing, because meaning can then be decided by the context of the country, region, community and the individuals who are involved in a particular project. Although participation may because of this be fraught with ethical and moral debates, it is not necessary to throw out the paradigm and its associated terminology as other theorists have attempted to do with the paradigms associated with 'development' (e.g. Escobar 1995; Fergusson 1994). Participation should still be about listening to local people and defining development in context (Chambers 1994a, b, c) and these ethics still stand, as long as they are applied to participation itself, or more accurately, as long as they are applied to the concept of development. Brett (2003) and Kapoor (2004) argue that we need to think about what type of participation is most appropriate, but in light of this evidence the starting questions in any form of development should perhaps be what does development mean in Tanzania, and how do individuals understand participation and responsibility? Although, as I have discussed, Kapoor (2002b; 2004) calls for a 'legitimizing force' for participatory encounters, in the critical participation literature there is a distinct lack of suggestions as to what a set of 'rules' to govern participatory encounters might look like.

The evidence from these three communities suggests that the first rule in any development encounter is to establish what the cultural norms or expectations of involvement in development are for local people, and also to establish for local people the norms and expectations of outsiders. This should include defining what empowerment, participation and community actually mean for local people and to openly discuss these in communities and groups with outsiders (including state and NGO actors and researchers/academics), and use these as the fundamental context for how development projects are thought through, developed and ultimately practiced. Setting the 'ground rules' and expectations of development will fundamentally determine what subsequently happens in communities. This involves more than simply finding out community material needs and priorities (although obviously these are also very important), it is also about defining what development means, what local people are prepared to do, and what they expect of others. Such an encounter would seek to establish what the roles and responsibilities of individuals and different actors are. For example, for the purposes of environmental education, what can local teachers and local people expect of the state and NGOs, and what can these actors

expect of local people? What can young people be expected to achieve in the local environment, and what do young people expect of others? And clearly, as this research has demonstrated, the ideas on these topics will be various and multiple, and they may be competing and conflictual within communities. But also by discussing and establishing these roles, this begins to open up possibilities for negotiation. Such encounters should not only be about 'finding out' about what local/community/state/NGO ethics of development are, they should also be opportunities to challenge and renegotiate these roles and responsibilities (Kesby 2007). We see, for example, in section 6.3 (and Fig. 6.4) that individuals within these communities can have strong ideals about who is responsible for local development which they are willing to express in conversation, yet these do not perhaps reflect the realities of what the state or NGOs can achieve at the local level (section 6.2). Such opportunities to challenge roles and responsibilities may not only draw the attention of state and NGO actors to what is expected of them, but also to manage the expectations of local people. How such a process might occur has been discussed in section 7.1, through discussion forums that bring actors together, but it is also a process which should be founded on detailed qualitative research that involves individuals within a community as actors. Detailed research has the potential to establish what these norms of development are for different social groups within communities, and a spatial, geographical approach is also important in establishing how these norms at the local and individual levels are networked across space. The task for applied qualitative research is to identify the range of different development subjectivities that exist between and within different communities, and more research is needed into the most appropriate ways to understand and represent the complexity of local understandings of development, and how best to work collaboratively within local communities to achieve this understanding.

Young people's participation offers one example of how this joint approach involving detailed qualitative research and local people can help determine the context of participatory development initiatives. Participatory education projects have generally assumed that a change in knowledge through education leads to a change in behaviour amongst young people (Bonnett and Williams 1998; Andersson et al 2003; Uzzell 1999). However, through detailed qualitative research in schools and in communities, which included the participation of young people, parents, teachers, other local adults, as well as NGOs and local state actors and leadership groups, it is clear that in the Tanzanian context this relationship between knowledge and agency is highly questionable. To understand why this occurs requires an appreciation of local social hierarchies, local norms of knowledge expression and action, and the place of young people in these systems. If environmental education projects had invested in research to understand the local context of

young people's roles, responsibilities, social status and attitudes to environmental behaviour, this may have fundamentally changed the projects to include considering how young people's agency in their respective communities might be negotiated, rather than set unrealistic expectations on young people and their abilities to act in the local community space. Even relatively short, detailed and local qualitative studies can offer an informative insight into these local social relationships, which should feed into how development is done.

At a broader scale there is an important role for research in addressing some of the continued yet rhetorically disguised or hidden Western assumptions in development. The assumptions still embedded in on-the-ground participatory development projects about knowledge and agency illustrate how participation and local empowerment agendas are still underpinned by linear narratives of progress which have been translated onto the local scale. Making assumptions about causal links between education and changes of behaviour, and therefore empowerment, are not dissimilar to the unilinear paths to development which were and are still present in neoclassical economics (Potter et al 2003), or enlightenment thought, which underlines ideas of 'progress' with causal relationships between inputs and outputs of development (Power 2002). Detailed qualitative research about what happens in projects at the local level is needed to illustrate how in actuality the idea of participation and local empowerment is not a causal and linear process, because only then can there be an understanding of development as a process of failure as much as it is a process of progress. Interestingly, local people often understand this notion themselves when they conduct experiments at the local level. In section 6.5 we see how local people conduct experiments with crops to establish what works in their environment. They are not blind to the fact that such experiments may fail, which is why they do not adopt them wholesale on their first encounter. If they fail, it is unlikely that they will be adopted in their present form. Local people have the capacity to do this, so why not NGOs and other actors of development? Again, this provides further evidence to suggest that organisational cultures of development must change to evaluating success and failure, to detach funding from quantitative output and to start thinking about development as a process of negotiated experimentation, rather than one of progress and success. Equally, there is clearly a continuing need for the critical academic literature on participation and community to become actively engaged in promoting its messages about the nature of communities and the power dynamics of participation to on-the-ground development actors. Early work, which largely celebrated and championed participatory approaches (e.g. Chambers 1994a) was very successful in engaging the policy community to promote local participation in development, however, more complex, critical engagement with understanding community and participation (e.g. Gujit and Shah 1998; Cooke and Kothari 2001; Kesby 2007) has

yet to have the same effect, at least in this context, despite the fact that much of this critical approach appeared over ten years ago. There are some important questions to be asked here about how more critical, complex understandings of community and participation can be communicated to the development community more broadly.

Does this also mean that all Western assumptions of development should be abandoned, as post-development appears to advocate? In the context of the argument I present above, does this mean that Western ideals of empowerment are no longer valuable? I believe that they are, just that the context in which they are applied should change. Tanzanian understandings of community perhaps offer a useful parable of how we might begin to examine diverse knowledges and understandings of development at other scales. Participatory development has made considerable assumptions about community (Gujit and Shah 1998) which do not match those of the Tanzanians in this study. It has assumed that communities are largely cohesive, collaborative, and, as such, are relatively simple in their dynamics of power and action (Green 2000; Cleaver 1999; Agrawal and Gupta 2005; Sahu 2008). In reality Tanzanian communities have a highly complex internal social structure, which is nested in wide networks of power relations and knowledge. There is a lack of consensus in both knowledge and action, which help to produce marginalisations at particular scales. This understanding of community suggests that it is therefore not 'naturally' a site of empowerment. The reproduction of young peoples' identities as environmental actors is a case in point, illustrating how both local people and outside actors can reproduce marginalisations which structure what young people can and cannot do. This provides one alternative model of community, and highlights how, in development, a focus on one scale neglects the potential of others. But it also illustrate how, whilst there may be a unique and distinctive Tanzanian ideology of local development, participation and community, this ideology is not universal but instead is varied, multiple and in constant dialogue, competition and re-negotiation at the local scale, as it is at other scales of development. The same characteristics of multiple meanings of development and a lack of consensus are evident at the national scale as well as in the global arena.

In order for local development to take place, these dialogues and processes of negotiation about what development and empowerment mean at the local level must continue, and to shut them down by privileging one local group or ideology over another would work directly against the ethics of participation and empowerment in development. Processes at the community scale in Tanzania are a useful parable because similar processes occur at, and therefore the same thinking should be applied to, all scales of development. Processes of negotiation and, perhaps to some

extent, competition in values and ethics of development must continue to occur at broader scales, as well as at the local. Shutting these down through making broad policy statements in favour of the 'local' or any other scale/actor/ideology of development is a recipe for the continued dominance of one development paradigm over another. When Chambers (1994a) suggests that we 'hand over the stick' to local people he is paradoxically at odds with the ethics of participation, which should apply to all knowledge systems. Rather than 'handing over the stick' of determining what happens in development, which comes with it great responsibility, we should instead throw the stick away. The most radical thing that could happen at all scales of development is to imagine that there is no stick, to imagine that there is no single group that ultimately holds, or is entitled to, power over the process of development (even at the local scale), and that a range of both local and extra-local actors can have equal input, responsibility and potential for action in any given development scenario. This is what constitutes a 'radical' re-engagement with local knowledge (McFarlane 2006), one which not only listens to other knowledges, but allows all actors to represent and equally argue, and in the process re-examine, their own ethics of development. In this form of engagement, Western actors do not have to throw out their own ethics and morals in favour of others, as such an act refuses to take responsibility for one's role in a global society. By listening to local people in Tanzania we can see that they put a great deal of stake in the power and responsibility of the state, NGOs, and outside actors, and perhaps if these local ethics and understandings of development were listened to, these actors would consider how they can use this responsibility positively, rather than shunt responsibility onto local people (Blomley et al 2008; Mercer 2002). Of course, it is the negotiation of power relations to enable equal discussions to happen at the local, regional and national scales which is the practical crux.

Appendices

Appendix 1: Example interview schedule for NGO staff

Question schedule for NGO staff

Environmental Education

- Can you tell me about the environmental education project run by your organisation?
- More details about project e.g. location, materials, scope, activities, those involved, aims and objectives, achievements, funding?
- What has been your role in this?
- What have been the main successes? What has been achieved? Outcomes?
- What have been the main challenges?
- Are there plans for the future? What do you hope will happen?

Government and other NGOs

- How have you worked with the government/state actors on environmental education?
- Are you aware of other NGO projects? Can you give details?

Participation

- Who is involved in the education project? E.g. teachers, young people, adults?
- How are communities engaged with? How are people 'selected'?
- Are there any challenges associated with community participation?

Local Knowledge

- How are the 'contents' or 'curriculums' for environmental education decided on?
 - Do teachers/local people/young people have any input?
 - Does knowledge taught in environmental education always 'match' what some people in the community already know?
 - Are there any conflicts? Are different knowledge readily accepted?
-

Appendix 2: Example interview schedule for teachers and headteachers

Interview questions for teachers

A. The local environment

1. Can you define the local environment?
2. What are the most important parts of the local environment?
3. What are the main environmental issues in the area? Which are the most important?
4. What are the main causes of these issues? Who causes these problems?
5. What do you think are the main environmental issues for Tanzania?
6. Who do you think should be responsible for local environmental problems?

B. Environmental education

1. How have you been involved in Environmental Education?
2. Why did you become involved?
3. Are all teachers involved?
4. Did you receive any training to teach Environmental Education?
5. What are the main benefits and challenges/problems that you can identify from being involved in Environmental Education?
6. What kind of activities are children in the school been involved in relating to Environmental Education?
7. Have the local community been involved in any way (e.g. Parents)?
8. Do you think EE has changed the children's behaviour in the environment? If so, how?

C. NGOs, Government, and other questions

1. How did you find out about the EE project/training?
2. How helpful has the NGO and the Government been in supporting you with EE?
3. Who decides on the curriculum for EE? Is it the government or the NGO (e.g. JGI)?
4. Does the teaching of EE involve any traditional knowledge about conserving the environment?
5. Do all parents send their children to school?

Appendix 3: Focus group questions and tasks with young people

Section	Method
1. The local environment <i>20 min.</i>	<p>Card sorting exercise</p> <ul style="list-style-type: none"> The students are split into two groups (normally of 3 or 4 students each). Each group writes down on 6 or more small cards what they consider to be the main 'parts' of the environment. Examples included water, air, land, animals. Each group then sorts the cards into 'most important' at the top, and 'least important' at the bottom. <p>Feedback from card sorting</p> <ul style="list-style-type: none"> Students are asked in their groups to describe each of the parts of the environment to the whole group, and explain the order in which they put their cards. Other pupils can ask questions about this. <p>Group discussion questions</p> <ol style="list-style-type: none"> For each of the parts of the environment you have identified, can you tell us any problems or issues that you know about? Which of these issues is a problem in this area (around the school/where you live)? Are there any problems in the local area not on the cards?
2. Behaviour in the environment <i>15 min.</i>	<p>Group discussion questions</p> <ol style="list-style-type: none"> Do any of you take part in any environmental activities? If so what do you do? Who causes environmental problems? Who is responsible for looking after the environment?
3. Environmental education <i>10 min.</i>	<p>Group discussion questions</p> <ol style="list-style-type: none"> Have you learnt about the environment at home, from your parents or family or friends? What kind of environmental activities have you done at school? Do you prefer learning about the environment in the classroom or doing activities outside?
4. Traditional knowledges <i>5 min.</i>	<p>Group discussion questions</p> <ol style="list-style-type: none"> Do any of you know about traditional knowledges or traditional ways of looking after the local environment?
5. Urban and rural environments <i>10 min.</i>	<p>Vote with your feet activity</p> <ul style="list-style-type: none"> On a wall (on the classroom blackboard) one side of the room becomes an urban area, the other side a rural area. Students start in the middle of the room, and move to either a rural or urban area in response to the question. Once they have moved, students are then asked to explain their answers. Questions: <ol style="list-style-type: none"> Which has a better environment, Rural or Urban areas? Which one has more jobs, Rural or Urban? Which would you rather live in, Rural or Urban?

Appendix 4: Example interview schedule for local adults and young people

Question schedule for local people

The local environment

- Can you define the local environment?
- What are the most important parts of the local environment?
- Are you aware of any environmental issues in the area?
- Which is the most/least important?
- What/Who causes these problems?
- What do you think are the environmental problems around Tanzania?

Environmental behaviours and participation

- Who should be responsible for solving these problems/looking after the environment?
- Are you aware of any activities in the area to help conserve the environment?
- What are the solutions to these problems?
- Would you want to help if there was an opportunity?
- Are you aware of any NGO projects here? Have you been involved?

Environmental education

- Do you know what environmental education is?
- Have you heard about environmental education being conducted in local schools?
- What is your opinion on young people being educated about the environment at school?
- What do young people need to be taught about the environment?
- Do you have children? Do you talk about the environment at home?
- What is your opinion on sending your children to school? Are you aware of anyone who does not send their children to school?

Local and traditional knowledge

- Are you aware of any local traditional knowledges relating to the environment?
 - What places are they from? Could you describe them?
 - What is your opinion on traditional knowledges?
 - How useful are they for managing the environment?
 - Do you think they should be taught at schools?
-

References

- Abraham, J. (1994) 'Bias in Science and Medical Knowledge: The Open Controversy', *Sociology*, 28, pp. 717-736.
- Adams, W. M., Potkanski, T. and Sutton, J. E. G. (1994) 'Indigenous farmer-managed irrigation in Sonjo, Tanzania', *The Geographical Journal*, 160 (1), pp. 17-32.
- Aggarwal, R. M., and Rous, J. J. (2006) 'Awareness and quality of knowledge regarding HIV/AIDS among women in India', *Journal of Development Studies*, 42 (3), pp. 371-401.
- Agnew, J. (2001) 'The new global economy: time-space compression, geopolitics, and global uneven development', *Journal of World-Systems Research*, VII (2), pp. 133-154.
- Agrawal, A. (1995) 'Indigenous and scientific knowledge: some critical comments' *IK Monitor*, 3 (3).
- Agrawal, A. (1996) 'Poststructuralist approaches to development: some critical reflections', *Peace & Change*, 21 (4), pp. 464-477
- Agrawal, A. and Gupta, K. (2005) 'Decentralisation and participation: The governance of common pool resources in Nepal's Terai', *World Development*, 33 (7), pp. 1101-1114.
- Allen, L. (2005) 'Managing masculinity: Young men's identity work in focus groups', *Qualitative research*, 5 (1), pp. 35-57.
- Alumasa, J.K. (2003) 'Hanging on the edge of a cliff: my loud thoughts as I walk along the winding path of participatory development in Kenya', in Cornwall, A. and Pratt, G. (eds.) *Pathways to Participation: Reflections on PRA*, ITDG Publishing.
- Andersson, N., Swaminathan, A., Whitaker, C. and Roche, M. (2003) 'Mine smartness and the community voice in mine-risk education: lessons from Afghanistan and Angola', *Third World Quarterly*, 24 (5), pp. 873-887.
- Andreasson, S. (2001) 'Divergent paths of development: the modern world-system and democratization in South Africa and Zambia', *Journal of World-Systems Research*, VII (2), pp. 175-223.
- Anello, E. (2003) 'My pathways to work on participation in local government', in Cornwall, A. and Pratt, G. (eds.) *Pathways to Participation: Reflections on PRA*, ITDG Publishing.
- Asthana, A. N. (2003) 'Decentralisation and supply efficiency: The case of rural water supply in central India', *The Journal of Development Studies*, vol. 39, no. 4, pp. 148-159.
- Bashyam, L. (2002) 'The role of the Northern development NGO (Christian Aid)' in Desai, V. and Potter, R. B. *The Companion to Development Studies*, London, Arnold, pp. 514-519.

- Batley, R. (2002) 'The changing role of the state in development' in Desai, V. and Potter, R. B. *The Companion to Development Studies*, London, Arnold, pp. 135-139.
- Bebbington, A. (2000) 'Reencountering development: livelihood transitions and place transformations in the Andes', *Annals of the Association of American Geographers*, 90 (3), pp. 495-520.
- Blaikie, P. (2000) 'Development, post-, anti-, and populist: a critical review', *Environment and Planning A*, 32, pp. 1033-1050.
- Blaikie, P., Brown, K., Stocking, M., Tang, L., Dixon, P. and Sillitoe, P. (1996) 'Knowledge in action: Local knowledge as a development resource and barriers to its incorporation in natural resource research and development', *Agricultural Systems*, 55 (2), pp. 217-237.
- Binns, T. (2002) 'Dualistic and unilinear concepts of development', in Desai, V. and Potter, R. B. *The Companion to Development Studies*, London, Arnold, pp. 75-80.
- Binns, T. Hill, T. and Etienne, N. (1997) 'Learning from the people: Participatory rural appraisal, geography and rural development in the 'new' South Africa', *Applied Geography*, 17 (1), pp. 1-9.
- Blomley, T., Pfliegner, K., Isango, J., Zahabu, E., Ahrends, A. and Burgess, N. (2008) 'Seeing the wood for the trees: as assessment of the impact of participatory forest management on forest condition in Tanzania.' *Oryx*, 42 (3), pp. 380-391.
- Bodeker, G., Kabatesi, D., King, R. and Homsy, J. (2000) 'A regional task force on tradition medicine and AIDS', *Lancet*, 355, pp. 1284.
- Bonnett, M. and Williams, J. (1998) 'Environmental education and primary children's attitudes towards nature and the environment', *Cambridge Journal of Education*, 28 (2), pp. 159-173.
- Bourdillon, M.F.C. (2004) 'Children in development', *Progress in Development Studies*, 4 (2), pp. 99-113.
- Brett, E. A. (2003) 'Participation and accountability in development management', *The Journal of Development Studies*, 40 (2), pp. 1-29.
- Briggs, J. (2005) 'The use of indigenous knowledge in development: problems and challenges', *Progress in Development Studies*, 5 (2), pp. 99-114.
- Briggs, J., Badri, M. and Mekki, A-M. (1999) 'Indigenous knowledges and vegetation use among Bedouin in the Eastern Desert of Egypt', *Applied Geography*, 19, pp. 87-103.
- Briggs, J., Sharp, J., Hamed, N. and Yacoub, H. (2003) 'Changing women's roles, changing environmental knowledges: evidence from Upper Egypt', *The Geographical Journal*, 169 (4), pp. 313-325.

- Briggs, J. and Sharp, J. (2004) 'Indigenous knowledges and development: a postcolonial caution', *Third World Quarterly*, 25 (4), pp. 661-676.
- Briggs, J., Sharp, J., Yacoub, H., Hamed, N. and Roe, A. (2007) 'The nature of indigenous environmental knowledge production: evidence from Bedouin communities in Southern Egypt.', *Journal of International Development*, 19, pp. 239-251.
- Brock, K. (2003) 'Participation, policy, poverty: where now?' in Cornwall, A. and Pratt, G. (eds.) *Pathways to Participation: Reflections on PRA*, ITDG Publishing.
- Brymen, A (2004) *Social research methods*, Oxford: Oxford University Press, 2nd Edition.
- Caillods, F. (2005) 'The international working group on education: supporting global education initiatives' *Journal of Education for International Development*, 1 (1), pp. 1-3.
- Calderon, J.N., Baker, R.S., and Wolf, K.E. (2005) 'Focus groups: a qualitative method complementing quantitative research for studying culturally diverse groups', *Education for Health*, 13 (1), pp. 91-95.
- Chambers, C. N. L. (2008) 'Pasua and the politics of environmental management, Tongareva, Cook Islands', *Scottish Geographical Journal*, 124 (2-3), pp. 192-197.
- Chambers, R. (1994a) 'The origins and practice of participatory rural appraisal', *World Development*, 22 (7), pp. 953-969.
- Chambers, R. (1994b) 'Participatory rural appraisal (PRA): Analysis of experience', *World Development*, 22 (9), pp. 1253-1268.
- Chambers, R. (1994c) 'Participatory rural appraisal (PRA): Challenges, potentials and paradigm', *World Development*, 22 (10), pp. 1437-1454.
- Chambers, R. (1997) 'Responsible well-being – a personal agenda for development', *World Development*, 25 (11), pp. 1743-1754.
- Clarke, C. (2002) 'The Latin American structuralists', in Desai, V. and Potter, R. B. *The Companion to Development Studies*, London, Arnold, pp. 92-97.
- Cleaver, F. (1999) 'Paradoxes of participation: questioning participatory approaches to development', *Journal of International Development*, 11 (4), pp. 597-612.
- Cooke, B., and Kothari, U. (2001) *Participation: The New Tyranny*, Zed Books, London
- Cornwall, A. (1998) 'Gender, participation and the politics of difference', in: Guijt, I., and Shah, M. K. (eds) (1998) *The myth of community: gender issues in participatory development*, ITDG Publishing, London, pp. 46-57.

- Cornwall, A. (2002) 'Locating citizen participation', *IDS Bulletin*, 33 (2), pp. 49-58.
- Cornwall, A. and Brock, K. (2005) 'What do buzzwords do for development policy? A critical look at 'participation', 'empowerment' and 'poverty reduction'', *Third World Quarterly*, 26 (7), pp. 1043-1060.
- Cornwall, A. and Pratt, G. (2003) 'Introduction', in Cornwall, A. and Pratt, G. (eds.) *Pathways to Participation: Reflections on PRA*, ITDG Publishing.
- Cox, S. M., and Fulsaa, K. (Eds.) (2006) *Mountaineering. The Freedom of the Hills*, 7th Edition, Swan Hill Press, Shrewsbury.
- De Grauwe, A., Lugaz, C., Balde, D., Diakhate, C., Dougnon, D., Moustapha, M. and Odushina, D. (2005) 'Does decentralisation lead to school improvement? Findings and lessons from research in West-Africa', *Journal of Education in International Development*, 1 (1), pp. 1-15.
- Davidson, J. (2010) 'Cultivating knowledge: development, dissemblance, and discursive contradictions among the Diola of Guinea-Bissau', *American Ethnologist*, 37 (2), pp. 212-226.
- Davies, R. (2002) 'Monitoring and evaluating NGO achievements', in Desai, V. and Potter, R. B. *The Companion to Development Studies*, London, Arnold, pp. 523-528.
- Desai, V. (2002) 'Community participation in development', in Desai, V. and Potter, R. B. (eds.) *The Companion to Development Studies*, London, Arnold. pp. 115-119.
- Diawara, M. (2000) 'Globalization, development politics and local knowledges', *International Sociology*, 15 (2), pp. 361-371.
- Dixon, A. (2001) 'Indigenous hydrological knowledge in southwestern Ethiopia', *Indigenous Knowledge and Development Monitor*, 9 (3), pp. 3-5.
- Dodds, K. (2002) 'The Third World, developing countries, the South, poor countries' in Desai, V. and Potter, R. B. (eds.) *The Companion to Development Studies*, London, Arnold, pp. 3-7.
- Donnell-Roark, P. (1998) 'Indigenous knowledge systems in Sub-Saharan Africa: an overview', *IK Notes* 1, The World Bank.
- Dossa, S. (2007) 'Slicing up 'development': colonialism, political theory, ethics', *Third World Quarterly*, 28 (5), pp. 887-899.
- Easton, P. (1999) 'Literacy and local governance in a rural community', *IK Notes*, 7, The World Bank.
- Easton, P. (2004) 'Education and indigenous knowledge' in *Indigenous knowledge: local pathways to global development*, Knowledge and Learning group, Africa Region, The World Bank, pp. 18-23.

- Easton, P. and Belloncle, G. (2000) 'Indigenous knowledge: blending the new and the old', *IK Notes* 25, The World Bank.
- Easton, P., Capacci, C. and Kane, L. (2000) 'Indigenous knowledge goes to school: Potential and perils of community education in the Western Sahel', *IK Notes*, 22, The World Bank.
- Elliot, J. A. (2002) 'Development as improving human welfare and human rights', in Desai, V. and Potter, R. B. *The companion to development studies*, London, Arnold.
- Erdelen, W.R., Adimihardja, K., Moesdarsono, H. and Sidik (1999) 'Biodiversity, traditional medicine and the sustainable use of indigenous medicinal plants in Indonesia', *Indigenous Knowledge and Development Monitor*, 7 (3), pp. 3-6.
- Escobar, A. (1995) *Encountering Development: the Making and Unmaking of the Third World*, Princeton NJ, Princeton university press.
- Ferguson, J. (1994) 'The anti-politics machine: "development", and bureaucratic power in Lesotho', *The Ecologist* 24 (5), pp. 176–181.
- Fallon, G., and Brown, R. B. (2002) 'Focusing on focus groups: lessons from a research project involving a Bangladeshi community', *Qualitative Research* 2 (2), pp. 195-208.
- Gershberg, A. I. (1999), 'Fostering effective parental participation in education: lessons from a comparison of reform processes in Nicaragua and Mexico', *World Development*, 27 (4), pp. 753-771.
- Gilmartin, M., and Berg, L. D. (2007) 'Locating Postcolonialism', *Area*, 39 (1), pp. 120-124.
- Goebel, A. (1998) 'Process, perception and power: notes from 'participatory' research in a Zimbabwean resettlement area', *Development and Change*, 29, pp. 277-305.
- Gorjestani, N. (2000) *Indigenous knowledge for development: opportunities and challenges*, The World Bank. [Online].
Retrieved on 10 May 2010 from: http://www.worldbank.org/afr/ik/ikpaper_0102.pdf.
- Goss, J. (1996) 'Postcolonialism: subverting whose empire?', *Third World Quarterly*, 17 (2): pp239-250.
- Gowan, P. (2004) 'Contemporary intra-core relations and world systems theory', *Journal of World-Systems Research*, X (2), pp. 471-500.
- Green, E. C. (2004) 'Indigenous responses to AIDS in Africa', in *Indigenous Knowledge: Local Pathways to Global Development*, Knowledge and learning group, Africa Region, The World Bank, pp. 18-23. [Online].
Retrieved on 1 September 2010 from: <http://www.worldbank.org/afr/ik/ikcomplete.pdf>.

- Green, M. (2000) 'Participatory development and the appropriation of agency in Southern Tanzania', *Critique of Anthropology*, 20 (1), pp. 67-89.
- Grillo, R. D. (2002) 'Anthropologists and development' in Desai, V. and Potter, R. B. (eds.) *The Companion to Development Studies*, London, Arnold, pp. 54-58.
- Guijt, I., and Shah, M. K. (eds) (1998) *The myth of community: gender issues in participatory development*, ITDG Publishing, London.
- Haraway, D. (1991) *Simians, Cyborgs and Women: the Reinvention of Nature*. Free Ass. Books.
- Harpham, T., Huong, N. T., Long, T. T. and Tuan, T. (2005) 'Participatory child poverty assessment in rural Vietnam', *Children and Society*, 19, pp. 27-41.
- Harrison, G. (2005) 'Economic faith, social project and a misreading of African society: the travails of neoliberalism in Africa', *Third World Quarterly*, 26 (8), pp. 1303-1320.
- Hart, G. (2001) 'Development Critiques in the 1990s: cul de sac and promising paths', *Progress in Human Geography*, 25 (4), pp. 649-658.
- Hettne, B. (2002) 'Current trends and future options in development studies', in Desai, V. and Potter, R. B. (eds.) *The Companion to Development Studies*, London, Arnold, pp. 7-12.
- Hoggart, K., Lees, L. and Davies, A. (2002) *Researching human geography*, Arnold, London.
- Hoza, J.T. (2009) 'Capacity building for environmental education and ESD: Status and opportunities in Tanzania', *Paper presented to the National Environmental Education Forum*, 18th-19th June, Morogoro, Tanzania.
- Huntington, H. P. and Fernandez-Gimenez, M. E. (1999) 'Indigenous knowledge in the Arctic: a review of research and applications', *Indigenous Knowledge and Development Monitor*, 7 (3), pp. 11-14.
- Intili, J. A. And Kissam, E. (2006) 'Fostering education for female, out-of-school youth in Afghanistan', *Journal for Education in International Development*, 2 (1), pp. 1-21.
- Jakimow, T. (2008) 'Answering the critics: the potential and limitations of the knowledge agenda as a practical response to post-development critiques', *Progress in Development Studies*, 8 (4), pp. 311-323.
- Jane Goodall Institute (2009a) *Environmental Education: Coastal and Marine Ecosystem Volume 1*, Inter Press of Tanzania, Dar es Salaam.
- Jane Goodall Institute (2009b) 'The Jane Goodall Institute: For Wildlife Research, Education and Conservation', *Presentation given to the National Environmental Education Forum*, 18th-19th June, Morogoro, Tanzania

- Jones, P. S. (2000) 'Why is it alright to do development 'over there' but not 'here'? Changing vocabularies and common strategies of inclusion across the 'First' and 'Third' Worlds', *Area*, 32 (2), pp. 237-241.
- Kambou, S. D., Shah, M. K., Nkhama, G. (1998), 'For a pencil: Sex and adolescence in peri-urban Lusaka', in: Guijt, I., and Shah, M. K. (eds) (1998) *The myth of community: gender issues in participatory development*, ITDG Publishing, London, pp. 110-120.
- Kapoor, I. (2002a) 'Capitalism, culture, agency: dependency versus postcolonial theory', *Third World Quarterly*, 23 (4), pp. 647-664.
- Kapoor, I. (2002b) 'The devil's in the theory: a critical assessment of Robert Chambers' work on participatory development', *Third World Quarterly*, 23 (1), pp. 101-117.
- Kapoor, I. (2004) 'Donor participatory governance evaluation: initial trends, implications, opportunities, constraints', *Journal of International Development*, 16, pp. 157-170.
- Katz, C. (2004) *Growing up global: economic restructuring and children's everyday lives*. University of Minnesota Press.
- Kesby, M. (2000a) 'Participatory diagramming as a means to improve communication about sex in rural Zimbabwe: a pilot study', *Social Science and Medicine*, 50, pp. 1723-1741.
- Kesby, M. (2000b) 'Participatory diagramming: deploying quantitative methods through an action research epistemology', *Area*, 32 (4), pp. 423-435.
- Kesby, M. (2005) 'Rethorising empowerment-through-participation as a performance in space: beyond tyranny', *Journal of Women in Culture and Society*, 30 (4), pp. 2037-2065.
- Kesby, M. (2007) 'Spatialising participatory approaches: the contribution of geography to a mature debate', *Environment and Planning A*, 39, pp. 2813-2831.
- Kesby, M., Gwanzura-Ottmoller, F. and Chizororo, M. (2006) 'Theorising other, 'other childhoods': Issues emerging from work on HIV in urban and rural Zimbabwe', *Children's Geographies*, 4 (2), pp. 185-202.
- Klooster, D. J. (2002) 'Toward adaptive community forest management: integrating local forest knowledge with scientific forestry', *Economic Geography*, 78 (1), pp. 43-70.
- Kothari, U. (2001) 'Power, knowledge and social control in participatory development', in Cooke, B., and Kothari, U. *Participation: The New Tyranny*, Zed Books, London, pp. 139-152.
- Kydd, J., and Dorward, A. (2001) 'The Washington consensus on poor country agriculture: analysis, prescription and institutional gaps', *Development Policy Review*, 19 (4), pp. 467-478.

- Latour, B. (1986) 'The power of association.' In Law, J. (ed.), *Power, Action and Belief: A New Sociology of Knowledge?* Routledge and Kegan Paul. pp. 264-280.
- Leach, M. and Fairhead, J. (2000) 'Fashioned forest pasts, occluded histories? International environmental analysis in West African locales.' *Development and Change*, 31, pp. 35-59.
- Leach, L., Sumner, A. and Waldman, L. (2008) 'Discourses, dynamics and disquiet: multiple knowledges in science, society and development', *Journal of International Development*, 20, pp. 727-738.
- Lewis, D. (2002) 'Non-governmental organisations: questions of performance and accountability', in Desai, V. and Potter, R. B. (eds.) *The Companion to Development Studies*, London, Arnold, pp. 519-523.
- London, J. K., Zimmerman, K. and Erbstein, N. (2003) 'Youth-led research and evaluation: tools for youth, organisational, and community development', *New Directions for Evaluation*, 98, pp. 33-38.
- Lucarelli, G. (2001) 'Preserving local knowledge through discovery learning', *Indigenous Knowledge and Development Monitor*, 9 (3), pp. 16-17.
- McEwan, C. (2002) 'Postcolonialism', in Desai, V. and Potter, R. B. (eds.) *The Companion to Development Studies*, London, Arnold, pp. 124-129.
- McFarlane, C. (2006) 'Crossing borders: development, learning and the North-South divide', *Third World Quarterly*, 27 (8), pp. 1413-1437.
- McGregor, A. (2007) 'Development, foreign aid and post-development in Timor-Leste', *Third World Quarterly*, 28 (1), pp. 155-170.
- McKinnon, K.I. (2006) 'An orthodoxy of 'the local': post-colonialism, participation and professionalism in Northern Thailand', *The Geographical Journal*, 172 (1), pp. 22-34.
- Madriz, E.I. (1998) 'Using focus groups with lower socioeconomic status Latina women', *Qualitative enquiry*, 4 (1), pp. 114-128.
- Martin, W.G. (2000) 'Still partners and still dissident after all these years? Wallerstein, world revolutions and the world-systems perspective', *Journal of World-Systems Research*, VI (2), pp. 234-263.
- Matthews, S. (2004) 'Post-development theory and the question of alternatives: a view from Africa', *Third World Quarterly*, 25 (2), pp. 373-384
- Mayo, M. (2001) 'Children's and young people's participation in development in the South and in urban regeneration in the North', *Progress in Development Studies*, 1 (4), pp. 279-293.

- Mayoux, L. and Chambers, R. (2005) 'Reversing the paradigm: quantification, participatory methods and pro-poor impact assessment', *Journal of International Development*, 17, pp. 271-298.
- Mbuta, M. C. (2009) 'The future of environmental education for sustainable development in Tanzania', *Paper presented to the National Environmental Education Forum*, 18th-19th June, Morogoro, Tanzania.
- Meinzen-Dick, R. Raju, K. and Gulati, A. (2002) 'What affects organisation and collective action for managing resources? Evidence from canal irrigation systems in India', *World Development*, 30 (4), pp. 649-666.
- Mercer, C. (1999) 'Reconceptualizing state-society relations in Tanzania: are NGOs 'making a difference'?', *Area*, 31 (3), pp. 247-258.
- Mercer, C. (2002) 'The discourse of *Maendeleo* and the politics of women's participation on Mount Kilimanjaro', *Development and Change*, 33, pp. 101-127.
- Mhina, N. J. I. (2009) *Understanding Geography 6: Pupil's Book*, Abantu Publications, Dar es Salaam.
- Mohan, G., and Stokke, K. (2000) 'Participatory development and empowerment: the dangers of localism', *Third World Quarterly*, 21 (2), pp. 249-268.
- Mohan, G. (2001) 'Beyond participation: Strategies for deeper empowerment', in Cooke, B. and Kothari, U. (eds.) *Participation: The New Tyranny?*, Zed Books, London, pp. 153-167.
- Mohan, G. (2002) 'Participatory Development' in Desai, V. and Potter, R. B. (eds.) *The Companion to Development Studies*, London, Arnold, pp. 49-54.
- Mosse, D. (2001) 'People's knowledge', participation and patronage: operations and representations in rural development' in Cooke, B. and Kothari, U. (eds.) (2001) *Participation: The New Tyranny?*, Zed Books, London, pp. 16-36.
- Motteux, N., Binns, T., Nel, E. and Rowntree, K. (1999) 'Empowering for development: taking participatory appraisal further in rural South Africa', *Development in Practice*, 9 (3), pp. 261-273.
- Moyo, H. Z. B. (2009) 'Indigenous knowledge-based farming practices: A setting for the contestation of modernity, development, and progress.' *Scottish Geographical Journal*, 125 (3-4), pp. 353-360.
- Msabila, D.T. (2007) *Geography for Secondary Schools Book Two*, Nyambari Nyangwine Publishers, Dar es Salaam.
- Munyanziza, E., and Wiersum, K.F. (1999) 'Indigenous Knowledge of miombo trees in Morogoro, Tanzania', *Indigenous Knowledge and Development Monitor*, 1999, 7 (2), pp. 10-13.

- Murthy, R. K. (1998) 'Learning about participation from gender relations of female infanticide', in: Guijt, I., and Shah, M. K. (eds) (1998) *The myth of community: gender issues in participatory development*, ITDG Publishing, London, pp. 78-92.
- Myers, G. A. (2002) 'Local communities and the new environmental planning: a case study from Zanzibar', *Area*, 34 (2), pp. 149-159.
- Nairn, K., Munro, J., and Smith, A.B. (2005) 'A counter-narrative of a 'failed' interview', *Qualitative research*, 5 (2), pp. 221-244.
- National Bureau of Statistics (NBS) Tanzania (2006) *Analytical Report: Tanzania Census 2002*, National Bureau of Statistics, Ministry of Planning, Economy and Empowerment, Dar es Salaam, Tanzania, August 2006.
- National Environmental Management Council (NEMC), United Republic of Tanzania (2004), *National Environmental Education and Communication Strategy 2005-2009*
- Naur, M. (2001a) 'Indigenous knowledge and HIV/AIDS', *IK Notes 30*, World Bank. pp. 1-3.
- Naur, M. (2001b) 'HIV/AIDS: traditional healers, community self-assessment, and empowerment', *IK Notes 37*, The World Bank. pp. 1-3.
- Nelson, F., and Agrawal, A. (2008) 'Patronage or participation? Community-based natural resource management reform in sub-Saharan Africa', *Development and Change*, 39 (4), pp. 557-585.
- Nile Trans-boundary Environmental Action Project (NTEAP) (2009) *Report on the National Environmental Education Forum, Organised by NTEAP in Morogoro, Tanzania', 18th-19th June 2009, Tanzania*
- O'Connor, A. (2002) 'Poverty in global terms', in Desai, V. and Potter, R. B. (eds.) *The Companion to Development Studies*, London, Arnold, pp. 37-41.
- Ortiz, O. (1999) 'Understanding interactions between indigenous knowledge and scientific information', *Indigenous Knowledge and Development Monitor*, 7 (3), pp. 3-6.
- Pain, R. (2004) 'Social Geography: participatory research', *Progress in Human Geography*, 28 (5), pp. 652-663.
- Parfitt, T. (2004) 'The ambiguity of participation: a qualified defence of participatory development', *Third World Quarterly*, 25 (3), pp. 537-556.
- Parnwell, M. J. G. (2002) 'Agropolitan and bottom-up development' in Desai, V. and Potter, R. B. (eds.) *The Companion to Development Studies*, London, Arnold, pp. 112-117.
- Pence, A. and Schafer, J. (2006) 'IK and early childhood development in Africa: the early childhood development virtual university', *Journal for Education in International Development*, 2 (3), pp. 1-16.

- Porter, G. and Abane, A. (2008) 'Increasing children's participation in African transport planning: reflections on methodological issues in a child-centred research project', *Children's Geographies*, 6 (2), pp. 151-167.
- Potter, R. B. (2002) 'Theories, strategies and ideologies of development', in Desai, V. and Potter, R. B. (eds.) *The Companion to Development Studies*, London, Arnold.
- Potter, R.B., Binns, T., Elliot, J.A. and Smith, D. (2003) '*Geographies of Development*', Pearson, Prentice Hall, Harlow, England.
- Power, M. (2002) 'Enlightenment and modernity', in Desai, V. and Potter, R. B. (eds.) *The Companion to Development Studies*, London, Arnold, pp. 65-70.
- Radcliffe, S. A. (1994) '(Representing) post-colonial women: authority, difference and feminism', *Area*, 26 (1), pp. 25-32.
- Roulston, K. et al. (2003) 'Learning to Interview in the Social Sciences'. *Qualitative Inquiry*, 9 (4), pp. 643-668.
- Routledge, P. (2001) 'Within the river: collaboration and methodology', *Geographical Review*, 91 (1/2) PP. 113-120.
- Routledge, P. (2003) 'Voices of the dammed: discursive resistance amidst erasure in the Namada Valley, India', *Political Geography*, 22, pp. 234-270.
- Sahu, B. K. (2008), 'Pani Pan Chayat in Orissa, India: The practice of participatory water management', *Development*, 51, pp. 121-125.
- Sanderson, E. and Kindon, S. (2004) 'Progress in participatory development: opening up the possibility of knowledge through progressive participation', *Progress in Development Studies*, 4 (2), pp. 114-126.
- Schroeder, R. A. (1999) 'Geographies of environmental intervention in Africa', *Progress in Human Geography*, 23 (3), pp. 359-378.
- Schuurman, F.J. (2002) 'The impasse in development studies' in Desai, V. and Potter, R. B. (eds.) *The Companion to Development Studies*, London, Arnold, pp. 12-16.
- Semesi, A. K., Mgaya, Y. D., Muruke, M. H. S., Francis, J., Mtolera, M. and Msumi, G. (1998) 'Coastal resource utilization and conservation issues in Bagamoyo, Tanzania', *Ambio*, 27 (8), pp. 635-644.
- Sharp, J., and Briggs, J. (2006) 'Postcolonialism and development: new dialogues?', *The Geographical Journal*, 172 (1), pp. 6-9.

- Sharp, J., Briggs, J., Yacoub, H. And Hamed, N. (2003) 'Doing gender and development: understanding empowerment and local relations', *Transactions of the Institute of British Geographers*, NS 28, pp. 281-295.
- Sidaway, J.D. (2002) 'Post-development' in Desai, V. and Potter, R. B. (eds.) *The Companion to Development Studies*, London, Arnold, pp. 16-20.
- Sillitoe, P. (1998a) 'Knowing the land: soil and land resource evaluation and indigenous knowledge', *Soil Use and Management*, 14, pp. 188-193.
- Sillitoe, P. (1998b) 'What, know natives? Local knowledge in development.' *Social Anthropology*, 6 (2), pp. 203-220.
- Sillitoe, P. (2000) 'Let them eat cake: Indigenous knowledge, science, and the 'poorest of the poor'' *Anthropology Today*, 16 (6), pp. 3-7.
- Sillitoe, P. (2004) 'Interdisciplinary experiences: working with indigenous knowledge in development'. *Interdisciplinary Science Reviews*, 29 (1), pp. 6-23.
- Simon, D. (2002) 'Neo-liberalism, structural adjustment and poverty reduction strategies' in Desai, V. and Potter, R. B. (eds.) *The Companion to Development Studies*, London, Arnold, pp. 86-92.
- Sinding, C., and Aronson, J. (2003) 'Exposing failures, unsettling accommodations: tensions in interview practice', *Qualitative Research* 3 (1), pp. 95-117.
- Smith, T. A. (2008) *Participatory Forest Management in Tanzania: Participation, Power, State and Knowledge*, Unpublished MRes Thesis, The University of Glasgow.
- Smith, T. A. (2011) 'Local Knowledge in Development (Geography)' *Geography Compass*, 5 (8), pp. 595-609.
- Smyth, A. and Seftel, A. (eds.) (1998) *The Story of Julius Nyerere: Africa's Elder Statesman*, Fountain Publishers Ltd, Kampala, Uganda.
- Sparke, M. (1994) 'White mythologies and anemic geographies: a review.' *Society and Space* 12: pp. 105-123.
- Steiner, A. and Oviedo, G. (2004) 'Indigenous knowledge and natural resource management', in *Indigenous Knowledge: Local Pathways to Global Development*, Knowledge and learning group, Africa Region, The World Bank, pp. 30-33.
- Sutton, K. and Zaimeche, S. E. (2002) 'The collapse of state socialism in the socialist Third World', in Desai, V. and Potter, R. B. (eds.) *The Companion to Development Studies*, London, Arnold, pp. 20-27.

- Sylvester, C. (1999) 'Development studies and postcolonial studies: disparate tales of the 'Third World'' *Third World Quarterly*, 20 (4), pp. 703-721.
- Temu, A. E. and Due, M. (2000) 'Participatory appraisal approaches versus sample survey data collection: a case of smallholder farmers well-being ranking in Njombe District, Tanzania', *Journal of African Economies*, 9 (1), pp. 44-62.
- Timsina, N. P. (2003) 'Promoting social justice and conserving montane forest environments: a case study of Nepal's community forestry programme', *The Geographical Journal*, 169 (3), pp. 236-242.
- Tobisson, E., Andersson, J., Ngazi, Z. and Rydberg, L. (1998) 'Tides, monsoons and seabed: local knowledge and practice in Chwaka Bay, Zanzibar', *Ambio*, 27 (8), pp. 677-685.
- Twyman, C. (2000) 'Participatory conservation? Community-based natural resource management in Botswana', *The Geographical Journal*, 166 (4), pp. 323-335.
- Uzzell, D. (1999) 'Education for environmental action in the community: new roles and relationships', *Cambridge Journal of Education*, 29 (3), pp. 397-413.
- Wallerstein, I. (1973) 'Class and class-conflict in contemporary Africa', *Canadian Journal of African Studies*, 7 (3), pp. 375-380.
- Wallerstein, I. (1974) 'The rise and future demise of the world capitalist system: concepts for comparative analysis', *Comparative Studies in Society and History*, 16 (4), pp. 387-415.
- Wallerstein, I. (1983) 'The evolving role of the African scholar in African studies', *Canadian Journal of African Studies*, 17 (1), pp. 9-16.
- Wallerstein, I. (2000) 'Globalization or the age of transition?: A long-term view of the trajectory of the world-system', *International Sociology*, 15, pp. 249-265.
- Warr, D. J. (2005) 'It was fun ... but we don't usually talk about these things': Analyzing Sociable Interaction in Focus Groups', *Qualitative Inquiry*, 11 (2), pp. 200-225.
- Weick, K.E. (1990) 'The vulnerable system: an analysis of the Tenerife Air Disaster', *Journal of Management*, 16 (3), pp. 571-593.
- White, H. (2002) 'The measuring of poverty' in Desai, V. and Potter, R. B. (eds.) *The Companion to Development Studies*, London, Arnold. pp. 32-37.
- World Bank (1998). *World development report 1998/9: knowledge for development*. USA: World Bank/Oxford, University Press.