

**THE SIGNIFICANCE OF THE LOCAL TRADE IN NATURAL RESOURCE  
PRODUCTS FOR LIVELIHOODS AND POVERTY ALLEVIATION IN  
SOUTH AFRICA**

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## ABSTRACT

What role can the commercialisation of natural resource products play in the efforts to reduce poverty and vulnerability and how can this be enhanced? With poverty alleviation at the top of the global development agenda, this is a question posed by many scholars, practitioners, donor agencies and government departments operating at the environment-development interface. However, recent commentary on this issue is mixed and ambiguous, with some observers being quite optimistic regarding the potential of these products, while others hold a counter view. This thesis explores the livelihood contributions and poverty alleviation potential of four products traded locally in the Bushbuckridge municipality, South Africa; namely traditional brooms, reed mats, woodcraft and a beer made from the fruits of *Sclerocarya birrea*. A common approach, employing both quantitative and qualitative methods, was used to investigate the harvesting, processing and marketing arrangements, sustainability and livelihood contributions of each product. The results illustrate that any inference regarding the potential of the trade to alleviate poverty depends on how poverty is defined and interpreted, and on whether the role of these products is assessed from a holistic livelihood perspective that includes notions of vulnerability, alternatives and choice, diversification and the needs of rural producers themselves. Overall, the products studied were key in enhancing the livelihood security of the poorest members of society, forming an important safety net and assisting in raising household incomes to levels equivalent to the wider population, but generally were unlikely, on their own, to provide a route out of poverty. However, there were notable exceptions, with marked variation evident both within and across products. Incomes often surpassed local wage rates, and a minority of producers were obtaining returns equivalent to or greater than the official minimum wage. Other benefits, such as the opportunity to work from home or to diversify the livelihood portfolio, were also crucial, with the trade representing different livelihood strategies for different households. When viewed within the context of rising unemployment and HIV/AIDS these findings assume greater significance. While the trades were complex and growth limited, livelihood benefits could be improved on a sustainable basis if the sector was given the attention and support it deserves.

## DECLARATION

I declare that this thesis is my own work, and that all other sources used or quoted have been fully acknowledged and referenced. It is being submitted for the Degree of Doctor of Philosophy at Rhodes University, and has not been submitted for a degree or examination at any other university.

Sheona E. Shackleton

Signature.....

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## TABLE OF CONTENTS

<b>ABSTRACT</b> .....	ii
<b>DECLARATION</b> .....	iii
<b>LIST OF TABLES</b> .....	ix
<b>LIST OF FIGURES</b> .....	xi
<b>LIST OF BOXES</b> .....	xii
<b>ACKNOWLEDGEMENTS</b> .....	xiii
<b>PART I: INTRODUCTION AND OVERVIEW</b> .....	1
<b>CHAPTER 1: INTRODUCTION, THEORETICAL CONTEXT AND STUDY APPROACH</b> .....	1
1.1 INTRODUCTION.....	1
1.1.1 <i>Recognising the role of natural resource products in rural livelihoods: from neglect to poverty alleviation potential</i> .....	1
1.1.2 <i>Exploring and questioning the linkages between natural resource products, livelihoods and poverty</i> .....	2
1.1.3 <i>Gaps and research needs</i> .....	4
1.2 THE SOUTH AFRICAN SITUATION.....	6
1.3 HYPOTHESES, KEY QUESTIONS AND OBJECTIVES.....	8
1.3.1 <i>Hypotheses underlying the study</i> .....	8
1.3.2 <i>Key questions and objectives</i> .....	8
1.4 STRUCTURE OF THE THESIS.....	9
1.5 CONCEPTS AND DEFINITIONS.....	10
1.5.1 <i>Livelihoods focus and approach</i> .....	10
1.5.2 <i>Understanding poverty, poverty alleviation and related concepts</i> .....	12
1.5.3 <i>Natural resource products and NTFPs</i> .....	15
1.5.4 <i>Local level or ‘endogenous’ trade in natural resource products</i> .....	15
1.6 STUDY DESIGN AND METHODS.....	16
1.6.1 <i>Overall approach and selection of products</i> .....	16
1.6.2 <i>Selection of the study area</i> .....	16
1.6.3 <i>Overview of case study methods</i> .....	17
1.6.4 <i>Integrative analysis</i> .....	19
1.6.5 <i>Limitations and assumptions</i> .....	20
<b>CHAPTER 2: SOUTH AFRICAN CONTEXT AND GEOGRAPHIC SETTING OF CASE STUDIES</b> .....	22
2.1 POVERTY AND RURAL LIVELIHOODS IN SOUTH AFRICA.....	22
2.1.1 <i>Poverty profile and context</i> .....	22
2.1.2 <i>Growing unemployment</i> .....	23
2.1.3 <i>The HIV/AIDS context</i> .....	25
2.1.4 <i>The nature of rural livelihoods in South Africa</i> .....	26
2.2 STUDY AREA DESCRIPTION.....	28
2.2.1 <i>Location and land use</i> .....	28
2.2.2 <i>Biophysical characteristics</i> .....	29
2.2.3 <i>Socio-economic characteristics</i> .....	30
<b>PART II: CASE STUDIES OF LOCAL NATURAL RESOURCE PRODUCT TRADING</b> .....	34
<b>CHAPTER 3: THE TRADE IN TRADITIONAL GRASS AND TWIG BROOMS</b> .....	34
3.1 INTRODUCTION.....	34
3.2 METHODS.....	35
3.3 THE RESOURCE: SPECIES USED FOR BROOM PRODUCTION IN BUSHBUCKRIDGE....	38
3.3.1 <i>Outdoor twig brooms: species used, their attributes and potential for sustainable use</i> .....	38
3.3.2 <i>Indoor grass brooms: species used, their attributes and potential for sustainable use</i> .....	39
3.4 WHO IS INVOLVED IN THE BROOM TRADE?.....	40

3.4.1 Profile of broom producers and traders and their households.....	40
3.4.2 Producers' and traders' involvement in the trade.....	44
3.5 BROOM PRODUCTION: RAW MATERIAL HARVESTING AND PROCESSING.....	47
3.5.1 Mechanisms for obtaining raw material.....	47
3.5.2 Sources of raw material.....	47
3.5.3 Access to raw material.....	50
3.5.4 Availability of raw material.....	53
3.5.5 Harvesting season, procedure and quantities harvested.....	53
3.5.6 Costs of raw material harvesting.....	55
3.5.7 Process for making brooms.....	55
3.6 MARKETS, SELLING AND PRICES.....	57
3.6.1 Market channels, markets and prices.....	57
3.6.2 Market description and organisation.....	60
3.6.3 Marketing costs.....	60
3.6.4 Quantities of brooms sold by producers and traders.....	60
3.6.5 Customers and their reasons for buying brooms.....	61
3.7 CONTRIBUTION OF THE BROOM TRADE TO HOUSEHOLD LIVELIHOODS.....	61
3.7.1 Incomes earned by broom producers.....	61
3.7.2 Incomes earned by broom traders.....	64
3.7.3 Producers' and traders' perceptions of the broom trade as a livelihood option.....	64
3.7.4 Contribution to household livelihoods.....	66
3.8 CONSTRAINTS TO THE TRADE.....	68
3.9 CONCLUSIONS: SUSTAINABILITY OF THE TRADE AND ENHANCING BENEFITS.....	70
3.10 SUMMARY OF KEY FINDINGS.....	72
<b>CHAPTER 4: THE TRADE IN WOVEN REED MATS AND WALL DECORATIONS.....</b>	<b>73</b>
4.1 INTRODUCTION.....	73
4.2 METHODS.....	75
4.3 THE RESOURCE: SPECIES USED FOR MAT WEAVING IN BUSHBUCKRIDGE.....	77
4.3.1 Species used.....	77
4.3.2 Potential for sustainable use.....	78
4.4 WHO IS INVOLVED IN THE MAT TRADE?.....	79
4.4.1 Profile of producers and their households.....	79
4.4.2 Producers' involvement in the mat trade.....	82
4.5 MAT PRODUCTION: RAW MATERIAL PROCUREMENT AND PROCESSING.....	85
4.5.1 Mechanisms for obtaining raw material.....	85
4.5.2 Harvesting raw material: Sources, access and availability.....	85
4.5.3 Harvesting season, procedure and quantities of raw material harvested.....	90
4.5.4 Sources of purchased of raw material.....	91
4.5.5 Quantities of raw material purchased.....	92
4.5.6 Costs of raw material harvesting and purchases.....	92
4.5.7 Process for mat manufacture.....	94
4.5.8 Costs of processing.....	95
4.6 MARKETS, SELLING AND PRICES.....	96
4.6.1 Market channels, prices and costs.....	96
4.6.2 Frequency of sales and quantities sold.....	99
4.6.3 Customers and their reasons for buying mats.....	100
4.7 CONTRIBUTION OF THE MAT TRADE TO HOUSEHOLD LIVELIHOODS.....	100
4.7.1 Incomes earned.....	100
4.7.2 Producers' perceptions of the mat trade as a livelihood option.....	102
4.7.3 Contribution to household livelihoods.....	103
4.8 CONSTRAINTS TO THE TRADE.....	106
4.9 CONCLUSIONS: SUSTAINABILITY OF THE TRADE AND ENHANCING BENEFITS.....	107
4.10 SUMMARY OF KEY FINDINGS.....	108
<b>CHAPTER 5: THE TRADE IN TRADITIONAL MARULA (SCLEROCARYA BIRREA) BEER.....</b>	<b>110</b>
5.1 INTRODUCTION.....	110
5.2 METHODS.....	112

5.3 THE RESOURCE: CHARACTERISTICS OF <i>SCLEROCARYA BIRREA</i> (MARULA) IN BUSHBUCKRIDGE.....	113
5.3.1 <i>Description</i> .....	113
5.3.2 <i>Ecology in the study area and potential for sustainable use</i> .....	114
5.3.3 <i>Nurturing and propagation of marula trees</i> .....	116
5.4 WHO IS INVOLVED IN THE MARULA BEER TRADE?.....	116
5.4.1 <i>Profile of beer sellers and their households</i> .....	116
5.4.2 <i>Beer sellers' involvement in the trade</i> .....	119
5.5 MARULA BEER PRODUCTION: FRUIT PROCUREMENT AND PROCESSING.....	122
5.5.1 <i>Sources, access and availability of raw material</i> .....	122
5.5.2 <i>Harvesting season, procedure and quantities of fruit harvested</i> .....	123
5.5.3 <i>Costs of raw material harvesting</i> .....	124
5.5.4 <i>Marula beer processing</i> .....	124
5.6. MARKETS, SELLING AND PRICES.....	125
5.6.1 <i>Timing and location of markets</i> .....	125
5.6.2 <i>Selling marula beer: quantities, prices and costs</i> .....	126
5.6.3 <i>Market organisation and coordination</i> .....	127
5.6.4 <i>Customers</i> .....	128
5.6.5 <i>Socio-cultural issues and attitudes to beer trading</i> .....	128
5.7 CONTRIBUTION OF THE MARULA BEER TRADE TO HOUSEHOLD LIVELIHOODS.....	129
5.7.1 <i>Incomes earned</i> .....	129
5.7.2 <i>Sellers' perceptions of the marula beer trade as a livelihood option</i> .....	130
5.7.3 <i>Contribution to household livelihoods</i> .....	131
5.8 CONSTRAINTS TO THE TRADE.....	133
5.9 CONCLUSIONS: SUSTAINABILITY OF THE TRADE AND ENHANCING BENEFITS.....	135
5.10 SUMMARY OF KEY FINDINGS.....	136
<b>CHAPTER 6: THE TRADE IN <i>PTEROCARPUS ANGOLENSIS</i> (KIAAT) AND OTHER HARDWOOD CARVINGS AND FURNITURE.....</b>	<b>138</b>
6.1 INTRODUCTION.....	138
6.2 METHODS.....	140
6.3 THE RESOURCE: SPECIES USED FOR WOODCRAFT IN BUSHBUCKRIDGE.....	142
6.3.1 <i>Diversity of species used</i> .....	142
6.3.2 <i>Description, ecological characteristics and impacts of harvesting on <i>Pterocarpus angolensis</i></i> .....	143
6.4 WHO IS INVOLVED IN THE WOODCRAFT TRADE?.....	145
6.4.1 <i>Profile of producers and their households</i> .....	145
6.4.2 <i>Producers' involvement in the trade</i> .....	147
6.5 WOODCRAFT PRODUCTION: RAW MATERIAL PROCUREMENT AND PROCESSING.....	149
6.5.1 <i>Sources, access and availability of raw material</i> .....	149
6.5.2 <i>Quantities harvested</i> .....	152
6.5.3 <i>Responses of producers to wood scarcity</i> .....	152
6.5.4 <i>Costs of raw material harvesting</i> .....	153
6.5.5 <i>Manufacture of carvings and furniture: production modes and practices</i> .....	153
6.5.6 <i>Manufacture of carvings and furniture: items produced and levels of production</i> .....	155
6.5.7 <i>Costs of processing</i> .....	156
6.6 MARKETS, SELLING AND PRICES.....	157
6.6.1 <i>Market channels, selling and market organisation</i> .....	157
6.6.2 <i>Selling woodcraft, prices and costs</i> .....	160
6.7 CONTRIBUTION OF THE WOODCRAFT TRADE TO HOUSEHOLD LIVELIHOODS.....	161
6.7.1 <i>Incomes earned</i> .....	161
6.7.2 <i>Producers' perceptions of the woodcraft trade as a livelihood option and its contribution to their livelihoods</i> .....	163
6.8 EXTERNAL SUPPORT TO THE TRADE.....	165
6.9 CONSTRAINTS TO THE TRADE.....	167
6.10 CONCLUSIONS: SUSTAINABILITY OF THE TRADE AND ENHANCING BENEFITS.....	169
6.10.1 <i>Development of the trade and markets</i> .....	169
6.10.2 <i>Resource management</i> .....	170
6.11 SUMMARY OF KEY FINDINGS.....	171

<b>PART III: INTEGRATION, ANALYSIS AND DISCUSSION</b> .....	172
<b>CHAPTER 7: LOCAL LEVEL NATURAL RESOURCE PRODUCT TRADING: CONTRIBUTIONS TO LIVELIHOODS AND POVERTY ALLEVIATION</b> .....	172
7.1 INTRODUCTION: CURRENT DISCOURSE ON NATURAL RESOURCE PRODUCTS, LIVELIHOODS AND POVERTY.....	172
7.1.1 <i>Addressing the poverty role of natural resource products</i> .....	172
7.1.2 <i>Current knowledge on natural resource, livelihood and poverty linkages</i> .....	173
7.1.3 <i>Purpose, objectives and approach to this chapter</i> .....	178
7.2 EXPANSION OF THE NATURAL RESOURCE PRODUCT TRADE AND ITS SAFETY NET FUNCTION.....	179
7.2.1 <i>Growing levels of participation in trading</i> .....	179
7.2.2 <i>Drivers of expansion and the safety net role of the trade</i> .....	181
7.3 WHO IS TRADING IN AND BENEFITING FROM NATURAL RESOURCE PRODUCTS?....	183
7.3.1 <i>Gender</i> .....	183
7.3.2 <i>Education and age</i> .....	183
7.3.3 <i>Land holdings and farming</i> .....	184
7.3.4 <i>Sources of household income and cash income levels</i> .....	185
7.4 WHAT ARE THE LIVELIHOOD BENEFITS OF NATURAL RESOURCE PRODUCT TRADING?.....	188
7.4.1 <i>Incomes from product sales, variation and comparison with benchmarks</i> .....	188
7.4.2 <i>Potential determinants of product income</i> .....	190
7.4.3 <i>Non-financial benefits</i> .....	193
7.5 HOW DOES NATURAL RESOURCE PRODUCT TRADING FIT INTO HOUSEHOLD LIVELIHOOD PORTFOLIOS?.....	194
7.5.1 <i>Contribution to household income and dependence on the trade</i> .....	194
7.5.2 <i>Livelihood strategies</i> .....	196
7.6 CONCLUSIONS: WHAT IS THE ROLE AND POTENTIAL OF NATURAL RESOURCE PRODUCT TRADING FOR POVERTY ALLEVIATION?.....	204
7.7 SUMMARY OF KEY FINDINGS.....	207
<b>CHAPTER 8: LOCAL LEVEL COMMERCIALISATION PROCESSES AND PATHWAYS: ISSUES AND COMPLEXITIES</b> .....	209
8.1 INTRODUCTION.....	209
8.1.1 <i>Background: Commercialisation and local markets</i> .....	209
8.1.2 <i>Frameworks for understanding natural resource product commercialisation processes</i> .....	211
8.1.3 <i>Purpose of this chapter</i> .....	213
8.2 RAW MATERIAL PROCUREMENT AND SUPPLY CHARACTERISTICS.....	214
8.2.1 <i>Sources of raw material, tenure and access issues</i> .....	214
8.2.2 <i>Resource properties, availability, impacts and harvesting systems</i> .....	218
8.2.3 <i>Augmenting the resource by cultivation</i> .....	220
8.2.4 <i>Organisation of raw material procurement</i> .....	221
8.3 PROCESSING.....	222
8.3.1 <i>Production modes and practices</i> .....	222
8.3.2 <i>Skills</i> .....	224
8.3.3 <i>Tools, equipment and other inputs</i> .....	224
8.4 MARKETING, MARKETS AND SALES.....	225
8.4.1 <i>Market participants, locations, networks and channels</i> .....	225
8.4.2 <i>Characteristics of the markets</i> .....	227
8.4.3 <i>Price determination</i> .....	229
8.4.4 <i>Growth, market saturation and sustainability</i> .....	231
8.5 SIZE AND VALUES OF THE TRADES AND MULTIPLIER EFFECTS.....	233
8.6 CONCLUSIONS: EMERGING PATTERNS AND SIMPLIFYING THE PICTURE.....	235
8.6.1 <i>Local level commercialisation typologies, factors affecting trading and sustainability</i> .....	235
8.6.2 <i>Comparison to 'generic' conditions that enhance sustainability</i> .....	238
8.7 SUMMARY OF KEY FINDINGS.....	239

<b>CHAPTER 9: THE SIGNIFICANCE OF THE LOCAL LEVEL NATURAL RESOURCE PRODUCT TRADE: SUMMARY, IMPLICATIONS AND CONCLUSIONS.....</b>	<b>241</b>
9.1 INTRODUCTION.....	241
9.2 LIVELIHOOD AND POVERTY ALLEVIATION BENEFITS OF TRADING.....	241
9.3 THE COMPLEXITY OF THE LOCAL TRADE: FACTORS INFLUENCING LIVELIHOOD AND POVERTY ALLEVIATION BENEFITS.....	245
9.3.1 <i>Attributes of the resource</i> .....	245
9.3.2 <i>Resource access and management</i> .....	245
9.3.3 <i>Markets</i> .....	246
9.3.4 <i>Choice and attributes of participants and their households</i> .....	246
9.3.5 <i>Policy environment</i> .....	247
9.4 IMPORTANCE OF CONTEXT WHEN INTERPRETING LIVELIHOOD AND POVERTY ALLEVIATION BENEFITS: HOW DIFFERENT IS SOUTH AFRICA?.....	248
9.5 POLICY AND DEVELOPMENT ISSUES: ENHANCING THE LIVELIHOOD BENEFITS AND POVERTY ALLEVIATION ROLE OF LOCALLY TRADED NATURAL RESOURCE PRODUCTS.....	249
9.5.1 <i>Recognise the sector and broaden the rural development base</i> .....	250
9.5.2 <i>Target and benefit the poorest and most vulnerable people</i> .....	250
9.5.3 <i>Build on what exists</i> .....	251
9.5.4 <i>Support livelihoods not just enterprises</i> .....	251
9.5.5 <i>Recognise the complexity and heterogeneity of the sector</i> .....	252
9.5.6 <i>Integrate with other sectors</i> .....	253
9.5.7 <i>Minimise regulatory barriers</i> .....	253
9.5.8 <i>Improve access to micro-finance – ‘credit for livelihoods’</i> .....	253
9.5.9 <i>Provide flexible support to build the capacity of producers, traders and organisations</i> .....	254
9.5.10 <i>Stimulate expanded domestic markets for ‘traditional’ products</i> .....	256
9.5.11 <i>Diversify products and markets</i> .....	256
9.5.12 <i>Recognise locally produced crafts for the tourism market</i> .....	257
9.5.13 <i>Recognise the importance of private land and private land owners</i> .....	257
9.5.14 <i>Improve resource access and management, and achieve sustainability</i> .....	257
9.6 CONCLUDING REMARKS: LESSONS FROM THIS STUDY.....	258
<b>REFERENCES AND PERSONAL COMMUNICATIONS.....</b>	<b>262</b>



## LIST OF TABLES

Table 2.1:	Employment and unemployment amongst the South African working age population in 2003.....	24
Table 2.2:	Growth in the unemployment rates in South Africa, 1993-2002.....	24
Table 3.1:	Species used in broom manufacture in South Africa.....	34
Table 3.2:	Use and purchase of brooms by rural household in different regions of South Africa.....	35
Table 3.3:	Villages to which producers were traced and number of interviews per village.....	36
Table 3.4:	Age, education and marital profiles of broom producers and traders.....	41
Table 3.5:	Income and livelihood profiles of broom producer and trader households.....	43
Table 3.6:	Reasons producers and traders gave for entering the broom trade, their prior occupations and years in the trade.....	45
Table 3.7:	Harvesting areas for <i>Athrixia phylicoides</i> used to make outdoor twig brooms.....	48
Table 3.8:	Harvesting areas for <i>Festuca costata</i> and <i>Aristida junciformis</i> used to make indoor grass brooms.....	49
Table 3.9:	Frequency of harvesting, average quantities of raw material harvested and potential number of brooms produced per season for both outdoor twig and indoor grass brooms.....	54
Table 3.10:	Average costs per season of harvesting <i>Athrixia phylicoides</i> and <i>Festuca costata</i> .....	55
Table 3.11:	Estimated average gross and net annual and monthly incomes from broom production calculated using three different approaches.....	62
Table 3.12:	Producers' and traders' perceptions of trends in their individual businesses.....	66
Table 3.13:	Problems and constraints identified by producers.....	69
Table 3.14:	Problems and constraints identified by traders.....	70
Table 4.1:	Species used in reed mat manufacture in South Africa.....	74
Table 4.2:	Use and purchase of reed mats by rural households in different regions of South Africa.....	75
Table 4.3:	Age, education and marital profiles of mat producers.....	80
Table 4.4:	Income and livelihood profiles of mat producer households.....	82
Table 4.5:	Reasons producers gave for entering the mat trade, their prior occupations and years in the trade.....	84
Table 4.6:	Proportion of producers collecting and purchasing <i>Cyperus</i> and <i>Schoenoplectus</i> .....	85
Table 4.7:	Frequency of harvesting and average quantities of raw material harvested each season by <i>Cyperus</i> and <i>Schoenoplectus</i> users.....	90
Table 4.8:	Average quantities of raw material purchased each season by <i>Cyperus</i> and <i>Schoenoplectus</i> users.....	92
Table 4.9:	Average costs per season of harvesting <i>Cyperus</i> and <i>Schoenoplectus</i> .....	93
Table 4.10:	Average costs per season of purchasing <i>Cyperus</i> and <i>Schoenoplectus</i> .....	93
Table 4.11:	Average time required to weave different sized mats of basic decoration.....	95
Table 4.12:	Prices of different types and sizes of mats and wall decorations and returns to labour.....	98
Table 4.13:	Producers' estimates of the frequency of mat sales.....	99
Table 4.14:	Proportion of producers selling to different groupings of customers.....	100
Table 4.15:	Estimated average gross and net annual and monthly incomes from mat sales for all mat producers.....	101
Table 4.16:	Differences in incomes earned by producers using <i>Cyperus</i> and those using <i>Schoenoplectus</i> .....	101
Table 4.17:	Problems and constraints to the mat trade as identified by producers.....	107
Table 5.1:	Comparative marula fruit yield data reported in the literature.....	115
Table 5.2:	Age, education and marital profiles of marula beer sellers.....	117
Table 5.3:	Incomes and livelihood profiles of marula beer selling households.....	118
Table 5.4:	Reasons beer sellers gave for entering the marula beer trade and their prior occupations.....	121
Table 5.5:	Duration of beer sellers' participation in the marula beer trade from 1998 to the time of the survey.....	122
Table 5.6:	Possible reasons provided by beer sellers as to why marula beer was not sold prior to 1998..	122
Table 5.7:	Average frequency of collection and quantities of marula fruit gathered each season.....	124
Table 5.8:	Mean costs, labour inputs and gross and net incomes from marula beer sales over the season.....	129
Table 5.9:	Mean net seasonal income per seller incorporating the opportunity costs of labour at zero cost, the local wage rate of R12.50 per day and the minimum wage rate of R20 per day.....	130

Table 5.10:	Beer sellers' perceptions of trends in their individual/household sales of marula beer.....	131
Table 5.11:	Problems and constraints identified by beer sellers.....	134
Table 6.1:	Wood species used by carvers and furniture makers in Bushbuckridge.....	142
Table 6.2:	Age profile of carvers and furniture makers.....	146
Table 6.3:	Prior occupations of producers and their years in the local woodcraft trade.....	148
Table 6.4:	Estimates of time required to complete some of the more popular woodcraft items, and the approximate number of small and large items that can be made on a monthly or annual basis.....	156
Table 6.5:	Prices for selected woodcraft goods in 1993 and 2000 at different points in the market chain.....	161
Table 6.6:	Average net annual incomes (Rands) earned by carvers and furniture makers in Bushbuckridge in 1993 and 2000.....	162
Table 6.7:	External support for the woodcraft industry in Bushbuckridge over the last few years.....	167
Table 6.8:	Problems and constraints to the woodcraft trade identified by producers.....	168
Table 7.1:	Rough estimates of number of forest users in different categories.....	175
Table 7.2:	Duration of participation in the natural resource product trade in Busbuckridge at the time of the study.....	180
Table 7.3:	Proportion of marula beer sellers joining the trade since 1998 showing the recent expansion in the trade.....	180
Table 7.4:	Reasons provided by producers and traders for entering the natural resource product trade...	182
Table 7.5:	Comparison of producers' and traders' profiles and household characteristics across products and with a random household sample.....	185
Table 7.6:	Annual cash incomes per household derived from product sales for the different producer groups.....	189
Table 7.7:	Benchmarks against which incomes from trading can be compared.....	189
Table 7.8:	Coefficients from a multiple regression analysis of net income from trading in mats and brooms.....	192
Table 7.9:	Contribution of income from trading to total household cash income and the importance of the product to households for the four products surveyed.....	195
Table 7.10:	Component scores for a PCA of product type and a range of household and product related variables.....	197
Table 7.11:	Livelihood strategy typologies and the natural resource products studied in this thesis.....	203
Table 8.1:	Primary sources of raw material and harvesting constraints for the four case studies, separating twig and grass brooms.....	215
Table 8.2:	The suitability and potential for commercialisation for each of the key species based on their biological characteristics and responses to harvesting.....	220
Table 8.3:	Comparison of selected processing characteristics for the different products.....	224
Table 8.4:	Comparison of the markets and marketing strategies used by producers for the different products.....	227
Table 8.5:	Comparative advantages and disadvantages of local 'endogenous' markets relative to new, 'facilitated' external markets.....	233
Table 8.6:	Size and values of the trades studied based on conservative estimates.....	234
Table 8.7:	Products assessed against a set of 'generic' conditions and features that affect commercialisation potential and sustainability.....	239
Table 9.1:	Key findings and insights gained from this research assessed against some of the dominant viewpoints and approaches found in the literature.....	258

## LIST OF FIGURES

Fig 2.1:	Location of the Bushbuckridge local municipality.....	29
Fig 3.1:	Location of sample villages and trading centres for broom producers and traders.....	37
Fig 3.2:	Distribution of total monthly cash income (Rands) for broom producer and trader households.....	43
Fig 3.3:	Proportion of total annual cash income contributed by broom sales to producers' households.....	44
Fig 3.4:	Location of the main harvesting areas for <i>Athrixia phylicoides</i> (twigs) and <i>Festuca costata</i> (grass) indicating producers' home villages and the spread of harvesting sites.....	48
Fig 3.5:	Proportion of producers harvesting from different land tenure systems for <i>Athrixia phylicoides</i> (twigs) and <i>Festuca costata</i> (grass).....	49
Fig 3.6:	Key markets and market channels for traditional outdoor twig and indoor grass brooms.....	58
Fig 3.7:	Proportion of producers selling brooms in different markets and places.....	59
Fig 3.8:	Monthly pension market visits made by producers using this channel to sell their brooms...	59
Fig 3.9:	Distribution of gross and net annual income earned from selling brooms in class intervals of R250.....	63
Fig 3.10:	Mean plot of net annual income from broom sales for producers relative to total cash household income class from poorest to 'wealthiest'.....	64
Fig 3.11:	Mean plot of percentage contribution of the broom trade to households of differing total cash income status from poorest to 'wealthiest'.....	68
Fig 4.1:	Distribution of sample villages across Bushbuckridge indicating the separation between primarily <i>Cyperus spp.</i> users and <i>Schoenoplectus corymbosus</i> users.....	76
Fig 4.2:	Distribution of total monthly cash income (Rands) of mat producer households based on intervals of R250 per month.....	81
Fig 4.3:	Mean plot of the relationship between pensions received by household and total annual household cash income demonstrating the considerable contribution pensions make to the overall household income of mat producers.....	81
Fig 4.4:	Proportion of total annual household cash income contributed by mat sales.....	83
Fig 4.5:	Main harvesting areas for both <i>Cyperus</i> and <i>Schoenoplectus</i> indicating harvesting sites and proportion of producers collecting at each site.....	86
Fig 4.6:	Proportion of producers harvesting from the different land tenure systems for <i>Cyperus</i> and <i>Schoenoplectus</i> .....	86
Fig 4.7:	Key markets and market channels for reed mats and wall decorations.....	97
Fig 4.8:	Spatial location of 'regional towns' where mat producers are selling reed mats to urban township dwellers.....	98
Fig 4.9:	Distribution of gross and net annual income (Rands) earned from mat sales in class intervals of R250 for all mat producers.....	101
Fig 4.10:	Mean plot of percentage contribution of the mat trade to households of differing total cash income status from poorest to 'wealthiest'.....	104
Fig 5.1:	Location of the business centres and roadside sales points where beer sellers were interviewed.....	113
Fig 5.2:	Distribution of total monthly cash income (Rands) of marula beer selling households based on intervals of R250 per month.....	119
Fig 5.3:	Proportion of total annual cash income contributed by beer sales to beer producing households.....	120
Fig 5.4:	Key markets and market channels for marula beer.....	126
Fig 5.5:	Distribution of gross and net annual income (Rands) earned from marula sales in class intervals of R250.....	130
Fig 5.6:	a) Mean plot of the percentage contribution of the marula beer trade to households of differing total cash income status from poorest to 'wealthiest', and b) mean plot of net cash income earned from the sales of marula beer for households of differing total cash income status.....	133
Fig 6.1:	Locations of villages to which woodcarvers and furniture makers were traced showing their scattered distribution across Bushbuckridge.....	141
Fig 6.2:	Use of the different wood species listed in Table 6.1 by carvers.....	143
Fig 6.3:	Use of the different wood species listed in Table 6.1 by furniture makers.....	143
Fig 6.4:	Distribution of total monthly cash income (Rands) of woodworker (carver and furniture	

	maker) households based on intervals of R250 per month.....	147
Fig 6.5:	Proportion of total annual household cash income contributed by woodcraft sales.....	149
Fig 6.6:	Flow chart outlining the procedure for harvesting <i>P. angolensis</i> in Bushbuckridge as well as some of the problems with the system.....	150
Fig 6.7:	Key markets and market channels for woodcarvings and furniture produced by Bushbuckridge hardwood craftsmen.....	158
Fig 6.8:	Location of the main sales points for woodcarvings within the Mpumalanga and Limpopo Province tourism region.....	159
Fig 6.9:	Distribution of gross and net annual income (Rands) earned from sales of carving and furniture in intervals of R1 000.....	162
Fig 7.1:	Proportion of households for each product type that fall within four total annual household cash income classes when: a) the net annual income obtained from the sale of natural resource products is included in total annual cash income, and b) when the net annual income obtained from the sale of products is excluded from total annual cash income.....	187
Fig 7.2:	Box plots of total annual cash income per household for the different producer groups.....	187
Fig 7.3:	Box plots of net annual income from product sales per household for each producer group..	190
Fig 7.4:	Plot of factor scores for component 1 and component 2 of a PCA of product type and a range of household and product related variables.....	197
Fig 7.5:	Plot of scores from a Bray-Curtis principal coordinates analysis of sources of household income; the output scores represent an index of diversification.....	199
Fig 8.1:	A simplified depiction of a typical production-to-consumption system (PCS).....	213
Fig 8.2:	Generalised commercialisation pathways for products traded by producers from Bushbuckridge.....	236
Fig 9.1:	Simplified, conceptual framework of the key components and factors that need to be considered to understand local level natural resource product trading and its outcomes.....	244

#### **LIST OF TEXT BOXES**

Box 3.1:	Life story of a successful broom maker.....	46
Box 3.2:	Livelihood contributions from the broom trade: quotes from interviews.....	68
Box 4.1:	Xalamukani Women's Project.....	99
Box 4.2:	The making of three successful mat weavers.....	105
Box 4.3:	Livelihood contributions from the mat trade.....	106
Box 5.1:	Livelihood contributions from the marula beer trade.....	131
Box 6.1:	Producers' comments on and attitudes towards the harvesting system.....	151
Box 6.2:	Life history of a successful woodworker.....	163
Box 6.3:	Attitudes of producers towards the trade.....	165
Box 6.4:	Perception of changes in the size of the woodcraft trade.....	165

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**CHAPTER 1**

**INTRODUCTION, THEORETICAL CONTEXT AND STUDY APPROACH**

**1.1 INTRODUCTION**

***1.1.1 Recognising the role of natural resource products in rural livelihoods: from neglect to poverty alleviation potential***

Natural resource or wild products gathered from forests, woodlands, grasslands, wetlands and agriculturally converted landscapes have long formed a vital component of rural people's everyday livelihood needs, providing energy, food, medicines and the raw materials for building, crafts, tools and implements (de Beer and McDermott 1996, Arnold and Ruiz-Pérez 1996, Koziell and Saunders 2001, Campbell and Luckert 2002). Trade in these products at the local level has, similarly, offered an important source of cash income to trading households for generations (de Beer and McDermott 1996, Neumann and Hirsch 2000). Nevertheless, historically, little attention was paid to these products and their significance for rural welfare; to the extent they were coined the 'hidden harvest' by IIED in 1995 (IIED 1995, Campbell and Luckert 2002). This past neglect was further epitomised by the designation, until recently, of products collected from forests as 'minor' forest products. The term 'minor' signified the supposedly low economic value and importance of these products compared to timber (de Beer and McDermott 1996, Arnold and Ruiz-Pérez 2001). It has only been in the last 10-20 years that increased interest has been directed to the role that biodiversity might play in rural development and in the livelihoods of the rural poor (Arnold and Ruiz-Pérez 2001, Koziell and Saunders 2001, Campbell and Luckert 2002).

This new interest has been partly driven by the 'conservation agenda' and concerns regarding the high rates of conversion of natural vegetation, in particular tropical forests, to other land uses. It was postulated that demonstration of the linkages between forest product use and the improvement of rural livelihoods could provide an incentive for local people to conserve natural resources, thus forming the basis for the more sustainable management of these resources whilst simultaneously promoting rural development (Ruiz-Pérez and Arnold 1996, Arnold and Ruiz-Pérez 2001). Similar arguments have been presented for wetland systems (Christiansen 1999, Kotze 2001), and form the basis of the community-based natural resource management (CBNRM) approach that has received much attention in southern Africa (Fabricius *et al.* 2004). Another factor that lent impetus to the study of the role and importance of natural resource products for rural people was recognition of the need for a deeper and more nuanced understanding of rural livelihoods and their complexity to ensure effective rural development (Ashley and Maxwell 2001, Campbell and Luckert 2002, see Section 1.5.1). This is encapsulated in the pro-poor 'Sustainable Livelihoods Framework' approach promoted by the UK Department of International

Development (Carney 1998), in which natural capital is recognised as one of five key assets required for building more secure livelihoods (Section 1.5.1). Enquiries directed at understanding the commons and their management, also led to valuable insights on common pool natural resources and their relationship to the rural poor, particularly in India (e.g. Qureshi and Kumar 1998, Beck and Nesmith 2001, Jodha 2001). More recently international concern for poverty alleviation resulting from the adoption of the Millennium Development Goals (UN Millennium Declaration 2000), which emphasise the need to improve conditions for the world's poor, has led to renewed evaluation of the role of natural resources and forest products in income generation, livelihood security, and poverty reduction and mitigation (Arnold 2002a, Angelsen and Wunder 2003a, Dickson and Bird 2004, Chapter 7). Indeed, this is an area that is increasingly coming under scrutiny (Chapter 7); in particular whether or not natural resource products play a role in sustaining livelihoods and contributing to poverty alleviation, or alternatively, whether natural resource dependent-livelihoods offer limited options serving only as a 'last resort' possibly contributing to persistent poverty (Wunder 2001, C. Shackleton 2004).

Debates around these issues, and how natural resource products can contribute to the international community's goal to eliminate poverty, are currently dominating the discourse (World Bank 2000a, 2002, Arnold 2001, 2002a, Angelsen and Wunder 2003a, FAO 2003, Adams *et al.* 2004, Chapter 7). Many researchers, practitioners, donor agencies and government departments operating in the sphere of environment and conservation are being compelled to re-examine the role natural resource products can play in the efforts to reduce rural poverty and vulnerability (see Chapter 7 for more details). The forest sector, in particular, has been active and a sizeable body of knowledge now exists internationally on so-called 'non-timber forest products' or NTFPs; a term now widely employed even for products originating outside of forest systems (Belcher 2002, Section 1.5.3). Much of the seminal work on the links between natural resources and livelihoods was conducted in the humid forest regions of south-east Asia, South America and Africa, focusing on NTFPs (e.g. Peters *et al.* 1989, Falconer 1992, de Beer and McDermott 1996, Ruiz-Pérez and Arnold 1996, Godoy *et al.* 2000). It was the early papers by Peters *et al.* (1989) and Godoy and Bawa (1993) that first elevated the status of 'minor' forest products and brought their potential value to the attention of the world, mooted NTFPs as a route to sustainable forest management and livelihood enhancement. A wave of studies followed, some within the dry forest zones of southern Africa and India, all providing insightful information into this previously neglected sector (for syntheses of some of this work see Campbell (1996), Ruiz-Pérez and Arnold (1996), Cousins (1998), Neumann and Hirsch (2000), S. Shackleton *et al.* (2000a,b), Jodha (2001), Kaimowitz (2003), Kusters and Belcher (2004), Sunderland and Ndoye (2004)).

### ***1.1.2 Exploring and questioning the linkages between natural resource products, livelihoods and poverty***

There is now little doubt that biodiversity and natural resource products contribute to the well-being, and sometimes the very survival, of poor rural households (Byron and Arnold 1999, Kaimowitz 2003,



Angelsen and Wunder 2003a,b, Arnold 2002a, Fisher 2004, see Chapter 7 for more details). Numerous studies have demonstrated that millions of rural dwellers throughout the world depend on a diversity of natural resource products extracted from the wild for their livelihood and income needs (Byron and Arnold 1999, Narendran *et al.* 2001, Scherr *et al.* 2003, Chapter 7). Often these are the most marginalised, vulnerable and poorest members of rural society (Reddy and Chakravarty 1999, Cavendish 2000, Beck and Nesmith 2001, Kaimowitz 2003, Marshall and Newton 2003, Takasaki *et al.* 2004, Chapter 7). Natural resource products may be harvested for subsistence purposes as direct inputs into the household, and/or as commodities that can be offered for sale in the market, in raw or processed form (Chapter 7). The use and sale of products may take place on a regular basis, or only in times of emergency or misfortune. In the case of the latter, these products then function as a form of 'natural insurance' or safety net, providing people with fallback options (Arnold and Ruiz-Pérez 2001, McSweeney 2004, Takasaki *et al.* 2004, Chapter 7). Local markets have been shown to have a significant role in assisting rural households to realise some, if not all, of their cash requirements (Falconer 1996, de Beer and McDermott 1996, Ndoye *et al.* 1997, Arnold and Townson 1998, Neumann and Hirsch 2000, Greene *et al.* 2000, Narendran *et al.* 2001, Marshall and Newton 2003, see Chapter 8 for more details). The processing and sale of natural resource products certainly offers a low barrier to entry and widely available option to generate cash income that is progressively being taken up by rural dwellers in many countries, including South Africa, as a means to cope with economic hardship (Narendran *et al.* 2001, Marshall and Newton 2003, Chapter 8). Indeed, in some situations, such as in the dry woodlands of southern Africa, the trade in natural resource products may be one of the few accessible local income generating options available to the rural poor, and women in particular (Campbell *et al.* 2002, C. Shackleton and S. Shackleton 2004a,b). More detailed discussion of the role of natural resource products, in particular the trade in these products, for rural livelihood security is presented in Chapter 7.

That said, it has been argued, however, that much of the work to date has created undue optimism regarding the potential of natural resource products to significantly benefit rural people and to alleviate poverty (Wunder 2001, Angelsen and Wunder 2003a). While the role of these products in providing subsistence, acting as a safety net in times of need, and generating supplementary income is generally well accepted (Pattanayak and Sills 2001, Arnold 2002a, Sunderlin *et al.* 2004, Chapter 7), questions are being asked regarding the ability of the sector to play a significant part in addressing rural poverty, and, more specifically, in providing pathways out of poverty (Neumann and Hirsch 2000, Wunder 2001). A much more cautious approach, and in some cases even outright pessimism, has replaced the initial enthusiasm over NTFPs as the panacea to rural development and natural resource, in particular forest, conservation (Lawrence 2003, Ros-Tonen and Wiersum 2003, 2005, Belcher and Kusters 2004). The initial high expectations were based, to some extent, on: a) inflated claims of economic potential (Wunder 2001, Sunderland *et al.* 2004, Vedeld *et al.* 2004), b) poor assessment and analysis of the complexity of economic, social and market orientated issues relating to natural resource production (Lawrence 2003), and c) invalid extrapolations from one situation and context to another. Indeed,

attempts to “delve deeper and to develop models and predictive capacity of the prevalence, magnitude and nature of the ‘dependence’ on forests and forest products have been constantly thwarted by problems relating to definitions, and the spatially and temporally dynamic nature of such use and dependence” (C. Shackleton 2004, also see Chapter 7). As a result, an exceedingly mixed picture as regards the *actual* importance of natural resources for rural livelihoods and poverty alleviation currently exists (Ros-Tonen and Wiersum 2003).

In an attempt to offer some clarification and to provide a ‘reality check’, a number of reviews and commentaries have been written in the last few years regarding the potential role of natural resource products in livelihoods and poverty alleviation (e.g. Byron and Arnold 1999, Wunder 2001, Arnold 2001, 2002a, Angelsen and Wunder 2003a, Kaimowitz 2003, Oksanen and Mersmann 2003, Oksanen *et al.* 2003, Sunderlin *et al.* 2004, Chapter 7). Arnold (2002a) emphasises the importance of natural resources to the poor in providing a way to cope with poverty rather than as a route for escaping poverty, and believes that the poverty goal should include livelihood security as well as income enhancement dimensions (see Section 1.5.2). Similarly, Angelsen and Wunder (2003a) and FAO (2003) make the distinction between poverty elimination and poverty mitigation, or preventing the worsening of poverty (see Section 1.5.2 below), and suggest that both are crucial elements in the fight against poverty. Arnold (2002a) further points out that another important distinction to consider is whether users ‘depend’ on natural resources in the sense of being ‘unable to do without them’, or whether they use such products out of choice and have access to alternatives. Some commentators have suggested in certain situations natural resource products may even constitute a ‘poverty trap’ (Neumann and Hirsch 2000, Wunder 2001, see Section 1.5.2 for a definition). An example of such a situation is provided by Sunderlin and Thu Ba (2004): poor people, in two provinces in Vietnam, were shown to be caught in a “perpetual cycle of debt that forced them to continue illegal hunting and other forms of NTFP extraction” effectively ‘trapping’ them in these activities. Neumann and Hirsch (2000) argue that it is the very properties of natural resource products that make them accessible to the poor that also limit their growth potential, with Dove (1993) contending that if this *status quo* is altered then the poor will ultimately lose out to elites who will take over as the rewards become more substantial.

### ***1.1.3 Gaps and research needs***

Despite this recent work, numerous gaps in understanding the linkages between natural resource use and trade and livelihood and poverty benefits still exist, and there is a need for further empirical studies (Campbell and Byron 1996, Arnold 2002a). For example, the Quebec Declaration (2003) on “Strengthening global partnerships to advance sustainable development of non-wood forest products” (formulated at the Quebec World Forestry Congress 2003) states that: “there is a profound lack of information necessary to realise the full benefits of non-wood forest products (NWFPs) for individual, community and national well-being; decision makers, forest managers and resource users alike lack information about economic, ecological and social characteristics of NWFPs.” To address this it is

recommended that “government efforts be strengthened to conduct research, and to compile and disseminate information and statistics to key stakeholders on NWFP resources and their socio-economic and ecological values” (Quebec Declaration 2003). Angelsen and Wunder (2003a) stress the need for further quantitative research on: a) the role of NTFPs in household livelihoods including their safety net function, and b) on the potential of small, natural resource-based enterprises, stating that the enterprise approach is generally under-represented in the forest product literature. Lawrence (2003) mentions that there is still a need for case specific, systematic analyses of the potential or actual impact of using and selling forest products for livelihoods, poverty and conservation. Indeed, in many countries little national level information, based on solid empirical study, exists that quantifies the contribution of natural resource products to household income, reliably assesses their role as safety nets, or examines their potential for lifting people out of poverty in a lasting way (e.g. Vietnam – Sunderlin and Thu ba 2004, South Africa - Section 1.2).

While recognising the need for more case studies, certain gaps also need to be addressed. In general, little consideration has been given in many studies to the broader socio-economic environment and how this influences natural resource use and trade, as well as the role of these products within overall livelihoods (Neumann and Hirsch 2000, Arnold 2002a, Kepe 2002, Ros-Tonen and Wiersum 2003, 2005). Much of the literature has looked at NTFPs from a forestry management perspective as a means to engender community participation and resource conservation particularly on state owned land. Natural resource commercialisation as a form of livelihood diversification engaged in by different social actors in the community, and the factors that drive and influence this process have received less attention (Campbell and Byron 1996, de Jong *et al.* 2000). More work is required to understand the complex social context and relationships surrounding natural resource use and commercialisation (de Jong *et al.* 2000, Neumann and Hirsch 2000, Kepe 2002, Lawrence 2003, Ros-Tonen and Wiersum 2005). Moreover, much of the current literature is related to forest products (NTFPs) and the humid tropics, while drier areas have received less attention (Schreckenberg 1996, C. Shackleton 2001). The conclusions drawn from the former regions may not necessarily be applicable to less humid areas, where opportunities for other forms of livelihood, in particular agriculture, are often severely limited. The focus on forests and forest products may also be too narrow. People use natural resources from a wide range of environments and ecosystems. There is, thus, a need to expand the range of detailed cases studies on which to draw, and to synthesise the findings from these (Campbell and Byron 1996, Ruiz-Pérez and Byron 1999, C. Shackleton 2001, Lawrence 2003).

To appreciate the contribution that the trade in natural resource products might make to livelihood security and poverty alleviation, there is also a need to understand the markets for these products, the pathways of commercialisation, the internal and external constraints faced by producers in the commercialisation process, and any opportunities for intervention that may exist (Campbell and Luckert 2002, Cunningham 2001, Marshall *et al.* 2003). This is critical to assessing whether or not the benefits

of trading can be sustained, or even improved, creating real and lasting opportunities for local livelihood enhancement and poverty alleviation. In particular, ‘endogenous’ or local level natural resource product trading activities (see Section 1.5.4 for a definition), which are often invisible, unsupported and frequently ignored, need to be given attention as they are often the most important in terms of contribution to income and employment (Arnold 2002b, also see Chapter 8). It is argued that multiple case studies using the same approach and methodology are required in order to facilitate comparative analysis, draw lessons and elucidate some of the factors that may contribute to, and enhance, the positive livelihood outcomes of trading in natural resource products (Ruiz-Pérez and Byron 1999, Belcher and Ruiz-Pérez 2001, C. Shackleton 2001, Marshall *et al.* 2003).

In this thesis, I aim to contribute to the research gaps outlined above by improving current understanding of natural resource commercialisation processes and benefits in systems outside of the humid tropics, and by focusing on the widespread and growing, but often neglected, locally initiated, or endogenous, trading activities. Through systematic analysis of detailed case studies I will demonstrate whether or not the trade in natural resource products can make a significant, and sustainable, contribution to rural livelihoods, assisting in the drive to improve the welfare and well-being of rural dwellers and reduce their vulnerability. Such research is necessary to bring substance to the mixed and ambiguous views that exist on the potential of natural resource products to contribute to income generation and poverty alleviation both internationally and in South Africa.

## **1.2 THE SOUTH AFRICAN SITUATION**

High levels of unemployment, a shrinking job market and a scarcity of land for farming purposes (Marcus 2000, Kingdon and Knight 2001, Landman 2003, Natrass 2004) has driven many households in the rural areas of South Africa to seek alternative means of meeting their livelihood requirements (Chapter 2). The commercialisation of natural resource products has been one strategy widely employed, and increasingly poor rural people within the country are turning to the natural resource base as a means of income generation (C. Shackleton *et al.* 1999a, Kepe 2002, Cocks and Dold 2004a,b, C. Shackleton and S. Shackleton 2004b). Whilst there is some recognition of this growing importance of natural resource commercialisation for rural livelihoods amongst those working in the environment and conservation sectors, it is rarely appreciated by policy makers, practitioners and planners concerned with rural development, poverty alleviation and the promotion of informal industry and small enterprises (S. Shackleton *et al.* 2000a, Rogerson 2000, Kepe 2002, Chapter 9). This lack of attention is partly the result of a focus on the more conventional rural development sector of agriculture (albeit limited in the South African context – see Chapter 2), in particular on so-called ‘emerging farmers’ (Marcus 2000, Scoones and Wolmer 2003, C. Shackleton and S. Shackleton 2004b), and partly because there is a strong argument by some that the trend is towards increasing urbanisation and a move away from reliance on land-based livelihood activities (Bryceson and Bank 2001, Bryceson 2002). Others argue that the rural informal sector in South Africa tends to be largely ignored because of its low profile

nature and ‘survivalist’ mode (DACST 1998, Marcus 2000, Rogerson 2000, Rogerson and Sithole 2001, UNDP South Africa 2003). Certainly the local level trade in natural resource products often takes place outside of visible markets (Chapter 8) and, consequently, is poorly acknowledged, researched and documented.

Thus, to date, there is little consolidated information on the local level or endogenous trade in natural resource products in South Africa, with the possible exception of medicinal plants (Mander 1998, Botha 2001, Williams *et al.* 2000, Dold and Cocks 2002, Cocks *et al.* 2004b). Knowledge is lacking on the extent of trading across the country, the dynamics of this, the types of households that are engaging in these activities, the significance of the trade for livelihoods, the characteristics of the markets, and the influences of macro-level policies and local institutional arrangements on the process. Where work on natural resource products has been done this has tended to focus on: a) formally traded products such as devil’s claw (Wynberg 2004), marula (Mander *et al.* 2002) and *Aloe ferox* (Newton and Vaughan 1996); b) craftwork (including non-plant materials) for external markets (DACST 1998, Rogerson and Sithole 2001, INR 2003); or c) specific externally supported small enterprise development or conservation ‘outreach’ projects often linked to the tourism industry (Krüger and Verster 2001, Ndabeni 2001). Moreover, existing studies are often so diverse in their approach and methodology that it is difficult to extrapolate them to higher-level interpretative and conceptual analysis. In addition, few studies completed in South Africa have attempted to interpret the role of natural resource trading within a holistic, household livelihood perspective (Kepe 2002, Scoones and Wolmer 2003), nor do they concern themselves with the broader poverty context or the notions of vulnerability, livelihood diversification, choice and risk (Section 1.5.2). Indeed, many studies are undertaken with the resource as their starting point rather than the people involved (e.g. Cunningham 1997, Cawe and Ntloko 1999, McKean 2003, Lawes *et al.* 2004). The specific context of South Africa and its history (Chapter 2) also complicates the picture and makes it difficult to extrapolate findings from other countries. Consequently, without good baseline data on how locally driven natural resource commercialisation processes currently work, as well as their importance for the people involved, little can be done to raise the profile of this sector, justify investment in it, or advocate for a more favourable policy environment. In this thesis I aim to enhance our understanding of the local level trade in natural resource products that have received little attention to date<sup>1</sup>. I seek to draw attention to the value of the trade for rural livelihoods, including its potential for achieving poverty alleviation and in reducing risk and vulnerability, particularly in the context of increasing economic hardship (Chapters 2 and 7). Through integrative analysis, areas for intervention that could address some of the internal and external constraints producers face and lead to a more sustainable trade and greater livelihood security are explored.

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<sup>1</sup> This PhD study is part of a broader project supported by the South African-Netherlands Programme for Alternatives in Development (SANPAD) in which a number of case studies on products that have been poorly researched were undertaken at Masters and Honours level in different parts of the country using the same basic approach.

## **1.3 HYPOTHESES, KEY QUESTIONS AND OBJECTIVES**

### ***1.3.1 Hypotheses underlying the study***

This study is premised on a number of hypotheses or propositions as listed below. These were formulated based on the observations and commentary presented above and in Chapters 7 and 8, personal experience from working in this sector over a number of years, and dialogue with other researchers. They were key in guiding the approach, design and methods used in this study and underlie much of the discussion. They are returned to in each of the synthesis chapters (Part III) as well as the final concluding chapter.

- A growing number of rural households are engaging in natural resource product commercialisation in response to economic hardship.
- Natural resource product trading is one component of a diverse livelihood base for many of the poorest and most marginalised members of rural society.
- The sale of natural resource products makes a difference to poor people's livelihoods and forms an important safety net, but on its own rarely results in significant poverty elimination.
- The natural resource product trade in South Africa is complex, multifaceted and differentiated across products, trade chains and the actors involved, presenting numerous challenges for sustainable rural development and poverty alleviation.

### ***1.3.2 Key questions and objectives***

The broad research objectives of the study were to:

- determine the contribution that the local level natural resource product trade makes to household income relative to other sources of cash income;
- evaluate the importance of local natural resource product commercialisation as a strategy for enhancing livelihood security, reducing risk and providing a safety net;
- elucidate and assess the different pathways and processes of locally driven natural resource commercialisation, including the factors that shape and influence this;
- determine whether there is potential for delivery of sustained, or even enhanced, benefits to rural producers and traders; and lastly
- analyse the policy and development implications of the study findings, particularly for achieving poverty alleviation.

These objectives provided the means to answer the following overarching questions. What contribution does the locally initiated trade in natural resource products make to rural livelihoods in South Africa, and what are the harvesting, processing, and marketing constraints and opportunities that communities, households and individuals face when pursuing this option as a form of income generation? Based on

this, how important is the trade in the efforts to combat rural poverty and what options, if any, exist for expanding the poverty alleviation role of natural resource products?

Specific objectives and questions pursued for the case studies and for the integrative analysis are provided, respectively, in the methods section below and in the introduction section of each of the integrative chapters.

#### **1.4 STRUCTURE OF THE THESIS**

The empirical basis of this thesis is four comprehensive case studies of local level or endogenous natural resource product commercialisation that form the core around which other chapters are built. Based on this, the thesis is divided into three main parts: an introduction and overview (Part I); the empirical case studies (Part II); and a final part that provides for integration, analysis and discussion of the case study results (Part III). Each part includes a number of chapters. These, other than the general introduction and final conclusion, were constructed as stand-alone pieces.

*Part I* consists of two chapters. *Chapter 1*, the current chapter, a) introduces and sets the context for the study, providing insight into the background, discourses and practicalities that influenced the study from both an international and South African perspective; b) provides a conceptual framework and outlines the broad approach and methods used, noting that specifics are dealt with in each case study and integrative chapters; and c) explains and defines key concepts and terms. The review of the literature in this chapter was purposely kept short and concise, focusing on research trends and perspectives, with other details being presented in the introductory sections of the case study and integrative chapters. *Chapter 2* outlines the poverty context in South Africa and offers a description of the study area.

*Part II* consists of the four independent case study chapters (*Chapters 3 to 6*), covering the trade in traditional brooms, reed mats, marula beer and woodcraft in Bushbuckridge. A similar framework and structure is used for each case study (see Section 1.6.3). Each chapter provides information on specific methods related to the particular case, the ecological characteristics of the product traded (mainly from secondary sources), and detailed analysis and interpretation of the survey data. Within these chapters, results are discussed and compared to related studies from elsewhere, but comparison between cases is limited to the integrative chapters to avoid repetition.

*Part III* consists of three chapters that integrate and synthesise the results of the case studies according to specific theme areas that relate back to the original objectives and hypotheses. *Chapter 7* deals with the role of the products studied in contributing to livelihood security and poverty alleviation. Within this chapter the methods, results and discussion are interwoven together under sections that relate to some of the key issues identified within current natural resource-livelihood-poverty debates. New empirical

analysis was conducted for this chapter that combines and reworks data from the four case studies. In essence, the chapter deals with the financial and non-financial benefits or impacts of trading in relation to the broader livelihood portfolio of producer and trader households. *Chapter 8* is largely a descriptive chapter that compares and contrasts the commercialisation pathways, including opportunities and constraints, for each of the products and relates this to the international literature. A production-to-consumption system approach, which is described in the introduction to the chapter, was used as a framework to discuss and compare the cases and to structure the chapter. This chapter essentially provides the ‘how’ of local level trading and the factors influencing it. *Chapter 9*, the final concluding chapter, pulls together all the findings by: a) summarising the key issues emerging (including the benefits emanating from the trade), and b) considering the broader policy and development implications of the work. Justification for recognising and supporting this sector, while appreciating its many complexities and difficulties, is presented. The first two integrative chapters are preceded by a comprehensive theoretical and contextual discussion, while all the chapters that present results are rounded-off with a point-by-point summary of the major findings.

## **1.5 CONCEPTS AND DEFINITIONS**

### ***1.5.1 Livelihoods focus and approach***

As has already been alluded to, few analytical studies exist that relate the trade in specific natural resource products to other household livelihood strategies and the well-being of the household as a whole (Arnold 2002a, Ambrose-Oji 2003), although there are some notable exceptions such as Cavendish (2000), Campbell *et al.* (2002) and Fisher (2004). In particular, there has been little effort to analyse the role of traded natural resource products within the context of livelihood diversification (Ellis 2001, Ambrose-Oji 2003). This section provides some background on the livelihood concepts that were critical in both guiding the design of this study and interpreting the results obtained.

“A livelihoods approach starts off by focusing on people, their assets and their activities, rather than on sectors and their performance” (Ellis 1998). The latter is generally the conventional entry point, and the approach widely adopted in natural resource commercialisation studies. Indeed, de Jong *et al.* (2000) point out that much of the NTFP research to date has tended to focus on products and their management, rather than the complex and dynamic livelihood systems of which NTFP commercialisation forms just one part. This need for a more holistic approach is supported by Ambrose-Oji (2003), who argues that the “application of the pro-poor livelihoods approach to examining and understanding individual and household economies” has forced forest managers and development practitioners to move away from sectoral perspectives towards a much broader view that encompasses “the importance of the various economic activities that make up the livelihood portfolios of forest margin communities”.

A livelihood relates to the assemblage of activities, capabilities and assets required for people to make a living (Carney 1998). The livelihoods approach recognises that rural livelihoods are diverse



(encompassing a range of activities), complex, dynamic and socially differentiated, and that people's access to different forms of livelihood capital and, consequently, the types of livelihood strategies they can engage in are mediated and influenced by the economic, political, ecological and institutional environment within which they find themselves. In this study effort is made to situate natural resource commercialisation within the broader household livelihood system, including how this activity may complement or replace other household activities under varying circumstances. Such an approach provides insights into the types of households that participate in commercialisation, and how and why – i.e. what drives their involvement. Indeed, few rural households rely on one source of livelihood (Pattanayak and Sills 2001, Ambrose-Oji 2003, Campbell and Luckert 2002, Wolmer and Scoones 2003) and natural resources have their place in the livelihood portfolio just as agriculture, migrant work, local jobs, social welfare and networks, and livestock rearing do. Too often the commercial trade in natural resource products is seen in the context of a full-time occupation, and the success or failure of the trade in making a meaningful contribution to household welfare and poverty alleviation judged from this perspective.

Equally important to understanding the role of natural resource trading within the overall household portfolio, is the need to analyse the contribution of the natural resource trade in the context of the prevailing socio-economic and political environment and the sources of livelihood capital people have access to. Many studies, and commentators on the natural resource-poverty link, fail to consider the alternatives available to the rural poor, often marginalised by poor skills, education, infrastructure, remoteness and limited access to real employment activities either locally or further afield (C. Shackleton 2004). In South Africa, in particular, this broader context is important due to the country's aridity, history of discrimination and land alienation, and high levels of HIV/AIDS (Chapter 2).

The livelihoods approach, in particular the 'Sustainable Livelihood Framework (SLF)' (Carney 1998) also directs attention to forms of livelihood capital and household benefit other than just financial. In particular, it encourages analysis of the social benefits that any particular livelihood activity may bring to individuals and their households, as well as how financial capital gained from a particular activity may be reinvested in other 'capitals' such as the education of children, thus building human capital within the household. Indeed, the SLF is premised on the recognition of five types of capital or assets that are important in building and securing livelihoods. These include social, natural, human, financial and physical capital (Carney 1998). Some also add political capital (i.e. voice) (Baumann and Sinha 2000) and cultural capital (Bebbington 1999) as other dimensions. In this study attention was paid to understanding some of the less tangible benefits from trading in natural resource products that may contribute to these other forms of livelihood capital. Such an understanding is important if poverty is viewed more broadly, and not just in terms of income or consumption (see below, Section 1.5.2).

The issue of livelihood diversification needs further comment. Livelihood diversification is defined as the incorporation of new activities into the household economic portfolio (Ashley *et al.* 2003, Ellis 1998). Some commentators, e.g. Barrett *et al.* (2001), believe that diversification has always been a normal condition of rural life, while others, e.g. Ellis (1999, 2000), see it as a contemporary response to increasing socio-economic stress. It is often viewed as a proactive strategy to reduce risk and spread income within the household (Ambrose-Oji 2003). However, livelihood diversification may also be a consequence of having little other choice, and so people ‘diversify’ into a particular activity out of necessity because they have no alternatives. In this situation the activity may be taken up as a ‘last resort’ or as a coping rather than a strictly diversification strategy. The former, where diversification is a ‘considered’ response, is often referred to as ‘pull’ or positive diversification, whereas the latter is a ‘push’ or forced or negative form of diversification (Ashley *et al.* 2003). I have referred to these two forms of diversification as ‘choice’ and ‘no-choice’ in this thesis as it better fits the reasons people themselves gave for engaging in a particular trade. Diversification and substitution are also often confused. Diversification usually refers to expanding the livelihood base rather than substituting one activity with another new and different activity, or one that was not commonly practised previously. These different interpretations of livelihood diversification are often unclear or confused within the literature. In this study both ‘choice’ or ‘pull’ and ‘no-choice’ or ‘push’ forms of diversification were encountered (Chapter 7). The former usually allows households to live better and possibly to accumulate assets, while the latter is mainly a matter of survival (Ashley *et al.* 2003).

### ***1.5.2 Understanding poverty, poverty alleviation and related concepts***

Understanding what is meant by poverty, and the different definitions of poverty alleviation and related concepts, is crucial to interpreting whether natural resources can play a positive role in addressing poverty (Arnold 2001a). This section provides these definitions, drawing primarily on the thorough discussions of this subject in the context of forests and natural resources provided by Angelsen and Wunder (2003a), Sunderlin *et al.* (2004) and the State of the Forests Report (FAO 2003).

#### ***Poverty and well-being***

Poverty, in its broadest sense, is seen as the pronounced deprivation of well-being related to a lack of material income or consumption (the conventional measures of poverty), low levels of education and health, poor nutrition and low food security, high levels of vulnerability and exposure to risk, and a profound lack of opportunity to be heard (Chambers 1988, World Bank 2000b, Sunderlin *et al.* 2004). The inability of the poor to give voice to their needs can be related to their powerlessness within existing social, economic, political and cultural structures (Chambers 1988). May *et al.* (1998) in writing about poverty in South Africa define it simply as “the inability of individuals, households or entire communities to command sufficient resources to satisfy socially acceptable minimum standards of living”. Both these definitions recognise that poor people’s concerns go beyond just adequate income to include aspects of security, capability, independence, choice, health and well-being, and the ability to

devise appropriate coping strategies when faced with shocks and crises. Yet, these dimensions of poverty, some of which relate back to the non-financial forms of livelihood capital described above, are often neglected in poverty assessments or studies dealing with poverty, including those in the natural resource sector, possibly because they are difficult to measure quantitatively (Kepe 2002, Kingdon and Knight 2003). Vulnerability, in particular, needs more attention, as it is believed that poor people are being exposed to increasing risk due to, amongst others, climate change, HIV/AIDS, changes in trade, globalisation, and increasing violence and crime (Aliber 2003, World Bank 2000b). The poor's own interpretations of their well-being has also been highlighted as another neglected area (Aliber 2003, Angelsen and Wunder 2003a, Kingdon and Knight 2003). In South Africa, poor people themselves perceive alienation from the community, food insecurity, crowded homes, the use of unsafe forms of energy, and fragmentation of the family as other dimensions of poverty (May *et al.* 1998). In this study, I take cognisance of this all-encompassing notion of poverty in both designing the study, seeking people's attitudes to trading and its role in their livelihoods, and in interpreting my findings. A brief analysis of the poverty context in South Africa is presented in Chapter 2, Section 2.1.

### *Poverty alleviation*

Poverty alleviation can be defined as the lessening of the deprivation of well-being (Sunderlin *et al.* 2004). However, this is more complicated than it first appears. Oksanen and Mersmann (2003) write about poverty alleviation being “a multi-dimensional problem requiring holistic solutions that are sustainable over time. Economic growth and increased income are important but not the only routes to poverty reduction. These need to be complemented by more equitable distribution of income and assets, reduction of insecurity and vulnerability, better access to basic services, reduction of social exclusion and empowerment of the poor and good governance”. Thus, when evaluating the role that natural resource products might play in poverty alleviation this broader understanding needs to be given consideration.

The FAO (2003), Angelsen and Wunder (2003a) and Sunderlin *et al.* (2004) have attempted to qualify what poverty alleviation means in the specific context of the forest sector. They suggest that two types of forest or natural resource based poverty alleviation apply at the household level: a) *poverty avoidance, prevention or mitigation* and b) *poverty elimination or reduction*. Poverty prevention or mitigation refers mainly to the situation where natural resources serve a safety net function (see below), or as a gap filler, including as a source of petty cash, and contribute to the reduction of risk and vulnerability. Under this scenario, the use of natural resource products would help people to maintain a minimum standard of living (even if below the poverty line) preventing them from slipping further into poverty, or ensuring that they are less poor than they might otherwise have been. Poverty elimination or reduction, on the other hand, refers to the situation where forest resources help lift the household out of poverty by functioning as a source of savings, accumulation and asset building, resulting in a lasting improvement in income and welfare. These understandings parallel the three sets of policy measures

suggested by May *et al.* (1998) that might be used to alleviate poverty, namely a) promotional activities that aim for an improvement of incomes and social consumption, b) preventative measures that try and avert deprivation, and c) protective measures which are essentially safety net and disaster management measures that provide relief from deprivation.

Poverty alleviation, as used in this thesis, is thus presented as a broad term that includes addressing all the dimensions of poverty outlined in the previous section, and that encapsulates both poverty prevention or mitigation and poverty reduction or elimination. In addition, it has been stressed that the role that natural resources play in alleviating poverty is almost always linked to other forms of livelihood, including agriculture, rearing of livestock, formal jobs, and others (FAO 2003). So, while the sale of a natural resource product on its own may not lift a household out of poverty, it could when combined with income from other sources. This holistic approach is used in this thesis.

#### *Safety net*

'Safety net' is a term that is increasingly encountered in the literature dealing with natural resource-livelihood-poverty linkages. A 'safety net' is generally regarded as a source of emergency sustenance in times of hardship, or a fallback option in the absence of alternatives. Safety nets are mechanisms that mitigate the effects of poverty and other risks on vulnerable households (World Bank 2004). In the poverty literature the term is often used to refer to public social security transfers such as unemployment benefits, child grants, pensions, subsidies, etc., as well as the informal transfer of goods between households (Devereux 1999, World Bank 2004). In the natural resource literature, it is the existence of natural capital that can be drawn on for sustenance and income in times of need that constitutes the 'safety net'. Biodiversity, in other words, provides a form of insurance or cushion against risk or when little else is available (Angelsen and Wunder 2003a,b, McSweeney 2004). The numerous safety net functions provided by natural resource products are outlined in Chapter 7, Section 7.1.

#### *Poverty trap*

The poorest and most marginalised people often have few assets and skills, except their own labour. This prevents them from seizing more profitable opportunities. They thus risk being trapped by their initial lack of assets (a function of many factors) in activities with low returns, such as the sale of natural resource products. This prevents them from accumulating what they need to escape poverty (Ashley *et al.* 2003). The resulting self-perpetuating cycle is what is often referred to as a 'poverty trap'. A question that is commonly asked is whether natural resource products under such a scenario function as a safety net or poverty trap (Angelsen and Wunder 2003a). This will be considered in this thesis.

#### *Poverty line*

The poverty line is one of the primary measures of income poverty and refers to the income required to achieve a minimum acceptable standard of living, or to meet minimum household consumption

requirements (i.e. basic needs), and may be expressed on a per person or per household basis (Hunter *et al.* 2003, World Bank 2004). There is much debate, which cannot be entered into here, about how to derive an appropriate poverty line (Landman *et al.* 2003, Meth and Dias 2004). The poverty line varies from country to country, with the Millennium Development Goals using US\$1 and US\$2 per person per day in 1993 Purchasing Power Parity terms as the minimum global standard (UNDP South Africa 2003, World Bank 2000b). Households can be said to have been 'lifted out of poverty' if their incomes climb above this pre-defined poverty line (Angelson and Wunder 2003a, Meth and Dias 2004). The poverty line for South Africa (R237 per month per adult equivalent – Carter and May 1999) is presented in Chapter 7 where it is used as a benchmark against which to compare incomes from trading.

### ***1.5.3 Natural resource products and NTFPs***

'Natural resource product' has been used in this study to refer to any raw or processed product that is produced from an indigenous or wild biological resource that is harvested for either domestic consumption or small-scale, informal trade. In some instances, the resource may be cultivated or sourced from modified or non-natural systems (e.g. irrigation canals), but cannot be regarded as a typical agricultural crop. The term non-timber forest product or NTFP can be given much the same definition, although it is usually applied to resources harvested from forest systems and purposely excludes commercial timber (de Beer and McDermott 1996, Belcher 2003). Recently, however, the use of NTFP has become so widespread, that it now often encompasses products from systems other than forests (Belcher 2003). Despite this broad use, natural resource product was preferred for this study to prevent any misunderstanding, given that some of the products are extracted from wetlands (e.g. reeds) and grasslands (e.g. broom grass and twigs). I do, however, use the term NTFP in the thesis when referring to the forest literature. Given that many of the definitions assigned to these types of products are overlapping, what is critical is that the types of resources being referred to and where these are sourced from are declared up front so that there is no opportunity for ambiguity and misinterpretation (Angelsen and Wunder 2003a, Belcher 2003).

### ***1.5.4 Local level or 'endogenous' trade in natural resource products***

This study is focused on the local level self-initiated, or endogenous, trade in natural resource products. This forms part of the so-called informal sector or, as is presently widely used in South Africa, the 'second economy' (Webster 2004). Without getting into too much detail, the informal sector can be defined to include all economic pursuits that operate outside of the formal economy, that are not registered by government or accounted for in the national accounts, that are unregulated and not protected by laws concerning minimum wages, safety, etc., and that are largely small-scale and with low barriers to entry (Preston-Whyte and Rogerson 1991, Terry 1999, Cunningham 2001). Some argue that the first and second economy, or alternatively the formal and informal sector, are interdependent and interconnected and, therefore, should not be separated into these dichotomous categories (Terry 1999). For the purposes of this thesis, the local level trade is taken to mean all informal trade in natural

resource products that has been initiated at a local level by producers themselves without external support, and that is mainly, but not exclusively, targeted at local markets.

## **1.6 STUDY DESIGN AND METHODS**

### ***1.6.1 Overall approach and selection of products***

This study is largely an applied enquiry drawing on multidisciplinary approaches that link ecological, social and economic understandings and systems. Building on the call for more comparative case studies as outlined above (Section 1.1.3), four natural resource commercialisation cases from one region/municipality, Bushbuckridge in Limpopo Province, South Africa, were selected to answer key questions and test underlying hypotheses (Section 1.3) regarding the contribution of trading to rural livelihoods. I chose to focus on one region, rather than select cases from across the country, so as to avoid dealing with differing social, economic, institutional and resource endowment contexts. The products, woodcraft (including carving and furniture manufacture), traditional hand brooms (both indoor grass and outdoor twig brooms), marula beer and reed mats, were chosen based on prior information regarding the extent of their trade in the region (C. Shackleton and S. Shackleton 1997, C. Shackleton and S. Shackleton 2000). All the trades were locally initiated and driven, receiving no external support except until recently in terms of woodcraft. Whilst I selected to work in the savanna biome, i.e. a forested system (see below), it was only during the course of the study that it was revealed that the raw material for some of the products, e.g. brooms and mats, was sourced from other types of ecosystems including farmlands, wooded grasslands and pure grasslands. In this sense, the products were not all strictly forest products or NTFPs and have, hence, rather been referred to as natural resource products (Section 1.5.3).

### ***1.6.2 Selection of the study area***

The area selected for this study was the Bushbuckridge municipality of Limpopo Province in the northeast of South Africa (Chapter 2, Figure 2.1). There were a number of reasons for selecting this site including:

- Limpopo Province is one of the poorest provinces in the country, but in most areas is still relatively well endowed with natural resources offering a variety of opportunities for commercialisation.
- Bushbuckridge lies within the savanna biome, and is typical of semi-arid woodland or dry forest (Chapter 2). I selected to work in a woodland area because: a) previous work identified this vegetation type as an important source of traded products (C. Shackleton and S. Shackleton 2000); b) the savanna biome constitutes the largest proportion of South Africa occupied by poor, rural communities; and c) there is literature on NTFPs and livelihoods from such areas, as well as more humid zones, with which I could compare and contrast my findings.
- Bushbuckridge is one of the most densely populated areas of the country (Chapter 2), with limited farming potential and few formal employment opportunities. This suggests that alternative income

generating options may be important. The evidence of growing commercialisation of natural resource products in this region supports this.

- There is good baseline information on natural resource use and management in the area on which to build, much of it collected by myself over a period of nine years.
- High-quality contextual data for Bushbuckridge exists, and I have a good working knowledge of the broader socio-economic and political processes operating in this area. This is crucial to analysing the drivers, outcomes and opportunities for local natural resource product commercialisation.

### ***1.6.3 Overview of case study methods***

#### *Overview*

A similar approach and methodology was used for each case study. To ensure that I collected all relevant data, I drew on the comprehensive guidelines developed by the Centre for International Forestry Research (CIFOR) for a large global project comparing NTFP commercialisation cases (Belcher and Ruiz-Pérez 2001, Ruiz-Pérez *et al.* 2004), as well as the ethnobotanical texts of Cunningham (2001) and Martin (2004). In addition, I incorporated further variables related to the livelihood strategies and portfolios of producer and trader households. I designed the case studies to explore the following main areas:

- the ‘types’ of individuals and households that engage in the trade, how, why and under what circumstances;
- the contribution of the trade to livelihoods through assessment of the financial and non-financial benefits of the trade in relation to other sources of income and livelihood;
- the history and growth of the trade and the factors influencing this;
- the characteristics of the trade or production-to-consumption system (see Chapter 8 for a definition), from harvesting to sales, for each product including barriers and constraints;
- the features of the natural resource base and its access, use and management that may influence the development and sustainability of the trade; and
- the opportunities for expansion of the sector including policy and development implications.

Data collection for each case was undertaken during a separate field trip coinciding with the main harvesting season for the particular product (with the exception of woodcraft where this did not apply). Both the marula beer and woodcraft case studies built on existing work, and hence were completed earlier than the traditional broom and mat cases. The woodcraft survey was undertaken in September 2000 with some follow-up discussions in January 2002; the marula beer survey in February/March 2002; the traditional broom survey in April/May 2003; and the reed mat survey in August/September 2003.

### *Data collection*

A combination of approaches was used in data collection. For each case, the different actors involved in the trade were identified and then interviewed, except where they resided outside of the Bushbuckridge municipality (as was the case for informal traders selling carvings). Depending on the structure of trade, producers were interviewed either at their homes or in the markets, while all traders were interviewed in the markets. Producers interviewed at home were found by tracing them through others who were either identified by my research assistant, or whom we met on the road or at the markets (especially pension markets). I also formed good working relationships with some producers who either organised group meetings for me or spent the day guiding me to others involved in the trade. Without this assistance, it would have been extremely difficult to trace producers. In terms of research ethics, the purpose of the study and the types of questions to be asked were discussed with each interviewee prior to commencing the interviews. After answering any queries, the interviewee's permission was then sought to continue with the interview. In the interests of confidentiality full names of respondents were not recorded, and any questions that they felt uncomfortable about answering were skipped (e.g. salaries of employed household members, collection of raw material when this was illegal). The interview schedule was designed to collect both quantitative and qualitative information on:

- the characteristics of producers/traders and their households (gender, age, education levels, sources of household income, total household income, etc.);
- producer/traders' reasons for entering the trade, when they entered and their previous occupations;
- raw material harvesting – sources of raw material, access to this, changes in availability, when harvested, frequency of harvesting, quantities harvested and costs involved;
- processing of the product – how, costs and quantities;
- marketing of the product – where, prices, costs and quantities;
- incomes and non-financial benefits of trading;
- perceptions of changes in the overall trade and producer/traders' individual businesses;
- positive and negative aspects of being involved in the trade; and
- the problems and constraints experienced by producers/traders in undertaking their trade.

Interviews took approximately one hour each and were conducted in the vernacular with the aid of an interpreter. Since I collected all my own data, I was able to enrich the questionnaire data with additional qualitative data by pursuing, through conversation, any interesting issues that emerged. It also provided the opportunity to probe and tease out some of the more difficult information to obtain (e.g. the number of harvesting trips in the season, or the number of products sold in a week or month – see below). Where producers had raw material in storage, I measured and weighed this based on the standard collection units (usually 'headload' sized bundles) using a tape and spring balance. This was necessary to allow conversion of local units (e.g. bundles, bags) into metric units at a later stage (Cunningham



2001). Details specific to individual products such as sampling approach, sample size, etc. are provided in the methods section of the case study chapters (Chapters 3-6).

In addition to the formal interviews, I conducted in-depth life histories with selected individuals who were particularly successful in their trades. Key informant interviews with other stakeholders in the trade, for example, traditional authorities, landowners, key players further up the market chain, final consumers, local NGOs and conservation officers were also undertaken. Secondary sources were consulted regarding the ecological characteristics of the species concerned, general socio-economic features of the area, the policy and legislative environment, and relevant macro-economic issues. This multi-method approach was necessary to attain the required insights, depth and contextual setting for each of the case studies (Cunningham 2001, Martin 2004).

#### *Data analysis*

All quantitative data were captured in Excel spreadsheets and summarised using basic descriptive statistics and frequencies. Data recorded in binary format (i.e. whether the household had a pension or not) were expressed as a percentage of the total number of interviews for that product. To allow for comparative analysis, data relating to the quantities of product harvested and sold, and incomes earned were converted to annual figures. The details of how this was done for the different products appear in the case study chapters (Chapters 3-6). The gross returns from trading were obtained by multiplying the amount of the product sold by the mean price obtained from the markets and interviews, and adjusted for seasonality. All costs excluding 'own' labour were then subtracted to obtain net income, or, in other words, the cash returns or profit accruing to the household. The household was used as the basic unit of analysis for all livelihood related investigation. All data were tested for normality prior to applying any statistical tests. Due to high variability, most data were not normally distributed requiring the use of non-parametric tests. Three statistics programmes, STATISTICA, MVSP and SPSS, were used for statistical analysis. Specific statistical tests performed for different cases studies are presented in the case study chapters. For ease of reporting and due to the fact that most data were estimates (see Section 1.6.5), percentages and larger numbers were rounded to the nearest whole number. This rounding sometimes resulted in total percentages adding up to just over 100%. In all cases, I attempted to highlight the variation that existed in the data by presenting frequency distributions as well as the range of values across variables.

#### ***1.6.4 Integrative analysis***

Following the completion of the individual case studies, the findings from these were integrated and compared with the aim of developing overlying conceptual understandings and frameworks relating back to the study questions and hypotheses. This entailed a) combining and reworking the data to allow for statistical comparison and exploratory 'pattern seeking' multivariate analysis (Chapter 7), and b) descriptive comparison and interpretation of the results in relation to existing theory and discourse

(Chapter 8 and 9). Attention was paid to both capturing and highlighting the inherent variation and complexity within and between cases, while at the same time drawing out any commonalities, recurring themes and ‘universal’ lessons and principles (see the discussion in Chapter 9 on the issue of “fuzzy generalisation” as the situation is seldom clear-cut enough to make definitive statements).

### ***1.6.5 Limitations and assumptions***

Many of the key variables measured for this thesis, e.g. quantity of raw material harvested or number of products sold, were based on interviewees’ recall and estimations rather than direct measurement. Such data are, thus, never completely accurate, being dependent on the honesty, cooperation and recall ability of respondents (Martin 2004). However, good research practice can help to minimise inaccuracy. Undertaking the surveys during the harvesting and selling season, as was done for this thesis, can help to improve the accuracy of the data by reducing the recall period. ‘Guesses’ by respondents can be avoided if questions are broken down into manageable, meaningful and easily recalled components. For example, instead of asking respondents how much raw material they collect in a season, it is better to ask how often they collect (i.e. is it once per week, once per month, etc.), how much they collect each collecting trip (in the local collecting unit), and the duration of the season (Martin 2004). From this the total quantity harvested in the season can be calculated. I used such an approach in this study for quantifying harvesting, production, sales and incomes. Large sample sizes, as used in this study, also help to increase confidence in the data.

Cautions regarding household income data need further discussion. Income data, in particular total household income, are notoriously difficult to obtain. In this study, I collected data on cash income rather than total income partly because it is a long process to obtain ‘in kind’ household income contributions, and partly because many households in South Africa are almost completely dependent on the cash economy, with the income from auto-consumption only being a small proportion of the total (see Chapter 2). Questions that relate to cash income are private, sensitive and may produce unreliable responses (Martin 2004). This can be overcome to some extent by careful, indirect questioning around the range of income sources households draw on. For example, I asked respondents whether their households received pensions, child grants, or other state grants (all fixed amounts per month), and whether they had formally or self-employed household members. The occupations of these members were noted, as well as whether they contributed some or all of their earnings to the household. This can be used to crosscheck and probe the actual figures offered, and to deduce contributions when respondents are unwilling to share these. In general people seem more willing to share ‘money contributed’ than salaries. The low levels of employment found in this study meant that total cash household income was based mainly on known amounts (pensions, etc.) and the estimates of producers’ earnings from trading, increasing the reliability of these data.

Just as total cash household income is difficult to obtain so is the income earned from trading, especially in a once-off survey and where trading is part-time and *ad hoc* and varies widely from week-to-week or month-to-month. Most producers/traders have little idea of what they earn, spending their earnings as soon as these are received. Few keep any records of income and expenditure. Thus, only the actual monitoring of sales over a predetermined time period will provide truly accurate data (Martin 2004). For this reason, some researchers prefer not to measure income at all (e.g. Townson 1995). Income data are, however, essential when studying livelihood and poverty impacts. In this study income was calculated mainly from people's recall of their sales over an appropriate time period and the price of the product. Often careful probing and discussion was required to affirm figures. Where possible, I triangulated using different methods (Cunningham 2001, Martin 2004). For example for brooms, annual income was calculated in three separate ways based on a) the numbers of brooms sold per week extrapolated up for the season, b) the amount of raw material harvested in the season and the number of brooms that could be made from this, and c) producers' own estimates of their monthly earnings from sales. All income data were also cross-checked against other related information such as the most important source of income for the household, and whether interviewees viewed their income from trading as very important, important, slightly important or not important for their households.

It is necessary to note that as some respondents were unable to supply certain data, the sample size or value of 'n' was not constant across every variable for each case study. In particular, several individual cases had to be dropped due to missing data for those variables related to production and income, resulting in reduced sample sizes. While this was not a problem for any of the datasets, with the possible exception of woodcraft (Chapter 6, Section 6.2), it highlights the importance of having a large sample size to begin with. The 'n' values for all variables are reflected in the tables in the results sections. The exclusion of cases due to missing or invalid data, as well as the high variability in the data, also meant that the figures obtained for higher order, calculated variables (i.e. those derived from a number of component variables – see above) such as annual net income differed slightly according to whether they were calculated based on the original data or by using the means for each component variable. Thus, for example, mean net annual income calculated from the data on a case-by-case basis was not identical to mean net income obtained by subtracting mean costs from mean gross income. In this study, all variables were calculated on a case-by-case basis allowing for a measure of variation around the mean, with the exception of a few variables related to harvesting presented in the marula beer case study (Chapter 5, Section 5.2).

**CHAPTER 2**

**SOUTH AFRICAN CONTEXT AND GEOGRAPHIC SETTING OF CASE STUDIES**

**2.1 POVERTY AND RURAL LIVELIHOODS IN SOUTH AFRICA**

***2.1.1 Poverty profile and context***

Although South Africa is ranked as a middle-income country, the majority of households in South Africa, especially those in rural areas, live in abject poverty. Inequality in South Africa is one of the highest in the world (Gini coefficient score = 0.6), with this growing as the gap between the rich and the poor continues to widen (Hunter *et al.* 2003, Landman *et al.* 2003). It has been shown that some 6% of South Africa's population, mainly urban and white, captures more than 40% of income (Woolard and Leibbrandt 2001). Furthermore, the country's per capita GDP of US\$9 401 per annum places it as one of the 50 wealthiest nations in the world, while the "strikingly poor social indicators of the country result in South Africa being ranked 107<sup>th</sup> out of 173 countries in terms of its Human Development Index (HDI) in 2001 – down on its ranking of 93<sup>rd</sup> in 1992" (Hunter *et al.* 2003). The most recent HDI value for South Africa is 0.68 (UNDP South Africa 2003). The decrease in the HDI has been strongly influenced by a decrease in life expectancy due to HIV/AIDS (Section 2.1.3).

As a consequence of this inequality, South Africa's poverty profile is comparable to that of many poorer countries. Woolard and Leibbrandt (2001) suggest that some 40-50% of South Africans can be classified as poor. Within this, significant racial and spatial differences are found. Poverty tends to be worst amongst the black population, in particular those living in rural areas (a direct consequence of South Africa's history – see below). Some 72% of South Africa's poor live in the rural parts of the country (Carter and May 1999), while 70% of rural households can be classified as poor (Government of South Africa 2000), and 18-24% as chronically poor<sup>2</sup> (Aliber 2003). These poor households are mainly concentrated in the previous Bantustans or homelands<sup>3</sup> – areas that were systematically underdeveloped and neglected during the apartheid era. These areas are characterised by a relative scarcity of formal sector employment; poor health, water, sanitation and communication services; a lack of infrastructure; land scarcity; and relatively low levels of education. For example 22% of rural

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<sup>2</sup> The 'chronically poor' are "those who are most likely to remain in poverty in the absence of outside assistance, but are also those who are likely to be the most difficult to assist" (Aliber 2003). They are the people who remain in poverty (trapped) year after year.

<sup>3</sup> The Bantustans or homelands, constituting only 13% of the surface area of South Africa, were created as labour reserves legitimated by a complex of apartheid ideals and policies that emphasised the importance of separate development. They were the only areas where black people could access land, which was held in "trust" by the state and administered through the tribal authorities. In the early 1990s, all homelands were reincorporated into South Africa.

households lack secure access to the basic services of piped water, housing and energy, and over one million households lack access to arable land (Statistics South Africa 2004).

The relative lack of availability of agricultural land is one feature that distinguishes South Africa from rural areas elsewhere on the continent and globally (Marcus 2000, Bryceson 2002). While farming and home gardening may be an important dimension of rural households' livelihoods, it is rarely a source of cash income. The creation of the homelands as reserves of labour, coupled with significant land alienation, forced many rural black households out of agricultural commodity production (Bryceson 2002). Today, crops are grown mainly for home consumption, with a lack of suitable land limiting this activity largely to home gardens or small scale plots in most areas. In light of this, Marcus (2000) argues that efforts to address rural poverty in South Africa need to move away from the current and traditional focus on agriculture and 'emerging commercial farmers' to consider other options of non-agricultural activity and self-employment including craft production.

Since the democratic transition in 1994 the South African government has been under considerable pressure to act speedily on improving the welfare of the rural poor. However, to date, although service delivery to rural areas has improved, unemployment and poverty continue to grow (Meth and Dias 2004). There are now many more people (about two million more) in the bottom expenditure category than there were in 1999 (Meth and Dias 2004). This situation has been exacerbated by the HIV/AIDS pandemic, the impacts of which have begun to manifest in the last few years (see below), significantly increasing the vulnerability of rural households (Aliber 2003). Female-headed households and those impacted by HIV/AIDS (these often being one and the same) are considered amongst the most vulnerable in the country (Aliber 2003). Other categories of people and households vulnerable to poverty, and more particularly chronic poverty, include the rural landless (land is an important safety net preventing destitution although it seldom allows households to escape poverty); people with disabilities; the elderly; retrenched farm workers (especially those evicted from farms resulting in a loss of social networks); and cross-border migrants.

### ***2.1.2 Growing unemployment***

While many factors may contribute to poverty, Aliber (2003) contends that unemployment is of overriding importance as a major cause of poverty in South Africa. It has been argued that while measures such as public work programmes, anti-poverty support programmes and social safety-net arrangements may assist the poor, especially the chronically poor, these cannot replace the need for an expanding labour market and job creation (Aliber 2003, Landman *et al.* 2003). Indeed, Natrass (2004) writes about the current unemployment situation in South Africa as "a socio-economic crisis of major proportions".

Unemployment levels in South Africa are amongst the highest in the world (Kingdon and Knight 2001). In 1998, unemployment was officially measured as 39% on the broad definition and 26% on the narrow definition across the entire economically active population<sup>4</sup> (Statistics SA 2000). By 2003, these proportions had increased to 42% and 31% respectively (Gelb 2003) (Table 2.1 provides a more detailed breakdown of these employment-unemployment figures). A significant bias exists in terms of who is employed. Amongst blacks and coloureds (and thus the poorer sector), unemployment lies between 45-47% compared to 10% for whites based on the broad definition<sup>4</sup> (Aliber 2003, Gelb 2003). In recent years, unemployment has reached record levels, almost doubling between 1995 and 2002 (Meth and Dias 2004) (Table 2.2). Recent data shows that some 4.7 million people cannot find work (Nattrass 2004). As the largest proportion of the unemployed (52% – Gelb 2003) fall into the poorest categories of society, the lack of employment opportunity is resulting in rising levels of poverty (Aliber 2003, CPRC 2004, Meth and Dias 2004, see above). For example, unemployment amongst women tends to be greater than among men by one-fifth, and is higher in rural than urban areas. This has resulted in a poverty rate amongst female-headed households of over 60%; double that of male-headed households (Gelb 2003). Furthermore, the proportion of unemployed working age individuals amongst households living below the poverty line is almost double the national average (Lewis *et al.* 2003).

Table 2.1: Employment and unemployment amongst the South African working age population in 2003; informal self-employment engaged by household members on a mainly part-time basis is excluded

	Number in '000	% of working age population	% of economically active population
Total population age 15-65 years	29555	100.0	n/a
Employed in the formal sector	8223	27.8	41.3
Employed in the informal sector and domestic service	3270	11.1	16.4
Unemployed (narrow definition)	5250	17.8	31.2
Unemployed (broad definition)	8421	28.5	42.1
Totally economically active (broad)	19914	67.6	100.0
Not economically active (broad)	9569	32.4	n/a

Source: Statistics South Africa (2003) as reported in Gelb (2003)

Table 2.2: Growth in the unemployment rates in South Africa, 1993 – 2002

Year	Source	Broad definition	Narrow definition
Sept 1993	SALDRU, University of Cape Town	31.2	13.0
October 1994	October Household Survey, Statistics SA	31.5	20.0
October 1996	October Household Survey, Statistics SA	35.6	21.0
October 1998	October Household Survey, Statistics SA	38.6	26.1
Sept 2000	Labour Force Survey, Statistics SA	36.9	25.8
Sept 2002	Labour Force Survey, Statistics SA	41.8	30.5

Source: Kingdon and Knight (2001)

<sup>4</sup> Narrow definition = when a person is unemployed and he/she has actively sought work in the last four weeks; broad definition = when a person is unemployed and wants to be employed but has not sought work in recent weeks.

In addition to the lack of job creation, a major factor increasing the numbers of unemployed people in rural areas has been retrenchment and the downsizing of labour forces in certain sectors. Both the mining industry and the commercial farming sector, in particular, have shed considerable jobs in recent years (as many as two million over the last decade), with many residents of the study area being previously employed in these sectors (Pollard *et al.* 1998, Sitas 2001, Philip 2002, S. Barton, Mine Workers Development Agency, pers. comm.).

### **2.1.3 The HIV/AIDS context**

It was estimated in 2002 that 11.4% of South Africa's population was HIV-positive (HSRC 2002). As of 2003 this had increased to 14% (over five and a half million people) (Nattrass 2004). Along with other southern African countries, this prevalence rate is one of the highest in the world. To date some 370 000 people have died of AIDS in South Africa (Sunday Times 2004). The number of AIDS orphans in the country was estimated at approximately 660 000 in 2001 (Gelb 2003) and is increasing. The Metropolitan Life model predicts that by 2005 there will be 920 000 AIDS orphans in South Africa and by 2010 there will be approximately two million (reported in Aliber 2003). This increase in AIDS orphans places a considerable burden on affected households, especially those headed by grandparents or young adults. It is not uncommon to find elderly grandmothers looking after young grandchildren whose parents have died of AIDS (so called 'granny' households – an extremely vulnerable group). In addition to the care of AIDS orphans, the presence of an AIDS sufferer in the household places a substantial toll on household resources, often over fairly prolonged periods. Not only is income lost, if the household member had been employed, but expenditure increases particularly on medical care and funerals (Aliber 2003, UNDP South Africa 2003). In turn, this often results in a curbing of spending on other needs. For example, in a study of 700 South African households affected by HIV/AIDS, more than half had insufficient food to keep starvation at bay (UNDP South Africa 2003). The need to care for an ill household member also limits the choices of occupation that other household members can pursue, and may limit labour availability within the household for productive activities such as crop cultivation. Household assets may also be sold off for cash income making it more difficult for households to recover from this set back (UNDP South Africa 2003). In addition, the disease has numerous social consequences. It impacts on household size, composition and dynamics leading to the expansion or contraction of households, and more elderly or younger households (Marcus 2000). In this process of reorganisation, important social networks and relations may be eroded or even destroyed (Marcus 2000, UNDP South Africa 2003).

HIV/AIDS thus contributes to a rise in poverty, driving poor households deeper into poverty as well as creating new poverty (UNDP South Africa 2003). Indeed, the HIV/AIDS pandemic has been identified as the major factor that has moved South Africa backwards in terms of a number of development indices (UNDP South Africa 2003). Aliber (2003) estimated that AIDS may contribute to a chronic

impoverishment of 26-33% more households than would be the case in the absence of the pandemic. This would increase the total share of chronically poor households in South Africa to 24-30%.

#### ***2.1.4 The nature of rural livelihoods in South Africa***

##### *Diversification and the increasing importance of the informal sector*

Given the above situation, rural (and urban) livelihoods in South Africa are becoming increasingly complex, dynamic and diverse (Wolmer and Scoones 2003). Most households rely on a mix of in-kind (subsistence) inputs, a variety of cash income sources, and on their social networks to meet their livelihood requirements. The typical rural livelihood portfolio consists of varying combinations of local wage employment, remittances, social grants (especially pensions and child grants), petty trading, micro-enterprise activities (making bricks, selling natural resource products, sewing, building, etc.), subsistence agricultural production, livestock rearing, natural resource gathering and transfers between households (S. Shackleton *et al.* 2000a,b). These livelihood portfolios, like rural people themselves, are differentiated by social identity, with some households being more diverse or well off than others as influenced by a myriad of factors including age, gender, education, location, access to assets, political affiliations, etc. (Kepe 1997). Some of the poorest and most marginalised households may have few sources of cash income at all. It has been reported that 5% of households in South Africa earn no cash income whatsoever (although they may receive transfers and gifts from kin and neighbours), while 12% rely entirely on social grants, and 26% on remittances from urban areas (Government of South Africa 2000).

The contribution and value of in-kind household contributions and low key (sometimes illegal) income generating activities are rarely captured and reported in large, formal household surveys, and hence are often underestimated and under-appreciated (Cavendish 2000, S. Shackleton *et al.* 2000a, Toulmin *et al.* 2000). However, there is growing evidence that informal income generating activities appear to be increasing in importance in South Africa especially amongst those households with few alternative sources of income (Marcus 2000, Kepe 2002, Philip 2002, SLSA Team 2003, Webster 2004). Mirroring trends elsewhere (e.g. Carswell 2000, Toulmin *et al.* 2000, Campbell *et al.* 2002), it is becoming increasingly common to find the integration of numerous forms of self-employment into the livelihood portfolio, with the expansion in local level natural resource trading being a key strategy in many rural areas (Kepe 2002, Cocks and Dold 2004b). For example, data from numerous studies to date suggest that approximately 8% (ranging from 3% to 14%) of the rural population in the savanna areas of the country sell at least one natural resource product on either an *ad hoc* or more regular basis [based on data obtained from C. Shackleton *et al.* (1999a, 2001), Dovie (2001), Magasela *et al.* (2001), and Twine *et al.* (2003)]. In the thicket biome in the Eastern Cape, about 9% of households were found to sell at least one natural resource product at some stage in the year (M. Cocks, Rhodes University, pers. comm.). The adoption of this livelihood strategy is a response to the economic hardships and increasing vulnerabilities outlined above, as well as the fact that migration to urban areas is no longer a practical



option as it is likely to sink people into deeper poverty and expose them to further risk (e.g. crime, loss of social networks) (B. Cousins, PLAAS, pers. comm.).

#### *Importance of state grants and pension markets*

It is not possible to talk about rural livelihoods in South Africa without making some reference to the state-sponsored social security systems found in the country, particularly the provision of non-contributory old age pensions. This welfare safety net is a key feature contrasting South Africa with many of its neighbours and other developing countries. Poor South Africans from all social backgrounds have had access to a means-tested state pension for over half a century (Møller and Ferreira 2003), although parity in the amounts received was only achieved just before the democratic transition in 1993. Pensions reach some 1.9 million elderly people annually (Møller and Ferreira 2003), with the eligibility age being 60 years for women and 65 years for men. In 2003, when the data for this study were analysed, an old age pension was worth R700 per month, comparable to the minimum wage rate. Most pension benefits are shared within households, significantly reducing the probability that households with a pensioner will be living in abject poverty (Møller and Ferreira 2003). Indeed, pensions are often identified as the most important source of cash income for households. Along with meeting basic needs, cash from pensions is also often used to support informal income generating activities such as mat making and petty trading (Chapters 3 and 4).

These grants not only provide the household with income, but they also play an important role in stimulating the local economy and providing an opportunity for informal sector activity. Indeed, this role has increased in importance as the amount of cash circulating from wages and remittances has declined. Pension markets – the informal markets that spring up around the mobile pension payout points – provide an opportunity for entrepreneurs, petty traders and producers of a range of local products to sell their wares. In a typical pension market it is possible to find traders selling clothes, locally produced and bulk purchased food, meat, hardware, blankets and other linen, snacks, ice cream, drinks, home baked confectionaries, and a range of natural resource products in both raw and processed form (see Chapters 3 and 4). Some entrepreneurs make their entire living by following the pension markets around an area for up to 25 days a month, while others only participate in those markets closest to their home villages. A number of vehicle owners have made a lucrative business from transporting traders and pensioners to and from, and between, these markets. Pension markets are crucial for the natural resource trades described in this thesis (Chapters 3, 4 and 5).

Other important social grants include means-tested disability grants and child grants. The disability grant targets persons of 18 years or older who are medically certified as disabled (Møller and Ferreira 2003). The grant is now also available to ‘full-blown’ AIDS sufferers (Nattrass 2004), and as a result is increasing in importance. For disabled children, a care dependency grant may be obtained if the child needs special care at home. This also now extends to the care of children with AIDS (Nattrass 2004).

Child support grants are general grants to assist the poorest households support young children. This grant was only instituted in the mid-1990s, and is paid to the primary care giver of children under seven years of age (Møller and Ferreira 2003). These grants amounted to R150 per month per child in 2003 – a marginal sum – but nevertheless often an important source of cash for very impoverished households, in particular those headed by women, as was found in this study.

## **2.2 STUDY AREA DESCRIPTION**

The information provided in this section is drawn mainly from the following sources: Infraplan (1989), S. Shackleton *et al.* (1995), Tollman *et al.* (1995), Pollard *et al.* (1998), the Municipal Demarcation Board (2004), and the Statistics South Africa (2004).

### ***2.2.1 Location and land use***

The Bushbuckridge municipality (30° 30' - 31° 35' E; 24° 30' - 25° 0' S), corresponding to the Mhala and Mapulaneng areas of the former Gazankulu and Lebowa homelands, lies in the southern portion of Limpopo Province (Figure 2.1). It is bounded by the Orpen road to Kruger National Park (KNP) in the north, the Sabie River in the south, the Drakensberg escarpment in the west, and the westernmost boundaries of KNP and Sabie-Sand Game Reserve in the east (Figure 2.1). The total area covered by Bushbuckridge is 2 417 km<sup>2</sup>. Approximately 23.7% of this is under state-owned plantation forestry and conservation and is inaccessible to local residents. This leaves an area of 1 843 km<sup>2</sup>, of which 84.9% is designated as communal grazing land (about 1564 km<sup>2</sup>), 8.7% is rain-fed crop production, 2.9% is irrigated agriculture and 3.5% is residential (Till 1996). The communal grazing lands (which are mainly wooded – see below) form, by far, the largest area and land use. These are a key source of natural resource products used for both everyday needs (e.g. fuelwood, food, building materials, medicines and inputs into agriculture) and to produce commodities for sale in the markets (e.g. thatch grass, reeds, marula fruit and carving wood) (C. Shackleton and S. Shackleton 2000).

The wider region is an important tourist destination because of its proximity to the Kruger National Park, numerous private game farms, and the scenic areas and towns of the Drakensberg mountain range. This has been a crucial factor in the development of the carving industry, and has positioned producers and traders well for tapping into the tourism industry.

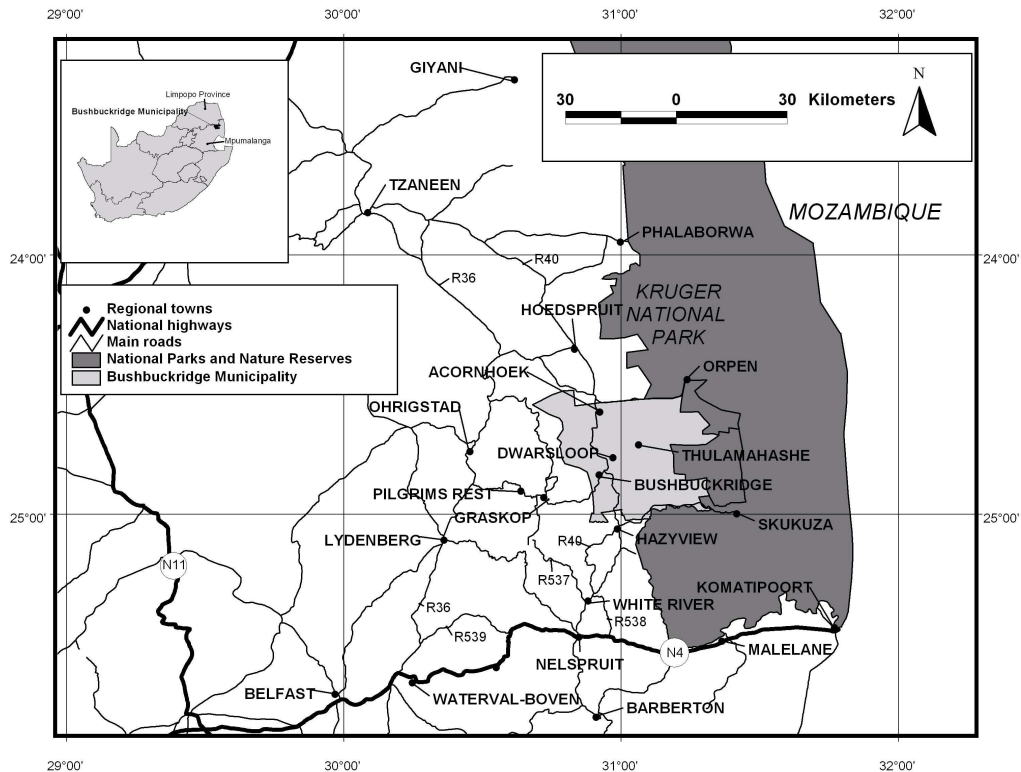


Figure 2.1: Location of the Bushbuckridge local municipality

### 2.2.2 Biophysical characteristics

#### *Climate, soils and agricultural risk*

Bushbuckridge is a semi-arid, summer-rainfall region with a warm to hot sub-tropical climate. Within the area, climatic conditions are strongly influenced by topography. Paralleling the topographical gradient from the Drakensburg escarpment (foothills = 900 m.a.s.l.) in the west across to the eastern boundary (about 400 m.a.s.l.) is a corresponding gradient in climate. Annual rainfall ranges from 1 200 mm against the escarpment to 500 mm in the eastern lowlands close to the Mozambique border. Approximately 50% of the area receives less than 650 mm p.a. Temperatures are high, increasing from west to east. Mean annual temperature is approximately 22°C. Average daily maxima are about 30°C in mid-summer and 23°C in mid-winter, while the corresponding minimum temperatures are 18°C and 8°C respectively (Pollard *et al.* 1998).

Broadly classified, the soils are mainly Cambisols and Regosols. These range in form according to local topography and geology, following the typical catena sequence of soils and vegetation found in many semi-arid savanna systems (C. Shackleton 1997, Pollard *et al.* 1998). On ridge tops, the soils tend to be shallow, sandy and nutrient poor, whilst in the bottomlands they are relatively deeper, clayey and nutrient rich. Overall, the soils in the moister west are generally deep and well drained with apedal subsoil horizons. These give way to much shallower, dystrophic soils in the east.

Low and erratic rainfall and frequent intra- and inter-seasonal droughts (approximately once every three to four years) coupled with high evapo-transpiration rates, shallow, nutrient poor soils, a lack of perennial water supplies and land scarcity severely limit arable production, forcing most of the population to seek alternative means of livelihood. Even when cultivation is possible, crop failure is a common occurrence (S. Shackleton *et al.* 1995). One area that is less risky for crop production is the band of villages that are situated along the base of the mountains, where the cultivation of ‘wetland’ gardens is common practice (Chapter 3). Livestock production is similarly subjected to the variability in climate, with the number of animals in the area fluctuating widely with drought events. After the last major drought in 1991/1992 cattle numbers decreased by over 70% (C. Shackleton *et al.* 1999b). The last two years have also seen large losses of livestock (pers. obs.). Livestock rearing is not a common activity in the area with only 24% of households owning cattle and 32% goats (C. Shackleton *et al.* 1999b).

### *Vegetation*

The natural vegetation is woodland or semi-arid savanna (Subtropical Dry Forest according to the Holdridge Life Zone system) (S. Shackleton *et al.* 1995) characterised by Acocks’ Veldtypes 9 and 10: Lowveld Sour Bushveld and Lowveld respectively (Acocks 1988). The corresponding vegetation types according to the classification system used by Low and Rebelo (1996) are Mixed Lowveld Bushveld (Type 19) and Sweet Lowveld Bushveld (Type 20). Dominant tree species include various *Combretum* species, *Acacia* species and *Terminalia sericea*. Other common species are *Sclerocarya birrea*, *Pterocarpus angolensis*, *Peltophorum africanum*, *Dichrostachys cinerea* and *Euclea divinorum* (Acocks 1988). Superimposed on these broad vegetation types are micro-level changes in vegetation according to the catenal sequence mentioned above. Low lying sites are characterised by microphyllous thorny species (*Acacia* species) while broad-leafed species dominate the ridge tops (*Combretum* species) (C. Shackleton 1997). The grass stratum is composed mainly of ‘sweet grasses’ such as *Bothriochloa insculpta*, *Hypparrhnia* sp., *Panicum maximum* and *Themeda triandra* (Acocks 1988).

### **2.2.3 Socio-economic characteristics**

The situation in Bushbuckridge is typical of most rural, communal areas in South Africa with the broad socio-economic context being very similar to that described in Section 2.1.

### *Population, livelihoods and employment*

Projections from a detailed demographic study estimate the population of Bushbuckridge to be about 660 000 (Tollman *et al.* 1995) – considered to be more accurate than the census figure of about 550 000 people (Municipal Demarcation Board 2004). Population densities are high, one of the highest in South Africa and the southern African region, at approximately 150 people km<sup>-2</sup> in the east and 300 people km<sup>-2</sup> in the wetter west. Annual population growth rate is about 2.4%. Average household size is 6.2

people (Tollman *et al.* 1995). There are an estimated 112 125 households in the area (Municipal Demarcation Board 2004) distributed over 65 settlements.

Unemployment runs between 40-80% (Pollard *et al.* 1998), with the average for the area being 63% (Statistics South Africa 2004). There is a heavy reliance on the cash economy and on state grants, mainly old age pensions. Approximately 50% of the adult male population and 14% of women engage in migrant labour (Pollard *et al.* 1998). Average household incomes range from R178 to R1131 per month (Pollard *et al.* 1998), with a mean of R850 per month obtained from the latest census data (Municipal Demarcation Board 2004). This puts most households below the poverty line of R237 or R352 per adult equivalent reported by Carter and May (1999) and Aliber (2003), and the more recent 2003 Minimum Living Level (MLL) of R1 871 for a household of 4.7 people (Bureau of Market Research 2003). Census data from 1996 indicated that some 62% of the population had annual household incomes of less than R6 000, or R500 per month, while 23% reported no income whatsoever (Municipal Demarcation Board 2004). More recent figures showed that some 40% of households reported no household income at all in 2001 (Statistics South Africa 2004). It is these profiles that make Limpopo Province, along with the Eastern Cape, one of the poorest provinces in the country (Gelb 2003). Education levels are generally low with over half of the population over five years of age having either no education (33%) or only a primary education (32%) (Municipal Demarcation Board 2004). Amongst people over 20 years old, some 40% had no education at all (Statistics South Africa 2004). Only 2% of the Bushbuckridge population has a tertiary education qualification.

#### *Infrastructure and markets*

Infrastructure and services are poor, although water, sanitation, electricity supply and road infrastructure have improved since the democratic transition in 1994. There are approximately 125 km of tarred roads within the study area, along with several hundred kilometres of good quality gravel roads. Bulk water supplies are available to most villages, but few households have private connections and supply is often irregular. It is not unusual to see long queues of women waiting for water at communal taps. National grid electricity is available to villages and peri-urban 'townships' serving approximately half the population. Electrification of the area has been of great benefit to woodcrafters and others engaged in self-employment. However, even with electrification the majority of the population still relies on fuelwood as their primary energy source (Madubansi 2003). Telecommunications were poor until recently. Cellular telephone coverage is now available throughout most of the area. Many people, including a number of the producers interviewed, own cellular telephones that they operate on a pre-paid basis.

In terms of markets, Bushbuckridge is not close to any major towns (Figure 2.1). The closest large centre is Nelspruit, which is over 150 km away. Hazyview, near to the southern boundary of Bushbuckridge, is a bustling commercial centre but serves both Bushbuckridge and the neighbouring

communal area of former Kangwane, which is closer by. This creates stiff competition in the informal markets. Consequently, most people in Bushbuckridge involved in informal trading concentrate on the main business centres in the area namely Acornhoek, Bushbuckridge, Dwarsloop and Thulamahashe (Figure 2.1) and/or pension markets, of which there are about 80 in total across the area between the 1<sup>st</sup> and 25<sup>th</sup> of each month (see Section 2.1.4).

### *Institutions and governance*

There are two parallel forms of local government in the study area – the traditional authorities and the democratic local government structures constituted after the political transition in 1994. In addition to these, regional offices of central or provincial government deal with issues relating to water, agriculture, health and conservation.

There are 13 tribal authorities or chiefs in the municipality, with each village having a headman. Headmen and chiefs are responsible for the day-to-day running of villages including issues relating to natural resource use, culture, land allocation, customary law and disputes between neighbours. The credibility, legitimacy and authority of these traditional leaders is influenced by perceptions of how they aligned during the ‘struggle’ era, and the individual personality and effectiveness of the chief and his councillors. In general, it appears that in most parts of the country these structures do not command the same respect that they did in the past (Keulder 1998, S. Shackleton 2000). The tribal authorities do have staff and ‘police’ or rangers, but these numbers have been depleted due to reduced funding allocations from central government (Pollard *et al.* 1998). The traditional authorities have no jurisdiction in the towns in Bushbuckridge where freehold title applies.

In terms of local government, Bushbuckridge falls under the Bohlabela district municipality and the Bushbuckridge local municipality (Municipal Demarcation Board 2004). The municipality consists of 34 wards and has 68 elected councillors. Local government is primarily responsible for development planning, the delivery of basic services, social and economic development, and the promotion of a safe and healthy environment (Government of South Africa 1996). All municipalities have an ‘Integrated Development Plan’ (IDP), which guides their activities in their area of jurisdiction. Although ‘the environment’ is mentioned in these plans, local government seldom plays an active role in natural resource management issues. Indeed, in many areas of Bushbuckridge, a lack of clarity still exists regarding the precise functions, powers and jurisdictions of the traditional authorities versus local government. As a result institutional gaps exist, particularly with regard to natural resource management and land access and allocation (Pollard *et al.* 1998, Chapter 3).

In addition to these formal governance structures are a host of other structures and committees at village and higher levels, often linked to specific sectors. Some of these local structures were initiated by government (e.g. water committees, water boards), while others were the result of interventions by

NGOs (e.g. women's groups, marula committees), parastatal organisations (e.g. electricity committees), the tribal authority, or local government (e.g. village development committees). Some represent truly community-based initiatives (e.g. burial societies, stokvels – or savings clubs). The type, functioning and effectiveness of these committees vary from village to village.

At a provincial level, Bushbuckridge was (and to some extent still is) a disputed area in terms of provincial boundaries causing political problems and a lack of government commitment. The uncontrolled pillage of the prime carving wood *Pterocarpus angolensis* from Bushbuckridge Nature Reserve (Chapter 6) has been but one of the repercussions following confusion regarding the division of responsibilities between the Limpopo and Mpumalanga provincial authorities.

## CHAPTER 3

## THE TRADE IN TRADITIONAL GRASS AND TWIG BROOMS

## 3.1 INTRODUCTION

Traditional handcrafted brooms are widely used by rural and to a lesser extent urban households throughout South Africa (C. Shackleton *et al.* 2001, S. Shackleton *et al.* 2002a, Malepe 2003, Cocks and Dold 2004a, Gyan and Shackleton in press). Two main types of brooms can be distinguished: ‘soft’ brooms generally made from grass or palm leaves which are used for sweeping indoors, and ‘hard’ brooms made from twigs or Cape reeds (*Restionaceae*) for outdoor use. Most traditional brooms are short ‘hand-held’ sweepers, although in the Eastern Cape long-handled brooms are also common (Cocks and Dold 2004a). A wide range of species are used as raw material in different parts of the country (Table 3.1), although specific qualities are required and producers will often travel considerable distances to obtain favoured species.

Table 3.1: Species used in broom manufacture in South Africa

Broom type	Species	Growth form	Reference
Indoor	<i>Tristachya rehmannii</i>	Grass	Malepe (2002)
	<i>Cymbopogon validus</i>	Grass	Cocks and Dold (2004a)
	<i>Hyphaene petersiana</i>	Ilala palm	S. Shackleton <i>et al.</i> (2002a)
	<i>Phoenix reclinata</i>	Palm	Gyan and Shackleton in press
	<i>Festuca costata</i>	Grass	This study, Mbewe (1999)
	<i>Aristida junciformis</i>	Grass	This study, van Wyk and Gericke (2000)
	<i>Typha capensis</i>	Bulrush	van Wyk and Gericke (2000)
Outdoor	<i>Athrixia phylloides</i>	Shrub	This study
	<i>Athrixia elata</i>	Shrub	Mokoena (undated)
	<i>Vernonia poskeana</i>	Shrub	This study
	<i>Helichrysum spp.</i>	Small shrub	This study
	Restios (a variety of species)	‘Cape reed’	van Wyk and Gericke (2000)

Brooms are amongst the most widely traded natural resource products used by rural households, with most households purchasing these items rather than making their own (Table 3.2). In Bushbuckridge, for instance, almost all households using traditional brooms (over 80% - Table 3.2) purchased these from vendors (Dovie *et al.* 2002). Brooms are, thus, commonly seen in both rural and urban informal markets across the country. In Bushbuckridge, most informal vendors in business centre markets sell both indoor grass and outdoor twig brooms along with a variety of other wares.

The data in Table 3.2 suggest that large local markets exist for brooms, providing income generating opportunities for rural producers. For example, in Bushbuckridge it is estimated that some 60 000 households are using traditional brooms, with most replacing these brooms at least once a year.



Considering that each household generally owns more than one broom and that the average lifespan of a broom is between 10 weeks (twig) and six months (grass) (C. Shackleton and S. Shackleton 1997, C. Shackleton and S. Shackleton 2000, Dovie *et al.* 2002), an annual turnover of over 390 000 brooms has been estimated for the municipality (C. Shackleton and S. Shackleton 2000). It is this significant trade that is explored in this case study, including its importance as an income generating opportunity and livelihood option for poor rural households (see Chapter 1).

Table 3.2: Use and purchase of brooms by rural households (hh) in different regions of South Africa

Study site	% hh using	% hh purchasing	Reference
<b>Indoor grass brooms</b>			
Kat River, Eastern Cape	87	81	S. Shackleton <i>et al.</i> (2002a)
Bushbuckridge, Limpopo Province	82	82	Dovie <i>et al.</i> (2002)
Mogano, Limpopo Province	95	73	S. Shackleton <i>et al.</i> (2002a)
Ha-Gondo, Limpopo Province	41	24	S. Shackleton <i>et al.</i> (2002a)
Kwajobe, KwaZulu-Natal	100	82	S. Shackleton <i>et al.</i> (2002a)
Hlabisa, KwaZulu-Natal	100	91	Magasela <i>et al.</i> (2001)
Mametja, Limpopo Province	96	83	Twine <i>et al.</i> (2001)
<b>Outdoor twig brooms</b>			
Bushbuckridge, Limpopo Province	100	100	C. Shackleton & S. Shackleton (2000)
Bushbuckridge, Limpopo Province	96	96	Dovie <i>et al.</i> (2002)
Mogano, Limpopo Province	69	28	S. Shackleton <i>et al.</i> (2002a)
Ha-Gondo, Limpopo Province	87	74	S. Shackleton <i>et al.</i> (2002a)
Hlabisa, KwaZulu-Natal	100	10	Magasela <i>et al.</i> (2001)
Mametja, Limpopo Province	94	83	Twine <i>et al.</i> (2001)

### 3.2 METHODS

The broad approach follows that outlined in Section 1.6, Chapter 1. Data were collected during the 2003 harvesting season (April/May). Two main groups of actors were identified for the broom trade – producers and traders (see Section 3.4 for more details). These producers and traders generally made and sold both types of brooms. Seventy producers, forming approximately 35% of the estimated producer population, were interviewed using a structured interview schedule designed to capture information on the characteristics of producers and their households, raw material harvesting, processing and the sale of brooms, and the livelihood benefits derived from trading (see Chapter 1). Since producers did not vend their brooms in the market, it was necessary to trace them to their homes. When producers were encountered at pension markets or *en route* to sell their stocks they were interviewed, and then appointments made to meet them in their villages where they would direct us to other producers. In Majembeni village, the recognised broom production centre of Bushbuckridge, two interview meetings were organised with about 10 producers at each. The spread of interviews across villages is presented in Table 3.3. Broom production is concentrated in those villages, mainly at the base of the Drakensberg escarpment, that are closest to the harvesting sites (Figure 3.1).

Table 3.3: Villages to which producers were traced and number of interviews per village

Village	Number of interviews
Acornhoek	7
Bushbuckridge	3
Brooklyn	1
Buffelshoek	2
Casteel	6
Cottondale	5
Dwarsloop	2
Majembeni (Rainbow)	31
Mambumba	1
Orinocco A	2
Shatale	6
Timbavati	1
Violet Bank	1
White City	2
TOTAL	70

Traders were interviewed at their stalls in the main centres of Bushbuckridge, namely Acornhoek, Bushbuckridge, Thulamahashe and Mkhuhlu, and at pension markets (Figure 3.1). No traders from Bushbuckridge were found in Hazyview markets. Forty traders representing more than half of those selling brooms in informal markets were interviewed.

Key informant interviews with farmers, forestry officers and nature reserve personnel were based on information supplied by producers regarding the source of raw material and a ‘tour’ of the harvesting sites with two of the producers. An iterative process similar to that used for tracing producers was used, in which each informant was requested to supply the names and telephone numbers of other contacts who could assist in this research or in answering specific questions. Specimens of all the species used for broom manufacture were collected for herbarium verification. When found, bundles of twigs and grass were weighed and measured to allow for conversion to metric units.

Quantities of raw material harvested were calculated from the number of harvesting trips made per year (the season is about four to five months) and the number of bundles harvested each time. Bundles were converted to kilograms using the average mass of the bundles weighed (six in total). Harvesting costs were calculated from the costs of each trip multiplied by the number of trips made per year. The zero costs incurred by producers harvesting in the communal lands and those using a sharing system were included in the calculation of the mean. Broom producers’ gross and net incomes were determined by triangulating three approaches. First, producers were requested to estimate their own income from broom sales on a monthly basis. This tended to reflect the cash brought into the household from sales rather than profits. Monthly incomes were then multiplied by the number of selling months to yield an annual income. Second, gross annual income was calculated based on producers’ recall of weekly sales of brooms (e.g. number sold last week), the number of weeks/months producers sold brooms over the year, and the selling price. Direct costs incurred during harvesting, processing and selling were

subtracted from this to obtain net annual income. A third estimate of gross annual income was obtained based on the quantities of raw material collected over the season, the number of brooms that could be made from this and their selling price. Costs were again subtracted to give net annual income. Incomes from grass and twig brooms were calculated separately and then, where applicable, summed to give an overall income from broom trading. Since producers were selling brooms at two prices (R3 to vendors and R6 to individual buyers), and could not always recall the number sold at each price, an average price of R4.50 was used in the income calculations. Traders' gross incomes were calculated based on the numbers of brooms sold per week, an average of eight months of selling per year and a selling price of R6 per broom. Traders had few costs in relation to brooms other than the price of the brooms at R3 each; hence net income was approximately half of gross income. All of the above were computed on a case-by-case basis and then averaged, allowing for a measure of variation around the mean. This often yielded slightly different values to those derived using the means of component variables (see Chapter 1, Section 1.6 for an explanation).

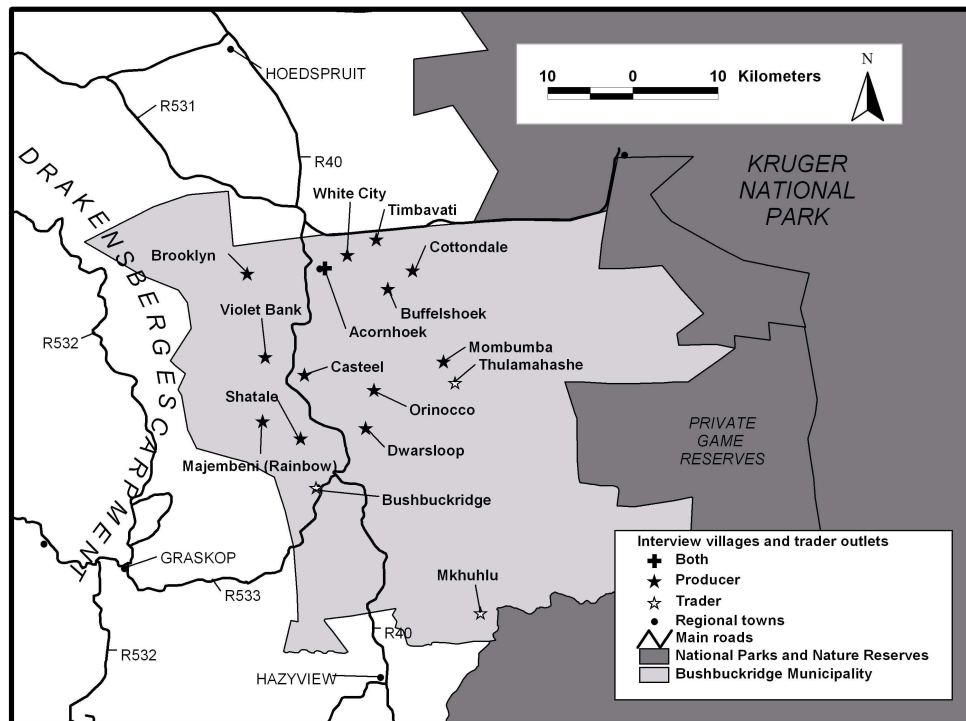


Figure 3.1: Location of sample villages and trading centres for broom producers and traders illustrating the concentration of producer villages in the western portion of Bushbuckridge closest to the Drakensberg escarpment and source of raw material

### 3.3 THE RESOURCE: SPECIES USED FOR BROOM PRODUCTION IN BUSHBUCKRIDGE

#### 3.3.1 Outdoor twig brooms: species used, their attributes and potential for sustainable use

Two species of *Athrixia* (Asteraceae), which can be difficult to tell apart, are used for twig or outdoor broom production, namely *A. phyllicoides* and *A. elata* (Mokoena undated). The Bushbuckridge producers are using mainly the former.

*Athrixia phyllicoides* DC.<sup>5</sup>, commonly known as tea bush, is a small, sprawling, aromatic shrub growing to about 1 m in height (Onderstall 1984, Pooley 1998). Its woolly stems, although thin (<1 cm in diameter), are woody and strong forming a favourable raw material for the manufacture of twig brooms. The flowers, typical daisies with mauve to purple ray florets and orange disk florets, appear from June to November overlapping with the harvesting period. The number of stems per plant varies from 1-20, with an average of 3-6 per plant (Mbewe 1999, Estes *et al.* in press). In terms of life history, *A. phyllicoides* is an annual resprouter (Estes *et al.* in press) with a fairly large rootstock from which the individual stems grow. Because of this, it appears to be a hardy species, able to tolerate frequent defoliation from fire and harvesting as well as being drought tolerant. It has been recorded as demonstrating 'weedy' characteristics including competing with and replacing other preferred vegetation (e.g. grass), as well as being unpalatable to livestock (Eshuys 1979, Wells *et al.* 1986). Some of the farmers consulted for this study confirmed these observations, indicating that *A. phyllicoides* tends to increase in abundance under heavy grazing.

Regarding habitat, *A. phyllicoides* favours dappled shade in rocky wooded grasslands of medium to high altitudes (Onderstall 1984), and is thus absent from most of Bushbuckridge. Even within its range, it appears to have fairly specific habitat requirements influenced by aspect and geology (Estes *et al.* in press), often occurring on fairly steep, south facing slopes (Mbewe 1999). There is little ecological information available on either *Athrixia* species apart from three unpublished studies undertaken in Songimvelo Game Reserve (managed by Mpumalanga Parks Board) near the Swaziland border in Mpumalanga Province. The plant has been extensively harvested from this reserve for broom production for the past 10 years. There is a lack of consensus on which species is present in the reserve, with one of the studies referring to the plant as *A. elata* (Mokoena undated) and the other as *A. phyllicoides* (Mbewe 1999), although the latter acknowledges the National Botanical Institute in Pretoria for assistance with identification. Plant densities in the reserve are variable ranging from 1 502 to 3 195 plants per ha in areas where it is prevalent (Mbewe 1999). Across the entire reserve, predicted densities of the plant varied between 7 and 905 plants per ha, with a mean of 303 (Estes *et al.* in press). Plants tend to be dispersed rather than clumped and often harvesters need to walk quite long distances between plants during harvesting (broom producers, pers. comm.; pers. obs.). The plant has been shown to be fast growing taking approximately two months to reach harvestable size after cutting to ground level

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<sup>5</sup> Note - species authorities are only provided for those species identified as being used in the broom trade.

(Mokoena undated). Mbewe (1999) concludes that the plant's resilience to stem removal and disturbance, its fast growth rates and its high density in the reserve make it an ideal candidate for sustainable utilisation by neighbouring communities.

*A. phylloides* has been recorded as being used to make tea, 'hard' brooms, and to treat coughs, acne, sores and boils (Roberts 1990, Pooley 1998, van Wyk and Gericke 2000). The tea is supposedly of good quality, better than some low grade China tea, and the plant has been recommended as being suitable for domestication and development as a commercial health tea (van Wyk and Gericke 2000). There is interest in this aspect of the plant, and a large multidisciplinary project coordinated by the University of South Africa (UNISA) is underway to explore this opportunity and to look into the cultivation potential of this species (J. Olivier, horticulturist, pers. comm.). Similarly, the Mpumalanga Parks Board (MPB) is seeking funding to investigate the domestication potential of *A. phylloides* but with a focus on brooms rather than tea (T. Steyn, horticulturist, Mpumalanga Parks Board, pers. comm.).

The woolly-stemmed shrubs, *Vernonia poskeana* Vatke & Hildebr. (Asteraceae) and *Helichrysum kraussii* Sch. Bip. (Asteraceae), are also used for twig broom production. *H. kraussii* is collected mainly in the communal lands on the slopes of the Drakensberg escarpment in Bushbuckridge, whilst *V. poskeana* is collected from up on the escarpment in the same areas as *A. phylloides*. These species are much less frequently used and do not produce the same quality of brooms as *A. phylloides* (broom producers, pers. comm.). The shorter, harder, less flexible stems of *V. poskeana* (locally known as *mordaritsi*) are said to be suitable for sweeping mats and carpets and are favoured by people in towns and cities. The inferior quality of *H. kraussii* (locally known as *siruthule*) brooms is reflected in their price, selling for R1 each compared to R3-R6 for the other species.

### **3.3.2 Indoor grass brooms: species used, their attributes and potential for sustainable use**

The favoured grass for indoor brooms is a *Festuca* species (*legasi*), most likely *Festuca costata* (F. de Wet, grassland expert, pers. comm.), although it is easy to confuse with the closely related *F. scabra* and *F. caprina* (Gibbs Russell *et al.* 1990, van Oudtshoorn 1992). It is possible that all of these species are used since they have overlapping ranges in the harvesting area.

*Festuca costata* Nees is a tough, tufted, rhizomatous perennial with long leaf blades of about 3.5-6 mm wide that provide the raw material for brooms. The leaves in-roll after cutting – a property that gives them the strength required for broom production. In terms of habitat, *Festuca* species generally occur in undisturbed high-lying mountainous grassland, often in moist areas (Chippindall 1955, van Oudtshoorn 1991), excluding them from Bushbuckridge. *F. costata* and *F. scabra* are encouraged by frequent burning and tend to be common to locally dominant where they are found (Gibbs Russell *et al.* 1990), which is the situation at the main harvesting site (F. de Wet, pers. comm.). There is no information

available on the impacts of harvesting *F. costata* for broom production, although regular defoliation by burning appears to have no negative consequences for this plant (Gibbs Russell *et al.* 1990).

*F. costata* and *F. caprina* are useful grasses with the leaves being used to make ropes and woven into hats in Lesotho (Chippindall 1955). Leaves are also placed as a mattress under skins that are being worked to make them supple. In Swaziland, *F. costata* is used to make brooms, rope, and door and floor mats. The rope may be wrapped around reeds and used in building. This species is also harvested from the Natal Drakensberg Park for similar purposes (Ramsar Sites Database 2003), and Mbewe (1999) records its use for mats and brooms in Songimvelo Game Reserve.

*Aristida junciformis* Trin. & Rupr. (wire grass or *matilwani*) is sometimes also used to make grass brooms, with the culms rather than the leaves being used. This species is collected locally within Bushbuckridge in particular sites. The grass, which forms a dense tuft of thin culms up to 750 mm in length, is unpalatable and increases with overgrazing (van Wyk and Gericke 2000). It is less favoured as a broom grass than *Festuca* species as it tends to be more brittle and less durable with a resulting shorter life span for the broom. However, due to a lack of high altitude *Festuca* species, *A. junciformis* is used in many other parts of the country for brooms (Mbewe 1999, van Wyk and Gericke 2000).

### **3.4 WHO IS INVOLVED IN THE BROOM TRADE?**

Natural resource products traded at the local level, including brooms in other parts of the country (Cocks and Dold 2004a, Gyan and Shackleton in press), often have a simple market chain in which the same individuals harvest, process and sell the finished products direct to consumers. By contrast, the broom industry in Bushbuckridge consists of producers (who do both harvesting and processing) and traders. Most broom producers sell the bulk of their stocks to informal traders. These traders either sell the brooms at informal market stalls in the business centres of Bushbuckridge (85%), or make their living by following the pension markets over the pension payout cycle (see Chapter 2 for an explanation of pension markets) (15%). In all cases brooms were but one of many types of products traders were vending, and consequently formed only a small proportion of their monthly income. All traders sold twig brooms (which were said to sell well), whereas 75% sold grass brooms. The characteristics of each of these groups and their role in the broom trade are presented in this analysis.

#### ***3.4.1 Profile of broom producers and traders and their households***

All broom producers interviewed were female except for one Mozambican male. On querying this, my research assistants indicated that it would be socially unacceptable for local men to make and sell brooms (“they would rather steal!”), whereas Mozambicans are considered outsiders who have no need to conform and who tend to be ostracised anyway. Similarly, traders were mainly women, with only two

males interviewed. One of these men was watching his mother's stall while she was attending to other business, and the other ran a large vending stall with his wife.

Producers were mainly middle-aged to older women with 73% being between 41 and 60 years of age, and 15% over 60 years old (Table 3.4), while a few elderly producers had no knowledge of when they were born. The mean age of producers was  $50 \pm 1$  years, which was significantly older than that of traders at  $45 \pm 2$  years (T test;  $t=2.29$ ;  $p<0.05$ ). Traders showed a more even distribution across age classes; 30% were forty years old or younger, 30% were in their forties, and 39% were older than 50 years (Table 3.4).

As would be expected from the age profile of broom producers, a large percentage were illiterate (43%). Sixteen percent had some secondary education, while only one had completed high school. The remaining 39% had varying years of primary school education (Table 3.4). Traders were, on the whole, better educated with less than one third having no education, 28% some primary school education, 25% some secondary schooling, and 15% a matriculation (school leaving) certificate (Table 3.4). The mean number of years of education was  $4 \pm 0.4$  for producers, significantly less than broom traders who had on average  $6 \pm 1$  years of education (Mann-Whitney U Test;  $U=1020$ ;  $p<0.05$ ). The low levels of education and elderly age of broom producers, in particular, was mentioned as a major factor precluding them from finding formal employment, especially when there were younger and better educated job seekers competing for the limited opportunities that exist.

Table 3.4: Age, education and marital profiles of broom producers and traders (percentage of respondents in each class)

Variable/attribute	Class	% of producers (n=70)*	% of traders (n=40)*
<b>Age</b>	<=20 years	0	0
	21- 30 years	1	14
	31-40 years	12	17
	41-50 years	41	31
	51- 60 years	32	31
	>60 years	15	8
	Mean $\pm$ SE	$50 \pm 1$	$45 \pm 2$
	<b>Education</b>	None	43
Primary		39	28
Secondary		16	25
School leaving certificate		2	15
Mean $\pm$ SE		$4 \pm 0.4$	$6 \pm 1$
<b>Marital status</b>	Married	50	32
	Single (divorced, unmarried)	29	28
	Widowed	20	25
	Child	1	15
<b>Position in household</b>	Producer is head - male	1	0
	Producer is head - female	46	50
	Husband is head	49	33
	Father is head	3	13
	Mother is head	1	5

\*Due to rounding up, column totals for each variable may not always add up to exactly 100%.

Approximately half of producers were either single or divorced (29%), or widowed (20%), and in these instances generally headed their households although a few stayed with or had moved back to their parents (Table 3.4). Similarly, more than half of traders were single or widowed and were the heads of their household, while 15% of traders stayed with their parents and 32% were married (Table 3.4). The proportion of female-headed households amongst these two groups is higher than the one third recorded in a random sample covering four villages in Bushbuckridge (S. Shackleton and C. Shackleton 2002) and the one third recorded for rural South Africa as a whole (Posel 2001). Such households are amongst the poorest in the country (Posel 2001, Gelb 2003), with the poverty rate in households headed by women being double that of male-headed households at 60% (Gelb 2003). Overall, these profiles are similar to those obtained for broom makers in the Eastern Cape by Cocks and Dold (2004a), whereas the producers interviewed by Gyan and Shackleton (in press), also in the Eastern Cape, were on average younger (mean age of  $33 \pm 3$  years) and better educated.

The average size of producer households was  $7 \pm 0.3$  people, higher than the average for Bushbuckridge of 6.2 people (Chapter 2). Traders, on the other hand, came from a household size of  $6.7 \pm 0.5$  people. Over 71% of broom producer households had no employed household members, and half had no regular source of cash income of any kind, relying almost totally on the broom trade (the latter have been classified as “marginalised households” by May 1999) (Table 3.5). Similar high dependencies on trading were found amongst handicraft producers in neighbouring Mpumalanga by Rogerson and Sithole (2001). For those households with other sources of income, 29% had at least one job (either permanent, temporary or self-employment) in addition to broom making, 21% had a pensioner receiving a monthly pension of R700 per month (in many cases this was the producer herself), and 14% received at least one child welfare grant of R150 per child per month (Table 3.5). Monthly household incomes were generally low, ranging from R50 to R2 550 with a mean of  $R611 \pm 65$ . An analysis of income distribution indicated that more than half of households had cash incomes of less than R500 per month, whilst almost a quarter earned less than R250 (Figure 3.2). More than 85% fell below or were on the income poverty line of R237 per adult equivalent per month (Carter and May 1999), with even more below the 2003 Minimum Living Level (MLL) of R1 871 per household of 4.7 people (Bureau of Market Research 2003).

Amongst traders, 82% of households had no employment other than their trading businesses, and 53% had no other source of cash income (Table 3.5). For those households with other sources of cash, 17% had another household member in a job, 30% received a pension and 15% child grants (Table 3.5). Total monthly cash income ranged from R50 to R2 600, with a mean of  $R865 \pm 101$  per household. This was significantly higher than for broom producers (Mann-Whitney U test;  $U=767$ ;  $p < 0.05$ ). In terms of distribution of this income, some 39% of households had cash contributions of less than R500 per month, 33% had between R500 and R1 000, and 28% received more than R1 000 per month (Figure



3.2). Generally those households with higher incomes were those that received pensions. Although incomes were higher than for producers, some 72% of households still fell on or below the poverty line (see above).

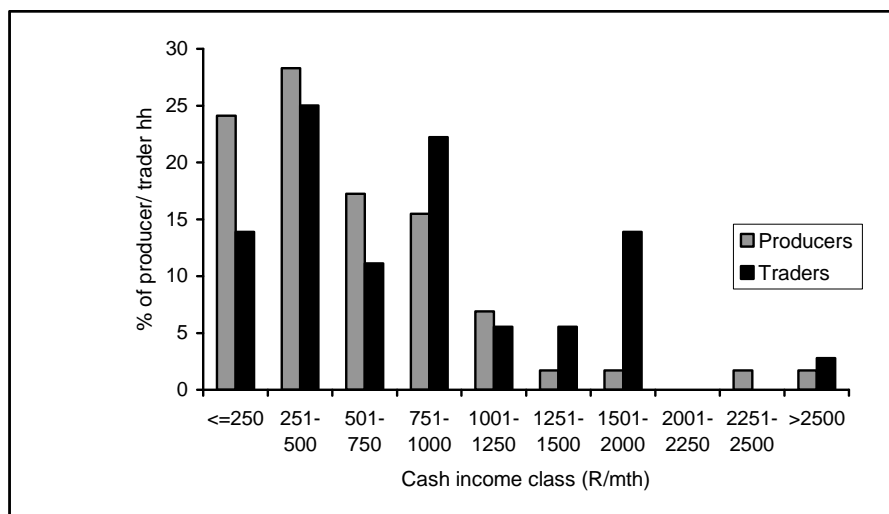


Figure 3.2: Distribution of total monthly cash income (Rands) for broom producer and trader households based on intervals of R250 per month (percentage of respondents in each class, n=58 for producers and n=36 for traders)

Table 3.5: Income and livelihood profiles of broom producer and trader households (percentage of respondent households in each class)

Variable/attribute	Class	% of producers (n=70)*	% of traders (n=40)*
<b>Employment other than trade</b>	None	71	83
	One job	29	17
	> One job	0	0
<b>Sources of income</b>	At least one job	29	17
	At least one pension	21	30
	At least one child grant	14	15
	No regular source of income #	50	53
<b>Ownership of productive assets</b>	Fields	11	20
	Cattle	10	5
	Goats	9	5
	Chickens	41	40
<b>Most important source of hh income as identified by respondents</b>	Brooms/vending business	60	62
	Pension	19	30
	Temporary job	7	-
	Other self-employment +	10	-
	Permanent job	1	-
	Child grant	2	-
	Remittance	1	8
<b>Assessment of importance of brooms/vending businesses</b>	Very important	70	60
	Important	29	40
	Slightly important	1	0

\*Due to rounding up, column totals for each variable may not always add up to exactly 100%.

# These categories are not mutually exclusive and therefore percentages add up to more than 100%.

+ This included activities such as vending, sewing, upholstery, wood sales, etc.

In terms of productive assets, only 11% of producer households had fields and all of these used their produce for home use only. Livestock ownership was similarly low with only 10% of households owning cattle (mean herd size was  $4 \pm 1$ ) and 9% goats (mean herd size was  $3 \pm 1$ ). Most households cultivated their home gardens. Most producers had multiple roomed houses with tin roofs, although some were in various stages of construction. A few families had very old vehicles, and a number owned televisions. About three producers had cellular telephones. The standard of most homes suggested past investment when households had more access to disposable income. Few trading households were involved in farming activities, with only 20% having fields and 10% owning cattle or goats (Table 3.5).

### 3.4.2 Producers' and traders' involvement in the trade

The importance of brooms to the total household income of producers was significant, with brooms contributing on average about  $51 \pm 5\%$  of total cash income (Figure 3.3). Sixty percent of households indicated that brooms were their most important source of income, and 70% rated the contribution that brooms make to their livelihoods as “very important” (Table 3.5). In many cases the broom producers were the only household members with any form of work.

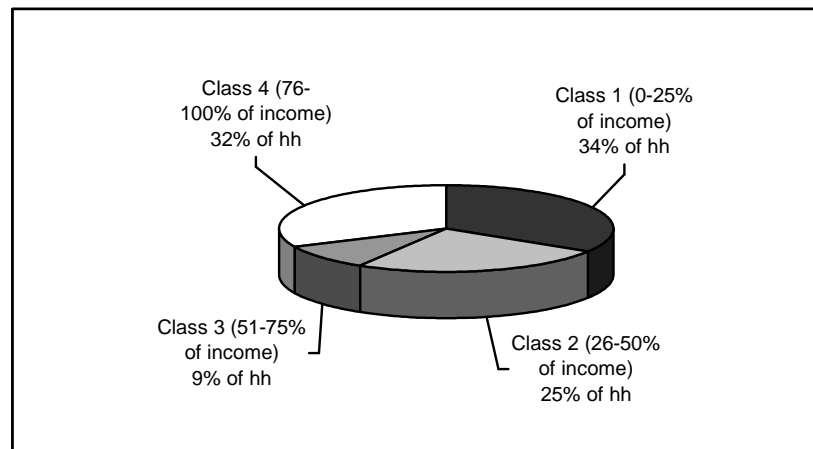


Figure 3.3: Proportion of total annual cash income contributed by broom sales to producers' households (percentage of producer households (hh) in each class, n=53)

The reasons (unprompted) producers gave for engaging in the broom trade related mainly to their levels of poverty and their struggle to make ends meet, often following a crisis in the household (Table 3.6). The most frequently expressed were “suffering” (24%); the loss of a husband’s income either through his failure to send remittances, retrenchment, illness or death (47%); the lack of other employment (11%); and shortages of money (7%). Other reasons provided included: the death of a pension earner, inherited mother’s business, other self-employment not profitable enough, job loss, and exposure to broom making as an opportunity to earn income. It is noteworthy that 10% of producers also indicated that they had commenced making and selling brooms after they were left to care for their grandchildren following the death of the children’s mothers, presumably from HIV/AIDS. In these cases even

respondents with pensions said that the money received was inadequate to support the large number of dependents for whom they had become responsible.

Half of producers were unemployed prior to entering the broom trade and relied on their husbands for income (Table 3.6). One quarter were employed in a variety of jobs in the forestry sector, in factories (e.g. local rug making factory), on farms and as domestic workers. A number of those who had worked as domestic workers for local households indicated that their wages were unacceptably low (R150 per month) and they could earn more from the broom trade, which also provided them with flexibility and independence. One producer mentioned that she took up broom trading in preference to selling fruit and vegetables, as the latter was not profitable. The remainder had been involved in various forms of self-employment, some of which they were still actively engaging in. Thirty-nine percent of producers mentioned that they participated in other complementary income earning activities including vending fruit, vegetables, dry foods and snacks (undertaken by 70% of those involved in additional income generating activities); buying and selling new and second-hand clothes (18% of those involved); upholstery; sewing; and selling reed mats, wood and carvings (48% of those involved). Seven (10%) producers had their own vending stalls, making their brooms at night and obtaining assistance from family members to run their stalls when they went to harvest. It is clear that many of the broom producers have an entrepreneurial flair despite low levels of education as illustrated in Box 3.1.

Table 3.6: Reasons producers and traders gave for entering the broom trade, their prior occupations and years in the trade (percentage of respondents in each class)

Variable/attribute	Class	% of producers (n=70)*	% of traders (n=40)*
<b>Reasons for entering the broom trade or starting a market stall</b>	Loss of husband's income	47	35
	"Suffering and hunger"	24	8
	No jobs	12	5
	No money	7	14
	Lost or changed job	Included in 'various'	16
	Various (see text)	10	22
<b>Previous occupation</b>	Unemployed	54	40
	Employed	26	30
	Trading other products	10	13
	Sewing	3	-
	Brick-making	3	-
	Farming	1	-
	School	3	17
<b>Number of years in the trade</b>	1-5	36	30
	>5-10	11	20
	>10-15	2	13
	>15-20	16	10
	>20-30	16	17
	>30	6	10
	Mean $\pm$ SE	12 $\pm$ 1.2	14 $\pm$ 2

\*Due to rounding up, column totals for each variable may not always add up to exactly 100%.

The largest proportion (36%) of broom producers had only been in the trade for 1-5 years, supporting the trend evident across the country of increased participation in natural resource trading under rising unemployment, HIV/AIDS impacts and other economic hardships (like the escalating costs of basic food stuffs) (Table 3.6) (Chapter 2 and 7). However, the trade is not new and two producers had been involved in selling brooms for as long as 30 years (Table 3.6). The mean number of years in the trade was  $12 \pm 1$ . Broom production can therefore be considered as a viable, stable and long-term source of income for women in Bushbuckridge. Producer age was not correlated with number of years in business as some elderly women entered the trade in recent years after being widowed or left with grandchildren to care for.

**Box 3.1: Life story of a successful broom producer**

Nerah Magubane is an experienced and successful broom trader living in Buffelshoek, Bushbuckridge. She has been in the business for 26 years and is very active, selling brooms in Giyani (200 km away) as well as locally. She initiated the group in her village and has introduced numerous women to the trade. This is the story of how she became involved in the broom trade.

Nerah was born on a farm near Hoedspruit in 1952. She grew up on the farm and attended the farm school until Standard 6. In 1967 she married Mr Magubane of Majembeni (Rainbow) after his first wife left him. She stayed in her husband's village until 1973, after which she moved to Johannesburg with him to live in Kensington on his employer's property. He was employed as a housekeeper for 44 years, and she often assisted him. He now receives a pension from his former employers. She had five children, two of whom died in infancy. Her last-born child still lives with her as well as her daughter's young child. She started the first of her entrepreneurial activities whilst in Johannesburg where she made and sold bedspreads. As her children grew older and needed to attend school, she returned to Majembeni and started making brooms in 1977. The idea of making brooms for sale came from her friend who invited her to go and harvest raw material in the mountains. The members of her church donated 20 c each to help her make the trip, allowing her entry into the trade. After she came back from harvesting, her friend showed her how to treat the grass and sew the brooms, and together they went to Acornhoek to sell. She sold all her brooms and was able to buy maize meal, meat and sugar for home. In those days a broom sold for 40-50 cents. She decided to carry on, and since then has not looked back. When she moved from Majembeni to Buffelshoek in 1986 she continued with her broom business. Initially, she continued to join her friends from Majembeni on their harvesting trips. But, then her neighbours in Buffelshoek asked her "why go to Majembeni – teach us". So, she started a group and has been working with the women of Buffelshoek for a long time now. They harvest *Athrixia* for twig brooms in the Lydenburg area at a group of farms known as "Rusplaas" where they have an arrangement with the farmers to work on the farms in return for permission to harvest. They obtain their grass from Mac Mac Pools, a conservation area near Graskop. They generally go for two weeks at a time to harvest. Her mother cares for her grandchild while she is away. Each producer pays their own costs for harvesting, although they sometimes share the costs of hiring a one-tonne truck depending on the amounts they harvest. Mrs Magubane sells in Giyani, as well as locally, usually with one of her friends. However, recently they had a nasty experience where someone from their village followed them to Giyani and robbed them of their profits of about R3 000. She does, however, plan to go back this year. For Nerah Magubane, brooms are a way of life and she can't imagine doing anything else. She has been able to supplement her husband's salary and then pension for years, using her earnings for everyday items as well as home improvement including tiling her roof. She also still sews, making mainly church uniforms. She sees herself continuing with broom production until she is too old and weak to do the strenuous harvesting.

As with broom producers, traders' businesses were the most important source of income for the household in the majority of cases, followed by pensions (Table 3.5). Trading contributed on average  $62 \pm 6$  % of household cash income, and brooms alone some 11% of total cash income. Most traders saw their vending business as "very important" for the household (Table 3.5). The main reasons given by traders for starting their vending stalls included the need to earn income because of job loss (16%) or the loss of their husbands' income because of death, retrenchment, lack of support, etc. (35%); the need to supplement existing income; as well as simply because traders' families were "suffering" (Table 3.6). Specifically, some traders mentioned that they sold brooms as part of a strategy to diversify the goods they were offering for sale and to expand their businesses. Brooms were cheap to purchase, generally

moved quickly and were non-perishable, making them a favourable item to stock. No traders engaged in other income generating activities as they were attending their stalls and businesses full-time. Forty percent of traders had been unemployed before starting their business and 18% had been at school. The remainder had worked either as domestics, traded in other products or assisted other traders (and subsequently started their own business). Half of traders had been in their business for between 1-10 years, with 30% entering in the last five years, indicating that vending, like the other self-employment occupations, is growing (Table 3.6). About 40% had been vending for between 15-30 years, and 10% more than 30 years. The mean number of years in business was  $14 \pm 2$ .

### **3.5 BROOM PRODUCTION: RAW MATERIAL HARVESTING AND PROCESSING**

#### ***3.5.1 Mechanisms for obtaining raw material***

Most twig broom producers (93%) harvested their own raw material, although a few hired someone else to do this (4%) or sent a friend or relative (3%). The pattern was much the same for grass brooms. Some producers also gained access to raw material via a 'sharing system', whereby they were provided with raw material in exchange for half the brooms they made. Unlike for other natural resource products (e.g. reed mats – Chapter 4), raw material was not seen for sale anywhere. Producers (97%) generally harvested in groups of between 3-8 women, for purposes of safety and security, mutual support and cost savings. The only time harvesters went out individually was when they were collecting locally in the communal lands. These informal 'collecting' institutions were important for producers in gaining access to raw material, as frequently one member of the group had a link, via a friend or relative, to the property they were harvesting from. Additionally, many of the women in these groups had been harvesting together for years. The role and importance of such informal institutions in facilitating raw material collection has been highlighted by Kepe (2002) for various products in other parts of the country. Most broom producers collected raw material for both twig and grass brooms, alternating their collecting trips.

#### ***3.5.2 Sources of raw material***

*Athrixia phylicoides* for twig brooms was harvested mainly from higher altitude grasslands falling into the vegetation types "North-eastern Mountain Grassland" and "Mixed Bushveld" towards the north-west boundary of the harvesting area near Ohrigstad (Low and Rebelo 1996). The main harvesting sites and the percentage of producers harvesting at each of these are presented in Table 3.7 and illustrated in Figure 3.5. Producers travelled relatively large distances, often more than 200 km a round trip, to harvest and usually went for one to two weeks at a time (Figure 3.4). The two most popular areas, Ohrigstad/Lydenburg and Pilgrim's Rest, are closer to producers' villages than most of the other sites (Figure 3.4). However, it was not only distance that influenced where producers harvested, but also their ability to gain access to the land. It is of note that most harvesting occurred on private land belonging to either individual farmers or forestry companies (Figure 3.5). Only 15% of producers harvested raw

material from the mountain slopes under communal tenure close to their villages (Figure 3.5). The situation was similar in the Eastern Cape, with private farms being the main source of broom grass for the industry there (Cocks and Dold 2004a).

Table 3.7: Harvesting areas for *Athrixia phyllicoides* used to make outdoor twig brooms – because of distances individual producers tended to select one area in which to harvest (DWAF = Department of Water Affairs and Forestry and MPB = Mpumalanga Parks Board)

Property regime	Place	% of producers (n=63)*
Private (company forestry estates)	White River, Brondahl	8
	Driekop estate (near Sabie)	3
	London estate (near Sabie)	3
	Berlin estate (near Sabie)	2
	Barberton	2
Private (commercial farms)	Pilgrim's Rest area	38
	Ohrigstad/Lydenburg area	27
	Waterval-Boven	8
	Sudwala	3
	Ngodwana (Nelspruit)	3
	Belfast (near Lydenburg)	2
Communal	Bushbuckridge area	11
	Leboweng	3
State – DWAF, MPB and municipal	Graskop	3

\*Some producers were collecting from more than one place so the column total exceeds 100%.

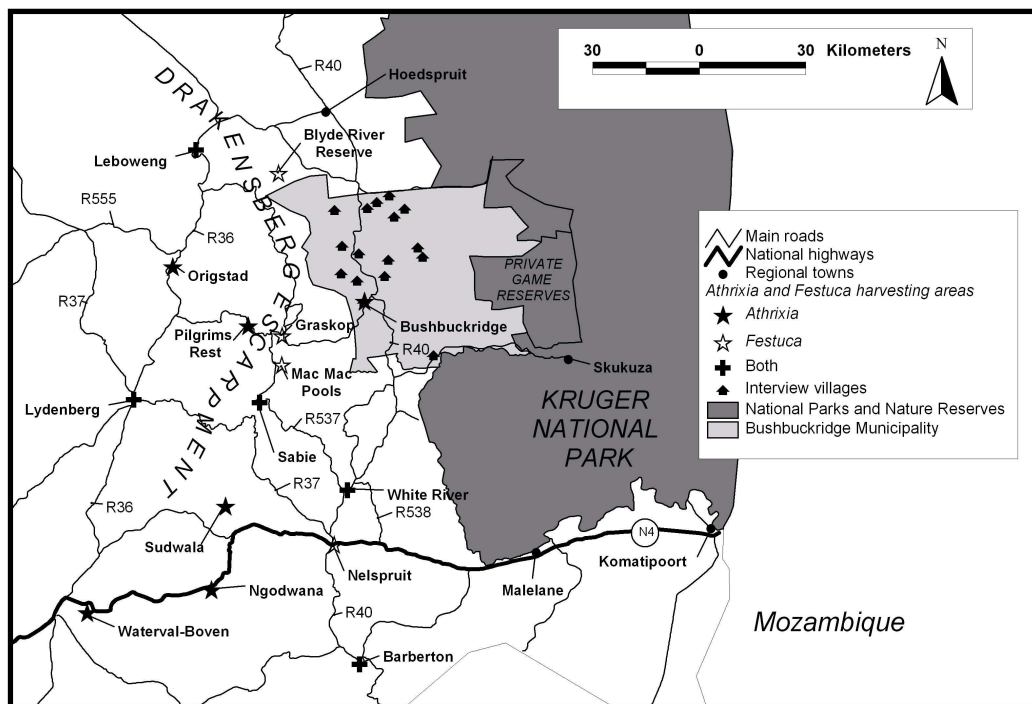


Figure 3.4: Location of the main harvesting areas for *Athrixia phyllicoides* (twigs) and *Festuca costata* (grass) indicating producers' home villages and the spread of harvesting sites (individual farms and forestry estates listed in Tables 3.7 and 3.8 could not be mapped at this scale)

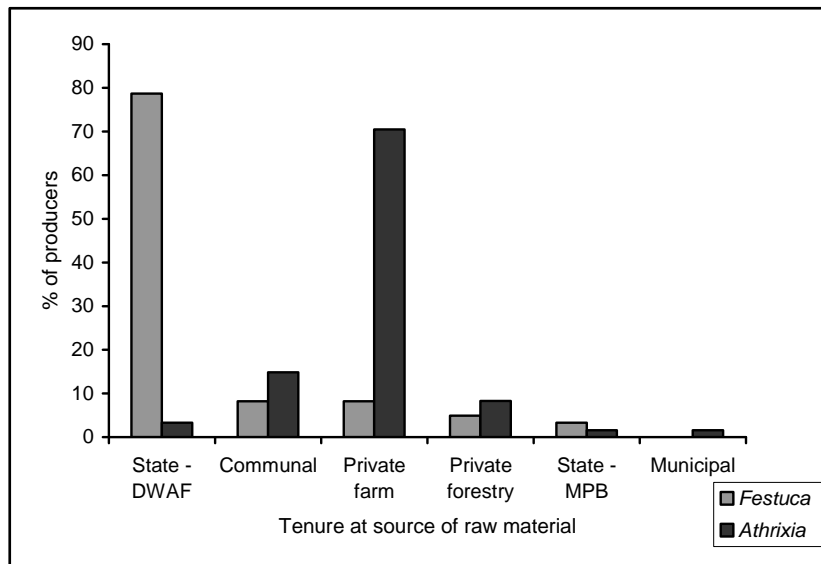


Figure 3.5: Proportion of producers harvesting from different land tenure systems for *Athrixia phyllicoides* (twigs) and *Festuca costata* (grass) (DWAF = Department of Water Affairs and Forestry and MPB = Mpumalanga Parks Board)

The primary raw material for grass brooms, *Festuca costata* (Section 3.3), was harvested mainly from high altitude, mist belt grasslands (“North-eastern Mountain Grassland” – Low and Rebelo 1996) around Graskop and Mac Mac Pools on the Drakensberg escarpment (Table 3.8, Figure 3.4). Other important sites included Morgozon Reserve and Forestry Estate, Pilgrim’s Rest, and the Blyde River Nature Reserve. Again, producers travelled quite long distances to obtain grass (Figure 3.4). In contrast to the raw material for twig brooms, most grass was harvested from state-owned land (Figure 3.5). The grass that was collected in the communal lands of Bushbuckridge was not *F. costata* but *Aristida junciformis*, a less superior grass for brooms (Section 3.3).

Table 3.8: Harvesting areas for *Festuca costata* and *Aristida junciformis* used to make indoor grass brooms (DWAF = Department of Water Affairs and Forestry and MPB = Mpumalanga Parks Board)

Property regime	Place	% of producers (n=63)*
State – MPB and DWAF	Blyde River Reserve	5
	Mac Mac Pools	62
	Graskop	19
	Morgozon Reserve (near Pilgrim’s Rest)	11
Private forestry	Pilgrim’s Rest and Morgozon estate	24
	London estate (near Sabie)	2
	Barberton	2
	Faluka estate (near Sabie)	1
Private farm	Lydenburg	3
	Nelspruit (Kaapsehoop mountains)	2
	White River	2
Communal	Bushbuckridge area	5
	Leboweng	3

\*Some producers were collecting from more than one place so the column total exceeds 100%.

### 3.5.3 Access to raw material

The fact that most raw material for twig broom production was collected from private land had various implications for resource access (Figure 3.5). Amongst twig harvesters, 89% indicated that it was difficult to access raw material as permission from landowners was required and not all were willing to provide this. Moreover, where access could be obtained, the procedure and regulations for this varied widely as illustrated below. It was only on communal land that *A. phyllicoides* could be ‘freely’ harvested. Even where legal access could be obtained or was not an issue, producers maintained that physical access to the plants was difficult, as they had to climb high into the hills and mountains negotiating steep, rocky slopes. Visits to some of the harvesting sites confirmed this.

Within the Ohrigstad/Lydenburg area and other areas where producers harvested from individual private farms, e.g. Waterval-Boven and Sabie, farmers who permitted broom producers to harvest usually required them to work on the farm for the equivalent number of days as spent harvesting as a form of ‘in kind’ payment. However, one farmer interviewed mentioned that she no longer used this system as she was concerned about its implications under the new labour law (K. Barnemond, commercial farmer, pers. comm.). Instead, her farm workers now harvested and sold the raw material to broom producers at R100 per headload. On other farms a permit fee of R5 per day or R50 per harvesting trip was charged or the farmers were ‘paid’ in brooms (L. Smith, commercial farmer, pers. comm.), whilst on yet others nothing was required at all from producers other than an undertaking to close gates and avoid lighting fires (I. Dixon, farmer’s wife, pers. comm.). Access was also mediated and facilitated through producers’ social networks, with a number of respondents mentioning that if a friend or relative worked on a farm it was easier to gain access. Knowing someone on a farm was particularly important with regard to obtaining accommodation, as producers usually stayed with farm workers during their 1-2 week collecting trips. Some farmers permitted only their own workers to harvest (W. Ferreira, commercial farmer, pers. comm.), although family members living off the farm could sometimes assist with this. In general, a core of farmers in the Ohrigstad/Lydenburg area (known locally as “Rusplaas”) appeared relatively sympathetic to producers’ needs, and many producers had been harvesting from these farms for years. However, such informal arrangements do not provide producers with any long-term security. Their entry must be renegotiated each year, and so their position remains tenuous. The MBP reserve at Lydenburg does not permit harvesting of *A. phyllicoides* and is unlikely to do so until they have a better understanding of the impacts of this (M. Lotter, MPB ecologist, pers. comm.). They have established some monitoring plots.

In the Pilgrim’s Rest area and for commercial forestry land the situation was less positive, although greater potential exists for developing access policies, as most of the land is company owned. Producers experienced difficulties obtaining permission to harvest in these areas, and as a result a certain amount of illegal harvesting took place, with producers reporting incidents of arrest. Interviews conducted with officials from the two forestry companies operating in the area, Komatiland Forests and Global Forest



Products, and with the manager of Barlow World's land near Pilgrim's Rest provided some insights into the situation.

Global Forest Products (GFP) was not opposed to providing access to natural resource products on their lands, and indeed the conditions for certification with the Forest Stewardship Council (FSC) requires this under the social responsibility component (Global Forest Products no date). However, they tended to give priority to their own employees, dependants of their employees and immediate neighbours (S. McCartney, forestry officer, pers. comm.), and so broom producers from Bushbuckridge were often turned away. The entry permit is free, but is rigorously policed and enforced. People found on GFP land without a permit are removed or requested to obtain a permit unless they are game poachers, in which case they are arrested and handed over to the police. Producers mentioned two forest estates (London and Driekop) owned by GFP that they had access to in the past, but were no longer permitted entry. On investigation it was revealed that concerning London estate, harvesters continually strayed onto MPB land from London (there are no fences) resulting in complaints from the management of MPB. The easiest solution for GFP was to close London to harvesters. With regard to Driekop, employees of the estate did not want outsiders harvesting, reserving the resource for their own use.

The situation for Komatiland Forests (SAFCOL – or South African Forestry Company) was less easy to establish. They appeared not to have any policies in place specifically relating to the harvesting of broom raw material, and, in general, authorisation to harvest any products was limited (L. Mudimeli, environmental officer, pers. comm.). The previous environmental manager mentioned that access to a variety of natural resources had been allowed via a permit system (established under their Environmental Management System), but difficulties controlling this and constant abuse of permits by harvesters (harvesting for longer or taking more than the permit allowed) resulted in them closing all access in early 2002 (G. Marais, forestry consultant, pers. comm.). Adding to this decision, was the fact that SAFCOL land was being used to illegally gain entry to MPB land resulting in complaints from the provincial conservation authority. The misuse of entry permits and the company's inability to accurately monitor off-take was said to be compromising their FSC certification (G. Marais, pers. comm.). Certification supports opportunities for natural resource use by local people, but not at the expense of the environment. New models for access are being considered based on more formal contracts with fewer people. Mr Marais, who is an expert consultant on forest certification, believes that the certification process has made it harder for local people to access resources on commercial forestry land due to tighter controls on forest estates and greater security – most companies now use private contractors who are more removed from the local community. This was confirmed by producers who complained about the new security arrangements.

The manager of the 16 000 ha Barlow World Farms' land (also known as TGME) near Pilgrim's Rest was concerned about the sustainability of harvesting. He based this on the lack of *A. phyllicoides* in the

communal lands adjacent to the area he was responsible for and on the harvesting technique, which he felt was damaging to plants (M. Jevon, ecologist and estate manager, pers. comm.). He therefore instituted a system of closing the area for harvesting every second year to allow recovery and regeneration. This was, however, never conveyed to broom producers who presumed the area was permanently closed. This breakdown in communications resulted in illegal harvesting. The manager also mentioned that he wanted to introduce a rule that harvesters cut the stems of the *A. phyllicoides* plants rather than break them, so that none of the rootstock is removed.

Accommodation for producers in many of the forestry harvesting areas and on Barlow World Farms' land was problematic, and a number of them mentioned that they camped out in the bush or in plantations. Since harvesting occurs in winter this can be extremely cold and uncomfortable especially as they avoided lighting fires to prevent discovery.

It is clear from the above that the state of affairs regarding access to raw material is complex with all parties making classical mistakes that often characterise the escalation of conflict in these situations. Broom producers often did not use the correct channels, either because they were unsure of these or were afraid of being turned away. This frustrated landowners, sometimes to the point where they would become unaccommodating and intolerant (G. Marais, pers. comm.). However, the women harvesting broom material represent a particularly disempowered group with most having no education and few being able to communicate in English (see Section 3.4). Many were afraid to approach the relevant officials (broom producers, pers. comm.).

Like twig brooms, most of the raw material for grass brooms was harvested from land other than communal land (Figure 3.5). In this case, it was State land held by the Department of Water Affairs and Forestry (DWAF) that was the most important source of raw material (Table 3.8, Figure 3.5). Access was far less problematic than for *A. phyllicoides* with 73% of producers mentioning it was easy to access broom grass, and only 27% experiencing any difficulties. Access to DWAF land is also considerably more secure than that for private land, as the utilisation of forest products is promoted and supported in both forestry policy and in the Forest Act of 1998. Harvesters obtained permission to harvest from the local forestry officer and were required to pay for their harvest at a rate of R0.50 per bundle of grass (F. Maleka, forestry officer, pers. comm.). The relationship with broom producers was seen as part of the regional office's "Participatory Forest Management Programme". However, the Mac Mac/Graskop and Morgozon grasslands are soon to be devolved to the provincial conservation agency, MPB, and Komatiland Forests respectively (M. Brondyn, DWAF regional director, pers. comm.).

During one of the organised interview sessions producers mentioned that there was an abundance of broom grass in the Blyde River Nature Reserve, but harvesting was not permitted. This was followed up with the community liaison officer from MPB head office. At present there is no uniform policy

regarding access to natural resources in MPB reserves (M. Marais, community liaison, MPB, pers. comm.). Each reserve has its own system and regulations. With respect to the Blyde River Nature Reserve, it appears that priority is again given to the immediate local community with whom the Parks Board has established a community forum. Harvesting is also only permitted one day a week, as game guards to accompany harvesters are not available more frequently than this. Such an arrangement is unsuitable for Bushbuckridge producers who need to harvest for more days if they are to cover their costs. The community liaison staff were, however, willing to meet with broom producers to discuss possibilities.

#### **3.5.4 Availability of raw material**

In terms of the availability of *A. phylloides* in the harvesting areas, 60% of twig harvesters felt that there was adequate for everyone who wished to collect, whereas 40% believed there to be shortage. The shortage was indicated to be the result of: a) too many people collecting so that demand exceeded supply, b) natural scarcity, and c) burning (either wild fires or deliberate). It was mentioned that sometimes “a group gets there before you and then there is nothing left”. Fires also often burn off supply before people have had a chance to harvest it. None of the producers felt that the amount of raw material available had changed over the years they had been harvesting, and all mentioned that the plants re-sprouted after harvesting and produced a full harvestable crop by the next season. This was confirmed by the farmers interviewed and by Mbewe’s (1999) observations for Songimvelo Game Reserve (Section 3.3). Despite the perception of some shortages in current harvesting areas, all producers felt that there would be plenty of raw material if areas presently closed to harvesting were opened up.

The availability of broom grass was perceived to be adequate by 55% of producers, and too little by 45%. Reasons provided for the shortage were similar to those for *A. phylloides* and included: a) too many collectors, b) too little rain this season, and c) the fact that the grass is often burnt under Mac Mac’s biennial burning programme before it can be harvested.

#### **3.5.5 Harvesting season, procedure and quantities harvested**

*Athrixia phylloides* is ready to harvest in winter from about April/May/June through to September/October, although some respondents mentioned that it could be harvested almost all year round if it had not been cut or burnt. Most producers collected on average  $5.4 \pm 0.8$  times per season (Table 3.9), or  $3.3 \pm 0.3$  times per season from the more distant sites outside of Bushbuckridge. The mean number of bundles collected per producer per harvesting trip was  $6.5 \pm 0.6$ . The average over the entire season was approximately  $26 \pm 3$  bundles per producer, varying widely from a minimum of three to a maximum of 120 bundles. The median was 18 bundles and the mode 40. The mean wet mass of raw material harvested per producer was  $671 \pm 75$  kg. Each headload-sized bundle weighed approximately 26 kg prior to drying and removal of leaves. Estes *et al.* (in press) found that one kilogram of *A.*

*phylicoides* contained on average 172 stems. Based on an average of 7 stems per plant, this was converted to yield an average of 25 *A. phylicoides* plants per kg. Each bundle collected therefore requires some 645 plants, or 16 640 plants per producer per season. Each producer could make an average of 338 brooms from the raw material harvested after drying (based on producers' estimates of the number of brooms per bundle).

The procedure to harvest twigs involves selecting suitable length stems (1-2 m) from the plant and snapping these off at the base where the stem swells before joining the root system. This often results in some minor roots being removed. However, the entire plant is not uprooted as is frequently assumed, and usually some stems are left untouched. Some managers were, however, concerned that the cumulative effect of annual removal of part of the root system would ultimately be to the detriment of the plants (Dzerevos 2004, M. Jevon, pers. comm.). They would prefer harvesters to cut the stems above ground, as was suggested for the Barlow World Farms' land at Pilgrim's Rest (see above).

Table 3.9: Frequency of harvesting, average quantities of raw material harvested and potential number of brooms produced per season for both outdoor twig and indoor grass brooms

Variable	<i>A. phylicoides</i> (twigs) (n=59)	<i>F. costata</i> (grass) (n=60)
Number of collecting trips per season per producer (mean $\pm$ SE)	5.4 $\pm$ 0.8	5 $\pm$ 0.4
Length of collecting trip (days) (mean $\pm$ SE)	9.0 $\pm$ 0.7	5.0 $\pm$ 0.5
Number of bundles collected per trip per producer (mean $\pm$ SE)	6.5 $\pm$ 0.6	8.1 $\pm$ 0.8
Number of bundles collected per season per producer (mean $\pm$ SE)	26 $\pm$ 3	36 $\pm$ 4
Kg of raw material harvested per season per producer (mean $\pm$ SE)	671 $\pm$ 75	317 $\pm$ 39
Number of brooms per bundle (mean $\pm$ SE)	14 $\pm$ 1	12 $\pm$ 2
Number of brooms produced from raw material harvested (mean $\pm$ SE)	338 $\pm$ 44	369 $\pm$ 41

*Festuca costata* is harvested from about February/March until June/July. Harvesters mentioned that broom grass should be cut while the leaves are still fresh and green, and that by July the plants are generally too dry and beginning to yellow. Most producers collected on average 5  $\pm$  0.4 times per season (Table 3.9), or 4.6  $\pm$  0.4 if the more frequently visited communal areas are excluded. The mean number of bundles collected per producer per harvesting trip was 8  $\pm$  1. The average over the entire season was 36  $\pm$  4 bundles per producer, varying from a minimum of two to a maximum of 225 bundles. Based on a mean fresh weight of 8 kg per bundle, the mean mass of raw material harvested per producer was 317  $\pm$  39 kg. Using producers' estimates of the number of brooms per bundle, this amount can make about 370 brooms (Table 3.9). Records obtained from Mac Mac Pools showed that the forest reserve had sold some 1 827 bundles or approximately 15 900 kg of grass between April 2002 and April 2003. Sickles are used to cut the grass tufts at about 10-15 cm above ground level. The grass is packed into bundles of about 50-60 cm circumference.

For both grass and twigs, the main factor determining frequency of harvesting and consequently the amount of material harvested each season appeared to be access to cash to pay for transport. Broom

producers actively selling at pension markets (see below) tended to go every month end (from about 25<sup>th</sup> to 30<sup>th</sup> of the month) between pension pay out cycles. Those marketing less vigorously and those with cash flow problems (the poorest households) would go less frequently. Households collecting in the mountains close to their villages (again usually the poorest households) would collect a few times per month (between 12 and 36 times per season) as they only went for a day at a time harvesting a single headload.

### 3.5.6 Costs of raw material harvesting

Raw material harvesting was a costly exercise for broom producers. They had to travel considerable distances to reach harvesting sites and most had to pay for hired transport. It was only where producers were harvesting within the communal lands that no direct costs were involved. However, the quantities of raw material that could be collected from these areas were insufficient for those who really wanted to make a business of broom production. Producers spent on average about R880 per season on harvesting as most were producing both types of brooms (Table 3.10). Individual costs for a season went as high as R2 500. The cost to hire a one-tonne truck (known as a 'bakkie' in South Africa) was usually around R300 to R500 per trip. These costs were often shared between 3-4 producers. Where groups of harvesters were larger, the truck would make more than one trip to collect all the raw material. Producers who could not afford the transport fees would negotiate with the vehicle owner to pay these once they had made and sold their brooms, or they shared their harvest with the vehicle owner. Some producers harvested for other people in return for their costs being covered and for a share of what they harvested, i.e. their labour was paid for in raw material. Harvesting was the largest cost producers incurred, at about R0.80 per broom (27% of the wholesale price and 13% of the individual price). Some interviewees (including landowners and managers) felt that the prices charged by local truck owners were exploitative and that they were taking advantage of the broom producers who had few alternatives. The other costs presented in Table 3.10 refer mainly permit fees, with these being minor compared to transport.

Table 3.10. Average costs per season of harvesting *Athrixia phylicoides* and *Festuca costata* (all data are per producer)

Per producer	<i>A. phylicoides</i> (twigs) (n=59)	<i>F. costata</i> (grass) (n=60)
Transport costs per single trip (Rands) (mean $\pm$ SE)	148 $\pm$ 18	100 $\pm$ 11
Transport costs for season (Rands) (mean $\pm$ SE)	482 $\pm$ 67	404 $\pm$ 49
Other costs (Rands) (mean $\pm$ SE)	1.2 $\pm$ 1.2	2.9 $\pm$ 1.6

Means include the zero values for those producers having no cash costs (i.e. those sharing or harvesting close by).

### 3.5.7 Process for making brooms

Most producers made brooms without any assistance. Only eight producers (11%) indicated that someone else in the family assisted them. One grass broom producer mentioned that her husband

assisted with the hammering and soaking of the grass (see below) whilst she made the brooms, and in this way she could easily make a few hundred brooms in a month to go and sell further afield. The art of broom making and the 'know how' to participate in the broom trade was learnt mainly from friends or neighbours (60%). Other producers were self-taught (17%), while 23% learnt their skills from family members including their mothers and sisters. The process for making each type of broom is outlined below.

Following harvesting, the raw material for twig brooms is spread in the sun to dry for one week. Once dry, the leaves are removed by beating bunches of twig stems against one another. This material is then stored either indoors, under a makeshift shelter, a tarpaulin or plastic sheet to keep it dry. To make the brooms, bunches of twigs of about 40-60 stems are bound together using pieces of rubber inner tubing, which is pulled very tight by using a fork prong to secure and tie it off. Some producers cover the ends of brooms with plastic or foil, but this is unusual. Each broom takes about between 10-30 minutes ( $22 \pm 3$  minutes) to make and producers usually make them in batches of about 20 at a time. At an average price of R4.50 per broom, this provides a gross return of approximately R12 per hour of labour for processing and R7 if harvesting time is included (although the latter is a very rough calculation). Each broom weighs about 0.4-0.5 kg and is almost 1 m in length. One producer encountered in the Acornhoek pension market was experimenting with adding handles to her outdoor brooms.

For grass brooms, following harvesting, the freshly cut green grass is spread in the sun to dry for one day. This causes the leaf blades to furl tightly. The dried material is then stored either indoors or outside under plastic sheets until required. Prior to making the brooms, the cut ends of the grass are hammered to soften them and then immersed in a bucket of boiling water and left to soak for one day. This further softens the tips of the grass and removes any brittleness. At the next stage, small bunches (about 0.5-1 cm diameter) of this treated grass are taken and the moistened ends looped over and bound into place with plastic or nylon twine and then joined to the next bunch of grass so that the whole item begins to resemble a grass skirt. The binding is done by hand (no needles are used) and producers use their teeth to pull the twine tight. This 'skirt' (75-100 cm in length and consisting of some 60-100 small bunches of grass) is then coiled and sewn in place with the same twine to produce a broom. Additional twine is bound tightly around the area just below the top of the broom to provide a grip, and a loop to hang the broom added. The length of the grass is usually between 60 and 90 cm – the longer it is the better for selling. Producers use homemade awls made from pieces of steel strip to do the final sewing. Each broom contains about 0.5 kg of dry grass and takes about  $80 \pm 10$  minutes to make on average. This provides a gross return to labour of approximately R3.50 per hour for processing, and R3 if harvesting time is included. Producers usually make about 20 brooms at a time, which is the amount they can carry to the market. One producer indicated that she could make 200 brooms a week if she was not busy.

In addition to raw material, the other inputs required to make both twig and grass brooms were relatively inexpensive. Plastic or nylon twine was either bought in large rolls for R70, which last more than one year, or in skeins of R1 each sold at pension markets, which do about five brooms. The rubber tubing was obtained for free, exchanged for brooms or purchased at a cost of R5 per inner tube, which is enough for about 40 brooms. Accurate costs were difficult to calculate, but it was estimated that, overall, producers were spending on average about R40 per year on these other inputs.

### **3.6 MARKETS, SELLING AND PRICES**

#### ***3.6.1 Market channels, markets and prices***

The market chain for brooms is presented in Figure 3.6. There are two main channels for sales: direct to customers or via informal street traders. The wholesale and ‘retail’ prices of both grass and twig brooms were identical across the district despite more labour being involved in producing grass brooms. Most producers were selling brooms to intermediate traders at a wholesale price of R3 per broom (Figure 3.6). The brooms were either taken to the market, or traders would come to producers’ homes to purchase in bulk. In the case of the former, producers would simply take a stock of brooms (10-20) to one of the towns and walk around offering these for sale to stall owners. Traders (75%) indicated that they bought from whoever was selling and rarely placed prior orders. It was interesting to note that broom producers were prevented from selling direct to customers at these informal markets. One trader mentioned how producers who attempted to do this were “chased away”. This provided producers with no option but to sell to stall owners at the wholesale (or ‘stock’) price. The towns visited by producers included: Acornhoek (33%), Thulamahashe (31%), Bushbuckridge (7%), Hazyview (6%), Marite (3%), Hoedspruit (1%), Mkhuhlu (6%) and Dwarsloop (1%) (Figure 3.1 and Figure 3.7).

The monthly pension markets served as the other main market for producers. At these it was common to find both traders (usually with a wide range of other goods) and producers selling brooms. Unlike the informal markets in the towns, there appeared to be no restrictions on producers selling brooms at pension markets. Some 56% of producers used this channel and sold brooms direct to customers at R6 per broom (Figure 3.6). Figure 3.8 profiles the number of pension markets visited each month by these producers. Producers usually went to their own village pension market as well as those in the nearest surrounding towns. The pension markets around Acornhoek, being one of the most densely populated parts of the district, were also popular.

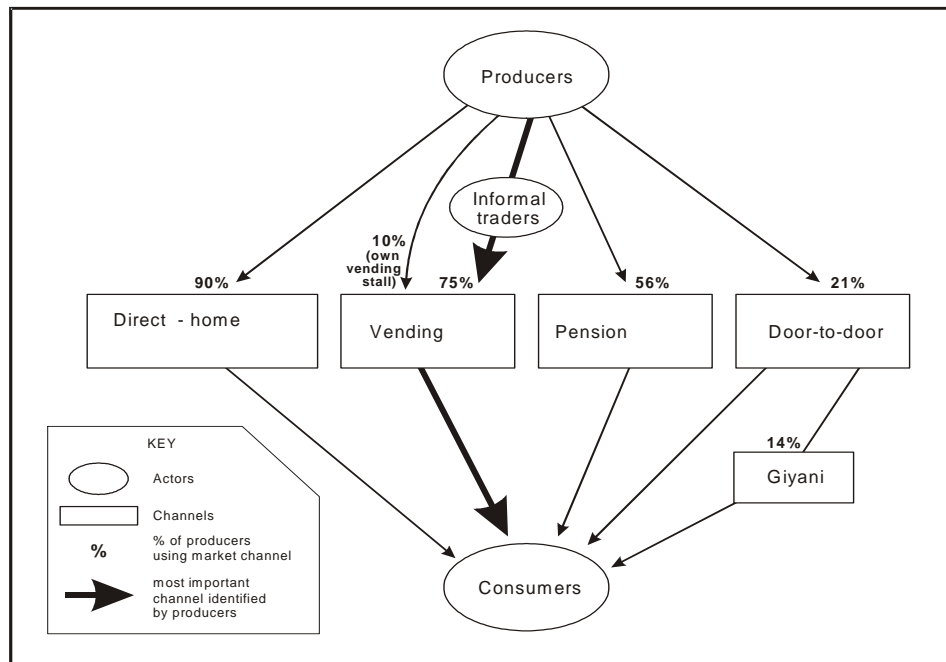


Figure 3.6: Key markets and market channels for traditional outdoor twig and indoor grass brooms

In addition to these two markets, 90% of producers also sold to individual buyers (neighbours) who came to their homes to purchase, but this formed only a small proportion of total sales. Other routes included door-to-door selling particularly in villages where there were few broom producers (21% of producers), selling from one's own stall (10% of producers) and selling in the distant town of Giyani (14% of producers) where there was no raw material locally for broom manufacture (Figures 3.6 and 3.7). Only 10% of producers sold from their homes and nowhere else. These households tended to have lower incomes than others. The remaining households used more than one of the market channels described, and most (75%) sold brooms at both wholesale (R3) and the 'retail' prices (R6). The top three 'most important' selling places as rated by producers were: pension markets, Giyani and Acornhoek.



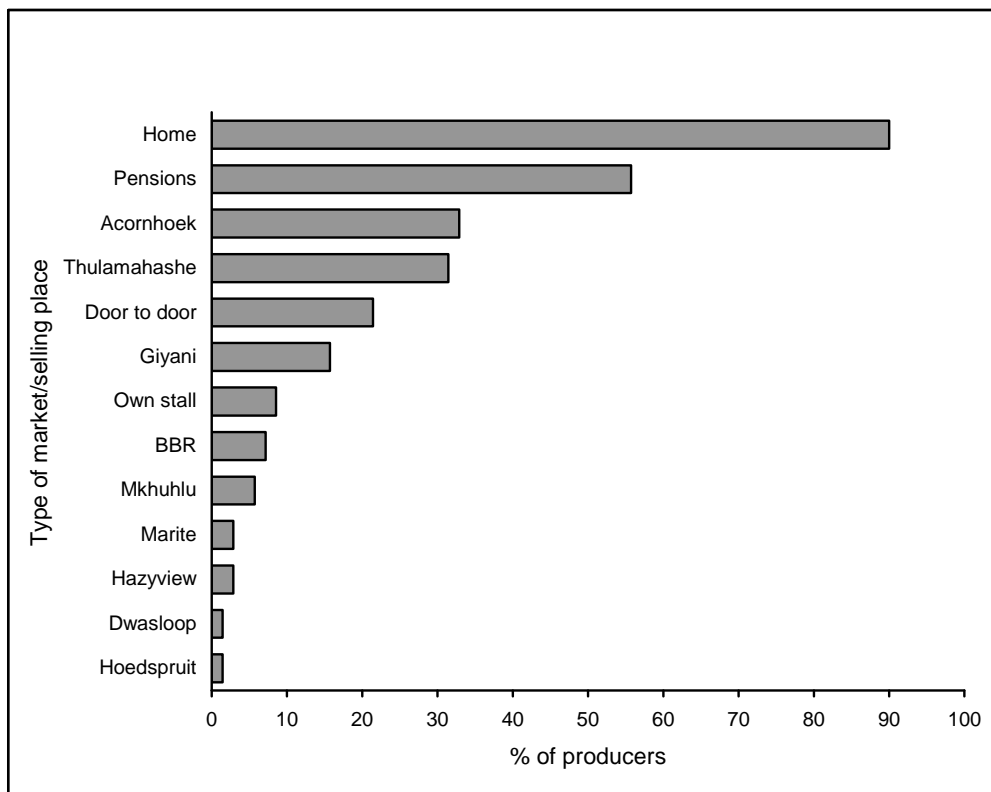


Figure 3.7: Proportion of producers selling brooms in different markets and places (BBR = Bushbuckridge town)

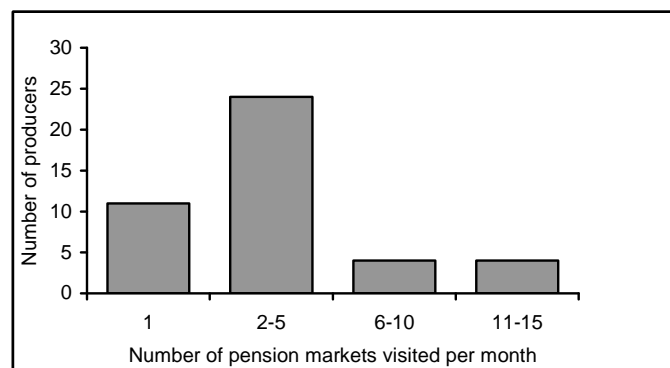


Figure 3.8: Monthly pension market visits made by producers using this channel to sell their brooms

Giyani was one of the most successful markets to visit in terms of earnings. Producers electing to sell in Giyani would build up their stocks to about 400-1 200 brooms. They then hired a one-tonne pick-up truck, often sharing with 1-2 other people, for about R1 200 to take the load to Giyani approximately 200 km away. They stayed there selling for about 1-2 weeks. The wholesale price for brooms in Giyani was R4-R4.50. Other costs included accommodation (sometimes) and food for the vehicle driver. Producers selling in Giyani earned approximately R2 465 ± 625 net per trip. This pushed them into a higher income bracket than other producers (Chapter 7). The high transport costs and the costs involved

in building up such a large stock of brooms precluded many producers from accessing this market. One producer mentioned how someone sometimes bought stocks of brooms from her to sell in the Johannesburg townships of Soweto and Thembisa.

### ***3.6.2 Market description and organisation***

There were no formal organisations or committees in any of the markets except those in shopping plazas where vending stalls had to be hired. For these, a small executive committee usually oversaw the rent payments and stall allocation. Traders did, however, meet informally to agree on standard prices and basic rules such as keeping the market clean. Some 80% of traders indicated that there were market rules relating to hygiene and cleanliness, prices and dispute resolution. In most cases, brooms were only one of many products that traders were selling. Other items included fruit, vegetables, dried foods (beans, chillies, mopane worms), household goods (sugar, salt), cool drinks, snacks, ice cream, sweets, steel wool, cigarettes, clothing and blankets. Traders opened their stalls for 6-7 days per week spending 9-10 hours per day selling. In each of the towns mentioned above there were approximately 14-20 traders selling brooms, making about 80 traders altogether for Bushbuckridge. Each trader had, on average, 6-8 of each type of broom in stock. Thus, the total stock of brooms available in informal markets in the district when the survey was conducted was approximately 1 000. This was said to diminish in the later months of the year when raw material became scarce; people spoke about the “time of brooms” being from about April to October. In addition to the informal markets, in any single pension market there were usually about 15-20 people selling brooms. Three to four pension markets are held every day from the beginning of the month until about the 25<sup>th</sup> of the month in different places in Bushbuckridge (Chapter 2). In each of these markets there was probably at least 100 brooms for sale.

### ***3.6.3 Marketing costs***

Transport to the markets was expensive, especially if more distant markets were visited. The mean cost for those using transport was R126 ± 34 per year including trips to Giyani. The cost of obtaining space on the pension market transport was R35 each time – this usually covered three pension markets all in the same vicinity. Some women saved these costs by walking long distances with bundles of brooms on their heads or pushed their brooms in wheelbarrows to the nearest pension markets. Costs varied from R0 to R690, with less than half of producers incurring any transport costs at all.

### ***3.6.4 Quantities of brooms sold by producers and traders***

During the main trading period (May to September) producers were selling on average about 29 ± 6 brooms in total per week. About two thirds were twig brooms and the remainder grass brooms. The amounts of both types of brooms sold in a week varied from none to over 100, reflecting the different effort that producers put into production and sales. The average monthly sales figure was 80 ± 10 brooms, assuming three weeks per month were spent selling. Traders were selling on average about 45 ± 10 brooms per month, or about eight twig and three grass brooms per week. Traders would sell for the

entire year unless their stocks of brooms ran out beforehand. Some traders mentioned how, if they could afford the cash, they liked to buy enough stocks to last into December when brooms were generally scarce. Traders mentioned that the sales of brooms and other goods picked up towards the end of the month after people had been paid. Generally, they could sell double the number of brooms in the last week of the month than at other times.

### ***3.6.5 Customers and their reasons for buying brooms***

Brooms were purchased mainly by women (95%). They were bought for purely practical and economic reasons, unlike the findings of Cocks and Dold (2004a) for the Eastern Cape where the underlying reason for buying traditional brooms appeared to be cultural. In the latter study, people were found to buy brooms for marriage gifts, as ‘protectives’ against lightening, and as implements for the application of traditional protective medicines in and around the homestead (Cocks and Dold 2004a, Cocks *et al.* 2004a). Although interviewees in Bushbuckridge also made reference to some of these cultural uses, they insisted they were not of prime importance anymore. The majority of people bought traditional brooms because they liked them and they worked well. Outdoor twig brooms were more popular than indoor brooms (which is reflected in the household data in Table 3.2), with the latter often being substituted with shop bought long-handled brooms. Buyers looked for quality – with long, full and tightly bound brooms being preferred. Twig brooms were said to be excellent for sweeping yards and people liked the swirling patterns they left on the ground. A well-swept yard not only looked good, but also allowed homestead occupants to pick up snake and other tracks more easily. Grass brooms were said to be practical for sweeping under beds and in corners, for removing spider webs and doubling up as dusters since they were soft and did not damage furniture.

## **3.7 CONTRIBUTION OF THE BROOM TRADE TO HOUSEHOLD LIVELIHOODS**

### ***3.7.1 Incomes earned by broom producers***

Average gross annual income of producers calculated from the sale of brooms (see Section 3.2) was R2 527 ± 307, equivalent to about R370 ± 44 per month for the production or selling period (approximately seven months) or R210 over 12 months (Table 3.11). Net income, after deducting all costs, was R2 063 ± 296 per annum, equivalent to about R295 per month for the production period or R172 over the whole year. Similar estimates for gross and net income were obtained using the amount of raw material harvested rather than broom sales (see Section 3.2 for an explanation of the different methods of calculating income, Table 3.11). The average net income of approximately R2 000 per annum was comparable to R1 800 per annum obtained by Cocks *et al.* (2004a) for a similar study in the Eastern Cape, but less than half that obtained by Gyan and Shackleton (in press) for their broom study.

The data were, however, extremely variable. The maximum gross income earned was R10 876 and the minimum R315 based on sales figures, and R15 007 and R356 based on raw material figures. The

equivalent values for net income were R10 097 and R21, and R14 917 and R40 respectively. The maximum earning of approximately R10 000 stood out, with the next highest gross incomes being between R7 000 and R8 000 (two producers), and between R4 000 and R6 000 per annum (six producers). The producer earning the very high income worked together with her husband to produce grass brooms (see Section 3.5.7), which she sold in the town of Giyani at R4.50 per broom (see Section 3.6.1). She would take a load of up to 1 200 brooms to Giyani about every two months during the production period. In addition to this, she sold at nine pension markets and frequently sold to traders who came to her home to stock up. Brooms were this household's only source of income. She saved costs by sharing what she harvested on each collecting trip with the owner of the vehicle. The other high earners all had multiple sales strategies selling at a number of pension markets every month, as well as in the towns and from door-to-door in selected villages. A few sold in Giyani as well. Clearly, the more effort producers put into marketing and selling their brooms the greater their reward, as captured in the following quote: "if you carry the brooms you find money".

The incomes calculated from both the broom sales data and the raw material data were higher than producers' own estimates of their income from broom production and nearer to the income calculated based on the stock price of R3 per broom (Table 3.11). It is possible that using a mean price of R4.50 per broom (see Section 3.2) may have over-estimated income earned as more brooms were probably sold at R3 than R6. Alternatively, producers' estimates of their income may not have been very accurate. A number of producers could not estimate their income at all, indicating that they spent the cash as soon as they received it. A common comment was: "I do not count it".

Table 3.11: Estimated average gross and net annual and monthly incomes from broom production calculated using three different approaches (see Section 3.2 for details)

<b>Income</b>	<b>Producers' estimates of monthly income (n=53)</b>	<b>Calculated from quantities of brooms sold (n=55)</b>	<b>Calculated from amount of raw material collected (n=65)</b>
Gross annual income (R) (mean $\pm$ SE)	1 489 $\pm$ 153	2 527 $\pm$ 307 (1 685 $\pm$ 204 at stock price)	2 753 $\pm$ 313 (2 003 $\pm$ 228 at stock price)
Gross monthly income (R) (mean $\pm$ SE)	213 $\pm$ 22 (R124 over 12 mths)	370 $\pm$ 43 (production period) (R210 over 12 mths)	-
Net annual income (R) (mean $\pm$ SE)	-	2 063 $\pm$ 296 (1 392 $\pm$ 203 at stock price)	2 004 $\pm$ 296 (1 212 $\pm$ 296 at stock price)
Net monthly income (R) (mean $\pm$ SE)	-	R295 (production) (R172 over 12 mths)	-

Net income as presented here is equal to gross income minus all costs except the opportunity costs of labour.

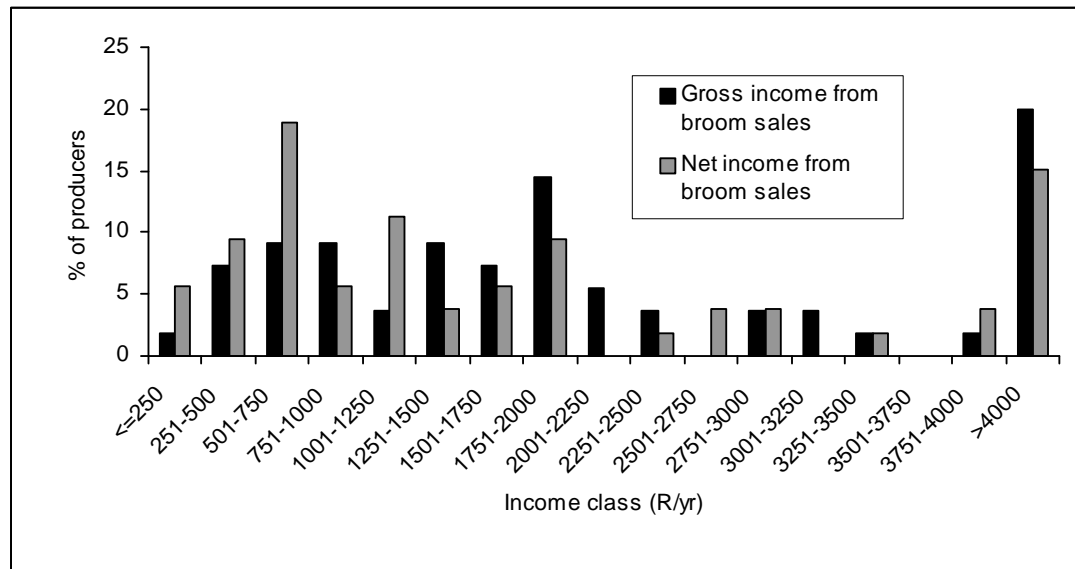


Figure 3.9: Distribution of gross and net annual income earned from selling brooms in class intervals of R250 (calculated from the weekly sales of brooms) (percentage of respondents in each class, n=55)

Although, on average, incomes from the broom trade were modest, some producers were clearly earning good returns reflecting their involvement and effort in the trade as well as access to alternative sources of cash. High earners often had access to other sources of income, providing them with the cash to harvest raw material more frequently and to market further afield, i.e. to make a real business of broom production. Figure 3.10 illustrates how higher income households tended to earn more in absolute terms from brooms than lower income households, although this was not statistically significant. In other cases it was concerted effort, sheer hard work and an entrepreneurial flair that put producers into the higher income bracket. For example, one producer mentioned how she sells all year round “if I don’t go and harvest and run out of stocks I buy from someone else. I bought from someone last week for R180 and then went around selling each broom for R5.” The availability and mobilisation of additional labour within the household and the organisation of this was also an important factor in augmenting income streams (see above).

This pattern of highly diverse incomes amongst natural resource product sellers is not unusual and has been reported for many different products both in South Africa (e.g. this thesis, DACST 1998, Rogerson and Sithole 2001, Kepe 2002, Gyan and Shackleton in press) and elsewhere in the world (e.g. Velásquez Runk 2001, Lebbie and Guries 2002, Vormisto 2002, Marshall and Newton 2003). This variation is important to consider and capture when assessing the potential contribution of natural resources to livelihoods and poverty alleviation. Some people, albeit a minority, are clearly able to earn reasonable incomes from trading in natural resource products, something that is often lost or overlooked when data

are reduced to averages. On the other hand, other producers may be not seeking to earn more than a supplementary income and only participate in the trade to the extent they feel is necessary to meet their specific cash needs and to fit in with other household activities. It is their choice to maintain a part-time involvement and this is probably carefully assessed in the light of other livelihood options (e.g. Gyan and Shackleton in press). In other cases, however, producers may be constrained by their personal circumstances or by problems with the resource or markets, which prevent them from optimising their incomes. This is elaborated on further in Chapter 7.

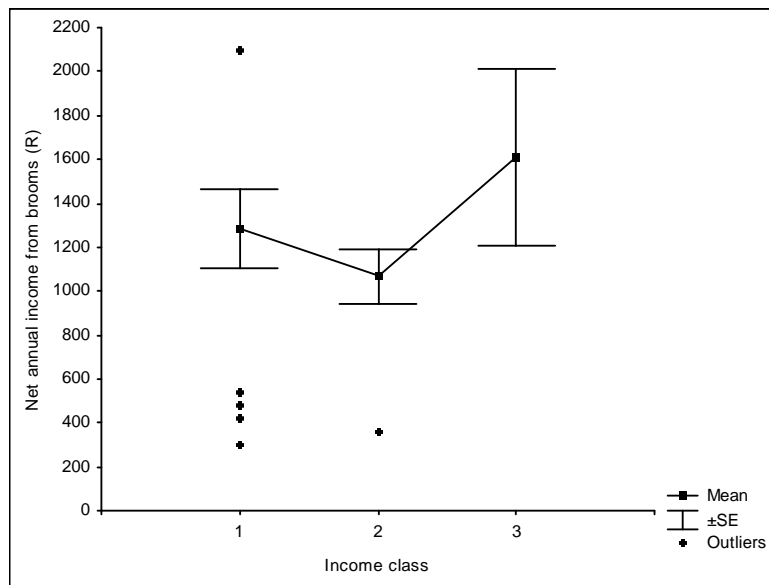


Figure 3.10: Mean plot of net annual income from broom sales for producers relative to total cash household income class from poorest to ‘wealthiest’ (Class 1 =  $\leq$  R500/mth, Class 2 =  $>$ R500-R1 000/mth, Class 3 =  $>$ R1 000-R2 000/mth, Class 4 =  $>$ R2 000/mth – for comparative purposes these classes have been standardised throughout the case studies reported in this thesis)

### 3.7.2 Incomes earned by broom traders

Traders’ gross monthly income from broom sales was  $R273 \pm 62$ , with net income being half of this at  $R136 \pm 31$  per month. Net annual income based on eight months selling was  $R1 091 \pm 246$ , approximately half that calculated for producers (Table 3.11). Variation in this income was less than for broom producers with the exception of one trader who was selling in pension markets. Her income for the year was R9 600. Traders’ mean annual income from their businesses as a whole was  $R6 141 \pm 971$ . Income from brooms formed some  $20 \pm 3\%$  of this. Brooms thus appeared to be a relatively important product to them.

### 3.7.3 Producers’ and traders’ perceptions of the broom trade as a livelihood option

Producers, coming from amongst the poorest and least educated sector of the Bushbuckridge population, were selling brooms mainly because they had few other options and were forced to find some means of

earning an income. Many entered the trade after some setback in their households such as the loss of a job or a death (Section 3.4.1). Rogerson and Sithole (2001) made similar observations for handicraft producers in the same region, and wrote about ‘supply-push’ rather than ‘demand-pull’ reasons for entering the trade, with the majority of crafters entering the business out of necessity or survival. However, this was not the case for all producers. Several mentioned that they had to find ways of earning income that allowed them to remain at home as they had children and grandchildren to care for or could not undertake permanent employment for health reasons, while others (19%) had been making and selling brooms for 30 years or more and saw this as their full-time occupation. The barriers to entry for the broom trade were relatively low, particularly if producers started off by harvesting in the nearby mountains and then worked towards being able to collect from more productive, but expensive to reach, sites on private and state land. Although 59% of producers indicated that they would prefer to do something else for a living, 41% were satisfied with the broom trade. Reasons given for this included: being able to work from home and look after their children and grandchildren; the fact that brooms were non-perishable and therefore there was no problem of wastage as was the case with trading in fresh produce; that it was possible to earn more from brooms than from some of the local jobs available to them such as domestic work for more well-off rural households or farm labour; that they were independent and could set their own pace (this was especially important for those older women and those in ill health); that this was something they knew how to do, were in control of and enjoyed; that only a little money was needed to get stocks; and that it combined well with other self-employment activities such as sewing, and the selling of other natural resource products and goods. In contrast, one producer mentioned that there were no positives to this business – “it requires going into the bush and is hard work but we have no choice in what we do.” This ‘no choice’ situation is fairly common amongst participants in the natural resource trade, and accounts for the growing number of people entering this market worldwide. Often there are just no other opportunities available, especially for older and illiterate women and those without land holdings (the latter being the norm in Bushbuckridge) (e.g. Kepe 2002, Rogerson and Sithole 2001).

For traders, 55% were content with the work they were doing whereas 45% would have preferred to have a regular salaried job. Traders worked long hours and often both Saturdays and Sundays and were constantly running into cash flow problems. Many mentioned, when I interviewed them, how they were short of stocks or “broke”. Petty trading is increasingly becoming an important option for women seeking some form of income generation, but has higher barriers of entry than the natural resource product trade. For example, start-up finance is required to purchase initial stocks and a space to trade has to be found. Street vending tends to be a common option for households with other sources of income, which can be invested in the trading business, or for households that can borrow start-up finance from relatives or other sources. Like the natural resource product trade, vending is a growing employment option and form of livelihood diversification for rural (and urban) women, not just in South Africa but all over the world (e.g. Toulmin *et al.* 2000, Bryceson 2002, Campbell *et al.* 2002).

Producers' perceptions of whether their businesses were growing, stable or declining were mixed (Table 3.12). Those who felt that their businesses had declined attributed this to the increasing number of people entering the trade and the consequent competition for markets and buyers. Some also mentioned that they were afraid of being arrested at the harvesting sites, and so were collecting less raw material than previously. Others were simply too old or had developed illnesses and could not work at the same intensity as they had in the past. Those who felt that their businesses had grown came to this conclusion because they now found themselves with adequate finances to pay for most of their needs. Others felt that their businesses had changed little over the years and complained that the prices of brooms were not increasing in pace with the costs of transport or the costs of living. Several producers who had been in the trade for more than ten years mentioned how in the past their earnings allowed them to purchase most of their household requirements, whereas today this was not possible.

Table 3.12: Producers' and traders' perceptions of trends in their individual businesses

	<b>% of producers (n=70)</b>	<b>% of traders (n=40)</b>
<b>Grown</b>	39	31
<b>Stable</b>	31	37
<b>Declined</b>	30	32

The reaction of traders was also mixed with little consensus, preventing the prediction of an overall trend. The reasons provided for a decline in business were similar to those for broom producers, i.e. too many traders and a lack of stocks. Others included a lack of buying power amongst customers and a decrease in the profit margin on individual items. Traders who felt that their businesses had grown attributed this mainly to an increase in the variety of products they were selling. Those believing their businesses to be stable indicated that it was very difficult to predict any trend, as their incomes varied widely from month-to-month.

The majority of producers and traders felt that the overall trades had grown, with the reason being that there were now more producers and traders than when they had first started. The growth in participants in broom production and in general trading was attributed to a lack of employment opportunities, widespread retrenchment and increasing costs of basic foods, which all forced people to look for means of self employment, livelihood diversification and supplementary income.

#### **3.7.4 Contribution to household livelihoods**

Producers were obtaining on average 51% of their income from broom production with some as much as 100% (Figure 3.3, Section 3.4.2). Poorer households were obtaining proportionally more of their income from the broom trade than wealthier households (KW-H = 21.3;  $p < 0.001$ ) (Figure 3.11), a fairly common finding for NTFPs (Newmann and Hirsch 2000, Cavendish 2000). Some producers in addition to earning cash income also exchanged their brooms for food with village neighbours. In a few cases of



very poor households, who could not afford the transport costs to sell brooms elsewhere, this formed an important contribution to the household. Neighbours and relatives of these destitute households often donated more than the brooms were worth. Broom traders received on average  $11 \pm 2\%$  of their total cash income and 20% of their business income (Section 3.7.3) from the sale of brooms. Thus, brooms formed just one of numerous sources of income.

Incomes earned (see above) compared favourably with the wages from unskilled jobs in the area, and as mentioned by the women themselves, were better than what they could earn from, for example, local domestic work (see Chapter 7). Interestingly, broom producers were earning more than handicraft weavers from the neighbouring area who were targeting the tourist rather than local market. Up to 45% of these producers received less than R100 per month (Rogerson and Sithole 2001). However, even given the extremes in earnings described above, incomes still tended to be at a subsistence or survival level for the majority of producers and traders (as also described by Rogerson and Sithole 2001 for handicraft producers in the same region), with cash flow being a constant problem for both groups. The broom trade is thus unlikely to provide a pathway out of poverty for participants, but it does mean that they have an independent source of income and do not have to rely on family and friends for support and donations in the absence of any other employment opportunities (see Box 3.2).

The cash earned from broom production and selling was totally controlled by producers and traders themselves. No cases were found where married women were required to relinquish this income to their husbands as heads of household. The income was used mainly for the good of the household including to purchase food, household goods (soap, soap powder, floor polish, etc.) and to pay school fees. A number of women specifically mentioned the importance of the income from brooms in contributing to their children's and grandchildren's schooling costs. One producer shared how her children "no longer go to bed crying of hunger" since she became involved in the broom trade. Another proudly pointed to a tiled roof on her house, which she was paying off with the income she obtained from broom sales. Other uses of the income included contributing to the purchase of alternative goods for sale and its reinvestment into the broom business for further raw material harvesting, purchase of twine, etc. The value of the income earned to producers and their households is captured in the statements quoted in Box 3.2.

Non-financial benefits of trading in brooms included independence and self-esteem, the opportunity to work from home and integrate income earning activities with other household duties (as mentioned above), the productive use of time (a number of women mentioned how it was better "to do brooms than sit around at home"), new social networks and support systems, and entrepreneurial skills that can be applied elsewhere or which may provide an entry point into the formal sector (DACST 1998, Rogerson and Sithole 2001). Terry (1999) highlights similar social benefits of the handicraft industry in Botswana

and elsewhere, stressing that “the psychological benefits of having purposeful work cannot be denied when the alternative might be unemployment”.

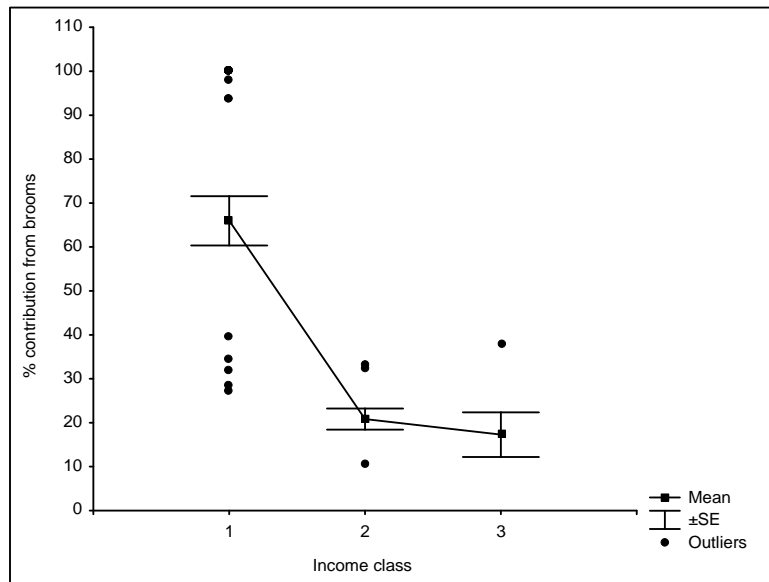


Figure 3.11: Mean plot of percentage contribution of the broom trade to households of differing total cash income status from poorest to ‘wealthiest’ (see Figure 3.10 for definition of classes)

Box 3.2: Livelihood contributions from the broom trade: quotes from interviews

“My children were not going to school – I decided to go with a friend to harvest so I could send them.”  
 “I had to stop working because of asthma and high blood pressure – I learned from a friend to do brooms as I only had a temporary pension for my illness.”  
 “I asked a neighbour for food and she said you will find food if you go and cut brooms. The brooms give me food when I can’t do anything else.”  
 “If people come and buy stock I can earn R100 – R200 in one day.”  
 “Brooms are good as there is always business.”  
 “The broom trade is good as I find money to help my children especially my disabled child with special schooling.”  
 “I am doing this as I am looking after my child and grandchild and cannot take a job far away.”  
 “My husband was getting too little money – by doing this I can help him support our children.”  
 “Brooms are a way to earn money that we can learn to do ourselves.”  
 “I can find a lot of money if I have good stocks.”  
 “I can help myself in this way.”

In addition to producers and traders, raw material transporters were other beneficiaries from the broom trade. It was estimated that the trade was contributing between R500 and R1 000 per month to local vehicle owners during peak harvesting season.

### 3.8 CONSTRAINTS TO THE TRADE

Overall both producers and traders were generally positive about their trades with relatively few complaints. Many when asked, “what are the problems you experience in doing this business”,

answered “none”. However, with probing and discussion an array of problems and constraints began to emerge. These differed between traders and producers.

Broom producers’ problems related mainly to obtaining raw material. These included the high costs involved in transporting the raw material from the harvesting sites to producers’ villages, the difficulties experienced in gaining access to private and state land to harvest, the very strenuous work involved in harvesting, the competition for raw material that existed in the areas harvesters were able to access as well as shortages of this material, the lack of somewhere to stay when harvesting, and a danger and fear of snakes. Other frequently expressed problems related to the poor prices obtained for brooms and a lack of customers. Producers felt that the ‘stock’ price of R3 that they obtained for their brooms did not take into account their considerable labour in making the brooms. The lack of customers was attributed to the fairly rapid growth in the number of people participating in the trade, to the point that the market was becoming saturated. Some producers mentioned how they had stopped attending pension markets, as there were too many sellers there and that they sometimes returned home without selling anything. Others, however, persevered and this usually paid off as discussed in the previous section.

Table 3.13: Problems and constraints identified by producers (percentage of producers mentioning)

Issue	% of producers (n=70)*
Transport costs for raw material harvesting and/or marketing	83
Access to raw material	81
Laboursome process	64
Competition	40
Low prices	39
Shortages of raw material	37
Too few customers	20
Lack of shelter/accommodation when collecting	14
Snakes in raw material collecting areas	11
Buyers use credit and delay paying back	10
Seasonality/burning	10
Costs of raw material	6
Harvesting away	3
Asthma when collecting	1
Lack of loans	1
No shops to buy food where collecting	1

\*Categories are not mutually exclusive so the column total exceeds 100%.

In contrast to producers, traders’ problems related mainly to cash flow and competition (Table 3.14). Most of the concerns raised were encompassing of their businesses as a whole and not just to the selling of brooms. The five most frequently expressed problems were the high costs of stocks, the lack of customers, the high wastage of perishable items, competition due to the large number of traders, and the credit system employed by buyers. Some traders were dissatisfied with the price they were receiving for brooms but felt that buyers would simply not buy if the prices were higher. Traders mentioned how many of their customers were poor and could barely afford to buy food never mind other goods. Traders sometimes allowed their customers to purchase on credit and pay back at a later stage. However, they

did complain that it sometimes took a long time to receive their money. The lack of customers was perceived to be related to both an increase in unemployment and associated decrease in available cash to spend as well the growth in the number of traders in the market. The latter was also attributed to the increasing levels of unemployment, and the data reflects this with many traders entering the vending business after jobs had been lost in their households (Section 3.4.3).

Table 3.14: Problems and constraints identified by traders (percentage of traders mentioning)

Issue	% of traders (n=40)*
Cost of stocks	45
Too few customers	45
High wastage	45
Competition	35
Transport to market stalls	25
Buyers use credit	25
Low prices	15
Lack of shelter	13
Rent costs	8
Theft of stocks	3

\*Categories are not mutually exclusive so the column total exceeds 100%.

### 3.9 CONCLUSIONS: SUSTAINABILITY OF THE TRADE AND ENHANCING BENEFITS

The local market for brooms was sizable, with about 390 000 brooms required per annum (Section 3.1), and relatively stable and secure. This market has existed for some 30 years and evidence suggests that it is likely to remain for the foreseeable future. Local people continued to show a preference for traditional brooms, in particular outdoor twig brooms. Such local markets and their potential are often not appreciated by governments or development agencies, with the emphasis often being placed on external and export markets (Arnold 2002b). Yet, local markets often provide a reliable and accessible avenue for the sales of a wide range of traditional products (Arnold 2002b, Chapter 8, Table 8.5). Thus, while the market for brooms is not necessarily a lucrative or high paying one, it is certainly large and likely to remain stable into the immediate future, guaranteeing broom makers with an avenue to sell their products.

There is also potential to grow alternative markets, especially in the face of increasing saturation of local markets (Section 3.8). Several producers mentioned how they were sending brooms to townships near Johannesburg in Gauteng (some 500 km away). However, the large Gauteng markets are also being supplied with brooms from a nearby area making it difficult for producers from Bushbuckridge to compete (J. Olivier, pers comm.). More regional markets such as those in areas where raw material is scarce, e.g. Giyani, could possibly be exploited further. Certainly urban dwellers indicate interest in purchasing traditional products, with brooms featuring highly amongst these (Cocks and Dold 2004a, Cocks *et al.* 2004a). Such markets for traditional and cultural products need to be encouraged and

promoted (see Chapter 4, Section 4.9). A small number of grass brooms were found for sale in curio and craft shops in the wider tourism area indicating a potential new market, especially for colourful and neatly adorned brooms that could be used for decoration. The managers of the shops where these brooms were stocked commented on their popularity. The primary constraint to expanding markets is a lack of cash to pay for transport to reach more distant market places, as well as to collect adequate raw material; producers need to take large quantities of brooms at a time (a few hundred) to these markets in order to be cost-effective. Access to micro-credit to overcome these cash flow constraints may assist producers to enhance their incomes. These aspects are discussed further in Chapters 8 and 9.

With regard to the resource base, the main issue appears to be access to the resource rather than scarcity or poor availability of raw material. The resource does not appear to have been impacted on negatively by the broom trade. Ecological data suggest that the plants used for both types of brooms are hardy and able to tolerate, and even respond positively, to defoliation (Section 3.3). Thus, although more information is required on, for example, the impacts of snapping *A. phylloides* shoots off at the base, existing evidence suggests that raw material production has the potential to be sustainable (also see Chapter 8). Producers also mentioned how the resource had changed little in the time they had been using it. Moreover, as much of the harvesting is from private and state land, the opportunity exists to introduce controls and systems for the sustainable management of the resource including rotational harvesting and new harvesting practices. Research initiatives investigating the cultivation and domestication potential of *A. phylloides* as a herbal tea (see Section 3.3) may also have positive spin-offs for the broom trade. Cultivation of this plant may be a future option although it is not clear at the moment exactly how this could be done, as most of the areas in which it grows are either commercial farms or forestry estates.

While the resource shows potential for sustainable use, access to it on the private and state land from where it is harvested was extremely tenuous and at the discretion of landowners and managers. Communication between these actors and broom producers was poor, often resulting in tensions and misunderstandings between the two groups. More secure and negotiated access is required for the trade to provide long-term benefits to producers. This may require a third party to lobby for and negotiate on behalf of producers, since the latter are a particularly disempowered group. Better organisation amongst producers may assist in this process as well as provide a mechanism to help ensure that producers adhere to their side of the agreement and do not abuse their access rights, as is sometimes the case.

Overall, in terms of sustainability the broom trade looks favourable with the main threat being the growing number of people taking up this business, leading to saturation of local markets in the context of fairly limited potential for large new markets. The ambiguous and insecure nature of resource access is a further factor affecting sustainability, especially as farmers become less amenable to people harvesting on their land and the state continues to delay on allowing producers to collect within

conservation areas. Further details on the opportunities, challenges, lessons and recommendations arising from this case study are presented in Chapters 7, 8 and 9 in relation to the other case studies.

### **3.10 SUMMARY OF KEY FINDINGS**

- The broom trade in Bushbuckridge is based on two types of brooms, indoor grass brooms made from *Festuca costata* and outdoor twig brooms made from the shrub *Athrixia phylicoides*. Most producers make both types of brooms.
- Raw material is gathered primarily from private and state land outside of Bushbuckridge. Secure access to raw material is one of the major constraints producers face.
- As well as direct sales, large numbers of brooms are channelled through intermediary traders owning informal vending stalls in the business centres of Bushbuckridge.
- Producers were a vulnerable group of mainly middle-aged to elderly women with poor levels of education. Over half headed their own households. A large proportion were reliant on the broom trade as their primary, and often only, source of cash income. Many entered the trade because they had few other options. Broom sales contributed, on average, 51% of total household income.
- Traders tended to be slightly younger, better educated, and from more well-off households than producers, with brooms being only one type of good they sold. Again, over half of trader households were headed by women.
- Incomes were highly variable for producers, ranging from a few hundred rand per annum to as much as R10 000. Average net income was approximately R2 000 per year.
- Traders earned less from broom sales, on average R1 000 per annum, with this forming about 20% of their income from trading and 11% of their total cash income.
- Expansion into new markets is required if the trade is to sustain current benefits, since local markets are becoming increasingly saturated as more people join the trade.

## CHAPTER 4

### THE TRADE IN WOVEN REED MATS AND WALL DECORATIONS

#### 4.1 INTRODUCTION

Woven reed mats (known as *masanga* or *mosemu* in Bushbuckridge) are an important handicraft product produced across southern Africa wherever suitable weaving materials are locally available (Heinsohn 1991, C. Shackleton and S. Shackleton 1997, Terry 1999, Kotze 2001, Kepe 2002, Makhado 2004, Pereira 2004). Mats feature strongly in local culture as well as having numerous utilitarian functions. Large mats are used for sleeping on, mainly by children as conventional beds or mattresses have largely replaced sleeping mats amongst adult household members. Mats are still widely used by women for sitting on, with many of the older generation preferring these to chairs and, indeed, often disapproving of younger women who do not observe this tradition (Kepe 2002, pers. obs.). Amongst the Mpondo in the Eastern Cape and the Zulu in KwaZulu-Natal, food mats are frequently used to serve meat during feasts (Kotze 2001, Kepe 2002). For maize grinding, slightly larger versions of these food mats may be placed under grinding stones to catch any spilt grain (Kepe 2002). In Namaqualand, traditional beehive houses are covered entirely by reed mats. These easily dismantled homes are ideally suited to the Nama's nomadic lifestyle (van Wyk and Gericke 2000). More recently, in certain parts of the country, mats have increasingly taken on a decorative and aesthetic dimension for both local and external markets. Smaller mats, which have been colourfully and intricately decorated with plastic bags, twine, wool, crisp packets and foil sweet-wrappers, are now commonly produced and sold as 'wall hangings' or table runners. Many of these show considerable innovation.

Culturally, mats are significant for several rituals and ceremonies. In the study area, small mats (often decorated in colours that match one's outfit) are commonly bought for initiation ceremonies and shaken during dancing, as well as used for sitting on. During feasts and celebrations women generally sit on mats, and mats may line the aisle for the bride and groom to walk on during a wedding ceremony. Mats are also used in burials to either line the bottom of the grave or to place over the coffin (Kepe 2002, pers. obs.). This is believed to create the conditions for the deceased to 'rest in peace'. Traditional healers use mats for themselves and their patients during consultations and in cleansing rituals (Kepe 2002). Mats are also extensively presented as gifts at initiation ceremonies, weddings and at the end of a widow's one-year mourning period (C. Shackleton and S. Shackleton 1997, Kotze 2001, Kepe 2002). The functional uses of mats as described above also play a key role in maintaining people's connections to their culture, traditions and ancestors. Mats, thus, still form an integral part of the way of life of rural people in South Africa across a range of ethnic groups, and there are few households in areas where

mats are produced who do not possess a number of mats for different purposes (C. Shackleton and S. Shackleton 1997, Kepe 2002).

A wide range of sedges and rushes are used for mat production (Table 4.1), with many producers using a number of these depending on local availability. Grasses and palm fibres may also be used for weaving, but rarely to produce sleeping and sitting mats (Kotze 2001). The species used for mat weaving are thus predominantly wetland species growing in perennially moist areas in marshes, around dams and rivers, and in estuaries. The most popular species are members of the Cyperaceae and Juncaceae families. These plants are characterised by high productivity, resilience to defoliation, rapid vegetative regeneration, and commonly occur in plant communities of low species diversity thus demonstrating high potential for sustainable utilisation (Cunningham 1985, Heinsohn 1991). In most cases it is the culms that are harvested for weaving, with many of the sedges being leafless, whereas the leaves of *Cyperus latifolius* and *C. immensus* are used (Table 4.1). The thin, hard stems of the rush, *Juncus kraussii*, are said to provide the highest quality and most durable of the raw materials (Van Wyk and Gericke 2000).

Table 4.1: Species used in reed mat manufacture in South Africa

Species	Type of reed	Reference
<i>Juncus kraussii</i>	Salt water rush	Heinsohn (1991), van Wyk and Gericke (2000), Kotze (2001)
<i>Cyperus latifolius</i>	Sedge	Heinsohn (1991), Kotze (2001), this study
<i>Cyperus textilis</i>	Sedge	Heinsohn (1991), Kotze (2001), Mathe (2001), Kepe (2002)
<i>Cyperus sexangularis</i>	Sedge	Heinsohn (1991), Kotze (2001), this study
<i>Cyperus fastigiatus</i>	Sedge	Heinsohn (1991), Kotze (2001), this study
<i>Cyperus marginatus</i>	Sedge	Kotze (2001)
<i>Cyperus alternifolius</i>	Sedge	C. Shackleton <i>et al.</i> (1998)
<i>Cyperus natalensis</i>	Sedge	Van Wyk and Gericke (2000)
<i>Cyperus immensus</i>	Sedge	Van Wyk and Gericke (2000)
<i>Schoenoplectus brachyceras</i>	Sedge	Van Wyk and Gericke (2000)
<i>Schoenoplectus scirpoides</i>	Saline sedge	Van Wyk and Gericke (2000), Kotze (2001)
<i>Schoenoplectus scrymboseus</i>	Sedge	Kotze (2001), this study
<i>Typha capensis</i>	Bulrush	C. Shackleton <i>et al.</i> (1998), Kepe (2002), this study

To date, much of the work on the weaving industry has focused on the production of crafts for tourist markets by groups of women involved in external enterprise development interventions (DACST 1998, Marcus 2000, Kotze 2001, Krüger and Verster 2001, Institute of Natural Resources 2003). There is little information available on locally driven production for local markets (Kepe 2002), despite mats being widely used and purchased (Table 4.2). The majority of rural households own between two and five mats (C. Shackleton and S. Shackleton 2000, Kepe 2003, Twine *et al.* 2001), and most will have either presented or received a mat as a gift at least once during the course of a year. While most households have the skills to make their own mats, many do not have the time or inclination to do so. Thus, even in areas where reeds are available, about one third of households on average are purchasing their mats (Table 4.2). The numbers may be even higher in regions without adequate reed resources, and where mats must be imported from elsewhere. For example, in the Kat River area in the Eastern Cape nearly



all households using mats (Table 4.2) are purchasing these. When extrapolated up, the size and potential of the local mat trade is significant. In Bushbuckridge alone it is estimated that there are between 150 000 to 250 000 mats in the region at any one time, all made locally (C. Shackleton and S. Shackleton 1997). Annual demand is roughly 70 000 to 100 000 mats (C. Shackleton and S. Shackleton 2000), with approximately 36% of households selling mats. In KwaZulu-Natal, ten years ago, it was estimated that some 7 500 people were involved in the weaving industry, with most of these producers making mats as well as other fibre-craft items (Heinsohn 1991). Little work has been undertaken to try and understand who these weavers are and how important production is for their livelihoods. Much of the production and marketing activity is not visible as selling takes place informally between households, with the result that the local level trade tends to be forgotten and neglected. As for the other case studies, this case explores the local level trade in reed mats and decorative ‘wall hangings’ in the Bushbuckridge municipality and its significance for household income generation and livelihood security.

Table 4.2: Use and purchase of reed mats by rural households (hh) in different regions of South Africa

Study site	% hh using	% hh purchasing	Reference
Kat River, Eastern Cape	18 - 50	13 - 41	C. Shackleton <i>et al.</i> (2002)
Bushbuckridge, Limpopo Province	47*	30	Dovie <i>et al.</i> (2002)
Mogano, Limpopo Province	9	3	S. Shackleton <i>et al.</i> (2002a)
Kwajobe, KwaZulu-Natal	100	41	S. Shackleton <i>et al.</i> (2002a)
Hlabisa, KwaZulu-Natal	80	58	Magasela <i>et al.</i> (2001)
Mametja, Limpopo Province	82	67	Twine <i>et al.</i> (2001)

\*Other studies in Bushbuckridge have shown higher use (e.g. C. Shackleton and S. Shackleton 2000).

## 4.2 METHODS

The broad approach follows that outlined in Section 1.6, Chapter 1. Data were collected in the 2003 harvesting season during August and September. Interviews were conducted with 115 mat weavers at their homes. Since it was known that mat weaving, unlike broom production (Chapter 3) or woodcarving (Chapter 6), occurs throughout Bushbuckridge, 20 villages were randomly selected from a list of 58 villages obtained from the Municipal Demarcation Board (2004). This list was then revised to: a) ensure adequate coverage of both the wetter west and drier east of the study area where different weaving species were used, b) accommodate a village that was involved in a large wetland project which could use the data generated from this study, and c) include selected villages where a lead or entry point already existed, for example where weavers had been encountered during previous surveys. After this fine-tuning, 21 villages were finally selected (Figure 4.1). Between three and 12 households were visited in each village, depending on village size and the number of weavers resident in the village. Sample households were identified by asking people in the village to direct us to mat weavers. An interview was only administered if the weaver actively sold mats (many people make for their own use). As outlined in Chapter 1 the interviews involved obtaining quantitative and qualitative information on the producer and her household, the history of her involvement in the trade, aspects of harvesting, processing and trading, and livelihood benefits.

A large sample size was necessary so that the data could be disaggregated according to: a) weaving species, and b) those buying or collecting their raw material. This was necessary to ensure an accurate and more complete picture of the reed product trade in Bushbuckridge. Thus, I analysed harvesting and production data for each species separately, further disaggregating for purchased and collected reeds. For ease of reporting the two species used for commercial production (Section 4.3) are referred to by their genus names *Schoenoplectus* and *Cyperus* in this write-up.

In addition to the household interviews, harvesting sites, pension markets (see Chapter 2, Section 2.1.4) and informal markets were visited for further contextual information. Key informant interviews were conducted with farmers in the Hoedspruit area where some producers were harvesting or purchasing raw material, and with the managers of some formal sales outlets. Specimens of the reeds used were collected, with the guidance of weavers, for accurate herbarium identification. Where possible different sized bundles were measured and weighed.

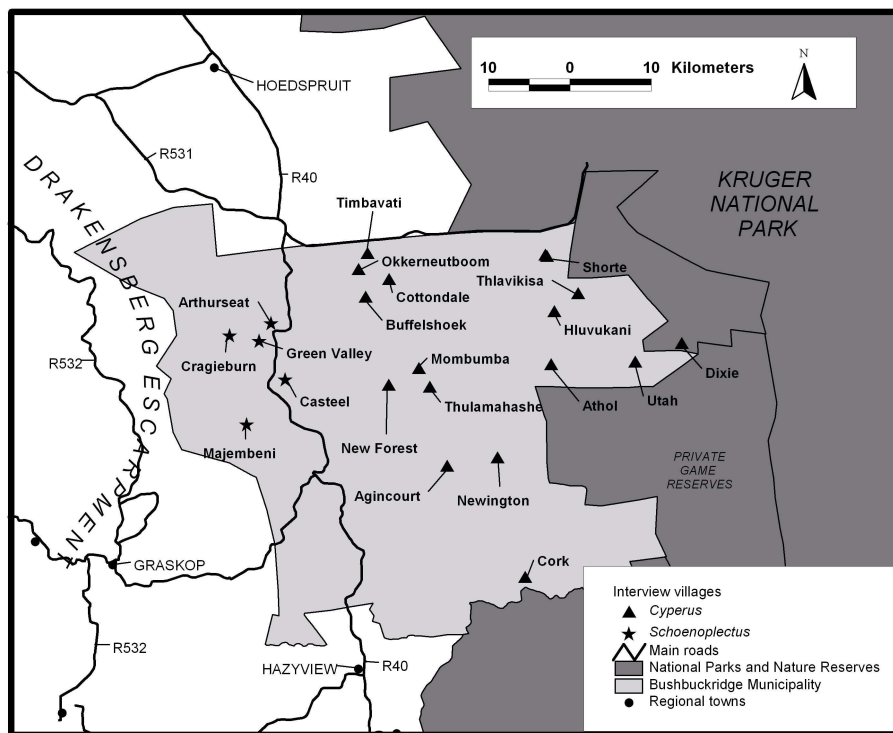


Figure 4.1: Distribution of sample villages across Bushbuckridge indicating the separation between primarily *Cyperus spp.* users and *Schoenoplectus corymbosus* users

Quantities of raw material harvested or purchased were determined from the frequency of harvesting or purchase, the number of bundles obtained each time, and the length of the harvesting or selling season. When calculating this and income from sales, numerous cases had to be dropped as some respondents were unable to report with any confidence on the quantities of raw material harvested or on their mat

sales. Gross annual incomes from mat sales were determined based on the number of mats sold by each producer per year, multiplied by the average price across all sizes of mats (R52), as it proved too difficult to obtain information on the size of each mat sold. An assumption was made that most producers were selling most sizes of mats and that this was likely to even out through the year. Income from the sales of reeds was also included in the income calculations for those producers selling reeds. Net incomes were calculated by subtracting all costs excluding labour. Because monthly sales were erratic, an estimate of monthly gross and net income was obtained by dividing annual income by 12 months. As a crosscheck, producers were also asked to estimate their own monthly income from mat sales.

### 4.3 THE RESOURCE: SPECIES USED FOR MAT WEAVING IN BUSHBUCKRIDGE

#### 4.3.1 Species used

Six species of wetland plants were used for mat production in Bushbuckridge, namely *Cyperus sexangularis* Nees,<sup>6</sup> *Cyperus fastigiatus* Rottb., *Cyperus latifolius* Poir., *Schoenoplectus corymbosus* (Roth ex Roem. & Schult.) J. Raynal, *Typha capensis* (Rohrb.) N. E. Br. and *Kyllinga* spp. The most popular species were *C. sexangularis* collected mainly along earthen irrigation canals in the farming district of Hoedspruit, *C. fastigiatus* harvested locally in the drier, eastern parts of Bushbuckridge, and *S. corymbosus* collected locally from wetland areas in the wetter, western part of the study area against the Drakensberg mountains. The popularity of the different species was a function of the quality of the fibre, the accessibility and availability of the plant, and buyers' preferences. Some people preferred *Cyperus* species, saying the mats made from this raw material were more durable, while others preferred *S. corymbosus* as it is spongier and more comfortable to lie or sit on. Mats made from species other than the three most popular species tended to be used only by a small proportion of producers (6%) and were seldom offered for sale in the market place.

*Cyperus sexangularis*, locally known as *imizi*, forms the most important raw material for people living in the drier parts of Bushbuckridge. This species is characterised by sharply angular stems of about 1-2 m in height. Leaves are absent except for leaf-like bracts at the ends of the stems (Kotze 2001). *C. fastigiatus* is similar, but with smooth stems. Both grow in moist areas including seasonally flooded depressions and ephemeral rivers and do not need to be permanently inundated (W. Uys, pers. comm.).

*Cyperus latifolius* (*rikwana*), a less popular species, grows to about 1.5-2.5 m. It has stiff leaves, shaped like a 'w' in section, that are used for weaving rather than the culms. The leaf margins are smooth, distinguishing it from *Cyperus dives* which has rough, sharp margins (Kotze 2001). The latter is not used for weaving and is known locally as *jekejeke*. *C. latifolius* mats are rarely sold. Leaves from the bulrush (*T. capensis* or *mphanga*) are also used to make mats, but again rarely for sale. A reason for this

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<sup>6</sup> Note - species authorities are only provided for those species identified as being used in the mat trade.

is that mats from these species are slow to make as the leaves must be folded and are much coarser and less durable than mats made from the other species. Another species that was mentioned for weaving, but which was relatively unimportant was a small, fine leaved *Kyllinga* species, locally known as *ncema*; but unrelated to the *ncema* (*J. kraussii*) used in KwaZulu-Natal.

*Schoenoplectus corymbosus* (*rixakwa* – Shangaan or *leshago* – North Sotho/Pedi), is a leafless sedge of 1-2 m in height with spongy stems and small clusters of inconspicuous brown flowers. This species prefers to grow in water and have its roots permanently submerged (Hilliard 1987, mat producers, pers. comm., pers. obs.), one of the reasons why it is used mainly by North Sotho speaking people living in the area immediately below the Drakensberg escarpment where there are numerous small rivers and wetlands forming the upper reaches of the Sand River catchment. The culms of this species are used for weaving and it forms the most important weaving species for people living near to its source (Figure 4.1).

#### **4.3.2 Potential for sustainable use**

All of these wetland species appear to be able to tolerate, and even respond positively to, frequent defoliation (Heinsohn 1991, Kotze 2001). In Ecuador, for example, it was found that regular harvesting promoted the growth of *Schoenoplectus californicus* stands by increasing stem density (Macia and Balslev 2000). Similar results were found for both species of the common construction reed *Phragmites* (McKean 2001). Mat weaving plants are also resistant to drought, with the main effect of poor rainfall being on the length of stems, due to slow re-growth, rather than the density of plants (C. Shackleton and S. Shackleton 1997). Farmers in the Hoedspruit area, where much of the harvesting takes place, mentioned how hardy *C. sexangularis* is, growing in seasonally wet areas and surviving long periods of desiccation (“you can dry an area and re-wet it a few years later and the *Cyperus* will re-grow”) (W. Uys, ichthyologist and tourism operator, pers. comm., A. Smith, local commercial farmer, pers. comm.). By contrast, heavy rains and floods were said to be detrimental to reed populations, and have far greater impact than harvesting, as floodwaters may wash entire plants away. However, recovery is reasonably rapid taking about two seasons to revert to full production (mat producers, pers. comm.).

Wetland plants are known to be fast growing and have high regenerative capacities (Kotze 2001). Furthermore, most *Cyperus* species can be easily cultivated from rhizomes as demonstrated experimentally by Heinsohn (1991) and described by Kepe (2002, 2003) and Mathe (2001) for the mat weavers of the Transkei region of the Eastern Cape, who cultivate their own raw material. Similarly, several producers interviewed for this study were growing *Cyperus* in their home gardens (Section 4.5.1.). Cultivation for commercial production is thus a feasible option. *S. corymbosus*, on the other hand, is more difficult to grow because of its water requirements. However, some producers mentioned that they do encourage the growth of this plant in areas where it is sparse by throwing uprooted pieces into the water. These sink, root and then grow (Section 4.5.1). More intensive cultivation appears to be

possible given that a related species, *Schoenoplectus californicus*, has been successfully managed, grown and improved by local Indian communities in Ecuador and Peru for generations (Macia and Balslev 2000, Banack *et al.* 2004). Indeed, the authors state that the majority of *S. californicus* stands in these countries are probably the result of human cultivation. Fibre-producing wetland species thus have many favourable characteristics suited to sustainable harvesting by producer communities for the commercial market (Christiansen 1999). The few negative impacts identified related mainly to non-selective harvesting with a sickle that removes seed as well as unripe culms, reducing the availability of stems the next season (Mander *et al.* 1995). Furthermore, if waste material is discarded on site it often forms a dense mat that may inhibit re-growth in the following season (Mander *et al.* 1995).

#### **4.4 WHO IS INVOLVED IN THE MAT TRADE?**

The trade chain for reed mats was relatively simple involving one main group of actors – mat weavers or producers – who harvested or purchased raw material, processed the mats and sold these to end consumers through informal channels. Some producers also sold bundles of reeds (13% of the sample), and occasionally people were encountered who sold the raw material only. This analysis focuses on mat producers of which there were three main groups distinguished by the raw material they used: *Cyperus* users (40%), *Schoenoplectus* users (36%), and those that used both (24%).

##### **4.4.1 Profile of producers and their households**

Mat producers were all women with an average age of  $57 \pm 1$  years. They were amongst the oldest of all the producers and traders interviewed across the case studies, with 52% being between 40 and 60 years old, and 40% over 60 years (Table 4.3). Only 9% were younger than 40 years of age. This result is not unexpected; mat weaving is reputed to be primarily an older woman's activity (for grandmothers or *kokwana*) since only they have adequate time to devote to it. This domination of the weaving trade by middle-aged and elderly women has also been found by other studies (e.g. Makhado 2004, Pereira 2004). As would be anticipated from the age profile, the majority of producers (65%) were illiterate with no education, while 25% had completed some years of primary school, and 7% some years of secondary school (Table 4.4). Only three individuals had finished high school, and two of these had obtained a tertiary education qualification. The mean number of years of education was  $2 \pm 0.3$  (Table 4.3).

Half of producers were married. Amongst those that were 'single' and headed their own households (50%), 39% were widowed, 2% divorced and 9% independent single. This proportion of female-headed households is higher than that for the region or the country as a whole (Posel 2001, S. Shackleton and C. Shackleton 2002). As they were elderly, many of the weavers had adult and even married children living with them.

Table 4.3: Age, education and marital profiles of mat producers (percentage of respondents in each class)

Variable/attribute	Class	% of producers (n=115)*
<b>Age</b>	≤ 20 years	0
	21-30 years	2
	31-40 years	7
	41-50 years	20
	51-60 years	32
	>60 years	40
	Mean $\pm$ SE = 57 $\pm$ 1	
<b>Education</b>	None	65
	Primary	25
	Secondary	7
	School leaving certificate	1
	Tertiary	2
	Mean $\pm$ SE = 2 $\pm$ 0.3	
<b>Marital status</b>	Married	50
	Single (divorced or unmarried)	11
	Widowed	39
<b>Position in household</b>	Producer is head - female	50
	Husband is head	47
	Father or brother is head	2
	Mother is head	1

\*Due to rounding up, column totals for each variable may not always add up to exactly 100%.

Producers' households were larger than the average for the area (6.2 people) at  $7.7 \pm 0.3$  people. Just less than one half (44%) of households had at least one employed household member (Table 4.4). The proportion of households with pensions was also high at 52%, reflecting the age of the producers, whilst one third of households received child grants. A relatively small proportion of mat producing households, 12%, had no other regular source of income except for mats (Table 4.4). These data are indicative of the supplementary income role that mats play for a large proportion, but not all, of producer households. Total monthly household income ranged from as little as R12 to R4 600 per month, with a mean of  $R900 \pm 57$  (Figure 4.2), and was closely related to whether the households were receiving pensions or not (Figure 4.3). Approximately 14% of households earned less than R250 per month, 10% between R250 and R500, 40% between R500 and R1 000, and 36% greater than R1 000. Some 64% of households still fell below the income poverty line of R237 per adult equivalent (Carter and May 1999), with even more below the more recent 2003 Minimum Living Level (MLL) of R1 871 for a household of 4.7 people (Bureau of Market Research 2003).

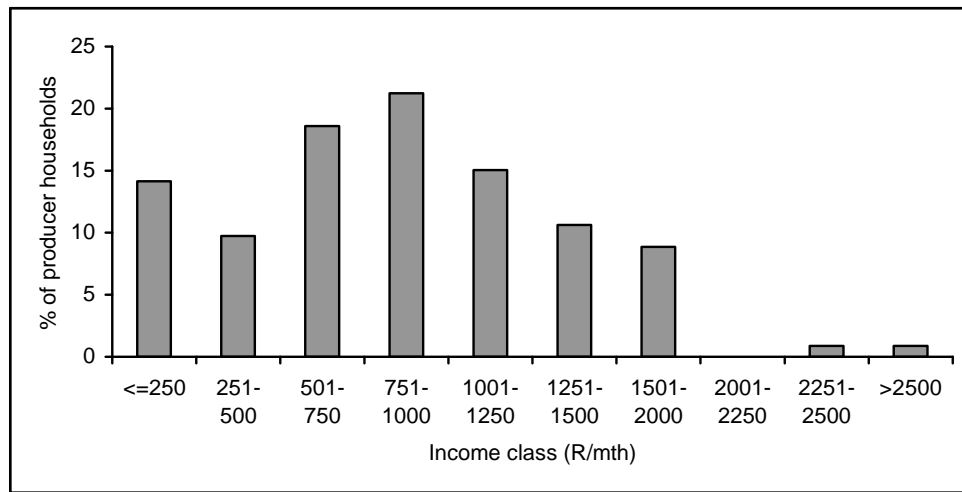


Figure 4.2: Distribution of total monthly cash income (Rands) of mat producer households based on intervals of R250 per month (percentage of respondents in each class, n=113)

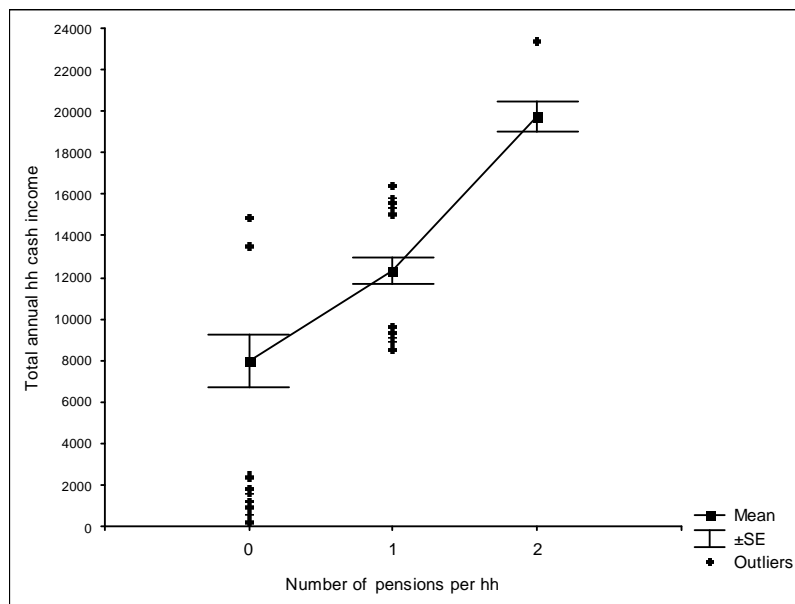


Figure 4.3: Mean plot of the relationship between pensions received by households (hh) and total annual household cash income demonstrating the considerable contribution pensions make to the overall household income of mat producers (n=113)

Just over half of households had access to either fields or gardens on the edge of rivers in the western villages (Table 4.4). This approximates the average for Bushbuckridge as a whole (S. Shackleton and C. Shackleton 2002). A large number of households also cultivated their home plots and grew fruit trees. Only a few sold crops. Livestock ownership was again representative of the area as a whole (S. Shackleton and C. Shackleton 2002), with 24% of households owning cattle, 20% goats, 15% pigs and

55% chickens (Table 4.4). Producers' homes were generally multi-roomed and built with cement bricks and corrugated iron for roofing.

Table 4.4: Income and livelihood profiles of mat producer households (percentage of respondent households in each class)

Variable/attribute	Class	% of producers (n=115)
<b>Employment</b>	None	56
	One job	37
	> One job	7
<b># Sources of income</b>	At least one job	44
	At least one pension	52
	At least one child grant	36
	No regular source of income	12
<b># Ownership of productive assets</b>	Fields	56
	Cattle	24
	Goats	20
	Pigs	15
	Chickens	55
<b>Most important source of hh income as identified by respondents</b>	Mats	13
	Pension	48
	Temporary job	1
	Other self-employment *	11
	Permanent job	18
	Child grant	2
	Disability grant	1
	Remittance	4
Family donations/support	2	
<b>Assessment of importance of mats</b>	Very important	14
	Important	42
	Slightly important	43
	Not important	1

# Note: These categories are not mutually exclusive and therefore percentages add up to more than 100%.

\* This included activities such as vending, sewing, upholstery, wood sales, etc.

#### 4.4.2 Producers' involvement in the mat trade

While most producers felt that mat production was an important contributor to household income, this was usually supplementary to other income sources. For example, 99% of mat weavers felt that the income earned from the sale of mats was of some importance for their households, but only 14% said this was very important (Table 4.4). When ranking different income sources, mats were rated as the most important source of household income in 13% of cases. Pensions were the principal contributor to income for the largest number of households (48%), followed by permanent jobs (18%) and other forms of self-employment (11%). Overall, mats contributed, on average,  $21 \pm 3\%$  of total annual household cash income (Figure 4.4), similar to the figure of 26% obtained by Pereira (2004) in the Eastern Cape. While for the majority of weavers (75%) mats contributed between 1-25% of cash income, a small proportion (10%) were almost totally dependent on mats for their livelihoods (Figure 4.4).



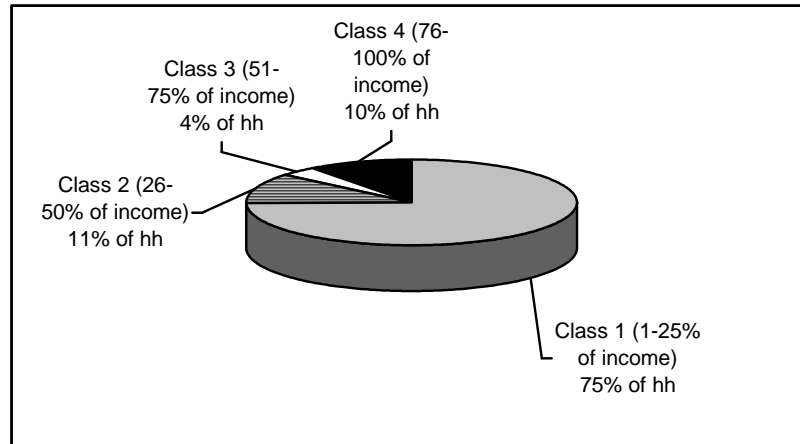


Figure 4.4: Proportion of total annual household (hh) cash income contributed by mat sales (percentage of mat making households in each class, n= 107)

A diversity of reasons were provided by producers for entering the mat trade (Table 4.5). Numerous producers (30%) commenced mat weaving after the loss of a key income source for the household, usually their husband's income (Table 4.5). This was generally due to his retrenchment or death, but also sometimes because he neglected to provide for the family. Poverty, suffering, hunger and a lack of money to buy food and pay school fees, as well as a need to augment the meagre incomes that households were already receiving comprised the other main reasons for engaging in mat weaving (Table 4.5). With regard to the latter, the entry of these households into mat production could be viewed as a form of livelihood diversification (Ellis 1999), since it swells and diversifies the number of income sources available to the household (see Chapter 7). Other more specific reasons for trading in mats included: the death of both parents, the need to work from home, participation in a community craft project, and that weavers initially producing for home use were approached by others to sell them mats. More detailed discussion revealed that some 10% of interviewees needed the money from mat sales to care for grandchildren after the death of the children's parents, most likely from HIV/AIDS.

Prior to entering the mat trade, 22% of producers had been formally employed and 10% had been involved in selling (and may still be) other products (Table 4.5). Three producers had been scholars; with one obtaining a teacher's qualification but failing to find work. The greatest proportion of producers were, however, unemployed and had decided to put their time to productive use by making mats and engaging in other forms of self-employment. At the time of interviewing, 58% of mat weavers had started selling other products, with some of these being other natural resources including brooms (10% of total sample), thatch (3%), carvings (2%), clay pots and grass products (3%), herbal medicines (2%), wild foods (4%), marula kernels (13%), seed necklaces (1%) and firewood (2%). Other types of activities mat weavers were involved in were baking, sewing, vegetable gardening, sorghum beer production (illegal), curio sales, informal 'tuck' shops, plastic mat production, clay brick making,

hairdressing, traditional healing, and the sales of old clothes, fruit and vegetables. Thus, mat weavers tended to have relatively diverse livelihood sources at both an individual and household level. An interesting issue was raised by a producer who mentioned that her main business used to be baking and selling scones, but flour had become too expensive and she had shifted to mat making as her primary income source. Thus, the inaffordability of inputs for other forms of self-employment appears to be forcing people to turn to more freely available natural resource products.

The years of participation in the mat trade was fairly evenly spread across all classes (Table 4.5), although the highest proportion of producers (30%) had started selling mats in the last five years. However, the trade is not new. About a third of producers had been selling mats for between 20 and 30 years or more, with many of them starting before they were of pensionable age. The mean number of years in the trade was  $15 \pm 1$ .

Table 4.5: Reasons producers gave for entering the mat trade, their prior occupations and years in the trade (percentage of respondents in each class)

Variable	Class	% of producers (n=115)*
<b>Reasons for entering mat trade</b>	Loss of husband's income	30
	"Suffering and hunger"	25
	For extra income – to help other earners	19
	Observed others trading mats	10
	No jobs	5
	Approached by others to make mats for them	4
	Retrenchment	3
	Part of community project	2
	Orphaned	1
	Gave birth – work at home	1
<b>Previous occupation</b>	Unemployed	65
	Employed	22
	Trading other products	9
	Farming	2
	School/college	2
<b>Number of years in the trade</b>	1-5	30
	>5-10	9
	>10-15	10
	>15-20	22
	>20-30	19
	>30	10
	Mean $\pm$ SE = $15 \pm 1$	

\*Due to rounding column totals for each variable may not always add up to exactly 100%.

In summary, mat weaving can be characterised as primarily a supplementary source of income providing much needed additional cash, and reducing risk through diversifying income sources. Households were poor, but not as desperately as some of the other cases described in this thesis (Chapter 7). This was partly because half of mat producers were elderly and were obtaining a monthly pension of R700. Although the contribution of mat sales to household income was relatively small, some producers were making a full-time business out of mat production as illustrated in Figure 4.4 and

Box 4.1. It is also notable that the majority of mat weavers were unable to find alternative work because of their age and poor literacy. Of interest was the fact that only 36% of mat makers expressed preference for other work. Mat weaving appears to be a reliable and relatively easy source of income that integrates well with other earning activities and household duties, and that can be done by elderly women. One woman mentioned specifically how she makes mats in the winter and farms during the summer. Another mentioned how she occupied her spare time by weaving and how the income was an added bonus to the household.

## 4.5 MAT PRODUCTION: RAW MATERIAL PROCUREMENT AND PROCESSING

### 4.5.1 Mechanisms for obtaining raw material

More than half of the entire sample of mat weavers harvested their own raw material, while the remainder either purchased this at pension markets, direct from local harvesters (often other weavers) or from farm workers in the Hoedspruit area. In terms of the latter, workers either brought the reeds to Bushbuckridge or producers went to the farms to fetch the raw material. Some producers, especially those going to Hoedspruit to buy, often acted as intermediaries or ‘middlemen’ between the farm workers and other mat weavers. Generally, most *Schoenoplectus* was harvested by producers themselves, whereas *Cyperus*, in particular *C. sexangularis*, was more often bought (Table 4.6). A number of producers were procuring raw material through both of these means. A small proportion of mat makers (6%) obtained their raw material on a ‘share’ basis, wherein they would be provided with reeds in return for half of the mats they produced. Producers harvested both individually and in groups, with 53% of *Cyperus* users working in groups, and 91% of *Schoenoplectus* users. *Cyperus* producers tended to go to Hoedspruit to collect on their own, whereas most *Schoenoplectus* users collecting from communal areas preferred to work in groups for reasons of safety and companionship. The average size of these groups was  $4 \pm 1$  women. Children often assisted at weekends with carrying the reed bundles home.

Table 4.6: Proportion of producers collecting and purchasing *Cyperus* and *Schoenoplectus*

	% collecting only	% purchasing only	% collecting and purchasing	% not using	Total % (n=115)
Using <i>Cyperus</i> only	17	18	5	60	100
Using <i>Schoenoplectus</i> only	31	4	1	64	100
Using both species	8	15	1	76	100

### 4.5.2 Harvesting raw material: Sources, access and availability

Most of the *Cyperus* used in Bushbuckridge, whether purchased or collected, came from private farms on the Blyde River irrigation system in the Hoedspruit/Essex area approximately 30 km from Bushbuckridge (Figure 4.5). Half of *Cyperus* users were sourcing their raw material from this area (Figure 4.6). Another important source of reeds were the small annual rivers and streams in the nearby communal rangelands, used by 28% of producers. A few weavers (10%) living in Utah near the Sabie

Sand and Manyeleti Game Reserves were harvesting from these reserves (Figure 4.5). The remaining producers collected from private farms in the Komatipoort area (over 100 km away) (5%), a local dam (5%) and their own gardens (3%).

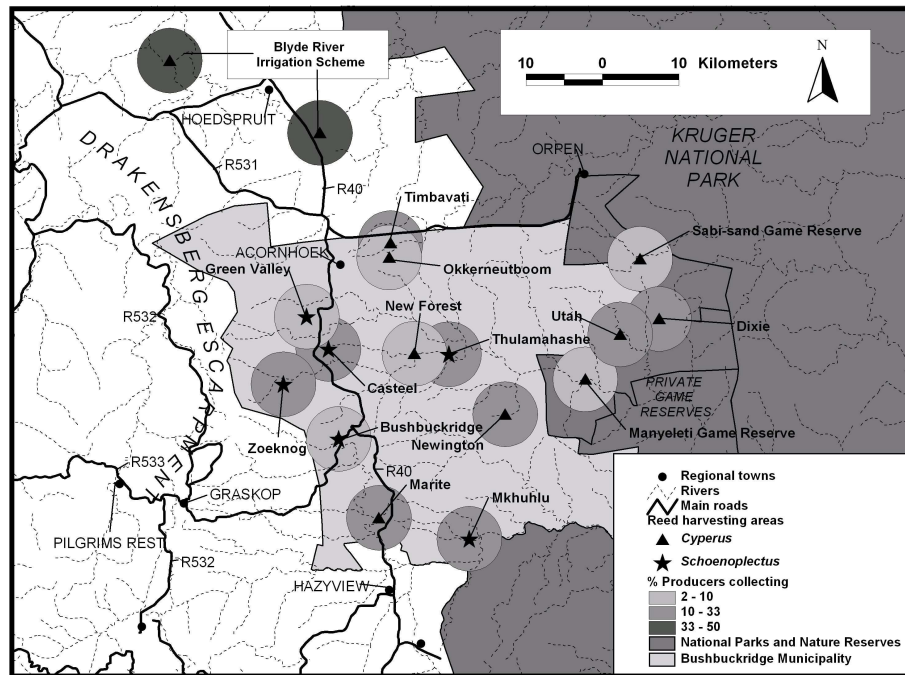


Figure 4.5: Main harvesting areas for both *Cyperus* and *Schoenoplectus* indicating harvesting sites and proportion of producers collecting at each site

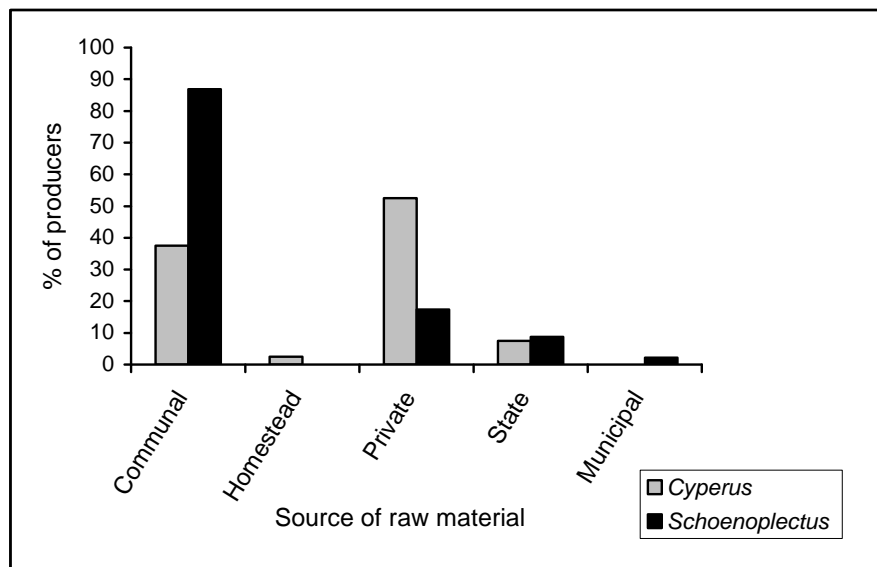


Figure 4.6: Proportion of producers harvesting from the different land tenure systems for *Cyperus* and *Schoenoplectus* (as some producers were harvesting from more than one area the figures do not add up to 100%; private land includes commercial farms in the Hoedspruit and Komatipoort areas and the Sabie Sand Game Reserve)

There were various procedures and systems in place for harvesting from private land. It was only in the communal areas, or on one's own property, that producers could harvest freely. However, despite restrictions (recognised by 62% of producers), the majority of *Cyperus* harvesters (62%) felt that it was relatively easy to access raw material. Producers collecting on private, commercial farms in the Hoedspruit/Essex area required permission to harvest. In almost all cases, producers had a relative or friend working on the farm or they had been employees in the past, which facilitated their access. Many farmers preferred to allow their own workers, or their families, to harvest rather than outsiders (W. Uys, pers comm., A. Smith, pers. comm.), primarily because this was easier to regulate. Generally, farm workers were protective of the resource, not readily permitting others, particularly those with whom they had no social links, to access it. Many of them sold the raw material for supplementary income. There were few restrictions on cutting once producers gained access. Most of the material was harvested from the earthen irrigation furrows that traverse the area, subsidiary rivers and small irrigation dams. Farmers were generally pleased to have someone clear these systems of the clogging reeds, which grew prolifically due to high amounts of chemical fertilizers entering the water (A. Smith, pers comm., M. Uys, development worker, pers. comm.). There was, however, concern that plans to improve the irrigation scheme through the installation of a pipeline would reduce the need for storage dams and furrows, and thus threaten the supply of the reeds in the future (M. Uys, pers. comm.). At present, though, there is no shortage of raw material in this area, with 69% of producers believing that there was adequate supply.

The small proportion of producers (10%) harvesting from the private and state run conservation areas generally had husbands or other relatives working for the reserve authorities. However, many producers from the villages bordering these game reserves complained that they were not permitted to harvest within the reserves, despite an abundance of raw material inside the fences. The reasons for this were not clear, although it was suggested that one problem might be the presence of dangerous wild animals. Whatever the reason, producers were disgruntled with the seemingly uninterested and uncooperative attitude of the reserve owners and managers.

Collection of *Cyperus* reeds from the river and streambeds in the communal areas yielded far smaller quantities of reeds than the other sources. In low rainfall periods, such as the season this survey was undertaken, reeds of a suitable length were said to be particularly scarce (29% of interviewees mentioned that availability had decreased due to drought). It was usually producers who could not afford the transport costs to Hoedspruit or who only needed small quantities of raw material that harvested from these sites. One producer mentioned how "when it is raining I collect in the rivers but when it is dry like this year I go to the farms". Unlike the situation in Pondoland, where local women 'owned' reed beds and gardens along drainage lines (Kepe 2002), this resource remained open access in the communal lands of Bushbuckridge.

Although only one mat weaver mentioned that she obtained all her raw material from her own plants, other producers in Bushbuckridge were experimenting with cultivating *Cyperus* at their homesteads. Sixteen percent of producers had planted *Cyperus* on their home plots, although generally only between 1-3 plants, and 42% knew of others who had planted this species. The plants were said to grow well and could be harvested, but growth was poor in 2002 and 2003 due to drought. Grazing by livestock was also a common problem. A major constraint preventing expansion of these ‘reed gardens’ was that few women had a supply of water at their homesteads. Only one interviewee had attempted to grow *Cyperus* in a riverbed near her home, but she had problems with people “stealing” her crop.

The most important sources of raw material for *Schoenoplectus* users were the numerous drainage lines, wetland areas and small dams making up the landscape at the base of the Drakensberg mountains, close to where producers resided (Figure 4.5, 4.6). Approximately 80% of users relied on these areas for their reeds (Figure 4.6). Some specific harvesting sites mentioned included the: Nokokgware River, Pelele River, Santikwani River, Gaydodi River, Mabalayakgomo River, Mutlumuvi River, Moreveta River, Manakana River, Motkatse River, Thulandizteka River and Dam, Matshidi River, Zoeknoeg Dam and Casteel (Joseph) Dam. All these areas fell under communal tenure and were readily accessible to harvesters (only 22% of producers mentioned any restrictions and these mainly applied to non-communal land), although some traditional controls were in place to regulate use. For example, it was prohibited to harvest reeds before the local headman or chief had formally declared the harvesting season open, usually around Easter time. This requirement was more rigorously enforced in some areas than others, with a few producers admitting to having been arrested by the traditional police and then fined for harvesting prior to the chief’s announcement. The fine can be from R200 upwards. Similar rules governing the time of harvesting, which is generally after flowering and when the plants start to die back naturally, are described by Kotze (2001) for KwaZulu-Natal. However, a number of weavers also mentioned that there was no point in attempting to harvest early, as the reeds were too soft, which meant that they bent and peeled easily. One weaver mentioned, “a mat made from unripe reeds will not even last a year”. C. Shackleton and S. Shackleton (1997) reported a similar observation. Despite this, other producers felt that you had to go early and “be first” to avoid the competition.

Another factor affecting access to weaving reeds in these communal areas was the growing number of small, fenced vegetable gardens that were being sectioned out of the wetlands along the rivers and valleys. Most of the ‘owners’ of these gardens have enclosed and laid claim to any reed beds occurring within the zones demarcated for their use. Since this effectively privatises the resource, mat weavers have been cut off from supplies they were previously able to access. A group of weavers from Casteel felt that it was unacceptable and unfair that people could take ownership of a resource they had not planted. It appeared that owners of gardens only allowed family or friends to harvest, or they harvested themselves and sold the raw material. Producers were not clear how the land allocation process for these wetland gardens operated, nor whether they could legitimately protest about being denied access to a

resource that many of them had used for decades. From discussions with other researchers working in the area, it was revealed that no systematic procedure appeared to exist for the application or granting of land for these gardens, with it mainly being left to the discretion of the chief, or, alternatively, people simply laid claim to pieces of land (S. Pollard, local researcher, pers. comm., mat producers, pers. comm.). This is an issue that requires further investigation, and that will need to be addressed by the different institutions involved in local governance matters.

In principle anyone could harvest at any site within the region. However, during discussions producers revealed that outsiders were generally not welcomed by locals, and that, indeed, they would request any non-locals to desist if they found them harvesting. Some weavers from Casteel described how “one guy destroyed everyone’s material” near Zoeknoeg Dam because they were from a different village, although fairly close by. On the other hand, other producers felt that there was no competition between harvesters for raw material and that there was an adequate supply. Certainly, some of the producers interviewed (9%) were harvesting outside of their own immediate areas and were not being prevented from doing so. One issue facing harvesters from outside the area was that it was difficult to drive to many of the harvesting sites to load the raw material onto transport, whereas most locals carried their reed bundles home. Additional harvesting sites, used by only a small proportion of producers, included a state forestry area located just west of the communal areas described above (Figure 4.5) (2% of producers), some private farms in the Nelspruit, Kieppersol and White River areas (9%), and some wetland gardens (4%).

Approximately 82% of users felt that it was easy to access raw material, while 66% believed that this was in adequate supply. Only 29% of weavers perceived the availability of *Schoenoplectus* to have decreased. This was attributed mainly to poor rainfall, which inhibited growth during the current season, and to floods in 2001, that either washed the reeds away or buried them under sediment.

In terms of cultivation, the picture was less positive for *Schoenoplectus* than *Cyperus*. As mentioned in Section 4.3.2, this was probably due to its need to grow in water which prevented women establishing these plants on their home plots. The majority (72%) of *Schoenoplectus* users believed that the plant could not be cultivated at all – “God plants”. Only three producers (6%) had ever tried to grow it for themselves, and nine (18%) mentioned that they knew of others who had propagated this species. Of those growing the plant, one had tried it in her home garden and the other two in their wetland gardens. The plant was propagated by either planting pieces of the rhizome or by throwing these into the water (see Section 4.3.2). The latter was often used to encourage establishment in areas where *Schoenoplectus* was scarce. Unlike *Cyperus*, which can be grown on home plots, it appears that it will only be possible to grow *Schoenoplectus* in wetlands and rivers in mainly communal land. This presents problems with respect to tenure over the resource (see above), unless producers have their own wetland garden. The system of individual ownership of stands of reeds seen in Pondoland, Eastern Cape (Kepe 2002) and in

Ecuador (Marcia and Balslev 2000) has not evolved in Bushbuckridge, and probably would be very difficult to introduce.

#### 4.5.3 Harvesting season, procedure and quantities of raw material harvested

The harvesting season for both *Cyperus* and *Schoenoplectus* is winter from April until August, with most producers gathering their raw material between June and July. This coincides with the broom harvesting season (Chapter 3), and a few producers, who also traded brooms, mentioned how they collected material for both products concurrently. Good Friday was often mentioned as the cut-off date after which harvesting could commence, with the actual date being announced by the chief for *Schoenoplectus* (see above).

On average, *Cyperus* users collected raw material  $2.4 \pm 0.8$  times per season (Table 4.7). Some 45% of producers were harvesting an entire one-tonne truckload at a time at Hoedspruit, and as a result usually only went to collect once or twice a year. Each truck carried the equivalent of about 75-150 standard bundles. Women mentioned how they would “go and cut for one week and collect enough for the year”. Producers collecting from the communal lands tended to go out more frequently with one producer making as many as 30 trips and another, 12 trips over the harvesting period. They usually collected a single headload at a time, equivalent to about 3-5 standard bundles (hereafter referred to as bundles). The total number of bundles collected each trip was extremely variable ranging from 2 to over 100. Over the season, an average of  $48 \pm 7$  bundles were harvested per *Cyperus* user, varying between a maximum of 150 and a minimum of five bundles. When disaggregated according to the type of unit collected, one-tonne truck users were collecting on average  $81 \pm 10$  bundles per season, headload gatherers  $21 \pm 5$  bundles, and those harvesting standard bundles  $39 \pm 17$  bundles. Using a mean mass of 3.15 kg per bundle (the mean for R10 and R20 bundles), the average mass of raw material harvested per producer was  $174 \pm 32$  kg, varying between 12 kg and 473 kg. This could make some  $42 \pm 7$  large sleeping mats considering each bundle makes 1-2 large mats. However, as mats of many different sizes are produced, the average number of mats per producer per season is probably greater than this.

Table 4.7: Frequency of harvesting and average quantities of raw material harvested each season by *Cyperus* and *Schoenoplectus* users (all data are per producer)

<b>Per producer</b>	<b><i>Cyperus</i> (n=38)</b>	<b><i>Schoenoplectus</i> (n=45)</b>
Number of collecting trips per season (mean $\pm$ SE)	$2.4 \pm 0.8$	$11.4 \pm 1.5$
Number of standard* bundles collected per season (mean $\pm$ SE)	$48 \pm 7$	$93 \pm 13$
Kg of raw material harvested per season (mean $\pm$ SE) based on 3.15 kg/bundle	$174 \pm 33$	$293 \pm 41$
# Potential number of mats produced (mean $\pm$ SE) based on 1-2 mats/bundle	$42 \pm 7$	$79 \pm 13$

\*A standard bundle is about 40-60 cm in circumference and weighs 2-4 kg. It is usually sold for R20. All data were converted to standard bundles prior to production and income calculations.

# Since mat size varies widely this calculation is based on the potential number of sleeping mats. Producers could make many more medium and small mats, or wall hangings.



*Schoenoplectus* users collected more often than *Cyperus* users at about  $11.4 \pm 1.5$  times per season, as would be expected for people harvesting locally with few direct costs (Table 4.7). The mean number of standard bundles harvested per producer over the season was  $93 \pm 13$ , equivalent to about  $293 \pm 41$  kg (Table 4.7). Amounts harvested were, however, extremely variable, from a minimum of eight to a maximum of 320 bundles, or 25 to 1 008 kg. The mode was 48 bundles. Overall, the quantities harvested were significantly higher than those for *Cyperus* (Mann-Whitney U Test;  $U=318$ ;  $p<0.01$ ). Unlike for *Cyperus* users, there were no differences in the amounts of raw material procured between people using different collection units. Each producer could make on average  $79 \pm 13$  large mats from the raw material harvested, although some producers, especially those harvesting large amounts, sold a proportion of their reeds, which provided them with immediate cash income.

Harvesting is a simple process. A sickle or knife is used to cut handfuls of reeds at a time at about 30-50 cm above ground level. The cut material is then made into bundles and tied as a headload or loaded directly onto a vehicle. *Cyperus* grows in relatively mono-specific stands making it easy to harvest. Women seldom have to enter the water to cut *Cyperus* reeds, whereas *Schoenoplectus* harvesters usually have to stand in the water, which during winter is unpleasantly cold. *Schoenoplectus* usually grows in mixed stands together with the bulrush, *Cyperus latifolius* and the fern, *Thelypstrus* species. This can make harvesting tedious, as harvesters have to sort through numerous stems to select the required species.

#### ***4.5.4 Sources of purchased of raw material***

Producers purchasing *Cyperus* obtained this primarily from farm workers in Hoedspruit, or from village neighbours going to Hoedspruit to either collect or to purchase for resale (58% of producers). This source of purchased reeds was generally selected if large quantities of material were required. Pension markets were another important source of purchased raw material, used by 13% of mat weavers. A small proportion (10%) of producers obtained reeds from village women who collected excess to sell. Usually only a few bundles, enough for 1-2 mats, were purchased at a time from the latter sources.

All of the *Schoenoplectus* purchased came from the communal areas described above, with the exception of two producers who bought from farm workers harvesting in the White River area. Pensions markets were the most popular place to buy *Schoenoplectus* reeds, used by 15% of those purchasing. All other buyers obtained reeds from numerous different sellers across a number of villages in the area. Unlike for *Cyperus*, where whole truckloads of material would be bought at a time, most producers purchasing *Schoenoplectus* only bought a few bundles each time. Producers using mainly *Cyperus* often purchased *Schoenoplectus* in small amounts for variety.

#### 4.5.5 Quantities of raw material purchased

The average amount of *Cyperus* purchased per season by users procuring their raw material by this means was  $52 \pm 19$  bundles per producer, or  $167 \pm 62$  kg (Table 4.8). This amount was highly variable ranging from one bundle (3 kg) (to supplement collected raw material) to 450 bundles (1 417 kg) (purchased from Hoedspruit by a highly productive weaver who was employing others to assist in her business – Box 4.2). For producers purchasing from Hoedspruit, the mean number of bundles purchased was  $272 \pm 82$  per producer. Conversely, producers purchasing from pension markets and neighbours were buying only between  $7 \pm 1$  and  $13 \pm 2$  bundles per season. Thus, those producers requiring large volumes of raw material purchased primarily from Hoedspruit, where the costs were considerably less per bundle (see next section).

The average quantity of *Schoenoplectus* purchased per producer was considerably less than the amount of *Cyperus* purchased at  $11 \pm 2$  bundles, equivalent to  $33 \pm 6$  kg (Table 4.9). As mentioned above, bundles of *Schoenoplectus* were often bought by *Cyperus* users if they came across these at pension markets, whereas most *Schoenoplectus* producers collected their own raw material.

Table 4.8: Average quantities of raw material purchased each season by *Cyperus* and *Schoenoplectus* users (all data are per producer)

Per producer	<i>Cyperus</i> (n=42)	<i>Schoenoplectus</i> (n=20)
Number of purchases per season (mean $\pm$ SE)	$2.0 \pm 0.2$	$1.9 \pm 0.3$
Number of bundles bought per season (mean $\pm$ SE)	$52 \pm 19$	$12 \pm 2$
Kg of raw material bought per season (mean $\pm$ SE)	$167 \pm 62$	$33 \pm 6$
Number of mats produced from raw material purchased (mean $\pm$ SE)	$32 \pm 13$	$12 \pm 8$

#### 4.5.6 Costs of raw material harvesting and purchases

Since most *Cyperus* was collected from private farms in the Hoedspruit area, producers had to hire vehicles to transport their raw material home. This was a relatively large outlay for producers. *Cyperus* producers spent an average of  $R60 \pm 12$  per season on transport (Table 4.9), including the zero costs associated with harvesting from communal lands. The costs incurred by women harvesting from Hoedspruit varied between R50-R300 per year, depending on how many producers shared transport. The mean cost per standard bundle was R1.08 if harvested from Hoedspruit, whereas people harvesting locally incurred very few costs, from none to R0.22. This compared to a cost of R10 to R20 per bundle if the raw material were purchased in pension markets. Other costs reflected in Table 4.9 were mainly for permits.

Table 4.9: Average costs per season of harvesting *Cyperus* and *Schoenoplectus*

Cost	<i>Cyperus</i> (n=36)	<i>Schoenoplectus</i> (n=45)
Transport costs per producer for season (Rands) (mean $\pm$ SE)	60 $\pm$ 12	25 $\pm$ 11
Other costs per producer (Rands) per season (mean $\pm$ SE)	4 $\pm$ 2	0
Costs per bundle (Rands)	1.19	0.27
Costs (Rands) per standard bundle if a pick-up is used	1.08	1.39
Costs (Rands) per standard bundle if collecting by the bundle or headload (mean $\pm$ SE)	0-0.22	0-0.20

The average transport cost per season for *Schoenoplectus* users harvesting their own raw material was R25  $\pm$  11 (Table 4.9). Numerous harvesters left their raw material on site until they had accumulated enough to fill a one-tonne truck, which they then hired to transport the material home. The cost per bundle was R1.39 in these cases, whereas those collecting by the headload or bundle incurred costs of R0.20 or less per bundle.

Producers purchasing *Cyperus* usually paid for both raw material and transport. The average costs per producer was R352  $\pm$  80 per season, and R113  $\pm$  45 for transport (Table 4.10). The costs for producers buying by the one-tonne truckload at Hoedspruit were higher at R1 142  $\pm$  336 per season for raw material, and R604  $\pm$  166 for transport. This was biased upwards by one particular individual who had made three trips in the season. Generally, one truckload cost about R600. Several producers mentioned how they exchanged plastic water containers and basins for raw material with farm workers rather than paying cash, a strategy that saved them money. Although Hoedspruit buyers had higher total costs for the season due to the volumes they were buying, their average cost per bundle was less than those buying smaller amounts at R6.42 per bundle as opposed to R15.19 per bundle. The selling prices for bundles at pension markets were R10 for a  $\pm$ 2 kg bundle, R20 for an approximately 4 kg bundle and R50 for a headload ( $\pm$  8-10 kg).

Table 4.10: Average costs per season of purchasing *Cyperus* and *Schoenoplectus*

Cost	<i>Cyperus</i> (n=42)	<i>Schoenoplectus</i> (n=20)
Costs per producer per season (Rands) (mean $\pm$ SE)	352 $\pm$ 80	219 $\pm$ 34
Transport costs per producer per season (Rands) (mean $\pm$ SE)	113 $\pm$ 45	19 $\pm$ 10
Costs per bundle (Rands)	8.97	22.29
Costs (Rands) per standard bundle if a pick-up is used (mean $\pm$ SE)	6.42	-
Costs (Rands) per standard bundle if purchased by the bundle (mean $\pm$ SE)	15.19	-

Producers buying *Schoenoplectus* were spending on average R219  $\pm$  34 on raw material per season, and R19  $\pm$  10 on transport, less than expenditure on *Cyperus*. Overall, commercial trade in raw *Schoenoplectus* was modest, although this species was widely collected and used. The primary reason for this is its greater accessibility and availability locally (see Section 4.5.2), making it straightforward for people to collect it for themselves. The average cost of a standard bundle of *Schoenoplectus* was

R22. Standard bundles were sold for as high as R40 each in pension markets. One-tonne trucks were never used when buying this species.

#### ***4.5.7 Process for mat manufacture***

The mat manufacture process was the same for both species of reed, and was generally done by the producer herself with little assistance (unless ‘contracted’ out). Only 17% of producers were helped by family members. Most producers had learnt to make mats from their mothers (48%), friends (16%) or other family members (17%), whereas 19% were self-taught.

After harvesting, the reeds are dried for 3-5 days, or longer, and then packed and stored under shelter. Just prior to use, enough reeds for one day are wrapped in a damp cloth or sheet to soften them. This is said to make it easier to pull the twine tight without cutting into the reed.

Historically, women made reed mats by hand without the assistance of a weaving frame. They would bind the reeds down the entire length of the mat on one side first, and then move to the next strand, and so on across the mat. Usually each mat was held by 3-4 bindings. Weavers usually sat on the ground to do this with the mats resting on their laps. Patterns could not be produced using this technique, but the mats could be carried around. A group of old women mentioned how mat making used to be a remarkably social activity; they would take their mats (“like knitting”) to their friend’s houses when visiting. The introduction of weaving frames altered this and turned weaving into a much more solitary affair as the frames are too unwieldy to move around. In the early days sisal string was used to bind the mats, with some women rolling their own string made from the fibre extracted from sisal leaves. No one could recall what was used prior to sisal being introduced to the region.

The weaving frame was first used in the 1970s (elderly mat producers, pers. comm.), and was probably introduced by missionaries. It is a simple wooden frame consisting of a narrow, horizontal notched piece of wood, varying in length from 1-2 m, supported by trestle type legs. The height of the frame may vary according to individual preference from low, where the weaver sits on the ground, to standing height. Strands of twine wound onto and weighted down by stones or batteries are hung along the notches on the horizontal bar. These are criss-crossed, one at a time, over reeds positioned along the bar to create a mat. The length of the reed determines the width of the mat, with reeds being cut to produce smaller mats. Sometimes two reeds may be bound together to make a thicker mat, with this occasionally being one stem of each species. Often extremely elaborate and intricate patterns are woven using different coloured twines. Complex designs were said to require concentration and careful counting to ensure symmetry. Plastic or nylon twine is used and may be purchased in short skeins at pension markets or in large balls in a range of colours. Some women were unravelling narrow nylon webbing, also bought in rolls, to produce a fine, but strong, string. Plastic vegetable bags were also sometimes untied for twine.

During the late 1980s to mid-1990s various innovations took place in the mat weaving industry, as mats became more decorative as well as functional. Weavers began to incorporate waste materials such as foil and waxed sweet-wrappers, crisp packets and plastic bags into their designs. Parts of a reed may be wrapped in sweet or crisp papers and incorporated into a larger design, or whole reeds may be entirely covered with plastic strips cut from bags or purchased as a roll. These may be worked in with natural reeds or combined with covered reeds of different colours. The range of colours and combinations are endless, and again careful planning is required to ensure evenness of pattern. Wall hangings of many shapes and sizes also became popular and provided producers with considerable scope for creativity. Whole plastic bags are often incorporated into wall hangings to give a three dimensional effect. One young producer interviewed was using brightly coloured wool to sew patterns and inscriptions (mainly from the bible) onto mats to be used as wall hangings. Some women had started to make crocheted mats entirely from plastic bags to sell alongside their reed mats. Another innovative weaver made wall hangings incorporating the red HIV/AIDS ribbon symbol, which were apparently in high demand. Mats integrating dyed reeds into the design were also seen, although this was not a common practice in Bushbuckridge compared to other parts of South Africa, such as KwaZulu-Natal (pers. obs.).

Weaving is a time demanding process, and producers seldom spent the entire day weaving unless an urgent order was required. It was usually a task they fitted between other household chores. Most weavers spent  $4 \pm 0.2$  hours per day on mat weaving, for at least four days per week. This was usually in the afternoon, as few people had good enough light to work at night and their mornings were too busy. One young producer, with electricity at home, preferred to work after the rest of the household had gone to bed, apparently finding this a relaxing pastime after a busy day. The average time in days (including hours not weaving) required to complete mats of different sizes is presented in Table 4.11.

Table 4.11: Average time required to weave different sized mats of basic decoration

Type/size of mat	n	Number of days to complete (mean $\pm$ se)	Time to make in hours (days x 4hrs/day)
Large sleeping mat ( $\pm$ 114 x 240 cm)	106	5.6 $\pm$ 0.3	22
Medium sitting mat ( $\pm$ 70 x 180 cm)	99	3.3 $\pm$ 0.2	13
Small mat ( $\pm$ 60 x 120 cm)	100	1.9 $\pm$ 0.1	8
Wall hanging (similar to small mats)	74	1.8 $\pm$ 0.2	7

The quality of the mats was extremely variable from one producer to the next, with some producing beautiful, neatly finished mats (whether decorated or not), whilst others were untidy with messy knots in the twine.

#### 4.5.8 Costs of processing

Costs incurred in processing were largely for twine. Some producers also bought rolls of plastic strip for covering reeds, and two producers had purchased a large roll of pre made-up crisp packets from

someone who was obtaining these from the 'Simba' crisp factory in Durban. Twine was bought mainly in large rolls of between R50 and R70 each, and these lasted "more than one year". Most producers had several colours. Average costs were R47  $\pm$  5 per year. Children and other community members collected papers and plastic bags to sell to weavers. Producers also mentioned that the new environmental legislation which banned free plastic shopping bags (all bags must now be paid for) had made it a lot harder for them to obtain these. If purchased plastic rolls were used the cost can be as high as R10 per mat.

## **4.6 MARKETS, SELLING AND PRICES**

### ***4.6.1 Market channels, prices and costs***

Mat producers were largely selling mats from home to local people, with customers sometimes pre-ordering. Other markets included pension markets, 'regional towns', city townships, other villages on a door-to-door basis, and the tourism industry. Many producers used a combination of these (Figure 4.7). Some 26% of producers visited between one and 16 (mean = 7  $\pm$  1) pension markets in their vicinity each month. Producers (10%) in the villages of Utah and Dixie, close to Sabie Sand Private Nature Reserve (Figure 4.1), took advantage of their location and sold to tourists. One of the producers had been employed at a lodge in Sabie Sand, and had persuaded the lodge managers to bring tourists to Utah to view her mats. Sometimes tour groups went to Dixie to watch traditional dancing, and producers made use of this opportunity to sell their mats. Although sales by this means had been good in 2002, there had been few visits in 2003. Members of a community project at Cork (Box 4.1) also sometimes sold their products along the roadside to tourists visiting Kruger National Park, and one producer delivered about R600 – R700 worth of mats to a curio shop in Hazyview twice a year. Mats were rarely seen for sale in the informal markets where brooms were common (Chapter 3), other than a limited number of stalls selling 'wall hangings'. Some producers increased their sales by selling door-to-door in other villages (27%), whereas others (17%) sent their mats to townships within regional towns such as Giyani, Phalaborwa, Tzaneen, Hazyview, Hoedspruit and Mica with relatives or took them there themselves (Figure 4.8). One producer mentioned how she took 10 mats up to Thembisa township outside of Johannesburg every year. The three most important markets, as rated by producers, were sales from home, pension markets and the large townships within the region.

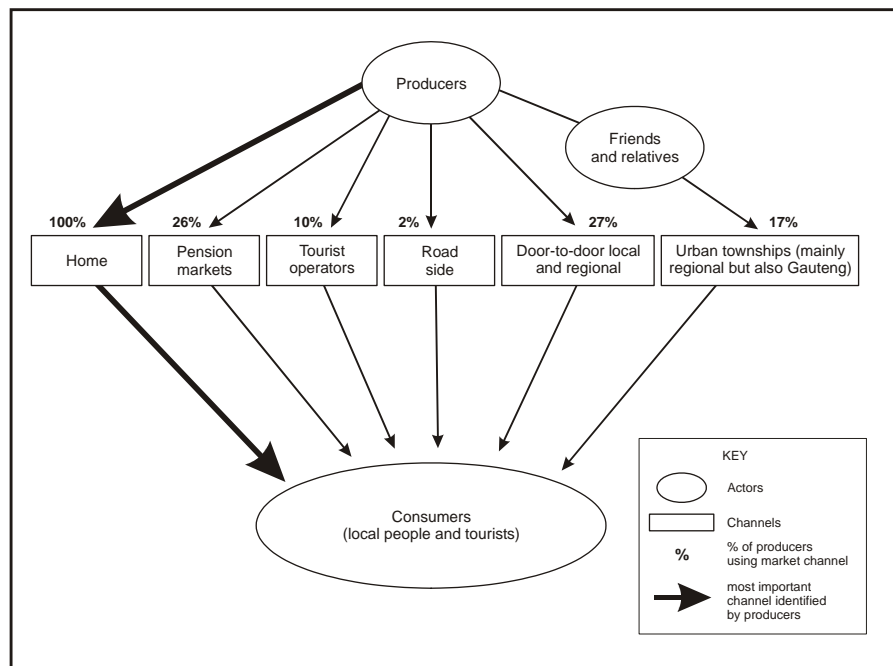


Figure 4.7: Key markets and market channels for reed mats and wall decorations

Mat sales took place all year round, except sometimes in peak harvesting season when producers were busy cutting, since most producers built up sufficient stocks to do this. However, in the *Pedi* speaking areas, in particular, the demand for mats escalated in August, September and October due to numerous initiation ceremonies. Women liked to take a new small mat to these celebrations to shake during dancing and to sit on (see Section 4.1). While the demand for mats was relatively high (C. Shackleton and S. Shackleton 1997), they did not appear to sell as easily or as quickly as, for example, brooms and most producers visited had numerous mats and wall hangings in stock, some from the previous year.

The selling prices of mats were determined by individual producers and were not standardised. This is because each mat is unique in terms of its size and decoration. However, average prices were obtained for a ‘typical’ large, medium and small mat and for a small wall hanging (Table 4.12). Costs, excluding labour, formed about 1% of the price for a large mat if the raw material was collected, and 25% if purchased. An elaborately decorated mat was said to sell for about R10 more than the equivalent sized plain mat. Prices did not appear to vary depending on the source and, thus, costs involved in obtaining raw material, nor between the two species of reeds. Prices were generally higher than those reported by C. Shackleton and S. Shackleton (1997), where it was stated that prices increased by units of R5 every year, but in the same range as those obtained by Kepe (2002) in Pondoland, although the average price for each type of mat tended to be about R10 to R20 higher in Bushbuckridge. Many producers sold their mats on a credit system and rarely received the full price of the mat at once. Returns to labour were approximately R4 per hour, comparable to that found by Pereira (2004) for the same trade and better than the local wage rate (Mander *et al.* 2002).

Table 4.12: Prices of different types and sizes of mats and wall decorations and returns to labour based on times in Table 4.11

Type/size of mat	n	Selling price (mean ± SE) (Rands)	Range (Rands)	Gross returns to labour (Rands per hr)
Large sleeping mat (± 114 x 240 cm)	106	86 ± 4	30 – 200	4.00
Medium sitting mat (± 70 x 180 cm)	98	53 ± 2	20 – 100	4.00
Small mat (± 60 x 120 cm)	99	32 ± 1	10 – 70	4.26
Wall hanging (similar to small mats)	80	27 ± 1	10 – 60	3.90

The costs to get mats to the market were, on average, relatively low, as most producers were selling from home. The mean cost was R122.80 ± 24.90 per season, ranging from zero to a maximum of R1 200 (the producer, Vina, described in Box 4.2). Producers used public transport to take their goods to the market.

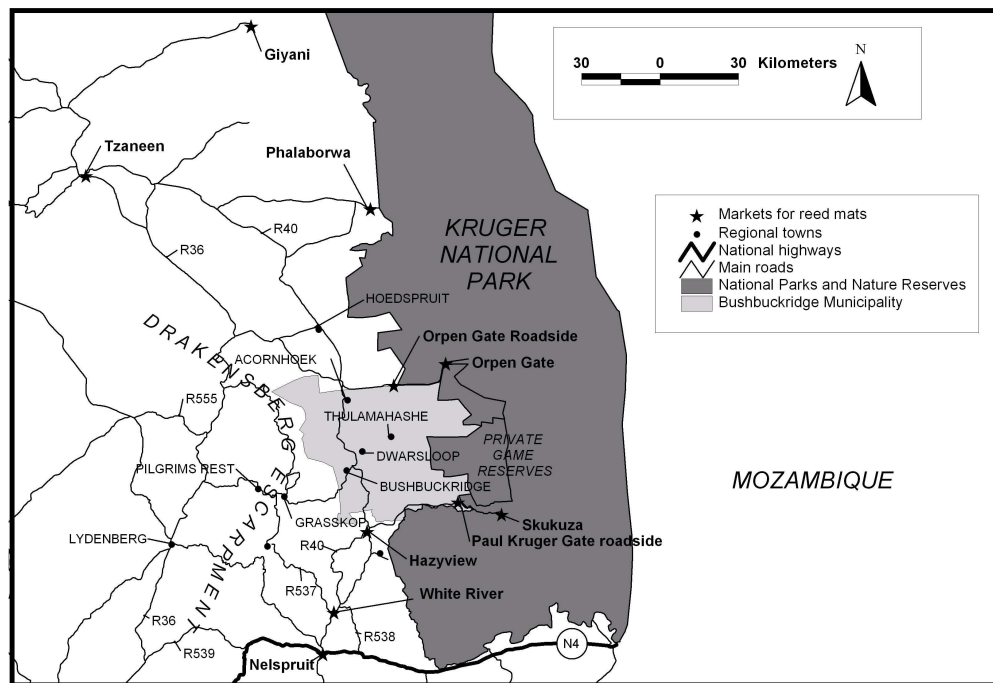


Figure 4.8: Spatial location of ‘regional towns’ where mat producers are selling reed mats to urban township dwellers



Box 4.1: Xalamukani Women's Project

This craft production group in Cork village was started by a young woman from the community in 2002. She had studied Visual Art at technical college but had been unable to find a job and so decided to apply her skills in other ways. Her objective was to create jobs for women in the village by producing goods for sale using traditional skills and locally available materials. The group received no outside assistance, although they brought someone in from a neighbouring village to teach them to make clay pots. They hired a large shed in the village that previously was used as a factory for curing skins (I could not establish who owned this). The group consisted of 15 women. They made reed mats, grass (*Festuca costata*) mats, other woven products (bags, baskets), clay pots and drums. All members were able to make all products. Buyers came to the village to purchase, although some members of the group occasionally sold at the side of the road to Kruger National Park. Most of their customers were local, although one buyer from Pretoria came to purchase large quantities of plaited grass rope every few months. Staff from the University of the Witwatersrand Rural Facility have also bought products from them to resell in their craft shop. The group said they could not afford the transport costs to market their products further afield, but desperately needed new places to sell.

They harvested the raw material (*Schoenoplectus*) for the reed mats themselves, near Marite and Bushbuckridge, at a cost of R200 per one-tonne truckload. Their grass came from farms in the White River area and their clay from the village of Alexandria in the south of Bushbuckridge municipality. Their price for a large mat was R40 and R30 for a medium size, cheaper than many other producers. Their mats were beautifully patterned and finished. They had sold four mats in the month prior to the interview and had just sent five to Kruger National Park.

Altogether the group earns between R400 and R1000 per month. This is usually shared between all the members, providing about R46 per month – mere “pocket money” as one producer declared.

#### 4.6.2 Frequency of sales and quantities sold

Several producers experienced difficulty reporting the numbers of mats they had sold during the year (or any other unit), as sales tended to be rather *ad hoc* and infrequent (Table 4.13), making it difficult for them to remember both the number of sales and the size of the mats sold. Other producers were still busy making their mats for 2003, and had not sold any at the time of the interviews. These were excluded from the sample. The mean number of mats sold, of all sizes, per producer per year was  $23 \pm 2$ . However, as discussed for the other cases, and has been found for many similar products (DACST 1998, Rogerson and Sithole 2001, Kepe 2002, Velásquez Runk 2001, Lebbie and Guries 2002, Vormisto 2002, Marshall and Newton 2003, Gyan and Shackleton in press), the quantities produced and sold varied widely from producer to producer depending on how actively they were participating in the trade and in their entrepreneurial abilities (see Box 4.2). One woman had only sold one mat over the year, whilst another had sold 120. Producers were also requested to report the number of mats they had sold in the last month. This was estimated at  $3 \pm 0.3$ , with some having sold none and another 16 mats. The average number of reed bundles sold per annum by the eight women involved in selling raw material was  $68 \pm 8$ .

Table 4.13: Producers' estimates of the frequency of mat sales (percentage of producers)

Frequency of sales	% of producers (n=114)
Infrequently/occasionally	45
Every second month	4
1-2x per month	27
3-4x per month	16
$\geq 5x$ per month	6
Starting now – no sales this year	2

#### 4.6.3 Customers and their reasons for buying mats

The main customers for mats were local women (Table 4.14), with tourists and urban dwellers only forming a small proportion of buyers, although there is potential to grow these markets. Locally, mats of all sizes were bought to replace old mats in the household. Mats typically lasted 2-3 years if regularly used. The life span was shorter if used by children for sleeping because of wetting. Mats were also purchased as traditional gifts and for special occasions (see Section 4.1). For example, some 47% of producers felt that demand increased significantly during initiation time. It is also likely that the demand for mats for funerals and as gifts following the release of a widow from her mourning period has increased due to the greater numbers of AIDS deaths, as was found by Kepe (2002) in the Eastern Cape. One third of producers felt that all sizes of mats were popular, whereas another third said small mats were the most sought after. Certainly small mats were more affordable, and people were replacing large mats with small mats or wall hangings as gifts. *Schoenoplectus* appeared to be more popular than *Cyperus* as a material, especially for sleeping on.

Table 4.14: Proportion of producers selling to different groupings of customers

Customers	% of producers (n=115)*
Local women	77
Local women, tourists, bulk buyers, urban township dwellers	4
Local women, tourists	8
Local women, urban township dwellers	8
Local women, curio shops and tourists	3
Tourists	1

\*Due to rounding up, column totals may not always add up to exactly 100%.

### 4.7 CONTRIBUTION OF THE MAT TRADE TO HOUSEHOLD LIVELIHOODS

#### 4.7.1 Incomes earned

Average annual gross income for mat producers was R1 235 ± 141 (Table 4.15). This was equivalent to a monthly gross income of R182 ± 14. Average net income was R998 ± 119 per producer per year (Table 4.15). Costs thus formed some 20% of income. Some producers were earning considerably more than others; six producers were earning net incomes of more than R3 000 per year, whilst the majority (85%) earned less than or equal to R2 000 per annum (Figure 4.9). A few were earning less than R100 net per year; of these, one was starting out, one was disabled, relying totally on tourists to buy her mats, one was focused on her hairdressing business, and the other two appeared to have very high costs. The mode and median for gross income were R600 and R800 respectively, and R436 and R582 for net income. The highest income was R7 200 or R5 765 net. Producers' own estimates of their income (which tended to be the cash brought into the household from sales rather than profits) were in much the same range as those calculated from mat sales (Table 4.15). Average returns from sales were comparable to those found for weavers in other parts of South Africa including those receiving external support (Institute of Natural Resources 2003, Makhado 2004, Pereira 2004).

Table 4.15: Estimated average gross and net annual and monthly incomes from mat sales for all mat producers (all data are per producer)

Income from mat sales	Producers' estimates (n=108 & 103)	Calculated from mat sales (n=97 & 91)
Gross annual income (R) (mean $\pm$ SE)	1 092 $\pm$ 140	1 235 $\pm$ 141
Gross monthly income (R) (mean $\pm$ SE)	100 $\pm$ 12	183 $\pm$ 14
Net annual income (R) (mean $\pm$ SE) *	-	998 $\pm$ 119

\* Net income as presented here is equal to gross income minus all costs except the opportunity costs of labour.

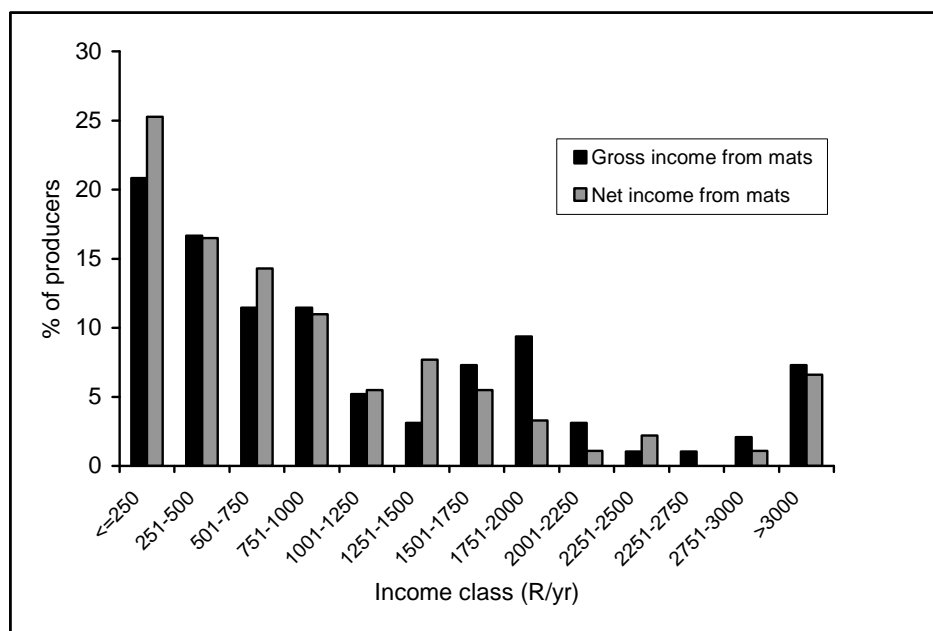


Figure 4.9: Distribution of gross and net annual income (Rands) earned from mat sales in class intervals of R250 for all mat producers (percentage of respondents in each class, n=97 & 91 respectively)

There was a significant difference in the incomes (net and gross) earned by *Cyperus* users relative to *Schoenoplectus* users (Mann-Whitney U test, U=439.0, p<0.05; U=382.0, p< 0.01), with *Schoenoplectus* users earning higher gross and net incomes (Table 4.16). Cost formed a greater proportion of gross income for *Cyperus* users than *Schoenoplectus* users at 34% as opposed to 20%. This is not unexpected, as it has been highlighted that much of the *Cyperus* is purchased.

Table 4.16: Differences in incomes earned by producers using *Cyperus* and those using *Schoenoplectus*

User group	Gross and net annual income (Rands) (mean $\pm$ SE)	
<i>Cyperus</i> users (n=36)	1 204 $\pm$ 269	796 $\pm$ 189
<i>Schoenoplectus</i> users (n=35)	1 435 $\pm$ 240	1 149 $\pm$ 205

For *Schoenoplectus*, the average net income earned by producers collecting their own raw material was higher than that for producers buying reeds, but there was no significant difference in this for *Cyperus* users. In terms of the latter, both buyers and collectors of raw material had high transport costs (see

Section 4.5.6). Producers buying *Cyperus* by the one-tonne truckload were earning considerably more than other users at a mean gross income of R4 248 ± 1152, and a net income of R2 082 ± 1100.

The economic benefits from mat production were, on the whole, less than those from other products studied here, indicating, again, the more supplementary nature of mat production (see Section 4.4.2, Chapter 7). However, a limited number of weavers (5%) were making a genuine business from mat making, earning more than R5 000 per year (Box 4.2). These producers were buying in bulk (often exchanging plastic containers rather than paying cash) from Hoedspruit or collecting large amounts of raw material, and ‘hiring’ assistants to make mats for them on a 1:1 sharing basis. They were marketing in diverse markets, often outside of Bushbuckridge and were also selling raw material locally. On the other extreme, several weavers were sitting with mats they had not managed to sell, and complained about insufficient customers. These producers generally made little attempt to sell elsewhere, or did not have the cash flow to do so. One such producer described how it was “difficult to go away and sell as you must make a very big stock” to make it worthwhile, and that some producers simply did not have the time nor money to do this, or they were too old. Another set of producers viewed their income from mats as “pocket money”, and were quite happy with this, preferring not to invest more time into this activity. Others, however, would like the opportunity to expand into new markets and increase their earnings, but had little knowledge on how to go about this. As for the other cases described in this thesis, incomes earned appeared to depend as much on the individual attitudes and commitment of producers and the need for income in their households, as on external factors such as markets and raw material access. This issue of individual attributes and motivation is often overlooked as a factor influencing the income generated from, and importance of, the natural resource product trade, often because it is lost in data summary.

The largely supplementary nature of mat production for many households was further illustrated by the variation in production and income from year to year as producers fitted this activity in with whatever else they were doing. For example, one producer described how she had made only 13 mats in 2003 compared to more than double that the year before. This was because her husband was ill and there was no one to look after him and her shop when she went to harvest. As a result she only cut for two days, and was therefore limited by the amount of raw material she had collected.

#### ***4.7.2 Producers’ perceptions of the mat trade as a livelihood option***

Most producers entered the mat industry because they needed the income (see Section 4.4.2), and mat making presented an opportunity with few barriers to entry. The majority of women in Bushbuckridge have the skills to make mats, and raw material is not difficult to obtain (Section 4.5.2). Reeds and mats can also be stocked for long periods, offering the prospect for income generation throughout the year. Thus, mat production provides an ideal option for, in this case, mainly supplementary income. Some 64% of producers were satisfied with mat weaving as an income generating activity and were not

interested in other work, whereas 36% of women interviewed would have preferred a regular job, but were unable to find employment. The benefits of the mat trade included: being able to work from home; independence; an ideal job for those too elderly to work full-time; and that it fitted well with other self-employment and household activities. The growth of the trade (88% of producers perceived it to have grown) demonstrated how weaving was becoming an increasingly important income generating option for women in the face of few alternatives.

Producers' perceptions of their own trading activities were mixed. Forty-one percent of producers felt they were earning less from mat weaving than they had in the past. This was attributed to, amongst others, "people not coming to buy"; "tourists not coming this year"; "people not paying" (after purchasing on credit); and "competition". Only one producer felt her business had declined due to a decreased demand for sleeping and sitting mats, as a result of a move away from traditional practices. One quarter of producers believed that they were doing better than previously mainly because they were "going out to sell" and/or were making a greater selection of mat designs and sizes, whereas 34% reported no change in the status of their business. There is evidence that those producers actively marketing their mats by selling door-to-door within Bushbuckridge and/or taking them to regional towns were able to earn higher incomes (Chapter 7). One producer, who was preparing to go and sell on the streets of Nelspruit, mentioned how "in town people take the mats very fast". Another producer pointed out how her business had declined since she had stopped going out to sell due to her age, whilst someone else said there is a market for the mats but her and her friend's "weak point is that we are not going to sell in other villages".

#### ***4.7.3 Contribution to household livelihoods***

Although the economic benefits from mat production were generally modest, mat making still represented an important source of cash income for many producers. In a few instances this activity was the household's most important, or only, source of revenue (see Section 4.4.2), with the percentage contribution of mats to total cash income being significantly higher for poorer households (Kruskal-Wallis test;  $H = 31.0$ ;  $p < 0.001$ ) (Figure 4.10). Absolute income was not, however, significantly different between the different income classes. On average, mat making contributed about 20% of total cash income.

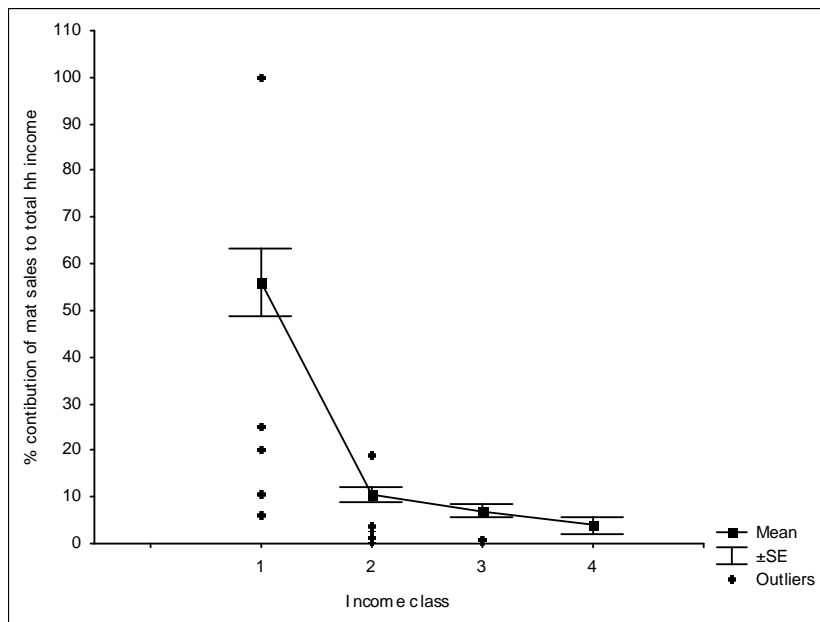


Figure 4:10: Mean plot of percentage contribution of the mat trade to households (hh) of differing total cash income status from poorest to ‘wealthiest’ (Class 1 =  $\leq$ R500/mth, Class 2 =  $>$ R500-R1 000/mth, Class 3 =  $>$ R1 000-R2 000/mth, Class 4 =  $>$ R2 000/mth – for comparative purposes these classes have been standardised throughout the case studies reported in this thesis)

Although individual earnings were low, the overall industry is large given the popularity and cultural importance of this product. Altogether it is estimated that there are some 1 000-1 200 mat sellers in Busbuckridge, with each village having between 10-20 women in the business, as well as producers making their own mats for their households or gifts. Similar results were found for the *Schoenoplectus californicus (totora)* mat weaving industry in Ecuador, where gross annual income was within much the same range as for mat producers in South Africa.

Mat making has the benefit of being an income earning activity women can do from home, and is ideal for the elderly (see above). Some of the positives women saw of being involved in the mat business are presented in Box 4.3. Of note was that it provided an important source of additional income for grandmothers caring for grandchildren. The cash earned was controlled by producers themselves and was used mainly for food and for schooling costs. A common statement was that the income was used for “everything at home”. However, several producers mentioned some specific uses of their earnings. One woman revealed how the cash from mat sales was very important to her as it allowed her to pay her monthly burial society dues, while another said she used it to give her children money to buy food at school. An elderly producer had used her earnings from mat making to help put her son through medical school (Box 4.3). Mats could also be exchanged for other goods, including food (locally) and second hand items, especially clothes. One producer took mats to Thembisa township in Johannesburg and bartered these for old clothes, which she brought home and sold for more than she would have received

for the mats. Another obtained clothes for her children in this way. The fact that a large mat fetched between R70 and R150 was seen as significant, as this provided a substantial injection of cash, enough for an 80 kg sack of maize meal (the staple food). However, many producers were forced to sell their mats on credit, losing the advantage of this cash payment (see Section 4.6.3). A few producers felt there were no positives of mat making because “there is not much income from this”, “reed mats go very slowly” and “I have nothing else to do”. These tended to be younger women who would have preferred salaried employment.

Box 4.2: The making of three successful mat weavers

**Rhoda Mkhize**, 70 years old, is a born entrepreneur. Whilst employed as a gardener and then a crèche assistant on a farm in Hoedspruit, she harvested traditional wild vegetables (*morogo*) and sold these in her village. With the proceeds she bought second hand clothes to sell. When the farmer she worked for started spraying the reeds in his canals to kill them, she asked if she could harvest them after seeing mats for sale in a pension market. This was the start of her mat making business. In 1996 she left her job to come home and look after her family following the death of her daughter who had performed this responsibility previously. She earned her living making mats (still harvesting on the farm where she had worked) and practising as a traditional healer until her consulting hut and all her ‘tools of the trade’ were burnt in a fire set by jealous neighbours. After that she depended on mats as her main source of income. When her son obtained a bursary to study medicine at university, Rhoda managed, with the help of an R800 loan from the “Get Ahead Foundation”, to find an external buyer for her mats who would purchase about R800 worth at a time twice a year. Between this and local sales she managed to pay many of her son’s personal costs at university. Rhoda still produces mats, and had many in stock when I visited, to earn money to care for her grandchildren. She normally sells about two a month. Last year she sent eight mats to Kruger National Park to her sister-in-law who helped to sell them. Many of her mats are highly decorated and she has an eye for pattern and colour.

**Vina Machabe**, 48 years old, is also a determined businesswoman. She has made a real industry from mat weaving and reed selling, after starting in 1973 at age 18. Vina obtains reeds from farm workers in Hoedspruit, either for cash or in exchange for plastic containers. She purchases a full one-tonne truckload (worth about R600) between 4-7 times per year. She sells both reeds and mats. The reeds she sells for R30 a bundle and has no problem finding customers. She makes about R200-R300 from this per month throughout the year. Instead of making her own mats she “hires” other women to do this on a sharing basis. Vina supplies the raw material and for every mat the women make for Vina, they can keep one for themselves to use or sell. At the time of the interview she had 20 people working for her on this basis. She believes she sells about R500 worth of mats every month. Twice a year she takes R600-R700 worth to a curio shop in Hazyview. She also sells in neighbouring villages, in Dixie to tourists, at pension markets and in Deox, which is a village outside of Bushbuckridge en route to Tzaneen. As well as mats she sells second hand clothes and vegetables and fruit from a vending stall at the taxi rank. Some of the vegetables she grows herself in a community garden. She has also started making moulded aluminium pots after learning how to do this from some Mozambicans. She sees mat and reed selling as her “job”.

**Martha Ndlovu**, 40 years old, has recently diversified into mat weaving and curio trading and has been extremely successful in boosting her modest part-time domestic worker’s salary. With the help of her mother, Martha makes traditional mats, wall hangings, tablemats, baskets and hats to sell to local people, urban dwellers in Thembisa, Johannesburg and to tourists. She has opened a roadside stall on the main road to the Orpen Gate of Kruger National Park, opposite the University of the Witwatersrand Rural Facility where she works as a domestic helper. She also buys other curios from producers and traders to resell, as well as hand embroidering T-shirts and bags. She has knowledge of what tourists like, and keeps her mats for this market as natural as possible, using sisal rather than plastic twine. Small tablemats have proved a good seller and she makes these in sets of six. Someone now comes from Hazyview to buy these in bulk from her. In the week prior to my interview she had sold six tablemats and three wall hangings earning R320. She now earns more money from her business than her job. She has few costs as she harvests from Mahlevo Dam, a couple of hours walk from her village, and carries the raw material home with the help of her son. As she says “everything I make from mats is profit”.

Box 4.3: Livelihood contributions from the mat trade: Observations by producers regarding the benefits of the trade

"I get small amounts of money to help at home."

"This is something I know how to do."

"I can earn money as I can't work because I am disabled."

"It is good because you don't lose anything – people are buying and it doesn't cost to get stocks."

"I can pay the school fees and other household costs."

"It promotes culture."

"It is a simple business, the mats do not go rotten and the stocks are reasonable."

"I am happy to do mats as I can do other things in between."

"I get money and you don't get arrested like with brooms."

"Helps me at home – I must work from the house so I can look after my husband who is ill."

"If I sell to tourists I can get lots of money."

"It is very relaxing to make mats – it gives me something to do and helps me forget my problems."

"It is something people can do when they are old and earn extra money."

"I can't take a job where I must leave my young children."

#### 4.8 CONSTRAINTS TO THE TRADE

Most producers experienced problems related to the marketing of their mats rather than the harvesting of raw material (Table 4.17). "People don't come to buy" was a common complaint, as was "people take on credit and don't pay". Many producers said that the only way to sell their mats was to allow their customers to pay in instalments over a few months. One producer could only talk to us briefly, as it was the end of the month and she was going out to collect her dues; a time consuming job. This sometimes made producers unpopular – one interviewee mentioned that if you ask for your money "people say you are fighting". Because of these problems a number of producers had elected to sell on a cash basis only. This usually meant that they had fewer customers. The lack of customers was considered to be a function of both an increase in the number of producers selling as well as general poverty. There was simply too little buying power within the local community. Others admitted that they waited for customers to come to them rather than being proactive and going out to find buyers, and that this slowed their sales.

Other frequently expressed constraints related to transport costs (a common problem for rural producers obtaining materials from outside their immediate area), the high costs of raw material if purchased, local shortages of raw material – especially *Cyperus* in the communal areas due to poor rainfall that season, access to raw material in some areas (such as Sabi Sand and Manyeleti Game Reserves), and the costs of other materials required in mat making. Weavers often had to use credit to buy twine in sufficient quantities. The problems relating to the resource base applied mostly to *Cyperus*, and rarely *Schoenoplectus*, although one *Schoenoplectus* producer lost her whole harvest after it was burnt by a wildfire; a not uncommon occurrence. Theft of raw material that had been left to dry was also mentioned as a problem.



Table 4.17: Problems and constraints to the mat trade as identified by producers (percentage of producers mentioning each problem)

Issue/constraint	% of producers (n=115)*
Too few customers	63
Buyers use credit	50
Transport costs for raw material harvesting or markets	37
Costs of raw material	29
Shortages of raw material	21
Access to raw material	17
Costs of twine, etc.	16
Low prices	12
Laboursome process	11
Competition	10
Standing in the water when harvesting/far to walk	7
Lack of new places to sell	6
Snakes in raw material collecting areas	3
Seasonality/burning	2
Harvesting away from home	3
Difficulties getting plastic, wrappers, etc.	2
Wild animals in raw material collecting areas	1

\*Categories are not mutually exclusive so the column total exceeds 100%.

#### 4.9 CONCLUSIONS: SUSTAINABILITY OF THE TRADE AND ENHANCING BENEFITS

The trade in reed mats is not a new industry, but one that has been able to sustain itself for more than 30 years. Raw material is in adequate supply, even if a little distant, and the plants show numerous positive attributes suiting them to sustainable harvesting (Section 4.3, Kotze 2001, Chapter 8). The opportunity to expand raw material production through cultivation also appears feasible, with several producers already growing their own *Cyperus* and this having been successful elsewhere. Tenure issues may, however, place a limitation on the planting of *Schoenoplectus* (Section 4.5.2). One concern, in terms of raw material supply, is the possible impacts of the move away from open, earth channel irrigation in the Hoedspruit farming area to pipelines. It is likely that this will result in the loss of some reed beds, with negative consequences for those producers in the east of Bushbuckridge largely reliant on this area for raw material.

The demand for mats within local markets is relatively high and appears unlikely to change much in the near future. Thus, presently a large and stable traditional market exists for producers (see Arnold 2002b and Chapter 8 for the importance of such local markets). However, this is showing signs of saturation and new markets need to be explored if the industry is to grow. Moreover, increasing levels of unemployment may also have a negative affect on these local markets and even cause them to shrink. It has been shown that income-earning opportunities from self-employment tend to fall with increased unemployment in the formal sector due to fewer remittances and less cash circulating within the local economy (Ardington 1988).

An opportunity to expand into new markets such as urban townships, the interior decorating market and the curio and craft industry exists, but is unlikely to happen without some sort of external support and intervention – particularly with respect to the curio/craft market. Women have the weaving skills and many produce good quality products, but they lack the knowledge to adapt what they know to targeted markets and new products. Natural reed and grass blinds are very popular at the moment and several companies in South Africa have emerged in the last few years that produce these blinds using traditional techniques (Institute of Natural Resources 2003, “Grass Cottage” manager, White River, pers. comm.). There is potential to grow this and to operate on different models, such as out-sourcing, to benefit more rural producers (D. Kotze, wetland expert, pers. comm.). One limiting factor, however, is the strong competition from natural fibre products imported from southeast Asia (Institute of Natural Resources 2003). The Institute of Natural Resources in KwaZulu-Natal has been instrumental in developing innovative products (such as conference folders and corporate gifts) and new technology to expand the markets for producer groups in their province (Institute of Natural Resources 2003, Hay 2004), but the benefits are limited to the groups they are working with. The potential of urban black or township markets has been given little attention. Recent work by Cocks (M. Cocks, pers comm.; Cocks and Dold 2004a) in the Eastern Cape has shown how many urban Africans continue to purchase traditional items to maintain their links with their culture, rural roots and traditions. Certainly, the women targeting these markets in this survey were successful in selling their mats, often in higher numbers than those selling in local markets. Rural-urban networks are extremely important in this strategy, with many producers giving mats to relatives who live in urban centres to sell for them. The potential of these markets is an area that requires some attention and market research (see Chapter 9). In KwaZulu-Natal, it has even been recommended that traditional rural as well as urban markets be promoted (Kotze 2001). It was suggested that a “well marketed initiative to promote the use of indigenous products within South Africa” is required which may include both the traditional products themselves as well as the integration of variations of these into common everyday items such as furniture (Kotze 2001). Furniture incorporating reed mats into the design, for example in door panels or drawers, is one possibility.

However, even with new markets, it is likely that mat production will continue to be a supplementary and income diversification strategy for the majority of producers. There are simply too many people involved and too many producers making mats as a subsidiary activity for them all to benefit from new prospects. Some of the opportunities, challenges, lessons and recommendations arising from the information and data presented in this chapter are discussed further in relation to the other case studies in Chapters 7, 8 and 9.

#### **4.10 SUMMARY OF KEY FINDINGS**

- The mat trade in Bushbuckridge involves two species of reeds sourced from different areas. Producers both collected and purchased raw material. Producers marketed their mats themselves.

- Mat producers tended to be middle-aged to elderly and poorly educated, with many saddled with the responsibility of caring for grandchildren. Half headed their own households.
- Incomes from mat sales were modest but highly variable, averaging R1 000 per annum with a small number of producers earning more than five times this.
- Mat production was primarily used to supplement other individual and household income (contributing on average 21% of income), although a minority of producers earned most of their cash income from this activity.
- At present, raw material availability is not a limiting factor for the trade although some producers complained of poor quality material during dry years.
- A local market exists for mats but is limited and producers need to market further afield to improve their incomes.
- Mat production is a widespread activity supporting some 1 000 or more producers in Bushbuckridge.

## CHAPTER 5

### THE TRADE IN TRADITIONAL MARULA (*SCLEROCARYA BIRREA*) BEER<sup>7</sup>

#### 5.1 INTRODUCTION

*Sclerocarya birrea* subspecies *caffra* (marula or *nkhanyi* in the study area) is a widely distributed species found throughout the semi-arid, deciduous savannas of much of southern and East Africa (Peters 1988). The fruit, seeds, leaves, wood and bark of this species have been used extensively by rural communities for many hundreds of years in most countries in which it is found (Hall *et al.* 2002). Probably one of the most important uses of this multi-purpose tree has been, and still is, the production of a popular alcoholic beverage from its fruit. This is commonly known as marula beer or wine, but more closely resembles cider in its properties. Evidence of piles of marula nuts in caves in the Matobos Hills in Zimbabwe suggests that this brew was possibly made as long ago as 9000 BC (Walker 1989). Other important uses of marula include the consumption of fresh fruit and kernels, the extraction of oil from the kernels for a variety of purposes from cooking to cosmetics (although the oil is not used in the study area), the harvesting of leaves and bark for traditional medicine, and the use of wood for fuel, fencing and carving (S. Shackleton *et al.* 2002c).

Marula beer has always formed an integral part of local culture and spirituality, and the drinking of marula beer is both a social and cultural activity. During the early part of the last century, a number of writers described the very important role that marula beer played in various elaborate ceremonies and cultural traditions (Junod 1927, 1938, Krige 1936, 1937, Berglund 1976). First fruit ceremonies, at which the first marula beer of the season was drunk, were widely celebrated at national and local level to give thanks to the ancestors and to mark the beginning of the season of abundance. While these ceremonies now rarely occur at the scale they did in the past, local first fruit ceremonies are still practised in some parts of southern Africa, for example Inhaca Island in Mozambique (Cunningham *et al.* unpubl. cited in S. Shackleton *et al.* 2002c) and Swaziland where a marula festival is held at the Royal Residence annually (Thiong'o and Edje 2002). In many areas people continue to gather at a village or household level to drink marula beer, and the long-standing custom of presenting this brew to the traditional leadership is still common (Shone 1979, Cunningham 1985, Mabogo 1990). For instance, in Bushbuckridge, beer is presented to the village headman at the beginning of the season (a practice known locally as *xikhua*), and he calls a celebration in which residents of the village gather together to

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<sup>7</sup> A modified version of this chapter has been published as Shackleton, S.E. (2004). Livelihood benefits from the local level commercialisation of savanna resources: A case study of the new and expanding trade in marula (*Sclerocarya birrea*) beer in Bushbuckridge, South Africa. *South African Journal of Science*, Rhodes Centenary Issue **100**: 651-657.

drink the beer, chant and dance (S. Shackleton and C. Shackleton 2002). This custom was and, to some extent still is, one of the numerous ways in which these local institutions are reinforced, particularly in their role as custodians of cultural matters. It is the potential 'erosion' of this tradition with increased commercialisation of fruit and beer that so concerns some of the local leadership in different regions where marula beer is traded (den Adel 2002, S. Shackleton and C. Shackleton 2002, 2005).

Probably more important and widespread than the offerings of beer to the local leadership and the associated community celebrations, is the sharing of this traditional liquor between friends, neighbours and relatives at a household level. A household will brew 50 litres or more of beer and then invite people within the neighbourhood to come and drink it. These gatherings (known as *xirhwalo* in the study area) reinforce reciprocal bonds and obligations, and are key in building and maintaining social networks. Surveys have revealed that even households that do not drink marula beer nevertheless make it to share with neighbours (McHardy 2002, S. Shackleton and C. Shackleton 2002, 2005). The sharing of marula beer provides a form of 'social insurance' for host households who may need to call on neighbours for support later in the year. A degree of unease exists, particularly amongst the elderly, that the trade in marula fruit and beer may ultimately lead to a decline in this mutual hospitality and the loss, not just of an enjoyable occasion and free beer, but also the social fabric of the village (den Adel 2002, S. Shackleton and C. Shackleton 2002).

This significant cultural value of marula beer has resulted in taboos against its commoditisation across the species' range. However, these customary norms are now rarely enforced. From a purely pragmatic perspective, traditional leaders have recognised and accepted that the sale of beer can bring much needed income into poor households that have few other options (S. Shackleton and C. Shackleton 2002, 2005). There are reports of marula beer being sold in Namibia (den Adel 2002, S. Shackleton *et al.* 2002c), Zimbabwe (Gumbo *et al.* 1990), Swaziland (despite it being illegal) (Edje 2000) and the former Venda, South Africa (Mabogo 1990) – all areas in which this activity was not sanctioned in the past. Thus, recognition of high levels of poverty and the need for cash income has rendered the traditional rules around beer selling obsolete in many parts of the region. By contrast, the sale of marula beer is still largely prohibited by traditional leaders in northern KwaZulu-Natal, although perhaps it is only a matter of time before the trade develops there as well since beer sales are already taking place (Cunningham 1990, McHardy 2002). In regions where there is active trade in marula beer much of the sales occur in towns and business centres rather than in rural villages (den Adel 2002, S. Shackleton and C. Shackleton 2002) and therefore rarely interfere with the traditional practices associated with marula beer at village level.

Marula beer (known locally as *vukhanyi*) is extremely popular in Bushbuckridge, with some three quarters of households brewing, on average, over 150 l (ranging from 10-3 670 l) of beer each season for home consumption (S. Shackleton and C. Shackleton 2002, 2005). However, it is only since 1998

that beer has been offered for sale in the business centres and along the main roads of the municipality (pers. obs.). While the quantities sold presently form only a small proportion of the beer made and consumed in the area, the trade is becoming increasingly visible and progressively more women are trying it as an option for seasonal income generation. This case study investigates this relatively new, vibrant and expanding local trade in marula beer through a market survey. I describe the process by which rural households convert the marula resource into a commodity that is sold in the market to generate cash income. In particular, I pay attention to assessing the contribution that this activity makes to beer sellers' livelihood security, and understanding how it fits in with other livelihood options and strategies including its role in reducing poverty and vulnerability.

## 5.2 METHODS

The broad approach follows that outlined in Chapter 1, Section 1.6. The survey was undertaken during the marula fruiting season, in late January and early February in 2002. Since the marula beer sellers encountered in the markets were generally also producers of beer, all interviews were conducted at sales points. Forty-five beer sellers were randomly interviewed in the five main business centres in Bushbuckridge municipality, namely Acornhoek, Thulamahashe, Bushbuckridge, Mkhuhlu and Hazyview (Figure 5.1), where seasonal markets for marula beer existed (beer is rarely seen for sale in rural villages). Between ten and eleven beer sellers were interviewed in each market except for Mkhuhlu where only two were encountered. In addition, five beer sellers marketing along the main road between Bushbuckridge and Acornhoek, and one selling on the road between Thulamahashe and Dwarsloop were interviewed (Figure 5.1). The total sample size was thus 51, representing an estimated 20-25% of beer sellers. The interviewees came from a spread of villages across Bushbuckridge including Hluvukani, Ludlow, Dumphries, Eglington, Edinburgh, Rolle, Allandale, Thulamahashe, Merry Pebbles Stream, Saselane, Dwarsloop, Arthurstone, Oakley, Mkhuhlu, Cunningmore and Madras (Figure 5.1).

A structured interview, covering individual and household characteristics of producers and sellers, the history of their involvement in the trade, the production process for marula beer from harvesting to sales, and the livelihood benefits derived from trading (see Chapter 1), was administered in the local language (*Tsonga* or *Pedi*) through an interpreter. Each interview took about half to one hour to complete. In addition, a full count of all sellers in each market, where they came from, when they had started selling marula beer and what their daily sales were, was carried out each time one of the markets was visited. The markets were visited two or three times during the survey period, and again in early March when much fewer participants were found. The latter could be because production had tapered off, but also because producers were experiencing difficulty in being allowed to trade and were frequently hounded from the market by shopping centre security personnel or the police (J. Botha, research assistant, per comm.). In addition to the above, data from a comprehensive random household survey of marula use in four villages in Bushbuckridge, incorporating 142 households, were used to

complement the market survey (S. Shackleton and C. Shackleton 2002). This household survey was undertaken a month before the market survey and was used, primarily, for information on harvesting. The volumes of beer sold were calculated indirectly from respondents' recall of gross income earned per day from beer sales over a period of 3-5 days (i.e. yesterday, the day before and so on), as beer sellers found it difficult to report on exact quantities sold (the beer being sold in numerous different sized containers). A mean over several days was preferable as sales could vary quite widely from one day to the next. Data were obtained from the market counts, as well as individual interviews, providing a large sample. Daily income was then averaged and converted to litres by dividing by the mean price per litre. Seasonal gross returns from beer sales were calculated as the product of the seller's average income per day (calculated as above), the number of days per week the seller visited the market, and the number of weeks she/he anticipated selling over the season. Net incomes were derived from gross income minus any direct costs incurred, these being mainly the costs of travelling to the market. Total household cash income was calculated as described in Chapter 1, Section 1.6.

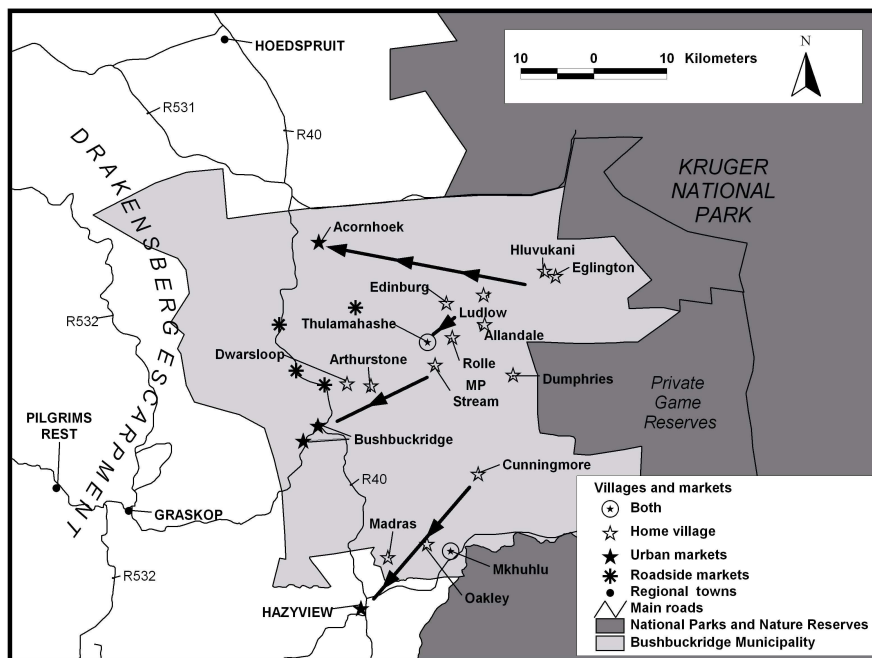


Figure 5.1: Location of the business centres and roadside sales points where beer sellers were interviewed; the arrows represent the movement of sellers from their home villages to these beer markets

### 5.3 THE RESOURCE: CHARACTERISTICS OF *SCLEROCARYA BIRREA* (MARULA) IN BUSHBUCKRIDGE

#### 5.3.1 Description

*Sclerocarya birrea* (A. Rich.) Hochst, is a member of the Anacardiaceae family. Three subspecies of *S. birrea* are recognised with *Sclerocarya birrea* subsp. *caffra*, the marula, being the most ubiquitous. It

occurs in east tropical Africa (Kenya, Tanzania), south tropical Africa (Angola, Malawi, Mozambique, Zambia and Zimbabwe) and southern Africa (Botswana, Namibia, South Africa and Swaziland), and is also recorded from Madagascar (Fox and Norwood Young 1982, Arnold and de Wet 1993, SEPASAL 2001). The southern end of its range is the coastal belt of southern KwaZulu-Natal, South Africa at approximately 31°S. Within South Africa, marula is common in northern KwaZulu-Natal, Mpumalanga, Limpopo and North-west Provinces, where it can be found in a diversity of vegetation types; typically, open, deciduous savanna, but also as a component of semi-deciduous forest along the KwaZulu-Natal seaboard (Johnson and Johnson 1993). This species occurs on a wide variety of soils from deep sands on granite, to basaltic clays, although a preference for well-drained soils has been commented upon (Lewis 1987). A key factor limiting its distribution appears to be its sensitivity to frost (von Breitenbach 1965, Palmer and Pitman 1972, Johnson and Johnson 1993). Altitudinal range is from sea-level to 1 800 m, and rainfall from 200 to 1 500 mm (Peters 1988), although it more typically occurs in areas with mean annual rainfalls of between 400 to approximately 1 000 mm (Shone 1979, Peters 1988, Bandeira *et al.* 1999). Within the study area marula occurs in what is known as 'Mixed Lowveld Bushveld' (Low and Rebelo 1996), and is most common in the central and eastern portions of Bushbuckridge, whilst virtually absent in the west near to the escarpment.

The marula is typical of the Anacardiaceae in several ways, being characterised by resin ducts in the bark, dioecy, edible kernels and the prolific production of fleshy fruits by female trees. *S. birrea* trees are deciduous reaching 7-17 m in height. The fruit size is variable, but is roughly plum-sized. Marula fruits abscise before ripening, at which stage the skin colour is green and the fruit is firm. The ripe fruits have a thick yellow peel and a translucent whitish flesh, high in vitamin C. Fruit size and flavour vary from tree to tree. Each fruit has a single nut or stone, which contains 2-4 protein-rich edible kernels.

### ***5.3.2 Ecology in the study area and potential for sustainable use***

A study on the ecology and productivity of marula was undertaken in 2001/2002 in Bushbuckridge (C. Shackleton *et al.* 2003). As this resource inventory covers the study area and is one of the most comprehensive sources of information available on marula densities and production, this section primarily draws on this work. The study compared densities and yields of marula across different land uses, namely homesteads (villages), fields, communal lands and nearby protected areas (C. Shackleton *et al.* 2003).

{tc \14 "Stem density}The density of *S. birrea* in Bushbuckridge varies according to land use. Total stem density was found to be greatest in protected areas at approximately 102 stems per ha, followed by communal grazing lands at 61 stems per ha, and least in home plots and fields at 10 and six stems per ha respectively (C. Shackleton *et al.* 2003). However, the percentage of adult trees relative to other size classes was highest in homesteads and fields as little natural recruitment takes place in these environments. Considering fruit bearing trees only, densities of adult female trees varied from



approximately two (fields and communal lands) to 4.5 per ha (homesteads and protected areas). The proportion of adult female trees was greatest in the largely human modified environments, and some 40-50% lower in communal grazing lands and protected areas. This was probably due to the selective removal of male trees; an issue that is of some concern as it could affect pollination success (Leakey *et al.* 2002, Hall *et al.* 2002). Marula tree densities in Bushbuckridge are comparable to those from unpublished data from Mozambique and KwaZulu-Natal Province in South Africa (reported in S. Shackleton *et al.* 2002c), and Namibia (Botelle *et al.* 2002), which also show that densities of mature *S. birrea* trees are not necessarily reduced, and in many areas are greater, in anthropogenic landscapes than adjacent rangelands.

Marula trees produce abundant fruit, although yields per tree can vary widely between individual trees, sites and land uses (see Table 5.1). In Bushbuckridge, trees within villages (homesteads and fields) had significantly more fruits (>17 000 per tree) than those in the protected areas (<3 500 per tree) (T-test;  $t = 12.5$ ;  $p < 0.005$ ) (C. Shackleton *et al.* 2003). The highest mean number of fruits recorded was just over 44 000, while the overall mean across all sites was 30 800 fruits per tree. Mean yields in protected areas were as low as  $2\,728 \pm 842$ .

Table 5.1: Comparative marula fruit yield data reported in the literature

Four trees at Zebedelia estate produced between 21 667 and 91 272 fruits each, with an average yield of 550 kg (Quin 1959)
163 000 fruits produced by four trees at Zebedelia estate in northern Transvaal* – 40 750 fruits per tree (Palmer and Pitman 1972)
9 601 fruits or 270 kg from one tree near Tzaneen in the north-eastern Transvaal (Shone 1979).
26 000 fruits in one month (April) (not entire season) from 111 tagged trees in Luangwa, Zambia - about 230 fruits per tree (Lewis 1987)
2 000 fruits from one tree in the western Transvaal (Peters 1988)
Approximately 70 000 fruits per tree, or 570 kg (Roodt 1988)
Average of 35 000 fruits in the wild in Botswana (Taylor <i>et al.</i> 1996)
2 100-9 100 fruits in a season (Arnold <i>et al.</i> 1985)

\*Note – as some of the literature is dated, old provincial names are quoted (e.g. northern Transvaal is now Limpopo Province and western Transvaal is North-West Province).

Paralleling these differences in number of fruits per tree, were differences in the mean fresh mass of individual fruits. Fruits on trees in the villages were approximately 20% larger than those on trees from protected areas (C. Shackleton *et al.* 2003). The mean fresh mass of a single fruit across all village trees was 25 g, and only 21 g for the protected area trees. This larger size of fruits, as well as the higher yields, translates into a mean fruit mass per tree of over one tonne in villages, whereas yields in the two protected sites were one or two orders of magnitude lower at 73 and 56 kg respectively (C. Shackleton *et al.* 2003). The care afforded to *S. birrea* in fields and home plots, as well as reduced plant competition may account for the fact that these differences between land uses exist. Furthermore, these results suggest some level of domestication and selection of *S. birrea* by residents in the Bushbuckridge region, as supported by preliminary examination of *S. birrea* fruit characteristics and variation within the Bushbuckridge populations (Leakey *et al.* 2002, 2005).

Based on 2002 yield data, the current density of adult female trees appears sufficient to meet the demand for fruit for household and commercial use. Certainly few users reported any shortage of fruit. However, yields can vary from year to year, with some people reporting poor yields after prolonged drought and wide biennial fluctuations in yields for specific trees.

### ***5.3.3 Nurturing and propagation of marula trees***

The protection of self-germinated marula seedlings and the more active planting of marula trees, whilst not a common practice, was certainly not unknown in Bushbuckridge. Indeed, the higher density of adult female trees in homestead plots (C. Shackleton *et al.* 2003) may be partially a result of this as well as the other factors mentioned. In the random household survey of marula use in central Bushbuckridge (see Section 5.2) it was found that just less than one third of households claimed to have planted a marula tree (S. Shackleton and C. Shackleton 2002). Planting occurred mostly within the homestead, with the remainder in fields, and along kraals and fences. Amongst those propagating this species, the most common means of establishing a new individual was by planting a marula seed, usually from a tree with desirable characteristics in terms of fruit production or size and quality. But transplanting of 'wild' seedlings also occurred as well as the use of truncheons as propagation material. Problems mentioned in growing marula trees included browsing by cattle and goats and a lack of water. The fact that marula is already cultivated provides a good basis for a domestication strategy.

## **5.4 WHO IS INVOLVED IN THE MARULA BEER TRADE?**

The marula beer trade chain was relatively simple involving primarily one main group of actors – beer producer-sellers – who harvested the raw material, processed the beer and sold this to end consumers in the local towns. Amongst the beer sellers interviewed, 80% were responsible for all three of these functions, while the remaining 20% were young adults or children selling beer prepared by their mothers. Some respondents saw the latter households as “lucky” as they could sell every day, given the division of labour between different members of the household. In contrast, all other beer sellers were selling on average 2-3 times per week, using the intervening days to make beer. The data presented in this chapter focus on the beer sellers encountered in the markets (including both beer producers and family members selling on their behalf), although I also do some analysis that excludes children selling for their mothers in order to obtain a fuller picture of producers themselves.

### ***5.4.1 Profile of beer sellers and their households***

All but one of the beer sellers were female. The single male encountered was selling beer for his mother, standing in for her when she had other commitments. The average age of sellers was  $34 \pm 2$  years, younger than for other cases reported in this thesis (Table 5.2). However, there was wide variation in age from 13 to 60 years (in the former case a school child was selling beer for her mother at the side of the road after school). Approximately 48% of sellers were 30 years old or less, 22% were between 30 and 40 years of age, 16% were between 40 and 50 years of age, and 14% were older than 50 years

(Table 5.2). Only one was over 60 years of age. Sellers' education profiles matched this age distribution with most being relatively well educated. More than half had attended secondary school and 16% had completed their matric (school leaving certificate) (Table 1). Only 12% of beer sellers had no formal education. One interviewee, selling at Hazyview, had a diploma in marketing, but had been unable to find formal employment. She was quite creative, mixing marula beer with ice cream as well as selling cigarettes. The average number of years of education for sellers was  $8 \pm 0.4$ .

Amongst the ten households in which children were selling for their mothers, the average age of their mothers was  $49 \pm 4$  years, with  $1 \pm 1$  years of education. The average age of women processing beer for sale, excluding children selling on their behalf, was  $38 \pm 12$  (Table 5.2); still relatively young compared to the other cases. The mean number of years of education amongst these producers was  $7 \pm 1$  (Table 5.2).

Table 5.2: Age, education and marital profiles of marula beer sellers (percentage of respondents in each class)

Variable/attribute	Class	% of beer sellers (n=51)*
<b>Age</b>	<=20 years	18
	21-30 years	30
	31-40 years	22
	41-50 years	16
	51-60 years	12
	>60 years	2
	Mean $\pm$ SE = $34 \pm 2$ (sellers); $38 \pm 2$ (producers)	
<b>Education</b>	None	12
	Primary	24
	Secondary (16% had a matric certificate)	63
	Tertiary	2
	Mean $\pm$ SE = $8 \pm 0.4$ (sellers); $7 \pm 1$ (producers)	
<b>Marital status</b>	Married	43
	Independent single (divorced, unmarried)	22
	Widowed	6
	Dependent single (child)	29
<b>Position in household</b>	Producer is head - female	27
	Husband is head	43
	Father or brother is head	8
	Mother is head	22

\*Due to rounding up, column totals for each variable may not always add up to exactly 100%.

About 43% of the beer sellers were married women, a number of whom mentioned that their husbands had been retrenched in the last two years. Twenty-eight percent were single women, either unmarried, divorced or widowed, and the remainder (29%) were adult or school-going children still living at home (Table 5.2). Amongst the children selling for their mothers, over 60% did not have a father in the household. Thus, essentially half of producers were from female-headed households, higher than the proportion for the country as a whole (Posel 2001).

The average size of marula beer selling households was fairly typical for the area at  $6.8 \pm 0.3$  people per household (Chapter 2). Over 45% of trading households had no regular source of income, with self-employment being the most important source of cash for just over 40% of them (Table 5.3). Regarding other sources of income, 31% of households had at least one job in the household and 22% had a pensioner contributing a monthly pension (Table 5.3). A number of households (22%) were also receiving R150 per month child grants. A few households were so destitute that they relied entirely on relatives for food and cash. Over 62% of households had incomes of less than R500 per month, 33% had incomes between R500 and R1 000 per month, and only two (4%) had incomes of over R1 000 per month (Figure 5.2). Beer sellers can thus be said to be representative of the poorest sector of the Bushbuckridge community. Almost all trading households fell below the poverty line of R237 per adult equivalent reported by Carter and May (1999), and the more recent 2003 Minimum Living Level (MLL) of R1 871 for a household of 4.7 people (Bureau of Market Research 2003).

Table 5.3: Incomes and livelihood profiles of marula beer selling households (percentage of respondent households in each class)

Variable/attribute	Class	% of selling households (n=51)*
<b>Employment</b>	None	69
	One job	27
	> One job	4
<b>Sources of income #</b>	At least one job	31
	At least one pension	22
	At least one child grant	22
	No regular source of income	45
<b>Most important source of income as identified by respondents</b>	Self-employment – beer and other+	41
	Pension	20
	Temporary job	12
	Permanent job	18
	Remittance	4
	Family donations/support	4
	Farming	2

\*Due to rounding up, column totals for each variable may not always add up to exactly 100%.

# Note: These categories are not mutually exclusive and therefore percentages add up to more than 100%.

+This included activities such as vending, sewing, upholstery, wood sales, etc.

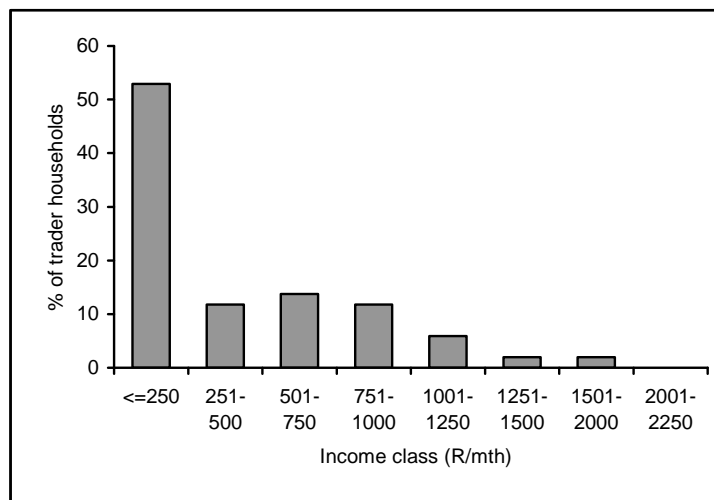


Figure 5.2: Distribution of total monthly cash income (Rands) of marula beer selling households based on intervals of R250 per month (percentage of respondents in each class, n=51)

#### 5.4.2 Beer sellers' involvement in the trade

Some 41% of beer sellers rated self-employment, including the sale of marula beer, as their most important source of cash income, although many did recognise the seasonal limitations of marula beer. Formal full-time jobs and remittances were rated as the most important source of income in only 18% and 4% of cases respectively, reflecting the fact that many sellers were heading their own households or, if married, had unemployed husbands. Being a younger cohort of people, pensions were rated as important by only 20% of respondents, compared to, for example, 48% amongst mat weavers (Chapter 4).

The importance of self-employment was well demonstrated in the array of other activities in which beer sellers engaged. Forty-six percent demonstrated entrepreneurial skills and initiative and were selling a range of other goods both from home and at pension markets. Common items sold were ice, biscuits, cool drinks, 'niknaks' (a type of corn chip) and vegetables. Three made clothes for sale or sold second hand clothes ("jumble"), and one sold sorghum beer. Six marula beer sellers were making use of other natural resources and produced grass mats, brooms, clay pots, grass screens and dried mopane worms for sale. More than half sold marula kernels to the Mine Workers Development Agency marula project (MDA)<sup>8</sup> in Thulamahashe/Rolle, while five sold these locally within their villages. Most respondents would have preferred to sell goods such as vegetables, chickens and clothes on a full-time basis, but many ran into cash flow problems – something people mentioned that they did not experience when harvesting a free resource such as marula.

<sup>8</sup> Marula Natural Products (Pty Ltd) is an employment creation and income generation initiative initially funded by DFID and supported by the Mine Workers Development Agency, but established as an independent enterprise in 2003. The project produces oil from marula kernels, for use in the cosmetic industry, as well as fruit pulp.

Because of the seasonality of the trade (2-3 months of the year), marula beer sales contributed only a small proportion towards the total cash income of trading households (Figure 5.3). On average this was  $14 \pm 2\%$  of annual income. In no cases did beer sales contribute more than 50% of income (Figure 5.3). However, during the selling season marula beer contributed up to 100% of household income for those months. Sellers then sought other sources of income, including support from their social networks, for the other months of the year.

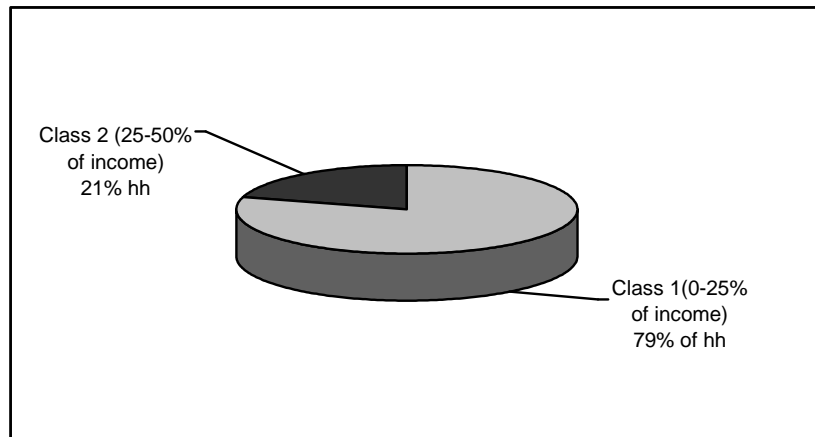


Figure 5.3: Proportion of total annual cash income contributed by beer sales to beer producing households (percentage of beer producing households in each class, n=40; no households obtained >50% of their income from beer sales)

A variety of reasons were provided as to why respondents had decided to start selling marula beer (Table 5.4), with most seeing it as a low cost opportunity to earn some additional income at a particularly important time of the year. Commonly expressed reasons for entering the trade related to people's poverty, "suffering", lack of income, job loss, and the need to earn money (41%). Other beer sellers (35%) mentioned how they had been alerted to the opportunity after they saw other people selling beer or their friends or neighbours told them about it (Table 5.4) – several had not believed it possible to sell marula beer. This demonstrates just how new the trade in this product is. A number of producers (18%) provided a combination of these reasons, for example "life is difficult – I needed money. I saw people were selling and coming with money and so I decided to sell". Numerous respondents mentioned how the money would assist them in paying school fees.

Table 5.4: Reasons beer sellers gave for entering the marula beer trade and their prior occupations (percentage of respondents in each class)

Variable/attribute	Class	% of beer sellers (n=51)*
<b>Reasons for entering the marula beer trade #</b>	Observed others doing this	35
	Combination of suffering and observed others doing this	18
	“Suffering and hunger”	14
	For income	14
	No money	10
	For extra income - to help other earners	6
	Retrenchment from a job	4
<b>Previous occupation</b>	Unemployed	31
	Employed	14
	Part-time employment/piecework	2
	Trading other products/other self-employment	32
	Farming	8
	Caring for new baby	2
	School/college	11

\*Due to rounding up, column totals for each variable may not always add up to exactly 100%.

# This is a summary and simplification of the reasons producers provided.

Prior to entering the beer trade, 14% of producers had been employed and were now seeking any other sources of income they could find, 31% had been unemployed relying on others to bring money into the household, and 32% had participated or were still involved in some form of self-employment (Table 5.4). Several older women (8%) mentioned that they had farmed in the past as a livelihood strategy, but that farming was difficult today because of unreliable rainfall and drought. Other producers (11%) had been or still were at school. Numerous women mentioned how they were constantly seeking ways to earn income (however little), and that marula beer and the sale of kernels to the MDA project were recent opportunities they had tried.

The markets for marula beer were relatively new, with the first sellers starting in 1998 (Table 5.5). All respondents interviewed had been selling beer for five years or less, with a third just starting out. It was not clear what triggered people to commence selling beer in 1998, but it is likely that the presence of the MDA marula project had some influence by demonstrating that it was possible to commercially retail marula products. Some sellers commented that, previously, village women made beer to give away, but because so many households were now “suffering” they had started to sell it. A few referred to the MDA project: “the project in Rolle gave us the idea to start selling”. Table 5.6 provides some further reasons why people only commenced trading in recent years. Since 1998 the numbers of producers has grown dramatically (Table 5.5), indicating how a few people have set the example for others. The risk now is of market saturation as increasing numbers of women try out this income generating activity.

Table 5.5: Duration of beer sellers' participation in the marula beer trade from 1998 to the time of the survey (percentage of sellers)

Year started	Number of years in the trade at the time of the survey	% of beer sellers (n=51)
1998	5	4
1999	4	8
2000	3	10
2001	2	45
2002	1 -just joined	33
	Mean $\pm$ SE = 2.0 $\pm$ 0.1	

Table 5.6: Possible reasons provided by beer sellers as to why marula beer was not sold prior to 1998

Selected responses to the question "why did you not sell marula beer previously"
Did not know there was a market for beer/did not know you could do this/people just did not think of it before/never realised you could make money from it
Marula is from nature – thought people would not buy
Strict traditional laws against selling beer previously
Cost of living much higher now (price of maize meal doubled in the last year) – people need to use all the ways they can to earn extra income
People were drinking for free and it did not seem possible to sell beer

Marula beer, because it is a seasonal source of income, provides an opportunity for income diversification by adding to and complementing the portfolio of individual and household income sources. The importance of the timing of this income at the beginning of the new year is discussed in Section 5.7, and is probably the most significant factor influencing participation in the trade. The above data clearly indicate that it is the poorest sector of the Bushbuckridge population who are taking advantage of the opportunity marula offers. For them, any form of additional income that eases their cash flow problems, even if only for a few months, is hugely beneficial (Chapter 7). However, due to the seasonality of marula fruiting and its relatively low income-earning potential (Section 5.7), it is unlikely that this product could ever provide a full-time livelihood or a pathway out of poverty in itself. Nevertheless, the increasing numbers of people joining the trade attests to the benefits it brings to poor rural households, particularly those headed by women, and demonstrates its role in livelihood diversification, risk amelioration and income-bridging.

## 5.5 MARULA BEER PRODUCTION: FRUIT PROCUREMENT AND PROCESSING

### 5.5.1 Sources, access and availability of raw material

Marula fruit used was procured largely from the communal lands surrounding the villages from which local beer sellers came. Ninety-nine percent of beer traders harvested from these areas. Some were also using fruit from trees in their own or neighbours' homestead plots or fields (38%). Only one household used fruit solely from a tree in their plot. No restrictions on harvesting time, place or amount were reported, except where a tree was located in an individual's plot or field. In these cases the owner's permission was required in order to gather fruit. Marula is thus a relatively freely available resource



presenting opportunities to even the most marginalised of community members. This contrasts with the situation in Namibia where most trees were found in individual households' fields, suggesting that those without landholdings or with too few trees will always be dependent on the goodwill of their friends and neighbours for access to fruit (S. Shackleton *et al.* 2002b). The willingness to share this resource may decrease as commercialisation expands.

Some 83% of respondents felt that there was sufficient fruit to meet demand, with most being resolute that there were no shortages at all. Similar results, suggesting an adequate supply of fruit, were reflected in the random household survey on marula already mentioned, and the production data of C. Shackleton *et al.* (2003). Minimal competition for fruit amongst beer sellers and other users, including those using fruit at home and fruit sellers, was identified. The biggest threat to fruit availability appeared to be the use of marula trees for fuelwood combined with the clearance of land for agriculture and infrastructural development. The few sellers (17 %) who felt there was a shortage of fruit attributed this to the felling of marula trees for these purposes.

### ***5.5.2 Harvesting season, procedure and quantities of fruit harvested***

The marula harvesting season falls in mid-summer. The first fruits start to ripen in late December with most trees coming into full production by the end of January. Fruiting begins to taper off in March, although some trees will continue to produce fruit into April. Most beer selling takes place in the peak of the season between mid-January and mid-March.

Collectors went out in the early hours of the morning to collect fruit, sometimes as early as 3:00 am. They mentioned that if they did not do this then they would not find adequate quantities of suitable fruit (which to some extent contradicts the observation that there is no shortage). The average collecting time, which was obtained from the random household survey (Section 5.2), was  $2.4 \pm 0.2$  hours, as most producers were collecting in nearby communal lands. Collectors were gathering enough fruit each trip to make 20-50 litres of beer, i.e. 1-2 old 80 kg maize meal bags weighing between 70 and 140 kg. Collection was undertaken 2-3 times per week (mean =  $2.6 \pm 0.2$ ) with sellers attending the market on intervening days. Given that the average trading season was  $6.5 \pm 0.3$  weeks, most producers were collecting about 17 times in a season (Table 5.7). The average total amount of fruit gathered per collector was 1 877 kg, producing on average some 600 l of beer.

The majority of collectors (61%) gathered fruit alone, whilst 19% were assisted by members of their family, primarily other adult women and children. Two women mentioned that their husbands helped. Wheelbarrows were often used to bring the harvest home; otherwise collectors carried the sacks of fruit on their heads.

Fruits were generally collected from a number of different trees to ensure that both sweet and sour/bitter fruits were obtained (collectors sampled the fruit for flavour before selecting it). Purportedly both types are required to make good beer. Slightly green fruits were preferred and these were ripened to the correct stage (a creamy yellow) in a shady place at the homestead. Over ripe or strong smelling fruits were avoided, as were the first fruits that fall which are too hard for beer making. Most women were knowledgeable regarding where to find trees producing favourable fruit.

Table 5.7: Average frequency of collection and quantities of marula fruit gathered each season (all data are per collector)

Variable	Quantity per collector
Number of collecting trips per season (mean)	17
Number of 80 kg maize meal bags collected per season (mean) #	26
Kg of raw material harvested per season* (mean)	1 877
Litres of beer produced from raw material harvested (mean)	638

# Calculated using an average of 1½ sacks per collecting trip

\* Calculated based on an average of  $73.6 \pm 5.8$  kg of marula fruit per sack (data obtained from the random household survey)

Note: these data were not calculated on a case-by-case basis as some of the variables were obtained from the random household survey of marula use – there is thus no measure of variation about the mean

### 5.5.3 Costs of raw material harvesting

There were no costs, other than labour, involved in harvesting marula fruit, and, indeed, a number of interviewees mentioned that they had started selling marula beer because it was “easy to get into” as it did not require the purchase of any stocks or materials, nor was transport required.

### 5.5.4 Marula beer processing

In the first step of processing, either individually or with assistance, the producer (generally the senior woman in the household) removes the thick skin from the fruits using a fork. The skin is split, deftly turned inside out, and then separated from the flesh and discarded. The fruits are squeezed and the juice collected in a bucket. The nuts with the remaining flesh on them are placed in another bucket. Enough water to just cover the nuts is added to this second bucket, and these agitated to release any remaining juice and pulp. The water/juice mix (*veketa*) is then added to the pure juice and left to ferment. The nuts are put aside for later extraction of the kernels. This preparation stage is an intensive process, taking on average  $4.4 \pm 0.3$  hours to produce 20-50 l of beer. In a season, brewers spend some  $74 \pm 9$  hours making marula beer. During fermentation, the scum (*khuvi*) that forms on top of the fermenting beer is removed once or twice daily. Some fresh juice may be added. The beer is ready for drinking on the third day. It is usually decanted from buckets into 25 l drums prior to transporting to the market. There are no costs involved in the beer production as generally only water is added.

The ‘shelf life’ of the beer prepared in this way is limited, only 2-4 days depending on the ambient temperature, which during the summer months is generally above 30° C during the day. About one quarter of respondents mentioned that they could make the beer last an extra 2-3 days if they topped it up with fresh juice on a daily basis. Others owned fridges in which they stored the beer, but usually the

volumes were too large. One of the problems in the market was that there was seldom a cool place to store the beer and, in fact, it was often in direct sun for parts of the day. This tended to shorten the shelf life even more.

Another, much stronger, alcoholic drink known as *nhlowa*, which lasts from a few months up to one year depending on how it is stored, can be made from pure juice only (*nhlowa* also means juice) (see S. Shackleton and C. Shackleton 2002). It requires about double the quantity of fruit that the normal beer (*vukhanyi*) does. Traditionally this liquor was stored in clay pots buried beneath the ground, but fridges are now often used for storage. An extremely intoxicating drink results, and if sugar is added periodically it begins to resemble whiskey (Thiong'o and Edje 2002). *Nhlowa* is usually drunk at Easter and some of the producers mentioned selling this beer from home over the Easter holiday period. A few of the interviewees in the markets were selling a beer made from pure juice – this was often favoured by buyers (pers. obs.) and usually fetched a slightly higher price.

## **5.6 MARKETS, SELLING AND PRICES**

### ***5.6.1 Timing and location of markets***

During the season, beer markets could be found in all the major centres in the Bushbuckridge, as well as alongside the main roads (Figure 5.1, Section 5.2). Beer sellers used public transport, either minibus taxis or buses, to transport their beer in 25 l water containers from their homes to these points of sale (Figure 5.4). Generally taxi fares were more expensive than bus fares. The movement of sellers from their home villages to the markets is illustrated in Figure 5.1.

Beer sellers spent, on average,  $6.5 \pm 0.3$  weeks of the year selling marula beer, with most going to the markets from the end of January until the end of February. This period is slightly more than half of the full fruiting season of about 11 weeks. Apparently, at the beginning and the end of the season the effort required to collect sufficient suitable fruits seldom makes it worthwhile making beer for sale. However, a small proportion of producers (27%) were selling beer for longer than 6 weeks, up to about 10 weeks.

The markets were informal and relatively unregulated with producers setting up sales points wherever there was space, preferably in busier areas. However, in both Thulamahashe and Bushbuckridge producers were requested by the police to move away from taxi ranks and main roads in case of accidents involving intoxicated customers. In Thulamahashe, after being relocated three times in the early part of the season, the beer market was eventually sited on the outskirts of the town centre under a large shady tree. Some sellers were happy with this arrangement, whilst others felt they were too far away from the centre of activity in the town to catch the passing trade and that their sales were being compromised as a result. Sellers, allegedly, were also harassed or forced out of the market by licensed bottlestore owners and other vendors and retailers. In Acornhoek and Bushbuckridge (at one of the two places producers were selling from), sellers managed to find positions close to bus stops, which helped

to increase sales. In all the markets there was little shelter for sellers from sun or rain, contributing to increased wastage of beer.

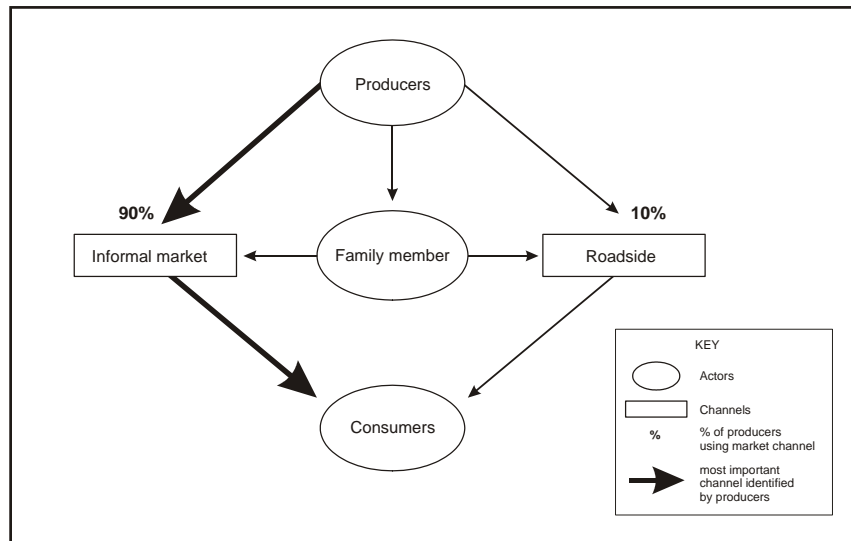


Figure 5.4: Key markets and market channels for marula beer

### 5.6.2 Selling marula beer: quantities, prices and costs

Beer sellers left home between 6:00 and 7:00 in the morning to reach the markets at about 8:00. The majority would stay until the end of the day, departing between 17:00 and 18:00 or when they had sold the last of their stocks. On average producers were spending  $9.7 \pm 0.3$  hours in the market per day. Over a typical selling season this amounts to an average of  $168 \pm 15$  hours or  $21 \pm 2$  days. The maximum time anyone spent selling was 566 hours (70 days – almost the entire fruiting season) and the minimum 30 hours (3 days).

Beer was sold in two main units: 2-l milk or soft drink bottles and by the 740 g (about 750 ml) ‘mayonnaise’ jar. The former were sold at R5 each in all the markets except Hazyview where the price was R6-R7.50. A ‘mayonnaise’ jar was priced at R2, except in Hazyview where it fetched R2.50. A mayonnaise jar of *nhlowa* sold for R3 in most cases, although some sellers only charged R2. The average price per litre of beer was  $R2.9 \pm 0.1$ . Customers purchasing jars of beer drank the beer *in situ* and returned the jar to the sellers. Most women carried a jug for decanting and a plastic or tin mug for tasting. All customers were permitted to taste the beer before purchasing.

The price of beer had not changed for three years. There was much despondency about this, since transport costs had escalated. Several respondents mentioned that customers refused to pay more, forcing sellers to drop their prices after an attempt was made to raise them. Part of the problem could be poor coordination between sellers in adhering to an agreed price. Also mentioned was the fact that the majority of residents in the area were poor or unemployed and could not afford to pay high prices.

Sellers felt if they pushed the price too high people would simply not buy from them. Interestingly, beer prices were similar in Namibia, although up to R4 per litre in large, distant centres (den Adel 2002).

Beer sellers brought on average  $29 \pm 2$  l of beer to the market each visit. The average amount of beer sold on market days per seller was  $17 \pm 2$  l, approximately 40-70% of stocks and worth about  $R43 \pm 14$ . Left over beer was usually taken home for the family and neighbours to drink. Over the season of 6½ weeks, each producer was selling on average  $296 \pm 49$  l of beer. In any single day, I calculated, based on the numbers of sellers in the market (obtained from the regular market counts), that there was approximately 600 l of beer in each market centre for sale, making about 3 000 l in total. This amounts to some 100 000 l over the season, providing income to about 200 households.

Transport was one of the few direct costs sellers incurred. They spent on average  $R9 \pm 1$  per day on bus or taxi fares. Other fairly minor costs included food, drinks and the occasional purchase of 2-l bottles, adding up to about  $R3 \pm 1$  a day. Total marketing costs were approximately  $R192 \pm 24$  per season (noting that most producers were selling on average 2.8 times per week) (Table 5.8). However, the fares varied quite widely depending on where producers were coming from and their destination. Generally beer sellers sold in their closest business centre (Figure 5.1). Hazyview was the most expensive sales point to reach, at about R20 per return trip. Sellers selling here were spending up to R280 per season on fares, although the slightly higher price of beer in this market helped offset this. The next highest costs were to Bushbuckridge, at R10-R12 per return trip. Thulamahashe, being relatively central to the villages from which sellers were coming (Figure 5.1), was the least costly sales point to reach. Several sellers were walking to this market. Sellers selling at the side of the main road had no transport costs, as their stalls were within easy walking distance of their homes, if not directly in front of them. Overall costs were, on average, about 28% of gross income, although this varied from seller to seller with some having no costs at all.

On some days sellers were not making enough sales to pay their taxi fares home. In these situations, they had a credit agreement with the taxi driver and would pay the following day or when they had successful sales. One respondent indicated that she would sometimes 'pay' the driver with left over beer. In the 2000/2001 season (i.e. the year prior to this survey), beer sellers from Dwarsloop hired a driver to transport them to Bushbuckridge. However, when he obtained employment, the women had to resort to using public transport again. Many of them preferred the former option and would like to be able to use this opportunity again, especially to reach more distant markets.

### **5.6.3 Market organisation and coordination**

There was no formal coordination between sellers within any of the markets, although they usually congregated in one place. Some respondents felt that a market committee would be useful, while others believed that either the season was too short to warrant this, or that such a committee would become

dominated by a few individuals and this would not be conducive to good relations. At a more informal level, groups of women from particular villages would, however, often travel together to the market and establish their vending stalls adjacent to one another. In general, all sellers seemed to operate in relatively close proximity to one another (even in quite big centres). The exception was Hazyview where they were scattered in small groups or individually throughout the main shopping areas. Other forms of coordination included agreeing on a common price for the beer. This was sometimes done by convening a meeting, but in most instances was simply achieved by asking one of the other sellers what the unit price was and conforming to this. However, the fact that sellers had failed in an attempt to increase their prices suggests that this system does not operate effectively. In terms of new entrants to the markets, these simply came and joined the sellers already there. Interviewees emphasised that no one was turned away since it was recognised that all participants were in the same dire economic circumstances and needed the income desperately. However, I did witness a situation where there was reluctance to accommodate two Mozambican women who arrived to sell. They were told that there was no space for them. However, when I returned to the market later in the day these women were selling (and doing well since they were selling *nhlowa*) alongside the rest of the beer sellers.

#### **5.6.4 Customers**

Buyers consisted mainly of men, of all ages, visiting the towns or who were employed there. Sales often increased at the end of the day when businesses closed, and workers either had a drink before going home or bought a two-litre bottle of beer to take home. Women seldom purchased beer. Occasionally beer sellers were lucky enough to sell the bulk of their stocks (25-30 l) of beer in one go to a bulk purchaser. In Thulamahashe, in particular, youth and unemployed men would sometimes linger in the markets for most of the day, often doing more tasting than purchasing much to the disgruntlement of sellers.

#### **5.6.5 Socio-cultural issues and attitudes to beer trading**

Given the socio-cultural role and significance of marula beer (Section 5.1), beer sellers were asked whether they had ever received negative comments about their trade. Only 16% mentioned that they occasionally met resistance, but that this was relatively infrequent as the need to earn income was well appreciated by all. Sellers, however, did point out that it would be inappropriate to sell beer in their own villages. Of those who had received negative comments, one remarked, “some people in the villages are saying that we are killing the villages”. Another commented, “customers are complaining as previously they got beer for free – but I said that if I ask for money for soup because I am hungry who will give it me? I do this to earn my living.” Some of the opposition to beer selling was because “it is against our customs”. However, overall it appears that beer sellers are seldom challenged. Slightly more than half of interviewees indicated that their families drank beer at home. However, only two felt that there was any competition for the beer they prepared for sale by other household members. Only in rare instances was this said to cause discord between household members. Generally, beer sellers would

provide the beer-drinking members of the household (mainly husbands) with a few litres of beer prior to going to sell. Often, unsold beer was brought home and friends and neighbours invited over to drink it. In this way beer selling households were able to continue to fulfil their traditional, social obligations.

## 5.7 CONTRIBUTION OF THE MARULA BEER TRADE TO HOUSEHOLD LIVELIHOODS

### 5.7.1 Incomes earned

Beer sellers were earning an average net income of R500 ± 74 per season (Table 5.8). Mean gross income per seller was R687 ± 67. However, there was marked variation in incomes earned. Gross incomes varied between R84 and R2 664, and net incomes between R84 and R2 299 (Figure 5.5). This variation was largely due to the period sellers were selling and the number of times per week they visited the market ( $r=0.31$ ;  $p<0.05$ ), rather than the daily sales of beer. If sellers sold beer for the entire fruiting season (11 weeks) they would be able to almost double these earnings.

Table 5.8: Mean costs, labour inputs and gross and net incomes from marula beer sales over the season (all data are per seller)

Variable	Calculated from beer sales (n=44)
Gross annual income (R) (mean ± SE)	687 ± 67
Gross monthly income (R) during the season (above divided by the length of selling season)	423
Direct costs (R) (mean ± SE)	192 ± 24
Net annual income (R) (mean ± SE)	500 ± 74
Net monthly income (R) during the season (above divided by length of selling season)	308
Labour inputs per season (hours) (mean ± SE):	
Beer production	74 ± 9
Selling	168 ± 15
Total	242

Net income as presented here is equal to gross income minus all costs except the opportunity costs of labour.

Labour inputs to collect the fruit, and make and sell the beer were relatively high at about 242 hours per person per season (Table 5.8). Net income per hour of work was R2 per hour or R16 per day, which is above the going wage rate for semi-skilled labour of R12.50 per day. Beer sellers were thus able to earn 1.3 times more income for their effort than the average farm worker, albeit only for a maximum of three months of the year. Calculation of returns to labour based on two scenarios – the present local wage rate of R12.50 per day and the proposed minimum wage of R20 per day – indicated profits for producers in terms of the former but not the latter (Table 5.9). The proceeds from marula beer sales were relatively good if viewed on a monthly basis (at R300 per month) over the production season, especially when compared to some of the other products reviewed in this thesis. Furthermore some sellers were earning over R2 000 per season, not much less than the annual average for other products. Respondents also mentioned that selling beer was much more profitable than selling fruit to MDA or Distell (a private company marketing a marula liqueur known as “Amarula Cream”) who were “robbing them”. This is

supported by data from the random household survey of marula use (see Section 5.2), which demonstrated average net incomes of between R194 and R335 for fruit sales per season.

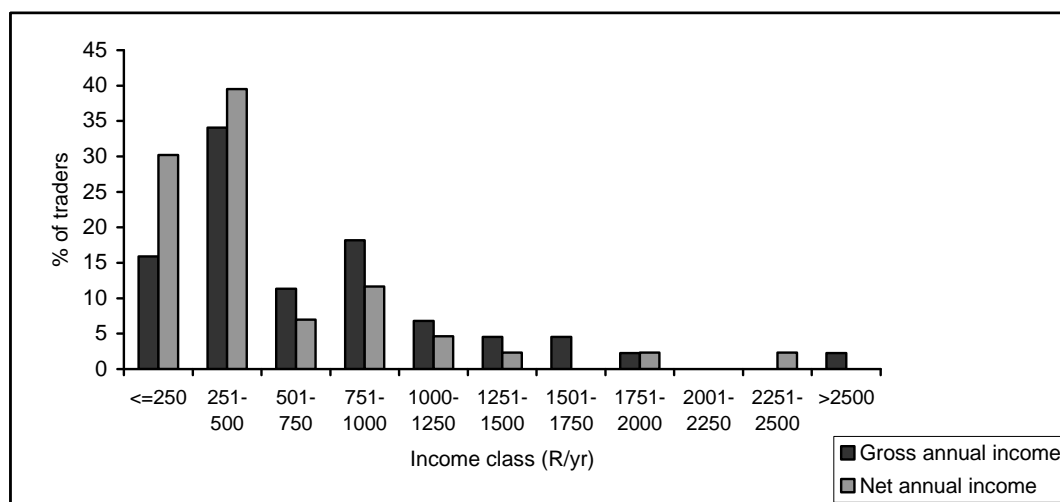


Figure 5.5: Distribution of gross and net annual income (Rands) earned from marula sales in class intervals of R250 (percentage of respondents in each class, n=44)

Table 5.9: Mean net seasonal income per seller incorporating the opportunity costs of labour at zero cost, the local wage rate of R12.50 per day and the minimum wage rate of R20 per day

Variable	Excluding time/opportunity costs of labour	Including time/opportunity costs	
		R12.50/day	R20.00/day
Total costs (R) (direct costs + time costs) (mean)	192	570	797
Gross income (R) (mean)	687	687	687
Net profit/loss (R) (mean)	495*	117	-109
Profit/loss as % of income (mean)	72	17	-16
Time costs/opportunity costs of labour (R) (mean)	0	378	604

Source: Mander *et al.* (2002).

\*Note this is slightly different to the mean in Table 5.8 where gross income minus costs was calculated on a case-by-case basis from the original data.

### 5.7.2 Sellers' perceptions of the marula beer trade as a livelihood option

Marula beer producing households were selling beer as another of numerous ways to make ends meet. Although sellers were generally pleased with the returns they received, many recognised that marula beer, because of its seasonality, could never be anything more than a welcome injection of cash during the first three months of the year. Because of this, 80% of sellers would have preferred a more permanent source of income or the cash flow to trade in products that can be sold throughout the year such as clothes and vegetables. That said, sellers identified numerous benefits from the marula beer trade (Box 5.1). These included the opportunity to earn income without having to invest in purchasing stocks, the chance to pay school fees and buy food, and the opportunity to earn as much as R50 a day for a few weeks.



Box 5.1: Livelihood contributions from the marula beer trade

“I can earn income. Last year I made over R600 for the season – about R50 per day. Another positive is that there are no costs to start.”  
 “I can send my children to school with the money.”  
 “It is beneficial, even if I get R5 as I am not paying for the stock.”  
 “The business is good but the season is too short.”  
 “I am happy because I can buy bread and groceries and go home with them.”  
 “This is a way I can help myself.”  
 “Good – better than farming when there is no rain – with marula you still get fruits.”  
 “I can earn income and help my family”  
 “This is better – because people are interested in buying marula beer.”  
 “We buy chicken feet or bread with the money – even R5 helps – it all helps.”  
 “Last year I was selling clothes – but business was not going well so I decided to supplement with beer.”  
 “We were hungry. I got the idea to sell. To steal is not good – we must make money honestly.”

The growth in the trade (some 86% of sellers said it had grown) is indicative of the fact that local women find it a worthwhile activity in which to participate, albeit often as a last resort. However, although more people are now earning income from selling marula beer, the returns per seller may have decreased. Forty-one percent of established sellers perceived that their sales and income had declined due to the increase in the number of sellers (Table 5.10). Those that had been operating since 1998/1999 mentioned that, previously, they had usually sold all their stocks before lunchtime, but that now they were sometimes returning home with beer. It is thus debatable whether the current market can continue to support the growth in beer sellers.

Table 5.10: Beer sellers’ perceptions of trends in their individual/household sales of marula beer

Status of business	% of beer sellers (n=51)
Grown	6
Stable	22
Declined	41
N/A – first season	31

### 5.7.3 Contribution to household livelihoods

Although the contribution that the beer trade makes to income is highly seasonal and short-lived, contributing only 14% to the total annual cash income of households (Section 5.4.2), it comes at a crucial time in the household calendar. January marks the beginning of the new school year when there is a considerable demand for cash to pay school fees, and buy school uniforms, shoes and books. It is also the time of the year when most households are particularly cash strapped following the Christmas season. Approximately half of sellers indicated that they used the income from beer sales primarily to cover school expenses. One seller described how she had paid her daughter’s high school fees from her earnings, and that she would continue selling until she had enough to pay her other daughter’s primary school fees. One young woman was selling beer to pay her own school fees. The other main use of income earned was to purchase food, and four sellers were reinvesting their earnings in other income generating activities, e.g. sewing, shoe repairs (the single male producer) and goods for reselling. Given that over 60% of trading households had incomes of less than R500 per month and 47% had no regular

source of income at all (see Section 5.4.1), this cash injection at a critical time of the year was significant. The proportional contribution of beer sales to total cash income was significantly higher for poorer households (mean =  $20 \pm 3$  % compared to  $5 \pm 1$  % and  $6 \pm 0.1$  % for the higher income classes) making this an important source of income for them (Kruskal-Wallis  $H=13.0$ ;  $p<0.01$ ) (Figure 5.6). By contrast, the absolute amounts earned were not significantly different between the different income classes (Kruskal-Wallis test;  $H=3.5$ ;  $P=0.17$ ) (Figure 5.6). This mirrors the findings from several studies worldwide which show an inverse relationship between the percentage of income derived from NTFPs and total household income (Newmann and Hirsch 2000).

Producers selling at the side of the national road tended to make less than those selling in the towns. On some days they earned as little as R5-R10. However, this money was said to be enough to buy bread or chicken feet, and was “better than nothing”. The general attitude was that any small amount of cash helped, even if people had to sit all day to earn it (Box 5.1). This was not unexpected since many of the households involved tended to live on a hand-to-mouth basis. In this context, even a few Rands were said to help put food on the table or to relieve cash flow problems. A couple of women, however, mentioned that there was nothing particularly positive about selling marula beer – “it was just another way to get a little money”.

There is little doubt that the cash income earned from the sales of marula beer, however small, has been of great benefit to the households involved, and has provided another source of income to add to people’s already diverse livelihood base. At community level, marula commercialisation has had the effect of diversifying the limited choices that people have to earn income. Thus marula beer is most important in making up income shortfalls, in providing cash at crucial points in the household calendar, and in offering a safety net to the poorest members of society. In addition, the women involved gained entrepreneurial skills, with some mentioning that selling beer had given them ideas for selling other products. Social networks between producers selling from the same village as well as other villages were strengthened, with some of these women now working together and supporting one another in other trading ventures. The bonds and informal social organisations that have emerged may be important in the future, as increased cooperation will be required if markets are to be expanded. The importance of such social capital has been described for palm wine traders in Sierra Leone (Lebbie and Guries 2002). Independence and self-esteem were also highlighted as important non-financial benefits, decreasing the poorest sellers’ dependence on transfers and food donations from relatives or neighbours.

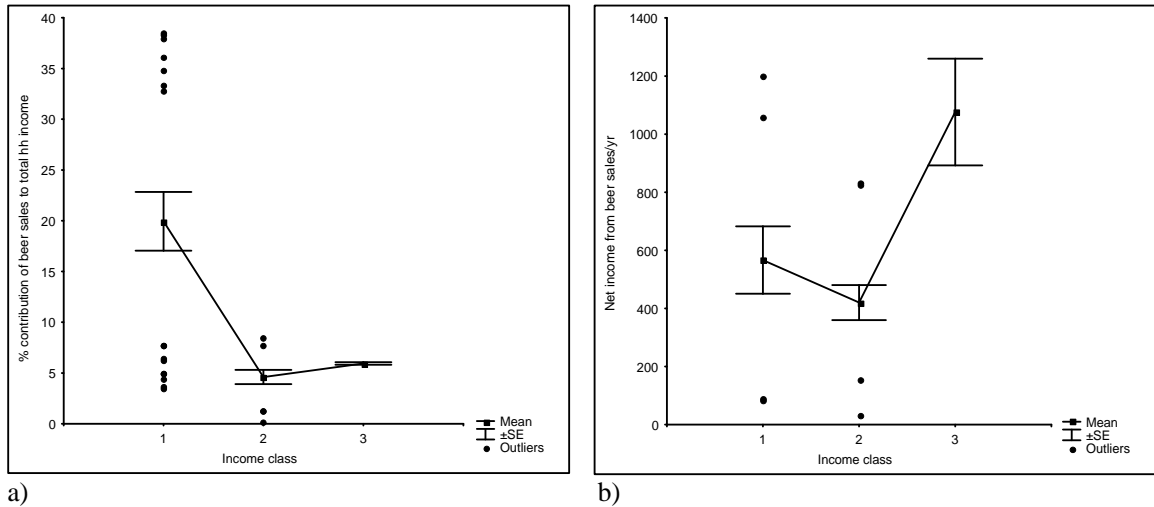


Figure 5.6: a) Mean plot of the percentage contribution of the marula beer trade to households of differing total cash income status from poorest to ‘wealthiest’, and b) mean plot of net cash income earned from the sales of marula beer for households of differing total cash income status (Class 1 =  $\leq$  R500/mth, Class 2 =  $>$ R500-R1 000/mth, Class 3 =  $>$ R1 000-R2 000/mth, Class 4 =  $>$ R2 000/mth – for comparative purposes these classes have been standardised throughout the case studies reported in this thesis).

## 5.8 CONSTRAINTS TO THE TRADE

Although many producers indicated that there were few problems associated with beer production and trading, further discussion and probing revealed several concerns and constraints (Table 5.11). Most of these related to marketing and selling, rather than raw material procurement or processing, except of course for the seasonality of the resource and the limited period of sales and income.

Several concerns relating to the intolerance towards beer sellers in the market were raised. These included: the lack of recognition of seasonal sellers and their place in the market by trader organisations and their unwillingness to accommodate them; the fact that sellers had no acceptable, stable, covered place from which to sell; and the restrictions, regulations and difficulties associated with selling alcohol even if only on a part-time, informal basis (see Chapter 9). During interviews it was frequently mentioned that owners of bottle stores and bars did not welcome the beer sellers, and that they used their influence to have these sellers evicted by police or shopping centre security personnel. I personally witnessed such an incident in Hazyview where three marula beer sellers were asked to move by local security personnel in response to complaints by members of the traders’ union (which it appears that the part-time beer sellers were not invited to join). This harassment was also the reason provided by vegetable and other informal vendors for the absence of beer sellers when the markets were revisited in March. This issue was pursued with the Tribal Authority office in Thulamahashe, and the same

explanation was provided. Apparently, the licensed alcohol producers had complained to the police that they were losing customers, and the police had proceeded to evict the beer sellers because legally they were not permitted to sell alcohol.

Other major problems related to the shortage of customers and competition because of the growing number of people participating in the trade (Table 5.11). Related to this was the inability to obtain a fair price, as well as erratic sales – “some I days get customers and do well, but other days I sell nothing”. Furthermore, long standing participants perceived their levels of trade and income to have declined. Despite this competition, there was little disharmony amongst beer sellers, and newcomers were seldom turned away. Several interviewees mentioned that there was little competition between sellers because customers sampled the beer and then selected which to buy according to what suited their palates. They felt that this was a fair way of doing business. However, other respondents revealed that there was sometimes resentment and jealousy if someone consistently produced a beer that was favoured by customers. In Thulamahashe, it was observed that some customers (e.g. young men who would spend a few hours at the market) would share their patronage between sellers by buying from each in turn.

Table 5.11: Problems and constraints identified by beer sellers (percentage of producers mentioning each problem)

Issue/constraint	% of beer sellers (n=51)*
Transport costs to markets	67
Place to sell in the towns where not harassed and with shade	57
Too few customers	47
Low prices	45
Finding containers especially 2-l bottles	45
Competition	35
Shortage of fruit	28
Wastage	26
Security in market	16
Laboursome process	12
Seasonality	8
People anti selling of marula beer	4
Customary rules disallow	4

\*Figures add up to more than 100% as each respondent mentioned a number of constraints

The expense of transporting beer to the markets was mentioned by 66% of interviewees as a constraint. There were numerous complaints that taxi fares had increased, but the price of beer had not (Section 5.6.2), and this was affecting profits. Transport costs were approximately 20% of daily income. Moreover, high taxi fares were preventing producers from reaching markets further away in the larger towns of the region, such as Nelspruit, where they felt that good potential existed for selling beer. Wastage of beer due to its poor shelf life was mentioned as a problem by a quarter of sellers. This is always an issue with a perishable product. There were also comments relating to a potential shortage of fruit due to competing uses for marula, in particular for fuelwood, in the future and the difficulty finding

adequate 2-l containers. Only 4% of sellers mentioned that traditional taboos on selling beer were affecting their business.

## **5.9 CONCLUSIONS: SUSTAINABILITY OF THE TRADE AND ENHANCING BENEFITS**

The marula beer trade is a new trade providing a readily accessible, although limited, source of seasonal income to approximately 200-300 households from amongst the poorest sector of the Bushbuckridge community. While offering a new opportunity for income generation, a major concern affecting the growth and long-term sustainability of this trade is the potential saturation of existing markets as increasing numbers of participants join the trade. This is compounded by sellers' inability to reach wider markets because of high transport costs. Furthermore, unless beer sellers are permitted to carry out their trade without disruptions and harassment there is little chance of their incomes becoming more secure. The intolerance towards the beer sellers in the market place was partly because they were perceived as competition by relatively powerful commercial liquor outlets, and partly because the sometimes drunken behaviour of customers made the situation unpleasant for other vendors and shoppers. The sale of alcohol will always be problematic because of this. There were also complaints that beer sellers disposed of beer and the scum from the beer within the shopping areas causing an objectionable smell, whilst others questioned the health standards employed. Considering that the marula beer trade is providing some extremely poor families with a little income and the chance to send their children to school, a means to accommodate these women should be found, particularly when it is for only three months of the year. The beer sellers' circumstances need to be discussed with town councils, traders' unions and associations, the police and other relevant stakeholders (see Chapter 9). Possibly a place slightly apart from the main shopping areas and activity could be found where these sellers could establish their stalls. Beer sellers themselves could also organise themselves better to keep their trading area clean and tidy, and work with the police and security to seek ways to deal with disruptive and inebriated customers.

While there are problems related to the markets for marula beer, as far as the resource is concerned, there appears to be an abundance of fruit (Section 5.3) and only a small minority (17%) of households perceived any shortage. Some respondents were, however, concerned about future supplies, particularly in the light of marula trees being cut by both domestic users and vendors for fuelwood purposes. In further discussions, respondents believed that in the longer term the economic value of the fruit and beer would help to deter felling, and would encourage those households who are trading in fruit products to invest in growing trees in their homesteads and fields; an activity in which about a third of households were already engaged (S. Shackleton and C. Shackleton 2002, Section 5.3). The collection of fruit for beer is, in itself, a relatively low impact activity, especially since the quality of the fruit required for beer is quite specific. This results in large quantities of fruit being left undisturbed. The prospect for a

sustainable supply of fruit for the beer trade thus appears encouraging, particularly if there are interventions to support better management of the resource and the further domestication of this species. In terms of the impacts of the trade on subsistence use and other forms of livelihood capital, beer sellers were able to balance their household's domestic and social requirements for marula beer by putting aside some of the brew for home use, or by taking home any left over beer and sharing this within the neighbourhood. In addition, since the beer is sold in the towns, it has had little impact on the social dynamics of beer consumption in rural villages, although recent anecdotal evidence suggests that marula beer is also beginning to appear for sale in village markets.

While the trade in its present form appears relatively sustainable, the strongly seasonal nature of marula fruit production limits the opportunities for interventions that will substantially boost the financial returns people derive from this resource. This was partly demonstrated by the fact that two externally established marula-based commercial enterprises, one specifically designed to provide an economic opportunity for unemployed community members, were unable to raise local incomes beyond those already received by beer sellers (Mander *et al.* 2002, S. Shackleton and C. Shackleton 2002, Wynberg *et al.* 2002). Typically, external interventions that expand markets and develop new products result in increased benefits for local producers, although in this case much of the value addition occurred elsewhere, limiting returns at a community level.

Few strategies were identified that could be employed to enhance the income of beer sellers by any significant amount in the short-term. At best, short-term interventions could, as already discussed, improve current conditions for sellers by addressing some of their immediate concerns such as their non-acceptance in the market place. The potential to market in larger more distant urban centres could also be explored, and mechanisms investigated to make this cost-effective through, for example, the sharing or subsidisation of transport. Longer-term interventions with the potential to have a significant positive impact on the trade would need to be targeted at extending the period over which products are sold. This could involve, for example, tree breeding to lengthen the fruiting season, the development of a more stable beer (Goyvaerts 2003), and the development of alternative long-life, marula-based products focusing on local value addition (jams, chutneys, products derived from kernels, etc.). All of these would require considerable research and development, and consequently financial resources (Wynberg *et al.* 2003). Further discussion of the challenges, lessons, implications and recommendations arising from this case study are provided in Chapters 7, 8 and 9 in relation to other products.

## **5.10 SUMMARY OF KEY FINDINGS**

- The seasonal trade in traditional marula beer provides an important source of cash income to some of the poorest households in Bushbuckridge. Amongst households selling beer 45% had no regular source of cash income from jobs or state grants, and about half were headed by women.

- On an annual basis, incomes from beer sales were small due to the highly seasonal nature of the trade (mean annual net income was approximately R500), but returns to labour during the selling period were comparable to those from low skill waged employment.
- The beer trade provided a means for poor households to add to the range of informal income generating activities in which they participated, and contributed, on average, 14% of total annual household cash income.
- Barriers to entry for the trade were low with the resource being readily accessible and available, and processing required no investment other than producers' time.
- The trade has undergone rapid growth since it started in 1998 leading to a situation where the market is becoming oversupplied. New markets will need to be found if sellers are to improve their incomes.
- Marula beer was most important in making up income shortfalls, in providing cash at crucial points in the household calendar thus assisting households to deal with unusual expenses, and in offering a safety net and survival strategy to the poorest members of society. Much of the value of this product lies in the timing rather than the magnitude of the income.

## CHAPTER 6

### THE TRADE IN *PTEROCARPUS ANGOLENSIS* (KIAAT) AND OTHER HARDWOOD CARVINGS AND FURNITURE

#### 6.1 INTRODUCTION

In many parts of southern Africa, a diversity of forest and woodland tree species have long provided the raw material for the production of wooden household items (spoons, bowls, mortars and pestles, trays, agricultural implements) and artefacts of cultural and ceremonial significance (sticks, drums, head rests) (Steenkamp 1999a, Ellery *et al.* 2004, Jacobsen and McKean 2004). In recent years, the need for cash income, increasing unemployment and economic hardship, as well as improved opportunities associated with growing tourism, has seen this traditional practice expand into an important income generating activity (Newton 1998, Steenkamp 1999a,b, Braedt and Standa-Gunda 2000, Jacobsen and McKean 2004). Woodcraft is now seen for sale on roadsides and in informal markets in Malawi (Marshall *et al.* 2000), South Africa (pers. obs.), Swaziland (pers. obs.), Namibia (Terry 1999) and Zimbabwe (Matose *et al.* 1997, Braedt and Standa-Gunda 2000). In Kenya, woodcarving has become a major industry, supporting some 60 000 carvers with an annual export value of US\$20 million (Choge 2001).

In South Africa, woodcarving and furniture manufacture have been widely adopted in parts of the country where suitable carving and timber species occur, e.g. Venda and Bushbuckridge in Limpopo Province, Mpumalanga lowveld, and the Zululand and Maputaland areas of KwaZulu-Natal (Newton 1998, Steenkamp 1999a, Jacobsen and McKean 2004). Traditional designs and skills have been adapted and modified to create a new assortment of products targeted primarily at the tourist market. These goods range from utilitarian items such as salad bowls, spoons and furniture to typical curio objects such as carved animals, birds and human figurines. One of the largest growth areas in the country for the woodcraft industry is the lowveld<sup>9</sup> region of Mpumalanga and Limpopo Province bordering the Kruger National Park (KNP). This is not unexpected given the region's attraction as one of the prime tourist destinations in South Africa. Indeed, increased tourism to South Africa since 1994, as well as the lifting of trade embargoes resulting in greater importation of carvings from other African states, has acted as a stimulus to the broader curio/craft industry, creating new dynamics, opportunities and sometimes stiff competition for local woodcrafters (Steenkamp 1999a).

Woodcraft production and use of the primary carving species, *P. angolensis*, in the study area has a relatively long history, although this species was rarely used for traditional artefacts. Its extensive use

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<sup>9</sup> The term lowveld refers to the relatively flat, low-lying, semi-arid savanna region in the north-east of the country positioned between the Drakensberg escarpment in the west and the Mozambique border in the east.



commenced at the turn of the last century, when its value as a commercial timber was recognised and stimulated by the arrival of colonial settlers in the area. Indeed, white traders have been held responsible for large-scale removal of timber from the area until as recently as the 1970s, with many producers still referring to this time. The majority of carvers and furniture makers in Bushbuckridge entered the industry in the last 15 to 30 years, although a number have been plying their trade for over 50 years. This is in contrast to the softwood animal figurine carving industry of the neighbouring district of Nsikazi, which evolved and grew in the early to mid 1990s (pers. obs.), and is slowly expanding into the Bushbuckridge municipality as well. Similar recent and rapid growth of the carving trade has been reported in the Dukuduka forest area of Zululand (Jacobsen and McKean 2004), in the Port St John's area of former Transkei in the Eastern Cape (J. Sithole, MSc student working on woodcraft, pers comm.), and in Zimbabwe along the main road between South Africa and Harare, the capital of Zimbabwe (Braedt and Standa-Gunda 2000, Standa-Gunda and Braedt 2004). In all cases these woodcraft industries have evolved and developed through local initiative with little or no support from any external agencies.

Although carving and furniture making provide opportunities for self-employment in isolated and remote rural areas, the long-term sustainability of these trades is often uncertain. Woodcraft production is a complex industry because it generally involves the use of slow-growing species, and trees harvested from wild populations (CIFOR 2002). Commercialisation of such a resource, thus, inevitably brings concerns regarding over-exploitation, resource degradation and the potential loss of biodiversity through the local extinction of valued timber species. There is evidence to suggest that commercial woodcraft production invariably results in greatly escalated demands for wood and a concomitant increase in pressure on the natural resource base (e.g. WWF undated, Desmet *et al.* 1996, Marshall *et al.* 2000, Choge 2001, Choge 2004, Jacobsen and McKean 2004). This ultimately threatens both the sustainability of the resource and the livelihoods of the craftspeople dependent on it. The impacts are especially profound where slow growing hardwoods like *Pterocarpus angolensis* and *Dalbergia melanoxylon* are favoured. Indeed, there are few woodcarving regions within Africa in which a declining resource base and wood scarcity are not of growing concern (WWF undated, Cunningham 1997, Matose *et al.* 1997, Steenkamp 1999a, Braedt and Standa-Gunda 2000, Marshall *et al.* 2000, Choge 2001, CIFOR 2002, Omeja *et al.* 2004, Cunningham and Choge 2004).

Within this context, this chapter explores and analyses the local woodcraft trade in Bushbuckridge and the wider Mpumalanga/Limpopo Province tourism region (Figure 6.8). As for other cases reported in this thesis, of primary interest was the role that woodcraft production plays in income generation and household livelihood security, and in addressing issues of rural poverty. Aspects of the industry relating to production and trade, livelihood importance and benefits, resource use and impacts, and external support and development were examined. Also considered were the nature of the challenges facing the

trade and potential strategies that could contribute to improved resource conservation and enhanced household income.

## 6.2 METHODS

The broad approach follows that outlined in Chapter 1. This case draws on work initiated in 1993 (S. Shackleton 1993), an on-going support-orientated relationship with woodworkers, as well as a recent survey (undertaken in late 2000) that served to update the original work and gather new data pertinent to the objectives of the current study (S. Shackleton and C. Shackleton 2004, Shackleton and Steenkamp 2004). In the original study, 21 woodcarvers and 21 furniture makers were interviewed using a semi-structured interview schedule. All interviews took place at producers' homes, with these being fairly widely scattered across Bushbuckridge (Figure 6.1). The woodworkers were found by asking each interviewee to direct us to others in the area (sometimes known as the 'snowball' method (Greene *et al.* 2000)). The sample of 42 producers represented the majority of woodworkers in the eastern portion (formally Gazankulu) of Bushbuckridge (enquiries were not leading to any new craftsmen), and a large proportion from the western part (formally Lebowa). Interviews covered issues relating to the history of the trade and producers' involvement in it; producers' profiles, skills and training; harvesting, processing and marketing; species used; and resource availability and management. Participatory Rural Appraisal tools such as ranking were used, where appropriate, with both individual woodworkers and groups of producers to complement the questionnaire data. An interpreter, a woodcarver himself, assisted with the interviews. Other role players in the woodcraft industry, including retailers and government officials, were also interviewed.

In the follow-up survey 16 producers, four of whom had not been interviewed previously, were interviewed, with the assistance of the same interpreter. The sample size was smaller as the aim of the exercise was to assess the main trends in the trade rather than collect all the original data again. The interviews focused on the profiles of producers, characteristics of their households and their incomes. More industry specific information, such as changes in the system for accessing wood, the state of the resource base, new markets, and development support to the industry was updated during a group meeting with 10 woodworkers lasting a morning. It was clear from this meeting that the trade had not changed much in the intervening years and most of the same producers were still active. In addition, key informant interviews were conducted with officials from conservation agencies and representatives from various support organisations. All the main markets and retailers were revisited, and informal traders and retailers interviewed using a short questionnaire. A detailed survey of traders, as done for the broom trade (Chapter 3), was not undertaken since traders worked and resided outside of Bushbuckridge (see Chapter 1, Section 1.6). Secondary sources were consulted regarding the ecological characteristics of the main wood species, *Pterocarpus angolensis*. The earlier and more recent surveys, together, provided a useful and informative longitudinal picture of the local woodcraft industry lending numerous insights into the development of local trading over time. Unless explicitly stated, the data reported are from the

2000 survey, or variables from the 1993 study, such as woodworkers' age and numbers of years in the trade, were updated to 2003 so as to be comparable with the other case studies in this thesis.

Accurate data on production rates, costs, quantities sold and incomes were extremely difficult to ascertain for woodworkers. Production and sales, and, consequently, income tended to be highly erratic, influenced by factors such as tourist season, equipment and tools, wood species, degree of assistance from other family members or helpers, success with selling stocks, and the number and size of orders. Many woodworkers experienced several months of the year without income. Compounding this was the fact that so many different items were made and sold, and that none of the producers kept books or records. Several cases had to be dropped because producers were unable to provide the necessary information. Based on the data available, production was estimated from the number of items of a particular type producers said they could make each month and from an inventory of what they had made in the last month. Annual gross incomes were obtained from producers' own estimates of what they earned from sales on a monthly basis (i.e. the cash brought into the household in months that they sold goods) and extrapolated based on the average number of 'selling months' in the year (6-8 per year). Net incomes were obtained by subtracting harvesting, processing and marketing costs. These costs were also difficult to obtain as few producers kept records of expenditure. Harvesting and marketing tended to be relatively *ad hoc*, and so these costs were based on the average number of harvesting and selling trips made per year. Expenditure on consumables such as sandpaper, glue, polish, labour, etc. was estimated on a monthly basis by woodworkers.

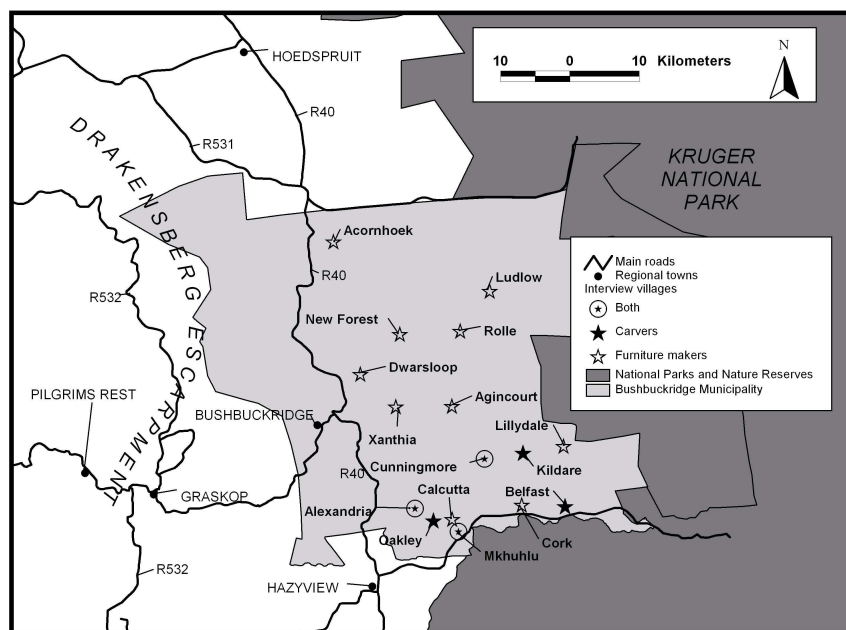


Figure 6.1: Location of villages to which woodcarvers and furniture makers were traced showing their scattered distribution across Bushbuckridge

## 6.3 THE RESOURCE: SPECIES USED FOR WOODCRAFT IN BUSHBUCKRIDGE

### 6.3.1 Diversity of species used

Seventeen species, in total, were used in the local woodcraft industry (Table 6.1). *Pterocarpus angolensis* DC.<sup>10</sup> was by far the most important in terms of volume and popularity, and was used for the greatest diversity of products (Figures 6.2 and 6.3). Other commonly used species included *Spirostachys africana* Sonder, *Dalbergia melanoxylon* Guillemin & Perrottet, *Berchemia zeyheri* (Sonder) Grubov and *Olea europea* L. ssp. *africana* (Miller) P.S. Green. Species used less frequently are listed in Table 6.1.

Table 6.1: Wood species used by carvers and furniture makers in Bushbuckridge

Botanical name and authority	Common name	Major uses	Availability and status (various sources)
<i>Pterocarpus angolensis</i> DC.	Kiaat	Bowls, spoons, plates, trays, furniture	Protected
<i>Dalbergia melanoxylon</i> Guillemin & Perrottet	Black ivory/zebra wood	Small dishes, spoons, walking sticks, candles sticks, small tables	Threatened throughout the region, scarce
<i>Berchemia zeyheri</i> (Sonder) Grubov	Red ivory	Walking sticks, spoons, forks, bowls, eggs, small tables	Scarce
<i>Olea europea</i> L. ssp. <i>africana</i> (Miller) P.S. Green	Wild olive	Spoons, small bowls, eggs, walking sticks, small tables	Protected, scarce
<i>Spirostachys africana</i> Sonder	Tamboti	Trays, furniture, walking sticks	Protected
<i>Apodytes dimidiata</i> E. Meyer ex Arn	White pear	Walking sticks, batons, eggs	Protected
<i>Combretum imberbe</i> Wawra	Lead wood	Furniture, walking sticks, plates and boards	Protected
<i>Acacia ataxacantha</i> DC.	Flame thorn	Teaspoons	Common
<i>Breaonadia microcephala</i> (Delile) Ridsd.	Matumi	Bowls, spoons, small tables	
<i>Terminalia sericea</i> Burch. ex DC.	Silver cluster leaf	Furniture, trays, spoons, bowls	Common
<i>Dombeya rotundifolia</i> (Hochst.) Planchon	Wild pear	Spoons	Common
<i>Schotia brachypetala</i> Sonder	Weeping boer bean	Walking sticks	Limited
<i>Acacia nigrescens</i> Oliver	Knob thorn	Candle sticks, spoons	Common
<i>Albizia versicolor</i> Welw. ex Oliver	Poison-pod albizia	Mortar and pestles	Common
<i>Sclerocarya birrea</i> (A. Rich.) Holchst	Marula	Stools, animals	Common
<i>Dichrostachys cinerea</i> (L.) Wight & Arn	Sickle bush	Spoons, forks, bowls	Common and a bush encroacher
<i>Jacaranda mimosifolia</i> D. Don	Jacaranda	Bowls, spoons, animals	Exotic and invasive
<i>Pinus</i> spp.	Pine	Furniture	Exotic
<i>Eucalyptus</i> spp.	Blue gum	Furniture	Exotic

Note: Species are listed in order of frequency of use.

<sup>10</sup> Note - species authorities are only provided for those species identified as being used in the woodcraft trade.

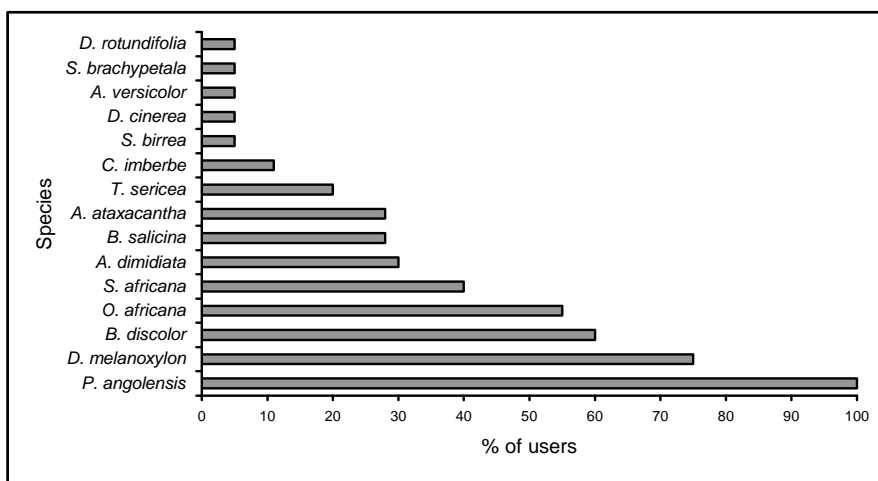


Figure 6.2: Use of the different wood species listed in Table 6.1 by carvers (percentage of carvers using, n=21)

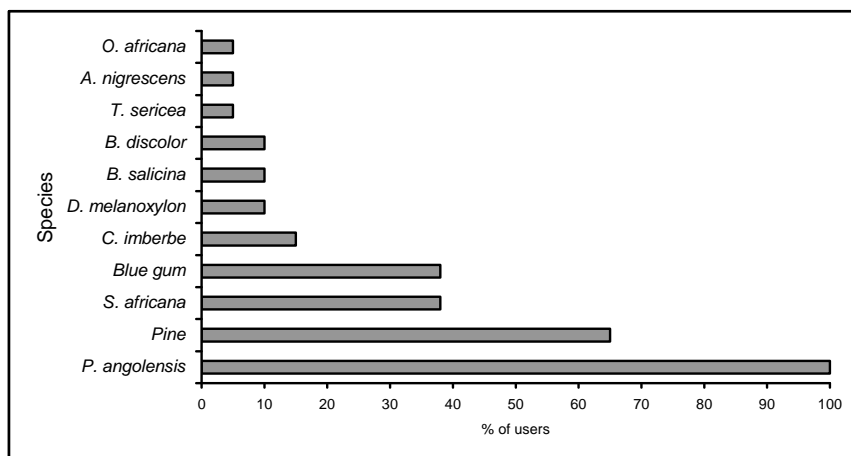


Figure 6.3: Use of the different wood species listed in Table 6.1 by furniture makers (percentage of furniture makers using, n=21)

In general, carvers used a greater diversity of species than furniture makers (Figures 6.1 and 6.2), and furniture makers relied on plantation woods such as pine and gum as alternatives. Some of the rarer species like *D. melanoxylon* and *B. discolor* were used mainly for small items such as decorative spoons, small bowls and eggs. These fetched higher prices than the equivalent objects in other woods. *S. africana* was rarely used for items which came into contact with food because of the poisonous nature of the wood.

### 6.3.2 Description, ecological characteristics and impacts of harvesting on *Pterocarpus angolensis*

*Pterocarpus angolensis* DC. (kiaat), a member of the Fabaceae family, grows in woodlands and wooded grassland throughout east and southern Africa. It produces one of the most widely used timbers of the African continent, and is amongst the most sought after hardwoods in Africa outside of the tropical forests (Vermeulen 1990). It is a medium-sized, slow growing deciduous tree usually reaching between

10-12 m in height. The heartwood is dark brown, often quite grained, and hard but still easily workable by hand. This is surrounded by a ring of softer white wood, which is sometimes incorporated into the design of carved products even though it is susceptible to borer (pers. obs).

*P. angolensis* has few characteristics that are favourable for its sustainable use. Although a fairly ubiquitous species in the region, its geographic distribution in South Africa is narrow, patchy and limited to parts of Limpopo Province, Mpumalanga and northern KwaZulu-Natal (Krynauw 2004). It demonstrates poor resprouting ability (C. Shackleton 1997, Krynauw 1999), and most trees die after felling. The species has low regenerative capacity (van Daarlen *et al.* 1992), and recruitment is episodic as illustrated by uneven size class profiles (C. Shackleton 1993, Clarke 1997). In Bushbuckridge, tree density is low at about two to three adults per ha (Desmet *et al.* 1996), although elsewhere the total number of stems of useable bole can be as high as 26-59 per ha (Krynauw 1999, 2004). Little is known about the growth rate of this species. *P. angolensis* has a peculiar trait of remaining as a suffrutex (small sapling) for a number of years, possibly up to about 20 years (Vermeulen 1990). The cues that stimulate it to enter a phase of rapid vertical growth are unknown, but have been speculated as fire, browsing, a year of high rainfall or release from competition. Analysis of data collected by C. Shackleton (1997) over a period of seven years for 99 trees, revealed that the time to reach a minimum harvestable size of 84 cm circumference (Desmet *et al.* 1996) was approximately 82 years.<sup>11</sup> The model derived by Desmet *et al.* (1996) between diameter and absolute mean annual increment based on one year's growth data resulted in an estimate of approximately 93 years. Neither of these estimates included time in the suffrutex stage. The length of time to reproductive age is also long. C. Shackleton (1997, 2002) found the smallest size of fruiting for *P. angolensis* was 25 cm circumference (about 36 years old), but only a few trees of this size bore fruit. Half of all trees of 60 cm circumference possessed fruit (about 59 years old), and all trees of 80 cm circumference (approximately 78 years old) or greater had fruit. Fruiting is regular and pollination and dispersal of the winged pods is by wind (Vermeulen 1990).

The rate of harvesting of *P. angolensis* in Bushbuckridge in 1994 was estimated as 5.6% of harvestable individuals per year (Desmet *et al.* 1996). A simple Leslie matrix model indicated that this was unsustainable over the long-term. Clarke (1997) compared the demand data of S. Shackleton (1993) with supply data (density and size-class profiles) for several species and similarly concluded that the current rate of demand is unsustainable. This conclusion was supported by work of van Daarlen (1990) in which he recommended that no more than 1% of usable trees should be harvested from the same area on an annual basis. Certainly, wood scarcity has become a major concern for producers in Bushbuckridge and has been the most significant change observed in the local industry over the last 10 years. Few of the harvesting sites mentioned in 1993 were still in use in 2000; craftsmen were moving further north as well as looking to populations outside the study area for wood (A. Shabangu,

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<sup>11</sup> Calculated using the function: percent annual basal area increment =  $-0.161$  (stem circumference) + 14.49 ( $r = 0.984$ ;  $p < 0.001$ ), and assuming a starting stem circumference of 3 cm.

woodworker, pers. comm.). However, recruitment appeared adequate (Desmet *et al.* 1996), with producers commenting on the large number of young individuals that existed in selected areas. In particular, Bushbuckridge Nature Reserve has large dense stands of immature trees (C. Shackleton 1997, A. Shabangu, pers. comm.), although most mature trees have been illegally removed (Macleod 1999). There is evidence that pressure on young trees is increasing as mature trees become scarcer, with some carvers now harvesting small diameter trees to make walking sticks.

Although some planted stands of *P. angolensis* exist in Mozambique, generally attempts to grow this species have met with limited success throughout the southern African region (Vermeulen 1990). Problems with germination, transplanting, poor take of cuttings, die off in winter, slow growth, and the suffrutex stage make the possibility of augmenting supplies through propagation an unlikely and impracticable option for this species, as well as extremely costly (Vermeulen 1990). This pessimistic view is shared by other researchers, with von Breitenbach (1973) stating that “the species defies artificial regeneration on any meaningful scale” and Boaler (1966) and Lewis (1958) declaring that *P. angolensis* is unsuited to plantation forestry. This all has consequences for the continued viability of the Bushbuckridge woodcraft trade.

## **6.4 WHO IS INVOLVED IN THE WOODCRAFT TRADE?**

### ***6.4.1 Profile of producers and their households***

All woodworkers (carvers and furniture makers) interviewed were men who regarded themselves as the primary producers and owners of their businesses. Production was not, however, dominated exclusively by men. Women played an important role in the finishing of articles (sanding and polishing) and sometimes helped with selling. In the follow-up study, a wife had taken over her husband’s furniture making business after he began to lose his sight, and another had continued with her deceased husband’s woodcraft activities with assistance from her son.

Producers were elderly (Table 6.2), with only two under the age of 50. The mean age of carvers at the time of writing was  $62 \pm 2$  years, and  $70 \pm 2$  years for furniture makers. This contrasts with the age profile of carvers involved in the newer softwood carving industry in the neighbouring area who were, on average, half this age (Steenkamp 1999b). However, the trade in Bushbuckridge was not exclusively the domain of the elderly. Several younger men, including producers’ sons, were working as apprentices or paid employees for older craftsmen, but had not yet established their own businesses. All producers were married, and they all headed their households. Unlike many women traders (Chapters 3 and 4), all the woodworkers were literate although the majority had only a primary school education. About one quarter could communicate well in English, which was a considerable asset to them when it came to marketing their products, especially to curio shops or individual buyers (in the case of furniture makers).

Table 6.2: Age profile of carvers and furniture makers (percentage of respondents in each class)

Age Class	% of carvers (n=21)	% of furniture makers (n=19)	Mean $\pm$ SE
<50	10	0	
51-60	30	16	Carvers = $62 \pm 2$
61-70	45	37	Furniture makers = $70 \pm 2$
>70	15	47	Both groups = $66 \pm 2$

None of the woodcraft households had other household members in permanent employment who contributed to the household. One carver mentioned he had a son and daughter who were employed, but that they only brought groceries when they visited a couple of times a year. However, almost half (45%) of households were receiving old age pensions and one a disability grant. Most of the elderly craftsmen had only recently become eligible for pensions; prior to this they were totally reliant on the woodcraft industry for their income. Most producers' children were too old for child grants, although one particularly struggling carver with 13 children mentioned that he was in the process of applying for child support grants for the younger ones. In terms of other self-employment within the household, one carver mentioned his wife made pottery for sale, another sold mats occasionally, and another had just trained as a traditional healer, whereas in most other households, wives and children assisted with woodcraft production and were integral to the business. In some cases cash flow constraints within the household prohibited other self-employment activities. For example, one carver revealed how his wife could sew and crochet, but that they did not have the money to buy materials for her to pursue this. Several producers (28%) mentioned that they themselves engaged in other activities that brought income into the household including farming, roofing, building, helping in a timber yard, furniture repair and selling firewood to Kruger National Park. One producer worked as a night watchman. In general, furniture makers had a greater diversity of income sources than carvers.

Total monthly cash incomes for woodworker households were extremely variable, ranging from R200 to R3 976, with a mean of R1 391  $\pm$  230 (Figure 6.4). Furthermore, sales were erratic, so incomes tended to fluctuate widely from month to month and were difficult to predict. When disaggregated and converted to an annual basis, mean total cash incomes were estimated as R6 534  $\pm$  2 203, R22 762  $\pm$  7 997, and R14 613  $\pm$  4 313 per annum respectively for carvers, carver-furniture makers and furniture makers. Because of high variation in the data and the small sample size these differences in income were not statistically significant. The range in total annual income was from R1 600 to R38 048. The highest income was obtained by a particularly active carver-furniture maker (see Box 6.2). He had an agent who exported selected products to the United Kingdom. He also received a disability pension, and sold firewood (*Acacia nigrescens*) to the Kruger National Park in bulk every month. Other households with high incomes tended to be those with pensions; a few had two pensioners in the household. In terms of other assets, about half of craftsmen had fields (54%) which they cultivated for home use. Only



23% owned cattle. One carver mentioned how it was not worth having livestock as they were just stolen.

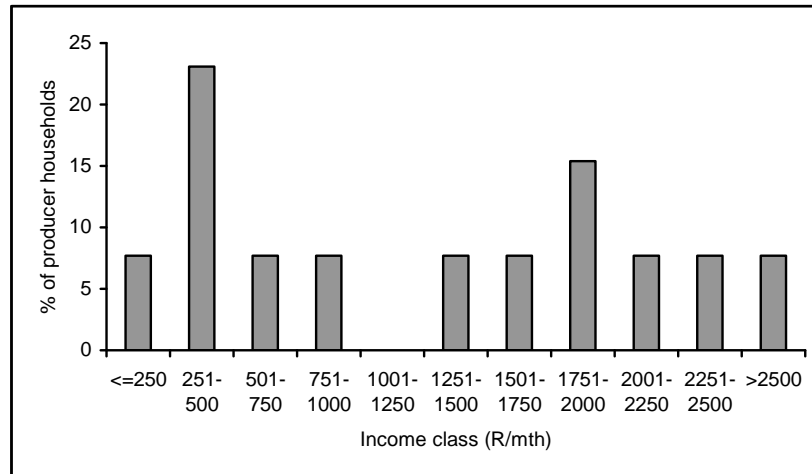


Figure 6.4: Distribution of total monthly cash income (Rands) of woodworker (carver and furniture maker) households based on intervals of R250 per month (percentage of respondents in each class, n=14)

#### 6.4.2 Producers' involvement in the trade

Woodcraft production was the main contributor to household income for most producers, followed by pensions. Overall carving and furniture making contributed some  $77 \pm 5\%$  towards total household income. Amongst individuals, this ranged from 39% to 100% (Figure 6.5). Woodworkers tended to view wood product manufacturing as their primary livelihood activity (83% saw themselves as full-time producers, while 17% saw their trade as a part-time) and expressed concern about their future as wood supplies continued to diminish. This was keenly articulated in the following statements: a) “I am not sure what will happen in the future – we are used to kaaat and formed our businesses on this wood”; b) “I use only kaaat, and so will starve when it is finished.” Many mentioned that they were elderly and that woodworking was the only skill they had. Others were concerned about what their sons would do in the future.

Most woodworkers (100% of carvers and 85% of furniture makers) entered the woodworking trade after leaving employment elsewhere, either through a lack of job satisfaction, family commitments or problems, or because of retrenchment. For this reason many trained in their late twenties, thirties or older (mean training age =  $39 \pm 3$  for carvers and  $27 \pm 2$  for furniture makers). In the majority of cases, woodworkers' previous occupations had offered little in the way of preparation for the woodcraft industry (Table 6.3). However, it is likely that the experience and exposure gained through formal employment made it easier for them to engage in entrepreneurial activities. Most had been employed as migrant workers in the farming, mining and construction industries, mainly in the Gauteng (56%) and Nelspruit (20%) areas. Others had worked as domestic workers, secretaries, drivers, salesmen and

hospital workers mostly away from home. Some 34% had been employed in the immediate region, mainly working on farms. Only 15% of furniture makers had moved directly into the trade to join their fathers in their businesses. One carver-furniture maker mentioned how he had literally dreamed about establishing his own business in woodcraft, and this acted as his catalyst (Box 6.2).

The barriers to entry for the trade were relatively low and the skills could be learned locally. Only 5% of producers had received formal training mainly through the previous Gazankulu Development Corporation, whilst all the rest had learnt informally within the community by working with other craftsmen (63%), or were self-taught (32%). At the time of writing, producers had been involved in the trade for an average of  $32 \pm 2$  years, ranging from a minimum of 11 years to as long as 62 years (Table 6.3). Carving was a younger trade with the average time in the trade being  $24 \pm 2$  years compared to  $41 \pm 2$  for furniture making. The woodcraft trade is thus relatively well established and has been an element of self-employment in Bushbuckridge for many years. The data suggest that the home-based hardwood trade may not be growing at the same rate as the other trades reported in this thesis or as the woodcarving industry elsewhere (Section 6.1), although this may be biased by the use of less recent data (see Section 6.2). That said, however, it was not easy to trace new producers in the follow-up survey, other than those producing softwood animals. This issue discussed further in Section 6.7.2.

Table 6.3: Prior occupations of producers and their years in the local woodcraft trade (percentage of respondents in each class)

Variable/attribute	Class	% of producers (n=41)*
<b>Number of years in the trade</b>	0-10	0
	11-20	25
	21-30	18
	31-40	30
	41-50	18
	51-60	8
	>60	2
<b>Previous occupations</b>	Previously employed (wide variety of jobs – see text)	83
	Entered business directly	15
	Other	2

\*Due to rounding up, column totals for each variable may not always add up to exactly 100%.

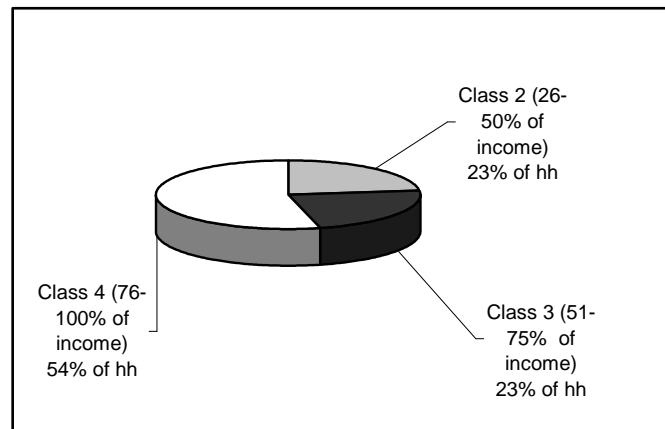


Figure 6.5: Proportion of total annual household cash income contributed by woodcraft sales (percentage of woodworking households in each class; there were no households where woodcraft sales contributed less than one quarter of income)

## 6.5 WOODCRAFT PRODUCTION: RAW MATERIAL PROCUREMENT AND PROCESSING

### 6.5.1 Sources, access and availability of raw material

Bushbuckridge woodworkers obtained their wood primarily from wild populations in the communal lands, although some illegal harvesting occurred within conservation areas. For example, several carvers admitted to harvesting illegally in Bushbuckridge Nature Reserve and Manyeleti Game Reserve, but given the sensitive nature of this issue it was not possible to pursue it further or to quantify volumes. *Apodytes dimidiata* was commonly sourced from private farmland and forestry estates in the neighbouring commercial farming areas. Since only a few carvers used this species and only branches were removed (i.e. harvesting is non-destructive), carvers reported little difficulty obtaining permission to harvest. However, access had been tightened in one area after harvesters, purportedly from elsewhere, had abused their privileges. Producers collected widely throughout the municipality, sourcing wood across numerous village boundaries. Some other woodland users tended to perceive this as an infringement of local use rights (S. Shackleton *et al.* 1995); in general, woodland resources found within a village's designated communal area tend to be regarded by the inhabitants of that village as belonging to them.

Five of the seven principal species (Table 6.1) used by producers were protected by provincial conservation legislation (in Limpopo Province, until new legislation is enacted, this still included old Transvaal, Lebowa and Gazankulu laws and ordinances). *Pterocarpus angolensis*, *S. africana*, *D. melanoxylon*, *Berchemia zeyheri* and *O. europaea* could not be harvested without a permit from the nature conservation authorities. Furthermore, within the former Gazankulu, woodworkers were required to pay for *P. angolensis* at a cost of R6 per running metre. The conservation authorities instituted this financial transaction to encourage producers to use this valuable wood responsibly (T. Tsweni, conservation officer, pers. comm.). The steps for harvesting *P. angolensis* are outlined below and in

Figure 6.6. Although illegal harvesting took place (when producers by-passed this system), all carvers and furniture makers adhered to this system for some, if not most, of their wood requirements.

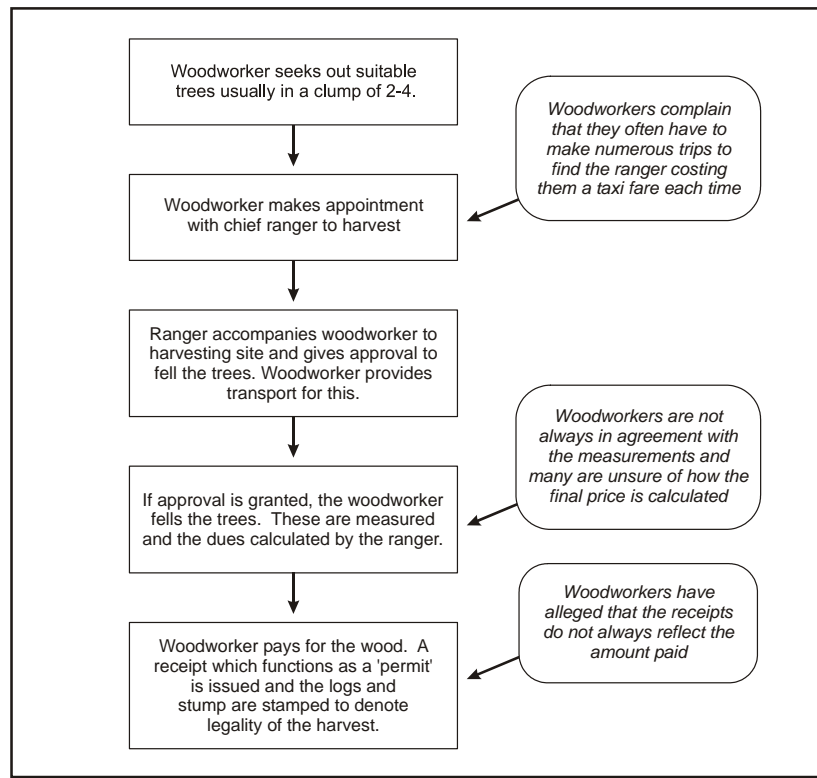


Figure 6.6: Flow chart outlining the procedure for harvesting *P. angolensis* in Bushbuckridge as well as some of the problems with the system

Prior to the political transition in 1994, producers required a licence to practise woodworking. This was acquired through a fairly complex process involving the tribal authorities, the local magistrate and the (former) Gazankulu Department of Finance. The licence gave the holder eligibility to harvest wood. Woodworkers without licences either: a) harvested illegally, b) obtained a temporary permit or c) solicited wood from a licensed individual. This licensing system was rescinded following the incorporation of Gazankulu into Limpopo Province, easing the situation for those producers without licences and removing a significant entry barrier.

Unlike the licensing system, the steps to obtain wood had changed little in the time between the two surveys (Figure 6.6). A woodworker would select two to ten trees within the communal lands for harvesting. After felling, these were measured by the local ranger, who accompanied the producer on his harvesting trip, and the amount owed calculated. This amount, usually between R200-R450, was paid in cash and a receipt issued. The stumps and logs were stamped to denote the legality of the harvest, and the revenue banked by the provincial Department of Agriculture and Environment (T. Tsweni, pers. comm.).

Woodworkers identified a variety of problems with this harvesting system, which relied heavily on law enforcement by rangers and tribal authorities and was extremely bureaucratic. Some of the factors causing discontentment included: a) the exclusion of producers from resource management decisions; b) the tedious and costly process mainly because rangers were often unavailable or did not have transport; c) poor communication on the method used for calculating payment; d) harassment and corruption (e.g. rangers taking wood or issuing incorrect receipts); and e) a lack of credit facilities to purchase wood (Box 6.1). However, at the same time, craftsmen were concerned about the decline in the resource base and the increased appropriation of wood by external groups (Box 6.1). Anecdotal evidence suggested that many previous controls had broken down (Macleod 1999, A. Shabangu, pers. comm.), mainly a result of institutional confusion and a lack of clarity regarding which authorities at both provincial and local level (i.e. local government or chiefs) were responsible for this function, as well as budgetary and capacity constraints. Recent efforts by Limpopo Province, however, have attempted to address this by supporting traditional leaders in reasserting their customary control over the natural resource base. A Deforestation Liaison Committee was recently formed for Bushbuckridge. This appears to have had some effect, as all woodworkers stated that the chiefs were becoming increasingly strict regarding the use of carving timbers, issuing high fines to illegal harvesters. One producer mentioned how in his tribal authority a woodworker could be banned from the trade if charged for more than three offences.

In addition to provincial legislation, most of the important carving species have recently been listed as protected species at national level under the Department of Water Affairs and Forestry's (DWAF) National Forests Act of 1998. However, at the time of writing, it was unclear how the new national regulations for protected species will relate to current provincial legislation, or how they will be implemented and enforced.

Box 6.1: Carvers' and furniture makers' comments on and attitudes towards the harvesting system

"It is important to control the use of wood otherwise it will be misused by people who are not woodcarvers or carpenters."  
"It (the kaaat) would disappear quickly if there were no control. People would cut the wood and sell it outside of Gazankulu."  
"The rangers are not straight – they steal the wood from the bush when the owners go away. They then approach other woodcarvers and offer to sell it."  
"The government does not help the woodcarvers. We promote the area with our skills but they are unhelpful. The rangers are unhappy with what we are doing. We don't have the money to buy logs – but we must pay cash. It would be better if we can get the wood and then pay later."  
"The chief is very strict about cutting trees without permission – if caught you have to go to the tribal court and pay a big fine."  
"Prices (for the wood) are often not right and I don't understand why."  
"The only painful thing is that if I buy the whole tree they measure the small branches and include this in the price. I am not happy with this."  
"As a carpenter I am constantly being followed by nature conservation whilst other people are cutting and carrying logs away. Rangers are always after bribes."  
"If I don't have the money I can't buy. They don't allow credit like the old days."

To date all management efforts have been targeted at controlling and curtailing harvesting through law enforcement, with little concern for the ecological management of the wild resource. No attempt has

been made to establish proactive, ecologically sound management guidelines for the species to encourage regeneration and growth, and prevent local extinction. Potential for this appears to exist. Van Daalen (1990), Vermeulen (1990), Holmes (1995) and Krynauw (2004) all describe various approaches, encompassing selective harvesting, nurturing of seedlings and the creation of suitable conditions for regeneration, that could contribute to improved management of natural populations of *P. angolensis*. Since it is unlikely that woodworkers will substantially curb their use of mature trees, it is critical that such an approach is incorporated into any broader management strategy for this species.

### **6.5.2 Quantities harvested**

Most wood sourcing and harvesting was done individually. Producers sought out appropriate trees for harvesting, often checking the depth of the heartwood, and then followed the procedure described above. Most craftsmen harvested 3-4 times per year. The volumes of wood harvested annually were difficult to establish and were not available in the government records. It was estimated from the 1993 data that carvers utilised some  $16 \pm 3$  trees per year and furniture makers  $40 \pm 8$ . The figures from the 2000 survey tended to be higher, with one carver-furniture maker and two furniture makers mentioning they used about 200 trees per year of mixed species (in this case they would have had to harvest much more frequently than four times per year). The mean across both groups was  $85 \pm 27$  trees, and  $31 \pm 5$  if the three high users were excluded. These numbers are, however, rough estimates as many producers were unsure of the amount of wood they were using and some had no idea at all: “I don’t calculate – I just buy and come to work and when it’s finished I go out again”. There is also the possibility that some producers were referring to the number of logs they used rather than whole trees.

### **6.5.3 Responses of producers to wood scarcity**

The shortage of wood, especially over the last decade, has led to alternative sources being sought at the instigation of both craftsmen and external support agencies. Other responses have included changes in production techniques and product range. Recent work revealed that carvers were now accessing wood from neighbours’ home plots and fields as well as revisiting previous harvesting sites to salvage ‘waste’ wood. Furniture makers reported purchasing *P. angolensis* planks imported from Mozambique and Zambia from timber merchants in Johannesburg, Pretoria and Nelspruit. The Danish Cooperation for Environment and Development (DANCED) Community Forestry Project and the Kruger National Park Socio-ecology Programme have assisted woodworkers in obtaining wood from the national “Working for Water Programme”<sup>9</sup> and from areas cleared for mining and other developments (Yeatman 2004). One carver-furniture maker successfully negotiated with a farmer to harvest the exotic species jacaranda (*Jacaranda mimosifolia*) and syringa (*Melia azedarach*) from his farm. Apart from these examples, little switching to alternative species was observed, possibly because there is not a lot of choice. Furthermore,

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<sup>9</sup> Working for Water is a national programme of the Department of Water Affairs and Forestry aimed at clearing invasive alien vegetation from catchment areas and riverine zones to enhance water production, biodiversity and local employment opportunities.

in contrast to reports from other countries, there was little evidence of long-distance migration to resource rich areas both within the country and across borders (Marshall *et al.* 2000, Choge 2004, T. Cunningham, natural resource expert, pers. comm.). This is probably because, in South Africa, there are few localities outside of parks that are as well endowed with timber species as the areas in which woodworkers already reside. However, as local resources are exhausted there may be increased cross-border trade with Mozambique (Steenkamp 1999b). In addition, a new trend towards working in softwoods was observed amongst new entrants to the trade and some established carvers (pers. obs); previously this was seen as the domain of producers' neighbours.

In terms of production, increased efficiency in wood use has been an important response to scarcity. Specific strategies include the production of smaller items using wood that would have been previously discarded, incorporation of greater amounts of white wood in *P. angolensis* products (pers. obs.), and a reduction in wastage due to the use of electric equipment especially saws (S. Shackleton and C. Shackleton 2004).

#### ***6.5.4 Costs of raw material harvesting***

One of the greatest costs for both groups of woodworkers was incurred during harvesting. The main input costs for harvesting included capital to purchase a chain saw, chain saw maintenance and fuel, payment of additional labour, travel costs for two or three trips to the harvesting site, payment for wood, and the hire of a truck to transport logs home. The average annual harvesting cost was R3 460 ± 1 009. Harvesting was also labour intensive, taking up to a week of woodworkers' time between finding the raw material, contacting the authorities and transporting the wood home.

The returns relative to the cost of the raw material itself were, however, high, as is typical of wild product industries requiring artistry and craftsmanship. The farmgate price of wood was approximately R0.60 per kg relative to an average of R46 per kg for finished products (Steenkamp 1999b). However, much of the wood harvested was lost along the way owing to inefficient designs (hand carved bowls waste a lot of wood), the use of unsophisticated tools, cracking (because wood is not dried adequately) and borer. In addition, high transport costs resulted in excess wood being abandoned at the harvesting site as few producers could afford to hire a vehicle for more than a day at a time. The local price for wood was highly subsidised with the value of *P. angolensis* timber in the commercial market being many times higher at about R8-10 per kg (R8 000 per cubic metre).

#### ***6.5.5 Manufacture of carvings and furniture: production modes and practices***

Bushbuckridge producers worked from home, and used dense hardwoods to produce utilitarian objects that they sold either to 'middlemen' or direct to vendors and retailers outside of Bushbuckridge (Section 6.6). They tended to operate within a family-based production system with a well-developed division of labour between family members. For example, men usually harvested and processed the wood, while

women and children sanded and polished the finished products. Furniture makers often employed extra help, with the number of employees ranging between two and 17. Producers were hardworking, spending on average 9-10 hours per day in their workshops, six to seven days per week. All had open or covered workshops or shelters, and most owned relatively sophisticated, albeit old and improvised, equipment such as chain saws, power saws, drills and sanders. Only a few households were not connected to the electrification grid. The provision of electricity in the area after 1994 made an enormous difference to producers and removed a significant barrier to production. However, much of their equipment was unreliable and an occupational hazard due to poor safety measures. For example, I watched a furniture maker and his assistant push a log through an unguarded saw; an extremely dangerous situation. It is, thus, not surprising that several producers have had accidents. Home-based producers tended to function very much as individual entrepreneurs or small businesses. They rarely cooperated or sub-contracted to one another, and saw each other as competitors. One furniture maker mentioned that “we shall bewitch one another if we all tried to work together collectively and cooperatively”. This has been both a strength and a weakness. The strength lies in the fact that these producers were not dependent on anyone else, having successfully created a livelihood for themselves with little support. The weakness lies in the many missed opportunities for growth and development of the local industry due to a failure to make use of the considerable collective potential that exists (e.g. to fulfil large orders or to share harvesting costs). A similar reluctance for cooperative work was identified amongst crafters in Botswana (Terry 1999).

This home-based mode of production contrasts with that used by softwood ‘roadside carver vendors’ from the neighbouring area, who carved and sold their goods, mainly animal and bird figurines, from the roadside along the main tourist routes (Steenkamp 1999a,b). In this case, facilities were low technology and production was often carried out in loosely constituted groups. Furthermore, many of these producers saw their situation as temporary while they sought formal employment elsewhere (Steenkamp *et al.* 1996; Moloji 1999). This mode of roadside production tends to be more typical of the woodcraft trade in South and southern Africa as a whole (Matose *et al.* 1997, Braedt and Standa-Gunda 2000, Jacobsen and McKean 2004), but faces many limitations due to its *ad hoc* nature. On the other hand, home production, especially where producers have access to electricity, shows better potential for growth and enhanced production. Producers already have an asset base (shelters and tools) on which to build and, because they have secure workshops, are able to work on many products simultaneously without the threat of these being stolen or exposed to the elements. Moreover, furniture production, as an activity that creates employment, is not possible at the roadside due to the type of infrastructure and equipment required.

While most home producers ran their own businesses some other models existed. One interesting production set-up was identified, wherein the owner of a furniture making business had become too old to work and so leased out his workshop to another businessman. The elderly furniture maker’s wife and



daughter then continued with production and supervision and were paid for their efforts by the lessee. This released the household from any marketing and raw material procurement responsibilities and ensured a regular monthly income.

#### **6.5.6 Manufacture of carvings and furniture: items produced and levels of production**

Carvers produced undecorated utility items such as bowls; spoons including ladles, serving spoons and teaspoons; platters and plates; trays in a variety of sizes; and walking sticks. Some items such as mortars and pestles, spoons and traditional sticks were sometimes made for the local market on request. Less frequently produced goods included bangles, candlesticks, key rings, batons and eggs. All of these goods were hand carved and the wood was left natural or lightly polished. These items have a distinct appeal in their simplicity, which shows off the warm-brown, medium grained wood. One income enhancement strategy adopted by carvers between 1993 and 2000 was to diversify into furniture production; a move facilitated by connection to the electricity grid allowing use of power tools.

Furniture makers were able to produce almost any item of furniture, including tables and chairs, armchairs, benches, sideboards, headboards, small cabinets, etc. The most frequently made items were dining room suites and Cape Dutch style '*riempie*' (leather thong) benches. Other items were usually only made on order. All furniture was handmade and solid, with no one piece identical. This lack of standardisation prevented these craftsmen from entering certain formal markets, such as the furniture store chains (one furniture maker described how they tried this route but had failed to meet the level of consistency required).

Across both groups, items tended to be repetitive and stylistically homogenous, although some carvings carried recognisable trademarks. For example, one carver in Bushbuckridge often used cow horn and warthog tusk to produce handles for his walking sticks. Others used the infrequently encountered, beautifully 'marbled' grey-blue wood of *Apodytes dimidiata*. While isolation and a lack of exposure to new ideas limited innovation, carvers and furniture makers also appeared resistant to experimentation, preferring to stick to proven, low risk products. Indeed, the costs associated with new product development were often prohibitive for these producers who literally led a day-to-day existence (see quote in Section 6.6).

Production related information was extremely difficult to obtain as few woodworkers kept records. In addition, the type and number of products made varied widely from month to month depending on the availability of dry wood, the size and species of wood, orders, type and working order of equipment, and availability of cash (related to success with selling stocks) to purchase inputs or hire help. In general, the production of handcrafted hardwood furniture and curios was a labour intensive process. The approximate time to make a range of popular items, and the number that producers believed they were capable of making in a month (carvings) or year (furniture) are presented in Table 6.4. It is

important to note that the latter relates to potential production rather than the actual number of items made, as incomes rarely matched these levels of output.

Table 6.4: Estimates of time required to complete some of the more popular woodcraft items, and the approximate number of small and large items that can be made on a monthly or annual basis

Item	*Time per item per producer	Mean ( $\pm$ SE) number of items produced (range)	Notes
Bowls -large -medium -small	1-1½ hrs to hollow and dig out 2 days to dry 2 hrs to sand and polish	<b>Per month</b> 51 $\pm$ 7 (30-300)	Small and large bowls took approximately the same time to complete. In terms of cost-benefits it would be better to produce larger bowls. However, some wood species were only suitable for small bowls. In addition small bowls can be made from branches and are said to sell more easily.
Spoons -tea -small -large	2 hrs	500 120 $\pm$ 24 (35-250)	Only one interviewee was producing teaspoons on a regular basis.
Walking sticks	1½ hrs	76 $\pm$ 15 (30-175)	Shape and decorations vary, influencing times.
Trays	4 per day	36 $\pm$ 17 (5-100)	A few of the furniture makers specialised in small items such as side tables and trays.
Small tables	3 days – 1 wk	10 $\pm$ 3 (60-240)	Often made with off-cuts and pieces of wood not suitable for other furniture.
Dining tables + 8 chairs	5 wks – 2 mths	<b>Per year</b> 10 $\pm$ 2 (3-24)	Number made depends on machinery, number of helpers, style and size.
Arm chair	3 wks	26 $\pm$ 7 (9-48)	
Bench seat	3 wks	13 $\pm$ 3 (7-20)	
Coffee table	2 wks	19 $\pm$ (12-24)	

\* It was sometimes difficult for carvers to estimate how much time it took them to complete a particular item as they often made them in bulk batches (e.g. 50 bowls at a time). Also unfinished work may be left to dry for periods of up to one week or more before completion.

### 6.5.7 Costs of processing

Processing was relatively costly requiring capital investment in tools such as saws and electrical planes, sanders and drills, as well as expenditure on day-to-day consumables like glue, sandpaper, saw blades, polish, transport to buy these, etc. Wages were another relatively high outlay. Furniture makers employed an average of 1-2 workers on a part-time or full-time basis, whereas few carvers employed additional help. Wages were variable and a common method of payment was to pay a set rate per item completed. Men were usually employed for carpentry or carving work, and women for sanding and polishing. Unstable income was mentioned as the main reason for not employing assistants, or for employing them on a part-time basis only. While exact costs were difficult to measure, it was estimated that processing overheads were on average R556  $\pm$  240 per month or R6 672  $\pm$  2880 per annum, although this varied widely from producer to producer depending on the size of their business. Mean costs for furniture makers were consistently higher than those for carvers at R13 620  $\pm$  6 876 per annum compared to R2 025  $\pm$  360. This pattern was consistent with the results found in the 1993 survey.

## 6.6 MARKETS, SELLING AND PRICES

### *6.6.1 Market channels, selling and market organisation*

Woodcraft products were primarily sold in external markets outside of the area of production, with tourists and wealthy and middle-class members of the 'white' community being the main consumer groups (Figure 6.7). Sometimes sales of specific traditional items or furniture made from exotic timber were made to local buyers (for example one furniture maker made benches for schools and churches), but the need to offer credit discouraged many producers from pursuing this market. Woodcarvers from Bushbuckridge, in contrast to other carvers in the region (Braedt and Standa-Gunda 2000, Jacobsen and McKean 2004), rarely sold their products direct to end consumers, but instead channelled these through formal and informal intermediate traders (Figure 6.7). One of the reasons for this difference is that, because carvers worked from home, they could not afford to take the time out of production to sell at the roadside. Another reason relates to South Africa's history. Many hardwood carvers started carving during the height of the apartheid era when it was impossible to work or sell at the roadside without being arrested, while the softwood carving industry grew in the early 1990s after many of these by-laws had been revoked. Furniture makers sold their products direct to end consumers via order or on the roadside (Figure 6.7).

Most marketing was carried out by producers themselves on an individual basis (Figure 6.7). Carvers made one or two selling trips per month, and furniture makers one every two months. For carvers, most markets were between one hour (Kruger Gate of KNP) and three hours (Pilgrims Rest) away. Producers may take a day to visit all the main selling points (some 90 outlets). Furniture makers generally drove up to Gauteng (500 km) or regional towns, and usually stayed there for a week or more selling at the roadside. Carvers usually travelled by minibus taxi whilst furniture makers hired a one-tonne truck.

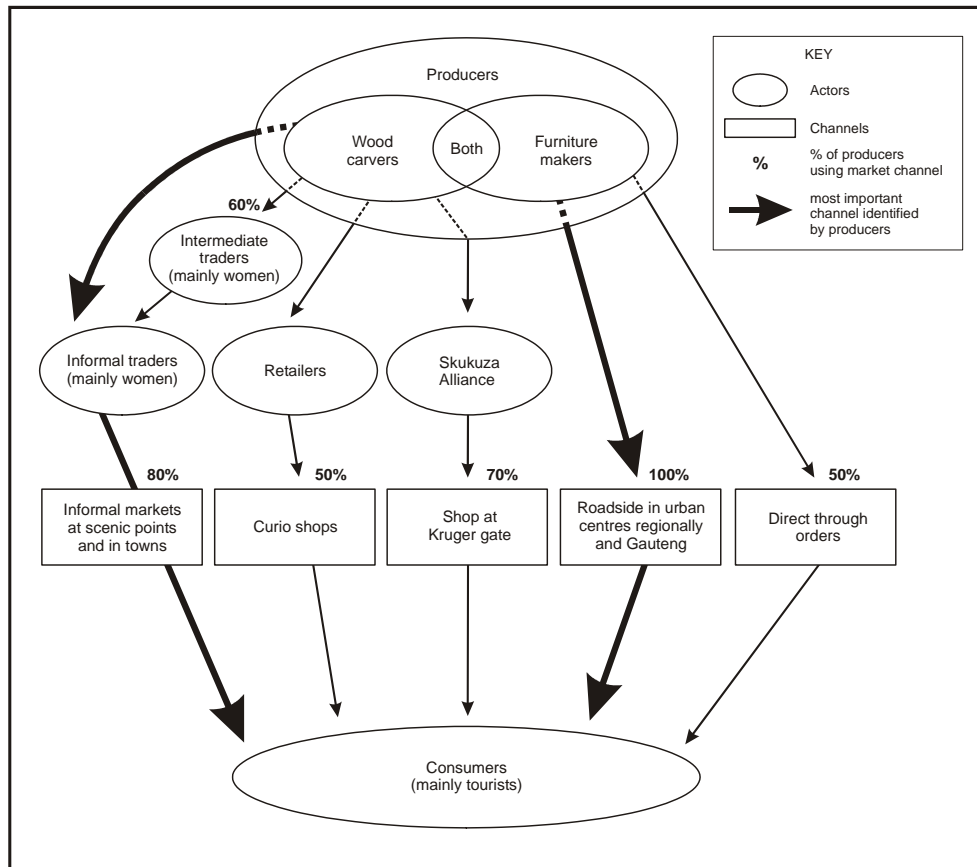


Figure 6.7: Key markets and market channels for woodcarvings and furniture produced by Bushbuckridge hardwood craftsmen

Previously the main markets for carvers were craft and curio shops located in and around six main towns of the tourist region: Hazyview, White River, Nelspruit, Sabie, Graskop and Pilgrims Rest (Figure 6.8). While these shops were still used, a number of informal markets have emerged in the last 10 years that now serve as the main outlet for carvers. Indeed, curio shops have shifted their focus to imported African goods; for example Steenkamp (1999b) found that, on average, there were more imported wood goods (55%) than local products (43%) in these shops. Furthermore, amongst the local wood products, only about 5% were produced by home carvers. One carver mentioned how he stopped selling to the curio shops as they would “choose what to buy”, whereas the vendors at the informal markets would buy his “whole stock” so he did not have to take goods home. In terms of the latter, a price would be often negotiated for the entire stock rather than on an item-by-item basis.

A number of the informal markets have been developed further through interventions from government, primarily the Mpumalanga Department of Finance, and parastatal agencies such as the Mpumalanga Parks Board and South African Forestry Company (SAFCOL). Support has included the provision of permanent cover, individual stalls, car parks and water and ablution facilities, creating a much safer and more amenable environment for both traders and tourists. The markets are located along main tourist

routes at scenic points, with the primary vending areas being Panorama Gorge, God's Window and Natural Bridge near Graskop, and Mac Mac Falls and Long Tom's Pass near Sabie (Figure 6.8). Committees oversee the management of the markets, and most have codes of conduct that traders must adhere to. Rules prohibited harassment of buyers, arguing between vendors and littering. Vendors paid a small fee (R5-R25 per month depending on the site) for their stall.

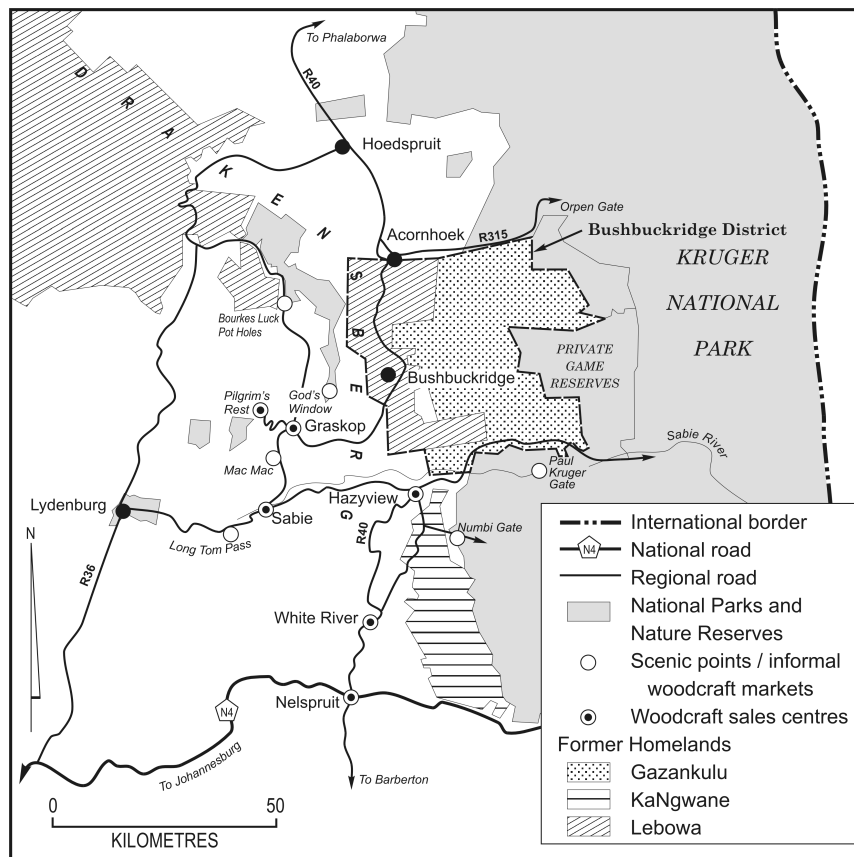


Figure 6.8: Location of the main sales points for woodcarvings within the Mpumalanga and Limpopo Province tourism region

Vendors in the informal markets were mainly female. They purchased their goods from intermediate traders or directly from producers, selecting home carver products and imports from neighbouring countries, especially Zimbabwe and Swaziland. Local woodcarvings composed some 20% of their stock. Most vendors were previously employed and have been vending for between two and eight years. Eighty percent expressed high job satisfaction, with their economic independence being an important factor. There appeared to be no established 'loyalty' relationships between particular woodcarvers and traders/vendors, although some vendors mentioned that they sometimes placed advance orders with carvers. Price ranges were generally agreed between vendors selling the same type of products: "we talk the prices through amongst ourselves to reduce competition". Incomes were on average less than R500 per month. Storage facilities were a problem in all the markets and traders hid their products in the forest at night.

In addition to the markets described above, most carvers also sold their goods through the Skukuza Alliance Kruger National Park (KNP) outlets (see Section 6.9). Prices were better than the other markets (Table 6.5), but goods were sold on consignment and so it could take several months before producers received any money. Nonetheless this market was identified as one of the more positive developments in the industry over the last few years. Finances to run the outlets were generated by deducting 10% from the sale of each item. Although this market appeared to be functioning, there were some problems. These included the undercutting of prices by producers selling on the roadside (Moloi 1999, SANParks 2000), the fact that tourist bus drivers had to be bribed before they would stop, selective support by the KNP administration (e.g. an appeal by the alliance to sell drinks and snacks was declined), and the lack of facilities to accept credit cards and to package and export goods for overseas buyers.

#### ***6.6.2 Selling woodcraft, prices and costs***

Carvers indicated they were “tired” of selling to informal vendors because they paid such a poor price – usually about one quarter of the asking price (Table 6.5). But few of these vendors could afford to pay more; their profits were marginal and cash flow limited. Some carvers sold unfinished goods at lower prices to the vendors, who then did the finishing. There was a similar arrangement with the shopkeeper at Kruger Gate. A number of retailers interviewed mentioned that they could not compete with the pricing structure of informal vendors and were unable to put a high mark-up on locally produced carvings. This reduced their interest in stocking local goods (producers interpreted this as the retailers being “angry” with them because they sold to the informal sector). An underlying problem is that end consumers still expect to pay very little for locally produced craft items, especially if sold in the informal sector. Consequently, producers and traders, because they operate on what is effectively a subsistence level, were at the mercy of the market and were frequently forced to accept unrealistic prices in order to earn sufficient money to pay their taxi fares home and to provide food for their families (Bistow-Bovey 1998) (Table 6.5).

Table 6.5: Prices for selected woodcraft goods in 1993 and 2000 at different points in the market chain

Products ( <i>P. angolensis</i> )	Average price at which goods were offered to traders/consumers by producers in 1993 #  (R)	Average price at which goods were offered to traders/consumers by producers in 2000  (R)	Average price actually paid by traders in 2000  (R)	Average price paid by final consumers in 2000 (R)		
				Informal Markets *	Skukuza Alliance	Retailers Curio shops
Bowl, large	33.00	79.00	30.00	70.00	120.00	80.00
Bowl, medium	15.00	47.00	20.00	35.00	50.00	40.00
Bowl, small	10.00	19.00	10.00	20.00	25.00	25.00
Bowl, sauce size	4.00	5.00	4.00	8.00	–	7.95
Oval steak plate	9.50	16.00	8.00	25.00	55.00	22.00
Teaspoon	1.80	3.00	1.00	2.50	–	4.95
Decorated walking stick	35.00	33.00	15.00	25.00	40.00	40.00 – 130.00
Plain walking stick	7.80	10.00	5.00	12.00	30.00	20.00
Salad server	8.00	10.00	5.00	10.00	25.00	12.50
Cheese board	–	25.00	8.00	25.00	–	27.95
Small table	65.00	123.00	–	–	150.00	175.00
Tray	29.00	63.00	25.00	50.00	–	99.95
Dining suite (eight chairs)	1 715.00	3 833.00	–	3 833.00	–	–

# In the case of carvers this was the price at which carved goods were offered to vendors and retailers (see Figure 6.7), whereas in the case of furniture makers this was the price at which the item was being offered to the final consumer.

\* Prices were flexible; price shown reflects effects of bargaining.

The average cost to market goods was approximately R90 ± 24 per month for carvers, and as much as R2 500 per trip for furniture makers every two or three months. This translates into annual costs of R1 080 ± 288 and R10 536 ± 164 respectively. Most of the costs were for transport although furniture makers often hired an assistant, or provided food to the driver of the hired vehicle.

## 6.7 CONTRIBUTION OF THE WOODCRAFT TRADE TO HOUSEHOLD LIVELIHOODS

### 6.7.1 Incomes earned

In 1993, in a 'good' month (approximately 6-8 per year), net income from sales ranged from R100 to R600 for carvers (mean = R290 ± 29) and from R500 to R2 750 (mean = R1 297 ± 198) for furniture makers (Table 6.6). Some of the walking stick and spoon makers reported that they only made enough to buy a 50 kg bag of maize meal valued at R80. In 2000, the equivalent incomes ranged from R200 to R980 (mean = R450 ± 95) and R800 to R2 400 (mean = R1 232 ± 384) respectively (Table 6.6). Average net annual incomes from woodcraft and furniture sales in 1993 were approximately R1 710 ± 213 for carvers and R7 140 ± 1 513 for furniture makers (Table 6.6). In 2000, the corresponding figures

were R3 603 ± 763 for carvers, R15 242 ± 4 021 for carver-furniture makers and R8 533 ± 1 748 for furniture makers (Table 6.6). Carvers' incomes were significantly lower than carver-furniture makers' incomes (Mann-Whitney U test; U=1.0; p<0.05), but not furniture makers' incomes. As with other case studies, annual incomes were extreme across different producers, ranging from R1 600 to R7 840 for carvers and R6 400 to R19 328 for producers making furniture (Figure 6.9). Gross incomes were approximately double net incomes, since costs formed some 51 ± 4% of gross income, although again this was variable for different producers. Overall, these data were comparable to those for carvers from other rural communal areas of between R2 400 per annum (Jacobsen and McKean 2004) and R7 800 per annum (Steenkamp *et al.* 1996). The longitudinal data indicated that although absolute values were mostly higher, in real terms incomes had not matched inflation and some households were possibly worse off than they were a decade ago.

Table 6.6: Average net annual incomes (Rands) earned by carvers and furniture makers in Bushbuckridge in 1993 and 2000 (gross incomes were approximately double net income)

'Form' of income (R) Mean ± SE	Carvers		Carver-furniture makers	Furniture makers	
	1993 (n=18)	2000 (n=7)	2000 (n=3)	1993 (n=19)	2000 (n=4)
Net monthly income * from the sale of wood products (for sales months)	290 ± 29	450 ± 95	1 905 ± 870	1 297 ± 198	1 232 ± 384
Net annual income from sales of wood products #	1 710 ± 213	3 603 ± 763	15 242 ± 4021 (biased by one high earner)	7 140 ± 1 513	8 533 ± 1 748
Net annual income from sales (R) (mean ± SE) for all producers in 2000 (n=14) = 7 427 ± 1 246					

\* Net income was calculated as gross income minus costs (i.e. materials, travel, equipment, employees wages etc. but excluding own labour).

# Assuming sales take place for eight months of the year.

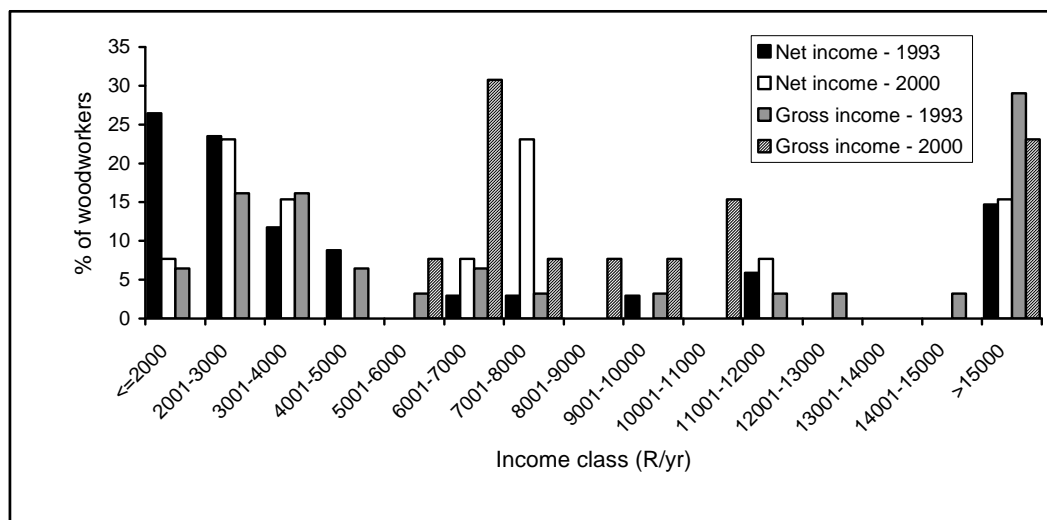


Figure 6.9: Distribution of gross and net annual income (Rands) earned from sales of carvings and furniture in intervals of R1 000 (percentage of producers in each class; some classes are not represented because of the small sample size and wide variation in income)



Box 6.2: Life history of a successful woodworker

Alfred Shabangu was born on a farm in 1934. He was lucky to have received primary education at a mission school and was fluent in English and Afrikaans. After working in Johannesburg for a number of years as a domestic worker, he had a motorbike accident and lost his left leg below the knee. This was when he dreamt of being a woodcarver. His state disability grant gave him the initial capital he required to enter the trade in 1964, and he taught himself all the skills he required. Alfred was a hardworking man who was never afraid to try something new. After starting with making mortars and pestles for the local market, he moved to bowl making and then on to producing furniture as well, commencing with small tables and graduating to full dining room suites as his skills improved. He was also always pursuing other ways of boosting his income, including working as a research assistant for various researchers, and selling firewood to Kruger National Park. When the Mhala woodworkers formed their association he agreed to chair this, and liaised with various stakeholders including the community outreach staff from the Kruger National Park. This helped him obtain recognition, such that he was contracted in 2000 to produce particular pieces for an overseas buyer. His family have continued with this relationship after his death in early 2003. Alfred's excellent communication skills provided him with an advantage that many of the other carvers lacked when it came to selling his goods and establishing relationships with his buyers. He rarely experienced problems marketing his products. He also worked very hard – getting up at 4:30 am and continuing through until 6:00 pm everyday. I never visited him when he was not hard at work. He enjoyed his work, mentioning that he was a “creator” and that it felt good inside to have made something that people liked and wanted. He mentioned that many of his ideas were his own (such as his trademark horn and warthog tusk walking sticks), but that he also obtained “patterns” from other producers, his friends and the shops. He also had a book on “Art from Africa” which provided him with inspiration. Alfred sometimes employed assistants and in 2000 had a blind man working for him who did most of the sanding. Alfred lived very modestly, having only a small two-roomed house for his family of six. He did, however, make sure his children went to the best local schools and was able to send his brightest son to technical college in Johannesburg. The family never lacked for food and enjoyed small luxuries such as meat and ‘coke a cola’ at least once a week. He also invested in his business, buying an engine, and electrical tools and saws (worth about R10 000), and a cell phone to communicate with his various buyers. He had a good relationship with other craftsmen in the area.

### ***6.7.2 Producers' perceptions of the woodcraft trade as a livelihood option and its contribution to their livelihoods***

For the majority of producers the woodcraft industry was their primary source of livelihood (Figure 6.5) and they saw this as their full-time occupation. They enjoyed their work and independence, and, as far as the older producers were concerned, preferred this to working as a migrant worker away from home and their families (Box 6.3). The number of years that producers had been engaged in the trade is clearly indicative of its permanence and degree of specialisation (Section 6.4.2). However, a few of the younger men, mainly spoon and walking stick makers, and those who were really struggling to make ends meet, remarked that they would have preferred a formal job (Box 6.3). Similar sentiments were recorded for the much younger softwood carvers from the neighbouring area (Steenkamp 1999b). The greater stability of the hardwood home-based trade may relate to the fact that producers needed to invest considerable capital in purchasing the tools required to work the hardwoods they were dealing with, in building a workshop at home, in honing their skills particularly for furniture making, and in marketing their products. Thus, having made this investment it made little sense to leave the industry especially when the returns from non-specialised wage labour were not necessarily higher (Chapter 7). One producer mentioned: “Tools are very expensive, so if I or my children after me sold them it would be very difficult to start again. They would not be able to afford the tools I have built up over the years.” Furthermore, many of the producers enjoyed their trade (72% mentioned that they were happy), and were proud of their creative skills and of what they had achieved (Box 6.3). They carried respect within the community, and preferred to live in their own homes in a rural area rather than a hostel in one of the

cities (Box 6.3). The woodcraft trade, thus, clearly had a number of non-financial benefits related to independence, self-esteem, psychological well-being and quality of life, in particular a sound and healthy family life.

On the whole the woodcraft industry had not changed much in the time between the two surveys. During the first survey the general impression was that the number of woodworkers had not increased greatly over the years, although this opinion varied between producers (see Box 6.4). Such varied perceptions were repeated in the second survey. Some 57% of producers believed numbers to have grown and attributed this to increasing unemployment and poverty. Twenty-nine percent felt that there had been no change in numbers, and the remainder, 14%, perceived the number of woodworkers to have decreased. The main reasons provided for a lack of growth in the industry was the unavailability of suitable carving wood and timber for furniture making. Producers' views of the dynamics of the industry were, however, quite localised to their immediate area, and thus it is possible that the numbers of participants may have increased in some areas and decreased in others.

In terms of individual returns from woodcraft production, 36% of producers believed their earnings to have declined, 21% said these had stayed the same, and 36% mentioned an increase in earnings, while the remainder said their earnings were too erratic to identify a trend. A decline in income was attributed to the rising costs associated with production, as well as scarcity of wood such that producers spent excessive time searching for new sources of raw material. An increase in earnings was related to producers becoming eligible for an old age pension, which provided the cash to harvest raw material and purchase inputs, increasing efficiency of production. This last point highlights the difference that the availability of small amounts of cash can make to producers' overall production levels.

Box 6.3: Attitudes of woodcarvers (wc) and furniture makers (fm) towards the trade

Positive

- "I enjoy this work as I can support myself, but the work is heavy and hard." (wc)  
"I like the work but I must spend a lot of time on it. I get very little profit." (wc)  
"I enjoy this work better than the secretary I was before. It can be profitable." (wc)  
"I am happy with the work but it has eaten my power. I love working with wood, I like creating and I like being at home with my family." (wc)  
"I enjoy this work very much. At home I can see everything and look after the mother of my house." (wc)  
"I am happy with this work but if there was a good salary I would leave. At the moment with prices as they are I am only getting a bag of mielie meal each month." (wc)  
"I like this work very much. I am happy because I know what I am doing. I don't have to fight with anyone. I am my own boss." (wc)  
"I am satisfied with this work, as I have nothing else in mind. I have no other way to earn money and a living." (fm)  
"This is what I really want to be doing. This is our own Johannesburg here – I will never need to go to Johannesburg again." (fm)  
"I am very happy, I feel like a free man." (fm)  
"In this work I feel like a boss. I do what I want." (fm)  
"This is my work. I am a grown-up man – it is the only work I know. I can't seek employment anymore. I could spend 100 years doing this job." (fm)

Negative

- "I am not enjoying it – because of suffering I am doing it but I would give up this work if I could get a job." (wc)  
"I don't like this work. It is too hard." (wc)  
"If I can get employment I would leave this work. The work is very heavy. I must be on duty everyday. If I was employed I could then get some days off." (wc selling on roadside)  
"On this work I am temporary. I can't make any strong words on the trade. I only make things when I have a financial problem."  
"You can injure yourself in this business and there is no one to stand in for you."  
"If there was work we would not need to do this and sit like old men under the trees."

Box 6.4: Perception of changes in the size of the woodcraft trade (wc=woodcarver; fm=furniture maker)

Initial survey (are there more woodworkers than there used to be?)

- "After 20-30 years there are not more furniture making people, but plenty of woodcarvers." (fm)  
"There are less. The work is very heavy. In my group, six people were trained now there is only one left." (wc)  
"There are less people. Arrests made by the rangers make people scared of working." (wc)  
"Many have gone bust – they could not get machinery." (fm)  
"People do not like handwork so they are not joining." (fm)

Follow-up survey (how have the numbers of people involved in the industry changed and why?)

- "Numbers have decreased because there is no more kiaat. People do not have transport or money to go very far." (wc/fm)  
"There are now many woodcarvers in Bushbuckridge who are involved in animals (growth in softwood carvers)." (wc)  
"The numbers have increased because of unemployment, but sales do not go well because some people sell very cheaply." (wc)  
"Numbers have decreased because of scarcity of the kiaat tree and some of the older people have retired." (fm)  
"There are plenty of new people – people are starving and there is no employment." (wc)  
"The number of people has increased because of unemployment and hunger. I have trained a number of new people." (wc)

## 6.8 EXTERNAL SUPPORT TO THE TRADE

While the Bushbuckridge woodcraft trade evolved at the local level under the impetus of local initiative, it has, in contrast to the other case studies described in this thesis, received some support in the last few years (Table 6.7). The opinion, though, of most interviewees was that the interventions described below were targeted at and benefited the more visible roadside carver vendors, with few positive spin-offs for

home carvers. Furniture makers, especially, felt that they were still totally unacknowledged and were bitter about this since they saw themselves as 'real' businesses creating employment for others.

One area of intervention has targeted the formation of producer organisations, with the aim of consolidating scattered producers into unified groups thus creating a more manageable situation in which to provide development assistance. The Mhala Woodworkers Association was formed in 1993 (S. Shackleton 1993). Its aims were to increase marketing opportunities, access external support and funding, collectively obtain wood from other sources, and enhance communication and cooperation between woodworkers. Since then, three woodworkers associations within the broader region, the Nyongane, Mhala and Lubambiswano Associations, have amalgamated to form the Skukuza Alliance. The socio-ecology staff at Kruger National Park (KNP) facilitated the formation of this organisation in 1997 (SANParks 2000). It is primarily market orientated, providing producers with covered markets adjacent to two of the entrance gates to the park. The woodcarvers in the former Lebowa area of Bushbuckridge formed their own association, which doubled as a lending club, but became dysfunctional when borrowers failed to repay their loans. Similarly, the Mhala Woodworkers Association (MWA) was relatively inactive by 2000 although its existence was important in securing donor funding and allowing carvers to participate in the Skukuza Alliance.

The Skukuza Alliance, while effective in opening up marketing opportunities (Section 6.6.1), has been subject to organisational difficulties and conflict (abuse of positions of power, unaccounted for expenditure, micro-politics, etc.). All home carvers were participants in the Skukuza Alliance, but had reservations about its lack of transparency, believing that they had been neglected in favour of softwood roadside carvers. One major factor limiting the effective participation of home producers in any organisation was their wide dispersion in the area, which restricted their ability to get together. As mentioned, many of them also favoured operating on their own, subjecting any longer-term collective benefits to very real (and realistic) short-term, individual interests. This is likely to continue to hinder the development of producer organisations in the future. It is ironic that a lack of organisational capacity and cooperation limits development and progress, but at the same time the formation of new organisations inevitably increases conflict and competition and leads to resentment and discord between producers.

In addition to the above, marketing and business skills training have been provided by the DANCED Community Forestry Project, the Independent Development Trust and Seagram South Africa, although most of these activities have focused on carver-vendors rather than home carvers. Other initiatives have been directed at other actors in the market chain, for example support to informal traders has been provided by the provincial Department of Finance, Mpumalanga Parks Board and SAFCOL as described in Section 6.6.1.

Table 6.7: External support for the woodcraft industry in Bushbuckridge over the last few years

Institution/organisation	Sector	Objectives/contribution to the trade
National Department of Water Affairs and Forestry (DWAF)/Danish Cooperation for Environment and Development (DANCED) Bushbuckridge Community Forestry Project	Donor in bilateral agreement with government	Sustainable utilisation of woodland resources, improvement of livelihoods, skills training, capacity building, alternative sources of wood
UK Department for International Development (DFID)	Donor	Support with building the market outlet at Kruger Gate
Mpumalanga Department of Sports, Recreation, Arts and Culture	Government	Job creation, preserve skills (craft heritage), stimulate creative process
Mpumalanga Department of Environmental Affairs and Tourism	Government	Rights to earn a sustainable living, sustainable resource harvesting
Mpumalanga Parks Board	Parastatal	Control over tree harvesting, informal market stalls
Mpumalanga Department of Finance	Government	Informal markets (with SAFCOL)
South African National Parks (SANParks) socio-ecology unit in partnership with DANCED	Parastatal Donor	Economic empowerment, Skukuza Alliance, market outlets, integration into park activities, sustainability of the carving industry
SAFCOL (SA Forestry Company Limited)	Private	Formalisation of markets for traders
Seagram SA (with SANParks)	Private sector	Skills development, provision of tools
Independent Development Trust (IDT)	NGO/donor	Building of a workshop (this has not yet been equipped)

At this stage it is difficult to determine the effect these interventions have had on the woodcarving industry. Preliminary reports are mixed. Facilitation of the two sales outlets appeared to be the main strength of the Skukuza Alliance, whereas its performance as an organisation and association of craftspeople was more questionable. Observations and discussions from the September 2000 revisit to the area suggested that the business skills and product development workshops organised by Seagram and DANCED had little impact. Carvers were still producing the same product range, and the same difficulties were experienced obtaining data on income, costs and pricing strategies, indicating that few of the producers were operating according to business principles. Furthermore carvers mentioned that the workshops were not helpful as they were being trained to make animal carvings: “we don’t want to learn to make birds and giraffes, we want to learn about decorative bowl design. If we study something it should be around our own skills. Since we have no money it is difficult to leave what we are currently doing and turn to new skills, as we don’t have the time to learn and develop these.” Indeed, it was surprising how little had changed given the fact that South Africa has undergone major political and institutional transition since 1994. The support to the informal markets, however, has been of considerable benefit to the trade, increasing the options that producers have to sell their products.

## 6.9 CONSTRAINTS TO THE TRADE

The main constraints to the industry perceived by woodworkers differed between the 1993 and 2000 surveys (Table 6.8). In 1993 the attitude towards raw material supply was generally optimistic with few producers perceiving this as a problem or seeing it as a future area of concern. However, by 2000

difficulties sourcing raw material had become the major concern of woodworkers and a severe constraint to the industry. A number of woodworkers were encountered who were sitting idle because they had not been able to find wood or lacked the finance to travel the distances they now had to cover to obtain wood. On the other hand, a lack of electricity, a major grievance in 1993, was no longer a problem after the area had been linked to the electrification grid in the mid to late 1990s. While licences to practise as woodworkers were no longer required after 1994, easing the situation for many producers (see Section 6.5.1), the bureaucracy linked to raw material harvesting continued to be a problem. This had considerable transaction costs for producers. The attitude and cooperation of rangers was also an issue, with one woodcarver stating: “if we had money they (rangers) would be our friends”. Cash flow constraints affecting harvesting, processing and marketing was an ongoing problem and will continue to be until some sort of micro-lending scheme is introduced to support rural, informal producers. Other problems related to a lack of markets, the poor prices paid by intermediaries and final consumers, the competition from imported woodcraft products, and the lack of support and recognition of the local carving and furniture manufacturing industries. One previous constraint, which had affected furniture makers more than carvers, was the risk of arrest attached to roadside selling. This situation has eased considerably now in most areas, opening up new marketing opportunities. However, some producers mentioned they were still cautious about selling on the roadside for fear of being used as decoys by ‘highjackers’ (criminals) or implicated in ‘highjackings’ (possibly a specifically South African concern, but one that has a genuine basis as there have been problems in the Kruger Park area in the past).

Table 6.8: Problems and constraints to the woodcraft trade identified by producers

<b>Constraints</b>
Scarcity of raw material (recent)
Lack of cash or credit to purchase equipment and machinery – e.g. saws to split logs – and raw material
The need for more reliable and larger markets and new markets
Costs of harvesting
Bureaucracy and inefficiency, resulting in high costs, around raw material harvesting
Poor prices that do not reflect labour inputs and wood scarcity
Start-up capital for new producers
Competition in the market from imported woodcraft
Lack of support from government and tourism industry for home producers
<b>Previous constraints, but now no longer an issue</b>
Lack of electricity
Harassment and arrest when hawking on the roadside
Difficulties obtaining licences

In addition to these factors, buyers and external organisations have identified poor quality, an inability to deliver on schedule, low level of supply, a limited product range and a lack of individuality, innovation and creativity as further problems. The flood onto the market of a wide range of high quality and alternative woodcraft products from other African countries has exacerbated the situation in recent years. Many of these problems are not unique to the carving industry, but tend to be characteristic of all

small-scale rural craft production in which poorly resourced, isolated rural producers are trying to supply to a constantly changing, high quality and often unforgiving market (Marcus 2000, MDA 2000).

## **6.10 CONCLUSIONS: SUSTAINABILITY OF THE TRADE AND ENHANCING BENEFITS**

This case study has demonstrated that the woodcraft industry is a sector with potential for development, and for providing rural communities with a viable source of income. However, much needs to be done to ensure that this happens in a sustainable manner. Of particular concern should be management of the tensions between developing the trade and minimising the clearly negative impacts on the resource base.

### ***6.10.1 Development of the trade and markets***

The broader woodcraft industry in South Africa is relatively complex, and local producers are competing directly with African imports and formal sector factory goods (Steenkamp 1999b). Both these competitors tend to be high volume, wholesale specialists, whereas local craftsmen fit into a low volume, direct sales category. Some development specialists feel that unless local producers find the means to enter this wider market, they will continue to be marginalised, invisible to formalised business and commerce, and vulnerable to exploitation and the day-to-day uncertainties of a subsistence existence. Others believe that local carvers could compete more successfully if they were to focus on a range of small and distinctive products, following the Mexican example (Steenkamp 1999b), or if they produced products with more ‘cultural’ or ‘artistic’ significance. However, the latter usually requires intrinsic talent rather than just craftsmanship, thus benefiting only a limited number of carvers. The art market is also fickle and prone to ‘boom and bust’ characteristics, as evidenced by the collapse of the Venda (north of Bushbuckridge) wood sculpture market even after numerous sculptors had attained international acclaim (Duncan 1999). New specialised, but less tourist dependent markets, could also be explored. For example, one restaurant in the Sabie area is furnished effectively with locally produced *P. angolensis* furniture, and another is using salad bowls, steak plates and pizza boards carved by home carvers. There is no reason why this could not be extended to other parts of the country.

Whatever the way forward, Steenkamp (1999b) stresses that a specialised marketing study needs to be conducted before any decisions are taken. Such a study should take into account a long-term development framework for the woodcraft industry, as well as any changes in production mode and strategy that would accompany the targeting of new markets. Certainly, entering the wholesale market assumes increased organisational specialisation and cooperation amongst producers, perhaps within a workshop/small factory situation as has happened in Kenya (Choge 2001). This is something that carvers have demonstrated reluctance towards, partly because it results in increased conflict, and partly because it means giving up their independence. Wood resources are also unlikely to support mass production. Joint partnerships with the private sector have been suggested as one development model by some stakeholders. Such an approach would provide the capital injection to set up bulk production and

provide a guaranteed market for at least some products. In the end, it is likely that a mix of different strategies and markets, suiting a range of producer needs and preferences, would be most appropriate. It is important that what has been achieved so far, mainly through the enterprise of producers themselves, is not ignored. After all, the woodcraft trade has been able to provide one of the poorest sectors of the Bushbuckridge community with a means of livelihood since the early 1970s. From this perspective, it is also critical that any new developments do not create unhealthy dependencies on agencies, companies or products that may have short-term horizons or unpredictable futures.

### **6.10.2 Resource management**

Regarding the resource base, the impacts on key carving species, in particular *P. angolensis*, have been substantial and population data indicate current rates of utilisation are unsustainable (Section 6.3.2). A response to this situation in other parts of the world has been to turn to cultivation of preferred species or fast growing alternative species (CIFOR 2002). *P. angolensis* has, however, proven extremely difficult to cultivate (Vermeulen 1990, Section 6.3.2). It is also very slow growing. This strategy is therefore unlikely to be a solution to the wood supply problems for kiaat users. Instead substitute species, including exotics and fast-growing softwoods, and alternative sources need to be sought.

Improved management of the existing resource base is crucial, but highly complex. Carvers and furniture makers are not the only users of communal woodlands, and different stakeholders have variable and contested understandings of boundaries and access rights. Moreover, existing institutional and legal arrangements are confused, controversial and ineffective. Law enforcement needs to be downplayed in favour of greater participation of woodworkers in resource management, and perhaps some legal recognition of local producers that provides them with preferential rights of access. Any community-based management plan would need to be a broad contract involving various user groups and authority structures, and would need to recognise the dependency of producers on the resource. Thus, whilst it may be difficult to restrict the use of mature trees, there could be improved and more active management of young trees and saplings. The extensive and intensive management of tree populations within communal lands is a sphere that requires attention and real commitment if the local extinction of key carving species is to be prevented.

As discussed for the development of the trade, a multi-pronged approach involving all of the above is likely to be most effective, although it is important not to 'romanticise' the notion of sustainable use for hardwood species. Indeed, so long as there is wood and the opportunity to earn an income from it, rural households on the breadline will continue to appropriate the resource to feed their families. They simply cannot afford not to. Further discussions on the challenges and opportunities of the woodcraft trade are provided in Chapters 7, 8 and 9.



## 6.11 SUMMARY OF KEY FINDINGS

- The *P. angolensis* based woodcraft trade in Bushbuckridge makes a significant contribution to the livelihoods of a small sector of local residents.
- Carving and furniture manufacture require specialisation and tend to be male dominated activities, although producers' families were key in assisting production. Sales of woodcraft contributed on average 77% of total household income.
- Producers were mainly elderly with only a primary education. Few new entrants appeared to be joining the trade, although a number of producers' sons were working with their fathers.
- While incomes were modest, erratic and highly variable between producers, they had formed the livelihood base of woodworkers for decades. Average incomes were approximately R3 600 per year for carvers and R8 500 for furniture makers, or R7 000 across both groups. Non-financial benefits from the trade, such as independence and working from home, were critical for many producers.
- The impacts of decades of wood use were being felt and wood scarcity was fast becoming the greatest constraint to continued production and growth. Access to alternative sources of wood is essential. Producers also need to be more involved in management of the existing resource base.
- Although there has been an increase in external support to both producers and traders in the last five years, much of this is piecemeal and uncoordinated. A more focused long-term effort is necessary if a sustainable industry is to be achieved. This presents a considerable challenge. New skills, products, structures and perspectives will be needed to bring woodworkers from the margin into the mainstream craft and curio industry.

**CHAPTER 7**

**THE LOCAL NATURAL RESOURCE PRODUCT TRADE:  
CONTRIBUTIONS TO LIVELIHOODS AND POVERTY ALLEVIATION**

**7.1 INTRODUCTION: CURRENT DISCOURSE ON NATURAL RESOURCE PRODUCTS,  
LIVELIHOODS AND POVERTY**

*7.1.1 Addressing the poverty role of natural resource products*

Poverty alleviation has been placed high on the development agenda of the international community after the adoption of the United Nations Millennium Development Goals in September 2000. The first and most important of these goals is to halve the proportion of people living on less than US\$1 per day, and those suffering from hunger, by 2015 (UN Millennium Declaration 2000). Poverty is an enormous and growing problem worldwide, and is arguably the greatest challenge facing the global community today (World Bank 2000b). It has been estimated, based on 1999 figures, that 1.2 billion people, some 23% of the population of the developing world, have consumption levels below US\$1 per day, and 2.8 billion, almost half of the world's population, are living on less than US\$2 per day.

The commitment to reducing poverty has become a priority for international donors, development agencies, NGOs and the governments of most countries, forming a focal point for development intervention. The drive to develop pro-poor policies and strategies, in particular Poverty Reduction Strategy Papers (PRSPs) in those countries classified as 'least developed' or low income, is a clear indication of this (Oksanen *et al.* 2003, Adams *et al.* 2004). Many of these countries are in regions of the world that are rich in biodiversity and heavily forested (WRI 2000). Consequently, scholars and practitioners working in this sector have been prompted to ensure that forestry and natural resource use and management issues are incorporated into and given requisite profile in these strategies (Kaimowitz 2003, Oksanen and Mersmann 2003, Adams *et al.* 2004, Dickson and Bird 2004, Bird and Dickson 2005). In addition, the requirement to address the Millennium Development Goals has resulted in the World Bank's revised Strategy on Forestry (World Bank 2002) and the State of the World's Forests Report (FAO 2003) placing high priority on understanding more fully the contribution that forests and natural resources can make to achieving the goals of poverty alleviation, and how this relates to environmental sustainability, another of the Millennium Development Goals (Goal no. 7).

This refocusing of the development agenda on poverty has led to recent critical reassessment of the role that biodiversity plays in rural livelihoods and poverty alleviation (also see Chapter 1). A profusion of new commentary has emerged. This poses many fresh questions, and, to some extent, tempers previous

optimism regarding the ability of forests and natural resources to make a significant difference to poverty, by providing a more subtle and complex picture of people-biodiversity linkages, drawing on research conducted over the last 10-20 years (e.g. Byron and Arnold 1999, Koziell 2001, Wunder 2001, Arnold 2001, 2002a, Angelsen and Wunder 2003a, Kaimowitz 2003, Lawrence 2003, Oksanen *et al.* 2003, Scherr *et al.* 2003, Adams *et al.* 2004, Sunderlin *et al.* 2004). Central to several of these new enquiries is a more perceptive and nuanced understanding of: a) what is meant by poverty alleviation in relation to forests and other natural resources, distinguishing between poverty prevention or mitigation and poverty reduction; b) the links between natural resource dependence and the potential to reduce poverty or provide pathways out of poverty; c) the safety net role of natural resources and when and how this might translate into a ‘poverty trap’; and d) the extent to which natural resources and forest policies can be made more pro-poor (Arnold 2001, 2002a, Angelsen and Wunder 2003a,b). A fundamental question that all scholars and practitioners working at the environment-development interface are asking is – what role can biodiversity and natural resources, including forests and other vegetation types, play in the efforts of developing countries to reduce poverty and vulnerability (Koziell 2001, Angelsen and Wunder 2003a)? Some observers are relatively optimistic regarding this role (e.g. Reddy and Chakravarty 1999, Kaimowitz 2003, Scherr *et al.* 2003, Ros-Tonen and Wiersum 2005), while others lean towards a more sceptical and pessimistic viewpoint (e.g. Wunder 2001, Levang *et al.* 2003).

In South Africa, even though it is a middle-income country, the levels of inequality are one of the highest in the world, and unemployment and poverty are growing (Meth and Dias 2004, Chapter 2). As a result poverty is foremost on the government’s agenda, and has been since the democratic transition in 1994. It features prominently in the Department of Water Affairs and Forestry’s (DWAF) strategic vision (Chief Director of Forestry in an address to the National Forestry Advisory Council), with “poverty eradication” being explicitly stated as a key objective of the Department (DWAF 2005). The relationship between forests and poverty is also the focus of a major bilateral programme between DWAF and the UK Department for International Development (DFID), which seeks to create and build pro-poor markets for forest products (DWAF 2005). Thus, the same questions that are being asked in the international arena, and the same need to demonstrate the value of natural resources for rural livelihoods apply in the South African situation. Since much of the existing literature is from humid regions and tropical forests, a key challenge is to understand how the situation and subsequent conclusions regarding the role of natural resources in poverty alleviation, as well as the policy and development implications of this, may differ in the South African context.

### ***7.1.2 Current knowledge on natural resource, livelihood and poverty linkages***

How important are natural resource products for the poor and what do we know about the contribution they make to livelihood security and poverty alleviation? The majority of rural dwellers in developing countries, estimated to be up to 1.6 billion worldwide (FAO 2001) and tens of millions in sub-Saharan

Africa (Kaimowitz 2003), make use of at least some natural resource products to meet a range of livelihood requirements from direct household provisioning to cash income (Campbell 1996, Byron and Arnold 1999, Kaimowitz 2003). In many instances this use is complementary to a range of other livelihood activities and income sources, whilst for a lesser number of households trade in natural resource products may form the primary source of household or individual income.

#### *Levels of dependence*

The numbers of people involved and the levels of dependency or reliance on wild resources are impressive, with figures cited in the literature ranging from 250 million (Pimental *et al.* 1997), to 350 million (Poschen 2002), to as high as “1.6 billion people relying heavily on forest resources” (FAO 2001) and “two billion relying on biomass fuels” (World Bank 2000). However, a more cautionary stance regarding these numbers has emerged. Numerous problems have been identified relating to definitions of dependence, the type and source of resources, and whether their contribution constitutes a strategy for coping with or escaping poverty (Byron and Arnold 1999, Arnold 2002a). For example, does opportunistic use of some product from a forest, or even trees outside a forest, represent dependence (Byron and Arnold 1999)? It has been suggested that the complex, dynamic and variable relationship between people and natural resources may be best understood by considering typologies of different users and assessing the role that natural resource products play in these users’ livelihoods (Byron and Arnold 1999, Arnold 2002a). For example, with regard to forests, Byron and Arnold (1999) distinguish between three groups of users: a) forest dwellers for whom forest products are the starting point of their livelihoods, b) predominantly farming communities relying on natural resources as a supplementary source of livelihood, and c) people, not necessarily living near forests, who derive their livelihoods from commercial forest activities (artisans, entrepreneurs and employees). Ros-Tonen and Wiersum (2003, 2005) and Arnold (2002a) further modify this to take into consideration whether products come from natural forests or anthropogenic vegetation types and farms. Arnold (2002a) also redefines the last category of user as “those processing and trading in forest products either part or full-time: can include farm households and the landless, and urban as well as rural poor.” A summary of the currently most widely accepted categories of users and rough estimates of the numbers of people involved are presented in Table 7.1. However, even these categories are not necessarily mutually exclusive, and may be too simplistic and limiting in some contexts such as the South African situation, as will be demonstrated later in this chapter. Furthermore, they neglect to take into account people using and depending on natural resources from ecosystems other than natural or modified forests.

Table 7.1: Rough estimates of number of forest users in different categories worldwide

Category of user	Estimated population of users
Forest dwellers who depend primarily on natural (usually closed canopy forests) for their livelihoods (hunting, gathering, shifting cultivation)	60 million
Rural people who live in or at the margin of natural forests or woodlands who rely on forests as a safety net or for supplemental income	350 million
Small-holder farmers who grow farm trees or manage remnant forests for subsistence and income	500-1 000 million
Artisans or employees in formal or informal forest-based enterprises	45 million
Estimated total	1 – 1.4 billion

Source: Scherr *et al.* (2003)

#### *Subsistence and non-consumptive uses*

While the degree of ‘dependence’ on natural resource products appears to need clarification, few would disagree that these have long formed a vital element of the everyday lives of rural people across the globe. Medicines, building materials, fuelwood, fibres, wild foods and other goods have been gathered from the wild and used on a subsistence basis for millennia. Considering food security and nutrition alone, poor people depend on natural resource products for many regularly utilised foods, for crisis or famine foods, for firewood to cook, for nutrients and vitamins, for grazing, for genetic resources, for inputs into agricultural production such as implement handles and ploughs, and for the raw material for manufacturing such items as canoes for fishing (Bass *et al.* 2001). Recent work to place an economic value on this auto-consumption of wild products has shown it to be worth several hundreds of dollars per annum to user households (Cavendish 2000, Campbell *et al.* 2002, C. Shackleton and S. Shackleton 2004a,b, Vedeld *et al.* 2004). Moreover, this daily subsistence use of ‘free’ natural resource products also allows households to enjoy a significant saving of scarce cash resources that can be redirected to meet other needs (C. Shackleton and S. Shackleton 2004b).

In addition to the practical uses described, many natural resource products also have important social and cultural functions providing indirect livelihood benefits. For example, the sharing of marula (*Sclerocarya birrea*) beer plays a key role in building and maintaining vital social support systems, allowing people to draw on these networks in times of need (see Chapter 5). The beer brewed from the marula fruit could, thus, be viewed as having an indirect safety net or risk insurance function. Similarly, natural ecological systems provide environmental services of various kinds such as soil fertility, maintenance of biodiversity, regulation of water quality and quantity, pollination, etc. that can impact positively on livelihoods and mitigate against poverty associated with environmental degradation. Furthermore, the poor may also be able to benefit through the transfer of payments for these environmental services by off-site/down stream users (e.g. for carbon sequestration, water quality, etc.) (Scherr *et al.* 2003).

### *Safety net role*

Frequently, particular products may only be gathered and sold in times of emergency or misfortune as a form of ‘natural insurance’ (Arnold and Ruiz-Pérez 2001, Pattanayak and Sills 2001, McSweeney 2004, Takasaki *et al.* 2004), at critical times of the year to bridge income gaps, and/or to meet specific needs such as school fees or the costs of a celebration. This safety net, buffering, and gap filling role of natural resource products also extends to the use of goods for own consumption during droughts, floods or other lean times, and as substitutes for purchased products during cash flow crises (Kaimowitz 2003). ‘Income smoothing’ is another widely mentioned benefit of natural resource product trading, especially at times when on-farm labour is in low demand (Fereday *et al.* 1997). In all these situations natural resource products serve the function of reducing household risk and vulnerability (Arnold 2002a), often helping to prevent households, particularly the poorest (Takasaki *et al.* 2004), from sinking lower into poverty during difficult times.

### *Trade and cash income*

Trade in natural resource products appears to be growing worldwide (Fereday *et al.* 1997, Neumann and Hirsch 2000, Campbell *et al.* 2002, Lowore 2003, Clarke and Grundy 2004, Ruiz-Pérez *et al.* 2004, Chapter 8). Increasingly, rural dwellers are selling products previously used only for subsistence purposes. This growth is driven, at the local level, by a greater need for cash income as people become more integrated into the market economy, and by economic hardship and shock due to, amongst other factors, unemployment, retrenchment, withdrawal of agricultural subsidies and HIV/AIDS (Devereux 1999, Monela *et al.* 1999, Rogerson and Sithole 2001, Campbell *et al.* 2002, Kepe 2002). In other instances, trade has been promoted and facilitated through the creation and stimulation of external markets by agencies concerned with linking rural livelihoods and the conservation of natural ecosystems (Neumann and Hirsch 2000, Arnold and Ruiz-Pérez 2001, Fabricius *et al.* 2004, Chapter 1). These interventions are generally aimed at addressing the dual goals of livelihood enhancement and biodiversity conservation, based on the assumption (perhaps misguided – Sunderland *et al.* 2004) that the livelihood benefits obtained from selling natural resource products will provide an incentive to conserve the resource base (Arnold and Ruiz-Pérez 2001). Thus, it is not uncommon to find building materials, fuelwood, charcoal, indigenous foodstuffs, medicines, craft items (from wood, grass, reeds, vines), furniture, and other more specialised products such as resins, paper and perfumes for sale in local, national and even international markets (see de Beer and McDermott 1996, Arnold and Townson 1998, Oksanen *et al.* 2003, Alexiades and Shanley 2004, Kusters and Belcher 2004, Sunderland and Ndoye 2004). In sub-Saharan Africa alone it is estimated that several million people earn their primary cash income from the sale of forest and other natural resource products (Kaimowitz 2003). Across tropical regions it has been estimated that smallholders living on forest margins obtain between 10% and 25% of their household income from the sale of NTFPs (Ndoye *et al.* 1997, Scherr *et al.* 2003). In the forest zone of southern Ghana about 20% of the economically active population earn income from selling forest products, while in the Brazilian Amazon about 1.5 million people derive part of their

earnings from NTFPs (Ndoye *et al.* 1997, Ruiz-Pérez *et al.* 1999). In South Africa, some 3-14% of rural households within the savanna biome are trading in at least one natural resource product (roughly 230 000 people – Statistics South Africa (2003)), albeit often on an irregular basis (Chapter 2). Some products such as medicinal plants form part of a multi-million dollar industry in South Africa, providing income-earning opportunities for many gatherers and traders, mainly poor rural and peri-urban women, and some 300 000 traditional healers (Mander 1998, Dold and Cocks 2002). It is this potential of natural resource products for income generation and livelihood security, and the ensuing positive impacts on poverty, that form the focus of this chapter.

Whether the trade in natural resource products is endogenous (as for the products studied in this thesis) or externally driven, both have features in common. Generally returns from the sale of natural resource products are low for the majority of participants, but for some, specialising in niche markets, incomes can be significant (Kusters and Belcher 2004). The sale of natural resource products may form part of an income diversification or risk reduction strategy, as households or individuals seek ways to supplement other sources of income or smooth their earnings throughout the year. For example, the NTFP trade often complements agricultural production in many regions of the world (Byron and Arnold 1999, Ros-Tonen and Wiersum 2005). Alternatively, the trade may be the primary source of income for the household, resulting in high levels of specialisation (Ruiz-Pérez *et al.* 2004). Such a scenario is most likely for high value-added products, often with external markets (e.g. woodcarving in Bali – Rohadi *et al.* 2004). In these cases, if the value of the product increases significantly then the danger exists that the trade will be captured by elites. Dove (1993) hypothesised that as the value of a product rises, the institutional and tenure features of resource use change to favour richer and more powerful households. At the other end of the spectrum, it is not uncommon to find that individuals and households turn to trading in natural resources in the absence of any alternative income earning opportunities, particularly after experiencing hardship or shock (e.g. S. Shackleton *et al.* 2000b, craft sales in South Africa – Rogerson and Sithole 2001, McSweeney 2004). The opportunity to sell natural resource products thus provides a safety net for people desperately looking for some source of income. Unlike the short-term safety net functions described earlier, this may evolve into a long-term or permanent source of livelihood if the conditions that initially forced the individual into the trade prevail, or if the producer subsequently chooses to make their living from the trade. The former situation could be construed to constitute a ‘poverty trap’ (Neumann and Hirsch 2000, Wunder 2001, Kaimowitz 2003, see Chapter 1, Section 1.5.2 for a definition).

#### *Importance for the marginalised*

Most work to date suggests that it is the poorest members of society who are most dependent on natural resource products (Fereday *et al.* 1997, Cavendish 2000, Neumann and Hirsch 2000, Beck and Nesmith 2001, Fisher 2004, C. Shackleton and S. Shackleton in press), although recent findings from Cameroon reveal that NTFPs in that country contribute most significantly to middle-income households (Ambrose-

Oji 2003). The collection of natural resource products is an activity that is generally available to all households, but that is more likely to be exploited by poorer groups with limited land resources and other assets, minimal education and skills, and few other income sources, contributing a greater proportion of total income to these households (Arnold 2002a, Fisher 2004, McSweeney 2004). The low barriers to entry to the trade in many natural resource products means that this activity provides an important option for poor and marginalised households who would have difficulty accessing other employment opportunities, or who are less able to cope with or insure against risk than better-off households (Fisher 2004, Takasaki *et al.* 2004). Women in particular benefit widely from the use and sale of natural resource products, as do older and less educated people who cannot compete as effectively in the job market (Falconer 1992, 1996, Terry 1999, Kaimowitz 2003).

### ***7.1.3 Purpose, objectives and approach to this chapter***

While the above discussion demonstrates that natural resource products contribute in a variety of ways to the well-being and livelihood security of rural households both globally and in South Africa, it is apparent that the relationship between people and natural resources is extremely complex, multi-faceted and dynamic. Households are constantly adapting their livelihood strategies to changing circumstances, taking up or dropping their use of and trade in these products in response to a variety of factors (Arnold 2002a, Campbell *et al.* 2002, McSweeney 2004). This complexity undermines and confounds the ability to obtain a comprehensive understanding and generalised picture of the extent to which natural resource products can alleviate poverty and reduce vulnerability now and in the future, and much research is still needed to shed light on this issue (FAO 2003, Angelsen and Wunder 2003a, Chapter 1). In South Africa, in particular, there are few studies that explicitly set out to explore the relationship between the natural resource product trade and poverty in its broadest sense (see Chapter 1, Section 1.5).

In this chapter, I focus on the contribution that local level commercialisation of natural resource products makes to the livelihoods of participating households in Bushbuckridge, South Africa, including the role of these products as safety nets, in reducing risk, in stimulating income diversification and as a means to make a living. I discuss the findings from the four case studies presented in Chapters 3-6 – in particular the contribution of the different trades to rural welfare, income diversification and livelihood security – in the context of the international goal of poverty alleviation, considering aspects of both poverty mitigation and poverty elimination/reduction (see Chapter 1, Section 1.5.2 for definitions) (FAO 2003, Sunderlin *et al.* 2004). I hypothesise that the local trade in natural resource products does make a difference to the livelihood security of the poorest rural people and forms an important safety net, but is unlikely to result in significant and extensive poverty elimination. The analysis, discussion and comparison of the case studies is aimed at exploring this.

A number of key questions relating to some of the fundamental issues identified within the natural resource product-livelihood-poverty discourse (see Chapter 1 and Section 7.1 above) have been posed



for this chapter. These, in turn, form the basis for the main sections of the chapter in which I have interwoven the findings from the case studies with further integrative analysis and general discussion and reference to other studies. These key questions are:

- What is the trend in the natural resource product trade, in particular its importance for rural people as a safety net under an increasingly harsh economic climate?
- Who trades in natural resource products and why? Does the trade form a crucial income generation option for poorer, disadvantaged and more marginalised individuals and households?
- In what way does the trade in natural resource products contribute to household cash income and other livelihood assets?
- How does the trade fit into the wider household livelihood portfolio, and what type of livelihood strategy does it represent both within and across case studies?
- Based on the livelihood contributions and roles, can the local level commercialisation of natural resource products provide a means to poverty alleviation?

To answer these questions, I made use of both qualitative and quantitative data already presented in the case studies chapters (Chapters 3-6), largely for descriptive comparison, as well as conducted new quantitative analyses across these cases. Comparative and exploratory analyses were carried out using data from individual case studies and from a random household survey of 143 households I conducted in the study area in 2001/2002 (S. Shackleton and C. Shackleton 2002). It is assumed that this sample was representative of the general population of the area (see Chapter 1). Given that the different products demonstrated substantive differences in the contribution they made to household livelihoods, some analyses were conducted across cases to explore these differences whilst others focused on understanding relationships within particular products, especially given the high degree of variability that was found to exist. Statistical analysis was conducted using SPSS, STATISTICA and MVSP (Multivariate Statistical Analysis Programme). Details of analyses are provided in the relevant sections below.

## **7.2 EXPANSION OF THE NATURAL RESOURCE PRODUCT TRADE AND ITS SAFETY NET FUNCTION**

### ***7.2.1 Growing levels of participation in trading***

The commercial trade in natural resource products in Bushbuckridge is expanding. Trade in mats, brooms and marula beer has shown progressive growth in the last few years, as greater numbers of people take up this activity (Table 7.2). Only woodcraft has shown little growth, primarily due to severe shortages of raw material, although producers (57%) mentioned that there were also new entrants to this trade. For the broom and mat trades, about one third of participants joined the trade in the five years between 1998 and 2003 (when the data were collected), and up to half in the 10 years between 1993 and 2003 (Table 7.2). The marula beer trade, in particular, has grown rapidly, from this product not being

seen at all in the markets prior 1998 to over 250 producers in 2002 (Table 7.3, also see Chapter 5). These findings are supported by participants' own perceptions of changes in the trade; the majority believe that more people are engaging in these activities than in the past (Chapters 3-6), with this leading to a situation of potential market saturation for some products (Chapter 8, Section 8.4). For several trades, it appears that once one innovator has set the example, others rapidly follow suit. This was revealed in the responses of marula beer traders to the open-ended question "why did you start trading", in which 53% of traders mentioned that they had seen others selling marula beer and decided to try it out since they needed income. The increase in the number of broom traders indicates how petty trading (most of these women were selling a wide diversity of products), in general, has grown; a finding also reported for other regions, e.g. Zimbabwe (Campbell *et al.* 2002), Ethiopia (Toulmin *et al.* 2000) and southern and eastern Africa (Bryceson 2002).

Table 7.2: Duration of participation in the natural resource product trade in Busbuckridge at the time of the study (percentage of producers/traders)

Years trading*	Year started	Broom producers %	Broom traders %	Marula beer sellers %	Mat producers %	Woodworkers %
<1-5	1998-2003	38	30	100	30	Not measured
6-10	1993-1997	11	20	0	9	0
11-15	1988-1992	21	13	0	10	13
16-20	1983-1987	13	10	0	22	12
21-30	1973-1982	13	18	0	19	18
>30	prior to 1973	6	10	0	10	58

\*2003 was used as the reference year.

Due to rounding up, column totals may not always add up to exactly 100%.

Table 7.3: Proportion of marula beer sellers joining the trade since 1998 showing the recent expansion in the trade

Year started	Years trading	% of sellers
2002	1	33
2001	2	45
2000	3	10
1999	4	8
1998	5	4

The growth trend apparent in Bushbuckridge is echoed across South Africa, where there is evidence that increasing numbers of people are trading in natural resource products (Kepe 2003, Jacobsen and McKean 2004, Gyan and Shackleton in press). The South African situation, in turn, reflects a general regional (Lowore 2003, Campbell *et al.* 2002, den Adel 2002) and worldwide trend in growing natural resource-based self-employment (Fereday *et al.* 1997, Mead and Liedholm 1998, Belcher *et al.* 2003). In Malawi, for instance, results from a longitudinal study in three rural communities demonstrated that the importance ranking of income from natural resource products had risen from sixth place to third place between 1992 and 1996 (Luhanga *et al.* 1997 cited in Lowore 2003). In the same country, a rapid

growth in mushroom trading, similar to that of marula beer, has been observed in the north following the first sales of this product in 1996 (Lowore 2003). Similarly, in Namibia some 46% of households selling marula beer across four sites had started as recently as 2001 (den Adel 2002).

### ***7.2.2 Drivers of expansion and the safety net role of the trade***

What is driving this expansion in the natural resource product trade? Producers, when asked why they thought the trade in their particular product was growing, ascribed this mainly to a lack of employment opportunities, widespread retrenchment and rising costs of living resulting in more people taking up the trade as a form of income generation. This is supported by national level statistics, which demonstrate that unemployment rates in South Africa are increasing, as is the level of poverty (Meth and Dias 2004, Chapter 2). Moreover, Bushbuckridge is seen as one of the areas in the country particularly hard hit by retrenchments from the mining industry (Susan Barton, Mine Workers Development Agency, pers comm.). People have, thus, been forced to find alternative, non-conventional sources of income as reflected in the reasons producers provided that precipitated their entry into the trade (Table 7.4). The majority of women producers (e.g. for mats, brooms and marula beer) entered the trade in response to a shock in the household, such as the death of a breadwinner, illness or retrenchment within the household (usually of their husbands), or because they were “suffering” and “hungry” and there were no jobs. Amongst male woodworkers, 93% commenced woodworking after they had been retrenched or had resigned from a formal job, usually as a migrant worker in the mining, manufacturing or agricultural industries. Of particular interest was that 10% of broom and mat traders were pushed into the trade after they had been left with grandchildren to care for following the death of the children’s parents, presumably from AIDS. This percentage is low compared to the 40% of households involved in handicraft production in KwaZulu-Natal that reported caring for AIDS orphans (Marcus 2000). While most of the reasons for entering the trade are ‘supply-push’ rather than ‘demand-pull’ factors (Rogerson and Sithole 2001), there was also an element of choice in joining the trade for some producers. Several women mentioned that they needed to work from home as they had young children or ill or elderly family members to care for, or that they themselves were too old or unwell to undertake a full-time job. Others reported that the trade offered better returns than the only other employment they could find, such as domestic or farm work for village households. The need to support other income earners and to add to meagre household incomes was also revealed as a reason for engaging in the trade. Several woodworkers reported how they preferred to be with their families than to work as migrant labourers far from home. Considering that most woodworkers took up their trade during the height of apartheid, it is not surprising that they favoured self-employment over the poor and discriminatory employment conditions low skill workers had to face during that period.

Similar conditions to those found in South Africa appear to be influencing the growth of the natural resource product trade in other countries. Mead and Liedholm (1998) present evidence from an extensive survey of eight countries, including several southern African countries, to show that when the

economy is stagnant there is increased pressure for people to start new, generally single individual, businesses, even if these yield only marginal returns. In Malawi, an increased level of natural resource trading was also attributed to poverty and the need for cash, and was seen as “a generational thing – these days people are always in need of money” (Lowore 2003). In Zimbabwe, Campbell *et al.* (2002) found more people engaged in trading woodland products with a decline in agricultural subsidies and an increase in the incidence of HIV/AIDS. In a review of the roles of forests in rural livelihoods, Scherr *et al.* (2003) noted – “where population is growing faster than per capita income, forest activities emerge largely to absorb people unable to obtain income, or sufficient income, from agriculture or wage employment. This situation is likely to be characterised by labour-intensive, low-return, typically household based activities such as fuel wood collecting and mat making”. This scenario appears to apply in many of the developing regions of the world, as evidenced by the large number of case studies showing an increasing number of people participating in these types of activities (e.g. Rogerson and Sithole 2001, Kepe 2002, Velásquez Runk 2001, Lebbie and Guries 2002, Vormisto 2002, Marshall and Newton 2003).

Table 7.4: Reasons provided by producers and traders for entering the natural resource product trade; these responses were categorised from qualitative answers to an open-ended question

<b>Reasons for entering the trade</b>	<b>Broom producers %</b>	<b>Broom traders %</b>	<b>Marula beer sellers %</b>	<b>Mat producers %</b>	<b>Woodworkers %</b>
Observed others trading the product and needed income	-	-	53	10	-
Suffering and hunger	24	22	14	22	-
For income as no jobs	19	5	24	6	-
To help other earners	-	-	6	19	-
Retrenchment or resignation	-	16	4	4	93
Loss of husband's income #	47	35	-	30	-
Other*	10	22	-	9	7

# From death, illness or retrenchment.

\*This includes caring for grandchildren, orphaned, have baby so work at home, people asked to buy, part of community project, family business.

Due to rounding up, column totals may not always add up to exactly 100%.

These results suggest the important safety net function that natural resource product commercialisation is playing, often providing employment of last resort or a mechanism for coping with risk when little else is available or when households face economic hardship or shock, such as the retrenchment or death of an income earner. The generally low barriers to entry facilitate the uptake of this option by poor households, a feature identified by other studies (Neumann and Hirsch 2000). Capital costs are low, raw material is relatively freely available or cheaper than purchasing other goods for resale, local markets exist, and many people already have the skills required to harvest and process the product (Chapter 8). For many it is a survivalist strategy (Rogerson and Sithole 2001), whereas for others it complements other activities, spreading risk, allowing flexibility and easing cash flow constraints (see Section 7.5). This option of having the natural resource trade to fall back on is particularly significant when viewed within the broader socio-economic context of growing unemployment, loss of jobs, high costs of living,

lack of land and the HIV/AIDS pandemic (Marcus 2000, Rogerson and Sithole 2001, S. Shackleton *et al.* 2000b, Kepe 2002, Chapter 2).

### **7.3 WHO IS TRADING IN AND BENEFITING FROM NATURAL RESOURCE PRODUCTS?**

The case study results suggest that it is the poorest and most marginalised households that trade in natural resource products, with this being particularly true for those trades in which women are the primary participants (Chapters 3-6). This was investigated more systematically by comparing key variables relating to the profile of producers and traders and their households across products and with the random household sample mentioned in Section 7.1.3 (Table 7.5). Kruskal-Wallis and Chi-squared tests were conducted to determine whether there were differences amongst groups. Where the results from the Kruskal-Wallis tests were significant, pair-wise comparisons were then performed using Mann-Whitney U tests, in which alpha (p level) was decreased by the number of pairs compared.

#### **7.3.1 Gender**

Recognising women as one marginalised group, this study has shown that women are the primary producers and traders of twig and grass brooms, marula beer and mats (Table 7.5) – four of the key products sold in Bushbuckridge. On the other hand, woodcrafters were all male, although female family members did assist with the finishing of products, and in some cases were taking over production from their elderly and sickly husbands (Chapter 6). These examples support the observation that natural resource trading is particularly important for women (Section 7.1.2), although incomes from the types of products they sell rarely match those of men who tend to specialise in high value-added products, especially those manufactured from wood (Townson 1995, Brigham *et al.* 1996, Fisher 2004). In addition to large numbers of women being involved in the trade, higher numbers of female-headed households were found amongst producers and traders of mats, brooms and marula beer than in the population as a whole (Table 7.5). This also holds true when compared to the average for the country as a whole of 30% female-headed households (Posel 2001). Female-headed households are commonly considered to be the “poorest of the poor” (Chant 1997). While this has been questioned and qualified elsewhere (Chant 1997, Campbell *et al.* 2002), evidence from South Africa shows that female-headed households are indeed a particularly vulnerable group (Posel 2001).

#### **7.3.2 Education and age**

All producers and traders were significantly less educated than the average adult in the random population, except for marula beer producers (Table 7.5). This reflects the age patterns across products, with marula beer producers being, on average, younger than other producers and consequently better educated (Table 7.5, Chapter 5). Mat producers and woodworkers were significantly older than the other groups. The poor levels of education and high illiteracy amongst producers, along with their age, were often provided as reasons for them being unable to find alternative employment. With employment

being so scarce in South Africa, older and poorly educated individuals have little chance of competing successfully in the job market. It was also observed that mat making is primarily an older women's activity, as it requires considerable labour – a resource that younger women seldom have. With regard to the woodworkers, their elderly age appears to be the result of them remaining in their trade for many years (many entered as much younger men), combined with few new, younger entrants into the business (Chapter 6). The younger average age of marula beer traders may reflect: a) the very part-time nature of this activity, with the younger generation using this as a stop-gap whilst they seek more permanent employment, and b) the fact that some students were producing and selling marula beer in order to obtain cash to pay their school fees. The informal traders also tended to be younger and better educated. Trading is hard work with most traders working 10 hours a day in the market place for six days a week, possibly presenting an entry barrier for older women. Also related to the age pattern was the proportion of households with pensions. Significantly more mat producing and woodworking households had pensions than the other groups. This provides a regular and secure source of cash for these households, to some extent decreasing their reliance on their trade as a primary source of income. No significant differences were found for household size across groups (Table 7.5).

### ***7.3.3 Land holdings and farming***

While data on field and livestock ownership were not available for marula beer producers, the results for the other product types demonstrated a significant difference amongst groups (Table 7.5). The proportion of households owning arable fields amongst mat producers was similar to the random sample, whereas far fewer broom producers, broom traders and woodworkers owned fields. Similar results were obtained for livestock ownership (Table 7.5), although generally fewer households owned livestock than fields throughout. The higher proportion of field and livestock owners amongst mat producers again suggests that mat trading is largely a strategy to diversify and supplement income (Chapter 4). In all cases, very little cash income was generated from agricultural activities, although it provided households with food and a safety net.

Table 7.5: Comparison of producers' and traders' profiles and household characteristics across products and with a random household sample; unlike superscripts indicate significant differences between groups at  $p < 0.003$  (where all groups are compared) and  $p < 0.005$  (where only products are compared)

	Mat producers	Broom producers	Broom traders	Marula beer sellers	Woodworkers	Random household sample	Significance level for $\chi^2$ or Kruskal-Wallis test
% female	100	98	95	100	0	-	-
% female headed hh	53	47	60	45	0 (excluded from test)	35	$\chi^2 = 44.1$ , df = 4, $p < 0.0001$
No of years of education							
Mean	2.1 <sup>c</sup>	3.6 <sup>c</sup>	5.6 <sup>cd</sup>	7.0 <sup>ab</sup>	5.9 <sup>bd</sup>	8.3 <sup>a</sup>	H or $\chi^2 = 139.5$ df = 5, $p < 0.0001$
Median	0	3	6.5	8	5	7.9	
SE	0.3	0.4	0.7	0.6	0.5	0.4	
Age							
Mean	57 <sup>b</sup>	50 <sup>c</sup>	47 <sup>c</sup>	39 <sup>d</sup>	63 <sup>a</sup>	-	H or $\chi^2 = 91.8$ df = 4, $p < 0.0001$
Median	58	50	49	39	65		
SE	1.0	1.1	2.0	1.8	1.8		
% of hh with pensions	36	21	30	22	44	35	$\chi^2 = 25.2$ , df = 5, $p < 0.0001$
% of hh with one or more formal jobs	24	7	10	22	2	35	$\chi^2 = 39.1$ , df = 5, $p < 0.0001$
% of hh with no regular cash income sources	12	50	48	45	50	15	$\chi^2 = 67.1$ , df = 5, $p < 0.0001$
% producers and traders selling other products	58	40	100	73	13	-	$\chi^2 = 78.6$ , df = 4, $p < 0.0001$
Total annual cash income of hhs (R)							
Mean	11 160 <sup>a</sup>	6 883 <sup>bc</sup>	10 656 <sup>a</sup>	6 205 <sup>bd</sup>	12 144 <sup>acd</sup>	11 706 <sup>ac</sup>	H or $\chi^2 = 22.8$ df = 5, $p < 0.001$
Median	9 900	4 715	9 840	4 712	11 040	8 400	
SE	692	856	1 217	777	2 860	1 087	
(also see Fig 7.2)							
% of hh owning fields	56	11	20	-	4	50	$\chi^2 = 73.0$ df = 4, $p < 0.0001$
% of hh owning livestock	38	16	6	-	4	39	$\chi^2 = 40.0$ df = 4, $p < 0.0001$
hh size							
Mean	7.7	7.0	6.7	6.8	-	7.5	H or $\chi^2 = 3.8$ , df = 4, $p > 0.05$
Median	7	7	6	7		7	
SE	0.3	0.3	0.5	0.3		0.3	

Some data were not available for particular products or the random household sample (see Chapter 1, Section 1.6)

### 7.3.4 Sources of household income and cash income levels

A higher proportion of producer and trader households (between 45% and 50%) were without any stable and regular source of cash income than was found amongst the random households (15%), with the exception of mat producers (12%) (Table 7.5). This suggests that without the income from trading in natural resources a large number of households would be destitute. Broom producers, marula beer traders and woodworkers were particularly dependent on the incomes they obtained from trading (Figure 7.1, also see Section 7.4.1). By contrast, the income earned from selling mats was largely supplementary for the majority, but not all, of mat producers. Related to this, fewer trading households had household members with formal jobs than amongst the random household sample, where 35% of

households had formal jobs compared to 2% for woodworkers, 22% for marula beer producers, 10% for broom traders, 6% for broom producers and 24% for mat producers.

Whilst trading households, except for mat producers, clearly had fewer sources of regular income than the broader population, differences in mean total household cash income were not as extreme (Table 7.5, Figure 7.2). Only marula beer showed a significantly lower income than the random population (which had the greatest range – Figure 7.2) and most other products. This suggests that earnings from selling brooms, mats and woodcraft can raise the average household income of trading households to levels comparable to the general population, performing an equalising role (Figure 7.1a,b), albeit that incomes were still below the poverty line for the majority of households. The ability of natural resource products sales to reduce income inequality has been demonstrated in other studies (Cavendish 2000, Fisher 2004). The lack of any significant difference, despite a higher mean and median income, between woodcraft and the marula beer and broom trades is likely to be a function of the small sample size for the former product (Johnson 1999).

To explore these relationships further, frequency distributions for four total annual cash income classes, based on quartiles from the random household sample, were plotted for each product, firstly including income from trading, and then excluding it in order to observe what difference this made to the income profiles (Figures 7.1a,b). The results indicate that marula beer sellers and broom producers were from amongst the poorest in the community, with the highest proportion of households in the poorest income class (Figure 7.1a). The pattern for mat producers and broom traders was very similar to that of the random household sample (Figure 7.1a), even when the income from trading was taken out (Figure 7.1b). This is because the trade only forms a small share of total income for these cases, with broom traders selling many other products, and mat producers receiving other income into the household, especially pensions (see Section 7.4.1). On the other hand, taking out the income from trading for the woodcraft and broom producer cases, results in a much higher proportion of households moving down into the poorest income class (Figure 7.1b). This suggests that trading is making a significant contribution to these households helping to lift them into a higher income bracket. Even though the percentage of households within the ‘better off’ income class is similar for woodworkers, mat producers, broom traders and the random household sample (Figure 7.1a), more households from the random sample lie at the top end of the range for this class as illustrated by the number of outliers and extremes in Figure 7.2. These households generally have relatively well paid professionals such as teachers, nurses and government bureaucrats as members of the household, and are, therefore, less likely to engage in natural resource trading activities.



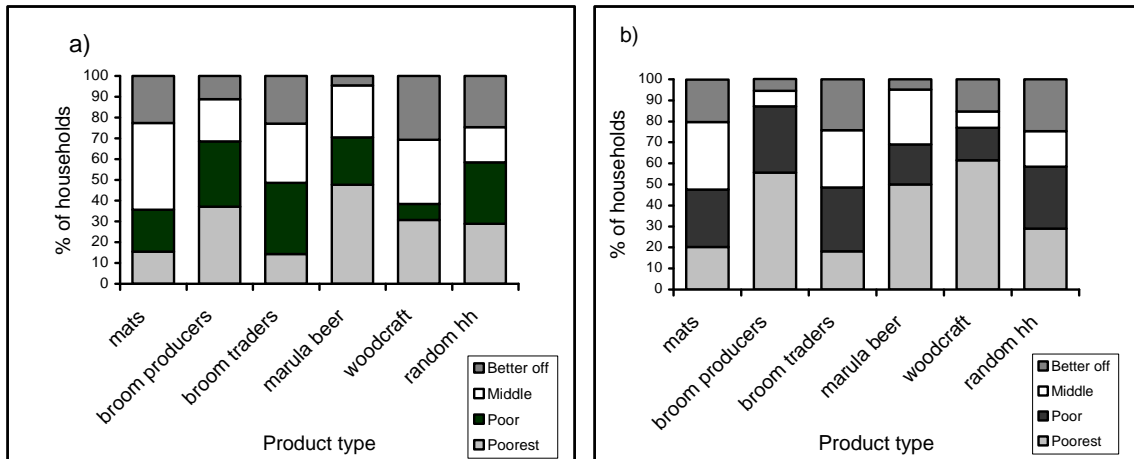


Figure 7.1: Proportion of households (hh) for each product type that fall within four total annual household cash income classes when: a) the net annual income obtained from the sale of natural resource products is included in total annual cash income, and b) when the net annual income obtained from the sale of products is excluded from total annual cash income. Classes are based on quartiles for total annual income for the random household sample where poorest = lowest-R3 600 per household per annum, poor = >R3 600-R8 400 per household per annum, middle = >R8 400-R15 090 per household per annum, and better off = >R15 090-highest per household per annum

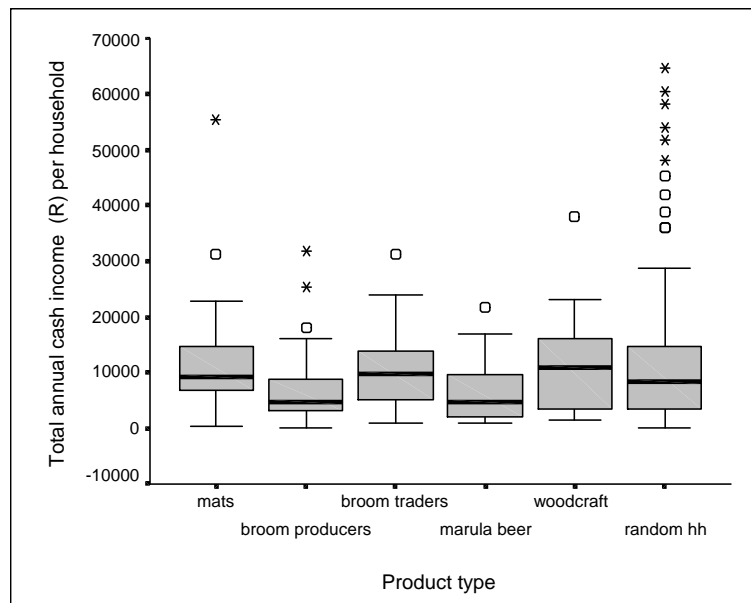


Figure 7.2: Box plots of total annual cash income per household for the different producer groups and the random household sample showing the high variation within product types – the centre dark line represents the median, and the box the interquartile range containing 50% of values; the whiskers show the highest and lowest values excluding outliers and extremes; the circle and star symbols indicate outlier and extreme cases respectively

The results presented in this section largely support the assertion that it is primarily the poorest and most marginalised segments of rural society that participate in natural resource trading and who are most dependent on this activity for meeting a large component of their livelihood requirements (Cavendish 2000, Neumann and Hirsch 2000, Fisher 2004, Section 7.1.2 above). It also appears that none of the products studied were lucrative enough to appeal to the elites and better off in the community (Dove 1993). The question of whether people engage in the trade because they are poor, or whether they are poor because their incomes from natural resource products sales are generally marginal is addressed in the final section of this chapter (Neumann and Hirsch 2000).

## **7.4 WHAT ARE THE LIVELIHOOD BENEFITS OF NATURAL RESOURCE PRODUCT TRADING?**

### ***7.4.1 Incomes from product sales, variation and comparison with benchmarks***

Overall, mean cash incomes per household from trading in natural resource products were relatively low even for high value-added products such as carvings, although in all instances there were ‘outlier’ cases with much higher incomes (Table 7.6 and Figure 7.3). Pair-wise comparisons showed that average net incomes for woodworkers and broom producers were significantly higher than for the other groups, at about R7 000 and R2 000 per annum respectively (Table 7.6). Marula beer was the lowest at R520 (Chapter 5). Average net annual incomes for mat producers and broom traders were approximately R1 000. Overall, with the exception of woodworkers, these incomes fell below the stipulated minimum wage, pension rate and the various poverty line measures (recognising, however, that some households do obtain money from other sources), but were higher or comparable to local wage earnings (Table 7.7). Returns per hour of work were often better than alternatives and approximated the minimum wage rate (Chapters 3-6), but because earnings were so erratic they generally fell short of the returns from other employment when considered on an annual basis. When compared to other natural resource products in different parts of the South Africa, mean incomes earned tended to be within similar ranges to those for palm brush vendors, roadside firewood vendors, woodrose sellers, softwood carvers and mopane worm sellers, but less than those earned by medicinal plant vendors and aloe tappers (C. Shackleton 2004). Relatively low mean annual cash incomes from product sales tend to be fairly characteristic of the natural resource product trade worldwide (see Section 7.1.2).

Table 7.6: Annual cash incomes per household derived from product sales for the different producer groups – unlike superscripts indicate significant differences between mean incomes for product types based on non-parametric (Mann Whitney U) pair-wise tests at  $p < 0.005$  (reduced by the number of pairs in the comparison)

	Mat producers	Broom producers	Broom traders	Marula beer sellers	Woodworkers	Kruskal-Wallis test
<b>Gross income</b>						
Mean	1 229 <sup>cd</sup>	2 752 <sup>b</sup>	2 182 <sup>bc</sup>	687 <sup>d</sup>	14 755 <sup>a</sup>	H or $\chi^2 = 124.1$ df = 4, $p < 0.0001$
Median	800	1 792	1 842	512	8 640	
Maximum	7 200	15 007	19 200	2 664	48 768	
Minimum	75	356	48	84	5 008	
SD	1 371	2 564	3 033	537	14 778	
SE	139	313	492	81	4 098	
<b>Net income</b>						
Mean	998 <sup>b</sup>	2 004 <sup>a</sup>	1 091 <sup>b</sup>	520 <sup>b</sup>	7 427 <sup>a</sup>	H or $\chi^2 = 52.1$ df = 4, $p < 0.0001$
Median	582	1300	867	462	6 400	
Maximum	5 765	14918	9 600	2 300	19 328	
Minimum	28	40	24	31	1 600	
SD	1 136	2386	1 516	469	5 979	
SE	119	296	246	71	1 658	

Table 7.7: Benchmarks against which incomes from trading can be compared

Benchmark	Value per month and per annum
Stipulated minimum wage – rural – R28.50 per day	R713 per month or R8 556 per annum
Regional wage rate – R12.50 per day (Mander <i>et al.</i> 2003)	R312 per month or R3 750 per annum
Immediate local wage rate (from survey) – R6 per day	R150 per month or R1 800 per annum
Pension	R700 per month or R8 400 per annum
Child grant	R150 per month per child or R1 800 per annum
South African poverty line - from Carter and May (1999) and the more recent Bureau of Market Research (2003) – values for the latter are shown in parentheses	R237 (or R398) per person (adult equivalent) per month or R3 150 (R4 777) per person per annum
International poverty line – \$1 and \$2 per person per day	R195 and R390 per month or R2 340 and R4 680 per person per annum

Note: Figures for pensions, etc. are for 2003 when the data were collected.  
US \$1 = R6.50

Presenting mean values only, however, provides a very limited picture of the incomes earned and the role of these products in household livelihoods, and obscures important patterns and understandings. Considerable variation was found in gross and net incomes for households trading in the same product (Table 7.6, Figure 7.3, Figures 3.9, 4.9, 5.5 and 6.9). Some producers were earning incomes of less than R100 per month, while others were earning several hundred Rands per month resulting in annual incomes comparable to the wage benchmarks in Table 7.7. For example, the five highest net annual incomes ranged between R3 810 and R5 765 for mats, R5 759 and R14 918 for broom producers, R1 536 and R9 600 for broom traders, R1 056 and R2 300 for marula beer, and R7 200 and R19 328 for woodworkers. Based on net annual income from product sales, some 40% of all producers were earning returns of more than R1 000 per annum, 22% were earning more than the local wage rate, and 12% and 7% were earning more than R3 000 and R4 000 per annum respectively. Two percent had net incomes

above the official minimum wage rate. Considering woodcraft alone, as a more full-time specialised activity, 23% of producers earned more than the minimum wage, and 54% more than R4 000 per annum. For broom producers some 20% earned more than R3 000 per annum. These results suggest that natural resource trading, while important as a safety net and in mitigating poverty, may also provide a pathway out of poverty for some individuals and their households, especially considering that, in many cases, income from the product was not the only source of revenue for both producers and their households. Similar wide ranges in income have been described for numerous other natural resource products both in South Africa and globally (e.g. Rogerson and Sithole 2001, Velásquez Runk 2001, Vormisto 2002, Marshall and Newton 2003, Fisher 2004, C. Shackleton 2004), although this feature of natural resource product trading has rarely been highlighted as important for interpreting the role of natural resource products in livelihoods and poverty alleviation. Reducing data to statistical averages obscures this important finding, leading to homogenisation and potentially misleading generalisations and conclusions. Furthermore, absolute income values are not the only important consideration, and should not be judged in isolation from the broader household economy and livelihood portfolio, the type of livelihood strategy represented by the trade (Section 7.5), and the non-monetary benefits (Section 7.3.4). Sometimes maximising income is not the primary objective of a producer's engagement in the trade.

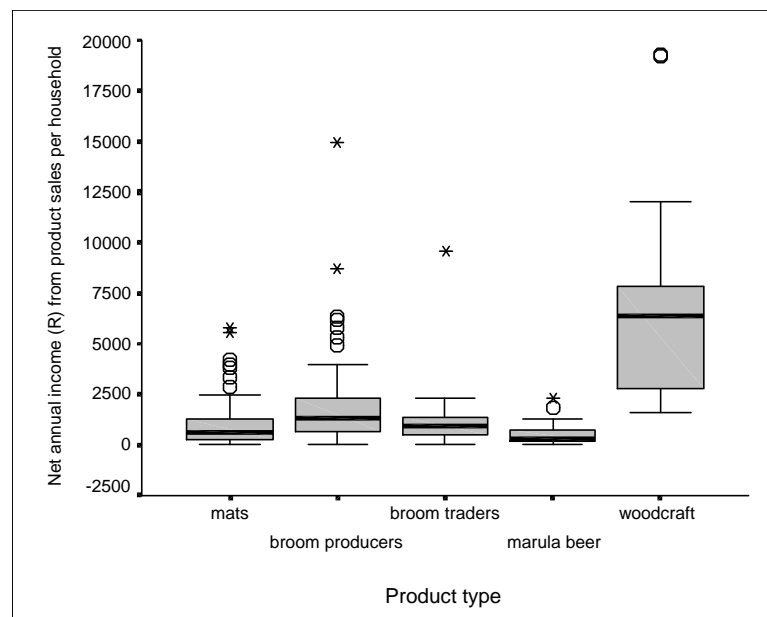


Figure 7.3: Box plots of net annual income from product sales per household for each producer group – the centre dark line represents the median; the box the interquartile range containing 50% of values; the whiskers show the highest and lowest values excluding outliers and extremes; and the circle and star symbols indicate outlier and extreme cases respectively

#### ***7.4.2 Potential determinants of product income***

The fact that some producers were earning sizeable incomes from trading, raises the question – why are some people doing so much ‘better’ than others? What factors could be associated with or determining income earned from trading? This was explored through multiple regression analysis using net annual income from trading as the dependent variable, and an array of both continuous and nominal (coded as zero or one) independent variables as reflected in Table 7.8. Strongly correlated variables were excluded, while some independent variables, particularly those related to marketing, were not available for all product types due to inherently different characteristics in the market chain for each product (Chapter 8). Analyses were carried for the data set as a whole (i.e. across all products), as well as for each product individually. Since numerous factors influence income, the objective of the analysis was not to develop a predictive model, but rather to explore whether there were any associations between particular characteristics of producers and their households, the marketing strategies they used and the income they were obtaining.

Income from selling marula beer showed no significant relationships with any of the variables used in the analysis; although a subsequent correlation analysis showed that the number of days spent selling per week was positively correlated with income (Pearson’s  $r=0.314$ ;  $p<0.05$ ). Similarly, there was no significant association between the net income derived from both woodworking and broom trading and the independent variables, although for woodworking there was a tendency for income from product sales to be higher if the household had other sources of income ( $p=0.102$ ).

For broom and mat producers, net income tended to be more influenced by market related variables rather than household attributes (Table 7.8). Income from selling mats was significantly positively associated with the number of different avenues producers pursued for marketing their products, including selling in nearby towns, at pension markets, at home, and door-to-door in neighbouring villages. Producers themselves recognised the benefits of marketing more widely, with some mentioning that their businesses had declined since they had ceased selling outside of their immediate area. Also positively related to net income from product sales, although not significant, was whether the household had other sources of cash or not (Table 7.8). Access to alternative income allowed producers to harvest more often and to reach more distant markets, both of which were costly to do. Absolute incomes earned for mat trading tended to be higher for the less poor income classes (Chapter 4).

Income from selling brooms also showed a significant positive relationship with the range of markets producers visited (Table 7.8). In addition, producers selling in Giyani, a large centre about 150 km north of the study area, were earning significantly higher incomes. During interviews producers identified Giyani as a “good place to sell”, because of a scarcity of raw material for brooms in that region, but costly to reach and hence only visited by a small number of producers (see Chapter 3). A single selling trip could result in earnings as high as R3 000 (Chapter 3). As large stocks of brooms are required (from

about 300 upwards to a maximum of 1 000 for a group of producers) to make the trip to Giyani cost-effective, producers selling in this market tended to be younger with less years in the trade than other producers, resulting in the negative associations between age and years in the trade and net income reported in Table 7.8. Elderly producers also tended to sell only from home limiting their returns.

Table 7.8: Coefficients from a multiple regression analysis of net income from trading in mats and brooms; variables showing a significant relationship with income ( $p < 0.05$ ) are indicated with \*

Independent variables (For yes/no variables: y=1; n=0)	Unstandardised coefficients		t	Sig (p)
	B	Std. Error		
<b>MATS</b>				
(Constant)	-404.0	954.5	-0.42	0.67
Family assists (y/n)	44.3	293.7	0.15	0.88
Age of producer	-12.3	13.9	-0.88	0.38
Gender of household head (f=1, m=0)	-126.5	262.6	-0.48	0.63
Total jobs in household	116.8	204.1	0.57	0.57
Producer has other self-employment (y/n)	158.9	308.2	0.52	0.61
Producer sells other natural resource products (y/n)	95.3	302.5	0.32	0.75
Number of pensions in household	191.6	254.0	0.75	0.45
Other sources of cash income in household (y/n)	860.2	484.8	1.77	*0.08
Trade rated as very important for household (y/n)	1763.9	524.8	3.36	*0.001
Trade rated as important for household (y/n)	833.5	290.7	2.87	*0.01
Years in the trade	-4.7	10.9	-0.43	0.67
Number of selling places	195.7	83.0	2.36	*0.02
Number of pension markets visited	-24.7	32.5	-0.76	0.45
<b>BROOMS</b>				
(Constant)	3356.4	2840.5	1.18	0.24
Family assists (y/n)	-46.1	1231.2	-0.04	0.97
Age of producer	-74.7	35.4	-2.11	*0.04
Gender of household head (female=1, male=0)	488.6	562.5	0.87	0.39
Total jobs in household	-996.7	990.2	-1.01	0.32
Producer has other self-employment (y/n)	-503.5	690.5	-0.73	0.47
Producer sells other natural resource products (y/n)	463.6	913.3	0.51	0.61
Number of pensions in household	258.1	882.3	0.29	0.77
Other sources of cash income in household (y/n)	100.5	1020.1	0.10	0.92
Trade rated as very important for household (y/n)	2426.0	1624.1	1.49	0.14
Trade rated as important for household (y/n)	2982.2	1724.3	1.73	0.09
Years in the trade	-75.8	30.2	-2.51	*0.02
Number of selling places	468.9	234.7	2.00	*0.05
Sell in Giyani (y/n)	3046.8	820.3	3.71	*0.001

No significant relationship was found between net income and the independent variables for the entire data set. An analysis of covariance, in which the categorical variable product type was included, indicated that the type of product traded was significantly associated with income. This is consistent with the results in Table 7.6. Differences in incomes between product types can be attributed to several factors including the time spent on the activity, the seasonality of the product, and the degree of value addition. Both woodcraft and broom trading tend to be relatively full-time, specialised activities, contributing to higher incomes (also see Section 7.5). Carvings and furniture are also high value-added products. Marula beer, on the other hand, only provides income for two to three months of the year during the marula fruiting season. Brooms also have a limited season of approximately eight months, after which stocks of raw material usually run out. Incomes from mat sales were low mainly due to the part-time, supplementary nature of this activity.

Overall, these results suggest that factors other than the measured variables may also be important in determining income. Not covered in the statistical analysis was the element of choice mentioned in Section 7.1.2. Some producers were not earning high incomes because they chose not to. Their income from trading was supplementary to other sources, and they were happy with the rewards for their effort. They only participated in the trade to the extent they felt was necessary to meet their specific cash needs or to fit in with other activities. This is of particular relevance to mat producers. Also not easily measurable, but key in determining income, were the innate characteristics of individual producers. Qualitative data and general observation showed that some people were 'born entrepreneurs' (see Boxes in Chapters 3 to 6). They were committed, had drive, worked hard and were innovative, often also trading in other products. Returns from trading are thus often directly related to the degree of effort expended, as well as the ability of producers. Similar results were obtained by Krüger and Verster (2001) for a group of weavers involved in producing Zulu handicrafts for the KwaZulu-Natal Parks Board. They found that, while the average economic benefits from craft item sales were low, actual incomes were significant and even substantial for the most committed project members. These findings suggest that, within certain limits (Chapter 9), the potential exists for more producers to raise their earnings by increasing their levels of productivity. That said, some of the poorest households were constrained by their cash flow situation and the high costs of raw material harvesting and marketing. They were often not able to harvest as often as they would have liked, nor sell their products in more distant, but high paying markets. Problems accessing raw material for brooms and mats on private land, especially for those producers not well networked, may also have influenced income.

#### ***7.4.3 Non-financial benefits***

The livelihoods approach, as well as the broader definitions of poverty (Chapter 1), emphasise the need to move beyond just economics (incomes and consumption) to also understanding the social dimensions of rural people's welfare. This includes notions of well-being, vulnerability and risk, capability and empowerment. This study revealed many important, and much appreciated, non-financial benefits of natural resource trading that were key in reducing vulnerability and improving the quality of life of the individuals and families concerned.

Independence and self-esteem were important social benefits from trading. Trading reduced producers' reliance on transfers from relatives and neighbours, allowing them to look after their families and to meet all or some of their basic needs. This independence is particularly important in the context of declining transfers between rich and poor, or among the poor themselves, due to a deepening of poverty and the impacts of HIV/AIDS (Devereux 1999). Several producers mentioned how their relatives had encouraged them to trade rather than relying on others for food and support. Trading also provided women with their own independent source of income. Income from trading was controlled by producers and traders themselves. No cases were found where married women had to surrender their incomes to their husbands as heads of households. Because women were controlling the income, this was invested

in the 'good' of the household and was used to purchase food, household goods and to pay school fees. A number of women specifically mentioned the importance of the income from trading in contributing to their children's and grandchildren's schooling costs. This investment in human capital was seen by producers as a way to broaden their children's options in the future, and hopefully provide them with a better opportunity for escaping poverty. Furthermore, being able to pay one's children's school fees had important social dimensions. Although free schooling is available in South Africa, parents must apply for a fees waiver, something that appeared to carry a huge social stigma (H. Lotz-Sisitka, Environmental Education, Rhodes University, pers. comm.). A few producers used their income to invest in other income generating activities, thus contributing to livelihood diversification and risk reduction.

Engagement in the trade provides an opportunity for producers to work from home. This was a necessity for some producers and a quality of life decision for others (Section 7.2.2). Natural resource product trading provides flexibility in hours, allows producers to do most of their production at or near home, and permits them to set their own pace with their rewards directly related to the effort they put in. Producers are only accountable to themselves and often earned more than they could from local wage employment. This opportunity to work from home will become increasingly important as the HIV/AIDS pandemic progresses and the social crisis of care for the ill and orphans worsens (Marcus 2000).

Other benefits of trading included the building of social capital through new and extended social networks, often beyond the immediate family and neighbourhood bonds upon which most people rely. These new networks were important in allowing producers to boost their incomes from trading through the sharing of costs, etc.; in branching out into new trading activities; and as an additional safety net to draw on in times of crisis. Producers also gained a range of entrepreneurial skills that could be applied in other activities, and many producers explained how they had also begun trading in other products. Several women revealed how producing and selling a particular product was important for their psychological well-being by providing them with a sense of purpose in life when they were unable to find work, and as a way to use their time productively - "it is better to do brooms than sit around at home". This was one of the main reasons an unemployed university graduate took-up mat making (Chapter 4). A few people mentioned that these activities were "better than stealing". Moreover, the fact that producers were seen as mat makers, or woodcarvers or broom producers provided them with some recognition and identity within the community, and often their skills, which in many instances helped to perpetuate tradition and culture, were admired or looked-up to. These less material benefits and their importance in contributing to a healthy family life and society, as well as the less tangible goals of poverty alleviation, should not be underestimated. Several other authors have noted the significance of the social benefits of, in particular, craft production, for producer's livelihoods and well-being (e.g. Terry 1999, Marcus 2000, Rogerson and Sithole 2001, Krüger and Vester 2001).



## 7.5 HOW DOES NATURAL RESOURCE PRODUCT TRADING FIT INTO HOUSEHOLD LIVELIHOOD PORTFOLIOS?

### *7.5.1 Contribution to household income and dependence on the trade*

It has already been discussed how the incomes earned from trading varied across households and products (Sections 7.3 and 7.4). The contribution of these earnings to total household income showed a corresponding pattern (Table 7.9). In general woodcraft and broom production, the highest earning activities, tended to contribute a higher proportion to total income (>50%) than marula beer, broom trading and mat production (<50%) (Table 7.9). Within product types, income shares from trading varied between households (Table 7.9), with poorer households obtaining proportionally more of their income from trading than wealthier households. Plots of the mean percentage contribution of income from product sales to total annual household income for four income classes, applied consistently across all product types, demonstrated that income shares from trading were highest for the poorest classes (see Figures 3.10, 4.10, 5.6). These households could be said to be more dependent on the sale of natural resource products than their counterparts, although their actual incomes from trading were not necessarily higher. This pattern is consistent with that found in other regions (Cavendish 2000, Vedeld *et al.* 2004), although there are exceptions (Ambrose-Oji 2003, Section 7.1.2). Related to this, was the perceived importance of the trade to households (Table 7.9). Generally, the higher the product share the more important the producer/trader regarded the income for the household, even if this was low. All woodworkers and 60% of broom producers rated their trading activities as their most important source of income, followed by 62% for broom traders, 41% for marula beer sellers and 13% for mat producers (Table 7.9). This could be interpreted to mean that producers selling woodcraft and brooms tend to be more reliant on the trade for their livelihoods than the latter, something that is supported by the data presented in Figure 7.1.

Table 7.9: Contribution of income from trading to total household cash income and the importance of the product to households for the four products surveyed

	Product type				
	Mat production	Broom production	Broom trading	Marula beer	Woodcraft
<b>Contribution to total cash income (% of households)</b>					
0-25%	75	34		79	0
26-50%	11	25		21	23
51-75%	4	9		0	23
76-100%	10	32		0	54
Mean (based on original data)	21 ± 3	51 ± 5	11 ± 2	14 ± 2	77 ± 5
<b>% of producers rating the trade as their most important source of household income</b>	13	60	63 (vending in general)	41 (self-employment in general)	100
<b>Perceived importance of the trade to households (% of producers)</b>					
Very important	14	70	60	-	80
Important	42	29	40	-	20
Slightly important	43	1	0	-	0
Not important	1	0	0	-	0
<b>% of producers who would prefer to do something else</b>					
Yes	36	59	55	80	20
No	64	41	45	20	80

### 7.5.2 Livelihood strategies

It is clear from the above that the contribution the trade in natural resource products makes to the overall household economy can vary widely. This may be influenced by a range of factors including, for example, the type of product traded, the other sources of income the household has available to it, labour availability within the household, household composition, land holdings, degree of integration into the cash economy, and the reason for engaging in the trade, i.e. whether as a temporary safety net or a full-time occupation (Ruiz-Pérez *et al.* 2004, Chapters 8, 9). In this section I look more closely at the role of natural resource product trading in relation to the wider household livelihood portfolio and attempt to answer the question: what type of livelihood strategies are represented by the different trades across households and why, and what does this mean in terms of dependence on the resource and the role of the trade in poverty alleviation?

#### *Exploring the livelihood role of the different products*

As a first step to investigate patterns across products, an exploratory principal components analysis (PCA) was undertaken, incorporating a number of variables, listed in Table 7.10, that might influence the way in which the trade is integrated into or contributes to the household. This showed that products are, to a large extent, differentiated based on how they fit with the overall livelihood portfolio of

households (Figure 7.4). The first two components/axes accounted for 47% of the variation in the data (27% and 20% respectively).

The first component was largely one of diversification. The number of households with other sources of income increased from left to right along the x-axis towards the mat producer cluster, while the income share from trading, net income and the importance of the trade to households decreased along this axis (Figure 7.4, Table 7.10). Mat producers, as the extreme right-hand cluster, are thus largely characterised by low income from trading, low percentage contribution of the trade to total income, low importance of the trade, and greater numbers of households with other income sources. This suggests that mat trading is, for the most part, an income diversification strategy or a way to supplement existing incomes. At the other extreme was a group of woodcraft cases. Woodcraft tended to be the highest earning of all the trades, contributing the greatest income share, suggesting that these households were specialising in this activity. Showing a similar pattern to woodcraft was a cluster of broom producer cases, as well as selected mat producer cases. The other groups, broom traders and marula beer producers, mainly formed a continuum between the two extremes along with a scattering of cases from all the other product types. The wide variability within particular products regarding their role in the household economy, and consequently the type of livelihood strategy they represent, is thus clearly illustrated (Figure 7.4). The second component related to the profiles of traders, and largely separated woodcraft from the other activities by gender of producer, age, number of pensions and years in the trade (Table 7.10).

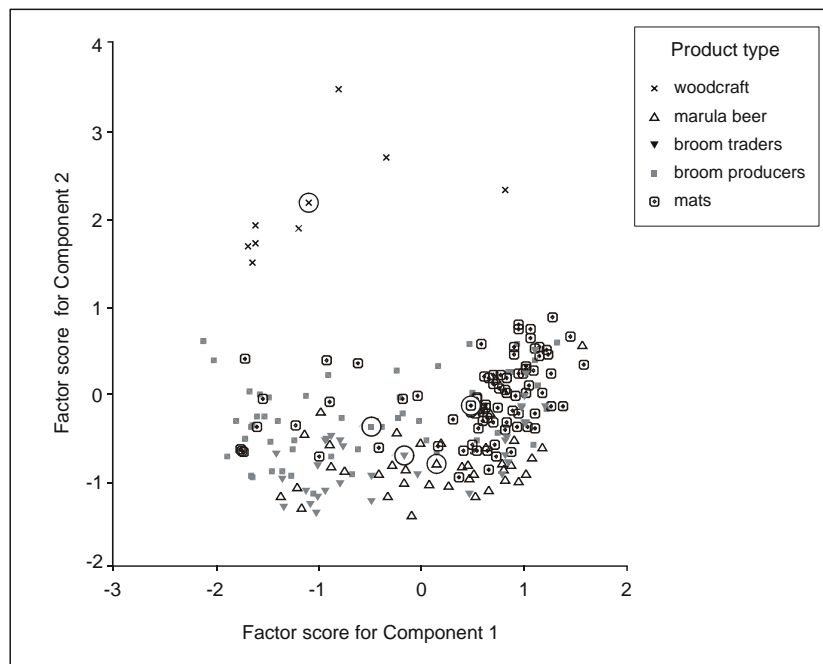


Figure 7.4: Plot of factor scores for component 1 and component 2 of a PCA of product type and a range of household and product related variables; the circled points represent the mean score for each product type

Table 7.10: Component scores for a PCA of product type and a range of household and product related variables

Variable	Component 1	Component 2
Family assists	-0.49	0.54
Gender of producer	0.67	-0.59
Age of producer	-0.12	0.63
Gender of household head	0.15	-0.33
Total jobs in household	0.44	0.03
Other self-employment	0.47	-0.27
No. of pensions in household	0.33	0.57
Other sources of income in household	0.61	0.50
Net annual income from trade	-0.54	0.20
Product contribution to total income	-0.76	-0.29
Trade very important to household	-0.77	-0.37
Trade important to household	0.57	0.32
Years in the trade	-0.33	0.61

To explore the relationship that was revealed between products and the degree of household diversification further, a specific diversification index was created using Bray-Curtis principal coordinates analysis (by means of the programme MVSP). Variables included in this related to the range of cash income sources that households had, including the number of other household members employed, other self-employment undertaken by the producer, sale of other natural resource products, number of pensions, number of child grants, and whether the household had any other sources of income at all. The analysis was relatively robust accounting for 50% of the variation in the data in the first component and 75% in the second. The outputs of this analysis were then used a) to plot cases and to identify any patterns across products, and b) as the dependent variable in an analysis of covariance across four products (woodcarving was excluded due to missing data for household size) to try and understand which household characteristics, if any, might be associated with diversification. The independent factors and covariates used in this analysis included product, status of producer in the household, gender of household head, income class, age, education and household size.

Figure 7.5 illustrates that mat producers had the most diversified households. Mat makers tended to have numerous other sources of income within the household, and undertook mat making largely as a supplementary or income diversification activity. Woodcraft, marula beer and broom traders were the least diversified groups, with the least alternative sources of income. Woodworkers are mainly full-time producers, with their families also assisting in their businesses. This leaves little opportunity within the household for other livelihood activities. Broom traders are specialised in terms of their primary livelihood activity being trading, but they trade a wide range of products in addition to brooms, diversifying their livelihood base in this way. Marula beer producers, on the other hand, had few other livelihood sources not because they are specialised, but because they tend to be representative of the poorest households in the community (Section 7.3.4). They were the group with fewest 'regular' sources of alternative income and the lowest cash income. Marula beer sales only contribute a small percentage

to overall income, and this activity is often undertaken out of desperation. By contrast, broom producers showed a spread across the diversification index, with trading the main source of income for some households and a supplementary source for others.

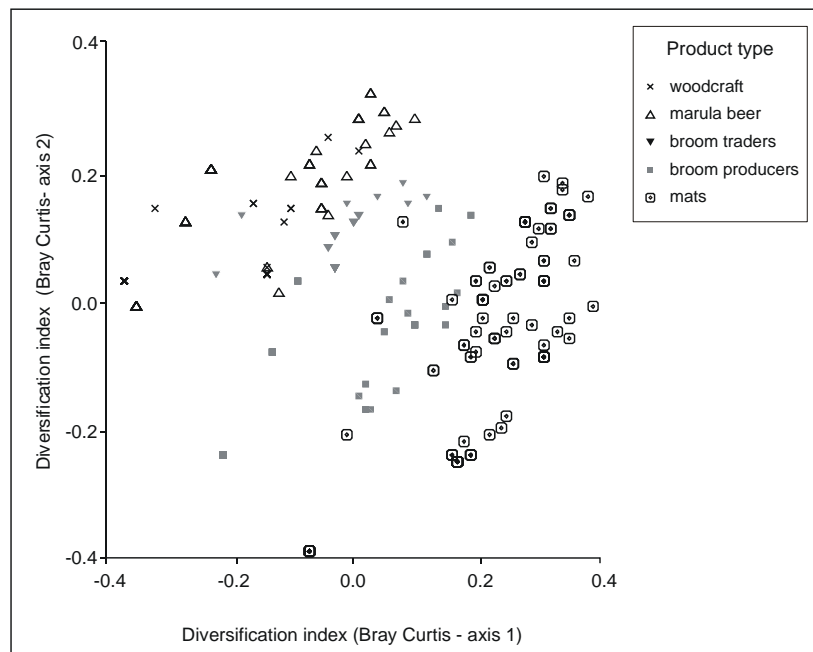


Figure 7.5: Plot of scores from a Bray-Curtis principal coordinates analysis of sources of household income; the output scores represent an index of diversification

There were few associations between the household diversification index and other measured variables. Of the variables included in the analysis of covariance only product type ( $F=85.91$ ,  $df=3$ ,  $p<0.01$ ) and income class ( $F=82$ ,  $df=2$ ,  $p<0.01$ ) were significantly related to diversification, while household size was almost significant ( $F=3.86$ ,  $df=1$ ,  $p=0.051$ ). All three of these were highly significant ( $p<0.05$ ) when the other variables were dropped from the model ( $R^2=0.776$ ). Including woodcraft cases in the analysis, and dropping household size since this was not available for woodcraft, still resulted in a significant relationship between diversification and product type and income class. These results, thus, suggest that poorer households are less diversified than more well-off households, while households with larger numbers of household members tend to be more diversified. The implication of the association between product type and household diversification is that particular products may be selected by producers for the way in which they fit with the overall livelihood portfolios of their households, and their other needs and commitments.

#### *A livelihood strategy typology*

Several researchers have attempted to classify natural resource product trading activities according to the type of livelihood strategy they represent. Lowore (2003), working in the miombo woodlands of Malawi, used the livelihood strategy framework proposed by Devereux (1999) to assess the importance

of selling miombo products for the food security of different households. Like this study, she found that the contribution made by trading activities varied amongst households, even for the same product, resulting in the trade representing a range of livelihood strategies from survivalist to accumulative for different households (Table 7.11). Stack *et al.* (2003) in an analysis of the mopane worm trade in southern Africa reached a similar conclusion. They used the terms ‘stepping-up’, ‘linking-in’ and ‘hanging-on’ for a similar set of strategies as those described by Lowore (2003) and Devereux (1999) (Table 7.11, Column 1). Devereux (1999) sees households pursuing a mix of accumulation, diversification and shock response strategies in order to survive, and proposed four groupings of livelihood strategies – accumulative, adaptive, coping and survival (Table 7.11). He discusses how these tend to form a continuum, and how, analytically, it is difficult to distinguish between adaptation and accumulation strategies, on the one hand, and adaptation and coping strategies on the other, with this classification often breaking down in practice.

Ruiz-Pérez *et al.* (2004) developed a typology of livelihood strategies based on the groupings that emerged from an analysis of 61 NTFP commercialisation cases according to the role of the product in the household economy (Table 7.11). This typology draws heavily on the degree that households are integrated into the cash economy or, in other words, how much of their income is ‘in kind’ from own production, together with the income share from the sales of NTFPs (Table 7.11). The former criterion is not particularly useful in the South African context due to the erosion of farming livelihoods by past policies and a lack of available land in the densely populated ex-homeland areas (Marcus 2000, Chapter 2). Most households in South Africa are well integrated into the cash economy and none survive on subsistence alone. This is one of the reasons old age pensions are so important as a social safety net in the country (Chapter 2).

To overcome some of the drawbacks of the existing typologies, a modified typology of strategies related directly to my findings is proposed for this study (Table 7.11, Column 3). This incorporates the definitions provided in the first two columns of Table 7.11, but refines and adds to these in the context of this study and brings in the important notion of choice that has already been mentioned. This new set of criteria is presented in Table 7.11 alongside the above-mentioned typologies. I then classified the products from this study, using the understandings gained from the multivariate analysis, against all four typologies, and discussed what this meant in terms of their contribution to poverty alleviation (Column 4, Table 7.11).

As the PCAs illustrated, all the products were representative of more than one livelihood strategy, depending on how, when and why producers entered the trade, who they were, and the degree of diversification of the household (Table 7.11, Figure 7.4, 7.5). Woodworking was largely a specialisation strategy demanding a great deal of producers’ and their families’ time and some reinvestment in the business, although for new entrants it may represent a coping strategy until either other work is found or

the producer decides to specialise in woodcraft. It was producers' most important source of income (Table 7.9), and generally provided enough income to meet basic household livelihood requirements. Although incomes were higher than for most of the other trades, woodworking households were not necessarily well-off. The demands of the trade prevented woodworking households from pursuing other forms of income generation, plus it was a costly business leaving little profit for producers to substantially improve their standards of living. However, woodworking did lift the total income of producer households to levels similar to those of the general population (Figure 7.1), and several households were able to send their children for tertiary education, an aspiration of many rural households. Woodworking thus has the potential to reduce poverty, although other constraints (such as raw material scarcity – Chapters 6 and 8) may place limitations on this. It was interesting to note that only 20% of woodworkers expressed a preference for other work (Table 7.9).

Mat making and broom trading were mainly proactive or 'by choice' livelihood diversification strategies (Chapter 1, Section 1.5). Mat producing households tended to have numerous other sources of income within the household, including pensions (Figure 7.5). Mat making was thus primarily an income supplementing activity, serving to pull household incomes up to higher levels or to provide cash for specific purposes such as school fees, burial society fees or luxury goods. Incomes from trading were generally small, but together with other cash sources could make a difference to the overall income of households, often easing cash flow constraints and reducing risk and vulnerability. However, as outlined in Box 4.2 in Chapter 4, a few producers had turned mat making into their primary livelihood activity and were earning reasonable incomes, even hiring other people to assist, thus moving into a specialisation strategy (see Figures 7.4 and 7.5). At the other extreme, mat making also sometimes provided a safety net, or means of coping, for poor households with few other income sources. Broom trading was an interesting case, in that trading as a whole tended to be a specialised strategy (hence the position of this group in Figure 7.5), while selling brooms was a way of diversifying the type of products offered for sale. Brooms did not earn traders high incomes, except for a few selling in pension markets across the district, but provided a reliable source of income at little risk since they did not perish in the same way as many of the other products traders were selling.

Although mat producers and broom traders were not highly dependent on the trade, the role of the trade in elevating often otherwise marginal incomes should not be underestimated or dismissed. Most producers felt these products made an important contribution to their livelihoods and were most distressed by the poor rainfall in the season of the study, which resulted in raw material shortage. The majority of mat producers (64% – Table 7.9) expressed satisfaction with their trade, not wishing to do anything else, probably because natural resource commercialisation fitted with their lifestyle and other livelihood strategies.

Broom production was primarily a coping or 'necessity' strategy for the people involved. Most broom producers had little else in the way of household income, and had entered the trade out of desperation. Broom production was, thus, often the most important source of income for the household, although net profits were low. For a few producers, however, brooms provided more substantial income, playing a role in reducing poverty levels in these households and moving them into a specialised livelihood strategy (Figures 7.1, 7.4, 7.5). However, for the most part, the broom trade provided a safety net for producers, sometimes replacing other safety nets such as social transfers between households. Even though broom producers entered the trade due to shocks, the lack of alternatives meant that this safety net role did become long-term for a large number of producers.

The sale of marula beer represented a survival or coping strategy for most households. Marula beer sellers tended to be the poorest of all the groups studied (Table 7.5, Figure 7.1), with few other reliable and regular sources of income available to them. Several sellers reported how they depended on relatives for food. Marula beer was one of the easiest trades to enter, and could provide good returns for the three months of the fruiting season (Chapter 5). Some women, from better off households, entered this trade with the specific aim of paying their children's school fees. The timing of the income is critical in this respect (Chapter 5). For others, it provided much needed cash, if even for an extremely short period, or was a better source of income than the *ad hoc* activities they normally depended on. This product, thus, plays a role in preventing destitution and increasing food security, but due to its seasonality can rarely replace other safety nets or result in poverty reduction. Furthermore, the fact that a much younger group of women were involved in beer selling compared to the other products suggests that this is a temporary activity while participants seek more permanent sources of income.



Table 7.11: Livelihood strategy typologies and the natural resource products studied in this thesis (product type is in bold where it corresponds to the most important strategy for that product; hh=household)

Household livelihood strategy typologies			Classification of products studied	Contribution to poverty alleviation and levels of dependency on the product
Devereux (1999) Stack <i>et al.</i> (2003)	Ruiz-Pérez <i>et al.</i> (2004) Belcher and Achidiawan (in press)	Additions and refinements based on this study		
<p><b>Accumulation</b> Increase in income flows and stocks of assets Proactive and positive</p> <p><b>'Stepping-up'</b></p>	<p><b>Specialised</b> Intermediate - high hh income &gt;50% of income in cash NTFP&gt;50% of income</p>	<p><b>Specialisation</b> Full-time activity Most important source of hh income (few other sources) - &gt;50% share Incomes comparable to low skill wage rates – intermediate hh income Only sometimes accumulative – but there is reinvestment in the trading activity May start out after a set-back (i.e. as a coping or necessity strategy), but often becomes the producer's activity of choice</p>	<p><b>Woodcraft</b> Petty trading Mats (a few producers) Brooms (a few producers)</p>	<p>Ensures basic living requirements Pathway out of poverty for some</p> <p>High dependence</p>
<p><b>Adaptive</b> Spread risk through diversification Proactive and positive</p> <p><b>'Linking-in'</b></p>	<p><b>Supplementary</b> Intermediate hh income &gt;50% income in cash NTFP&lt;50% hh income</p> <p><b>Integrated</b> Low hh income Hh income from mixed sources Large % of income in cash NTFP&lt;50% hh income</p>	<p><b>Diversification 'by choice'</b> Supplementary Some choice involved in entry and levels of engagement Seldom most important source of income - &lt; 50% share Numerous other income sources in household Often <i>ad hoc</i> and variable from year to year Low incomes from trade Intermediate to low hh income</p>	<p><b>Mats</b> Petty trading (traders diversified into brooms) Brooms (some producers)</p>	<p>Supplements marginal incomes May be undertaken with a specific objective in mind rather than just survival Reduces risk Diversifies income base With other activities, can assist in raising the standard of living of households</p> <p>Low dependence</p>
<p><b>Coping</b> Minimisation of the costs of adverse livelihood shocks, such that future livelihood capacity is not seriously impaired Reactive and defensive</p> <p><b>'Hanging-on' /'Linking-in'</b></p>	<p><b>Subsistence</b> Low hh income &lt;50% income in cash NTFP &lt;50% of income</p>	<p><b>Coping or 'necessity'</b> Response to set-back Response to few other opportunities Entered through lack of choice Few other income sources in hh and low hh income Often most important source of income to hh - &gt;50% share Can become a long-term activity Can replace other safety nets</p>	<p><b>Brooms</b> Mats (a few producers) Marula beer Woodcraft</p>	<p>Safety net Mitigation of poverty Reduced reliance on other social safety nets Decreased vulnerability Contributes to food security Important for school fees</p> <p>High dependence</p>
<p><b>Survival</b> Prevention of destitution Reactive and defensive</p> <p><b>'Hanging-on'</b></p>	-	<p><b>Survival</b> No choice – last resort Low returns and low entry barriers No other income sources Still rely on other safety nets and other similar survival activities &lt;50% share</p>	<p><b>Marula beer</b> Brooms</p>	<p>Safety net Prevention of destitution Contributes to food security Important for school fees</p> <p>Moderate dependence - still need other safety nets and activities</p>

## **7.6 CONCLUSIONS: WHAT IS THE ROLE AND POTENTIAL OF NATURAL RESOURCE PRODUCT TRADING FOR POVERTY ALLEVIATION?**

If we accept the new thinking on poverty that places emphasis on income distribution, human capital, vulnerability and an obligation to protect the poor (Ashley and Maxwell 2001, Chapter 1, Section 1.5), then the role of the natural resource product trade cannot be ignored. This study has demonstrated that these products clearly make a difference to the welfare of the poorest and, often, most vulnerable sectors of the community, albeit relatively small numbers of people (see Chapter 8). Moreover, defining poverty alleviation as both a function of poverty reduction or elimination, and poverty mitigation or prevention of the worsening of poverty (FAO 2003, Chapter 1, Section 1.5) leaves little doubt that the local level trade in natural resource products has an important contribution to make, even though it is unlikely to lift significant numbers of people out of poverty.

While a minority of producers of non-seasonal products such as woodcraft, brooms and mats managed to turn their trading activities into reasonably well-paying micro-businesses (Chapters 3, 4 and 6) or were able to boost existing household incomes to a significant extent, the majority of households engaging in the natural resource trade remained poor, had limited assets and tended to live on a day-to-day basis. Numerous women mentioned how they rarely took note of their earnings as they usually spent these immediately on food and other needs. Nevertheless, it is important to recognise that these producers, often from amongst the poorest in society and following major setbacks in their households, were resourceful enough to secure a part-time income for themselves, albeit marginal, with little external support or cost to the state. Through their trading activities they could care for their families, meet some of their basic needs, and add to inadequate household incomes. Due to a lack of alternative employment opportunities, they represented several hundred people who would not have otherwise held a job or engaged in productive activity. For this reason it is important not to underestimate the role that natural resource products can play in ameliorating poverty by: a) providing additional options for income generation, b) allowing households to diversify their income base, c) providing a safety net for those facing shock and hardship, and d) in meeting specific cash needs such as school fees – all roles fulfilled by the products studied here. Furthermore, participants involved in the trade had an independent source of income, and their pride and dignity in being able to provide for themselves and their families. They were able to bring food home and educate their children. They could be flexible in their hours and undertake much of their production at or near home fitting in with other responsibilities. Producers were also rewarded directly for the degree of effort they put in, and they developed skills that commanded the respect of others and that could be applied in other areas of their lives (such as marketing skills). Few would argue that this does not have a positive impact on the well-being of the individuals and households involved, particularly when the alternative is demoralising joblessness (Chapter 2) and greater vulnerability. Producers' own comments regarding the benefits of the trade (see

text Boxes in Chapters 3-6) as well as the fairly high proportion preferring this to some other income earning activity suggests that these benefits are very real to the people involved.

However, despite the benefits, the fact is that it is generally the poorest households who depend most on natural resource product sales and they tend to remain poor due to marginal returns. This has led some commentators to suggest that these products may have little role in poverty alleviation and may indeed constitute a 'poverty trap' in the sense that dependence on them undermines possibilities for accumulation and diversification in the household (Neumann and Hirsch 2000, Wunder 2001). On the other hand, those with a more optimistic view see natural resource products as a crucial safety net preventing the poor from falling deeper into poverty (Neumann and Hirsch 2000, Campbell *et al.* 2002). A similar divergent viewpoint exists within the small enterprise literature. Most commentators concur that "micro-enterprises can be a positive factor in contributing towards poverty alleviation" because of the numbers and types of people (e.g. marginalised, women) involved (UNDP South Africa 2003). Indeed, Mead and Liedholm (1998) suggest that single person, survivalist micro-enterprises are a particularly appropriate target group for those concerned with poverty alleviation. Others, however, believe that 'necessity' entrepreneurial activities cannot provide an effective route to tackling poverty because of their limited capacity for growth (Driver *et al.* 2001, UNDP South Africa 2003).

Before drawing conclusions either way it is important that the role of natural resource product trading is viewed in the wider context. The alternatives available to the rural poor, who are often poorly educated and skilled with limited access to formal employment opportunities, are seldom considered (C. Shackleton 2004, Chapter 1, Section 1.5.1). Indeed, the unemployment crisis in South Africa even precludes migration as an option (Chapter 2). So, while the returns from natural resource product trading are generally modest, they frequently compare favourably with: a) the immediate alternatives of local wage labour (Section 7.4.1), assuming that it is available, b) income from other sources such as farming, which is also marginal in the South African context, and c) other self-employment, which often requires upfront investment that people simply do not have. In semi-arid regions like Bushbuckridge the situation is further exacerbated by the harshness of the climate and the lack of viable, alternative land uses (Chapter 2), negating Wunder's (2001) proposition that other forms of land use might well provide a better route for poverty reduction than forest-based activities (also see Vosti *et al.* 2003). Moreover, the HIV/AIDS crisis in South Africa (Chapter 2) adds a chronic and long-term care and financial burden to already stressed and vulnerable households (Marcus 2000, UNDP South Africa 2003), and often forces members into home-based income generation activities (Kepe 2003). The current study has shown how the natural resource base provides a crucial safety net for HIV/AIDS affected households, while it is argued in the South African Human Development report (UNDP South Africa 2003) that the running of small enterprises plays a positive role in assisting households to offset some of the added financial burden caused by HIV/AIDS. Campbell *et al.* (2002) reached similar conclusions from their livelihood studies in Chivi, Zimbabwe.

Given the context outlined above, and the results from this study, which show that the trade in natural resource products may perform a variety of functions from assisting households to survive and cope (the majority), to allowing them to diversify or, at the other end of the spectrum, to specialise (Table 7.11), it would be incorrect to label this activity as a poverty trap. Indeed, the incomes earned from trading make a real impact in assisting households to deal with the hardship they face. This study has shown that the returns from selling selected natural resource products can help to lift producer households to income levels approximating those of the broader population (Figure 7.1). Moreover, some producers, by expending considerable effort, were able to earn significant incomes, whereas others chose a less intensive level of involvement. This suggests that if there is a poverty trap, it is the broader socio-economic environment within which the poor find themselves rather than the natural resource trade *per se*. It also points to the need to interpret the contribution of natural resource products, not just within the broader socio-economic context, but also in the context of the livelihood dynamics of individual households. As the livelihood strategy classification showed, it is often only the poorest households that rely entirely on natural resource products or those that are already doing well (Section 7.5.2, Table 7.11), while for others the production and sale of these products constitutes a livelihood diversification strategy. Income from trading should, therefore, not be considered in isolation from how it fits in with and contributes to the broader household economy. The positive contribution that natural resource product trading can make in easing poverty and hardship is supported by those working in the micro-enterprise sector, where there is evidence, particularly in a supportive policy environment, that “the poor can be a little less poor” through these activities and that “informal enterprises of South Africa’s small, medium and micro-enterprise economy can contribute towards poverty alleviation” (Skinner 1999, 2001 cited in UNDP South Africa 2003).

In conclusion, there is a need and obligation for the state to underpin the safety net offered by biodiversity, as well as to support those people who have turned to natural resource trading as a means to make ends meet in the absence of alternatives and under an increasingly harsh economic environment. There is a need to view specific livelihood activities from a more holistic perspective, and to favour livelihood-strengthening diversification options that promote risk averse, multi-occupational households (Ashley and Maxwell 2001) in addition to more specialised activities. Natural resource commercialisation activities should not be rejected as unsuccessful, as having little role in poverty alleviation, or unworthy of support just because they do not earn producers high incomes. Income is influenced by a variety of factors including motivation for involvement and producers’ commitment and ability. Households engage in natural resource trading for different reasons, with each product having its own role and place that varies from household to household (Section 7.5.2). This is well demonstrated by the number of mat producers that expressed satisfaction with this activity, and rejected the idea of substituting it with some alternative, even though incomes were marginal. Indeed, mat production and sale could be regarded as being very successful in fitting with the broader livelihood portfolio and

objectives of the households concerned. It is, therefore, crucial that natural resource trading activities are viewed from a household livelihood perspective rather than just an enterprise perspective, where the emphasis tends to be on business performance (Chapter 9). Most importantly, there is a need to be cautious about making generalisations, as the variability in the data for this study clearly demonstrates, and run the risk of underestimating or disregarding the role of the natural resource product trade as a possible contributor to rural livelihood security and poverty alleviation. However, at the same time there is a need for realism and not to overestimate the potential of these products, as tended to be done in the past particularly by proponents of community-based conservation approaches (Section 7.1, Chapter 1, Section 1.1), but rather see them as one component of a multi-sectoral approach for tackling rural poverty. Thus, natural resource product trading alone is not the answer, but nor is arable production, livestock rearing, migrancy or state welfare grants. It is only through the integration of these livelihood sectors that there will be any lasting positive impact on the welfare of the rural poor.

## **7.7 SUMMARY OF KEY FINDINGS**

- Increasing numbers of households are turning to the natural resource base for income as the economic climate deteriorates and the impacts of HIV/AIDS are felt. This highlights the safety net value of natural resource product trading.
- Trade in natural resource products tends to be taken up by poorer and more vulnerable individuals and households, in particular those who lack skills and education.
- Natural resource trading is important in increasing the limited choices that rural people have.
- Incomes earned from trading can pull total cash income for some households up to levels similar to the broader local population, but generally these incomes remain below the poverty line and are less lucrative than formal employment. This particularly applies to woodcraft, mat and broom production.
- Incomes from trading are modest, but highly variable across different products and between households selling the same products, contributing in different ways to poverty alleviation. For a few households, earnings from trading are significant, providing a pathway out of poverty.
- The analyses revealed few determinants of income amongst the measured variables, suggesting that individual attributes of producers and traders such as personal drive and entrepreneurship are as important in contributing to high income as other factors. This was supported by qualitative data.
- Different livelihood strategies tend to be represented by different products, e.g. woodcraft is primarily a specialisation strategy, mat production a diversification strategy, marula beer selling a survival strategy, and broom production a coping or 'necessity' strategy. However, for some products, especially reed mats and brooms, all of these livelihood strategies were found across participating households.
- The above points imply that it is not easy to make any generalisations regarding the contribution of the trade in natural resource products to income or its role in poverty alleviation as this is often

influenced by local context, the type of product traded, the unique circumstances of households, and the entrepreneurial abilities of individual producers.

- Several non-financial, or quality of life, benefits from natural resource product trading were identified, including independence, the opportunity to work from home and to fit income earning with other activities, the ability to set one's own pace and levels of productivity, and the building of human and social capital. These should not be undervalued.
- The use of income earned to pay school fees was mentioned as important by the majority of respondents for all products traded by women. This is an investment in the future and may represent intergenerational poverty reduction.
- Whether returns from trading and total income shares were high or low, in all cases the trade had its own particular role in people's livelihoods. Most producers viewed their income from selling as important for a variety of reasons, even when this was marginal. The natural resource product trade should not be dismissed as having little role in poverty alleviation just because financial benefits are small. The situation is more complex and must be viewed within the context of overall livelihood portfolios and the prevailing socio-economic climate.
- The importance of the trade as a means to cope under adversity is a significant dimension of addressing poverty, even if it rarely allows people to escape poverty. This study demonstrates that there is no doubt that the local level commercialisation of natural resource products can make a significant positive contribution to preventing participating households from slipping further into poverty.

## CHAPTER 8

### LOCAL LEVEL COMMERCIALISATION PROCESSES AND PATHWAYS: ISSUES AND COMPLEXITIES

#### 8.1 INTRODUCTION

##### *8.1.1 Background: Commercialisation and local markets*

The commoditisation of wild, natural resource products for income generation is not new, and some products such as rattan, shea butter, chew sticks and rubber, to mention a few, have been traded for many hundreds of years (de Beer and McDermott 1996, Sunderland *et al.* 2004). However, recent decades have witnessed an expansion of these commercial markets in many countries, through both the entry of new products into the market and growth in existing trade (Chapter 7). This expansion has been driven by both ‘supply’ factors such as poverty, economic hardship and an increased need for cash income (Chapter 7), as well as ‘demand’ factors including growth in the demand for low-cost products amongst the urban poor (Townson 1995, Fereday *et al.* 1997, Ruiz-Pérez *et al.* 1999, Williams *et al.* 2000, Cunningham 2001, Arnold 2002b, Lowore 2003) and increased stratification of rural communities creating new groups of consumers amongst wealthier households (Haggblade and Liedholm 1991). In addition, in the last 10-15 years, numerous facilitated projects aimed at the dual goals of biodiversity conservation and rural development have further stimulated and developed trade, often in new external markets (Neumann and Hirsch 2000, Chapter 1, Chapter 7).

It is the trade that has evolved ‘endogenously’ at community level and that makes use of local markets that is of primary interest in this study. This local level trade, although generally accounting for the bulk of sales (Arnold 2002b), tends to be relatively invisible with most sales occurring between individual households or in informal village markets (Cunningham 2001). Consequently, it frequently escapes attention by both researchers, and development planners and practitioners. Arnold (2002b) points out “although most studies focus on products gathered for urban and export markets, these may not be the most important in terms of contribution to rural income and employment, or of quantities involved”. Recognising this, there is a need for systematic and thorough study of local level trade processes, and their evolution and potential (see Chapter 1). Indeed, it has been argued that detailed information on the magnitude and structure of the local NTFP trade is particularly sparse as, unlike exported products, few statistics exist (Arnold 2002b, Vantomme 2003). The low profile and neglect of these markets has been attributed to the seasonal and intermittent production of many products, extremely localised production or consumption, dispersed production sources, low volumes traded often mixed with other products, the limited visibility of producers, and trading systems that are mostly informal with no dedicated infrastructure (Fereday *et al.* 1997). Some observers believe that the informal, home-based handicraft

sector has been similarly overlooked, with little meaningful data and information on its operation existing (Terry 1999, Marcus 2000, Rogerson 2000). This is perhaps because these activities are often viewed as ‘survivalist’ and therefore of minimal interest in terms of mainstream, market-based development and growth (Marcus 2000, Rogerson 2000). Indeed, Taylor (1999) believes that general discussion on the potential of NTFPs for international markets have often overshadowed the very real enterprise that is occurring at the local level.

A recent study coordinated by the Centre for International Forestry Research (CIFOR) provided a description of the production-to-consumption systems (Belcher 1998, Section 8.1.2) for over 60 products traded in Asia, Latin America and Africa (Kusters and Belcher 2004, Alexiades and Shanley 2004, Sunderland and Ndoye 2004), with a significant proportion of these appearing only in local markets. In common with other studies, this comparison showed the natural resource product trade to be complex, multifaceted and dynamic, influenced by a suite of interrelated factors (de Beer and McDermott 1996, Neumann and Hirsch 2000, Arnold 2002b, Belcher and Kusters 2004, Sunderland and Ndoye 2004). Some of these factors relate to the markets, others to how the trade fits into people’s livelihood portfolios (Chapter 7), and yet others to the supply of raw material and the biological properties of the resource (Neumann and Hirsch 2000, Arnold 2002b). Indeed, the extent of commercialisation of any particular product and the characteristics of its trade chain can vary in accordance with, amongst others, the availability and profitability of alternative employment, the seasonal availability of products over the year and from one year to the next, access to the resource, the status of the resource base, the resilience of the product to harvesting, the availability of alternatives and substitutes, access to markets, producers’ chosen level of engagement in the trade (Chapter 7), and costs relative to income (Neumann and Hirsch 2000, Arnold 2002b). Further complicating this situation is the fact that the range of products marketed under the natural resource product or NTFP banner is extremely diverse, from perishables such as fresh fruits and marula beer, to craft items like woodcarving and functional products such as building materials and biomass fuels (Deweese and Scherr 1996). The obstacles producers confront in the commercialisation process for each of these products are often heterogeneous, with each product having its own unique set of production and market requirements. Increasingly it is becoming apparent that what applies and works in one context and for one product may not necessarily apply in another context or for a different product (Arnold and Ruiz-Pérez 1996, de Jong *et al.* 2000, Marshall *et al.* 2003). Understanding the local context and how this influences raw material harvesting, production and marketing is therefore critical, particularly in addressing the development potential of the trade (Belcher and Kusters 2004).

A number of observers have sought to identify measures or indicators of successful commercialisation, or at least determine the factors that might impact on success or contribute positively to the development potential of a particular product (Ruiz-Pérez and Byron 1999, Marshall *et al.* 2003, Ruiz-Pérez *et al.* 2004). It has been argued that progress with this “has been hindered by the lack of an appropriate



analytical approach for comparison of case studies” (Campbell and Byron 1996, Marshall *et al.* 2003). Identifying the limitations and opportunities at each step of the commercialisation process (or production-to-consumption system), from collection to sale, is one approach that may permit some degree of comparative analysis and generalisation across different products and case studies (Marshall *et al.* 2003, see Section 8.1.2 below). However, the term ‘success’ in itself is not a straightforward concept and has as much to do with the objectives of individual producers as external factors. As argued in Chapter 7, it is not necessarily typical ‘business’ or economic measures such as large profits, specialisation, or growing enterprises that are important, but rather how the trade fits with people’s existing livelihood portfolios and how easily it might be taken up by cash-poor, rural producers (Scherr 2004). Marshall *et al.* (2003) also mention improvements in social justice, community organisation, local capacity and local culture as further important criteria. Perhaps a successful trade might be defined as one in which participants face few obstacles to achieving the level of engagement and income they seek on a sustained basis, and that the positive spin-offs extend beyond just producers and their households to fulfil some of the more indirect and community-level benefits mentioned by Marshall *et al.* (2003). However, because of the subjective and nebulous nature of the concept of success, what is possibly more important than defining success *per se* is to identify the factors that influence, both positively and negatively, the process of commercialisation and its sustainability, flagging potential areas for intervention. Another important feature might be whether the opportunity exists to grow and develop the trade further for the producers involved, including beyond the immediate local level. It is these aspects that are considered throughout this chapter.

### ***8.1.2 Frameworks for understanding natural resource product commercialisation processes***

Various approaches and frameworks, drawing on the agricultural marketing and small enterprise literature, have been proposed for analysing the process by which wild products are collected, transformed and marketed (Belcher 1998). The ‘production-to-consumption system’ approach (PCS) is one framework that was recently used to compare a large number of NTFP commercialisation case studies worldwide (Belcher and Ruiz-Pérez 2001, Belcher and Kusters 2004, Sunderland and Ndoye 2004), and has been suggested as a useful tool for identifying the factors influencing the outcomes of trading across different cases (Marshall *et al.* 2003, see above). A PCS is defined as “the entire set of actors, materials, activities and institutions involved in harvesting a particular raw material, transforming it into higher value-added products and marketing the final products” (Belcher 1998). The system includes how the trade is organised and conducted, the technologies used to obtain and process the material, as well as the social, institutional and economic environments in which these processes operate. It pays special attention to both vertical and horizontal linkages at different points in the system. Similarly, a market chain (also known as trade, commodity or value chain – Ribot 1998, Blowfield 2001) relates to the series of interlinked exchanges that a commodity passes through from harvesting to processing and finally end use. The main steps of a PCS consist of raw material

procurement (or cultivation), processing, storage, transport, marketing and sale (Figure 8.1) (Marshall *et al.* 2003, Belcher and Schreckenberg 2003).

Key areas that require investigation at each of these stages have been highlighted for both locally traded and exported products by numerous authors (Ruiz-Pérez and Byron 1999, Belcher and Ruiz-Pérez 2001, Belcher and Schreckenberg 2003, Belcher and Kusters 2004). At the raw material collection or supply step, some of the issues pertinent to examine, and that may influence supply, include: sources of the raw material and endowment, ecological characteristics of the resource, seasonality, property rights and access issues, sustainability of harvesting, and the institutional characteristics surrounding collection. At the processing and storage steps, factors such as barriers to entry, access to technology, skills and training, access to electricity and capital, type of product, opportunities for value adding, modes of production, returns to labour, quality control and levels of organisation have been recognised as important. In terms of marketing and sales, there are a host of issues to consider including size and accessibility of markets, type of market (local, national, international), availability of alternatives, transportation and communication infrastructure, consumer preferences, market transparency, pricing, levels of organisation, age of the market, market competition, and vertical and horizontal integration to name a few. Embracing all of this is the degree to which the state is interested and involved in natural resource commercialisation activities and how supportive and enabling the policy, legal and institutional environment is (see Chapter 9).

The importance, sequence and complexity of each of the steps in the PCS, as well as the range of factors influencing this, may differ from product to product and situation to situation, and indeed not all steps may be present (Marshall *et al.* 2003). Products commercialised at a local level, as in this study, often have short market chains and may only involve one or two sets of actors, although this does not necessarily mean they are uncomplicated. For example, raw material harvesting may be straightforward in one situation and extremely complex, requiring permits or licences, etc., in another. The market chain may also not involve a single pathway; instead there may be multiple routes or channels for moving a product to the end consumer (often known as sub-sector analysis – Haggblade and Gamsler 1991). This is often a feature of more ‘informal’ trades where the marketing chains are not necessarily well defined and established. Complexity is thus not only a function of the length of the chain, the number of actors or enterprises involved, but also the issues and constraints at particular points in the chain. It is this broad systems view that I use in this chapter as a guide to compare and contrast the four case studies in terms of the structure, function and organisation of their PCS, and to highlight problems, issues and constraints to improvements in the trade, as well as address the questions outlined in the following section.

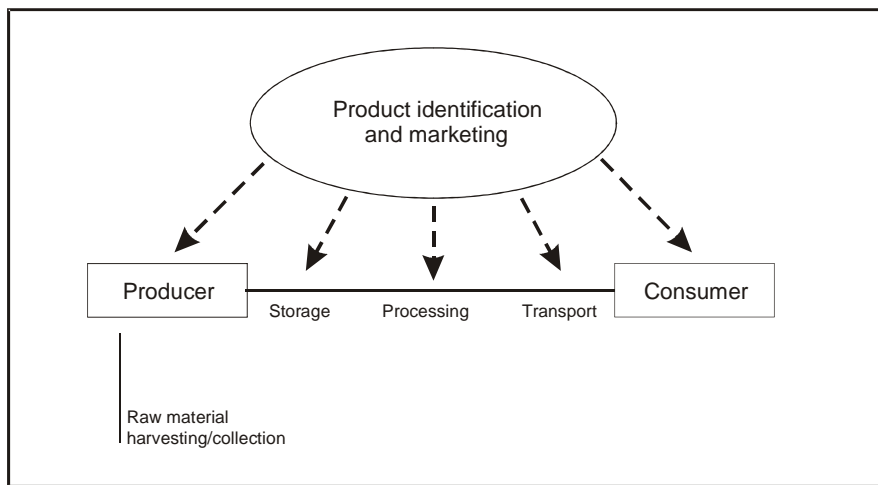


Figure 8.1: A simplified depiction of a typical production-to-consumption system (PCS); source: Belcher and Schreckenberg (2003)

### 8.1.3 Purpose of this chapter

Despite growing local trade in natural resource products in South Africa (Chapter 7), there is limited understanding of how these trades operate (see Chapter 1, Section 1.2). Other than perhaps for medicinal plants (Mander 1998, Williams *et al.* 2000, Dold and Cocks 2002), few attempts have been made to identify and analyse the factors, positive and negative, that may impact on trading and its outcomes, particularly across different types of natural resource products. Without some systematic insight into how locally driven trade chains work and their dynamics, there is little that can be done to develop the sector further or identify areas for intervention that could result in enhanced livelihood benefits and an improved or more ‘successful’ trade (Cunningham 2001). In particular, there is a need for greater comparative investigation of the range of situations and conditions under which natural resource commercialisation exists, and the factors (products, markets, etc.) that contribute to, or alternatively inhibit, a sustainable trade.

The purpose of this chapter, is to provide, using the case studies presented in Chapters 3-6, a comparative and interpretive analysis of the processes and pathways by which rural producers convert the natural resources available to them into commodities that are sold in the market. I attempt to build a picture of the various routes of natural resource product commercialisation occurring at a local level, highlighting the complexities, issues, constraints and challenges involved, as well as explore any emerging patterns (incomes are dealt with in Chapter 7). I speculate that the local level trade in natural resource products is complex, multifaceted and differentiated across products, trades, actors and individuals, presenting a range of challenges for sustaining and developing this sector, and for livelihood enhancement and poverty alleviation. The following broad questions were framed to guide the discussion in this chapter:

- What is the nature of the constraints, issues and challenges that emerge at different points in the PCS, from raw material harvesting to sales, and how does this compare and differ across products?
- What generalised commercialisation pathways and issues, if any, can be inferred?
- How sustainable are the trades in terms of continuing to provide a flow of benefits to producers and traders, and what factors and conditions influence this, both positively and negatively?

## 8.2 RAW MATERIAL PROCUREMENT AND SUPPLY

### 8.2.1 Sources of raw material, tenure and access

Interesting contrasts were found in terms of the primary source of raw material for the products studied, although all processing occurred in Bushbuckridge (Table 8.1). With the exception of some cultivated reeds and marula trees (Section 8.2.2), most raw material was harvested from wild plant populations sourced from land under communal, state and private tenure, with varying local property and access rights superimposed on these primary regimes. Communal lands close to the villages where producers lived were the main source of raw material for the marula beer and woodcraft trades, as well as one of the reed species used to make mats, whereas the bulk of the raw material for broom and mat manufacture was extracted from privately owned farms and commercial forestry estates some distance from producers' places of residence. For the broom trade, this related to the natural distribution of the two species, *Athrixia phylloides* and *Festuca costata*, used in broom making, with both occurring at higher altitudes than Bushbuckridge (Chapter 3). Similarly, the natural scarcity of reeds in the arid eastern portion of Bushbuckridge resulted in mat weavers harvesting *Cyperus sexangularis* from the nearby Blyde River Irrigation Scheme, where this sedge proliferates in the earthen canals and storage dams. This scheme supplies water to private, commercial farmers growing mainly citrus and mangos and is the main source of raw material for about half of mat weavers. The role of private landowners in supplying wild resources for local level commercialisation is not one that has been widely researched, although there are other traded natural resource products in South Africa that are harvested from commercial farm land, such as mopane worms (Styles 1994), *Aloe ferox* sap (Newton and Vaughan 1996), wild spinaches (Mavimbela 2004), broom grass (Cocks and Dold 2004a) and honey bush tea (R. Wynberg, biodiversity benefit-sharing expert, pers. comm.).

The tenure system under which harvesters obtain their raw material has, as would be anticipated, major implications for resource access and, more specifically, long-term security of access. Marula (*Sclerocarya birrea*) fruit used for beer brewing was the least problematic raw material to procure. Supplies were abundant and close, and no restrictions existed on harvesting from communal lands; it was only where trees occurred in people's homesteads and fields that the owner's permission was required (Chapter 5). The barriers to harvesting this effectively open access resource were, thus, minimal allowing wide participation (Chapter 5). Presently the greatest threat to continued access to this

resource appears to be the loss of marula trees through land clearance and the felling by fuelwood collectors and vendors (Chapter 5).

Table 8.1: Primary sources of raw material and harvesting constraints for the four case studies – figures in parentheses indicate the percentage of producers harvesting from particular sites and tenure systems

	Reed mat producers		Broom producers		Marula beer producers	Woodworkers
	<i>Schoenoplectus</i>	<i>Cyperus</i>	Grass	Twig		
<b>Location</b>						
Immediate area	✓(80%)	✓(35%)		✓(15%)	✓(100%)	
Bushbuckridge	✓(11%)					✓(99%)
Regional (outside Bushbuckridge)	✓(9%)	✓(65%)	✓(100%)	✓(85%)		✓(1%)
<b>Land tenure</b>						
Communal	✓(85%)	✓(28%)	✓(8%)	✓(15%)	✓(99%)	✓(99%)
Usufruct	✓(4%)	✓(3%)			✓(38%)	
State	✓(9%)	✓(5%)	✓(97%)	✓(3%)		✓(illegal)
Private	✓(2%)	✓(65%)	✓(35%)	✓(98%)		✓(1 species)
<b>Key limitations re harvesting and access</b>	Competition and enclosure	Transport costs and access	Transport costs	Access and costs	None	Scarcity and costs

Note: Some producers harvest at more than one site so percentages do not necessarily add up to 100%

*Schoenoplectus corymbosus*, used in making reed mats, was also harvested from the local area, in wetlands and along rivers in the western portion of Bushbuckridge (Chapter 4). While generally a common pool resource available to all local mat weavers, some producers complained that increasing numbers of fenced wetland gardens, used for vegetable growing, were being established which enclosed many of the reed beds previously available for harvesting (Chapter 4). This ‘privatisation’ of the resource appeared to be happening in the absence of any concern or control by the local authorities. Paralleling the growth in the commercial trade, competition for the resource between weavers was also mentioned as an issue. This forced some producers to commence harvesting before the ‘opening’ of the season by the chief (usually on Good Friday), increasing their risk of arrest by the traditional authorities. Tension between weavers from different villages was also identified regarding who had access to the resource in a particular site. Such restricted access to the reed resource occurs in other areas. In the Pondoland region of the Eastern Cape, for example, Kepe (2003) found a highly organised system of individual ownership of reed gardens along the communal river systems. This ownership was recognised and respected in the community, and the reed beds benefited from being tended by the owners. In contrast, one producer in Bushbuckridge described how she had planted a reed garden in the riverbed near to her home, but was unable to prevent others harvesting the reeds. Despite these constraints, overall, 88% of producers mentioned they had little problem accessing reeds.

This example highlights the dynamic and changing nature of local property rights and arrangements, and illustrates how more secure rights for one group, i.e. wetland farmers, can disadvantage another, i.e.

mat weavers. It also shows how commoditisation and increased demand for a resource can alter long established tenure and access regimes, potentially leading to conflict. Of prime concern was that these shifts in property rights were occurring outside of any institutional or legal framework, with little opportunity for recourse by those affected. Occasion for consultation and negotiation between the different weaving groups, wetland plot owners and the local governance structures appeared limited. It has been argued that until tenure and ownership rights are clarified in South African communal areas through a process of tenure reform, such *ad hoc* arrangements will continue to be a feature of these systems (Wynberg *et al.* 2003).

Also harvested from communal lands was the primary species used for carving and furniture manufacture, *Pterocarpus angolensis*. However, in contrast to the previous examples, rather than being a communal resource this valuable hardwood species is protected by law and is, thus, effectively state property. Woodworkers were required to follow a set procedure to obtain legal access to this species (Chapter 6), which included paying a nominal fee for the wood harvested. While the process was tedious and often costly, involving numerous trips to the conservation authority's offices and the harvesting site, genuine woodworkers were rarely refused permits. However, the inefficiencies in the process (see Chapter 6), the bureaucracy involved, and the difficulties monitoring and enforcing harvesting regulations within communal areas, meant that woodworkers sometimes circumvented the system. Only one species, *Apodytes dimidiata*, used for making walking sticks, was harvested from private and state forestry land. In this case only branches were used, resulting in few access constraints.

Most of the raw material used for grass broom production was harvested from state land belonging to the Department of Water Affairs and Forestry (DWAF) (Chapter 3). The National Forests Act of 1998 (Government of South Africa 1998) makes provisions to promote and support the use of natural resource products from state forestry land. Producers thus faced few difficulties accessing this raw material provided they followed the official channels, with their main complaint being that the grasslands were often burnt prior to them being able to harvest. Similarly, access to natural resource products on private commercial forestry estates tended to be policy driven, and relatively organised and institutionalised, and thus easier to influence. Forestry companies are subject to scrutiny in terms of their social responsibility and environmental performance based on national legislation and, more especially, if they have international certification. Indeed, the need to obtain Forest Stewardship Council certification acted as an important incentive for providing local communities with access to natural resource products, except where this was perceived to comprise ecological integrity and sustainability (Chapter 3). With regard to broom grass, one potential area of concern is that the proposed devolution of control of state land (that includes the harvesting areas) to the provincial conservation authority may alter or restrict existing access arrangements. Protection of these rights would be important as part of a negotiated agreement between DWAF and the new managers, particularly since the local conservation authority does not have a good track record regarding resource sharing.

Access to raw material for broom and mat production on individual private land was more problematic and dependent on the goodwill of the landowners as well as producers' social networks. Some 89% of broom producers mentioned difficulty accessing raw material for the manufacture of twig brooms. Having a friend or relative working on the farm was a considerable asset, allowing the producer (or group of harvesters) to gain entry more readily. This highlights the value and importance of informal social networks and institutions in facilitating commercialisation, a key factor identified by other researchers (Kepe 2003). Indeed, with the exception of woodcraft, harvesting appeared to be the main step in the PCS in which producers relied on and benefited from their associations with other people. Most producers harvested in groups for reasons of cost sharing, safety and companionship, as well as to take advantage of the social links that particular group members had. Accessing *Cyperus* from the Blyde River Irrigation Scheme appeared easier than accessing *A. phylloides*, with 62% of producers mentioning they had little problem. This is possibly because Hoedspruit is closer to Bushbuckridge and producers had more connections to the farms (for example several respondents mentioned they harvested from farms where they had previously worked), and because farmers were more willing to permit harvesting as they needed to rid their channels and dams of this invasive species. In all these private land situations there were differing mechanisms for harvesters to gain entry. Sometimes a permit fee was paid. In other situations producers exchanged their labour, or some of the raw material or the finished product for the opportunity to harvest, and in yet others no recompense was required at all. Of concern was an observed trend towards farmers permitting only their own staff to harvest (for security and labour law reasons). Farm workers would then sell the raw material to producers, exacerbating their already significant cash flow constraints, particularly for broom makers who incur high transport costs. Already, half of *Cyperus* users bought their raw material from farm workers or exchanged it for other goods.

Secure access rights to raw material is frequently advocated as one of the key requisites for a successful NTFP trade, and insecure tenure has been put forward as one of the major limiting factors at present (Neumann and Hirsch 2000, Belcher and Kusters 2004, Scherr *et al.* 2003). It has been argued that more secure property or user rights would promote people's direct involvement in resource management and conservation and provide for a much longer-term perspective (Ruiz-Pérez and Byron 1999). The above discussion illustrates the complexity of the tenure arrangements both within and across cases, and indicates how resource access is often tenuous and multi-layered. Indeed, the issues vary considerably for each product, presenting a range of challenges, with one of the primary concerns being how to facilitate access to products on individually titled, private land. This contrasts with much of the literature, where more formalised and secure rights to communal or state controlled resources are usually the major concern.

There are no simple solutions to these complex resource access issues and the situation is often ambiguous. For example, in the case of *Schoenoplectus*, it is arguable whether the tighter controls on

access that are emerging are necessarily unfavourable, since they move the system away from open access, often associated with resource decline (de Jong *et al.* 2000), to one with more defined rights. But, at the same time, they restrict access to a resource that certain producers have harvested for years. With regard to woodcraft, the results show that strict regulations over harvesting, as generally applied to protected species, do not necessarily prevent overexploitation if demand exceeds supply, if the procedure is onerous, top-down and poorly enforced, and if the species is slow-growing and destructively harvested (see Section 8.2.2). In addition, the more valuable a species the more likely that it will be exploited opportunistically by outsiders, forcing similar behaviour by local user groups, as happened with *P. angolensis* in Bushbuckridge (Chapter 6). Such a scenario is not unusual for woodcraft species in the region (Braedt and Standa-Gunda 2000, Choge 2001), with this group of NTFPs presenting particular, often intractable, challenges in terms of ensuring a sustainable trade (CIFOR 2002). While marula fruit is presently widely accessible, it is threatened in the long-term by demands and processes unrelated to the use of this species for the marula beer trade. This demonstrates the need to understand the wider context in which the commercialisation of a particular product takes place, and the importance of integrating any management strategy into broader district and regional planning processes. In terms of access to resources on private farmland, in particular *Athrixia phyllicoides*, the situation is complicated as it is the prerogative of the landowner whether he/she permits harvesting. The challenge is therefore to raise awareness amongst farmers concerning the valuable contribution these products make to rural livelihoods and poverty, and provide technical information and support regarding systems for the sustainable harvesting and management of the resource – a service that could be performed by the local conservation authorities. Perhaps at a policy level some sort of incentive system could be established to encourage individual farmers to make wild, and often unused, resources on their land available to poor, rural producers. Better organisation amongst harvesters may also be of benefit in terms of building relationships with landowners (e.g. as for the *Aloe ferox* sap trade – Newton and Vaughan 1996). For example, one group of broom producers had a ‘spokeswoman’ who liaised and negotiated with the farmer by telephone regarding harvesting arrangements in advance, and who made sure the group adhered to any conditions imposed.

### **8.2.2 Resource properties, availability, impacts and harvesting systems**

The availability of raw material was said to be adequate for all products except carving woods, where a severe shortage was evident, with producers adjusting their procurement strategies and moving to substitute species to deal with this scarcity (Chapter 6, Section 6.5.3). Producers also mentioned few changes in the status of the resource base for the broom, mat and marula beer trades over the period they had been involved in the trade. Much of this can be attributed to the individual attributes of the species involved and the responses of these plants to harvesting (Table 8.2). Both species of reed used for weaving demonstrated positive responses to defoliation, often increasing in density with regular cutting, an observation supported by producers and farmers as well as evidence in the literature (Chapter 4, Section 4.3.2, Christiansen 1999, Kotze 2001). *A. phyllicoides* and *F. costata*, being grassland species,



are well adapted to regular fire and are known to resprout readily after burning and other defoliation (Gibbs Russell *et al.* 1990, Mbewe 1999). Indeed, *A. phyllicoides* has been noted as having weedy characteristics (Eshuys 1979, Wells *et al.* 1986), and a number of farmers mentioned that this species becomes dominant under conditions of heavy grazing and frequent burning. The marula tree occurs in relatively high densities in the study area (Chapter 5, Section 5.3.2, C. Shackleton *et al.* 2003), and the use of the fruit has minimal impact. In contrast, the hardwoods used in the woodcraft industry show few attributes that favour their sustainable use, particularly when subjected to the intensified pressure that commercialisation brings. They seldom coppice after harvesting and are extremely slow growing, taking a lifetime (80 years or more) to reach harvestable size (Table 8.2).

No formalised harvesting or management systems were found for any of the species used, regardless of land tenure. However, several favourable local customs and practices, such as the norms prohibiting the harvesting of reeds before winter, the testing of the depth of the heartwood before harvesting a *P. angolensis* tree, and the snapping-off of *Athrixia* twigs at the base of the plant, rather than uprooting it as has been described elsewhere (Dzerefos 2004, J. Olivier, horticulturalist, pers comm.), were identified. Most products were harvested on a seasonal basis allowing time for the plants to recover, flower and seed. The fact that only fruits of a particular stage of ripeness were selected for marula beer ensured that some stock was left behind for regeneration. However, the institutional and governance vacuum that appears to exist for regulating access to, management and alternative uses of communal resources (Chapter 4 and 5), and the ineffectiveness of procedures controlling *P. angolensis* harvesting (Chapter 6) were areas with cause for concern.

The analysis presented here suggests that the common ecological concern expressed by researchers and conservationists that the creation of new or expanded markets for natural resource products will lead to over-harvesting and resource depletion (Neumann and Hirsch 2000) is not necessarily true for all products. Indeed, there is a need to move away from the frequently articulated, but rarely substantiated, ‘narrative’ used by so many of the conservation officials and land managers interviewed in this study, that use of a resource will ultimately lead to its overexploitation and that local harvesting practices are harmful. Sunderland and Ndoye (2004) highlight that “in many respects, the exploitation of wild-sourced NTFPs can be sustainable”. However, as shown in this study, this depends on the species and plant part utilised, suitable harvesting practices that minimise damage to the plant and allow time for recovery, a good understanding of the plant’s growth and reproductive characteristics that can be used to inform off-take and harvesting systems, and strong local institutions to implement these systems and to enforce controls (de Jong *et al.* 2000, Sunderland *et al.* 2004). A key challenge is, therefore, to devise systems for sustainable harvesting that are based on sound ecological knowledge and that can be effectively applied in practice; something easier said than done (Sunderland *et al.* 2004). In this study, it is the species harvested from state and private land that provide the best opportunity for instituting sustainable harvesting systems, both because of the nature of these species (Table 8.2) and because

controls can be put in place, for example, rotational harvesting, new harvesting methods, etc. In the communal areas this presents more of a challenge due to the erosion of the traditional institutions for natural resource management and their lack of replacement by alternatives.

Table 8.2: The suitability and potential for commercialisation for each of the key species based on their biological characteristics and responses to harvesting; adapted from Cunningham (2001) and S. Shackleton *et al.* (2003)

Attributes of the raw material that favour commercialisation	Mat reeds – <i>Schoenoplectus corymbosus</i> and <i>Cyperus sexangularis</i>	Twig brooms – <i>Athrixia phylloides</i>	Grass brooms – <i>Festuca costata</i>	Marula – <i>Sclerocarya birrea</i> fruit	Hardwoods – <i>Pterocarpus angolensis</i> - kiaat
<b>Abundant</b>	✓ (restricted to wet areas)	✓ (but distant & access restricted)	✓ (distant)	✓	X (scarce)
<b>Plant part readily renewable</b>	✓ (responds positively)	✓	✓	✓	X
<b>Non-destructive harvesting</b>	✓	✓	✓	✓	X
<b>Hardy</b>	✓ (but poor growth in drought)	✓ (tolerates fire & defoliation)	✓ (tolerates fire and defoliation)	✓ (but fruit yields poor in drought)	✓
<b>Fast growing and short time to production of harvestable product</b>	✓	✓	✓	✓ (medium – for tree to reach fruiting age)	X (>80 years)
<b>Consistent and reliable yield from year to year</b>	Variable	✓	✓	Variable	N/A
<b>Potential for cultivation and ease to propagate</b>	✓ (good)	✓ (good)	Not known	✓ (good)	X (slight)
<b>Resource already cultivated by producers</b>	✓	X	X	✓	X
<b>Compatible with local agroforestry land uses</b>	✓	X (bioclimatic conditions not appropriate)	X (bioclimatic conditions not appropriate)	✓	✓
<b>Natural refuges exist for the resource</b>	✓ (deeper water)	✓ (very steep slopes)	X	X	✓ (young trees not utilisable)

### 8.2.3 Augmenting the resource by cultivation

This study showed that producers were experimenting with growing reeds, and to a lesser extent marula, in their home gardens, but this did not constitute intensification in production nor could it substitute for wild harvesting. However, a number of species showed good potential for domestication (Table 8.2), and people demonstrated interest in growing these, with 16% of mat producers having planted *Cyperus*. Cultivation is increasingly being promoted as an option to mitigate against the overexploitation of wild populations (Sunderland *et al.* 2004), although is only likely to happen under particular conditions such as scarcity, high market value and ease of cultivation. Homma (1992) hypothesised that increased demand for a product would lead to increased harvesting from the wild, resulting in a loss of economic viability of the wild resource thereby encouraging the process of domestication. This, however, has not been observed for the products studied here. This is partly because many of the products remain abundant, or where they are scarce or difficult to access, as for carving woods and broom twigs, other

constraints and limitations prevent such a shift. For instance, the habitat requirements of *Athrixia* prevent its cultivation in Bushbuckridge. Furthermore, many producers were bemused by the idea of cultivating the resource, or felt that the volumes required were too large to make it possible especially under restrictive land and water availability, or believed that this was the state's responsibility (e.g. woodworkers). This contrasts with the situation in Asia where many products are derived from planted sources or managed within converted forests (Sunderland *et al.* 2004).

#### **8.2.4 Organisation of raw material procurement**

The majority of producers across all products gathered their own raw material. The only raw material offered for sale were reeds, either at the farms where *Cyperus* is abundant or in local pension markets. Approximately half of mat weavers purchased their reeds, or augmented harvested supplies, from these sources. Producers purchasing their reeds solely at pension markets usually bought small quantities at a time, and tended to trade on a pre-order basis. However, reeds purchased from farm workers were usually bought in one-tonne truckloads at a time. These stocks were either shared between a group of producers, exchanged for assistance with processing based on a sharing system (Chapter 4), or resold. Other sellers of reeds included weavers harvesting excess reeds to sell for immediate cash income and 'owners' of wetland gardens. Producers, especially broom makers, also obtained raw material on a sharing basis, whereby one producer 'hired' another producer to collect for her. Transport costs were paid by the first producer, while the second contributed her labour. The raw material collected was then divided evenly between the two producers, benefiting both parties. Woodcarvers sometimes purchased or were donated off-cuts from furniture producers, and a recent trend, due to local scarcity, has been for furniture manufacturers to purchase some of their *P. angolensis* from commercial timber merchants in the cities of Nelspruit and Pretoria. Legislation, however, prevents the trade of unprocessed, hardwood timbers in the local area (Chapter 6). While it is obvious that, due to the availability and abundance of marula fruit, there is no local market for the unprocessed fruit (although fruits are purchased by the distillers of the internationally marketed liqueur, "Amarula Cream"), it is less easy to understand why there is no trade in the raw material for brooms since this is expensive and difficult to access. Perhaps the low price of brooms, at R3-R6 each, makes it economically unviable. In addition, broom producers were amongst the poorest households in the area (Chapter 3), and possibly cannot afford the higher costs associated with purchasing raw material.

Raw material harvesting is the main stage in the PCS where producers cooperate and are relatively well organised. As mentioned in the previous section, they often harvest together, share information on harvesting sites and trips, and share transport costs. The cost of transport to reach harvesting sites and to bring the raw material home was one of the major constraints faced by producers of woodcraft, brooms and *Cyperus* mats (Chapter 7). Consequently, as outlined above, various sharing systems have evolved that allow producers with few cash resources to still obtain raw material. These cooperative arrangements are of considerable benefit, making it difficult for producers who are not linked into these

social networks to operate. That said, however, there is still opportunity for harvesters to organise better, particularly in terms of liaising with different landowners and local authorities. Commercial forestry company officials and conservation authorities mentioned that they would be happy to meet a delegation of producers to negotiate access conditions or to discuss any problems. This would require more formalised cooperation between producers than has been seen to date, but due to a lack of capacity this appears unlikely to happen without some external facilitation.

## **8.3 PROCESSING**

### ***8.3.1 Production modes and practices***

While all the producers interviewed worked from home, three different modes of production were identified. Producers either worked individually (single-person ‘businesses’), with the assistance of their families, or in small enterprise set-ups (Table 8.3). In the case of mats and brooms nearly all producers harvested and processed the raw material themselves, with only 17% and 11% respectively mentioning that they received assistance from their families. In many instances this was because these women lived on their own with young children. Additionally, men (husbands or sons) were often reluctant to help with these activities as they are seen as ‘women’s work’. Moreover, women did not have the authority within the household to command assistance, as was the case with woodworkers. Where producers did receive aid from their families or where they hired others, frequently on an exchange rather than cash basis, they were often able to earn better returns (Chapter 4, Box 4.2 and Chapter 3, Section 3.3.1). A similar situation was reflected for marula beer, although a greater number of producers had assistance from their families in gathering the fruit and selling the beer than in processing. The support with selling, however, did free producers to spend more time on processing (Chapter 5). Woodcarvers, on the other hand, operated within a family-based production system with clear divisions of labour between different household members. Women and children were mainly involved in sanding and polishing the finished articles, a simple but time-consuming job. Carvers rarely employed full-time assistants but sometimes hired people on a short-term basis to complete a specific job. Furniture makers, conversely, tended to operate within a micro-enterprise set-up often employing full-time assistants or apprentices. Most employed 1-2 workers, with the largest enterprise having a workforce of 17 people. Woodworking tends to be a more full-time, year round activity, producing higher value-added products than in the other cases. This both allows for, and requires, a fairly high level of specialisation and a larger unit of production. The other activities, by contrast, were lower value, seasonal or part-time, fitting in with other household livelihood strategies or engaged in as a last resort due to their low barriers to entry (Chapter 7). Woodcarving and furniture making were the only trades in which producers reinvested in their businesses to increase their processing efficiency.

Characteristic of all the cases was a lack of cooperation and pooling of resources and effort amongst producers, with this sometimes, especially in the case of woodworkers, resulting in missed opportunities for bulk orders. Unlike harvesting and to a lesser extent marketing, all processing took place on a highly

individualistic basis and this appeared to be the way producers preferred it. One furniture maker mentioned that subcontracting to a fellow producer would be like “putting money into a rival’s pocket”, while another said that producers would “bewitch” one another if they tried to work together. Working on one’s own from home was also often the most convenient and flexible mode of production, with this frequently mentioned as a reason for entering the natural resource trade. Similar individualistic production strategies have been found for the informal craft industry (Terry 1999). This is in direct contrast to the model of cooperative production commonly pursued, not always successfully, in externally facilitated small enterprise projects (Terry 1999, Philip 2002). That said, though, there are examples of successful cooperative production amongst carvers in Kenya and Bali (Choge 2004, Rohadi *et al.* 2004). This has allowed these producers to bulk process for the export market. These cooperatives, however, have a history based on strong social and family linkages and good external support that has contributed to their success (Choge 2004, Rohadi *et al.* 2004).

In addition to a lack of cooperative production strategies, no formal or informal organisations related specifically to processing were identified amongst the case studies, although the woodworkers had formed a loosely affiliated group known as the Mhala Woodworkers Association with the support of external facilitators (Chapter 6). This provided them with access to some training and funding and allowed some sharing of ideas on production and marketing (Chapter 6), but was relatively inactive mainly due to high transaction costs. While the opportunity certainly exists to establish informal associations that represent producers’ needs, it should also be recognised that most producers have little time or money to participate in these on any regular basis.

The pattern of primarily independent, single-person businesses is typical of developing countries and of the type of low value, locally marketed natural resource products studied (Arnold *et al.* 1994, Mead and Liedholm 1998, Terry 1999). Women are also much more likely to work on this basis as they often choose activities and products that are compatible with their other household and farming duties (Mead and Liedholm 1998). Furthermore, women tend to be more risk averse preferring to diversify into a range of different part-time activities, as the case studies showed, than expanding into one (Mead and Liedholm 1998). In other instances their engagement in these activities is simply a matter of having few other choices, especially when they are expected to look after the home and family. The potential for growth of such businesses is limited, but they are often successful in meeting and fitting with specific livelihood needs (Chapter 7). The exceptions to this pattern, as also illustrated in this study, are products based on wood such as carvings, furniture, fuelwood and charcoal (Arnold *et al.* 1994, Townson 1995). These trades are usually dominated by men, employ workers and have potential to grow (Townson 1995, Mead and Liedholm 1998), although they are often limited by raw material constraints.

### 8.3.2 Skills

None of the producers had received any formal training in their trades, as is typical of most local level trades. For the broom, mat and marula beer trades, the majority of producers had learnt their skills from their mothers or grandmothers, as these products have long been produced in the community for household use. Woodworkers apprenticed with other carver or furniture manufacturers, taught themselves, or learned from their fathers or other relatives. For brooms and marula beer, where processing was simple (Chapter 3 and 5), there was not a great deal of variation in the product from one producer to the next, although consumers preferred longer and more tightly woven brooms, and marula beer drinkers selected their beer on taste. On the other hand, the quality of reed mats, carvings and furniture varied widely depending on the skills, technique and artistry of individual producers. Some mats were beautifully made and decorated while others were rough and poorly finished. The same was true for carvings, with buyers often complaining about the lack of quality and diversity amongst products. There is, thus, certainly opportunity to develop skills, enhance quality and to innovate with new designs, thus adding value to existing products.

Table 8.3: Comparison of selected processing characteristics for the different products

<b>Processing characteristics</b>	<b>Mats</b>	<b>Brooms</b>	<b>Marula beer</b>	<b>Woodcraft</b>
<b>Mode of production</b>	Mainly single-person.  Supplementary activity.	Mainly single-person.  Relatively full-time activity for 6-7 months of the year.	Mainly single-person.  Highly seasonal for six weeks of the year.	Family-based or micro-enterprise.  Specialised full-time activity.
<b>Storage capacity of raw material and finished product</b>	Good. Raw material and mats store well with most producers storing mats.	Good. Raw material can be stored for about a year, although is mostly used within a few months. Brooms may be stored.	Poor. Perishable – lasting only a few days for both the fruit and the beer.	Good. Both wood and the finished products can be stored for long periods although most producers lack the infrastructure to protect their goods from the weather.
<b>Degree of processing and skills required</b>	Medium. Level of skill influences the quality of the end product.	Low	Low	High. Level of skill influences the quality of the end product.
<b>Special equipment and tools needed</b>	Simple handmade weaving frame. Little capital investment required.	None other than some sewing awls for the grass brooms.	Large drums or buckets and 25 l containers – most households have these anyway.	Many tools required from electrical, to diesel chainsaws, to handmade adzes. Capital investment relatively high.
<b>Other materials and inputs</b>	Twine, plastic strips and bags – inexpensive.	Twine and rubber tubing – inexpensive.	None.	Many consumables – sandpaper, polish, screws, nails, etc.
<b>Value-addition</b>	High	Medium	Medium	High

### 8.3.3 Tools, equipment and other inputs

In general the barriers to entry were low for processing, requiring little capital investment or inputs (Table 8.3). The equipment for the marula beer and broom trades was basic and often already used in

the household (Table 8.3). A weaving frame was required to make mats, but this could be easily made at home. Even woodworkers could start off with simple hand tools (often handmade) and graduate up to more sophisticated power machinery. However, some woodworkers mentioned that they were often unable to purchase the equipment they needed to increase their levels of production and efficiency because of cash constraints; this effectively ‘trapped’ them at a sub-optimal production level. Electrification of the area in the last few years has been a considerable asset for woodworkers (Chapter 6), but was also mentioned as important by a number of other producers since it allowed them to work at night. Other materials and consumables needed for processing were negligible and relatively low cost for all the trades except woodcraft (Table 8.3). Woodworkers’ costs, on the other hand, amounted to about 50% of their profits.

## **8.4 MARKETING, MARKETS AND SALES**

### ***8.4.1 Market participants, locations, networks and channels***

Producers of mats, furniture and marula beer generally sold their finished products direct to consumers. Such ‘producer-traders’, who undertake all the functions along the PCS themselves, are relatively common in local markets (Belcher 1998, Cunningham 2001). This results in a situation of full vertical integration. Conversely, for woodcarvings and brooms, the primary channel for sales was via informal intermediate traders to the consumer. These ‘middlemen’ tended not to be specialised, but sold a range of other goods including vegetables, fruit, clothing and dry goods in the case of those selling brooms, and an assortment of small craft items in the case of those selling carvings. Mostly producers delivered their products to the traders incurring the transport costs, but sometimes traders came to producers’ homes to purchase if larger quantities were required. There appeared to be no established relationships or loyalty between particular producers and traders, providing producers with a choice of buyers. Traders saw their participation in the respective local trades as a way of diversifying their goods for sale and, correspondingly, their risks. In terms of brooms, traders had a monopoly on the sale of brooms in the towns since they prevented producers from selling direct to the public. One producer revealed how she has been “chased from the market” by traders. Carvers, on the other hand, could not afford to take time out of production to sell their own products. Moreover, as a means of saving time, they often sold unfinished products to the traders at a lower price. In contrast to many other NTFPs (Fereday *et al.* 1997, Belcher and Kusters 2004), wholesalers, who buy in bulk and sell on to traders/retailers, did not feature in any of the trades, although woodcarvers mentioned that in the past (1970s and early 1980s) they had sold their goods mainly to ‘white’ dealers from the cities. These buyers had ceased coming to Bushbuckridge during the volatile period before the democratic transition in 1994, after which they were replaced by informal traders when local by-laws prohibiting street vending eased.

A question that might be asked is why are some products channelled through intermediate traders and not others? In contrast to the stereotype of the rich and exploitative ‘middleman’ (Belcher and Schreckenber 2003), the majority of traders were poor women who were often the main breadwinners

in their households (Chapters 3 and 6). In the case of craft traders these women had migrated to the small tourist towns in the region and lived under extremely poor ‘squatter’ conditions. They often experienced cash flow problems and had little working capital at their disposal. Items such as mats, selling at R30 to R200 each, and furniture pieces, at several hundreds of Rands each, were just too expensive and risky to stock. Brooms and wooden bowls and spoons, conversely, were cheap, sold readily and could be marked-up by a large margin, up to 100%. Another possible reason for the absence of intermediate traders in some market chains is that certain products, such as mats, are made and sold in most villages, and, therefore, there is no need to disperse them through the markets. Brooms, alternatively, were made only in those villages along the base of the escarpment closest to the source of raw material, and woodcraft needed to be moved out of the area to target the tourist market.

While relatively few actors were involved in the trade, trade networks were complex (Table 8.4), differing for each product and between producers of the same product. Mats were generally sold from home (100% of producers), on a door-to-door basis (27%) or, periodically, in pension markets (26%). Some producers (17%) also gave mats to family and friends to sell in regional townships, or they went there themselves. A small number of producers (10%) were selling to the tourist market, either direct to tourists or to curio shops (Chapter 4). Frequently, orders were placed with mat producers in advance, as was also the case with furniture makers. Broom producers used a similar diversity of channels, although the bulk of brooms were sold through informal traders as described above. Pension markets tended to be used more often by broom producers (56% of producers) than weavers, with some producers (10%) attending as many as 6-15 pension markets per month. Unlike the street markets, both broom producers and traders operated in the pension markets, with both groups selling the brooms for R6 each. Pension markets (see Chapter 2 for a description) are extremely important in South Africa for informal traders generally, constituting a vital component of the local economy. Some traders (often known as itinerant traders – Cunningham (2001)) followed these pension markets around for the entire month. Marula beer was sold mainly in local towns, within visible ‘marula beer markets’ where producer-traders congregated during the fruiting season. Other beer sellers sold to passing traffic along the main roads. Woodcarvers sold their products to informal traders located at some of the main tourist destinations in the region, to curio retailers and on a consignment basis to a shop run by a local crafts association at one of the gates to Kruger National Park. Unlike other carvers in South Africa (S. Shackleton and Steenkamp 2004) and the region (Braedt and Standa-Gunda 2000), home-based, hardwood carvers rarely sold their products at the roadside although furniture makers frequently did, both locally and in Gauteng, the business heart of South Africa (Chapter 6). The more sophisticated tools required for hardwood carving made it difficult for carvers to work at the side of the road, requiring them to separate their production and marketing activities. Moreover, many of the carvers had been in the trade for years and had experienced harassment and arrest in the past for street vending. They had therefore sought other avenues to market their goods. Some mat and broom producers also mentioned sending their products to Gauteng, often exchanging these for old clothes. Several broom producers (14%) visited the



town of Giyani, some 150 km north of Bushbuckridge, with large stocks of brooms of up to 1 000 per one-tonne truck (usually producers went in pairs). Due to a shortage of raw material in the Giyani area, producers had few problems selling their brooms and were guaranteed a good profit (Chapter 3), although the costs involved to both accumulate the stocks required and to visit the area prevented many producers pursuing this option.

The above illustrates how few producers relied on a single market and market channel for the sales of their goods, and how they explored and built on the range of options that existed. This suggests that these local markets are relatively competitive and producers are not dependent on any single buyer, thus avoiding manipulation and indebtedness. Generally the more avenues producers pursued for trading their goods, the higher their incomes tended to be (Chapter 7). The major constraint to maximising the range of markets in which producers participated was cash flow, as transport costs to reach some of the more distant markets were high. For marula beer, cultural reasons relating to the role of this product in community social relations restricted the sales of this commodity to the towns and roadsides. In addition, some producers mentioned that their age and health status prevented them from participating in some of the more demanding, but rewarding, forms of marketing such as door-to-door selling, or resulted in them selling on an infrequent basis. However, for most producers opportunities exist to expand the range of markets in which they sell (see below and Chapter 9).

Table 8.4: Comparison of the markets and marketing strategies used by producers for the different products (the most important and most frequently used markets are indicated by four ticks, and the least by one)

Markets and marketing strategies used	Mats	Brooms	Marula beer	Woodcraft	
				Carvings	Furniture
Local informal markets	✓	✓✓✓✓	✓✓✓✓		
Local door-to-door sales	✓	✓			
Home sales (by word of mouth)	✓✓✓✓	✓		✓	✓✓
Pension markets	✓✓	✓✓✓			
Regional urban centres and townships	✓✓	✓			✓
Townships and markets in Gauteng – the nearest large metropolitan area	✓	✓			
Tourists and other non-local buyers:					
Informal markets				✓✓✓✓	
Craft outlets	✓			✓✓	
Roadside	✓				✓✓✓
Visitors to village	✓				

#### 8.4.2 Characteristics of the markets

##### Seasonality

None of the products showed consistent sales throughout the year. While some markets were restricted by the seasonality of the resource, e.g. marula and to a lesser extent brooms, others were typified by high and low seasons in terms of sales. Sales of woodcarvings, for example, peaked in the school

vacation periods around Easter and Christmas when domestic tourists converged in the region. The demand for mats showed a peak in August, the primary time for initiation ceremonies (Chapter 4). Consequently, producers' incomes varied widely from month to month, with most experiencing at least some months of the year without income, severely impacting on their cash flow situation.

In many instances, the issue of seasonality and uneven income may be overcome by storage of either the raw material or the finished product (Fereday *et al.* 1997). Producers did store the raw material for brooms, but harvesting constraints usually prevented them from accumulating adequate stocks to last the entire year. Most supplies ran out after about seven months. A few broom traders, however, mentioned how they held some of their broom stocks over until the following year when there was a general scarcity in the market. Finished mats rather than reeds were generally stored, and most mat sellers were able to show potential customers a range of different mats and wall hangings to select from. Having such a selection was considered important for securing customers. There were few storage problems for raw wood or the finished products, although few producers had adequate sheltered space to protect their goods from heat and rain so frequently had to spend time re-sanding and polishing. Marula fruit or beer cannot be stored at all, although an alternative liquor known as *nhlowa* may be made and stored underground in clay pots or in refrigerators for a few months, usually until Easter. While this sells at a higher price, the process limits the opportunity to make large volumes (Chapter 5). Given the abundance of the marula resource and a ready local market, opportunity exists for biotechnological research and development of products with a longer shelf life (Goyvaerts 2003). Generally, storage and the release of products during times of scarcity at a higher price as described by Schreckenber (1996), Fereday *et al.* (1997), Ndoye *et al.* (1997) was not a strong feature of the cases studied here.

### *Organisation*

All the markets, with the exception of some of the woodcraft markets, were informal, poorly organised, unregulated and with limited visibility, and could be termed 'minor' markets (Cunningham 2001). In the case of seasonal markets, such as for marula beer, little organisation was evident, few rules and regulations existed and it appeared that anyone could join the market at any time. A lack of organisation and cooperation prevented beer sellers effectively colluding on prices (see Section 8.4.3), negotiating with the municipal authorities, or resisting the harassment they encountered from more powerful market actors such as licensed liquor store owners (Chapter 5, see below). However, at the same time there were few restrictions on newcomers and no domination by any particular individuals, ensuring equitable access to these markets. The lack of organisation may simply reflect the high transaction costs given the short-lived nature of the beer markets, as was suggested by some of the participants. Similarly, no formal organisation of pension markets was observed. Traders and producers simply went to these markets, found space and commenced selling. This openness or 'freedom of entry' was mentioned as a deliberate strategy to make sure that nobody was excluded, and was extremely important in promoting social equity. It would be tragic if these key markets became dominated by elites. The informal markets for craft products based along the tourist routes outside of Bushbuckridge were, on the other hand, better

organised, usually as the result of external intervention. Support from government and other local agencies in terms of infrastructure and facilities resulted in market committees being formed and a code of conduct established for traders (Chapter 6). Tensions between those with places in market and those seeking an opportunity to sell were a common occurrence, especially when the latter established sales points outside the entrances to the markets. Informal traders in the local towns were rarely organised into committees, although tacit rules existed re cleanliness, pricing and who was and was not eligible to sell, with places often being restricted to those from the immediate area. Producers of goods that traders sold, like brooms, were not permitted to sell direct to the public.

Linkages between traders and producers were rare: pre-orders were seldom made, traders rarely established a relationship with a particular producer, and, in general, traders showed poor understanding of harvesting and production issues. On the other hand, informal social networks were valuable in assisting producers to reach urban markets, with family and friends often selling products on behalf of producers, usually with little expectation of any share in the profits. It was done as a favour for a poorer friend or relative. At a higher level, for all products traded, little communication existed between producers, traders and the formal municipal structures, increasing their vulnerability in the market place.

Sunderland *et al.* (2004) mention how local markets are affected by many inefficiencies caused by regulatory enforcement officials (police, municipal authorities, shopping centre security) which increase transaction costs. In my study this was a major issue for the marula beer trade. Being an alcoholic beverage, traders faced more difficulties, including legal issues, in selling their product than tended to be the case for other products. They were constantly being harassed and chased from the markets by the police and other market actors such as commercial liquor sellers who saw the beer sellers as direct competitors (Chapter 5). This often resulted in wastage of beer due to its short shelf life, or producers being moved to isolated areas away from the passing trade. Despite the value of the informal trade to the local economy and considerable deregulation in recent years, the issue of low levels of acceptance, little support and harassment in the market place are common features in many informal markets in South Africa (UNDP South Africa 2003, C. Shackleton and S. Shackleton 2004b), and is an area that requires urgent attention. Furthermore, because of the invisibility and poor understanding of the trade, the unintended impacts of various regulatory policies, such as those on alcohol sales, also often go unrecognised (Wynberg *et al.* 2003).

#### **8.4.3 Price determination**

Two different situations were encountered in terms of pricing. In the first, the price of the product was set in the market place through collusion between producers or traders and a single price agreed. Most producers and traders then adhered to this reserve price. For example, at the time of data collection, both twig and grass brooms sold for a wholesale price of R3 each and a retail price of R6. Few producers deviated from this price, although some occasionally sold their brooms for R2.50 if they were

particularly desperate or in cases where the trader collected the brooms from the producer's home, thus saving the producer transport costs to the market. Similarly, the price of marula beer was set at R5 per 2-litre bottle and R2.50 for a 750 g glass jar. Beer sellers mentioned that they had tried to increase the unit price of the beer in the year of the study, but were unsuccessful due to poor cooperation amongst sellers. Because of complaints from customers, some sellers had backed down and sold their beer at the previous year's prices preventing a general price hike. Good organisation and cooperation is required to set prices – a situation that did not appear to exist, with few traders mentioning that they actually met to discuss prices and other market issues.

A standardised pricing strategy, which was also found to apply to many other traded products such as bags of fruit and vegetables, was possible when the products for sale were consistent across all producers and traders. But as soon as variation in the product is introduced, as is the case for mats and woodcraft, then the producer determines their own price. This is usually related to the size, quality and degree of decoration of the product. Price haggling, in which the producer and the trader/customer bargain to reach an equilibrium price somewhere between the lowest price the seller is willing to accept and the highest price the buyer is willing to pay, is common (Sunderland *et al.* 2004). In some instances, producers, especially woodcarvers, complained that they often had to accept unrealistically low prices, as they had to ensure that they could cover their transport costs home after travelling considerable distances to the markets (see Table 6.5, Chapter 6). The poverty and day-to-day existence of many producers and traders thus limited their ability to bargain, as they could rarely afford to withhold a sale.

Pricing appeared relatively *ad hoc* with few of the producers interviewed mentioning that they calculated the price of their goods based on the costs involved and their labour inputs. This is illustrated by the fact that mats made from purchased reeds were the same price as those made from locally collected reeds (Chapter 4), and that twig brooms, which took less than 10 minutes to make, were the same price as grass brooms which were much more time consuming to produce since the grass must be soaked, woven and sewn; a process that is undertaken over several days (Chapter 3). Similarly the prices of woodcraft products were often based on size rather than the degree of work involved or the species of wood used. No seasonal variation in prices was identified, although an annual price increase is usually made. Poor prices, which do not reflect labour investment, were a frequently mentioned problem. When this was queried, the response was that, with the rising levels of unemployment and job loss, consumers could not afford to pay higher prices. It has certainly been shown that income-earning opportunities from self-employment tend to fall with increased unemployment in the formal sector due to fewer remittances and less cash circulating within the local economy (Ardington 1988). Consequently, traders were afraid they would lose customers if they raised their prices “too much”. I did, however, observe that prices were rarely increased by small incremental amounts, but usually jumped by R1 or more, possibly because of the constraints in handling small change. It might be this that customers objected to. A further issue mentioned was that prices were not keeping pace with rising costs of living, and that

producers' purchasing power was decreasing. This trend was evident for the woodcraft trade based on longitudinal data (Chapter 6). Costs, especially transport costs, relative to income were also increasing disproportionately.

Related to this issue was the fact that many buyers purchased on a 'credit' system, whereby they would pay the producer or trader for the product at a later stage or on an instalment basis. This particularly applied to the more expensive products such as mats (raised as a constraint by 50% of producers) and furniture produced for the local market, but was also an issue with low cost products such as brooms (e.g. 10% of producers and 25% of traders complained about this). While a few producers refused to operate on this basis, many mentioned that they had no choice, as it was the only way they could make a sale. This situation exacerbated producers' cash flow problems and added to their transaction costs as many mentioned that they had to "chase" their debtors for their money. Often they were never paid. This scenario contrasts with much of the literature where rural producers often become beholden to their buyers, usually middlemen or wholesalers, through a system of advances (Fereday *et al.* 1996).

#### ***8.4.4 Growth, market saturation and sustainability***

Markets for all the products have shown growth in the 10 years up to 2003 (Chapter 7), with 90% of broom producers, 88% of mat producers and 86% of marula beer producer-traders perceiving that the trades in these products had grown. That said, 30-41% of producers believed that their own businesses had declined as a result of greater numbers of people entering the trade and the resultant internal competition. Saturation, often a feature of local markets because of the low entry barriers and limited amounts of cash circulating in the local economy (van Rooyen *et al.* 1997, Arnold 2002b), is thus an issue, particularly for the broom, mat and beer trades. The current trend appears to be one in which more people are benefiting from the natural resource product trade, but the income share per individual or household may be declining. Producers and traders mentioned that products often took longer to sell than previously, resulting in them having to invest more time in selling. This in turn constrains their ability to grow and improve their situation (Arnold 2002b). On the other hand, the main source of competition for local woodcraft products has been the flood of low cost imports from neighbouring countries onto the market following the lifting of trade embargoes. The challenge for local woodcarvers is then to produce quality products using innovative designs that can compete effectively with these imports. Although local markets are becoming oversupplied, there still appears to be potential to market further afield, including in regional and national urban centres (see below), with some producers already managing to do this quite effectively.

While the results suggest that local markets may be becoming oversupplied, the issue often raised in the literature of substitution of traditional ('inferior'), locally traded products with commercial substitutes (Fereday *et al.* 1997, de Jong *et al.* 2000) appears unlikely at this stage. With the exception of woodcraft, the products studied here continue to hold a key position in local culture (Chapters 3-5) and

are often preferred to commercial alternatives (e.g. brooms and marula beer in season). Their prices are also frequently more competitive, providing an important option for consumers with poor purchasing power (Arnold *et al.* 1994). This suggests a certain stability, or sustainability, of markets and income. The cultural significance of the products also extends beyond just the local level, with many urban dwellers continuing to purchase traditional products for their cultural rather than their functional value (Cocks and Dold 2004a), providing an opportunity for growth. The challenge is to promote these markets (also see Kotze 2001), and facilitate access to them, as they are often costly to reach (Chapter 9). This potentially raises an opportunity for new intermediaries. However, it is important not to neglect or substitute local markets in favour of wider, national markets as the latter have many comparative advantages (Table 8.4), especially for the low value-added, single person businesses that dominate the Bushbuckridge trade. Any new direction needs to build on local initiative and on what already exists at the local level, a principle also advocated in the small and micro-enterprise literature (Taylor 1999, UNDP South Africa 2003, Chapter 9). The ideal would be a combination of both local and external markets (Terry 1999).

While some of the issues relating to external markets are discussed in Table 8.5, it is worth making some of these more explicit. Firstly, high-value, external markets are generally both socially and geographically worlds apart from what producers know (Philip 2002). Rural producers have little knowledge on how to make contact with buyers and with the types of design and quality required; for example, few mat weavers were aware that the plastic in their mats, so admired by local customers, was generally disliked by tourists and the interior décor market. This limited experience of producers is compounded by illiteracy, poor communication infrastructure, remoteness, high transport costs and financial constraints. Consequently, external facilitation is usually required for producers to break into new niche markets (as opposed to the urban township markets for cultural products mentioned above). Such support often, in turn, becomes a weak link, creating unhealthy dependencies. For example, it was found at the close of an externally facilitated project with weavers in KwaZulu-Natal that weaving groups were no nearer to the point where they could market their own products than they were at the beginning (INR 2003). This meant that they had to become dependent on commercial marketing agents, placing them at risk if these agents stopped operating and forcing them to accept often poor, wholesale prices. A further problem in targeting external markets is that the small scale of local production makes it difficult to guarantee quantity and quality on a consistent basis, something that is required by these markets (Chapter 6). It is these issues that need careful consideration before advocating for external markets, particularly as an alternative to what producers are already using and know.

Table 8.5: Comparative advantages and disadvantages of local ‘endogenous’ markets relative to new, ‘facilitated’ external markets – information to complete this table was drawn from the case studies, Dove (1993), Dewees and Scherr (1996), Taylor (1999), Arnold (2002b), Philips (2002) and INR (2003)

<b>Advantages</b>	<b>Disadvantages</b>
Local markets exist, and may be relatively large, while external markets often have to be developed.	Local markets show limited potential for growth or grow more slowly than external markets.
Local markets are relatively stable and guaranteed while external markets are often fickle, uncertain and show ‘boom and bust’ type characteristics.	Local markets can become quickly saturated, limiting opportunities for new entrants, impacting on incomes of participants and constraining expansion of individual businesses.
Producers operating in local markets are independent and not reliant on any external agency, whereas various dependencies are created for external markets increasing the risk of benefit capture away from local producers and collapse if any of the actors withdraw.	Local markets show limited potential for product diversification to reduce risk in the long-term, whereas this is often a feature that is developed for external markets.
Local markets are accessible and close to producers reducing transaction costs.	Local markets have poor visibility and are often neglected, receiving little support and recognition compared to high value export markets.
Local markets are relatively unregulated or controlled with little bureaucracy compared to the situation for an exported product.	There is little investment in local markets and products in terms of research and development (e.g. extending shelf life) relative to new nationally and internationally marketed products.
Because of the low value of local markets there is little risk of takeover by the elites compared to more high value external markets, or displacement by cultivated sources.	There is limited potential for value-adding in local markets compared to external markets.
Local markets have low barriers to entry compared to external markets allowing the poorest and most marginalised community members to engage in the trade.	It is unlikely that local markets will be able to grow and develop without at least some external intervention. Producers do not have the technology, resources, access to credit, contacts or skills to develop their businesses much beyond what they are today.
Minimal intervention and capital investment by the state is required to support local level commercialisation and enhance livelihood benefits.	Informal traders often face problems establishing themselves in the market place and frequently encounter harassment. The conditions under which they operate are often poor.
The cultural value of many locally traded products provides market stability and can be used to expand markets particularly amongst urban communities that still have strong rural roots.	Local producers are constrained by the fact that they often perform all the functions along the trade chain, limiting the time they can spend on any single activity. The low value of the trade makes it unlikely that this division of labour will change.
The economies of scale shown by local markets make more sense in remote rural areas where some products are more effectively supplied locally.	Producers supplying local markets are often dispersed over large areas making it difficult to target interventions.
In local markets, producers are more in control, setting their own prices, selling where and to whom they wish, and determining their own work pace to fit in with other household activities. These options are not always possible when supplying an external market where the number of buyers may be restricted and the volumes required large so that producers become price takers.	Buyers within the rural areas where the markets are located are often poor and have little buying power – something producers and traders in this study identified. This keeps prices low and results in buyers purchasing on a credit system, which causes cash flow problems for producers and traders.
Local producers know and understand the needs of local markets, the quality standards and expectations. External markets are by contrast socially and geographically foreign.	There may be few buyers in local markets for producers who are particularly creative, producing high quality, unusual goods.

## 8.5 SIZE AND VALUES OF THE TRADES AND MULTIPLIER EFFECTS

In this section an attempt is made to approximate the size and annual value of the various trades studied to provide a more complete picture of their role in the local economy. It is this type of information that is required to make policy makers, local government structures and other stakeholders more aware of

the trades and their significance. All figures on numbers of people involved are estimates, based on interviewees' perceptions of the number of participants, as it was not possible to undertake a complete census of producers and traders. Annual turnover in raw material, finished products and income was calculated by multiplying the mean amount used, produced or earned per producer, as reported in the case study chapters, by the estimated number of participants in the trade. Only the economic value returning to residents of Bushbuckridge was estimated, thus woodcraft traders were excluded. Total beneficiaries were estimated based on an average household size of 6.8 persons, as determined in this study.

The results show that the trades are not insignificant, involving over 2 000 producers and traders and benefiting large numbers of local residents, up to as many as 14 000 altogether (Table 8.6). When these numbers are expressed relative to the statistics for Bushbuckridge as a whole, approximately 2% of households (out of some 112 000 in total) are involved in trading one of the four products studied, and about the same proportion of the total population (estimated at 550 000 – Chapter 1) benefits from the income this brings into households (see Chapter 9, Section 9.2). More significantly, if only the poorest category of households is considered (23% of households – Statistics South Africa 2004), then the proportion engaging in the trades rises to 8% (Chapter 9, Section 9.2). The combined total net annual value of the trades is in the region of R2.6 million, varying between R125 000 for the highly seasonal marula beer to around R1 million each for the mat and broom trades. Given this contribution, and the importance of the trades as a safety net and source of income to the poorest and most marginalised members of the community (Chapter 7), policy makers, planners and rural development practitioners can ill-afford to continue to neglect this sector, especially under the spectre of increasing levels of poverty, unemployment and HIV/AIDS that presently characterises the South African situation (Chapter 2).

Table 8.6: Size and values of the trades studied based on conservative estimates

	Mats	Brooms		Marula beer	Woodcraft	
		Producers	Traders		Carvers	Furniture makers
<b>Approximate numbers of people directly involved</b>	1 200	300 – 400 producers	200 traders	250	50	50
<b>Total volumes of raw material collected</b>	1 200 x 166 = 199 200 kg	350 x 670 = 234 500 kg	-	250 x 1 877 = 469 250 kg	50 x 16 = 800 trees	50 x 40 = 2 000 trees
<b>Total amount of product sold</b>	1 200 x 23 = 27 600 mats #	350 x 80 x 8 = 224 000 brooms*	200 x 45 x 10 = 90 000 brooms	250 x 296 = 74 000 l	-	-
<b>Total net annual value of the trade</b>	1 200 x 998 = R1 197 600	350 x 2 000 = R700 000	200 x 1 090 = R218 000	250 x 500 = R125 000	50 x 3 603 = R180 150	50 x 8 533 = R426 650
<b>Total beneficiaries</b>	1 200 x 6.8 = 8 160 people	350 x 6.8 = 2 380 people	200 x 6.8 = 1 360 people	250 x 6.8 = 1 700 people	50 x 6.8 = 340 people	50 x 6.8 = 340 people

\*This appears to be an underestimate as demand figures, based on the number of households buying brooms and the life-span of the brooms, suggest a turn-over of 390 000 brooms or R1.2 million (Chapter 3).

# This is an extremely rough estimate as mat size differs widely. Also, not all mats made are sold in the same year. Producers often build up stocks.



## 8.6 CONCLUSIONS: EMERGING PATTERNS AND SIMPLIFYING THE PICTURE

The above discussion has illustrated that, as predicted, the situation is complex, with a range of different commercialisation pathways, issues and constraints identified for each of the four products. The fact that such diversity exists for four locally commercialised products from within the same narrow setting makes it unsurprising that it is difficult to draw any generalisations, or find generic solutions or determinants of success, at a more global level. However, it is useful to look at some of the emerging patterns and commonalities amongst cases, and to simplify the findings, particularly in terms of what these mean for the sustainability of the different trades. In this section I attempt to provide ‘typologies’ of the different commercialisation pathways, summarise the key issues arising, in particular recurring themes across cases, and assess the potential of the different products to deliver sustained benefits to participants. Policy and development implications and recommendations, that draw together the results of this and the previous chapter, are dealt with in the final concluding chapter (Chapter 9).

### *8.6.1 Local level commercialisation typologies, and factors affecting trading and sustainability*

Three main factors distinguished the commercialisation pathways and the broader PCSs for the different products:

- the source of raw material and the tenure system represented – whether within (communal) or outside (state and private) of Bushbuckridge,
- the presence of intermediate traders as key actors in the market chain, and
- the location of the primary markets – whether inside (local) or outside (external) of Bushbuckridge.

These simplified pathways are presented in Figure 8.2. A fourth potential pathway, in which the resource is both harvested and sold outside of the production area, is possible as illustrated in the case of traditional brooms in the Eastern Cape (Cocks and Dold 2004a).

Examining Figure 8.2, it is apparent that with respect to factors affecting the sustainability of the trades, continued *access* to raw material is the greatest issue/constraint for the products represented by Pathway 3, as this is often extremely tenuous and at the discretion of individual landowners and managers. By contrast continued *availability* of raw material under poorly regulated and shifting tenure and management arrangements is the primary constraint for Pathways 1 and 2 where products are harvested from communal lands within the areas in which producers reside. Neither of these raw material supply and harvesting issues is straightforward or simple to address, with each being complex and multi-layered in terms of institutions, property and access rights, and supply-demand scenarios (Section 8.2.2). Regarding markets and their sustainability, the main concern for Pathways 2 and 3, where products are marketed within Bushbuckridge, is *internal competition* and local market *saturation* as more participants join the trade, and as disposable cash income declines amongst local consumers under the current trend of increasing unemployment and retrenchment (Chapter 2). All producers and traders selling within Bushbuckridge identified this as a key constraint. For Pathway 1, in which the main

market is non-traditional and located outside the production area, the main factor affecting sustainability is *external competition* from imported, often cheap, informal sector craft goods and from formal sector, quality-controlled, factory produced items. Such a situation is often the case for items entering the tourism-linked craft market (INR 2003).

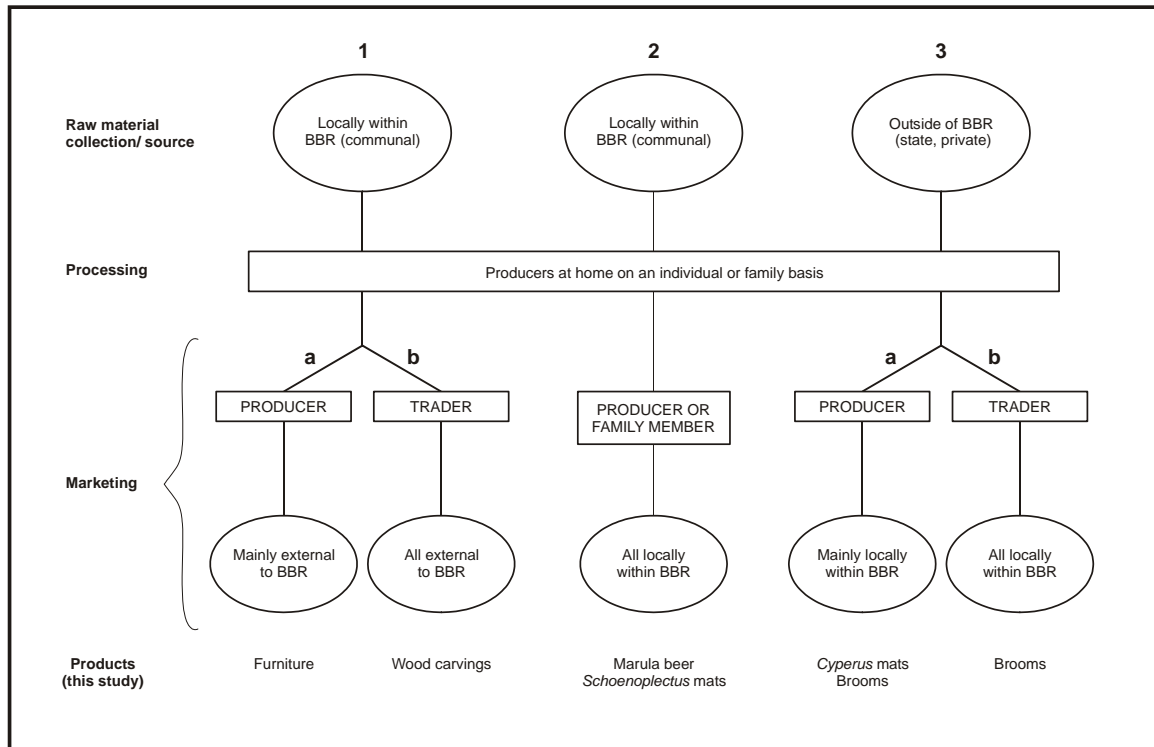


Figure 8.2: Three generalised commercialisation pathways for products traded by producers from Bushbuckridge (BBR in the figure)

For those products with market chains that include intermediate traders (Pathways 1b and 3b), this can represent both an advantage and disadvantage. On the positive side, the use of intermediate traders frees producers to concentrate on production, but the cost is that producers must sell at a ‘wholesale’ price, often half of what they could fetch if they marketed directly to consumers themselves (Chapters 3 and 6). For this reason most producers do not funnel all their sales through traders, but also seek secondary channels that provide them with direct access to the public such as pension markets, community managed outlets (e.g. the craft shop at the Kruger gate – Chapter 6), and roadside and door-to-door sales, both within and outside of the local area (Table 8.4). Possible reasons intermediate traders are absent from the market chains of certain products (Pathways 1a, 2 and 3a) have been discussed, and tend to differ from product to product. For mats and furniture, the lack of intermediaries appears to relate to the high costs of stocking these value-added products, and in the case of mats, also the fact that these are widely available at village level across Bushbuckridge. On the other hand, it is the low price of marula beer, its poor shelf life and the way in which this relatively new trade has evolved that appears to preclude the involvement of other actors in the market chain. However, an opportunity exists for

intermediaries to market these products to more distant, urban centres as some producers-traders have already demonstrated.

Other factors or constraints affecting a sustained stream of benefits from trading, and which tended to be common across products, included:

- Access to capital, or even small amounts of cash, for raw material harvesting and for the marketing of finished products. Cash flow constraints were raised by every producer and trader, and have been highlighted in all the sections above. This issue was particularly pertinent to payments for transport. Sales on a credit basis exacerbated this cash flow crisis.
- The lack of awareness of the size, value and significance of the trades for livelihoods and poverty alleviation, i.e. their invisibility, amongst key stakeholders such as traditional authorities, local governance structures and municipalities, conservation agencies and forestry officials, farmers, retailers, consumers and the general public. This accounted for the poor, or non-existent, communication between these different actors and producers and traders, the limited support received, and the perverse impacts of some policies and actions. In some cases, the lack of communication and a fear of those in authority forced counter-productive behaviour such as illegal harvesting. However, the issues that would need to be raised with different stakeholders would be specific to particular products as discussed in the previous sections.
- Poor understanding of costs, profits, pricing and other business principles amongst traders and producers. In all cases, producers and traders, even the more specialised woodworkers, tended to operate on a hand-to-mouth basis, spending their takings immediately on basic needs such as food. Income was rarely put aside for the next harvesting or marketing trip, and few producers kept records of income and expenditure. Those that did show business acumen (see case boxes in Chapter 4 and 6) were often earning higher incomes.
- Low price of products and high costs limiting profit margins. The low prices are partly a consequence of the 'survivalist' nature of the trades forcing producers into being price takers.
- Generally weak organisation at all stages of the PCS and, consequently, an inability to: a) make the most of opportunities to enhance recognition, to negotiate, to bargain and to set prices; b) to take advantage of any support services; and c) to communicate more effectively with relevant actors in the PCS.
- Intolerance towards producers and traders in the market place, except for pension markets, resulting in harassment, exclusion and seizure of products (something that also sometimes happened to harvesters), as well as poor facilities to protect goods from sun and rain.
- Often negative, unsympathetic and uncompromising attitudes of officials who have the powers to, for example, control access to raw material and provide space in the market.
- Poor quality, an inability to deliver on schedule, low level of supply, a limited product range and a lack of innovation and creativity in the case of craft items.

### **8.6.2 Comparison to ‘generic’ conditions that enhance sustainability**

Important determinants of a sustainable, local trade (or at least a trade that can continue to provide the current level of benefits – Section 8.1), as highlighted by this study and various authors, are presented in Table 8.7. Assessment of the current cases/products against these determinants illustrates that few were able to satisfy all conditions. Where raw material supplies are accessible and adequate, the trade is often limited by the product’s market potential or vice versa. There are usually mixes of positive and negative factors within any one case, with some of the latter showing good potential to be overcome, whilst others may be intrinsic to the product itself and difficult to address. What is encouraging is that all the trades, except for woodcraft, were positive for more than half of the conditions. On the positive side, all the products studied here have relatively stable markets (Table 8.4), although these show limitations, potential saturation and low returns, especially in the case of mats (Chapter 4). This suggests that it is the supply of raw material that will ultimately determine the future of these locally initiated trades, contrasting with the conclusions reached by Marshall *et al.* (2003), who identified “marketing and sales as the main processes constraining ‘successful’ commercialisation”. Presently, it is the woodcraft trade that is most threatened due to an acute scarcity of favoured woods, and the difficulties associated with addressing this problem for a resource that is destructively harvested and slow-growing (Table 8.2). The broom trade is also facing problems, as access to the resource becomes more restrictive. Some producers mentioned how they now harvested less often, as they did not want to resort to illegal entry and risk arrest (Chapter 3). Overall, however, with the exception of woodcraft, there appears to be relatively good potential for the trades to continue to deliver current benefits, for addressing constraints and overcoming some of the obstacles producers face, and, with the correct inputs, for building on what exists, particularly by supporting expansion into urban markets (Chapter 9). That said, though, the nature of the trades and products (local level, limited markets, poorest people involved, seasonality, traditional products, low value, etc.), the growing numbers of people involved, their wide dispersion across Bushbuckridge, and the way that trading integrates with producers’ livelihood needs (risk reduction, home-based – Chapter 7) limits extensive enhancement and development, particularly without substantial external support. Investment in research and the development of alternative products, for example in the marula case, would also need to be made. However, the policy environment for this type of support does not presently exist. Thus, while the results suggest that the trades can continue to supply producers with income and other benefits, these will likely remain marginal and at a supplementary level for the most part, forming but one of numerous sources of livelihood rather than a means of specialised employment and a route to escape poverty (Chapter 7). This issue is dealt with further in the final chapter (Chapter 9).

Table 8.7: Products assessed against a set of ‘generic’ conditions and features that affect commercialisation potential and sustainability – this table is based mainly on the conditions provided by Fereday *et al.* (1997), Taylor (1999), de Jong *et al.* (2000) and Marshall *et al.* (2003), as well as the findings from this study

Conditions and features affecting commercialisation potential and sustainable returns and benefits to producers	Mats	Brooms	Marula beer	Woodcraft
Returns to labour are high for producers relative to alternative activities on a daily basis (see Chapter 7)	X	✓	✓	✓
Markets already exist	✓	✓	✓	✓
Growing demand for the product is perceived	? (stable)	? (stable)	X	? (stable)
Access to the raw material is secure and reliable	✓	X - twigs ✓ -grass	✓	X
Resource is not declining or threatened by use	✓	✓	✓	X
The product is not highly perishable, or there is scope for value addition through processing and storage	✓	✓ (limited)	X	✓
Product is not highly seasonal or can be stored	✓	✓ (limited)	X	✓
There are few competitive substitutes	✓	✓	✓	X (imported craft)
Specialisation is not required as producer can trade in other products increasing diversification	✓	✓	✓	X
Only minimal capital investment is required for collection and village-level storage/processing	✓	X	✓	X
Skills exist or can be developed locally	✓	✓	✓	✓ (room for improvement)
There is scope for domestication	✓	? (unknown)	✓	X
The opportunity to introduce systems of sustainable management exists	✓	✓	X (weak institutions)	X (weak institutions)
Strong local organisation and institutions exist	X	X	X	X
Number of alternate market channels/buyers exist	✓	✓	X	✓
No evidence of takeover by more powerful groups	✓	✓	✓	✓
New higher value markets possible	✓ (limited)	X	X	✓
Supportive policies in relation to land rights, marketing and business support, e.g. micro-credit, exist	X	X	X	✓ (limited marketing support)

## 8.7 SUMMARY OF KEY FINDINGS

- Much of the locally initiated trade in natural resource products is invisible, neglected, unsupported and, consequently, poorly recognised by important stakeholders such as traditional authorities, municipal authorities, landowners and managers, etc.
- Each product has its own unique commercialisation pathway making it difficult to formulate generalisations and suggest blanket solutions, hindering support to the sector as a whole.
- The obstacles local producers face when commercialising a product vary widely and may relate to aspects of harvesting in one case, and the markets in another. A lack of working capital and organisational capacity were common problems at all stages of the PCS that hampered increased output and efficiency.
- The market chains for locally traded products are generally simple involving either the same people at all stages or one other set of actors, informal intermediate traders, who sell the product to the final

consumers. However, the issues encountered at each stage of the chain are often complex and unique.

- Local markets can be large, stable and dependable, but face saturation with the growth in the trade. Few local products show potential in alternative markets, although there is opportunity to build on the urban demand for traditional, cultural products.
- Raw material is harvested from a number of different vegetation types and from land under communal, state and private property rights, with multi-layered arrangements often evident. This presents different challenges in terms of access and management of the resource. In particular, the fact that much of the raw material for brooms and mats is from private land presents a set of circumstances not often encountered in the NTFP literature and a difficult hurdle to overcome, requiring innovative solutions.
- Pricing of products rarely covers labour investments, but producers believe these prices are a reflection of the broader, economic environment and the poor buying power that exists. Generally business skills and acumen are limited, although some producers are natural entrepreneurs.
- Except for woodcraft, the trades show good potential for continued delivery of existing benefits (i.e. sustainable at present), but limited potential for delivering substantially higher profits from improvements and new markets. These local trades are unlikely to be turned around into full-time, high income earning, specialised businesses, but their extremely important role in the livelihoods of large numbers of the poorest of rural dwellers should not be ignored because of this (Chapter 7). Much can be done to improve conditions, smooth and even raise incomes, albeit by small amounts, for both producers and traders (Chapter 9).
- The results show that the trades are not insignificant, benefiting large numbers of local residents. Furthermore, their total value is in the region of R2.6 million. Given this contribution, and their importance as a safety net (Chapter 7), it is time the local level trade received the attention and support it is due (also see Chapter 9).

## **CHAPTER 9**

### **THE SIGNIFICANCE OF THE LOCAL NATURAL RESOURCE PRODUCT TRADE: SUMMARY, IMPLICATIONS AND CONCLUSIONS**

#### **9.1 INTRODUCTION**

How significant is the local level natural resource trade for the livelihoods and welfare of rural households and what does this mean for policy and development, in particular with respect to efforts to combat rural hardship and poverty? Given that many of the findings from this study are already synthesised in Chapters 7 and 8, the main purpose of this concluding chapter is to address this question by considering the wider implications of the study findings, including what they mean within the milieu of current discourse and debate on natural resource-livelihood-poverty linkages (Chapter 1 and Chapter 7). In the first part of the chapter (Sections 9.2 and 9.4), I seek to bring together and summarise the key empirical findings and theoretical discussions found in this thesis, with particular reference to the original hypotheses posed at the beginning of the study (Chapter 1, Section 1.3). To assist in this, I have developed a simplified, conceptual framework (Figure 9.1) that highlights the key issues and factors that need to be considered to understand the local natural resource product trade, forecast its outcomes and design interventions. This broad synthesis provides the background to then lead into a more applied and practical consideration of the implications of the findings for policy and development, both in South Africa and globally (Section 9.5). The final section (Section 9.6) asks the question – what has been learnt from this study and how does this relate to common wisdom about natural resource product commercialisation and its role in poverty alleviation?

#### **9.2 LIVELIHOOD AND POVERTY ALLEVIATION BENEFITS OF TRADING**

In the introduction to this thesis it was conjectured that (Chapter 1, Section 1.3):

- A growing number of rural households are engaging in natural resource product commercialisation in response to economic hardship.
- Natural resource product trading is one component of a diverse livelihood base for many of the poorest and most marginalised members of rural society.
- The sale of natural resource products makes a difference to poor people's livelihoods and forms an important safety net, but on its own rarely results in significant poverty elimination.

The results from the case studies show these statements to be largely true, although some provisions apply, as the real situation tends to be more complex and less readily generalisable. This study has demonstrated that the majority of rural producers and traders entered the natural resource product trade in response to a lack of employment opportunities (see Chapter 2), retrenchment, the death of a

breadwinner probably from HIV/AIDS, and the need to augment inadequate household incomes (Box 1a in Figure 9.1). Poverty, suffering and hunger were frequently pronounced as major catalysts pushing people into the trade. Thus, economic hardship, which is on the increase in South Africa (Chapter 2), clearly plays a central role in the uptake and expansion of the local natural resource trade, once again highlighting the important safety net function offered by this activity (Chapter 7, Section 7.2, Angelsen and Wunder 2003a). Indeed, for large numbers of producers and traders, the opportunity to sell natural resource products with 'low barriers to entry' has meant the difference between destitution or relying on already 'stretched' informal social safety nets, and independence and the cash to meet a variety of basic needs (Box 3 in Figure 9.1). However, not all participation in the trade represented a coping or survival mechanism. In a lesser number of cases, people elected to engage in the trade out of preference. This applied mainly to those situations in which producers either specialised in the trade (e.g. woodcarving, some broom cases, some mat cases) or, at the other extreme, where their engagement in the trade represented a diversification activity undertaken to boost household incomes earned from a variety of other sources (e.g. mats) (Chapter 4, Section 4.7). In these situations a high proportion of producers were satisfied with the trade and did not aspire to alternative, waged employment (Chapter 7, Table 7.9).

Evidence from this study supports the widely held view that natural resource products are most important for the poorest and most marginalised sectors of society (Chapter 7, Section 7.3, Neumann and Hirsch 2000, Kaimowitz 2003). A comparison of producers and traders with a random population sample showed that, on the whole, producer and trader households were characterised by fewer formal and regular income sources, a lower average household income, less access to land and a lower incidence of livestock ownership. The exception was amongst reed mat producers, which is not surprising as mat making was undertaken primarily to supplement existing incomes (Chapter 7, Section 7.3). In addition, apart from woodworkers, a higher proportion of producers and traders came from female-headed households, and were elderly and illiterate, than found amongst the random household sample (Chapter 7, Section 7.3). Of note was that grandmothers were the primary care givers in about 10% (possibly an underestimate) of mat and broom trading households, a consequence of the HIV/AIDS pandemic that is manifesting throughout the country (Marcus 2000, Weinberg 2005). Marula beer producers were a younger, but particularly destitute group, surviving mainly on a string of short-term informal income earning activities (such as selling marula kernels, working in other people's fields, selling edible herbs, etc.) and donations from other households (Chapter 5, Section 5.4.2). Most of these producers wished for alternative employment, either a formal job or to have the cash to trade in other goods (e.g. fruit and vegetables) (Chapter 7, Table 7.9), and were selling marula beer until they could find something better. A few, however, undertook this activity solely to raise the capital to pay their children's school fees.

In most cases, with the exception of woodcraft, the trade represented one of several livelihood strategies and income sources for households (although this varied across individual households – Chapter 7,



Section 7.5). Natural resource product trading can therefore be considered as a form of livelihood diversification; representing both ‘no choice’ and ‘choice’ forms of diversification (Chapter 1, Section 1.5, Ashley *et al.* 2003). Woodcraft, on the other hand, was a specialised, full-time activity contributing on average 77% of total household income (Chapter 6, Section 6.4.2). Consequently, it was more typical of the conventional perspective of what constitutes a small or micro-enterprise, while the other trades can be better classified as part-time livelihood strategies. That said, these strategies had their own ‘special’ place within the existing livelihood portfolio and needs of individual households. While not specialised or particularly high earning, they were important for the households involved (as rated by producers and traders themselves – Chapter 7, Section 7.4) and often as vital as the incomes derived from other sectors and activities such as agriculture, non-permanent employment, other self-employment, local wage labour, etc. (May *et al.* 1998). Indeed, large numbers of producers, especially those without state pensions, rated their earnings from selling natural resource products as the primary source of income for the household (Chapter 7, Table 7.9). Incomes from trading were particularly important for the education of children, food security and the purchase of household goods.

The study uncovered numerous tangible and intangible livelihood benefits from natural resource trading, demonstrating that these products do make a difference to the livelihood security of poor households (Box 3 in Figure 9.1). Some of these benefits included cash income, critically-timed income (e.g. marula beer), independence and self-reliance, identity and respect, investment in the next generation, new skills and social networks, investment in loaning clubs and burial societies, a more dignified way of earning a living than some of the alternatives for low skilled people, and psychological well-being through engagement in productive activity (Chapter 7, Section 7.4). While earnings from trading, for the most part, tended to be marginal and below the minimum wage and poverty line (Chapter 7, Section 7.4.1), close examination of the variation in the data revealed that some people were managing to substantially improve their lives, and those of their children, based on their income from trading (Chapter 7, Section 7.4). These people tended to demonstrate a natural entrepreneurial flair (Chapter 7, Section 7.4.2), and often had access to other income within the household that allowed them to maximise the benefits from trading. For others, the returns from trading, along with income from other sources, helped to lift these households into a higher income bracket (Chapter 7, Section 7.3). In this situation, the income profile of trading households began to resemble that of the random population, with a noticeable decline in the proportion of poorest households (Chapter 7, Figure 7.1). There is, thus, no doubt that these products can assist in making those people who fall into the chronically poor category a little less poor (Aliber 2003, Chapter 2). The natural resource product trade therefore plays a critical role in mitigating poverty (Angelsen and Wunder 2003a), while for a smaller proportion of households it does provide a means, either on its own or with other income, to escape poverty or at least to raise the standard of living of households and allow investment in the next generation (Box 3 in Figure 9.1). This in turn provides producers’ children with a better basis to escape poverty in the future.

In summary, this study has shown that the natural resource product trade does make a real difference to rural livelihoods and helps to prevent and ameliorate extreme hardship (Boxes 3a and b in Figure 9.1).

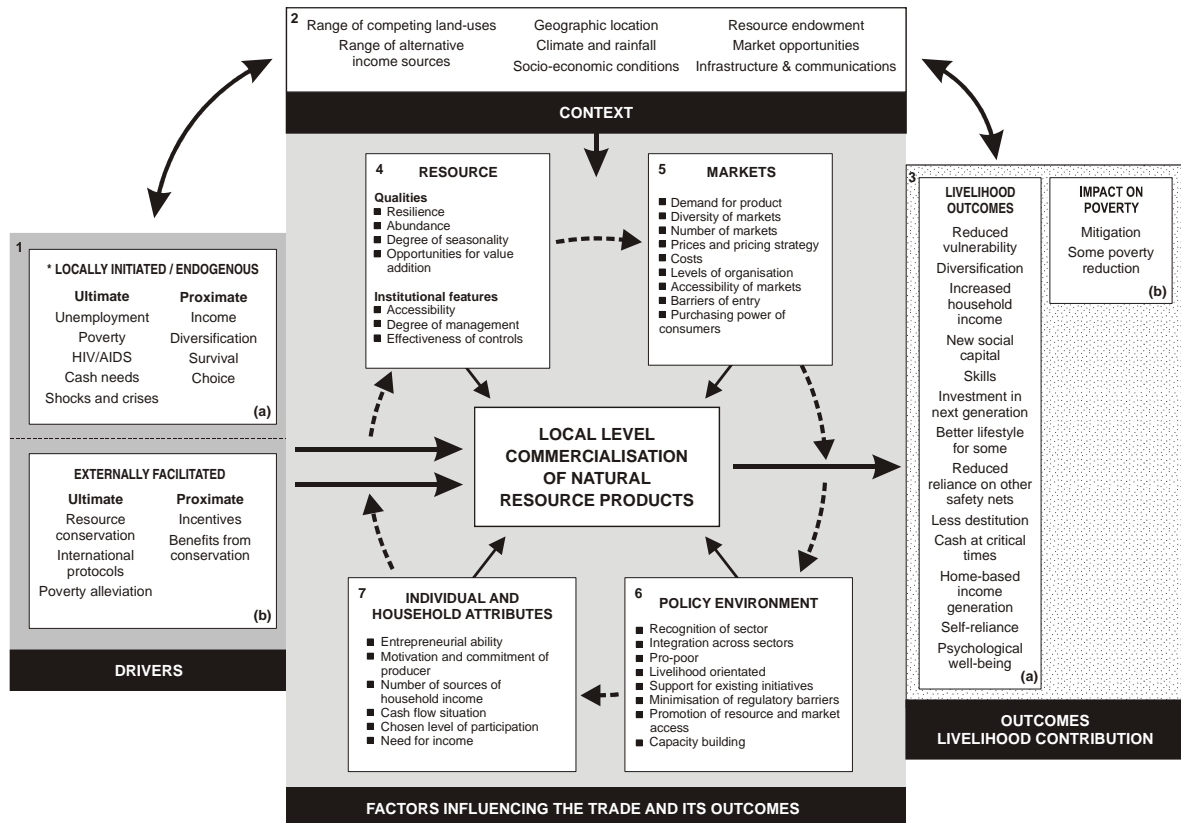


Figure 9.1: Simplified, conceptual framework of the key components and factors that need to be considered to understand local level natural resource product trading and its outcomes

That said, the actual numbers of people benefiting from these activities in South Africa is always going to be limited – these resources cannot provide a means to lift millions of rural people out of poverty (Chapter 8, Section 8.5). Presently, evidence suggests that some 3-14% of households within the wooded communal areas of the country are trading in at least one natural resource product on either an *ad hoc* or full-time basis (Chapter 2). This study found that approximately 2 000 households (Chapter 8, Table 8.6) from amongst a total of 112 000 in Busbuckridge (Statistics South Africa 2004) were engaging in the four trades selected for study. This is less, at approximately 2%, than the 3-14% suggested by other studies, possibly because this study excludes a number of other traded products such as fuelwood, poles, thatch grass and wild herbs, to name a few, as well as those producers selling on a very occasional basis (such as carvers who make spoons only for the local market). What is relevant though, is that participants in the trade were from amongst the poorest 23% of households in the area (Municipal Demarcation Board 2004). Thus, those engaging in the trade represent a fairly high proportion of the poorest sector of the population (Chapter 8, Section 8.5), whilst those in other income

brackets are more likely to have other opportunities. Further growth in the trade is problematic due to very high numbers of poor rural households, a limited resource base and saturated local markets.

### **9.3 THE COMPLEXITY OF THE LOCAL TRADE: FACTORS INFLUENCING LIVELIHOOD AND POVERTY ALLEVIATION BENEFITS**

It was proposed at the beginning of this thesis that the “natural resource product trade in South Africa is complex, multifaceted and differentiated across products, trade chains and the actors involved, presenting numerous challenges for sustainable rural development and poverty alleviation”. This study has shown that there are indeed many factors influencing and shaping the direction and functioning of the trade in any particular product, and, accordingly, the livelihood and poverty outcomes discussed above. A plethora of contextual, policy, institutional, household and personal factors may affect the type and extent of benefits the trade brings to individual producers, both within and across different product types. An attempt has been made to capture and explain some of this complexity in the central part of the framework presented in Figure 9.1 (Boxes 4-7). While each product has its own unique commercialisation pathway (Chapter 8, Section 8.6.1), certain conditions assist in enhancing the sustainability of the trade, and in reducing the obstacles participants face. These are highlighted below with reference to Figure 9.1.

#### ***9.3.1 Attributes of the resource***

The type of resource, its ecology and availability (Box 4 in Figure 9.1) are important in determining the feasibility, size and sustainability of the trade. For instance, the marula beer trade will always be limited by the seasonality of fruiting and the short shelf life of the beer, unless research and development is able to create products with a much more extended shelf life, or interventions are made to assist rural producers to store fruit pulp. After 30-50 years of use, the resource base for the woodcraft trade is beginning to show signs of overexploitation, impacting negatively on the continued viability of the industry. This situation is not uncommon for trades which are based on extremely slow growing species (CIFOR 2002) and where management systems have been lax. On the other hand, species that are resilient to use, or even respond positively to harvesting (e.g. reeds, broom grass and broom twigs), demonstrate good potential for creating a sustainable trade and provide the opportunity for growth.

#### ***9.3.2 Resource access and management***

No matter how abundant and favourable a resource, this is meaningless if producers cannot access it (Box 4 in Figure 9.1). Unlike the attributes of the resource, accessibility is an institutional feature that can be manipulated and altered, with both positive and negative outcomes for livelihoods. As this study has shown, the degree of access that producers have to a resource is closely aligned to the type of land use, property regime and land management system in place. Access is far less problematic on communal land compared to state and private land (Chapter 8, Section 8.2), although on the former poor controls

and management may affect access and availability in the future (e.g. reed mats, woodcraft). Promotion of improved, but controlled, access and local rights are key areas requiring attention and have been highlighted as fundamental in many NTFP studies (Ruiz-Pérez and Byron 1999, Scherr *et al.* 2003). Closely linked to access, is whether the resource is actively managed or not. In other words are systems in place to control access and off-take, and are these effectively implemented? This study has shown this to be a neglected area across all products, with potential consequences for sustainability in the future.

### **9.3.3 Markets**

Markets (Box 5 in Figure 9.1) are key to enhancing the positive outcomes from the trade in natural resource products. While there are numerous opportunities and constraints associated with both local and external markets (Chapter 8, Table 8.5), this study has shown that local markets are accessible, viable and important. However, saturation of these limited local markets is a potentially growing problem, with producers and traders having little know-how or time to seek new markets, in particular wider national and international markets. Thus, even where potential exists, these opportunities are not often exploited and are unlikely to be exploited without some external assistance. Ideally, for long-term sustainability access to a diverse range of markets would be optimum.

### **9.3.4 Choice and attributes of participants and their households**

How participants themselves control and influence the outcomes of trading is often not given adequate attention (Box 7 in Figure 9.1). This study has shown that households are extremely heterogeneous in their levels of engagement in natural resource product commercialisation and in the returns they receive (Chapter 7, Section 7.4). Both household and individual producer and trader attributes play an important role in influencing the magnitude of the benefits derived from trading. Firstly, the reasons that individuals and households engage in the trade may differ from one household to the next, with some undertaking this as a casual, supplementary activity while for others it is their primary source of income (see above). The element of choice people have is important in determining livelihood outcomes, which may not always necessarily be to maximise income (Chapter 7, Section 7.5). This is seldom appreciated, and interventions are usually directed at full-time activity. The study also showed that some producers and traders displayed greater ability and skills and personal drive for entrepreneurial endeavour than others. This suggests that with the 'right' training and inputs more people may be able to increase their incomes (if this is what they want). Access to other income in the household was also important as this assisted producers and traders to overcome cash flow problems, allowing them to harvest more often or reach more distant markets outside of the immediate locality. The implication of this is that access to micro-credit is likely to have a positive impact on income.

### 9.3.5 Policy environment

A supportive policy environment (Box 6 in Figure 9.3) that recognises the natural resource product trade for what it is, i.e. an important livelihood activity and complementary rural development option, is required. While, to some extent, the value of natural resource products for income generation and poverty alleviation is recognised in environmental and forestry policy and legislation<sup>12</sup>, this rarely extends to departments and agencies concerned with economic and rural development. For example, South Africa's Integrated Sustainable Rural Development Strategy (Government of South Africa 2000) makes only passing reference to the importance of natural resources, other than land and agriculture, for rural livelihoods. This situation is not unique to South Africa. Angelsen and Wunder (2003b) observe that "while forestry has taken a significant step to incorporate poverty reduction into its general discourse, the reverse cannot be said in terms of the role forests can play in poverty alleviation being recognised in broader economic development and poverty reduction strategies." Similar arguments are presented by Barany *et al.* (2001), particularly in respect of the role of forests in relation to the HIV/AIDS pandemic, and Dickson and Bird (2004) in terms of forestry and the supply of bushmeat.

The potential of craft in South Africa is, however, beginning to gain some acknowledgment by the Department of Arts and Culture (formally Arts, Culture, Science and Technology) (DACST 1998), the Department of Trade and Industry through its Spatial Development Initiative (SDI) programme (Ndabeni 2001) and local government (Hay 2004), although this interest does not specifically differentiate natural resource based crafts nor, more explicitly, locally initiated trading activities. For instance, the woodcarving industry across South Africa has received little government attention or support in comparison to other countries in Africa and globally (CIFOR 2002, Choge 2004, Permadi *et al.* 2004, Rohadi *et al.* 2004). Furthermore, even where enabling policies exist there has been little action on the ground, or where there has this has been limited to more 'conventional' sectors such as the expansion of commercial plantation forestry through small-growers. In this study the local trade in natural resource products goes largely unrecognised by national and regional policy- and decision-makers involved in rural development, as well as key local stakeholders such as traditional leaders, municipal authorities, conservation organisations, tourism operators and landowners and managers. All of the trades studied, except woodcraft, showed little evidence of government, or other support, at any level. Without greater acknowledgment of the sector and a more supportive policy environment there is limited prospect of improving the benefits derived from these trading activities and overcoming the obstacles producers face.

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<sup>12</sup> E.g. White Paper on the Conservation and Sustainable Use of South Africa's Biodiversity (DEAT 1997), National Environmental Management Biodiversity Act No 10 of 2004 (Government of SA 2004), White Paper on Sustainable Forestry Development in South Africa (DWAF 1996), National Forests Act 84 of 1998 (Government of SA 1998), Participatory Forest Management Strategy of the Department of Water Affairs and Forestry (DWAF undated), Community-based Natural Resource Management Strategy of the Department of Environmental Affairs and Tourism (DEAT 2003).

#### **9.4 IMPORTANCE OF CONTEXT WHEN INTERPRETING LIVELIHOOD AND POVERTY ALLEVIATION BENEFITS: HOW DIFFERENT IS SOUTH AFRICA?**

The outcomes of trading, which may include reduced vulnerability, livelihood diversification and increased household income (Box 3 in Figure 9.1), need to be appreciated and assessed within the broader socio-economic and poverty context in which this livelihood opportunity is pursued (Box 2 in Figure 9.1), as well as the suite of reasons producers themselves provide for engaging in the trade (also see Ros-Tonen and Wiersum 2003, 2005). Without this contextualisation it is difficult, as well as imprudent, to make judgements regarding the significance of the role that natural resource products play in people's livelihoods and in poverty alleviation.

In situations where there are few existing alternatives for people, then the trade may be critical in mitigating poverty. For example, in semi-arid regions, such as Bushbuckridge and much of southern Africa, the potential for alternative land uses such as agriculture and livestock production are extremely risky and limited, and there is often poor development of surface and ground water supplies (Anderson *et al.* 2002, Chapter 2). In South Africa, this situation is compounded by a scarcity of land in communal areas, and a history that discouraged and eroded small-scale agricultural commodity production (Marcus 2000, Bryceson 2002, Chapter 2). In this context, the role of natural resource product trading may assume added significance relative to a situation where farming continues to be one of the mainstays of rural livelihoods, as is typical of many of the more humid regions. High levels of unemployment locally and nationally, with the latter limiting opportunities for migrancy, as well as the increasingly negative impacts of HIV/AIDS (Chapter 2) further limit the choices rural people have in South Africa and much of the region. Choices are particularly limited for those with little education and few formal skills. The opportunity to work from home, an advantage local level trading has to offer, also becomes more vital when considered within the context of the HIV/AIDS pandemic and the growing burden of care for both ill household members and additional dependents that many households face (Marcus 2000, Chapter 7). The safety net function provided by natural resource products is, thus, crucial and needs to be recognised and supported, while at the same time alternatives such as promoting economic growth and employment, which will contribute to easing poverty in the long-term, should also be pursued. Arnold and Townson (1998) suggest in their synthesis of forest products and income in Africa that in the short term there may be no alternatives to trading in low return natural resource products for many rural dwellers, and so there is a need to focus on how this can be supported until better options emerge. This study suggests that the commercialisation of natural resource products, certainly in the South African and Bushbuckridge context, should be viewed as a safety net, and a livelihood pursuit worthy of investment rather than a poverty trap (Wunder 2001, Angelsen and Wunder 2003b, Chapter 1, Chapter 7). This is further emphasised when people's own perspectives on the importance of the trade are taken into account (Table 9.1).

Several other contextual factors differentiate South Africa from other regions where similar studies have been undertaken (see Chapter 7). One of these is the country's social security system (Chapter 2). The payment of state old-age pensions and other welfare grants is a key factor assisting to sustain local markets. Despite growing unemployment (Chapter 2), cash continues to circulate within local rural economies because of these welfare grants. As the case studies demonstrated, pension markets (Chapter 2) are of vital importance for traders of natural resource products, as well as those selling a wide range of other goods. Additionally, the extremely high population densities found in the rural, communal areas of South Africa, a legacy of the apartheid era when millions of Africans were relocated into only 13% of the land area, may also contribute to creating demand, ensuring the continued viability of local markets. Bushbuckridge, in particular, with up to 300 people per square km, is one of the most densely populated rural areas in the southern African region (Chapter 2). Another factor that distinguishes the South African situation from elsewhere (e.g. Zimbabwe – Campbell *et al.* 2002) is the relatively good availability of labour as there is little competition for agricultural production (see above). This study has shown that the majority of producers do not possess land for farming other than their home plots. This both pushes them into trading as they have few other safety nets, but also presents an opportunity to focus on these alternative livelihood activities, particularly if there is external support to grow the sector. Furthermore, the long history of urban migrancy in South Africa and the strong urban-rural linkages that exist provide an opportunity for expanding markets. Several producers demonstrated how they could reach more distant urban markets at little cost by channelling their products through their relatives and friends. All these contextual factors suggest the viability of local level natural resource trading as a livelihood option and as a means to alleviate poverty in South Africa.

## **9.5 POLICY AND DEVELOPMENT ISSUES: ENHANCING THE LIVELIHOOD BENEFITS AND POVERTY ALLEVIATION ROLE OF LOCALLY TRADED NATURAL RESOURCE PRODUCTS**

The livelihood benefits summarised above (Section 9.2) highlight the potential contribution of the natural resource product trade to South Africa's and the world's goal to alleviate poverty, while Section 9.3 provides a picture of the factors that influence the magnitude and sustainability of these benefits. Based on this, this section presents some of the emerging policy and development implications. These relate back to the question posed at the beginning of this study – what options, if any, exist for expanding the poverty alleviation role of natural resource products? While the trades in all the products described in this thesis have, to date, received little external input, they are unlikely to develop further without some support and intervention. Producers, on their own, simply do not have the technology, resources, access to credit, levels of organisation, contacts or skills required to grow their trading activities much beyond what they currently are today. The policy issues listed below are, accordingly, an attempt to advocate for recognition of the local natural resource product trade and to influence the direction of future support to this sector (also see Box 6 in Figure 9.1).

### ***9.5.1 Recognise the sector and broaden the rural development base***

Poor recognition of local level natural resource product commercialisation as an opportunity for rural development and poverty alleviation has been mentioned in many parts of this thesis including Chapter 1, Chapter 2, Chapter 8 and above. As stressed numerous times, the trade in natural resource products is as significant as many other rural development activities. This study, like Terry's (1999) research on craft in Botswana, has shown that most of the local trade in natural resource products is viable and competitive with other similar small-scale activities, is self-driven, and has little drain on the economy. But, it does not receive the same support or subsidisation as these other sectors (notably agriculture and livestock production). This is partly because it is still relatively invisible, due to a lack of good empirical studies, and partly because it is considered too 'survivalist' to be worthy of investment (Rogerson 2000, May *et al.* 1998, Chapter 1). However, Terry (1999) provides good evidence to show how investment in marketing and training substantially increased producers' incomes, providing a livelihood for people who would have otherwise been supported by more costly state welfare grants. This suggests that it makes economic sense to invest in the trade as a pro-poor strategy to tackle poverty; a viewpoint also supported by Marcus (2000). She mentions that investing in local production activities "is likely to have immediate and long-term social and economic benefits that are essential to development at the community level" (Marcus 2000). Such an approach is supported by the White Paper on Social Welfare (Department of Welfare 1997) that advocates for a shift to supporting people to help themselves, rather than just the conception of welfare as 'handouts' (May *et al.* 1998). The local level natural resource product trade thus needs to be given greater visibility, and advocacy is required to convince policy- and decision-makers of its relevance. Local people need to organise and lobby for recognition by local stakeholders such as local government. This may require facilitation and support.

### ***9.5.2 Target and benefit the poorest and most vulnerable people***

Supporting the natural resource trade will 'automatically' help secure the livelihoods of the poorest segment of the rural population, who are often the most difficult to reach. For example, Aliber (2003) mentions how the chronically poor tend to be the most difficult to target in terms of poverty relief. May *et al.* (1998) suggest that the "poorly educated rural unemployed" and "the long-term unemployed without labour market experience" are the two most difficult groups of unemployed people to assist as they can seldom find opportunity in the formal economy. Both of these groups are presently represented in the natural resource product trade. For these groups, social security, *self-employment and better support for income generating activities* are suggested as the best way forward to support them (May *et al.* 1998). Similarly, by focusing on local natural resource trading, women, as a particularly vulnerable group (Chapter 2), are also automatically targeted.



### **9.5.3 Build on what exists**

This study has shown that considerable local initiative and energy exists with regard to the harvesting and sale of natural resource products. Support needs to be directed at stimulating and promoting this already vibrant sector (Mead and Liedholm 1998, Martin 2004). Too often rural development initiatives focus on group or cooperative type projects that tend to be restrictive and exclusive (Philip 2002), and on the development of new skills and products that often have poor or high-risk market potential<sup>13</sup>. This study has shown that the local markets for natural resource products are viable – it is thus not necessary to think only about external, export markets and highly processed products. The focus on new, high value-added markets (e.g. rainforest crunch – Dove 1993) has tended to obscure what people have been doing for themselves, often over long periods of time (Arnold 2002b). Intervention should focus, certainly initially, on improving conditions and removing obstacles to the current trade. Already thriving trades should not be over-manipulated, and intervention should not create dependency where there was previously self-sufficiency. For example, the Mineworkers Development Agency (MDA), as an important agency involved in supporting rural income generation<sup>14</sup>, is beginning to recognise the value of supporting individuals and self-initiative, of being open to all people engaging in entrepreneurial and income generating activity, and of recognising small enterprises *and part-time livelihood activities* (Philip 2002). In a new approach, MDA is attempting to provide inclusive ‘service centres’ that anybody can access for advice and support (Philip 2002). Furthermore, they have shifted their primary function to “promoting sustainable livelihoods rather than ‘jobs’ in the formal sense of the term” (Philip 2002). This approach might provide a good model for institutional support to the natural resource product trade (see below) since it can cater for different types of livelihood strategies and respond to the diversity of need that exists.

### **9.5.4 Support livelihoods not just enterprises**

This research has emphasised the need to see natural resource commercialisation from the perspective of its role in supporting livelihoods rather than just as a means to enterprise development. The trade in natural resource products has been shown to be most important in livelihood diversification and in survival, although some specialisation is evident (Chapter 7, Table 7.11). Trading is often a part-time activity fitting in with producers’ other activities and their need to work from home. Its importance is frequently underestimated. Ellis (2001) states – “as part of diversification natural resource-based activities may become more or less permanently part-time in character rather than the full-time job that is often implicitly or explicitly assumed about work or employment. In South Africa in particular the

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<sup>13</sup> In a classic example of this, a consultant assisting a municipality in a high altitude area in South Africa recently contacted me for information on *Athrixia phyllicoides*. The municipality was proposing growing this species for tea production as an alternative to the local broom trade and a way to stop wild harvesting. But, there are no markets for *Athrixia* tea as yet (Chapter 3), plus no examples of this species being successfully cultivated on a large scale. Still this was seen as a better option to the broom trade, which was perceived to be destructive of the resource base and of little value.

<sup>14</sup> The Mineworkers Development Agency (MDA) is the development and job creation wing of the National Union of Mineworkers (NUM). It was formed in 1987 as a unit of NUM, and in 1997 became an independent company. MDA delivers job creation services to communities affected by mine downscaling through a network of development centres. Their vision is to “contribute to the eradication of poverty in communities affected by mine downsizing with a focus on South Africa” (Barton, undated).

legitimacy of diverse part-time occupations is something that needs to be vigorously advocated: the orthodox position historically in that country is that only full-time, commercially viable, sector-based activities are worth considering as objects of supporting policies". Diversification has numerous benefits, particularly for households living below the poverty line (see Ellis 1999), and should not be seen as 'second best'. Webster (2004) views the situation from the perspective of "making a living" as opposed to "earning a living" and believes that both need attention and support.

There is, thus, a need for realism in terms of what the sector can do, and a need for a pro-poor emphasis. The focus should be on: a) livelihoods and maintaining the safety net rather than solely on enterprise development, and b) on supporting diversification and choice rather than specialisation. However, this is not to say that where there is potential to grow benefits and optimise incomes through a more business-like approach this should not be considered, particularly amongst people who show real entrepreneurship (although this is unlikely to be something that large numbers of people participate in). Attention therefore needs to be paid to ensuring that 'maintaining the safety net' and 'optimising economic success' are not at odds with one another. May *et al.* (1998), in a policy document directed at the South African president's office, mentioned that policies aimed at supporting income generating activities need to be better targeted at the most vulnerable segments of the informal sector. This could be achieved by taking an approach that promotes and strengthens livelihood security, and improves the range of choice with respect to alternative diversification and coping strategies. Reducing vulnerability and enhancing the ability of the poor to cope is as important a dimension of tackling poverty as providing the means to accumulate wealth and assets (May *et al.* 1998, Chapter 1). In this sense, supporting natural resource product commercialisation is mainly a preventative measure averting destitution, although it can have the role of lifting some people out of poverty.

#### ***9.5.5 Recognise the complexity and heterogeneity of the sector***

The diversity of products, markets and livelihood outcomes of natural resource product commercialisation needs to be recognised and appreciated (see Section 9.6 below). While it is possible to draw certain tentative conclusions and to emphasise broad patterns in order to influence policy and national and international frameworks, as done in this section, the complex reality means that practice and intervention will often need to be designed on a more case or 'client' specific basis (Mead and Liedholm 1998, Lawes *et al.* 2004, see Chapters 3-6). For example, this study has shown that different products have varying potentials, diverse constraints and represent different types of livelihood strategies and, therefore, require targeted support. Similarly, different producers (e.g. women versus men, specialised versus diversified) may require directed assistance to address their own specific set of problems and needs.

### **9.5.6 Integrate with other sectors**

The emphasis on a holistic livelihood approach means that support for natural resource commercialisation should, in turn, be part of an integrated strategy for poverty reduction and rural development. This means working across sectors and ensuring that the trade is recognised in local and regional development planning initiatives (Hay 2004). Departments and agencies responsible for welfare, health, rural development, agriculture, economic and enterprise development, and the environment need to be working hand in hand for the improvement of livelihoods. Furthermore, growth and sustainability of the informal sector (or second economy) cannot be achieved without growth in the formal sector (or first economy) (Rogerson 2000, Webster 2004). Macro-economic growth, expansion and diversification of the formal economy, and employment creation is needed to circulate capital and ensure a continued and thriving market for locally produced goods (Webster 2004), as well as provide greater opportunity for those who wish to move out of the trade (mainly the younger producers such as those involved in marula beer trading). It is critical, however, that this is balanced with efforts to support the poorest people, such as the elderly women trading in mats and brooms, who would find it difficult to enter the formal economy (Landman *et al.* 2003).

### **9.5.7 Minimise regulatory barriers**

It has been discussed throughout this thesis that the barriers to entry for natural resource product trading are, on the whole, minimal, allowing some of the poorest people to participate. However, producers and traders themselves pointed out a range of obstacles, mainly related to regulation, which constrained their productivity. For example, while the situation has eased considerably since the apartheid years, informal trading laws that discriminate against seasonal and poor producers and traders in the market place were pointed out in this study and numerous others (e.g. Gyan and Shackleton *in press*, Mavimbela 2004, Rogerson 2004). National legislation may also present barriers (Scherr *et al.* 2003, Sunderland and Ndoye 2004); for example, marula beer producers encountered legal difficulties selling alcohol and were frequently harassed by formal, licensed dealers. Unnecessary bureaucracy and unhelpful, even obtuse, officials were commonly articulated problems in terms of both marketing and raw material access (e.g. woodcraft case study). Proper recognition of the role of the trade by municipalities and inclusion of these activities in their development plans would help to overcome many of these barriers. Access to micro-finance, as discussed below, is another strategy that could assist in reducing the barriers to entry.

### **9.5.8 Improve access to micro-finance – ‘credit for livelihoods’**

As highlighted in the preceding discussion, this study and others (e.g. Marcus 2000, Pereira 2004) have shown that households with multiple sources of income are likely to earn higher incomes from trading as this allows greater cash investment in the activity. A little extra cash can thus greatly ease the situation for producers and traders, helping them to overcome numerous obstacles such as the high costs

of transport. Producers themselves often list cash flow as a major problem and feel access to credit would be extremely beneficial (e.g. Mead and Liedholm 1998, Rogerson 2000, Rogerson and Sithole 2001). Marcus (2000) believes that “low risk micro-credit that is interest capped can contribute fundamentally to sustained horizontal and vertical expansion in production and income for many poor households”. Similarly, Mead and Liedholm (1998) mention for survival-type activities, often all that is needed is “a small amount of the single missing ingredient, working capital”, to sustain the activity and improve outcomes.

Presently government facilitated micro-finance for the informal sector in South Africa is targeted mainly at manufacturing enterprises, which have to present detailed business plans showing their potential for growth and employment creation (May *et al.* 1998, Rogerson 2004). The provision of finance is, thus, aimed primarily at economic growth rather than addressing poverty. Serious restructuring is therefore required if the most vulnerable people engaging in self-employment are to be assisted (Baumann 2001). This means developing new strategies for providing credit for informal, part-time activities (May *et al.* 1998). Baumann (2001, 2004a, 2004b) supports this view, commenting on how South Africa lacks the poverty-orientated micro-finance institutions common in Asia, Latin America and elsewhere in Africa. In these countries, micro-finance services do not assume that the borrower is an entrepreneur running a business, but are rather designed to support poor households’ livelihood strategies. Furthermore, Baumann (2004a) believes that the government in South Africa has not yet done enough to develop credit or saving facilities for the poor and that it “needs to wean itself from an ‘entrepreneurial’ mindset concerning micro-finance and micro-enterprise”. The idea of ‘credit for livelihoods’ has also been advocated by studies on livelihood diversification conducted in Ethiopia and Mali (Carswell 2000, Toulmin *et al.* 2000). By way of caution, however, the provision of micro-finance is not without its problems (Twyman *et al.* 2004). Campbell *et al.* (2002) point out that poor local management of funds and high levels of defaulting are common problems affecting the sustainability of credit schemes, especially in risky, semi-arid environments where people are extremely poor. For this reason, strengthening and building on traditional, often group based, lending and savings schemes (such as ‘stockvels’<sup>15</sup> in South Africa) is often advocated (e.g. Carswell 2000, Toulmin *et al.* 2000, IFAD undated, Baumann 2004a).

#### ***9.5.9 Provide flexible support to build the capacity of producers, traders and organisations***

Institutional support by government and other agencies for the natural resource trade is required, and, as stressed in various parts of this section, this should be seen as support for livelihoods rather than businesses (also see Rogerson 2004) and should take an integrated and flexible approach. Support could come in various forms. The purpose of this section is to highlight potential areas for support or service provision rather than make concrete recommendations.

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<sup>15</sup> Stockvels are informal lending clubs formed mainly by women. Every month members contribute a fixed amount to the club fund. The total contribution is then made available to members on a rotational basis.

Terry (1999), in her policy implications for the craft industry in Botswana, suggested subsidisation of the sector as a route to assist producers. This included subsidised transport, assistance with marketing (e.g. a government supported buyer), accessing new markets and training. Marcus (2000) and Kotze (2001) also mention the potential benefits of facilitated purchasing and marketing. Numerous studies highlight the need for skills training and capacity building as key areas for intervention (e.g. Terry 1999, DACST 1998, Marcus 2000, Rogerson 2000, Scherr *et al.* 2003, Campbell *et al.* in press). Such training could build skills for the production of new and improved products (product development) as well as better entrepreneurial practice. However, case studies show variable impacts, demonstrating the need for careful targeting and packaging of this training. For example, the woodcraft case study suggested that the training provided to woodcarvers had changed little in terms of their mode of operation (Chapter 6). Teaching complex business principles to illiterate and poorly educated people who live on a day-to-day basis is unlikely to have the desired impact. Similarly, the skills to make new, potentially high risk, products are unlikely to be pursued unless there is a guaranteed market for these and the raw material is cheap and readily available: poor rural producers simply cannot afford to experiment (see Chapter 6). Philip (2002) emphasises that training on its own is of little benefit. It needs to be accompanied by a range of support services to be effective. Based on MDA's experiences, she identifies "an enhanced framework for mentoring and counselling services" and "facilitating access to higher value markets" as two key areas for focus alongside training. Building organisational and institutional capacity by assisting producers to organise themselves better so that they have an identity, and can lobby and negotiate with different stakeholders regarding their needs, undertake group activities such as sharing transport to distant markets, and cooperate in terms of, for example, price fixing, etc. is a critical area of intervention (Chapter 8, Scherr *et al.* 2003, Campbell *et al.* in press). Campbell *et al.* (2002) suggest that institutional functioning is a key variable determining livelihood outcomes, and stress that intervention for poverty alleviation must work on strengthening local organisations. Training in resource harvesting and management practices (see below), and awareness of the importance of adhering to access conditions, particularly where producers are dependent on state and private land for raw material, is also crucial. Another potential support role would be to link local producers with private production and marketing organisations (Scherr *et al.* 2003), and to encourage outsourcing as described for woven blinds in Chapter 4.

A service/advisory orientated approach, similar to that of the MDA mentioned above (Philip 2002), may be a good basis on which to build an institutionalised and integrated approach to supporting local level natural resource product commercialisation and to build on what already exists. It has been suggested that this would be most effective at a local government or municipality level, supported by national policies and programmes (May *et al.* 1998, Mead 1999, Kotze 2001, UNDP South Africa 2003, Hay 2004, Rogerson 2004). The integrated craft support strategy being prepared by the uThungulu District Municipality in KwaZulu-Natal, South Africa may be useful in this respect (Hay 2004). Similarly, an

approach currently being tested in Uganda, which offers a range of community-based “forestry advisory services”, including support for the forest product trade, within an integrated framework directed at enhancing livelihood opportunities, could provide an interesting model (Harrison *et al.* 2004).

#### ***9.5.10 Stimulate expanded domestic markets for ‘traditional’ products***

“Domestic markets usually provide larger and more stable outlets than some of the industrial and niche export markets that have tended to attract the attention of intervention programmes recently” (Arnold and Townson 1998). In this study, the importance of local domestic markets has already been highlighted (Chapter 8). It was also discovered that some producers were successfully marketing their traditional products further afield in urban townships, both regionally and nationally. Work by Cocks and Dold (2004a, 2004b) has shown how urban markets are important in the Eastern Cape for traditional products such as brooms and medicines, and that many of these products are purchased for their cultural value and significance. Mkhize *et al.* (2001) cited in a report dealing with reed products (Kotze 2001), believe that potential exists to grow and promote these markets further. They propose that there is a need to stimulate and endorse the use of indigenous products and encourage urban Africans to retain their ties to their rural and cultural roots and to support informal production: this could build on the spirit of the ‘African Renaissance’ and the strong rural-urban linkages that already exist. Contemporary variations on traditional items could also be developed by tapping into the interior design market to reach yet more consumers (Kotze 2001). If such markets could be successfully promoted, then support would be also required to assist rural producers to move their products to these urban markets.

#### ***9.5.11 Diversify products and markets***

Many products have the potential to reach more than a single market, and some markets have the potential to absorb a range of products. A policy brief emanating from a broad, multidisciplinary project on the marula trade (Wynberg *et al.* 2003) emphasised the importance of diversification in species used, products produced, markets traded and players involved – all to reduce the risks associated with natural resource product commercialisation and to extend earnings throughout the year. For example, the kernels remaining after marula beer production can be sold locally or can be processed into oil for sophisticated external, export markets (Wynberg *et al.* 2003). Certain products derived from different species can complement each other – for example, several producers in Bushbuckridge made both mats and brooms, and most made both grass and twig brooms, because they could collect the raw material for both products from the same area and sell these in the same markets. New, private sector initiatives (e.g. reed blinds – Chapter 4) could be encouraged to use ‘outsourcing’ models to expand the markets for existing producers (D. Kotze, pers. comm.). This again suggests the need for a holistic, livelihoods approach that considers the benefits derived from a variety of products and activities rather than focusing on a single, high value product and market.

#### ***9.5.12 Recognise locally produced crafts for the tourism market***

Local crafts that are produced for the tourism market (sometimes in conjunction with local, traditional markets) need to be appreciated, promoted and provided with a special niche by the formal, tourist-linked sector. Too often these goods are thought of as inferior to imported or factory produced items (Chapter 6). A clear illustration of this is the lack of interest shown by the Kruger National Park for locally produced craft. This issue needs attention by local tourism boards, conservation agencies and district and local municipal authorities. Perhaps a more specific and local version of the ‘Proudly South African’ campaign is required. Another possibility would be for government to offer an incentive to bulk buyers of local products, such as some form of tax relief that relates to the quantity of these products purchased. Attempts to stimulate this market would, however, need to be accompanied by appropriate support to local producers to ensure the timely and consistent delivery of quality products.

#### ***9.5.13 Recognise the importance of private land and private land owners***

Two of the four products studied for this thesis were harvested primarily from privately owned farm and forestry land. Further investigation revealed that numerous traded natural resource products in South Africa are sourced from private land (see Chapter 8). This situation has received relatively little attention, and yet private land looks to be a major source of raw material. Farmers and landowners need to be encouraged to provide the rural poor with access to what might be termed ‘secondary’ products on their lands, through awareness raising and, perhaps, some sort of incentive scheme. This could include support from local conservation agencies in terms of developing systems for the sustainable management of these resources and the broader landscape within which they occur, and could be linked into the conservancy approach that is becoming popular amongst groups of private landowners.

#### ***9.5.14 Improve resource access and management, and achieve sustainability***

The need to improve resource access on private land, an important area identified by this study, is emphasised above. However, there is also a need to improve access and rights to resources on state land and, in some instances, communal land. This study has shown that despite policy (and rhetoric) to the contrary, resources on state land, other than those managed by the Department of Water Affairs and Forestry, are still difficult for producers to access. Some of the species used for the products studied here, e.g. mats and brooms, show good potential for sustainable use (Chapter 3 and Chapter 4). These, thus, provide an ideal opportunity for conservation managers to demonstrate their commitment to rural neighbours and to involve local producers in resource management efforts. Advocacy is needed to translate this opportunity into practice. In communal areas, institutional weaknesses are resulting in some local contestation over who has access rights to particular resources (e.g. reed harvesting, Chapter 4), while also contributing to the poor management of these resources, threatening their long-term sustainability. Major government effort and commitment is required to rebuild and support local institutions for natural resource management in the communal areas of the country (Lawes *et al.* 2004).

In some cases, such as carving wood, new and innovative approaches are needed to find alternative supplies (Chapter 6, Campbell *et al.* in press). The need to manage the resource base is one of the central features differentiating the natural resource trade from other spheres of local production and income generation; it implies that supporting and promoting the trade must go hand in hand with effective management of the resource. This means control and regulation of access and off-take, but through local involvement rather than top-down enforcement. More effort is needed in this area in terms of research on sustainable off-take and alternative supplies (e.g. cultivation), and in testing and adapting appropriate local level management approaches.

## 9.6 CONCLUDING REMARKS: LESSONS FROM THIS STUDY

This thesis has demonstrated that the commercialisation of natural resource products does have a significant role to play in contributing to rural livelihood security and poverty alleviation in South Africa. Like these products in many other parts of the world, they are key in providing a safety net for the poor and women in particular (Chapter 7). However, there were also numerous ways in which the findings from this study diverged from current understandings, narratives and conventional wisdom. These are summarised in Table 9.1, which contrasts key findings and insights gained from this research with some of the dominant viewpoints and approaches found in the NTFP literature, and amongst practitioners and other stakeholders operating in this sphere.

Table 9.1: Key findings and insights gained from this research assessed against some of the dominant viewpoints and approaches found in the literature, particularly with respect to local level commercialisation of natural resource products

	<b>Findings and insights from the current work</b>	<b>Prevailing viewpoints and approaches wrt natural resource product commercialisation and rural development</b>
1	Local, endogenous markets are stable, reliable and important and can result in the redistribution of wealth within the community. External markets may however be needed to ensure growth.	External, export markets are the only real way forward, and the value of local markets is often down played. Indeed local markets have been portrayed as fickle and suffering from boom and bust cycles (Padoch 1992).
2	Many natural resource products have significant cultural value, competitive advantage and are often preferred by consumers.	Natural resource products are inferior goods that are likely to be substituted by cheaper, manufactured commodities.
3	Participants enter the trade out of choice (quality of life, work at home), as well as desperation or through lack of choice. This suggests that for some people there are real advantages and benefits from undertaking these activities, while for others it is because they have few other options.	Participants trade in natural resource products as a last resort.
4	Urban markets exist for numerous products and this is often linked to cultural value.	Urban dwellers substitute traditional products with modern goods.
5	The trade in a single product, and across different products, represents a continuum across specialisation, diversification, coping and survival strategies. The role of the trade in relation to the overall household livelihood portfolio is important. Trading is frequently a part-time activity that supplements and complements other income sources. It needs to be viewed from this perspective.	The trade is taken up as either a coping strategy or, in the case of high value products, by the elite as a business opportunity. Trading is seldom assessed within the context of the overall livelihood portfolio and needs of households. Indeed, it tends to be seen as a micro-enterprise or business activity and judged on its economic success.
6	Close examination of the variation in income reveals real poverty reduction potential for some individuals and products – conclusions need to draw on the variation that exists.	Natural resource products have little to no poverty reduction potential, as incomes are so low. But these conclusions are drawn on summarised data (means, medians), which hide the high incomes earned by some



Findings and insights from the current work		Prevailing viewpoints and approaches wrt natural resource product commercialisation and rural development
		individuals. The tendency is to create a picture that homogenises the benefits of trading.
7	Low incomes may be the result of the level of participation in the trade that producers and traders choose for themselves.	Low incomes are due to the poor potential of natural resource products.
8	Low incomes from trading when added to other cash sources within the household can pull the household into a higher income bracket.	Incomes from trading are often assessed in isolation, without reference to how they interact with other income sources. This undervalues their role.
9	People's motivation for joining the trade and the innate characteristics of producers and traders such as ability, entrepreneurial flair, commitment and determination may have as important a role as external factors in determining income.	Income is largely determined by external factors (markets, resource characteristics, access, etc.) and out of the hands of producers and traders themselves.
10	The trade can be seen in different situations as a safety net, a diversification strategy and a means to improve livelihood security and household income, but rarely as a poverty trap, especially if the context in which trading takes place is properly acknowledged.	There is increasing reference to the trade in natural resource products as a potential poverty trap.
11	Returns to labour from trading are often as good as those from related informal activities (e.g. agriculture which is extremely risky in dry environments) and local wage labour, although generally lower than the minimum formal wage rate or the poverty line.	Returns lower than most other activities, or assumed to be without systematic investigation.
12	Local people themselves continually emphasise the importance and value of the trade for different dimensions of their livelihoods. Their distress when faced with problems (such as being denied access to resources) is very real, indicating the importance of the trade to them. People's own point of view is critical. It comes down to – who should make 'value' judgements on value and importance? <sup>16</sup>	Importance and value to livelihoods and poverty alleviation is generally judged from an outside, primarily financial or economic, perspective. The recent swing by observers to a more pessimistic viewpoint seems more academic than based on participants, own perspectives.
13	The local level trade is worthy of support and investment and could be done at low cost. Domestic markets need attention.	Investigation of new external markets and the development of sophisticated, processed, value-added products tends to be seen as the only area worthy of investment and is extremely costly (e.g. see comments by Scherr 2004 where she criticises this approach).
14	The trade has both poverty mitigation and poverty reduction potential, although the latter may be limited.	Increasingly, the pessimistic narrative, which sees natural resource product trading as having little poverty reduction potential, is taking hold.
15	Local people have shown considerable resourcefulness in how they have engaged in local level natural resource trading. They see the trade as an opportunity.	Local initiative and resourcefulness are seldom appreciated, with the focus being on facilitating new external markets for a few people.
16	The potential of the natural resource trade challenges existing orthodoxies regarding agriculture as the focus for rural development, especially in arid environments and in South Africa.	Rural development means agricultural development.
17	There was little evidence of capture and appropriation of benefits from trading by elites and more powerful stakeholders. Perhaps the incomes from local level trading are just too modest and better alternatives exist for these groups.	There is a danger of capture and appropriation of benefits by elites.
18	Where intermediate traders formed part of the market chain they were as poor as producers – certainly within local markets.	All intermediaries are better off than producers and exploitative.
19	The impacts of commercialisation on the resource are variable and relate to the attributes of the resource and the management systems in place.	Commercialisation leads to over harvesting.

The differing conclusions reached for some of the issues in Table 9.1 may be a function of differences in context between this study and others, a factor that has already been mentioned as critical when interpreting the importance and contribution of the natural resource trade to livelihoods and poverty

<sup>16</sup> This point is well captured in the following quote from Toulmin *et al.* (2000): "...serve to emphasise the need for caution in assuming that the categories and concepts used by researchers can map perfectly onto the lives of other people and the perceptions they may have of their options and strategies."

alleviation (Section 9.5 above, Figure 9.1). In particular, this study was undertaken in a semi-arid region, while much of the existing literature and conceptual analysis is based on work from the humid tropics where there are often more options (and competition) in terms of land use and livelihood strategies (Wunder 2001). South Africa's rural areas are also atypical compared to other developing regions – a function of the country's history (Chapter 2, Section 9.5 above). Subsistence and smallholder agricultural production, in particular, is of low significance, forcing households into the cash economy (Section 9.5). This setting, combined with high levels of unemployment and HIV/AIDS incidence symptomatic of southern Africa (Chapter 2), was central in framing and interpreting the findings from this study.

Another possible contributor to the differences highlighted in Table 9.1 could be the attention paid in this study to drawing out complexity and variability. This is something that other observers have recognised as central to achieving a more in-depth understanding of poverty and livelihoods, especially within dynamic dryland systems (Twyman *et al.* 2004). Research often involves a search for regularity and generality, as it is assumed that only in this way can theory be advanced (Lotz-Sisitka and Raven 2004). This study has shown that careful and detailed analysis of the variation in the data may reveal insights that are often lost when data are summarised and aggregated. For example, reporting only central tendencies (means and medians) hides the substantive incomes that some producers can obtain. Qualitative case history information, as well as relating findings to the specific context of the research and local people's own perceptions and knowledge, also provide valuable perspective, especially when dealing with multifaceted and interactive social, economic and ecological systems. This study has emphasised, time after time, the difficulties associated in drawing conclusions and making generalisations about natural resource commercialisation, even within a single study area. It has been shown that for both a single product and across different products:

- some people engage in the trade on a full-time basis while for others it is a part-time activity (Table 9.1, Points 3, 5 and 7),
- some people earn high incomes while for others their returns are much more marginal (Table 9.1, Point 6),
- some people would prefer to be doing something else while others are content (Table 9.1, Point 3),
- some people view the trade as their main source of income while for others it is a form of 'pocket money' (Table 9.1, Points 3 and 5),
- some people see the trade as a long-term, specialisation strategy while for others it is a temporary survival strategy (Table 9.1, Points 5 and 10),
- some people have what it takes to do well while others do not (Table 9.1, Point 9),
- some people are lifted out of poverty while for others the trade makes them less poor, vulnerable or destitute (Table 9.1, Points 6, 8 and 14), and so on.

Furthermore, as discussed in Section 9.3, these outcomes are also influenced in varying ways by multiple factors including the specific bio-physical and socio-economic conditions, the type of product and its quality and sustainability characteristics, the unique circumstances of households, the market opportunities, the type and degree of external support (if any), and the attributes of individual producers (Figure 9.1). This suggests that, in terms of advancing our broader understanding of local level natural resource commercialisation, a more nuanced perspective is needed that includes all the ‘ifs and buts’ and uncertainties. Generalisations should be ‘fuzzy’ and clearly recognise variability and exceptions (Bassey 1999, Lotz-Sistika and Raven 2004). Without this we are in danger of sending the wrong, or certainly a misleading, message out to donors and policy- and decision-makers, possibly diverting attention away from a sector that certainly deserves more support. This study has suggested, with reference back to the discourse and debates outlined in Chapter 1 and Chapter 7, that there is reason to be both optimistic and pessimistic about the role that natural resource commercialisation can play in poverty alleviation and sustainable development, and that a balance is required between these two extreme viewpoints (Chapter 1, Section 1.1). This may be best achieved by seeing natural resource commercialisation as one component of a multi-sectoral approach for tackling poverty, which expands the options that poor rural people have to help them cope under adversity and to diversify their livelihood base. With respect to building on the livelihood and poverty benefits of natural resource product trading, perhaps a case-by-case approach in which each situation is analysed on its own merits, as suggested by Fortmann *et al.* (2001) for community-based natural resource management systems, is required. The implication of this is that heterogeneity and complexity must be embraced (see policy issues), and that interventions may need to be either specifically targeted or inclusive and service orientated, responding to individual producers’ needs and priorities, like the model the Mineworkers Development Agency is pursuing, as discussed in Section 9.5.10 above.

As a closing note, I would like to quote from a recent, thought-provoking essay on poverty and conservation by Steven Sanderson (2005) in which he writes: “Rural lives are lived in small places, not in sectoral strategies. Poverty alleviation needs to be individuated, not globalised. Analysis must not be simply curiosity driven, it must respond to problems and needs”. He then moves on to say that: “this raises the intriguing problem: how to sell poverty alleviation work that will not make the aggregate numbers move” (certainly in any substantial way), that is locally or context specific and that operates at the micro-scale. This is a challenge that I hope I have risen to in this thesis, and is a matter that all of us working at the environment-development interface need to keep at the forefront of our thinking and analysis.

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