Love in Times of Climate Change

How an idea of Adaptation to Climate Change travels to northern Tanzania

Sara de Wit

Love in Times of Climate Change:

How an idea of Adaptation to Climate Change travels to northern Tanzania

Inaugural-Dissertation

to complete the doctorate

from the Faculty of Arts and Humanities

of the University of Cologne

in the subject of social and cultural anthropology

presented by

Sara de Wit

Born on 3 October 1982

In Santiago (Chile)

Cologne, December 2016

In loving memory of

my mother Elisabeth (1950-2002),

who always travels with me

Acknowledgements

This dissertation is the fruit of a research project carried out within the context of the Priority Program "Adaptation and Creativity in Africa: Technologies and Significations in the Production of Order and Disorder" (SPP1448). It has been a great privilege to participate in this extraordinary interdisciplinary framework, which has not only been intellectually inspiring but has also contributed to a sense of belonging. I wish to thank the German Research Council (DFG) for providing financial support, and the Co-Spokespersons Richard Rottenburg and Ulf Engel for creating and holding this framework together. This research has in turn formed a part of the jointly coordinated sub-project between the University of Cologne, Bayreuth and Bonn: "Translating the Adaptation to Climate Change Paradigm in Eastern Africa". My appreciation goes to the project-leaders Detlef Müller-Mahn and Martin Doevenspeck, and my supervisor Michael Bollig, for his support, knowledge and confidence in my work, and for giving me so much freedom. I owe much to my exchange with all the juniors and principal investigators, and to the support of my companions Michael Stasik, Florian Weisser, Jullia Willers and Eva Riedke of the SPP, who have made this journey a particularly enriching experience. I feel truly blessed to have had Dorothy Hodgson as my second supervisor, whose expertise, dedication, and critical eye have been an abundant source of inspiration. Due to her tremendously important work on the Maasai, I believe that this study stands on firmer ground. Other scholars who have, in the course of this research, provided me with insightful comments are Ben Orlove, Mike Hulme, and Terrence McCabe. My dear colleagues and friends from the University of Cologne – The "Marienburgers": Thekla Kelbert, Anne-Christina Achterberg-Boness, Christiane Naumann, Diego Menestrey and Elsemi Olwage – have been an anchor of joy in the past years in an otherwise lonely trajectory. I also wish to thank Monika Feinen for the cartography and Pax Amphlett for proofreading this whole manuscript.

Without my friends and informants in Tanzania this research would not have been possible. Seth and Caroline's hospitality has been boundless. "Thank you for having accepted me into your family". My gratitude also goes to my research assistants Naini Mollel, Musa Kamaika and Saruni Shuaka Kaleya, and to Joyce Msigwa from the University of Dar es Salaam for all the audio translations and transcriptions. I am particularly indebted to Saruni for uncountable hours spent walking through the plains of Terrat with me, and to transcribing and translating policy workhops with such care and devotion, as well as for your kindness and eagerness to learn. I am grateful for our serendipitous encounter. The Maasai family of Petro Lesindi, Mama Eliya, Mama Nasinyari, Logolie, Sembeyan, Banji and all the children who allowed me to dwell in their *boma* deserve special words of praise. To Petro: thank you for providing me with a house and for allowing me to share in the intimate space of the lifeworlds of your family, *achenaleng*! I owe my deepest gratitude to all my informants and to the villagers of Terrat, who have shared their stories, hopes, dreams and anxieties with me. The support of Israel, the VEO of Terrat, was indispensable in gaining access to the field. My gratitude also goes to my dear friend Beny, who helped me to fix my 20-year old

Suzuki Samurai more than a dozen times. I cherish the joyful memories of the time that Leboi spent with me herding cattle and making jokes. I also acknowledge the assistance of TNRF and all the other NGOs in Arusha. My admiration of Alais Ole Morindat cannot be left unmentioned, for being such an inspirational visionary and for his continuous effort to fight for the rights of the Maasai communities in Tanzania. The permission granted by the Tanzania Commission for Science and Technology (COSTECH) to carry out my research is also acknowledged.

Finally, my heart-felt gratitude goes to my friends and family – who have promised to finally read my work – which I doubt they will do, but that's fine. If I were you, I would also spend my time on things that I have been longing to do, for too long. I am full of awe of my father's lifelong efforts in understanding the world through the eyes of another, which must have inspired me, and I thank you for endowing me with a great dose of perseverance. And I thank Yaelita, for illuminating our lives with your colourful presence. Thomas Oudman deserves credit for the rainfall graphs and for bringing to my attention the "folktale of the Indian and the meteorologist", and also for sharing in a parallel "island universe" on Texel, while we were both struggling our way through the existential loneliness of doing a PhD. Appreciation goes to my uncle Dick for making me change the first sentence of this manuscript, which was indeed too long, and to my aunt Trudie for giving me permission to use her beautiful painting for chapter 3. Your graceful existence is a true source of happiness. I also owe a big thanks to Ton Verbeek and Geke Westera for providing me with shelter so that I could finish this dissertation. The encouragement of my dear friend Antje Visser has meant more to me than she might possibly be aware of. The encounter with my friend Jörg Döbereiner in Tanzania has greatly enriched my fieldwork, and I am also thankful for all your invaluable comments on my chapters. I am indebted to my anthropologist friend André Bakker in Brazil, whose luminosity left important traces on chapter 8, and, on my life. The depth of my love and gratitude for my brother and sister extends far beyond the realms of language, but I know that I am, because you are. This "Comic Sans" is for you two. One person without whom this thesis would have never seen daylight is Chris, whose faith, love and extraordinary patience elevate my existence like a divine melody.

Preview

Imagine an atmospheric scientist, a journalist, an NGO worker, a donor, a herbalist, a farmer, a fisherman, an activist, a religious leader, a government official, a traditional leader, two Maasai pastoralists, a filmmaker and an anthropologist engaged in a conversation. Most of the interlocutors speak English, some speak Swahili, and only two speak *Maa*. The tone is somewhat urgent. The story that has brought them together is about a world at risk. Indeed, it is the highly complex story and observation of an altered climate - which scientists have come to subsume under the denominator of climate change or global warming - that made all these people convene. These two Maasai men have travelled from afar and appear somewhat puzzled. There is no word for this pending catastrophe in their language yet. It is a story that needs to bridge not only linguistic barriers but also cultural ones. It was at that particular day in Dar es Salaam where I witnessed for the first time the unfolding of a climate-change spectacle. It was also the day on which the contours of "my field" most notably crystallized, and after which I began to have an idea of which trails to track.

And so I followed the two Maasai men to their village Terrat, where I spent many hours walking and herding cattle, trying to understand what climate change means to the pastoral Maasai of this particular locality. I also followed Joseph - the NGO worker who seemed the embodiment of a "development broker" - to Arusha. He illuminated the historical complexities between the irreconcilable worlds of the Tanzanian government and Maasai realities. And there was Eric, a representative of the civil society in Tanzania who had pushed the climate change agenda in Tanzania further. I visited him in Dar es Salaam, but our paths also crossed on many other occasions such as the international climate change conferences in Durban and Doha. I also followed climate scientists like Madumi to the University of Dar es Salaam, and the filmmaker to his studio where he edited his own version of the story. And I tried to follow government officials such as Paul, but very often to no avail, for they did not have time for researchers. Yet I received documents: draft policies, official policies, development policies, climate change strategies, adaptation plans, mitigation plans, poverty reduction plans, communication plans, assessment reports, evaluation reports, workshop reports and so on. And there were conferences, meetings, workshops, sensitization events, public hearings, and seminars – all revolving around the question of how to adapt to a changing climate. A great part of my following this climate-change spectacle thus consisted of following the actors and their script, that they performed again and again in a different setting and on a different stage. This thesis tells the story of a travelling story and all the varying lifeworlds that it has entangled and brought to life along its way. Following this trajectory provides insight into how climate change, as a statistical description, becomes an agentive force and imaginative resource that is inexhaustible in meaning; a power that operates well beyond its atmospheric properties.

Contents

5

Adaptation: A Workshop

6

To See or not to See – On Climate Change and Epistemology

7

Terrat Village in Maasailand

Acronyms

ALAPA	Association for Law and Advocacy for Pastoralists
AMCEN	African Ministerial Conference on the Environment
AR5	Fifth Assessment Report (IPCC)
ASAL	Arid and Semi-Arid Lands
COP	Conference of the Parties
CORDS	Community Research and Development Services
CSO	Civil Society Organization
DoE	Division of Environment
EMA	Environmental Management Act
FGM	Female Genital Mutilation/ Modification
GCA	Game Controlled Area
IIED	International Institute for Environment and Development
IK(S)	Indigenous Knowledge (System)
IMF	International Monetary Fund
IWGIA	International Work Group for Indigenous Affairs
IPCC	Intergovernmental Panel on Climate Change
LDCs	Least Developed Countries
MKUKUTA II	National Strategy for Growth and Reduction of Poverty (NSGRP II)
NAMA	Nationally Appropriate Mitigation Actions
NAP	National Adaptation Plans
NAPA	National Adaptation Programme of Action
NCCS	National Climate Change Strategy
NCCCS	National Climate Change Communication Strategy
NCCSC	National Climate Change Steering Committee
NCCTC	National Climate Change Technical Committee
NCCFP	National Climate Change Focal Point

NGO	Non-Governmental Organization
NIPCC	National Indigenous Peoples' Coordinating Committee
OBC	Ortello Business Corporation
ODA	Official Development Assistance
PES	Payments for Ecosystem Services
PINGO's	Pastoralists Indigenous Non Governmental Organizations Forum
REDD	Reducing Emissions of Deforestation and forest Degradation
TAPHGO	Tanzania Pastoralists Hunter & Gatherers Organization
TAR	Third Assessment Report (IPCC)
TIPTCC	Tanzania Indigenous Peoples' Taskforce on Climate Change
TNRF	Tanzania Natural Resources Forum
TMA	Tanzania Meteorological Agency
VPO	Vice President's Office
UCRT	Ujamaa Community Resource Team
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
URT	United Republic of Tanzania
WMO	World Meteorological Organization
WRI	World Resources Institute

Prelude

Since the "discovery" of Easter Island in 1772 – the most remote inhabited island in the world – until today researchers have been occupied with unravelling the great mystery of how a flourishing civilization came to an abrupt end. Located in the South of the Pacific Ocean, the island (also called *Rapa Nui*) became famous for the gigantic and spectacular stone statues that were built by the inhabitants. The generally accepted story goes that when Admiral Roggeveen arrived as the first European, he encountered a society that was in an extremely primitive state, engaged in continuous warfare and resorting to cannibalism as a desperate attempt to supplement the meagre food supplies available on the island (Ponting 1991, in: Boersema 2011: 16). Scientists were left with a conundrum: how did the inhabitants get there in the first place? Where did the people come from? What drove them to make those colossal statues? What do they signify? And how did they transport these massive stones? But the most debated issue has been the enigmatic societal collapse of this remarkable culture. In the attempt to reconstruct the civilization's history, several researchers came to conclude that it was the inhabitants' unsustainable relationship with the natural environment that caused its destruction.[1] According to this theory, for the transport of the statues (or *moai*) – of which hundreds have been found scattered around the island – the population needed to cut down an extensive amount of trees. Moreover, as the population grew they started to clear the land in order to grow crops. When they had cut down the last tree they lacked the timber to make ocean-going canoes, which they had formerly used for fishing. The deforestation of the island also led to erosion and a decline in the overall food supply, and ultimately the Easter Islanders had outstripped the land's capacity to feed them all.[2] Put another way, the irresponsible relationship with their environment had bereaved the inhabitants of Rapa Nui of their own home.

In the course of the modern environmental era that began around the 1970s, the story of *Rapa Nui* has turned into an icon of catastrophic warning for the international community, leaving an indelible mark upon man's (green) consciousness. An inevitable question that emerged during this time was whether humanity is about to face a similar scenario if we continue to deplete the environment and the ozone layer at the same ongoing pace. Til today the island is still seen as a microcosm in order to demonstrate that a society's unsustainable use of the natural environment

[1] See for example *A Green History of the World* (Clive Ponting 1991); or *Collapse: How Societies Choose to Fail or Succeed* (Jared Diamond 1995). For a more popular account see for example the documentary: *The Mystery of Easter Island:* http://www.youtube.com/watch?v=5DBTtC4J0OY&feature=related.
[2] Documentary *The Lost Gods of Easter Island* (David Attenborough, BBC 2005).

can entail an apocalyptic ending. This conclusion triggered the writing of several doomsday scenarios and the development of so-called *collapse* theories (Ponting 1991; Tainter 1988; Diamond 2005). Other academics compared the situation of Easter Island with the Club of Rome's 1972 "Limits to Growth" model, and a striking comparison was made between the causality of the depletion of natural resources, population growth, and finally the rather abrupt breakdown of a human system (Bahn and Flenley in, Boersema 2011: 18). The influential economist William Nordhaus also examined the "ecological limits" or "levels of tolerance" of a system before it would collapse. This approach gave further impetus to thinking about the (im)possibilities of human adaptation to a changing natural system – a concern that takes centre stage in current climate-change debates. Even though both human and ecological systems were considered, Nordhaus's examination was essentially an ecological approach (Nordhaus 1975 in, Schipper 2009: 366).

Thus Easter Island's unfortunate fate has in the first place predominantly been attributed to human practices. In fact, the deforestation of the landscape was seen as a result of the cultural "needs", since both the *moai* statues and agricultural practices required the extensive felling of trees. Secondly – and now we touch upon an interesting paradox – it is the same "highly civilized" and remarkable culture that did so many stupid things to the environment, and was allegedly incapable of adapting to a changing natural environment. So the popular story goes that when the islanders cut down the last tree, the *moai* culture could no longer be sustained. Notwithstanding the fact that abovementioned theories address the relationship between the human and natural systems, this line of reasoning can be characterized as *environmental determinism*. This theory assumes a mono-causal explanation for human and cultural change, and sees the environment as the prime (if not sole) driver for change. According to this view it is thus basically stated that humans are – at least ultimately – determined by their natural environment. As we shall see below, environmental or ecological deterministic thinking not only coloured the historiography of Easter Island, but also left its traces on the conceptualizing of adaptation in relation to broader environmental issues like climate change.

A similar story that has come to serve as a silent testimony for the alleged devastating consequences of climate change was the discovery in 1903 of the remains of a former prosperous Neolithic farming society, the oasis site of Anau, in the arid lands of Turkmenistan in Central Asia (dating around 4500 BC). Geologist-archaeologist Raphael Pumpelly, leading an archeological expedition, joined by American geographer Elsworth Huntington, were confronted in their expedition with the enigma of a deserted region that had once been a thriving town

(Pumpelly 1908, in Rosen 2007: 1). This finding led Pumpelly to formulate the foundations of the so-called "Oasis Theory", which referred to the origins of agriculture and assumed that in drier periods humans, animals and plants converged in oasis-like, rich localities elsewhere. This fieldwork experience also profoundly influenced Huntington, who then wrote his landmark book *Civilization and Climate* (Huntington 1915/ 1924), which consequently formulated the position that since then has come to be known as "climate determinism" (Rosen 2007: 1). Both iconic discoveries came to support the idea that changes in the climate and environment were the sole root cause that brought these flourishing civilizations to an end. The difference however between the latter example and the former is that the Easter Islanders were considered to be culpable themselves for environmental degradation, while the Neolithic farmers were supposedly hit by climatic changes that pushed their adaptive capacity to its limits. These exemplary expeditions have thus exerted considerable influence on intellectual orientations that deal with human-environment relations. As environmental archaeologist Arlene Miller Rosen explains, it was only in the 1960s that archaeologists began to realize that these mono-causal explanations for major social changes were far too simplistic, a realiziation that led to an appreciation of in-depth research into the interaction between many segments of society that are at least as complex as the changing environment. Archaeologists now understand that people's perception of nature is crucial – along with other intricate stressors as laid out in political and historical ecology – in the ways people relate and adjust to environmental change (Rosen 2007: 2). But before elaborating on this point the case of Easter Island deserves further attention for reasons that will be explicated below.

In the beginning of 2011 biologist and environmental scientist Jan Boersema published a fairly controversial book called *Beelden van Paaseiland* (Images of Easter Island) in which he radically opposes the existing collapse theories about Easter Island's fate. For his re-examination of the ecological and cultural history of the island, Boersema began to delve into the original journals of the first explorers. Little did he know that a startling and revealing journey awaited him. Soon he stumbled upon remarkable details that countered all the former assumptions about the islanders' deplorable condition at the time when the first Europeans arrived (Boersema 2011: 18-21). According to the written sources the first Europeans found a fertile island, with no obvious traces of erosion, and a population that was strong and in good health. Moreover, the variety of fruits and vegetables available on the island enabled the inhabitants to trade with the foreigners (Mulert 1911: 125, in: Boersema 2011: 20). The mystery deepened. The explorers indeed found an island that had been stripped of trees, and a statue culture that appeared to be no longer part and parcel of daily life. However, archaeological and archival evidence show that the *moai* culture

gradually gave way to a sustainable "birdmen culture" that suited the changed ecological circumstances better, and that the real collapse should be attributed to a different source. Every year around September seabirds visited the island to breed, announcing the spring. The seabirds' eggs were initially embraced as a welcome culinary product, and later became identified with the creator spirit Make Make, with fertility and (pro)creation. With the arrival of the new season a new religious leader – the birdman – was chosen to represent Make Make on Earth (Boersema 2011: 131- 137), which thus became engrained in the religious and political culture of the islanders.

In addition to this, statistical recalculations based on pre-modern societies' population growth rates have indicated that never have more than four or five thousand people dwelled on Easter Island (ibid: 157); a great contrast with the ten thousand people (or even more) that were formerly assumed to have lived there in the heyday of the civilization. Thus when the Europeans "discovered" *Rapa Nui,* they encountered a population growth rate that was in line with historical trends. Botanic evidence has furthermore demonstrated that the Polynesian rat made it impossible for the forest to regenerate, which underpins the conclusion that the cultural practices were not the root cause of the massive deforestation. The argument is thus turned around: the *moai* culture itself did not bring the forest to an end, but it was the unforeseen deforestation of the island that meant the end of the statue culture (ibid: 234). What this alternative explanation points out is that the end of the *moai* culture did not mean the end of a civilization, but that along with a gradually changing ecosystem an alternative socio-cultural, political and religious development took place that enabled the islanders to adapt to the new circumstances.

Against this background it can be said that a crucial element that is overlooked in former collapse narratives is that this cult around the birdmen was not the reminiscence of what once used to be a great civilization, but rather a continuation of it that enabled the islanders to attain a new balance. Hence, Boersema concludes that the history of Easter Island can better be characterized by the terms continuity and change, rather than collapse and loss (Boersema 2011: 138). It is worth mentioning that a "real" collapse did take place on Easter Island, but the author demonstrates that this did not happen prior to, but *after* the arrival of the Europeans. The serious decline of the population began in the second half of the nineteenth century, which coincided with the arrival of the Peruvians in 1862, who needed labourers to work on their plantations. This resulted in the recruitment of slaves, and within less than six months more than a third of the population was captured and deported to South America. In their "new world" the Easter Islanders were exposed to the smallpox virus. Due to international pressure some of the slaves

were repatriated, which enabled the virus to spread around the whole island. This sequence of tragedies inaugurated the darkest period of the history of the island. Finally in 1877, of the approximately four thousand inhabitants that were present before the Peruvians arrived, the number of people who survived counted 111. As Boersema rightfully points out, this can be characterized as a "real" collapse, since within less than a decade a society lost its political and religious leaders, its traditional knowledge and rituals. In brief, the social and cultural system disappeared, and consequently the inhabitants lost the resilience to adapt (ibid: 178-186).

The story of Rapa Nui has to be understood as a teaser to the thesis that follows. It forms a telling microcosm of the broader politics of knowledge revolving around human-environment relations in general, and adaptation in particular. It is an example that can be characterized as a "rupture" in the historiography of Easter Island. It is indicative of how competing (and erroneous) narratives about a culture's adaptive capacities and unsustainable relationship with nature have been reproduced and developed over time. It appeared that the former "collapse authors" (Diamond, Ponting and others) did not carefully ground their theories upon scientific sources. It shows us that they reproduced existing assumptions – highly informed by alarmist imaginations – that led to misrepresentations of the ecological history of the island instead. It is most probably not a coincidence that the collapse theories emerged in a time of worldwide growing environmental concern, in which an increasingly prophesied ecological apocalypse became part of the popular global imagination. It is (at least partly) within this ideological framework that we should understand how thinking about adaptation has been informed and has evolved over time. Furthermore, in the chapters that follow it will be argued that, due to the increasing sense of urgency sparked by the notion of climate change, climate determinism has re-emerged within the research agenda as an explanatory framework (cf. Hulme 2011a) and thus will be subject to critical scrutiny in this research.

Introduction

A positioning, or: what this thesis is *not* about

> "Climate change is not "a problem" waiting for "a solution". It is an environmental, cultural and political phenomenon which is re-shaping the way we think about ourselves, about our societies and about humanity's place on earth."
>
> Mike Hulme 2010a: 171

It is perhaps somewhat unusual to begin a thesis about what it is not. But considering the vast amount of literature dealing with the notions "adaptation" and "climate change" – and the encompassing theoretical scope - I deem it easier to begin by leaving some things behind. If we were to pick a foundational story that characterizes the way we view and narrate the dawn of the twenty-first century, few people would disagree that this can be justifiably be captured by telling a tale about *crisis*. In his inaugural address in 2009 President Barack Obama defined contemporary American history by declaring: "we are in the midst of crisis" (Roitman 2014: 1). Six years later in a similar attempt to characterize the moment's historicity during the State of the Union Speech, Obama voiced a more positive note: "The shadow of crisis has passed" (Obama, State of the Union Speech 2015).[3] In his speech President Obama continued to list the manifold crises that his administration has surmounted, and mentioned the major challenges and missions that are still ahead:

> And no challenge, no challenge poses a greater threat to future generations than climate change. 2014 was the planet's warmest year on record. And one year doesn't make a trend, but this does: fourteen of the fifteen warmest years on record have all fallen in the first fifteen years of this century. I have heard some folks trying to dodge the evidence by saying they are not scientists, and we don't have enough information to act. Well, I am not a scientist either. But you know what; I know a lot of really good scientists at NASA and NOAA and at our major universities. And the best scientists in the world are all telling us that our activities are changing the climate. And if we don't act forcefully, we'll continue to see rising oceans, longer and hotter heat waves; dangerous droughts and floods and massive disruptions that can trigger greater migration and conflict and hunger around the globe (Obama 2015, State of the Union Speech).

[3] President Barack Obama during the State of the Union Speech 2015: http://www.whitehouse.gov/sotu

If not a metanarrative, climate change has certainly come to occupy the role of a Big Story. It has become an all-embracing narrative that engulfs geo-political, intellectual, economic, spiritual and socio-cultural spheres of life. As a journalist recently exclaimed on the radio: "Climate change is the biggest story ever!" If we take a look at the dominant framing of climate change – both in popular accounts and in scientific predictions – a picture of doom and decay emerges. It has become a story that very well deserves the label of being the biggest crisis facing humanity today. Let us consider only a few of the high-profile climate change "whistleblowers" (Hamblyn 2009). For instance, Tim Flannery cautioned, "If humans pursue a business-as-usual course for the first half century, I believe the collapse of civilization due to climate change becomes inevitable" (Flannery 2005: 209). Al Gore warned, "We have to act together to save this global crisis. Our ability to live is what is at stake!" (Al Gore, *An Inconvenient Truth*). Also well-known doomsday thinker James Lovelock has forcefully argued that "global heating" is threatening civilization itself (Lovelock 2006). And recently political activist Naomi Klein wrote in a bestselling book: "Faced with a crisis that threatens our survival as a species, our entire culture is continuing to do the very thing that caused the crisis, only with an extra dose of elbow behind it" (Klein 2014: 2).[4] And indeed, science unequivocally shows that there are reasons abound to be worried.

Before embarking upon a somewhat constructivist journey, let me first attempt to foreclose realist critique by embracing it: there is no doubt that climate change is real, that it is happening, and that some parts of the world (notably the poorest countries in the world) are likely to suffer more than others. Another reason to be troubled is that on the completely opposite side of the "alarmist' spectrum" there continues to be ground for sceptics to deny the existence of anthropogenic climate change altogether. A sharper contrast between President's Obama's tone and that of President-elect Donal Trump, who has dismissed it as a hoax, could hardly be imagined.[5] What is worrisome about this situation, as Obama also noted, is that influential groups of people, such as policy-makers and high-profile scientists, are using or manipulating "matters of fact" to meet their own political ends (which holds also true for the alarmists).[6] Approximately

[4] For an overview of dominant climate-change framing engrained with an apocalyptic aura, see Crist 2007.
[5] Donald Trump has called global warming a "hoax" and claimed that the Chinese fabricated it. Even though he later said that this was just a joke, he has emphasized that he is not a big fan of the Paris Climate Accord, by Erica Goode, 20 May 2016, *New York Times*.
[6] Remarkable in this context is the event that took place in 1998 when some of the major fossil fuel companies in the world joined forces with conservative think tanks, industry groups and public relation experts to draft a plan. The so-called Global Climate Science Communications Plan was given birth in order to prevent global climate action, and to convince the American public and Senate that climate change is based on "shaky science".[6] The primary aim has been from the outset to disseminate as much doubt as possible. With a budget of two million dollars the campaign has been successful not only in spreading the "skeptics' gospel" but also in preventing appropriate political action from being taken. See:

half of American citizens (and also elected officials) are climate-change deniers and have now embraced this "pseudo-science", which rejects the fact that humans have caused global warming. In a similar vein, and at least as astonishing is the fact that this "faith of sceptics" has travelled around the world, to countries like The Netherlands, where it is embraced by an even larger percentage of the population than in the United States, which makes the Dutch population relatively the biggest group of deniers in the world (interview with van Soest, *Trouw* April 18 2014).[7] Considering the fact that The Netherlands lies partly below sea level and is extremely risk-prone to long-term climatic changes, this lack of trust in "conventional" science is astounding. According to author and environmentalist van Soest, the major drivers behind scepticism are first, a dogmatic religious view that is irreconcilable with the idea that humans have had the power to intervene in God's creation; and second, the fact that most deniers are engulfed by an extreme libertarian ideology in which the "holiness" of the free market takes centre stage. Theories related to climate change are seen as an attack on this conviction and thus unacceptable, and the only way out is to reject it (ibid). As a reaction to this worldwide growing climate scepticism a group of leading climate scientists have joined forces in an attempt to understand this "faith" of the deniers as well to debunk the climate-science myths that underpin it. In a massive online course offered by the University of Queensland called "Making Sense of Climate Science Denial", lectures are offered in climate science and psychology, driven by the hope that people will better understand anthropogenic climate change when they are cognizant about where these myths originated from (*The Guardian* 21 April 2015).

So there appears to be a paradoxical aspect to the ways in which climate change narratives are advancing in public and scientific discourse, with an acceleration of its rejection on the one hand, and continuing eschatological anxieties that it sparks on the other.[8] This is more or less the

---

https://www.documentcloud.org/documents/1676446-global-climate-science-communications-plan-1998.html

[7] Jan Paul van Soest has written a book about the climate change deniers in The Netherlands called *De Twijfelbrigade* (2014), which means something like the "division of doubt". For a similar account on this phenomenon about a cadre of scientists who have clouded public understanding related to scientific facts in order to advance a political and economic agenda, see the book written by Naomi Oreskes and Erik Conway, *Merchants of Doubt* (2010).

[8] Geographer Erik Swyngedouw (2010) speaks about another paradoxical aspect of the way the climate-change debate is evolving, between on the one hand the idea that climate change with its consensually apocalyptic framing is seemingly politicized as never before (i.e. urgent action is needed), while on the other hand political philosophers speak about the consolidation of a post-political condition of the public sphere over the past two decades (entwined with neoliberalization). This post-political situation can be characterized by the evacuation of proper political dimensions from the public terrain by technocratic management and consensual policy-making. As such, he insists that hegemonic climate-change policies reinforce processes of de-politicization and the socio-political status quo rather than contributing to more egalitarian transformations (Swyngedouw 2010).

polarized condition within which the Big Story of climate change is being played out. It is a telling case in point of the intertwining of science and politics in our contemporary world. Following Latour, this mixing up of facts and values is another, perhaps more fundamental, reason for concern. It is in the context of the enduring truth struggle between climate scientists vis-à-vis climate sceptics that Bruno Latour (2013) in his book *An Inquiry into Modes of Existence. An Anthropology of the Moderns* wonders: "Has the controversy really degenerated to the point where people can talk about the fate of the planet as if they were on stage of a televised jousting match, pretending that the two opposing positions are of equal merit?" (Latour 2013: 2-3). Latour sees this conflict, in part, as a testimony to what he has termed the "end of modernization"; a time in which the mixing up of Facts and Values is increasing as a result of an accelerated intermixing of humans and nonhumans, and the multiplication of "hybrids" between science and society. He observes a powerful tension between the value of objectivity and the *account* that is needed to define this value; or a confusion between the appeal to (scientific) Certainty on the one hand and to Trust (in the institution of science) on the other (Latour 2013: 6-7). This situation raises new questions for the social sciences and humanities, as Latour laments in an earlier article:

> Wars. So many wars. Wars outside and wars inside. Cultural wars, science wars, and wars against terrorism. Wars against poverty and wars against the poor. Wars against ignorance and wars out of ignorance. […] Should we be at war, too, we, the scholars, the intellectuals? […] Is it really the task of the humanities to add more deconstruction to destruction? (Latour 2004: 225).

Latour's point is directed at the sceptics and the manifold ways in which facts are obscured and manipulated to argue against the scientific basis of climate change, as briefly described above. It is a concern that stems partly from his pioneering work in science studies in which he – and many others – pointed at the many uncertainties inherent in the enterprise of science and in the construction of facts. He argues that the irony of this situation is that the constructivist weapons of the Enlightenment project, which were necessary descriptive tools to debunk the excessive trust in ideological arguments that were posited and accepted as matters of fact, are now turning back against us. The situation seems to have reversed, and now the danger is rather coming from "[…] an excessive *distrust* of good matters of fact [is] disguised as bad ideological biases!" (Latour 2004: 227). In other words, he laments that the critical mind has taken the wrong path and has begun to fight the wrong battle. His answer to this situation – which can succinctly be put as a "crisis of critique" – is the cultivation of a *stubbornly realist attitude*; yet one that deals not with matters of fact but rather with *matters of concern* (ibid).

It goes beyond the aims of this section to elaborate on this renewed form of realism; but for now it suffices as the background against which I can proceed to develop my own thesis. Latour's concern is well taken. Yet as I hope to make clear throughout the follow pages, for the very same reasons that the deniers need to be targeted with renewed weapons of realism, the critical eye of constructivism remains necessary to inquire about what happens at the other extreme of the continuum, specifically there where the apocalypse looms. This is particularly important considering North-South relations and the new configurations of power that are entailed by positing climate change as the epitome of crisis for sub-Saharan Africa and the Global South. In a very basic sense therefore, by critically scrutinizing the *claims to* climate change-as-crisis my thesis seeks to draw attention away from crisis. That being said, I wish to foreclose the "realism" versus "constructivism" debate by emphasizing the idea that "nature is simultaneously real, collective, and discursive – fact, power, and discourse – and needs to be naturalized, sociologized, and deconstructed accordingly (Latour 1993 in Escobar 1999: 2). The final issue that I wish to suspend from the outset, and which runs prominently through the climate change literature, is a problem-solution-inclined orientation. In other words, whether we deny or accept it – instead of being merely "a problem waiting for a solution", as Hulme also reminds us – climate change has become an imaginative force that has threaded its way through the most elementary and existential modes of being and living in this world.

What this thesis is about:

Adaptation to Climate Change as a travelling idea

There is one remarkable feature of the way in which the story of global warming is advancing, at least as far as sub-Saharan Africa is concerned: we cease to treat it as a story. In its simplest sense, this thesis addresses this blind spot. The global political preoccupation with climate change evolves, roughly speaking, around two basic foci: mitigation and adaptation. Mitigation primarily refers to reducing the causes of climate change, and thus to preventing it from getting worse.[9] Adaptation, on the other hand, deals with the alleviation of the negative consequences by enhancing societies' adaptive capacities in order to deal with a changing climate. In essence, whereas mitigation addresses the source of the problem, adaptation focuses on the consequences (Huq & Reid 2009: 313). The causal relationship between the two is that the more mitigation takes place, the less adaptation is needed, and vice versa (Schipper 2009: 361). The development version of climate change revolves around adaptation. In 2001 adaptation became officially

[9] Strategies related to mitigation revolve around the reduction of greenhouse gas emissions, the development of alternative modes of production, and enhancing potential sinks. These attempts involve both geo-engineering techniques and changing social policy to alter human behavior (Pielke 1998: 161).

recognized as a key principle of the international climate change policy at the United Nations Framework Convention on Climate Change (UNFCCC). Since its inception it has become one of the essential pillars of intervention in the Global South in the fight against climate change.[10] Meanwhile the idea has mobilized an array of transnational, national and local actors, funds, and institutional reforms, to the extent that adaptation has become one of the major development issues of our time (Tanner and Allouche 2011, in: Arnall *et al.* 2014). Due to its urgency and global magnitude the story or *idea* of adaptation to climate change is travelling all around the world. As a narrative about our basic human existence climate change is translated in an array of different forms because it shapes and it is shaped by the gamut of the world's cultures in its own contingent, distinctive and highly complex ways.

This idea is currently also "travelling" to the Global South with pronounced force. Due to this "planetary emergence" powerful actors in both the Global North and South are mobilized and assemble around this threat, an action which all assume to be indispensable in tackling this global problem. The adaptation paradigm is conveyed as a "new prophecy" for the Global South, as it is strongly imbued with the idea that adaptation to climate change is the *sine qua non* for survival. The securitization of climate change and its "apocalyptic aura" pertain particularly to sub-Saharan Africa and the small island developing states. The assumption that Africa is very likely to be at the dawn of facing an intense reshaping of how people (should) relate and adapt to a rapidly changing climate forms an inherent, and one of the most salient, elements of this discourse. Hence, this research takes as a basic premise that in this increasingly interconnected and mediated world people do not solely adapt to a changing climate, but also adapt to a changing discourse about the climate.[11] Put in the words of Rudiak-Gould, whose work followed a very similar course, "This study focuses on a different sort of climate change adaptation to climate prediction;

[10] The importance of adaptation has for a long time been sidelined for various political reasons. It took almost two decades before adaptation became officially adopted as a major pillar within the UNFCCC policy (Schipper 2009: 369). The reasons for this long trajectory have political, economic and conceptual root causes. The so-called *limitationist* view played an important political role here. The main reason behind this perspective, which focuses on preventive action (thus mitigation), has been the fear that a shift toward adaptation measures would weaken the social will to undertake greenhouse gas reductions (Kates 2000; Thornton & Manasfi 2010; Schipper 2009; Burton 2009; Pielke 1998; Pielke *et al.* 2007). Also, "adaptationists" saw no need to study adaptation in a special way, because they simply trusted natural selection or the forces of the market to encourage adaptation (Kates 2000; Schipper 2009). Finally, the *realist* view became widely accepted due to growing scientific consensus that acknowledged that adaptation to human-induced climate change constitutes new challenges for humanity: "[…] climate change is pushing us beyond the limits of existing coping strategies in many places, an additional adaptation, autonomous or otherwise induced, will be necessary" (Schipper & Burton 2009: 2).

[11] In this thesis I use the terms *discourse*, *idea*, *narrative*, *story* or *paradigm* somewhat interchangeably, but always depending on the context. The notion of adaptation as "an idea" stems for a body of theory that deals with travelling ideas and models. Whenever I use the term *discourse* I refer to more general talk that circulates widely in society; paradigm is used more often in the context of a "development paradigm".

not societal resilience to a present threat, but ideological resilience to a looming one" (Rudiak-Gould 2013b: 14).

Research related to climate-change adaptation in the developing world in general, and sub-Saharan Africa in particular, has until now been guided by positivist approaches in which the bio-physical manifestations of climate change have been taken as a focal point of analysis, and how human populations in different socio-ecological systems are adapting or should be adapting to climate change (IPCC 2007; Adger *et al.* 2003; Yanda *et al.* 2011; Downing *et al.* 1997; Seo & Mendelsohn 2007; Conway & Schipper 2011; Leal Filho 2015). Broadly speaking, a great number of studies have followed a problem-solving-oriented approach, by for instance describing general policy strategies (Lwasa 2015), which inevitably bring into focus specific technological interventions or socio-economic aspects of adaptation (Frank *et al.* 2011). Moreover, adaptation research is still largely dominated by studies that locate the source of vulnerability predominantly in the impacts that are brought about by climate change (Basset & Fogelman 2013).[12] This tendency to focus solely on climate change has rightly been criticised by Hulme (2011) for being some sort of neo-determinism or reductionism. Within the logic of reductionism one is seeking to predict a climate-shaped future, and so adopt a methodology and form of analysis that first extracts the climate from the matrix of complex interdependencies that shape human life, and consequently elevates it to being the dominant predictor variable. And so the future is reduced to the climate (Hulme 2011a).

Only recently have some scholars challenged the notion that adaptations to climate change in the Global South can be assessed without taking other vectors of social change into account, such as shifting power ideologies and discursive formations (Sheridan 2012; Arnall *et al.* 2014), or landscape and institutional changes (Goldman & Riosmena 2013) and more structural problems related to the global political economy (De Wit 2014b). Furthermore, very little concern has been expressed for a critical assessment of the power dynamics within which the social construction of adaptation to climate change takes place in concrete places (Pettenger 2007; for notable exceptions see: Weisser *et al.* 2014; Eguavoen *et al.* 2013; Smucker *et al.* 2015; Gebauer & Doevenspeck 2014). This void in the research agenda might prove a necessary and welcoming novel space of inquiry, particularly if we take into consideration the widespread appeal of climate

[12] In a content analysis of the adaptation literature of the four IPCC reports and four leading scholarly journals, Bassett and Fogelman (2013) have shown that 70% of the adaptation literature takes a so-called "adjustment adaptation" approach, in which climate change impacts are seen as the main source of vulnerability. Only 3% of the articles in their review take the social roots of vulnerability into account, and thus the need for political-economic change for "transformative adaptation". The remaining 27% locate risk in both biophysical hazards and society (Bassett & Fogelman 2013).

change adaptation discourses pertaining particularly to Africa and the small island developing states that increasingly shape the "climate landscapes" on the ground (cf. Farbotko & Lazrus 2012). Considering the vast number of adaptation projects, reports, government communiqués, strategies, policies, programs, funding and actors that are mobilized, I believe that complementing objectivist and technical studies with more interpretative accounts is a timely exercise. This research is therefore in line with the recent call to enrich the idea of climate change as a cultural concept (Hulme 2015). While the social sciences and humanities have been silent voices in the climate change research agenda for a long time, more and more recognition for the relevance of these disciplines can be witnessed in international policy-making circles as well as in the IPCC[13] reports (see also below).

Nevertheless, the majority of research about adaptation to climate change in Africa deals with the question "what does it take to adapt to climate change?" This research is rather concerned with asking what happens in the process of translating the idea of adaptation. Therefore this study proposes an alternative ontology of adaptation by exploring it as a travelling idea (cf. Weisser *et al.* 2014; Hulme 2008b; de Wit 2014a, 2015). In this thesis I trace the manifold ways in which Adaptation to Climate Change travels to northern Tanzania. For an idea to travel it needs to be *translated*. The concept of translation, as used in science and technology studies, is a comprehensive notion that basically refers to the process in which things are brought together that were separate before (see chapter three). I have focused on these processes of translating Adaptation. To be more precise, based on fourteen months of ethnographic fieldwork this thesis seeks to explore the ways in which Adaptation is played out in the so-called "interstitial spaces" of northern Tanzania, as well as how it is translated in a rural village of Terrat, Maasailand.

This ontological shift from viewing adaptation as a reaction to a biophysical process, to adaptation as (and *to*) a "travelling idea", similarly calls for an epistemological turn in the climate-change research agenda. Therefore this research is intended to contribute to developing theoretical and methodological tools that show the power-laden processes of translating adaptation. It will do so by arguing for an ethnography of connectivity, combined with a detailed ethnographic account of the "local" context where the global idea is ultimately supposed to be implemented. Central questions to be addressed in this manuscript are: how is adaptation to climate change translated and negotiated in northern Tanzania, and what are the consequences for different social groups? Who can benefit from these emerging discourses and who cannot?

[13] The Intergovernmental Panel on Climate Change (IPCC) is the leading scientific body that reviews worldwide climate-change research.

What makes the idea of Adaptation travel, or, in the case of Maasailand, what are the conditions under which the idea does *not* travel, or is by and large rejected? How do different "truth regimes" fuse in their mutual encounter? And, who holds power in translations of the epistemics of climate change, and who does not? In order to understand the relevance of this study we first need to know what the dominant framings of Adaptation to Climate Change are all about.[14]

The "Adaptation Imperative"

"Mitigate we might, adapt we must."

William Nordhaus 1994, in: Pielke 1998: 160

Under Kyoto's motto "Think Globally, Act Locally" the idea that the effects of climate change are a common concern of humankind (UNFCCC 1992: 1) has become a worldwide mantra. The sheer tragedy is that climate change is not only mirroring the profound historical inequalities between the Global North and South, it is expected to exacerbate them. It can be stated that the per capita emissions roughly reflect the global lines of wealth and power (Moore 2010: 78). Furthermore, the essence of the story is that the poorest nations are suffering the most, while having contributed the least to this environmental disaster. It is against the background of this ethical dilemma that the current climate-change adaptation crisis is played out through the international legal framework of the UNFCCC. In accordance with the principle of "common yet differentiated responsibilities" as stated in the Convention (UNFCCC 1992), the industrialized countries are supposed to help the most vulnerable countries to adapt. The Intergovernmental Panel on Climate Change (IPCC) has defined adaptation:

> "The adjustment in natural or human systems in response to actual or expected climate stimuli or their effects, which moderates harm or exploits beneficial opportunities" (IPCC 2007).

Considering the ethical dimensions, both technological as well as financial support for adaptation are urged to flow from North to South. To be more precise, in the language of the UNFCCC (hereafter the Convention), Annex II and Annex I countries that are able to do so are responsible for providing financial assistance to developing countries.[15] Studies conducted by the World

[14] Whenever Adaptation to Climate Change is capitalized it refers to the framing and representation of it as a discourse or idea that is translated widely, as opposed to adaptation as a process by which humans or organisms adapt to their changing environment.

[15] To respond to the challenges of equity and to allocate responsibilities between groups, the Convention has differentiated among parties, such as between "developed", "developing" and "least developed countries". But also a differentiation exists between "vulnerable" and "particularly vulnerable"; among

Bank, the UNDP and Oxfam have estimated that the required costs for adaptation in developing countries will be $10-86 billion per year (Moore 2010: 67). While the climate-change paradigm bears parallels to earlier narratives on the precariousness of society-environment relations in Africa (e.g. desiccation narrative of the 1920s, the tragedy of the commons of the 1960s, and the expansion of the Sahel narrative of the 1970s and 1980s) it can be said that the very size of global funds that are made available for adaptation, marks the beginning of a new era of global environmental governance. In recent years the need for adaptation to climate change is recognized by an increasing number of global actors, and an unprecedented level of financial commitment through the Green Climate Fund and other bi- and multilateral actors can be witnessed (Berrang-Ford *et al.* 2015: 755). The UNFCCC has estimated that the current Official Development Assistance (ODA) is insufficient to cover the adaptation needs of the Least Developed Countries (UNFCCC 2010: 3).[16] Moreover, due to the fact that the climate-change problematic embraces all aspects of human life and human security, a green paradigm shift has made its way into development thinking. In a recent global report, due to the sheer urgency of climate change particularly for the developing countries, the notion of an "Adaptation Imperative" has been coined (WRI 2010-2011; cf. Ki-moon 2009).[17] However, considering the alarmism with which this notion is imbued, instead of taking the "Adaptation Imperative" as a normative concept at face value, I will argue that a much more careful appraisal is needed of what the notion of adaptation entails for North-South configurations in general, and sub-Saharan Africa in particular (cf. Wisner *et al.* 2012; Orlove 2009; Gesing *et al.* 2014; De Wit 2014a). To give just one example, by critically evaluating adaptation Ben Orlove has demonstrated, on the basis of his work in Peru, that "the term serves the international and intermediary organizations far better than the local communities who feel the impacts most directly" (Orlove 2009: 131-132). Also, Robert Kates has offered cautionary tales about how the process of adaptation is only beneficial for some while bringing about new inequities for the poor (Kates 2000).

Over the past years a rapid increase in scholarly interest in adaptation can be witnessed, and adaptation strategies have begun to emerge in order to deal with the known and anticipated long-term impacts of climate change (Lwasa 2015). For instance, the Least Developed Countries (LDCs) in the Convention have been supported in drafting National Adaptation Plans (NAPs). Also National Adaptation Programmes of Action (NAPAs), which provide a rigorous assessment

"Annex I" and "Annex II" parties, and "economies in transition". Finally, a distinction is made between different physical characteristics of different countries (Mace 2006).

[16] UNFCCC "Fact Sheet" 2010: http://unfccc.int/files/press/application/pdf/adaptation_fact_sheet.pdf.

[17] Jointly produced by the UNEP, UNDP, the World Bank and the World Resources Institute (2010-2011).

of the urgent adaptation needs for LDCs, have been drafted.[18] In other words, Adaptation has entailed the expansion and reshaping of institutional frameworks at the national level, as well as projects at the local level – and thus the setting of new norms and standards about how to deal with the environment. The worldwide recognition of climate change as a major challenge facing households and communities in the developing world has led to a "mainstreaming" of Adaptation into development policies, which inevitably will result in an intense reshaping of environment-society relations in Africa and other parts of the developing world (Cannon & Müller-Mahn 2010: 3). An increasing number of scholars are pondering over the relationship between adaptation and development, and acknowledge the fact that there are clear linkages between the two, while critically questioning whether the one can be subsumed under the other (Ayers & Dodman 2010; Cannon & Müller-Mahn 2010; Huq & Reid 2006). While these are very important questions, my research accepts that adaptation is already travelling as a new development paradigm and therefore is rather concerned with the question what happens when adaptation is translated as such.

Africa's "Adaptation Deficit"

For sub-Saharan Africa climate change carries all the more a notion of urgency, because it is considered to be already highly vulnerable with low adaptive capacity. It is said that Africa is the most vulnerable continent to climate change, as it lacks the appropriate financial means and technologies to adapt. Moreover, in many parts of Africa the effects are already happening, and being experienced on the ground. The latest assessment report of the IPCC has concluded that: "for many in Africa adaptation is not an option but a necessity" (IPCC 2014a). If the world finds itself in a global climate change crisis, and if we look at the scientific predictions and the ways in which expert discourses for sub-Saharan Africa are advancing, it can be said that the continent is perceived to be in a *super*-crisis. Also, Tanzania is perceived to be highly vulnerable to predicted climate change impacts, because income levels are among the lowest in the world and livelihoods depend on modes of primary production that are inherently risky. Vulnerability is increased by lack of access to technologies and human capital. Furthermore, the state is lacking in capacity and suffers from corruption (Paavola 2006: 202). Taking this line of crisis reasoning one step further, we zoom in on the (agro)pastoralist Maasai in Tanzania – who are perceived to be the country's "most vulnerable community to the effects of climate change" (ibid; URT 2007) – we touch upon an iconic emblem, a people who find themselves in an *omni*-crisis. The climate crisis in sub-Saharan Africa speaks even more lamentably to the industrialized world's historical and moral

[18] In 2010 467 adaptation projects in the NAPAs have been identified with aggregate costs of 1.7 billion USD.

consciousness, for Africa never contributed to the problem, but finds itself faced with the most severe consequences. But crucially, and this is often sidelined, this reasoning also provides new ground for intervention.

The IPCC states in the latest Assessment Report (AR5) that "African ecosystems are already being affected by climate change, and future impacts are expected to be substantial. […] Climate change will amplify existing stress on water availability in Africa (*high confidence*)" (IPCC, AR5: 1202). Moreover, the assessment report stipulates that "climate change and climate variability have the potential to exacerbate or multiply existing threats to human security including food, health and economic insecurity, all being of particular concern for Africa (*medium confidence*)". Finally, there is increasing evidence that Africa faces an "adaptation deficit" and is in need of financial resources, technological support and investment in institutional and capacity development in order to address climate risk, build adaptive capacity and implement robust adaptation strategies (*high confidence*) (ibid: 1204). An Adaptation deficit is defined as: "The gap between the current state of a system and a state that minimizes adverse impacts from existing climate conditions and variability" (IPCC 2014a, WGII: 172). Put differently, expert discourses convey that Africa's future, as far as climate change is concerned, does not look very bright. Hence the only pathway to salvation is by welcoming the expertise, money and technologies of the developed nations. Such crisis narratives about Africa are nothing new, and we clearly hear the echoes of time of the "dark continent". In the context of development narratives Emery Roe (1999) has argued that the two dominant crisis narratives about Africa cry out for challenging counter narratives. The first is the "everything works … except in Africa" narrative, which refers to the ongoing idea throughout the world that development is taking place (decline of poverty etc.) everywhere except in Africa. The second leading narrative, related to the first, speaks about a "Doomsday Scenario" for any country in Africa: resources are overutilized, birth rates are skyrocketing, political unrest is becoming widespread, and so on (Roe 1999: 5).[19] It will be argued in this work that what follows from this all-too-familiar and repetitive story about Africa's "crisis" echoes historically produced discourses, which in the context of my research in Tanzania leads to a reproduction of certain questions, development paradigms, power hierarchies and dependency dynamics. The role of crisis narratives will be discussed in the next chapter.

Alternatives to crisis narratives do exist, but are rarely heard. For instance, the African delegates who are part of the climate negotiations certainly do not always share the vulnerability discourse.

[19] Roe's work was published more than fifteen years ago, and even though many of these crisis narratives are still predominant, it should be noted that recently also a more hopeful and promising tendency of narrating and imagining Africa's future can be observed, such as the "Africa rising" discourse.

During an international conference I had an interesting encounter with David Lesolle, a climatologist by training who has worked for the Botswana government for 28 years at the ministry of environment, and who has been a leading negotiator for the African Group in the climate change negotiations. After elaborating on the structural problems inherent in the international negotiation processes for the African delegates (under capacity, many delegates leave after a few years, so new experts need to be trained and learn the rules of the game); he explicitly emphasized that there is a need to tell a different tale about Africa regarding adaptation to climate variability:

> I have been in this process literally when the Kyoto Protocol was agreed on in COP3. Although science tells us that we are the most vulnerable, it is usually because the measure of vulnerability is based on infrastructural development and development at large. But at the same time, we haven't actually talked about how resilient we are to climate variability. I think Africans tend to be very resilient to climate variability! I tell my counterparts in Europe that in a lot of African countries, particularly in the Savannah, people are used to staying 6 months without rain, 8 months without rain. They probably only have about between 40 and 100 days of rain a year. That shows a level of resilience to me, we know a lot of droughts, climate shocks that we go through. And because of all of that I think we should be blowing our trumpet in terms of resilience! Can we improve on the resilience? Yes. Would it take a lot of effort? I don't believe so. I believe a lot of people know what to do; they just need a little resource to stimulate the adaptation programs.

Remarkably enough, David's account resonates with many voices in northern Tanzania who spoke for the Maasai communities – such as researchers and CSO workers who explicitly countered the vulnerability discourse – yet whose voices were often silenced in public meetings. The problem of this particular positioning of "Africa" (and hence "Africans"), which is largely perpetuated within the regime of the international negotiations, forms an important focus of analysis throughout this work.

Climate Change & Anthropology

On the Hegemony of the Natural Sciences

Voices from the humanities and social sciences have been raised lamenting the absence of the social sciences in the debate and the hegemony of a "science first" transformation in understanding global climate change (Szerszynski & Urry 2010: 3). Indeed, within the current research agenda a tendency can be observed that envisions adaptation to climate change as a highly technical response to biophysical conditions, for which a toolbox of programmatic "best practices" and "cookie-cutter" solutions are needed that should enable people to adapt in thoroughly planned and predictive ways to future climates. Despite the increasing recognition of

the value of social and cultural dimensions, technocratic approaches and managerial solutions continue to dominate adaptation research and policymaking (for a typical managerial analysis and solution, see e.g. Giddens 2009). In the latest IPCC report it is put forward that: "Engineered and technological options are commonly implemented adaptive responses" (IPCC 2014b: 8). This widespread assumption that underpin such approaches is a testimony to the influence and dominance of the natural sciences in climate change research. This technocratic, model-based discourse with a "God's eye" view on the climate finds expression in the way the Adaptation to Climate Change paradigm currently is manifested both in international politics and in social sciences – at the expense of more contingent, interpretative and imaginative accounts of social life (Hulme 2009, 2010a, 2011b; Crane *et al.* 2011; Rudiak-Gould 2011; Strauss & Orlove 2003). Without discarding the relevance and importance of developing predictive instruments and forecasting models, it will be argued here that isolating "Nature" from "Culture" – an inherent assumption of deterministic thinking that offer technocratic solutions – fails to understand (1) the socio-cultural embedded practices through which adaptation is locally valued and enacted; (2) the political struggles that are exacerbated by the travelling idea of Adaptation.

In the pioneering book *Weather, Climate, Culture* anthropologists Sarah Strauss & Ben Orlove *et al.* (2003) make a striking analogy between the development of the study of the human body and the study of the natural world. If we take a closer look at how the understanding of the human body evolved within anthropology and other related disciplines, from something that was perceived to be "natural" and detached from any social or cultural meaning, to becoming a key object for cultural analysis, a fertile ground for comparison emerges. As the authors point out, as recently as the 1970s the human body hardly received any attention from anthropologists until Mary Douglas' detailed work on the notion of the physical and social bodies opened up the field for further interest (Strauss & Orlove 2003: 5). By making a distinction between two bodily types, Douglas argued that the experience of the physical or individual body functions as a microcosm within a broader social system. Hence, the way people perceive their body and act upon bodily images is intimately linked to a broader symbolic system to which they belong, which acts upon it through pre-coded stimuli and responses (Douglas 1970: 164). She stated that:

> "The social body constrains the way the physical body is perceived. The physical experience of the body, always modified through the categories through which it is known, sustains a particular view of society. There is a continual exchange of meanings between the two kinds of bodily experience so that each reinforces the categories of the other" (Douglas 1970: 69).

It is particularly this dialectical relationship between these two discernable, but inseparable, notions that I find relevant in the comparison between the study of the human body and the

study of the natural environment (and the climate). The way humans shape and interact with their environment is embedded within – and in a continuous dialectical interaction with – the socio-cultural and political organization of a society. Moreover, the existential and symbolic role that the natural environment fulfills in many societies is often intricately interwoven with peoples' symbolic categories and belief systems. Put otherwise, as much as the physical environment impinges upon human societies across the world and has the ability to shape them in divergent ways, in turn, cultural frameworks have an influence on the way people experience, perceive and talk about it, and consequently act upon it. The natural and cultural environments are related in such a way that the one contains and shapes the other. It is somewhere in between these two mutually constitutive positions – i.e. nature being both real *and* constructed – that the *idea* of climate change is continuously translated during its travels. As Mike Hulme (2015) has also argued, both the weather and humans have agency, and the idea of climate change mediates between these two forms of agency:

> It is not the case that climate determines any particular human outcome. It is rather that human outcomes – with respect to landscape, design, technology, character, mobility, etc. – emerge from the interplay between atmospheric materiality and actions of the human mind (Hulme 2015).

While at first sight this mutually dependent relationship might appear rather evident, in academia it took several decades before a more holistic approach towards human-society relations developed. In climate-change research this division becomes all the more apparent along disciplinary lines. For a long time climate change was predominantly studied by the natural sciences like climatology and meteorology. It is only during the last two decades that the social sciences and humanities have become increasingly involved in studying the climate's impact upon human populations, and how societies over time have adapted to their environment and climate. Now it is widely recognized by researchers and decision-makers that the problems related to climate change cannot be properly understood and analysed without the vital contribution of the social sciences (Agrawal *et al.* 2012). And indeed, social scientists and anthropologists have become engaged with climate change research to an unprecedented degree (Roncoli *et al.* 2009). One of the explanations for this initial exclusion is convincingly put forward by Hulme, as mentioned earlier, who has argued that the new climate reductionism is driven by the hegemony exercised by the predictive natural sciences, which lends disproportionate power to model-based descriptions of future climates (Hulme 2011a: 245-247). Evidence of the disciplinary division and of the hegemony of the physical sciences can be found in the scientific literature that underpins

the assessments reports of the IPCC, which has received considerable criticism from several scholars.

For example, in her groundbreaking article "A New Climate for Society", Sheila Jasanoff criticizes the ways in which scientific assessments like the ones produced by the IPCC have helped to establish climate change as a global phenomenon, and as such has detached knowledge – as an abstraction of reality that arises from impersonal observations – from meanings that always emerge from embedded experience. Jasanoff points out that science's erasures of local specificity – inherent to the general scientific enterprise – are an important source of the conflicts that emerge around climate change. In her exploration of "the tensions that arise when the impersonal, apolitical and universal imaginary of climate change projected by science comes into conflict with the subjective, situated and normative imaginations of human actors engaging with nature", the author sees a vital role for the interpretative social sciences as they can contribute to more complex understandings, if not a resolution, of humanity's climate predicament (Jasanoff 2010: 233-235). We shall see in chapter five how Jasanoff's point resonates with Maasai pastoralists, who find themselves confronted with highly abstract representations and visualizations produced by science about their own environments.

The IPCC has also been criticized for its fundamental quest for globalizing knowledge – which is driven by the general aim to reach consensus – and also for being highly biased in prioritizing positivist science at the expense of more interpretative accounts of social life, as mentioned earlier (Hulme 2010a, 2011a, 2011b). In a literature study that was carried out in 2011, the disciplinary sources that were used by the three working groups of the Third Assessment Report (TAR) of the IPCC reports were analyzed. It appeared that the cited literature was strongly dominated by the natural science disciplines in general, and by the Earth Sciences in particular. Moreover, the minority of cited social science literature was heavily dominated by economics (Bjurström & Polk 2011). Partly grounded on the findings of this study, Hulme argued in a commentary, "Meet the Humanities" that: "Nature and Culture are deeply entangled, and researchers must examine how each is shaping the other. But they are largely failing to do so" (Hulme 2011b: 177). It should be noted however, that in the last two assessment reports of the contributions of the IPCC Working Group II (WII), there has been a growing recognition of the human dimensions of climate change, as the social sciences and the humanities have been given a more prominent role (Ford *et al.* 2012: 202). Yet, I fully share the concern that the hegemony of the biophysical sciences matters profoundly and therefore is in need of critical reflection. Due to its status as *the* authoritative voice of climate science, these assessments play a decisive role in

framing the problem and in giving direction to its envisaged solutions (Hulme 2011b), hence set the tone for both policies as well as public and academic discourse.

Furthermore, critique has been expressed about the ubiquitous "epistemic power" that is exercised by climate-change models which generally carry the presumption that they are value-free, and are based on "purely objectivist" science. For example, Silke Beck has demonstrated how the IPCC's linear model of expertise prioritizes "value-free" science and stimulates the separation of problem from response. This linear model envisages the interaction between science and politics as a unidimensional and one-way: from science to policy, in such a way that truth speaks to power (Beck 2011: 298). In other words, the dominance of the (natural) sciences and the underlying belief in their objective foundations presupposes that they are detached and independent from any political value. The paradox lies in the fact that this presumed neutrality places science at the center of political debate. Since science is thought to motivate political action, winning a scientific debate means attaining a privileged position in the political arena (ibid: 299).

In line with Latour – who argues that although scientific knowledge is only one amongst many modes of existence, an unrealistic vision of science has become the supreme arbiter of reality and "truth" – it will be demonstrated in chapter two that the expectation of, and faith in, science within the climate-change debate has come to play a peculiar and problematic role. Latour's critique is rightfully directed to the tendency that we are being seduced into judging all values according to the single standard of science (Latour 2013). Hulme has also argued that the burden that is placed on climate science – despite its inherent struggle with contingency and uncertainty – of finding a single-minded reality that is supposed to give insight into what the future holds has become much too great, and will inevitably lead to a political battlefield (Hulme 2009, see chapter three).[20] Furthermore, the problem with globalized knowledge and its universalizing instincts is that geographical and cultural differences are erased (Hulme 2010b). Hence the renewed significance that is given to the "reculturing" and "particularizing" of climate-change discourses (Endfield 2011), to which this work also seeks to contribute.

In this regard anthropology has played an important role in laying bare the possible discrepancies that exist between global climate-change discourses and climate-change experiences that are shaped locally "on the ground" (e.g. Jurt *et al.* 2015; Farbotko & Lazrus 2012; de Wit 2014b;

[20] *The Wall Street Journal*, 2 December 2009: http://www.wsj.com/articles/SB10001424052748704107104574571613215771336. Accessed January 5 2017.

Greschke & Tischler 2014). Thus one of the basic merits that can be attributed to anthropology is the rich collection of ethnographic accounts on the local implications, perceptions of and adaptations to short- and long-term climatic changes in different localities all over the world (Crate & Nuttall 2009; Casimir 2008; Strauss & Orlove 2003). Great emphasis is being placed on how human societies – through cultural repertoires – give meaning to environmental changes such as climate change (Roncoli *et al.* 2003; Cruikshank 2001). This broad field of inquiry has recently been named "observation studies", and has by and large contributed to supporting scientific claims that climate change is real and already happening on the ground. In other words, accounts of local communities all over the world are predominantly taken as a testimony to the dangerous consequences of climate change. Whereas these local accounts might be well grounded and reveal the inequities inherent in the geographical distribution of the consequences of global warming, I contend that the reproduction of climate crisis scenarios similarly hides a tendency to nourish alarmism, foreground vulnerability and legitimize external (expert) interventions (cf. Bravo 2009).

Moreover, on a methodological level another challenge emerges. Only very few studies have taken into account the possibility that these perceptions are also increasingly being shaped by the worldwide dissemination of and exposure to climate change discourses (Rudiak-Gould 2011, 2012, 2013a, 2013b; De Wit 2015; Bravo 2009). A pioneering anthropologist in this regard is Peter Rudiak-Gould, who has coined the term "reception studies", which refers to the specific field of research that explores the uptake of scientific information. In his work that is based on long-term fieldwork carried out in the Marshall Islands (Micronesia), he has convincingly demonstrated that observation studies alone cannot account for the ways in which people make sense of climate change. While the majority of contributions from anthropology have engaged with observation studies, a minority have taken reception dimensions into account, while virtually no study has combined the two. By employing the notion of translation, my study seeks to be attentive to this observation-reception nexus. In chapters 6 and 7, by following a Maasai herder across different scales, I wish to demonstrate how the shifting positioning of this informant should remind us of how the flow of new sources of information intersect with local epistemologies. It should also make us attentive to the active role that we as anthropologists (and other interlocutors such as NGO workers, journalists, experts etc.) play in the ongoing process of knowledge production. These epistemological and ontological concerns will be addressed in chapters six, seven and eight.

The isolated focus on the physical environment on the one hand, and on socio-cultural understandings of the weather and the climate on the other, resonates, as Strauss and Orlove argue, with the fact that within anthropology over the past thirty years knowledge has been generated from within two different camps: the materially grounded ecologists, and the meaning-centered symbolic anthropologists (Strauss & Orlove 2003: 4). In line with the authors, who propose a more extended anthropology of the climate and the weather that integrates the two perspectives, this research seeks to embrace both sides, and takes materiality and semiotics as mutually constitutive. As briefly sketched above, climate change is not merely a biophysical phenomenon that exists outside our ontological horizons and epistemological framings of it, but it is also a mediated reality that comes into being through our discursive practices, actions or "life processes" (cf. Ingold 2000) and the stories that we tell about it. As such, climate change has travelled well beyond the realm of the physical sciences, because it not only shapes our physical realities, but is a powerful idea that is increasingly altering our social worlds (cf. Hulme 2008b; 2009; 2010a).

Moving beyond existing approaches that understand climate-change adaptation mainly in terms of technocratic and "rational" solutions that occur in reaction to bio-physical stimuli, this work explores alternative perspectives in which contested orders of knowledge production, confusing epistemological encounters, and political struggles take centre stage that are entailed by the travelling idea of adaptation to climate change. By bringing into view the friction that occurs in the process of translating Adaptation to Climate Change between different actors, the politics behind this concept begin to dawn upon us. The following chapters focus on how a global discourse on climate-change adaptation finds its way through different "translation zones" (Apter 2006) in Tanzania; on how it takes off, gains a foothold again, and along its itinerary is appropriated, embraced, accepted, reinvigorated, and at times also refuted. By analyzing the translation chain my research seeks to understand how these discursive practices possibly lead to a (re)production or change of power hierarchies, and shape the policy prescriptions that emanate from them. A discourse, referring to the intertwining of knowledge and power (Foucault 1980), is here very basically understood as the way we understand and talk about the world.[21] Moreover, a political ecology lens is employed that traces the genealogy of narratives concerning the environment and the power relationships that are supported by them (Stott and Sullivan 2000: 2),

[21] Foucault defined discourse: "We shall call discourse a group of statements in so far as they belong to the same discursive formation. [..Discourse] is made up of a limited number of statements for which a group of conditions of existence can be defined. Discourse in this sense is not an ideal timeless form [..] it is from beginning to end historical – a fragment of history [..] posing its own limits, its divisions, its transformation, the specific modes of its temporality" (Foucault 1972: 117).

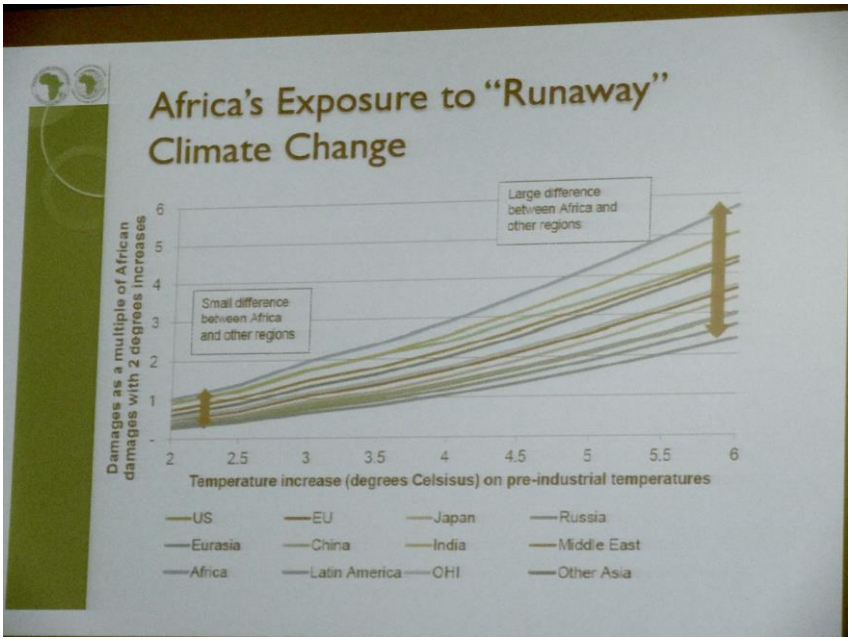
which enables us to explore the "multi-level connection between global and local phenomena" (cf. Adger *et al.* 2001: 682).

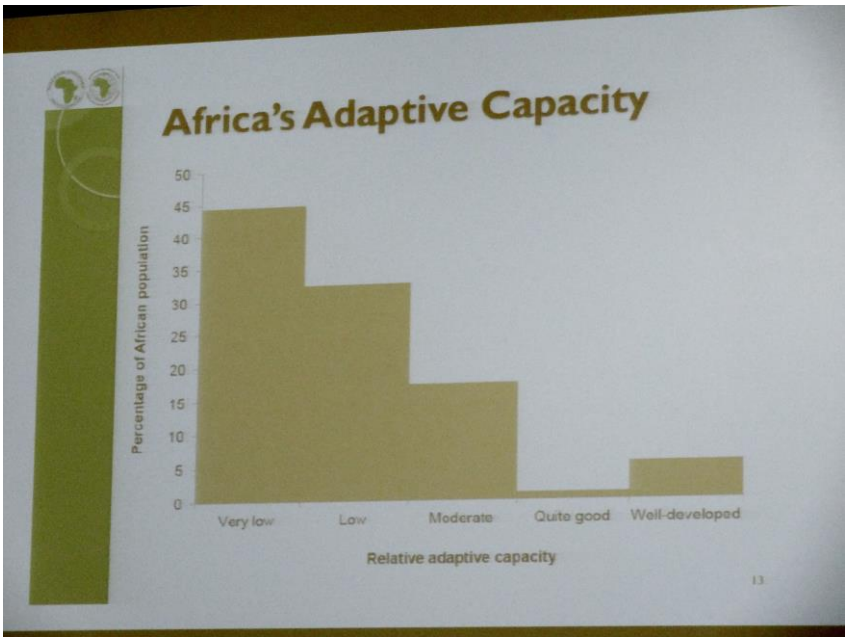
Organization of this book

The following chapters can be read as a travelogue that tells the story of a travelling story. The journey begins with an exploration of transnational climate-change discourses (as already addressed in this introductory chapter) and shall describe and interrogate whatever happens on its long and manifold trajectories up until it reaches Maasailand. Before embarking on the trip, chapter one offers a historical reflection of the notion of crisis, and critiques the ways in which it has shaped much of our contemporary epistemologies. Based on an empirical episode of my fieldwork, chapter two sets the stage for the consequent chapters. By bringing all the actors as described in the preview into a conversation, we gain an insight into the basic contours of the storyline and into the conflicting ways it unfolds. Chapter three is more a reflection on how to follow a travelling idea, rather than a classic methodology chapter. Yet, much of my methodology is woven into the text as a whole. Chapters four and five bring us to Arusha, where most NGOs and CSOs are located. A view from this "translation zone" tells us a lot about how Adaptation is translated in between the "global" and the "local". Finally, chapters six, seven and eight are fully devoted to the village of Terrat in Simanjiro, where the idea of climate change is only marginally present, and a whole different ontological politics can be observed.

1

Beyond Crisis Narration





Pictures taken during a presentation at the COP18, in Doha.

Crisis in and *as* History

Before introducing the heart of this work in the next chapter, a detour will be made around the generic notion of crisis. It may be clear by now that I am not interested in the question of what it means to live in crisis, nor in how one can overcome it, which much of the climate-change literature is infused with. Instead, inspired by the work of anthropologist Janet Roitman (2014), who draws in part on the work of historian Reinhart Koselleck, I focus on the questions of what it takes and what are the effects of *making claims* to crisis in the first place? After that I will explore the analytical value of treating Adaptation to Climate Change as a development narrative that is continuously enacted by being performed and dramatized at different "stages". In a similar vein to that of Roitman, Emery Roe (1999) has raised the following meta-questions regarding crisis in development narratives: "What is going on when experts put forward these crisis narratives?" And, "What is the *role* of these expert narratives in decision making based on them?" (Roe 1999: 6). While Roe's positioning can be understood as a way to counter crisis narrations in development thinking, and thus to come up with alternative (or more suitable) policy-relevant answers, Roitman's take is rather a historical philosophical excavation of the very concept of crisis itself. I will first consider her work before addressing Roe's approach in the second part of this chapter.

What does it entail to *envisage* living in, and speaking of, a global climate crisis? Apocalyptic imaginations are nothing new. Turbulent times apparently spark visions of degradation. Eschatological anxieties have been part and parcel of several cultural and religious traditions worldwide, notably Christianity, but also new forms of (secular) millennialism have sprung from the rapid technological advancements brought about by modernity's "risk society" (Beck 1992, 2009; Douglas & Wildavsky 1982). The influence of the Judeo-Christian tradition on contemporary thinking about the future can hardly be ignored, for both a linear conception of time as well as the notion of an abrupt ending stem directly from the Bible. Moreover, this idea of time has profoundly influenced the whole development of Western thought, even the most profane realms (David *et al.* 1999).[22] However, the ways in which the apocalypse resurfaces or the form in which it is recast, the proliferation and appeal of fear-invoking climate change rhetoric (and any end-of-time tales as well as crisis narrations) have to be located in a particular time and place. For instance, in chapter eight it will become clear that the Maasai have a radically different

[22] Umberto Eco has argued that nowadays the idea of an end of time is more characterstic of the non-Christian than of the Christian world. According to Eco, for the Christian world this idea has become a subject of contemplation and meditation; whereas the non-Christian world claims to ignore it, but is in fact obsessed with it (Eco & Martini 1987, in: Eco 1999: 20).

way of envisaging the future, because God (*Eng'ai*) is understood as the Supreme and unknowable figure of Providence (Spencer 2003). The acceptance of an "unknown" future clearly informs the ways in which the Maasai translate the new prophecy of climate change. In this chapter I wish to demonstrate that the truth effects of climate change crisis narrations and imaginations are never politically free. For instance, according to geographer Erik Swyngedouw (2010), one of the negative consequences of apocalyptic climate change imaginations and their presentation as a global humanitarian cause is that they generate a deeply depoliticized imaginary, which instead of directing us toward a different trajectory fuels the maintenance of the status quo. In other words, he laments that we are told to pursue radical techno-managerial and socio-ecological transformations, but all organized within the horizons of a capitalist order that is beyond dispute (Swyngedouw 2010). In brief, climate change as a tale that foretells a negative future inevitably says something about the society and times we live in. Let us consider the crisis of environmentalism briefly.

In his highly influential book *Why We Disagree About Climate Change* Mike Hulme (2009) explores the long history of humans and their relationship to the climate in pathological terms, and argues that a prospective of a change in climate that is not fully predictable offers a fertile ground for the heightening of these fears (Hulme 2009: 180). The anxieties are principally about the unpredictability of climate-related risks, and about traversing the determined limits that might lead to a so-called irreversible "tipping point", a dangerous threshold that speaks to our imagination as a point of no return. The eschatological fears explain in part where environmentalism in general, and climate change in particular, derive their discursive power. One convincing explanation for what drives environmentalism is that our relationship to the planet touches upon the very essence of the human condition (Arendt 1958, in: Lee 1995). Furthermore, according to Lee, a common ground shared by all forms of environmentalism – and why it is unsurprising that it even permeates traditional left- right dichotomies – is that:

> "In all its forms, environmentalism is – at least marginally – apocalyptic. It is the wellbeing of this planet that most fundamentally supports human life; threats to the health of the earth are therefore threats to human life itself. It is the power of that connection that drives environmentalism. Confronting pollution and extinction is in a very real way confronting the source and limits of power" (Lee 1995: ix).

Nevertheless, as already mentioned, not only are these crisis-driven accounts bound to popular discourse, but anthropology too is not exempt from the same tendencies. As Dove and Carpenter argue in the historical reader on *Environmental Anthropology,* much of anthropology's recently revived interest and engagement with the environment is by and large crisis-driven and

preoccupied with perceived threats to the environment, and is thus focused on the here and now. Whereas there have been several distinct periods of interest in environmental concerns within anthropology, they argue that in recent work on environmental issues a deeper perspective on the historical, political and theoretical context within which this work has been carried out is often missing (Dove and Carpenter 2008: xiv). This holds all the more true for climate-change-related research. The basic problem with such a single-minded focus on crisis is that it inevitably draws our attention away from other, perhaps more fundamental or structural concerns. Moreover, also essential is that crisis evokes such a sense of urgency that it tends to mask the politics inscribed in this discursive act itself.

In her innovative book "Anti-Crisis" anthropologist Janet Roitman (2014) explores the kinds of works the term "crisis" is or is not doing in the construction of narrative forms, and how we have come to narrate history in terms of crises. In her philosophical excavation the vital question is addressed how crisis is constituted as a (privileged) object of knowledge, for indeed: "crisis is an omnipresent sign in almost all forms of narrative today; it is mobilized as the defining category of historical situations, past and present. […] Crisis is mobilized in narrative constructions to mark out or to designate "moments of truth"; it is taken to be a means to access historical truth, and even a means to think "history" itself" (Roitman 2104: 3). If we take into consideration the current media apparatus and all the narrative forms that define, represent and qualify the world in terms of crisis, it seems that the term expresses a deep lack of confidence in the future, and it speaks of a community's anxieties and ethical failures, and hence largely constitutes a basic need for fundamental change. In this respect, to define something as a crisis, or to be *in* crisis always occurs within a comparative horizon. Crisis is constantly judged against how we wish things to be or how they ought to be, and measured in relation to other places and people, and perhaps against how it was in the past and hopefully will be in the future. Ideas about crisis are thus always constructed in spatial and historical analogy (Vigh 2008: 11).

An insight into the *Practice of Conceptual History* by Koselleck (2002), on the semantic power and development of the notion of crisis, teaches us that the concept underwent an inflationary usage – it became freestanding in the eighteenth century – which has come to cover almost all aspects of life. Koselleck states that the ever-accumulating word usage of "crisis" attests more to a diffuse manner of speaking than it contributes to the diagnosis of our situation (Koselleck 2002: 236). When reading an ordinary newspaper or watching the news one easily get the impression that the world is indeed enmeshed in a constant crisis, which seems to be an oxymoron considering its temporal connotation. The etymology of the term crisis suggests a temporal

condition (from Greek *krinô* which means to cut, to select, to decide, to judge), and it designated a crucial moment in which a definitive decision or judgment needed to be made. The concept implied a strict and irrevocable choice between alternatives like success or failure, right or wrong, life and death, and, finally, salvation or damnation (Koselleck 2002: 237).

In its medical history it signified the critical stage of a disease in which an important development or change would take place: a turning point, leading either to recovery or to death (Oxford English Dictionary). Crucially, crisis did not refer to the illness itself, but to the condition that required a decisive judgment between alternatives (Roitman 2014: 15-16). Making claims to crisis is a way of judging the world, as it always engenders certain forms of critique (Koselleck 1988; 2002), which politicizes interest groups. It also leads to the articulation of some questions while foreclosing others. And crisis, which is necessarily a second-order observation, engenders the production of "blind spots" (Roitman 2014). For example, the statement "the temperatures are rising" is a first-order observation, but the statement "we are in a climate change crisis" is necessarily a second-order observation; a form of critique that produces meaning. Furthermore, speaking about crisis gives birth to the production of alternative future horizons. Its manifestations unfold and are imagined as a global spectacle with an unhappy ending if we follow the current climatic trend as predicted to us by science. It has become a choice between salvation and damnation speaking to the industrialized society's moral consciousness, and appealing to modes of being in and relating to the (natural) world and to the limits of our existence. Indeed, the *epitome* of crisis.

Turning back to the notion of crisis as interrogated by Roitman, a certain teleology can be observed, as the moments of truth are often defined as historical "turning points" at which normativity is revealed, knowledge claims contested and vital decisions made. Thus crisis is posited as a sort of "epistemological impasse", which lays the foundation for alternative historical trajectories, and even for a new future (Roitman 2014: 4). If we follow Roitman in her claim that crisis marks out a "moment of truth", the question arises: what does climate change as a global crisis signify and entail as a moment in which truth and normativity are laid bare? There are of course more profound sociological "moments of truth" encapsulated than in the alarming figures (and futures) as presented to us by science, which are of a highly moral nature. Like mentioned above, climate change is not merely narrated as a crisis of the Earth, but undoubtedly understood as a crisis of morality. According to some observers climate change has induced the end of capitalism, for nature has turned against us as a fervent anti-capitalist. In her international bestselling book *This Changes Everything. Capitalism vs. the Climate* (Klein 2014) well-known author

and activist Naomi Klein warns us that all we have to do is nothing in order for this full-blown crisis to change everything. According to Klein, the reason for not taking enough action by lowering our emissions is because those actions fundamentally conflict with the reigning ideology of deregulated capitalism. She laments:

> " […] Living with this kind of cognitive dissonance is simply part of being alive in this jarring moment in history, when a crisis we have been seriously ignoring is hitting us in the face- and yet we are doubling down on the stuff that is causing the crisis in the first place" (Klein 2-4).

In a similar manner, Latour (1991) stated somewhat dramatically: "[…] nature, over which we were supposed to gain absolute mastery, dominates us in an equally global fashion, and threatens us all. It is a strange dialectic that turns the slave into man's owner and master, and that suddenly informs us that we have invented ecocides as well as large-scale famine" (Latour 1993: 8). The cognitive dissonance paired with this "jarring moment in history" that Klein mentions, and Latour's allusion to an inverted natural order both touch upon the source of crisis: a temporal differentiation between experience of the (known) past on the one hand, and expectations of an unknown future and the utopian hope of fulfillment on the other (Koselleck in Roitman 2014: 17). In other words, the climate is not just seen as a neutral arbiter, but as a corrective and galvanizing force that speaks to us and calls upon us to repent our excessive over-consumption and our unlimited greediness. The idea that is implied here is that our future lies in our own readiness for redemption. The climate crisis is our moment in history in which humanity is faced with the decisive choice between the manmade apocalypse and a "green", fairer and more sustainable future. That crisis could be understood as a *final decision* has been proposed by Koselleck as one of the three semantic options in his conceptual history. He argued that "[…] the crisis in which one currently finds oneself could be the last, great and unique decision after which history would look entirely different in the future" – that it is a semantic option that is expected of world-immanent of history itself. In Koselleck's view this option is taken up more frequently the less the absolute end of history is believed to be approaching with the Last Judgment. It thus becomes a matter of recasting a theological principle of belief (Koselleck 2002: 243).

How the "Secular" and the "Sacred" Fuse and Confuse

Although climate change as a global crisis is grounded upon the assumption of its being a secular discourse – driven by scientific analysis and "objective" observation – a sharp reader might have noticed that the language which has accompanied this brief outline of climate change narrations has been religiously inclined. It is remarkable that at some point in history the term *crisis* acquired a predominantly theological meaning. According to Koselleck, who interrogated the development

and semantic power of the concept, a decisive shift in the semantics of the term took place in between the Hippocratic medical grammar and Christian exegesis. The one did not replace the other but, in theology, *krisis* and *judicium* both gained a new meaning taken up from legal language: the judgment before God. It might be that crisis meant the Last Judgment at the end of time (Koselleck 2002: 236). Furthermore, what we learn from Koselleck is that crisis is a concept that has always posited a temporal dimension, and in modern times began to imply a theory of time in the sense that the right point in time must be met for successful action. In theology (according to John) the acceptance of God's message was seen as the way to escape damnation, "despite the still pending Last Judgment toward which the cosmos moved and whose arrival still remained veiled in darkness" (Koselleck 2002: 238). It will be demonstrated in chapter eight how climate-change discourses and their reception seamlessly conflate with the Maasai's existing religious convictions in which rain is generally understood as a blessing, while drought is a sign of moral failure that requires a society's contemplation and redemption. In this way God is mediating His message through tangible signs of the environment (see chapter six).

The theological interpretation of climate change and its religious, spiritual and ethical dimensions might appear far-fetched, but there are manifold cases that confirm an increasing acceptance of their signification, and move towards the rapprochement between the alleged dichotomy between the "secular" and the "religious". More and more religious organizations and spiritual leaders see an important role in tackling the issue of climate change through a reevaluation of religious values. In June 2015 Pope Saint Francis of Assisi, in an elaborate Encyclical Letter "On care for Our Common Home", has delivered an unprecedented call for worldwide action against climate change. The Pope reminded the worldwide community of Catholics and "every person living on this planet" that our common home is like "a sister with whom we share our life, and a beautiful mother who opens her arms to embrace us". He furthermore appealed to our sinful behavior, which can be characterized by humanity's hubris:

> This sister now cries out to us because of the harm we have inflicted on her by our irresponsible use and abuse of the goods with which God has endowed her. We have come to see ourselves as her lords and masters, entitled to plunder her at will. The violence present in our hearts, wounded by sin, is also reflected in the symptoms of sickness evident in the soil, in the water, in the air and in all forms of life. […] We have forgotten that we ourselves are dust of the earth (cf. *Gen* 2:7); our very bodies are made up of her elements, we breathe her air and we receive life and refreshment from her waters (Pope Saint Francis of Assisi 2015: 1).

Remarkably enough, it is not only faith-based organizations and spiritual leaders are making an appeal to strengthening our morality and taking care of God's creation. Also in science, particularly (but not only) within the social sciences and the humanities, some influential voices

have been heard that explicitly seek to depart from technocratic and programmatic approaches that dominate the climate-change research agenda, and allow for more ethically inclined and value-oriented epistemologies. For example, after having followed a remarkable trajectory in climate change research – moving from climate science and modelling to an engagement with how the idea of climate works culturally – in his latest work Mike Hulme emphatically pleas for a reacquaintance with the ancient and religious ideas of virtue as an appropriate response to the challenges of climate change. In this work Hulme is in part inspired by the earth scientist Tim Flannery (2011), who arrived at a similarly noteworthy conclusion in his influential book *Here on Earth: A New Beginning,* which gives a comprehensive historical account of the state of the planet. He argues that we do not need more knowledge – more striving for science and technology – but what we need instead is a valorization of love for our planet as much as we love ourselves (Flannery, in Hulme 2014: 299-300).

This elaboration on religious virtues and environmental ethics is not intended as a call for religious revival per se. Nonetheless, as we shall see the case of the Maasai attests to the ubiquitous epistemic power of climate change as a scientific and secular story, which appears to be blind to the invaluable role that religion can play in uniting morality and the environment. Moreover, it is similary an attempt to de-dichotomize this alleged mutually exclusive division between the secular and the religious. Secondly, this brief exploration of the term *crisis* serves as a theoretical and methodological background to open up to an in-depth understanding of trajectories of being and believing that are the heart of how climate change epistemologies and responses are shaped. The things we believe in and talk about – together with our practices and experiential realities – are foundational for the modes of being in this world, but also to the ways we relate to nature and to each other; and hence form the lifeblood of how we understand, and adapt and respond to climate change. "Living in times of climate change" is a judgment that produces a contemporary consciousness and it defines our historical condition, even to the extent that Earth Scientists have proposed a new name for the era that we live in: "The Anthropocene", or the Age of Mankind.

Not only in the media and public discourses, but also in contemporary social sciences the "event" is privileged as an object of knowledge and analysis, and has thus become the ground for critical theory (Koselleck 1988). The French philosopher Daniel Parrochia has argued that the last quarter of the century perhaps cannot so much be characterized by the "end of History", but rather by the end of philosophies of history, if by that we mean messianic belief systems that entail an unyielding confidence in a teleology of time (e.g. Christian eschatology, Enlightenment

idea of progress, Communist ideal of a classless society). And what remains of these (secular or religious) collective imaginaries of "becoming" seems to be – indeed – an attention to *events* (Parrochia in Roitman 2014: 86-87). It is in this light that we have to understand crisis as a narrative device that has the capacity to produce meaning, and to (re)shape our epistemological and ontological orientations. Furthermore, this narrative device, or "second-order observation", often leads to the creation of blind spots in our knowledge production and is thus inherently political. As Roitman's work has illuminated, while judgments of crisis are posited as a priori they are necessarily post-hoc, which often leads to the fact that the ground for knowledge are not questioned, nor made explicit:

> In [these] explorations of the politics of crisis, it is typically assumed that, while contested and an object of various forms of politics, crisis is an object of empirical knowledge. The grounds for such knowledge are usually left unexamined: crisis is a condition of human history and human affairs. Crises happen and crises are propagated; they *then* become sites of contestation. Crisis – be it disputed, contested, authored – has a particular status in history (Roitman 2014: 87).

Finally, it is not my intention to argue that the climate is not in crisis and that there are no real crises in this world, nor that the crisis narrations are false or inappropriate. Instead, based on my fieldwork in northern Tanzania I wish to bring into view some of the questions that are either overpoliticized or obscured by focusing on Africa's "Adaptation Deficit". The securitization of certain issues, such as that "sub-Saharan Africa is in an adaptation crisis", inevitably has social and political consequences for it legitimizes radical interventions that would otherwise not have been possible or accepted. The perceived urgency of matters often obscures alternative and more nuanced approaches. Since we know we live in a "World Risk Society" (Beck 2009) – which is entailed by the triumphs of modernization – Ulrich Beck has stated that the distinction between risk and catastrophe (or between risk and culturally varying assessments of risk) is gaining more prominence in the era of increasing globalization. The distinction lies in the following: "Risk means the *anticipation* of the catastrophe. Risks concern the possibility of future occurrences and developments; they make present a state of the world that does not (yet) exist. […] Risks are always *future* events that *may* occur, that *threaten* us. But because this constant danger shapes our expectations, lodges in our heads and guides our actions, it becomes a political force that transforms the world" (Beck 2009: 9-10).

It will be argued that the strength of the social sciences and humanities lies, at least in part, in detecting the "blind spots" in our knowledge formations; to keep on questioning the most commonly accepted paradigms and views of the world instead of taking them for granted. As outlined above, all claims to crisis – and climate change is no exception – take as a point of

departure the same question: what went wrong? These narratives are directed to finding the roots and source of crisis; none hesitate over the matter of positing the term crisis itself (Roitman 2014: 42). My research has addressed the stakes involved in positing adaptation to climate change as crisis, and what happens in its journey to northern Tanzania. Particularly climate change research with a focus on vulnerable areas largely seeks to address the questions: what are the biophysical consequences; how can it be solved, mitigated or prevented; or how can one adapt to it? In other words, the obsession with crisis as "the eventful" tends to circumvent the fact that it is the very claim to crisis that is never neutral, and is always a political act in its own right. This work seeks to bring to light some of these blind spots that are entailed by climate-change crisis narration about sub-Saharan Africa, and proposes to ask alternative questions.

Adaptation as a development narrative

If we consider the term *crisis* in the context of development thinking we learn that it has been at the very heart of the project of development itself. As mentioned earlier, it is crises that make outside intervention appear to be the only and indispensable way forward. In his foundational work "Except Africa" on development and power, Roe (1999) has argued that "what-do-we-do-about-crisis" questions are misleading for they pull us into the direction of techno-managerial elites whose very existence depends on these questions to begin with (Roe 1999: 11). This point will be addressed in the next chapter. Considering the velocity with which Adaptation to Climate Change is travelling to the Global South, it is a legitimate exercise to look into the issue as a development narrative. Roe has defined development narratives as:

> […] the rules of thumb, arguments, "war stories" and other scenarios about rural development that enable decision makers to take decisions, be the decision makers farmers, bureaucrats, outside experts, or others (Roe 1999: 1).

I have already touched upon two dominant crisis narratives about Africa in the introduction. Here I consider more specifically crisis narration within development thinking. An important point raised by Roe is why some development narratives have such pervasive power, despite all the counter-claims that do not warrant their conclusions; in fact even contradict them (a well-known scenario is the "tragedy of the commons"). The author argues that the main function of these development stories is that they underwrite and stabilize assumptions for decision-making in highly complex situations. In other words, they simplify complexity by crafting a scenario that is deployed to stabilize decision-making. He demonstrates how complexity and simplicity are deeply reciprocal. Put otherwise, the more complex a local problem appears to be at the macro level, the greater the demand for standardized approaches or blueprints becomes (Roe 1991;

1999). A common tendency to change the course of development by scholars and other experts in the field of development is to "denarrativize" the widely spread narrative, which is then commonly conceived of as a "myth" after it has been debunked. Here a problem arises, as the author argues, namely that each attempt to "denarrativize" creates more uncertainty, because it does nothing more than undermine the existing development narrative without providing an alternative. In short, a denarrativization does not dispel the chief virtue of a powerful narrative (which is its staying power). And because critique alone does not tell its own story, he proposes that the wiser course is to first examine how these narratives can be superseded or improved. So what is needed, according to Roe, is a similarly straightforward counternarrative that tells a better story (Roe 1999: 21; Roe 1991).

While Roe is probably right that the pervasive power of some development blueprints is due to their simplicity, which is relevant for policy making, I believe that there is also a political argument to make. Some development blueprints just tend to serve some interest groups better than others. Such has been the case with varying development narratives (embedded in scientific claims) relating to the pastoral rangelands of the world, so too in the case of Maasailand in northern Tanzania. The practice of development aid is in many ways substantiated through the continuous practice of making claims and counterclaims. However, unlike Roe my goal is not to come up with yet another counternarrative, but rather to bring these practices into the light of scrutiny.

Narratology and the quest for meaning

At first sight there appear to be sufficient reasons to believe that a narrative approach to climate change is a marginal and even unwise endeavour. Firstly, we live in times of growing climatic threats, and experiential realities related to climate change that are occurring all over the globe are on the rise, especially in the Global South; secondly, at the same time the worldwide "faith" of deniers and sceptics is flourishing and continue to form an impediment to global action; and thirdly, the question that has emerged on the lips of postmodernists is whether we haven't left the time of the metanarratives, and analyses thereof, behind us. In other words, it appears that the lure of finding ready-made solutions to overcome this looming crisis is stronger than the need to understand the discursive practices in which these alleged solutions are enmeshed. Against this background, to employ a narrative paradigm has been opposed – which is all too familiar to constructivist critique – as an attempt to do away with climate change as something

"constructed", which occurs only in our minds and in the stories that we tell about the world.[23] In this sense climate change brings to the fore the age-old dichotomy between "constructivists" on the one hand and "realists" on the other. The narrative approach as employed in this work seeks to do away with this binary opposition, for the one does not exclude the other. Whereas the two approaches are indeed grounded within different epistemologies – as a meaning-generating vehicle vis-à-vis something quantifiable and measurable – for a more profound understanding of climate-change realities, they need and complement each other. Climate change is both a biophysical and a deeply cultural and social phenomenon, as Mike Hulme has also made clear throughout his work:

> The world's climates will keep on changing, with human influences on these physical properties now inextricably entangled with natural influences. Global climate is simply one new domain which reveals our embeddedness in nature. But so too will the *idea* of climate change keep changing as we find new ways of using it to meet our needs. We will continue to create and tell new stories about climate change and mobilise these stories in support of our projects (Hulme 2010a: 171).

In other words, the stories that we tell about the climate and the things that we believe in are fundamental to how societies across the globe give meaning and respond to it. In turn, discourses form the ground upon which actions gain legitimacy, and it can thus be said that climate change itself has sprung from – and is the result of – a certain global system of international relations that is sustained and legitmized by a particular worldview; be it capitalism, neoliberalism, the belief in unlimited growth, in science or in the invincible power of humans. Climate change is real as a tangible atmospheric manifestation and physical condition, but it is also real as an all-embracing environmental story about humans' place on Earth that is travelling around and mobilizing actors across the world with increasing force. As Hulme claims in his newest work, "the idea of climate exists at the intersection of culture, weather and place" (Hulme 2017). Therefore, because climate change cannot be a single story we have to be attentive to its multivocality around the world.

The narrative paradigm is integral to the attempt to reunite culture with the climate (cf. Daniels and Endfield 2009: 222). In a similar vein, more and more scholars are pointing out the importance of engaging with holistic approaches and interpretative accounts that take as a vantage point issues like morality and justice (Jamieson 2009; Paavola & Adger 2002; Adger *et al.* 2006); values and culture (Roncoli *et al.* 2009); storytelling (Hulme 2011b; de Wit 2015; Rudiak-

[23] An example of this is the critique that Mike Hulme's book *Why We Disagree about Climate Change* (2009) received from some scholars. For a brief description of this debate see: Kitchner 2010, in Hulme 2010a: 173.

Gould 2011); narratives and the rising cultural profile around climate change (Daniels and Endfield 2009; Bravo 2009); social drama and rituals (Viehöver 2010); spirituality (Hulme 2009; 2010a) and the religious idea of virtue with a sensitivity to love, humility, hope and wisdom (Hulme 2014). Put in the words of climate psychologist Renee Lertzman: " […] it is an opportunity for us to think about how we can be active and be agents of change, and at the same time allow for what it means to […] reflect, what it means to connect, to listen and interact with one another in new and creative ways; and to love".[24] Furthermore, there is also a growing awareness and call for "alternative" epistemologies that are rooted outside climate-change science – such as indigenous knowledge systems – as an invaluable source of information in dealing with climate change. Moreover, Sheila Jasanoff (2007) proposed to develop "technologies of humility", as a call to open up to "partial knowledge" that can be characterized by uncertainty, and which is often sidelined in climate-change policies (Jasanoff 2007).

To conclude this section, it is important to note that I thus understand narratives as standing in a dialectical relation with human experience. In other words, language can be seen as an active and mediating force that gives meaning to our experiences, while our experiential reality similarly shapes our language and stories. Furthermore, I embrace pragmatism and social constructivism in the sense that language does not function simply as a "mirror of nature", but that it is rather part and parcel of constructing it. For, as Rorty (1979) explicated: "It is pictures rather than propositions, metaphors rather than statements, which determine most of our philosophical convictions" (Rorty 1979: 12). While the majority of scholars dealing with narrative have placed the focus of analysis on the active role of narratives in giving meaning to and constructing our human experiences in life, I thus wish to take the argument further and interrogate how human experiences endow narratives with meaning. The focus of the narrative analysis can be briefly summarized according to Polkinghorne's scheme in which he makes a triple representation of narratives: first, there are the stories that we tell to ourselves (not available to observation and analysis); secondly, the stories that we tell to each other by narrating, writing or enacting them; and thirdly, the process of understanding and interpreting the stories that we hear or read (Czarniawska 1997: 19; Polkinghorne 1988). The latter process falls under the broader field of reception studies, which forms an important focal point of analysis in the empirical chapters that follow. In addition to the current research agenda, which largely deals with climate-change impacts and with how people give meaning to these biophysical changes, it basically allows for an

[24] This statement was made during a speech "Why climate change produces apathy". This event took place the day after Donal Trump was elected as the new President of the US, so the meeting had an extra dose of relevance. 9 November 2016, *De Nieuwe Liefde*, Amsterdam.

understanding of how people make sense of travelling climate-change discourses. But let us turn now, at last, to the climate-change spectacle as it unfold in Tanzania.

2

Setting the Stage: A Climate-Change Spectacle Unfolds

Introduction

It was an extraordinarily rainy day for the time of the year when approximately one hundred people, including the national and international press, from all over Tanzania and abroad found their way to the UNDP building in Dar es Salaam to talk about climate change. Leboi Ole Netanga and traditional leader Meshak Ole Sambu[25], two Maasai pastoralists from Simanjiro, were summoned to this high-profile meeting as "climate-change witnesses", which enabled them to visit Dar es Salaam for the first time in their lives. Yet, *the idea of* climate change was not new to them. What we see in the picture is that these two herders are staring at a picture of themselves; a situation that comprises an interesting layer of encounters and travelling ideas that deserve a more detailed contextualization. By unpacking the following encounter between representatives of the government of Tanzania, grassroots testimonies from two Maasai herdsmen, technical experts and an NGO representative, I will show how the travelling idea of Adaptation to Climate Change entangles different lifeworlds and histories.[26] These pictures were taken during a public hearing that was organized by Tanzania's civil society "ForumCC", which is an overarching platform of NGOs and expert organizations dealing specifically with climate-change-related issues. The event was held in preparation for the upcoming international climate change conference (UNFCCC, COP17) that would take place ten days later in Durban.[27]

The aim of this happening was to "provide a space for Tanzanian citizens to share their experiences with and concerns about a changing climate and how it is, and will continue to impact their daily lives". In addition to the engagement of several stakeholders that represented the international community (organizations like UNDP, Resources in Africa, IIED)[28], and the national and regional government of Tanzania, this platform was intended to provide space for ordinary Tanzanian citizens to share their "climate testimonies", and to give them the opportunity to learn from experts. The floor was given to fishermen from the coastal zones and Kigoma; farmers from the mountainous area of Moshi and Kilimanjaro; two pastoralists from the

[25] Names of my informants have been changed.

[26] The following account should not be considered as an ethnographic "evidence" in the traditional sense of the word, but this event should be understood as an entry for storytelling, and for reflecting upon a comprehensive set of entangled issues that came to the fore during this meeting (cf. Ferguson 2006: 168). I chose this way of storytelling because this encounter between different stakeholders at this particular conference forms a largely fairly solid representation of the contours of different positions in the debate.

[27] "Climate Change Hearings II: Have you heard us? November 18th 2011, UNDP, Dar es Salaam. Organized by Tanzania National Resource Forum (TNRF) and ForumCC. The event received some considerable media attention as it was covered in at least three newspapers, and was also broadcasted on national TV. See link to program: http://www.youtube.com/watch?v=EYsA70EV-4U&feature=player_embedded#.

[28] Because my goal is not to analyze the working of the actors and organizations per se some names have been changed.

Simanjiro Plains; a seaweed farmer from Zanzibar, and subsistence farmers from Pemba, Kigoma and other parts of Tanzania. Also a traditional healer gave an account regarding knowledge about indigenous medicine, who came fully equipped with plants and herbs in order to demonstrate how climate change is affecting indigenous knowledge systems. Among the testifiers was also Maasai pastoralist Leboi Ole Netanga coming from Terrat (a rural village in northern Tanzania) and will form the focus of attention in this section, because this particular locality has formed part of my further fieldwork. Moreover, his testimony unintendedly sparked heated emotions among various actors that deserve some examination.

Source: photo-story book *Visions of Life with Climate Change 2011*

This picture was taken by Leboi. The photo-story book that the two Maasai men are looking at forms part of an initiative led by an international NGO, which aims to support the perspectives and needs of communities regarding adaptation to climate change, and similarly wishes to promote awareness in Eastern and Southern Africa. In order to communicate local climate-change adaptation, part of their methodology is to make use of community-based theatre, educational docu-drama films, a cross-media web site, a "toolbox" of information and photo-story techniques. This is what we can read about Leboi in the photo-story book:

> I took a picture of these zebras because I like to see them happy and fat. It shows that the land is good and healthy. It's beautiful. I spend a lot of time on the plains, where I work, close to the wildlife. I was elected to become a community game scout by the elders because I have experience. I know a lot about wildlife because I grew up having them around me. I know if they are ill, I know their names, I know how to count them, and I know their different tracks and hiding places. I was trained by my father. […] A plain can keep both wildlife and livestock. It is very good land. For us pastoralists the wildlife is a natural resource. The wildlife gives us money, we profit from them. We have an agreement with five tourism companies. Each year the village receives income from them for keeping the plains free from cultivation. The

> Conservation Easement area, as we call our plain, is a way to preserve our livestock and the wildlife.[29]

With this fairly romanticized portrait about the peaceful coexistence of wildlife, livestock and human beings, Leboi became part of this photo-series project. The idea behind giving Leboi a tool (the camera) was to give him the opportunity to document his lifeworld and show the environmental challenges that he is facing, and thus frame and give voice to his viewpoints and share it with a wider public. Hinting at the climate-change-related problems that pastoralists are facing, like increasing water scarcity and recurring droughts, he has also taken pictures of a dried up river, a cow and milk, which all form part of their socio-cultural and environmental fabric. In a similar vein as in this photo series Leboi was asked to testify at the public hearing about the climatic challenges that the people in his village are facing.

In the following analysis we have to take into account that before Leboi came to testify at the civil society event about how climate change is affecting livelihoods in his locality, he was already informed by an international organization about the causes and possible consequences. This is certainly not to say that his account is necessarily less "valid" or not objective, but rather that his newly appropriated idea about what lies at the root of this new challenge and how it can be surmounted has been shaped by prior exposure to information. One could argue that, at least to some extent, his testimony has been "scripted". We can explore this particular situation to gain insight into how an idea of climate change has travelled up and down from the international level to the local, to the national, and back again to the local (and is even further translated here by me). In other words, Leboi had been exposed to climate-change discourses before he came to testify, which thus renders an analysis in the light of reception studies an apt undertaking. Furthermore, it shows how NGOs actively shape the worldviews, perceptions or epistemological frames of the people they actively want to engage in support of "their" goals, which in this case are also presented as "his" perceptions and goals. The story behind this picture serves here as a metaphor of how an idea about climate change travels across a distance. The questions that will be addressed in this section are: what can be said about this "discursive journey" if we follow the different actors, networks and settings that constitute the connections that enable the translation of climate change to take place across a distance? How do policymakers and government officials speak about adaptation to climate change, and how do people at the grass roots make sense of these changes and discourses? And, how do they incorporate these issues – which form part and parcel of modernity's challenges – into their existing epistemological frameworks, local cosmologies and climate trajectories? By developing a portrait, or "thick description", of the

[29] *Visions of life with climate change. Community photoseries from Namibia, Tanzania & Kenya*, 2011.

public hearing on climate change that was held in Dar es Salaam, this section is intended to explore these translation dynamics.

The International Community

For the opening speech the floor was symbolically given to laureate Mr. Marsh, who represented the international community at large and the government of the United Kingdom in particular. He opened the meeting with following words:

> […] With the climate change negotiations in Durban only a few days away it is important that national policymakers and negotiators take with them the stories and initiatives from today, since climate change is affecting the poor and the most vulnerable. It is an issue that is affecting us all and will heavily affect the sectors of water, health and agriculture in your country. Increasing droughts will impact the poor and vulnerable as the year of 2006 has shown, while they have contributed least to the problem. Recent droughts have cost 1% of GDP, and in 2040 it will be costing 2% of the total GDP of Tanzania. So now it is time to take action to adapt to climate change. It is more important than ever to develop policies and strategies to address climate change. The international community is beginning to make climate funds available for reduction [inaudible…] and the UK has already planned to provide 1.5 billion pounds, which is over 3 trillion Tanzanian shillings globally for the next four years. […] Tanzania has an abundance of facilities for renewable energy resources, and the future carbon market could also provide energy with green growth opportunities.

In addition to the urgent need for adaptation to climate change for the poor and vulnerable as expressed in the words of Mr. Marsh, it may become clear how his view is in line with the positioning of the international community that is interested in combating climate change in Tanzania. A discursive pattern that can be distilled from this talk goes as follows: (1) the framing of the problem starts with the construction of the threat that climate change will bring about in Tanzania, especially for the poor; (2) the donor makes himself indispensable (cf. Callon 1986) by arguing that this problem can only be surmounted with the intervention from abroad, which comprises the promises of large future investments for the benefit of the country (rhetorically presented as the ultimate pathway to save Tanzania from the threats of climate change); (3) and on the other hand he seeks to open up the possibilities for market-driven responses in order to tackle the issue of climate change. Here the proposed solutions are to be found in a package that combines green growth, adaptation and development-related issues at large.[30]

[30] This standpoint of mainstreaming market-driven responses to climate change with development policies is fully embraced by the Tanzanian group during the international climate change conferences in Durban (COP17), as well as in Doha (COP18).

In the course of the ongoing expert discussions a critical observer implicitly stipulated the ethical side of the problem by mentioning how important it is to look at the causes of climate change from a global perspective instead of focusing on the local causes and contributions:

> In their [the panellists'] areas of identifying the issues of climate change there is something I want to say. Let us look at it seriously […]. There is one member here who spoke but we did not take his words seriously. When we talk about it in our country, we have some issues to deal with at the national level as a nation, for we have allowed practices of environmental destruction that have resulted in climatic changes. But there is a global issue that this forum has not discussed: the development activities, which are done by human beings in this world that are the source of climate change in the whole world. For example, our fellow here who said that we are talking about climate change without talking about the presence of industries in the world. If we will be quiet about this it is going to be very serious in the world today.
>
> […] This problem of pollution that increases temperatures is the one which destroys the ozone layer, but when we come to the literature we see it is that which makes a human being engage in development activities that do not consider what was told by God; that we have to use all things in the world but conserve them. Those are the instructions from God, and not from human beings. God created the world well and put good things and asked us to go and live on earth and use the sources well. Even if we do not have the capacity to tell them [the industrialized countries] that we want this world to exist, whether we like it or not this issue of climate change will bring the world to an end. This forum gives us the chance to speak, because if we don't speak it is like hiding a disease and one day the disease will… will reveal itself.[31]

What can be derived from these two fragments is on the one hand the ethical element that points to the historical responsibility of the industrialized countries towards the developing world (to save the planet), but it also shows how climate change appeals to moral sentiments that relate to the idea of stewardship of the Earth, as prescribed by different religious traditions. Finally, it becomes clear how discourses about climate change evoke anxieties of an approaching ending of the world. How we can make sense of the construction of responsibility ("Think globally and Act Locally"), feelings of guilt and morality (e.g. the idea of stewardship) and sentiments of fear (the apocalyptic "aura" of climate change) that form part and parcel of the translation process of climate change.

"Have you heard us?" The Grassroots Testimonies

After the introduction of the expert panellists from the fields of national politics, academia, (international) policymaking and the civil society, the floor was opened for the grassroots

[31] All grassroots accounts are originally in Swahili. Due to translation constraints some nuances of the original version might have been lost. Verbatim translations are thanks to masters students from the social sciences department at the University of Dar es Salaam.

testimonies. Recurrent explanations for the causes of climate change included, among others: the cutting down of trees, population growth, the planting of alien tree species (that absorb too much water) and poverty. The proposals for a solution were unequivocally expressed in the need for more education. Furthermore, the more experiential testimonies all referred to the problems that are caused by the irregularities in rainfall patterns. For the coastal fishermen the challenges are the rising sea levels, and the changing timing of water levels between high tide and low tide. Another observation that was made several times is that the knowledge that was passed on from their grandparents to their parents regularly fails to serve them nowadays. For example, as expressed by Angelina Kapinga, a female farmer from Kilimanjaro district:

> In the side of Rombo district the environment affects us very much, because the rainy seasons are so distorted. We fail to identify the perfect time of planting. Many of the farmers are acquainted with following the grandparents" system of cultivation. We fail to cope with the current weather, but due to the changes every year the farmers fail to know the conditions of their agriculture.

In another account it was explained that in times of a changing climate it is necessary to change certain norms and customs accordingly:

> […] Another thing that we should recognize is that we have common beliefs that a certain crop is only cultivated in a certain plain, like maize or rice. Sometimes it goes with our norms and customs, but it is very important to have a collective desire to change due to the climate-change issues. To stop those norms and customs that we are used to. Now we should find alternative ways or crops, which could help us to overcome the effects of climate change.

Even though it does not become clear to which norms and customs (apart from changing crops) are being referred to, a clear sentiment towards a general desire for change can be observed. As I have argued elsewhere (De Wit 2014b; 2015) climate change is often translated and perceived to be part and parcel of the broader challenges entailed by globalization and modernity, and it sets new norms and standards for how to adjust to a rapidly changing world. For many communities in the "developing world", climate change has become a container notion through which an array of societal ills is explained. From this more general overview of grassroots accounts, in which I selected fragments of statements that only scratch the surface of some of the recurring experiential realities and how people perceive climate change, I will turn now to a more detailed description of the case of Leboi.

Leboi speaks out

The final testimony was given by Leboi. It was quite remarkable that his testimony – as opposed to the other statements from the grassroots – was not written down. So he spoke freely, with a great sense of passion:

> My name is Leboi Ole Natanga from Simanjiro district. I come from Terrat village. When we used to talk with our fellows in the village about climate change we realized that it started to occur in 1987, when drought hit the zone of Simanjiro. We are pastoralists, we tried to cultivate but we failed due to the climate change, then variation in season and no rainfall. […] So we tried to cultivate but a few of us got maize, we tried more but we did not succeed […] and we realized that we are in an area that does not support agriculture. So we decided to continue livestock keeping.

According to Leboi, 1987 marked the beginning of the "arrival" of climate change, for it was a period of unusual drought and a time in which the pastoralists from Terrat engaged in agricultural practices. The link appears to be made that due to the drought, the cultivation of crops was needed in order to complement their common practices of cattle herding, and to diversify their livelihood strategies. Later on he explains in more detail what the difficulties were at that time:

> We experienced changes in those years. We could find one season of rainfall followed by a season without rainfall, or two consecutive years with no rain. So we asked ourselves: what causes this? Because since time immemorial while talking with our fathers, they told us that there was enough rainfall, hence enough pasture for livestock. However, now the situation has changed, therefore it happened that if the rain did not come for two years, livestock were affected by lacking pasture and sources of water were drying. When we were growing up we experienced the increase in number of people in the village. So those people cultivate, cut trees without planting. It happened that the village became desert, and large areas were left without trees. But at the moment they stopped because the maize did not grow, therefore they stopped to cultivate and left the area for livestock keeping again. Thus we started to see changes in those years because there was a shortage of water for our livestock. Sources of water are drying because there was no rainfall. As we see in previous days water was available because there was rainfall.

While speaking about the changing rainfall patterns, Leboi is similarly referring to the increasing population pressure and the (apparent) complicated relation that exists between keeping livestock on the one hand and cultivating crops on the other. According to anthropologist Terrence McCabe (2003): "The adoption of cultivation by pastoral Maasai living in northern Tanzania was the first and most significant step in the process of livelihood diversification that is continuing today" (McCabe 2003: 100). Moreover, he states that "[…] this attempt to craft new sustainable livelihoods was in response to increasing population pressure, a fluctuating livestock population, reductions in grazing areas, and modernization that places an increased emphasis on a monetary economy" (ibid). Put differently, the changes in rainfall patterns that Leboi was talking about

form part of a broad and complex picture that can similarly be characterized as a time of rapid social and economic changes, which are here given meaning by being viewed through a "climate-change lens". Population pressure, and irregularity of rainfall – as expressed in Leboi's statement – are among the factors that can be related to the increasing stress on grazing areas, and the decreasing availability of water. Yet, the importance of rainfall and access to water sources for the survival of the pastoralists and their cattle is repeatedly emphasized in his talk by mentioning (the lack of) rainfall as the source of change:

> It started to rain from October until April, but now it can rain in April and stop directly. So we migrate to another village out of Simanjiro. So the climate change brings a lot of changes, and if there is no rain for two or three years, our livestock dies. Therefore, we are affected more because we depend on livestock keeping. So we see that there is climate change, then as we come from Terrat village we see changes and we are trying to engage in meetings to discuss what brings this.

It is worth mentioning that, according to a currently widely accepted (however not uncontested) view among ecologists, with an average annual rainfall of 500 mm arid rangelands like the Simanjiro plains are "nonequilibrial ecosystems" (McCabe, personal communication), meaning that precipitation patterns are highly variable and droughts frequent. Furthermore, this entails that external factors – e.g. variability in the precipitation pattern, not herbivore numbers – exert a strong influence on the structure and condition of the rangelands (McCabe 2003: 102). Within this paradigm a pronounced climate variability is thus something inherent in this ecosystem rather than a new dynamic, with the precipitation patterns indeed having the greatest influence on the structure of the vegetation. Simply put, the concepts of "nonequilibrial" or "disequilibrium" state (which largely fall under the "new range ecology paradigm") hold that it is impossible to achieve a "steady state" or equilibrium between stocking rate and forage production in many, if not most, arid and semi-arid rangelands (Behnke *et al.* 1993). However, there are studies that point towards more complex explanations and contend that arid and semi-arid environments encompass both elements of equilibrium and non-equilibrium ecosystems, for they are extremes along a continuum (Vetter 2005). An extensive body of literature exists that deals with this topic, and I will only briefly come back to it in chapter five. It is important to note that my aim here is not to arrive at a better "truth", but rather to gain insight into how these competing narratives are historically produced, sustained and perpetuated within the climate change debate. Crucially, these scientific findings always have had far-reaching political consequences.

Pastoral rangelands throughout the world have been subject to an array of competing development narratives. Over time important shifts took place in thinking of pastoralism solely in

terms of *unpredictability* as risk, and that pastoralists make decisions based on risk aversion. In this development narrative risk aversion is an ecological adaptation in the face of constant unpredictability. More recent approaches, rather than focusing on avoiding risks per se, point towards the pastoralist as an active agent in pursuing ongoing efforts to reduce the probability of those hazards. For instance, Roe and others have developed an explicit counternarrative that opposes this "old (risk-averse) pastoralism", with the idea that the central concern of the pastoralist is to "manage a predictably unpredictable environment better". Drawing on "the new range ecology paradigm" that embraces "opportunism" as a key feature, their counternarrative sees pastoralism as a high-reliability institution in the face of unpredictability. Within this newer way of thinking pastoralists manage temporal and spatial diversity in grazing opportunities and diversity in livestock response. Hence, risks are accepted, and people even take risks as a response to hazards they cannot avoid (Roe *et al.* 1999: 58).

Let us take a closer look at Leboi's account. Due to the inherent variability of the Simanjiro plains it does not come as a surprise that for Leboi, speaking about the (changing) climate is one and the same thing as speaking about (changing) rainfall. Nevertheless, his expressed concerns deserve once again a broader historical understanding of political processes that have shaped the socio-cultural and environmental landscape of which the Maasai pastoralists form a part. He and his village members are not sure yet what causes this situation:

> Looking at history you say that the destruction of the environment causes this situation, but we are trying to find out how the destruction of the environment has caused it. It cannot be demonstrated clearly! […] We are trying to protect our environment so that it can rain, because we don't know either if it is the destruction of the environment itself or is it because of lack of rainfall. We don't know yet! We are trying more and more, but we fail. In recent years you can find there is no rainfall even for five years continuously. Nowadays there are some important pastures disappearing because of lack of rainfall.

This fragment leaves us with the impression that the emphasis is placed on showing that the pastoralists are trying to protect the environment, and not destroy it. He appears to find the idea that the source of change lies in the destruction of the environment itself rather odd, and instead seeks it in an external (or non- anthropogenic) cause, namely: rain. One of the possible reasons why Leboi feels the need to portray his way of living as non-destructive for the environment is undoubtedly due to the longstanding and predominant view that has perceived the pastoral mode of living as "irrational". This age-old paradigm has been given further impetus in academia and development planning by Herskovits' notion of the "cattle complex" and Hardin's article on "The Tragedy of the Commons", to which I come back below. Over time this idea has provided

a theoretical foundation for rangeland management systems that advocated either the reduction of livestock numbers, total abandonment of pastoralism, raising livestock in sedentary settings, commercial ranging or the privatization of rangeland resources (McCabe 2003; Igoe 2002; Sachedina 2008). It can be said that Maasai pastoralists like Leboi have been subjected to a wide variety of changing paradigms and political processes, generally motivated by Western conceptions of pastoral inefficiency, but perpetuated by the Tanzanian government (Sachedina 2008), which continued to have a considerable influence on the patterns and trajectories of their modes of living. Although the abovementioned more recently embraced "nonequilibrial" paradigm, which states that pastoralists do not automatically degrade the environment, we shall see that in the following response this idea still persists among (some) government officials.

Then something unexpected happened and Leboi seized the opportunity to ask the honourable member of parliament a question of a somewhat different nature:

> What is another issue? Let me ask the people from the government something: why is it that the wild animals, I mean from Tarangire [National Park], they come and eat our grass, but our cattle are not allowed to go to Tarangire to eat the grass there?

The final comment expressed by Leboi stems from similar disagreements over productive methods of livestock keeping that exists between the state and pastoralists, but also touches upon another crucial and sensitive issue, namely the conservation of nature (including wildlife) versus development-related issues. It is worth contextualizing the particular area in which Terrat is located, as it forms part of the vast plains of northern Tanzania, which have a long history of being managed under some sort of conservation management. This larger region that is internationally renowned for its "natural wonders" and scenic beauty, like the Serengeti plains and the Ngorongoro crater, forms part of a longstanding institutional legacy of the creation of national parks. There exists an extensive amount of literature that addresses the complex relationship between wildlife conservation on the one hand and sustainable development on the other, but it is beyond the scope of this chapter to elaborate on this matter here.[32] What is important to bear in mind, though, is that this region has a particular history of being subjected to globally constructed ideas of what nature is, and how humans can "fit" – or rather *not* fit – this (idea of) nature in order to conserve the world's remaining wild places and the wildlife that live in them. One such place that is based on the ideology of the separation of "nature" and "culture" is Tarangire National Park (TNP, see figure 1).

[32] For a detailed study on wildlife management and Maasai interaction in the Ngorongoro Conservation Area, see the notable work by Homewood & Rodgers (Homewood & Rodgers 1991).

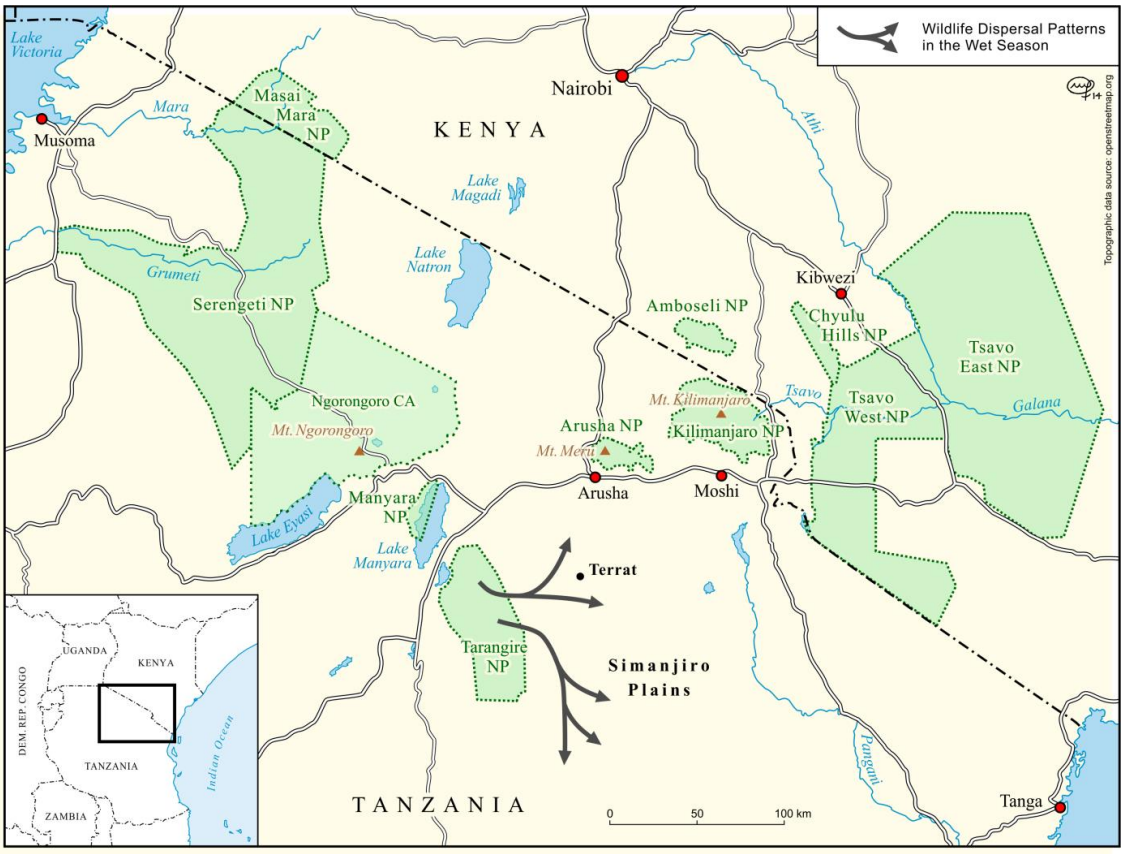


Figure 1. Wildlife dispersal into Terrat during the wet season. Cartography: Monika Feinen.

The village of Terrat is located on the northwestern outskirts of Tarangire National Park, which became a game reserve in 1957 and was "upgraded" to a national park in 1970. The gazettement of Tarangire as a national park remains a painful memory for people who were evicted (Igoe and Brockington 1999; Igoe 2002). For the Maasai of Simanjiro the area that is now Tarangire was central to their system of transhumant pastoralism, since the most important and reliable dry-season water point in the entire ecosystem – the Tarangire river – is located inside the park. Moreover, the park contains the so-called Silalo Swamp, which was the primary drought reserve area for the herders of the Simanjiro/Tarangire ecosystem. Finally, it contains a number of seasonal water resources. Local herders have claimed that the national park has disrupted their traditional herding systems, and played an important part in the decline of Simanjiro's pastoral economy (Igoe 2002: 80-82). Against this background, it is therefore not surprising that herders like Leboi, whose parents used to dwell in this area and traditionally followed the same migratory routes as the wildlife, complain about the increasing lack of water and green pastures for his cattle. Thus although the fact that the borders of the national park are, from the outside, strictly closed to both pastoralists and their cattle, in the other direction during the rainy season the wildlife disperses into the wider area. Due to the central location of Terrat within one of the

important migratory routes of the wild ungulates, at the onset of the dry season when the wildlife return to the park the cattle are often left with insufficient grasses to survive the dry season. Yet at the same time the village members play a vital role in the so-called community-based wildlife conservation by keeping the designated area free from cultivation. The majority of people I spoke with in Terrat complained about the lack of land and pasture. This is aggravated by the fact that wildebeest give birth in this area (Terrat is nicknamed "birth clinic" by the people there), which makes the land inaccessible for cows as the grass becomes poisonous for them, leading to blindness and death.[33]

There appears to reside a contradiction between the ideology upon which the idea of a national park is based on the one hand, and the community-based conservation paradigm that is surrounding the park, on the other. The idea of a (closed) national park is based on a strict separation of nature and culture, which lies at the heart of Western concepts of environmental conservation (McCabe 2003). This idea and practice of a strictly (en)closed nature has been called by Dan Brockington "fortress conservation" (Brockington 2002). Outside the park we can find community conservation (a paradigm that spread over Africa in the 1990s) that envisions a synthesis of conservation and development, and assumes that human and non-human systems are interdependent. This contradiction resonates with the following statement made by Jim Igoe (2002), who conducted a detailed case study of the relation that exists between Tarangire national park and the Maasai of the Simanjiro Plain:

> Ironically, there is a growing evidence that national parks themselves are contributing to the very problems that advocates of community conservation are trying to solve. British administrators, who assumed that African resource management systems were environmentally destructive, initially imposed the national park model on East Africa. […] In spite of the negative impacts of protected areas on local resources management systems, they were never redefined to suit the African context in the years following independence (Igoe 2002: 78).

The idea behind establishing national parks was originally based on the assumption that a local population's natural resources management system is inherently destructive for the wider environment. In his gripping book "Fortress Conservation", Brockington reveals the complex history of the establishment of the Mkomazi Game Reserve in Tanzania. He lays bare both the uncertainties of the ecological theories that buttress policymaking, and the negative social consequences for surrounding communities that are supposed to benefit from it. And crucially, he also shows how little all this negative scientific evidence matters with the influx and powerful

[33] Wildebeest transmit the malignant catarrhal fever (MCF), which causes blindness and is fatal to the cattle.

lobbying of large fund-raising machines that sustain fortress conservation (Brockington 2002). The ideology of national parks, protected areas or any form of gazetted reserve that falls under the wider protection of nature from human interference (which is only expanding throughout sub-Saharan Africa)[34], is one of the many "denarrativized" paradigms that is simply indifferent to all the counternarratives that have emerged over the years. It can therefore be said that this narrative is endowed with a great dose of "staying power".

Joshua on behalf of the National Government of Tanzania

Let us go back to the public hearing and look at the government's response that was given in reaction to Leboi's final question. The answer came from Joshua, who was the chief delegate in the international climate change negotiations, and represented the United Republic of Tanzania during the COP17 in Durban:

> Thank you moderator. The testimony that was given by our Maasai fellow is really correct and for a high percentage I can say that the pastoralists society, who depend on livestock for their livelihood, they can be affected more than those who depend on cultivation […] because it [climate change] goes together with loss of livestock. […] I think I have already explained from my previous clarification that due to the current condition we should have a collective desire for change. As I said, these people may not change without educating them. This training is so important to them; they should get the education so that they can do the productive livestock keeping. Keeping the livestock depending on the availability of pastures. And we witness the conflict that occurs between pastoralists and farmers when the pastoralists try to get pasture or water for their livestock. There is no one who likes this confrontation. As I said: I don't think that these people could move from one place to another if they could have been given education. I think you are the witnesses, as you see the situation occurs even after they migrate to those places. They still do not get a good welcome from the indigenous of those particular places. I think all of that could not have happened if they only could get that education.
>
> […] So when you migrate, the place where you went to must have constraints, because it is at the place that is not familiar. Not only at the societal level, but also with the environmental issue. You can see in other places that do not support you, it

[34] It is remarkable that the most dramatic growth of protected areas worldwide took place between 1985-1995, which coincided with the expansion of neoliberalism. The paradox of this situation has been that whereas pressure increased to reduce government intervention, state control and pressure on natural resources actually to an unprecedented degree. For a discussion of this dynamic, see the rich volume "Nature Unbound", by Dan Brockington *et al.* 2008. One of the arguments that the authors put forward is that while this set of relationships might perhaps seem counter-intuitive, capitalism and conservation are allying mutually to shape the world (Brockington 2008: 4-6). Paige West and Dan Brockington have also formulated a similar critique about environmentalism in general. They argue that whereas environmentalism emerged as a countermovement to its age-mate capitalism, since the 1980s "it got snugly in bed with its old enemy" in the ways in which it manifested itself as a powerful actor in global environmental governance. It was during this time that environmentalism took a step back from criticizing corporations and began to focus its energy on poor people living in highly biologically diverse and "vulnerable" places; environmentalism "went South so to speak" (West and Brockington 2012).

> comes to the point that the pastoralists who depend on livestock keep entering the national parks, which has resulted in them being seen as going against the rules and regulations. All in all, that particular condition forces them to enter in that condition. […] It is true that our fellows need more education so that they can have productive livestock keeping, depending on the availability of the pasture of that particular area. […] The main source is the increase in the amount of people by birth, but for a large percentage it is those who migrate from place to place, which is no more productive. As I said, all of them need to be educated, to receive capacity-building so that they can find an alternative way to sustain their livelihood. It is my message to society that the training that is given to the society is given purposefully. So they should realize that there is no other way for the society to survive, except by accepting the experts from the private sector and the government's effort. That is important, thank you.

Joshua's statement certainly does not stand alone in the vision of the government of Tanzania. It resonates with the National Adaptation Programme of Action (NAPA), which is the principal document for guiding adaptation policies in the country. The proposed solutions for the pastoralists include: the change of land-use patterns, education of farmers and livestock keepers, sustainable range management, controlling the movement of livestock, and advocating zero grazing (NAPA 2007: 22). Two things in this document deserve critical scrutiny. First, it is reiterated that "the existing number of cattle in Tanzania has already surpassed the normal carrying capacity in most areas" (p. 7). And secondly, it is also expected that the pastoralists are among the most vulnerable groups in the country, who will suffer from the consequences of climate change. Within the Adaptation discourse the Maasai are thus on the one hand portrayed as perpetrators (in public and media discourse the irrationality argument is nowadays augmented with the notion that cattle emit excessive amounts of CO2), and on the other hand victimized in the face of climate change (cf. Smucker *et al.* 2015). Particularly the first statement is remarkable considering the fact that livestock is the only sector for which environmentally destructive practices are reported, instead of giving ample attention to adaptation practices that could actually strengthen the position of the pastoralists. The fact that the notion of carrying capacity is deeply entrenched in the minds of government officials became clear to me during the encounters that I had. For instance, my first encounter with Paul, a very high-ranking international negotiator, was telling. The very first thing he exclaimed to me when I told him that I was studying climate change among the Maasai was:

> Do you know the figures of the carrying capacity? The Maasai have really exceeded this number! They think that they can wander around the whole country. You should go to the ministry of livestock and get the numbers, because this is really a great problem that we have in Tanzania (interview with a government official at the Vice President's Office).

These statements are rooted in the assumption that the Maasai are backward, in need of education and have low adaptive capacities; a tendency that turns the pastoralists in a double

sense into the environmental "other". The ubiquitous view about the Maasai in Tanzania is that with their large herds they exceed the carrying capacity of their lands. The term "carrying capacity" has become the government's mantra, to the extent that it almost coincides with what it means to be Maasai. This concept feeds into the highly controversial and longstanding discussion about equilibrium vis-à-vis non-equilibrium ecosystems. What is important here, though, is that the term *carrying capacity* has been prone to ideological hijacking, both to advocate for as well as against pastoralism as a non-sustainable livelihood system. For a long time this scientific claim has been used to reduce herd sizes at the expense of pastoralists' wellbeing. In a similar vein however, the denial that rangelands have a carrying capacity served to legitimize pastoralism by arguing that environmental destruction cannot be caused by a maximization of herd sizes (cf. Vetter 2005). Despite the many "denarrativizing" attempts by scholars to debunk the scientific proof of the universal value of such paradigms, the question remains why, then, is the scientific notion of the carrying capacity so perseverant amongst the Tanzanian government? To find the answer we have to trace the historical roots of this paradigm.[35]

As mentioned previously, already in the 20th century it was assumed that pastoral people had an "irrational" attachment to their livestock, and that their livestock numbers were maximized regardless of the carrying capacity of the rangelands. Herskovits' thesis about the "cattle complex" (1926) further underpinned this idea and also had a wide influence on development policies, which entailed that any attempt at sustainability involved livestock reduction (McCabe 2003: 101). Also Hardin's article on "The Tragedy of the Commons" (1968) was grounded in the assumption that traditional pastoral systems were fundamentally non-sustainable. This similarly continued to shape rangeland development policies that advocated for the reduction in livestock, and moreover, for the privatization of rangeland resources (ibid). It requires little effort to see the existing parallels with former narratives and misconceptions about human-nature interaction, and this notion was expressed by the chief negotiator of the national climate change agenda (with a fairly strong tone of voice). It is not a new phenomenon that governments, generally, see the pastoralist way of life as backward and as incompatible with administrative goals such as tax collection, provision of health and education services, economic development and the promotion of national unity (Homewood & Rodgers 1991: 3; see also Hodgson 2011a). What is new in this context, however, is that these ideas that pastoralists have an irrational relationship with the

[35] The question of whether Terrat forms part of an "equilibrium" or "non-equilibrium" ecosystem depends on several parameters (e.g. how much average rain per annum is needed for equilibrium) that one adheres to, but that discussion is beyond the scope of this chapter. For an interesting discussion on this topic in the light of climate change see: "Climate Change and the Challenge of the Non-equilibrium Thinking", Ian Scoones 2009.

environment and their cattle continue to persist in, and are even revitalized by, the "Adaptation to Climate Change Paradigm" (see for instance the NAPA 2007).

This new development narrative therefore deserves all the more critical scrutiny in analyzing the translation of climate change in Tanzania. With the realization that Leboi was summoned by a third party to come all the way from Terrat to Dar es Salaam to speak about the impacts of climate change on his life, during Joseph's talk I experienced feelings of a growing sympathy for Leboi. Instead of providing him with answers or constructive solutions about how to adapt to climate change, he received a fairly strong public reprimand about how environmentally destructive the pastoral mode of living is, which silenced Leboi for the rest of the meeting.

NGOs strike back: the emergence of a *counternarrative*

It is against the background of this nascent climate change narrative, that we have to understand the *counternarrative* that recently came to dominate the NGO vocabulary (mainly organizations that represent the pastoralists) in Northern Tanzania. The last speaker was Joseph. While mediating between different worlds – as a development expert and as a representative of the Maasai community – he intervened and turned the argument around by stating that it is not the herdsmen, but the people from the government who need to be educated instead:

> Thank you for the explanations about our fellow Mr. Leboi Ole Netanga from Terrat. I have a different opinion, because in our nation the herders seem to be a defect in the use of natural resources. The truth is that the peacemakers of our country, and those who are interconnected with development efforts, still don't understand the whole effect, especially "the dynamics of the pastoral system". And because there is a big knowledge gap among the dynamics of these drylands, promises that are made are not being very helpful for common citizens like Mr. Leboi. The tendency is, as we can see from his testimony, that they were encouraged to do agriculture. They were encouraged to cultivate because the political slogan of our country was "politics is agriculture" – and now the politics is to do agriculture in a dryland? It is a big problem within a dryland; we don't do that within a dryland! So we should not do these practices in the dry places like Simanjiro […]. You can't cultivate because you will get nothing in this time of climate change. The best use of those drylands is pastoralism, but livestock does not count in Tanzania, for a large number of livestock is considered to be a sin! For other countries like Ethiopia, Sudan, Eritrea and Egypt it is not. It is a productive one for the nation and it is not a crime at all. If we produce something low in the industry like cashew or maize we will like to see more maize, more cotton, more fish etc. But then why don't we like to see more livestock so our nation could become more productive?

It is worth mentioning that the Tanzanian government's attempt to relocate and "promote" agriculture and the sedentary life style dates back to the 1960s when the first president, Julius Nyerere, installed an African version of socialism. With a nationwide villagization program

people were forcibly relocated into so-called *Ujamaa* (Swahili: family hood) villages. In northern Tanzania this resettlement was known as *Operation Embarnat* (Maa: "permanent settlement"), and many Maasai herders saw this operation as another attempt by the state to appropriate pastoral rangelands. In other words, conservation was thus not the only force behind state-led resettlement (Sachedina 2008: 110). The statement of the NGO worker is in line with the manifold accounts about agricultural practices in Terrat, which were characterized by most informants as random trial and error. For example, one pastoralist told me that: "farming is some sort of gambling game, sometimes you win but more often you lose". Recently, among the NGOs and CSOs in Northern Tanzania a counternarrative has set forth the idea that the Maasai are not victims of climate change, but rather *masters* of adaptation.

To put it in the words of an NGO worker: "We are used to adaptation since we can remember; movement is our way of life". Since time immemorial they have followed the rain and green pastures with their herds, which has always enabled them to adapt to the highly variable and unstable climates. In fact, they argue, pastoralism is a livelihood *system* that should be understood in its full complexity, within which livelihood diversification like crop production and wage labour (cf. Leslie & McCabe 2013), as well as mobility and a large herd size are the key coping mechanism for cattle to survive during severe droughts (cf. Goldman & Riosmena 2013). Thus the adaptation measures as envisioned by the government (reduction of herd sizes, zero grazing, and a sedentary lifestyle only centred on growing crops) are for the Maasai rather the *antithesis* of adaptation. In the second part of his statement Joseph continued to provide the audience with some critical remarks, and added some possible solutions:

> […] So I suggest that there is a need for the peacemaker to identify, learn the whole science, and it is our responsibility to engage in that issue. So it is not about blaming someone, but there is a knowledge gap. But the big strategy of the pastoralists, as Mr. Leboi said, is that, if it did not rain, […] what could be the strategy of Mr. Leboi if the plain did not get enough rain, if all of you here were pastoralists? What can you do? Strategically, Mr. Leboi should shift from the plain to another area. But the movement could not be undertaken without a plan. The movement should be regulated locally through norms, traditions and regulation with those of the government. So if those of the government do not look at what Mr. Leboi wants, he will continue to live in a terrible condition. If the plains will be closed the cattle will die, and if Mr. Leboi will lose all his cattle he will be among the poorest of the nation, and I think we should help Mr. Leboi especially in our policies so he cannot become even poorer. […] The third issue is that, if you said that Mr. Leboi should not move to another area, we did not even look why he decided to move […]. The truth is that, nearby where Mr. Leboi lives, in the same country the government changed the area that had been used by Mr. Leboi for livestock keeping to become a national park, which is called Tarangire. So his land has been taken. If his land has been taken what will he do as a Tanzanian, given that Tanzania has movement of

> people, and rules? He is forced to move out of Terrat because his land has been turned into a national park. So he moves elsewhere. […] So instead of blaming them why they shifted to those places, the government should find out first the reason behind what happened to their original place. They have no place to go since many of the areas that they used to use for grazing have been taken, to be national parks
>
> […] So we need to understand why Leboi is not getting the same pasture that he used to get some years ago. What happened? He knows that when it starts to rain it is the time for perennial pasture, and annual pasture during the dry season. So if he loses all of them there is a turn for Mr. Leboi and all of these could be brought about by climate change. Now we should do research as we can identify the dynamics of changes of those particular plains in order to help him to manage his livelihood during the period of climate change. So as you see here I cannot agree to some of the issues, because of the existing knowledge gap regarding the dynamics of the pastoral system. Second, I see there is no correlation in policy to help Mr. Leboi. And third, the issue will place Mr. Leboi in difficulties, and he will be among the poorest people in our country if the policies, principles and conduct will not care about Mr. Leboi. Thank you!

This heated debated, which clearly evoked strong sentiments among different parties, was followed by several other expert statements, and by speakers who represented human rights movements and the civil society. All of them referred back to Mr. Leboi, and as such his case became the common thread running through the discussions. What can be derived from this confrontation between the government and Joseph, which was evoked by Leboi's account, hints towards the longstanding problematic relationship that exists between pastoralists and the Tanzanian state. With this portrait of the statements that were made during the public hearing on climate change, I have tried to demonstrate how old struggles come to the fore and are being framed through a new lens of climate change. Moreover, having a keen eye for the historicity of the "production of nature" and the broader political processes that have shaped the contours of the contemporary struggles of the Maasai herders for recognition and resource rights, it becomes clear how both Herskovits' and Hardin's "traces" can be found in the government's perception of the pastoralist way of living in general, and in the climate change adaptation policy in particular. A questions that rises in this context is: what continuities and discontinuities can be observed in emerging climate-change policies, in relation to former nature-environment paradigms, which continue to colour the socio-cultural and political landscape of which the Maasai pastoralist like Leboi form a part? Put differently, what happens in the translation process when a transnationally constructed idea of adaptation to climate change enters different policy circles and is shaped by different, and often competing, "translation regimes"? By developing an ethnography of connectivity – in which encounters from the "global" to the "local" level are explored – combined with a detailed ethnographic account of a village like Terrat, the following chapters explore these dynamics of "translating Adaptation to climate change" in more detail. But

first, a chapter shall be devoted to reflect on what it takes to follow a travelling idea, and on its possible analytic novelty.

3

Nowhere or Now Here

Notes on How to Follow a Travelling Idea of Adaptation to Climate Change

Painting "ochtendroze" (morning-pink) by Trudie Vrolijk-Vermeiden

Introduction

> "It [the global warming story] rewrites our planetary cosmos by refiguring the biophysical world as well as human relation to the biosphere and it sparks a new sense of *communitas,* which is of course still far from being a real community. […] I would say the climate regime is thus to be seen as a complex ritual order, based on a series of ritual performances taking place on various levels."
>
> Viehöver 2010: 145

Thinking retrospectively of my fieldwork and all the different sites, venues, countries and cities where I immersed myself in the negotiations, speeches, talks, presentations, meetings, side-events, public hearings, protest marches, conferences, workshops, exhibitions and other platforms of exchange between expert and lay audiences, journalists, policy makers, dignitaries, epistemic communities, researchers, Maasai pastoralists, peasants, NGO workers, environmental and indigenous rights activists etcetera – all of whom have been talking about climate change in their own particular ways – the notion of a "spectacle" aptly comes to mind. In line with Viehöver (2010), who proposes to think of the climate regime as a "complex ritual order based on a series of ritual performances", it will become clear that throughout this work the idea of climate change is treated as an *enacted* narrative, which is continuously performed, staged and ritualized. In other words, I take climate change not to be a static story but rather a fluid narrative that comes into being in a great many forms and a great many plots by its very enactment, which involves a multitude of both human and nonhuman actors.[36]

Taking the analogy of the spectacle further, the metaphor of a theatre stage on which actors are performing or "staging" their climate-change narrative, will prove fruitful in gaining insight into the governing principles, power struggles and conditions within which such a story can unfold in an array of varying – and at times imponderable – scenarios. In the following account I combine a narrative approach (MacIntyre 1981; Bruner 1986; Polkinghorne 1988) with the drama metaphor as used in organizational theory by Czarniawska (1997) and in the sociological analysis of everyday life by Goffman (1959; 1974). Drawing on Czarniawska and MacIntyre, it will be demonstrated that a sensitivity to enactment enables us to observe how stories change and are repeated if we treat them as dramatized stories, in which participants are actors, authors, directors, and producers (Czarniawska 1997). This is possible for: "[…] *conversations in particular,*

[36] The "plot" or "story-line" is here understood as "the means by which specific events are made to cohere into a single narrative" (Polkinghorne 1988: 18).

and human actions in general, are enacted narratives. Narrative is not the work of poets, dramatists and novelists reflecting upon events which had no narrative order before one was imposed by the singer or the writer; narrative form is neither disguise nor decoration" (MacIntyre 1981: 197). To begin with, the metaphor of the theatre stage and the focus on "performativity" allow us to explore the basic questions: what is being said in which context; who is talking to whom; who is giving answers and who is listening? And, whose voices are being heard and who is excluded from storytelling? In a later phase then, we can answer the question of what are the ideological effects of discourse, or the so-called "truth effects" that are created within discourses. This dramatic approach to the climate regime can be similarly positioned within a "narrative mode of knowing". This way of producing knowledge comes again close to the metaphor of the world-as-text as introduced by Lyotard, and brings into view the ways in which stories rule our lives and how our societies are constructed (Lyotard in Czarniawska 1997: 5). An understanding of social life as a narrative will here be combined with a focus on the "stages" where these narratives come into existence and are played out.

The ever-expanding field

How does one follow a travelling idea? And what insights does it yield? Apart from a mere playing with words, the title brings us right into the methodological and analytical heart of what it takes to follow a travelling idea or model. In the pursuit of tracing the idea of Adaptation, which is constantly re-crafted along its borderless journey, I was – at least for several consecutive periods – continuously on the move. One thing that became obvious is that, at least in part, my fieldwork can be characterized in terms of a patchwork. This entailed the tracing of complex webs of interconnectivity by following some clues, which at times however was also guided by the magic forces of contingency. If one thinks that the following pages are messy in their structure and chronology, then I have succeeded in doing justice to what it takes to follow a travelling idea. For an anthropologist, this mobility can easily lead to a feeling of discomfort – seemingly privileging surface over depth – as one of the disciplinary trademarks has been committed localism (Marcus 1995) by carrying out long-term and intensive fieldwork; (Malinowski 1922; Evans-Pritchard 1951: 75-76) "simply" by *being there* (Geertz 1988: 4-5; Borneman and Hammoudi 2009; Roncoli *et al.* 2003; Clifford 1997: 99).[37] Indeed, we owe much

[37] Contributing to the *Writing Culture Debate*, Clifford Geertz distinguished between "being there" as the fieldwork practice in which other forms of life are penetrated, where anthropologists mainly derive their epistemic authority from; as opposed to "Being There" referring to the anthropologist – palpable on the page – as author, which he deemed in need of self-reflection (Geertz 1988: 23).

of the deeply cherished long-term ethnographic fieldwork (often mentioned in the same breath as participant observation) in a single-site and bounded place to the archetypal image of Malinowski, who pitched his tent "right among the natives" in Melanesia and deemed it indispensable to fully immerse oneself in their daily life by "cutting oneself off from the company of other white men" (Malinowski 1922: 5-6).[38] According to Malinowski, this proximity was necessary for the ethnographer to observe whatever happened without allowing anything to escape his notice: "All these [quarrels, rituals, and trivial but always significant events] I had not to pursue, fearful of missing them, but they took place under my very eyes, at my doorstep so to speak" (Malinowski 1922: 8). Ultimately, due to the constant and sheer duration of his presence he ceased to be "a disturbing element in the tribal life". However, he similarly urged the ethnographer to take a more active position: "The Ethnographer has not only to spread his nets in the right place, and wait for what will fall into them." But, "He must be an active huntsman, and drive his quarry into them and follow them until its most inaccessible lairs" (ibid).

> *After uncountable attempts to interview one of the key players in the Adaptation program in Tanzania (let us call him Paul), I was about to give up. My frustrations about studying "up" had accumulated during my fieldwork, for it appeared to be an impossible undertaking. These key players either did not have time, did not really want to talk to me at all, or just gave me documents to read that I could have simply found online. My impression was that as soon as I told them (these important persons) that I was a researcher, the chances for having an interview dropped to zero. Somehow I had managed to get Paul's phone number from another important negotiator in the field whom I had met at a conference. By then I had already figured out that being among the negotiators at the conferences (and thus being to some extent part of them), was the only way to get access to this world of dignitaries. When I visited Dar es Salaam for a conference, I called Paul to inquire whether he was around that week. He told me that he was not around and most probably would not be in the near future. However, before returning back to the northern part of the country, I decided to give it a last try. I dropped by at the Vice President's Office (VPO) without prior announcement. I was about to enter the office building when I saw, to my greatest surprise, a remarkably fancy car stopping in front of the government building. It had a peculiar number plate: "Project Africa Adaptation Program Tanzania". And there he was, in the flesh, Paul himself. I approached him and introduced myself, after which he told me that he did not have time at that moment. I followed him inside nevertheless. He then sighed and said, "well okay, let me see if I can introduce you to my colleague". We entered his office and I told him that I knew one of his colleagues (an even higher-ranking person within the UNFCCC system). This apparently opened a door, so I finally had my long-awaited interview. He then introduced me to a colleague (and told him to talk to me), who then in turn introduced me to another colleague (who did the same). I learned that if one wishes to study "up", the best way is to begin at the top so that the snowball can roll down the hill.*

[38] However, while Malinowski carried out long-term research in a village, he was already carrying out multi-local research while tracing the complex exchange system, or "Kula ring" by following the Trobrianders on their sea faring expeditions (see Hannerz 2003: 202-203; Marcus 1995).

While Malinowski's motives might appear somewhat anachronistic these days, I believe that it is not so much the ethnographic enterprise itself – and all the basic methods that fieldwork as a mode of inquiry encompasses – that has changed, but rather the ever more compressed and interconnected world we live in with complex networks, encounters and changing configurations of power, together with our conceptual apparatus and localizing practices of what we think that constitutes "the field" (and thus our object of research). Since the 1980s, anthropology has been hunted by inexhaustible self-reflexivity, which, driven by a postmodern ethos and critique, has legitimated new (and increasingly complex) objects of study and styles of writing (Marcus 1994: 385). This reflexive stance has indeed shaped the ways in which ethnographers relate to and define their study objects and field site(s), and has set into motion more mobile approaches to doing research, with a move away from single sites to multi-locale explorations.

In the face of an increasingly interconnected world, globalization studies took root and flourished since the nineties, and the study of global entanglements, assemblages, connections, flows and fluids has become well known to anthropology. This has given rise to a bewildering array of metaphors and methodological prerogatives, all aimed at exploring how global change has led to local processes of appropriation, adaptation, rejection or resistance (Behrends *et al.* 2014: 9).[39] So anthropology is no longer bound to studying "down" or "up". But now the whole world (system) is within the focus, including science and technology, as well as the "tribe" of the Moderns that has increasingly been put under scrutiny (see for instance Latour 1993; 2013). Moreover, it seems that both anthropology and the social sciences more generally have come to detect some of their former blind spots. For instance, more and more attention is paid to canonical institutions that were left unexamined for a while, or all those organizations that produce knowledge and objective representations of the world, and thus to a large extent constitute and regulate (post) modern society (cf. Rottenburg 2009: xxv). It is quite remarkable that for some time the most widespread phenomenon of Western societies (organizational life) has been "glossed over and successfully blackboxed", which can in part be explained by the fact that organizations were considered to be merely "instruments" (Czarniawska 1997: 1- 2). And, arguing in a Latourian spirit, Rottenburg has sharply observed that the omission of "modern" institutions from anthropological inquiry has been founded upon the erroneous misconception that "worldviews" – anthropology's primary concern – could not be found there, but only belonged to other people

[39] The authors contend that the notion of a travelling model encompasses many of the notions that have been coined in studying global entanglements, such as "glocalization" (Robertson 1992); "hybridization" or "creolisation" (Brathwaite, Shepher and Richards 2002); "scapes" (Appadurai 1996); "connectivity" (de Bruijn and van Dijk 2012); "fluids" (Mol and Law 1994); "liquidity" (Baumann 2000), "technological zones" (Barry 2006) etc. See Behrends *et al.* 2014: 9-10.

who "didn't know better", and still believed in angels, devils and deities. What follows from this observation is the implicit assumption that worldviews are an illusion that do not so much correspond to reality, but are rather constructed and are the product of the social conditions and their constitution; whereas scientifically and technologically advanced societies (including anthropologists themselves and development workers) see the world as it "really" is (Rottenburg 2009: xxv).

This awareness that brought into view these practices of "epistemological othering", has given way to a more "symmetrical anthropology" for which Latour has defined three laws, a "triply symmetrical position" that uses the same terms to explain (1) truths and errors; (2) the production of humans and non-humans; and (3) Westerners and Others (Latour 1993: 103; Latour 2007). Speaking from an organizational theory perspective, Czarniawska has added a fourth position, namely that of an anthropology of the "doppelganger", which consists of studying equals, or people who have the same educational background, make the same claims about knowledge validity and are part of the same tradition (Czarniawska 1997: 5).[40] As I wish to make clear throughout this chapter, these rules of symmetry apply to the notion of a travelling idea, as it seeks to distil mechanisms of translation and the making of associations through which all actors that are enrolled in the chain come into view. Now we find ourselves studying every*body*, every*thing* and every*where* and their interconnections, so we are "Being there … and there … and there!" (Hannerz 2003). This, in turn, has resulted in the fact that a great many studies nowadays are lumped indiscriminately together under the encompassing term "multi-sited ethnography" (see Marcus 1995). As is often the case with terms that are used too often, they become beset with vagueness; so a few words on this approach deserve mention. As Hodgson has rightly pointed out, the term "multi-sitedness" can be somewhat misleading here for it carries the notion that it is about clearly discernable geographical sites. While my research has undeniably dealt with multiple sites, the term "nodal ethnography" as coined by Hodgson (2011), does more justice to my approach, since I have focused on places and interactions where different worlds and worldviews meet (cf. Hodgson 2011a: 17). The basic principles, however, are the same – that is ,"to follow" – the "nodal" concept explicitly denotes an ethnography of connectivity that illuminates how ties are established (cf. De Bruijn & Van Dijk 2012), and draws our attention to what happens in these spaces of encounter and what it is that makes ideas move or not. Since we

[40] As Czarniawska demonstrates, from an organizational theory perspective "equals" are indeed people who work for the organizations under scrutiny. From an anthropological point of view, a true anthropology of Doppelgänger would of course involve carrying out an anthropology of anthropology, or of anthropologists.

have come to realize that the "global" is as much part of the "local" as the other way around, this dichotomy is no longer useful. Therefore, it seems to make more sense to speak of sites as assemblages. For instance, most conferences are hold together by an array of different locales and actors. We thus easily find multiple "sites" within one site.

> *Just a few days before arrival in Doha, I had exchanged the mud hut in Terrat for high-tech and air-conditioned venues. A sharper contrast between these two worlds could hardly be imagined. Therefore, on my second day at the COP18, I was thrilled to see a Maasai woman in her traditional gown. I approached her by greeting her in Maa, to which she responded with a delighted smile. I showed her the beads that I was still wearing on my arms and legs, and by observing the colours and patterns she immediately recognized that I must belong to the Kisongo tribe. She herself was a Kenyan Maasai. During our short encounter she enthusiastically greeted a Sami hunter from Norway, who was also dressed in his traditional gown. She explained to me that he was also an indigenous person, just like her. And it occurred to me that it was the "Indigenous Peoples for Climate Change Day". The next day, I met her again, but this time she was dressed in "official" clothes. I asked her why she had changed her clothes, and she replied that today it was "Gender Day". Today she represented women for the Kenyan parliament and not just the Maasai, so she had to dress accordingly.*

Nowhere: on the unfolding field

What constitutes the field? And how can the field be delimited and identified, and who is entitled to do so? James Clifford (1997) already made us wary of the dangers of construing ethnography as *field*work, which is a certain "spatial practice" (De Certeau 1984, in Clifford 1997), and entails a politics of representing and "locating" culture. Clifford argued that this spatial practice has a history of privileging relations of dwelling over relations of travelling. So he rightfully found that the discourse on "being there" was too sharply separated from "getting there". This has led to the obscuring of historical realities, such as the means of transport to reach the field that reveal prior and ongoing connections. He criticized anthropology for excluding other parts of blurred boundary areas, such as all the places the researcher passes through before entering the field (the capital, the national and regional context etc.), the so-called préterrain, and also all the relations of translations, and complex global conjunctures in which ethnography was always already enmeshed (Clifford 1997: 99-100). Put otherwise, the "field" as traditionally conceived was in many ways already multi-sited, which is a reality that is nowadays more and more difficult to allow to escape from our ethnographic gaze. While there is no methodology free from localizing practices in relation to cultural translation, the notion of a travelling idea forecloses (at least some of) this critique. For instance, it prompts us to think beyond predominant dichotomies such as the global vs. local, as well as modern vs. traditional; and directs our attention instead to the

theoretical context within which these conceptual oppositions emerge (Behrends *et al.* 2014: 8). Furthermore, mobile ethnography can also do away with the distinction between lifeworld and the system, for there is an inherent claim in multi-sited ethnography that "[…] Any ethnography of a cultural formation in the world system is also an ethnography of the system" (Marcus 1995: 99).

We shall see in the following account that in my research the field could not be delimited a priori, but rather unfolded through very itinerary of the object of research itself as it moved in unpredictable directions. However, this does not mean that this approach is tied together by mere contingency or passive waiting until something worth exploring befalls the researcher. Quite the opposite is true in fact, and it comes closer to Malinowski's "active huntsman" attitude or the job of a detective, which continuously tracks the traces of where the idea is coming from and where it is heading. To begin answering the question that I raised above, it is crucial to note that ideas or models themselves do not travel. In order to move they need to be picked up, transported or translated by goods or people, as Czarniawska and Sévon have put it:

> Ideas must materialize, at least in somebody's head; symbols must be inscribed. A practice not stabilized by a technology, be it a linguistic technology cannot last; it is bound to be ephemeral. A practice or institution cannot travel; they must be simplified or abstracted into an idea, or at least approximated in a narrative permitting a vicarious experience, and therefore converted into words and images. Neither can words nor images travel until they have materialized, until they are embodied, inscribed or objectified, as only bodies and things can move in time and space (Czarniawska 2002, in Czarniawska and Sévon 2005: 9).

In this growing field of social inquiry that deals with the travelling of ideas (Czwarniawska and Sévon 2005; Merry 2006); models (Behrends *et al.* 2014; Kelbert 2016); blueprints (Bierschenk 2014); norms (Acharya 2004); discourses (de Wit 2014b; 2015); concepts (Bal 2002); knowledge (Strathern 2006); policies (Peck and Theodore 2010); things (Cook 2004; Cook and Harrison 2007); theories (Said 1983); cultures (Clifford 1997); fluid technologies (De Laet and Mol 2000) – the basic pursuit has been largely the same – that is, to understand global entanglements, connectivity, and how change in one place leads to, or is related to, developments elsewhere. Furthermore, it also raises the issue concerning why certain ideas, models or blueprints "work" and take root in some contexts, whereas in others they simply don't (cf. Behrends *et al.* 2014: 1; Acharya 2004) or take on radically distinct forms. These questions have formed the heart of my enterprise. In the endeavour to understand what makes things move, persevere or dissolve, these studies inevitably deal with questions of power. I do not intend to dwell on the difference

between all these varying concepts, as most of them share heuristic properties. For example, a travelling model, idea or blueprint, are all metaphors for or representations of reality that might stimulate concrete and tangible manifestations, interventions and connections beyond their sites of inception. The fruitfulness of these concepts depends on the context in which they are used, so I deem it legitimate to use some of them interchangeably, since an idea or paradigm can become a model or a policy, which are in turn carried by certain objects and shaped by certain technologies of inscription etc.[41] Whatever the travelling forms or vehicles, the essential point is that in order to move, semantics and materiality are necessarily intertwined. This is where translation comes in. The translation of a travelling thing or idea is inherent to its deployment, for it cannot be deployed without being translated (Behrends *et al.* 2014: 4). Put otherwise, and as I will make more concrete below, translation and travelling (or transportation) are cognates.

It may be clear that the approach of following a travelling idea has indeed been inspired by Science and Technology Studies, and that a few basic ontological principles – such as insisting on things as the *effect* of practices and interaction rather than the primitive causes – are derivative of Actor Network Theory (ANT). Or, as John Law later devised, a more general approach to society can perhaps more aptly be captured by the comprehensive and open term "material semiotics".[42] Whatever the term used, an essential point of departure in this "sociology of translation" is the idea that practices of knowing (but this can be extended to society, organizations, agents, machines, power etc.) are always the result of a heterogeneous network in which materiality and semantics are interwoven. Latour has called this ontological shift a "background/foreground reversal", in the sense that instead of starting from a set of universal laws and taking local contingencies as endless particularities that could be either erased or protected, it all begins with these incommensurabilities and unconnected localities that might end up in "provisionally commensurable connections" (Latour 1996: 370). It is through the lens of "material-semiotics"

[41] The notion of technology can refer to a technological object, like a device or tool. But it also refers to what Foucault described as practices that may involve technologies of the body, of power, or of the self. Foucault was interested in understanding how the self has been objectified through different scientific inquiries, which operated as "truth games", for which he explored the workings of related techniques that humans use to understand themselves. He distinguished four major "technologies": (1) technologies of production; (2) technologies of sign systems; (3) technologies of power; (4) technologies of the self (Foucault 1988: 17-18).

[42] John Law prefers nowadays to use the term *material semiotics* instead of ANT, as it does more justice to openness, uncertainty and diversity of the dimensions it seeks to explain. Furthermore, ANT is not a foundational theory that seeks to explain *why* things happen, but is rather descriptive and tells stories about *how* things assemble or don't (Law 2007: 2). Latour in turn has argued that ANT is a *method* to describe the deployment of associations, and a method to describe the generative path of any narration (Latour 1996).

that mechanisms of power as an effect of ongoing interactions between material and non-material forms and their assemblages can be explained (see e.g. Law 1992; Callon 1986).

For example, if we recall the public hearing as elaborated on in the introduction, I have demonstrated how different realities and normativities are juxtaposed, and how legal, economic, moral, scientific and ontological tensions are played out, and, how the social, the cultural, the political and the natural fuse in the enactment of a new reality that is incited by the travelling idea of "Adaptation to Climate Change". All of the actors involved in the meeting (the Maasai herdsmen, the NGO workers, the government official, the media, researchers etc.) form part of different heterogeneous networks (human and non-human) and have their own social and moral outlook. The Maasai men stand for their communities back home, enmeshed in broader human-animal networks and are worried that more land is being taken from them; the NGO worker seeks to speak for the Maasai men but also represents a broader network of grassroots organizations, who in turn form part of interlinking donor-recipient webs and need to secure the continuation of funding; and the government official stands in an antagonistic relationship with the other actors, as he speaks on behalf of the government of Tanzania, again bound to a particular infrastructure and international-national dynamics of dependency, which prompt him to build upon ancient rhetoric, etc. etc. Moreover, climate change knowledge takes on an array of material forms in the process of translation, be it a speech act, a slideshow, a PowerPoint presentation, a movie, a model, a text, a scientific paper etc. And there are of course nature(s), present both as meta-narratives – which brought everybody in this occasion together – and as that natural undeniable reality that reveals itself in endless atmospheric material forms that we call the climate, to which everybody relates in their own distinctive ways. By analyzing this meeting we have explored both the enactment of realities (ontological) as well as described the making of knowledge (epistemological). This is, according to John Law, "material-semiotics" at work (Law 2007).

As mentioned above, in the seemingly abstract pursuit of following a travelling idea, one needs a material manifestation to be able to track its traces. Attending this public hearing enabled me to follow the actors to their respective heterogeneous networks, and observe whatever new connections were forged and new trajectories and networks unfolded. These observable and unfolding networks as described above bear resemblance to Callon's notion of techno-economic networks (or TENs). He coined this term "to describe a coordinated set of heterogeneous actors which interact more or less successfully to develop, produce, distribute and diffuse methods for

generating goods and services" (Callon 1990: 133). These networks mix humans and non-humans and inscriptions of all sorts, and when simplified, are organized along three axes: scientific (knowledge); technical (artefacts); and a market axis (money). According to Callon, these networks are ordered (again simplified) by four types of intermediaries: (1) texts or literary inscriptions; (2) technical artefacts; (3) human beings and (4) money in all sorts of forms. As mentioned before, in my research I have limited myself to following both key actors (humans) to their respective networks of translation, and an array of textual forms or so-called *literary inscriptions* (Latour 1986 in Callon 1990: 135) and speech acts. As will become clear in the next chapter, in the field of development cooperation, climate change documents play an indispensable role in maintaining and reproducing the field itself (for the role of documents in the international negotiations, see the work of Weisser 2014). As one Tanzanian delegate during the coffee break at a conference lamented:

> I do not need coffee because this meeting is so boring. I need to sleep. I have learned nothing new. The problem nowadays is that we are only dealing with paperwork. 80% is paperwork. We loose touch with implementation. I have two hard discs full of literature and documents.

Later, when I visited him at his office at the Ministry of Environment and I inquired about his take on climate change, he gave me documents. Then he brought me to one of his colleagues who "had more technical knowledge in the field", who in turn, also gave me documents. All these documents, in turn, referred again to more documents.

Following people, papers, policies, protocols and practices

And so I followed the trails of papers and people – held together by certain practices and protocols, and enacted into policies – "through which people become subjects of, as well as subjects to, global development" (Mosse 2005: 2), or more specifically, to Adaptation.[43] In tracking these trails I interviewed different key translators who all formed part of different translation networks, but at times also came together in contested arenas that I have adopted as "translation zones" (see below). Nevertheless, it was extremely difficult – if not impossible – to gain access to officials that worked for the Tanzanian government in the field of climate change.

[43] It was much more difficult to trace money, as this was among those sensitive topics that people did not like to talk about, especially after a corruption scandal in relation to REDD+ funding came to the fore. Fortunately, other researchers have done this job and their research results from tracking climate change finances in Tanzania can be read in the following reports: "Climate Finance Tracking Study for Agriculture and Livestock Sector Ministries in Tanzania 2009/10 – 2013/14", Moshi *et al.* 2015. And also: "Tanzania National Climate Change Finance Analysis", Yanda *et al.* 2013.

Particularly the official climate-change negotiators (said that they) never had time.[44] Yet, I met them on several international conferences and at times got the chance to chat with them only briefly. Moreover, by attending these meetings I got an impression of the ways in which they intended to represent the government of Tanzania at the international stage, and of how their rationales changed once they were back in the office in Tanzania.[45] Another advantage of attending conferences and workshop was that often the same people and organizations participated, which gave me an idea of an emergent "climate-change community". It was much easier for me to follow representatives of civil society organizations (broadly, NGOs and advocacy sector), who were generally open and willing to talk. Drawing on the literature from the ethnography of development aid, these translators or carriers of travelling ideas can be called "development brokers" (Bierschenk *et al.* 2002; Lewis & Mosse 2006).[46] Bierschenk and others have categorized this group, who serve as intermediaries between "donors" and potential "beneficiaries" of aid, as "a new social category" in Africa (as well as in other developing nations). The emergence of this social category has to be placed in the context of the wider development landscape that emerged in the aftermath of the Second World War, which marked the transition from colonial "*mise en valeur*" to development aid in the form of "social and economic development", and has become a prevalent reality in many African countries (Bierschenk *et al.* 2002: 2-3). According to the authors, development brokers are:

> […] The social actors implanted in a local arena (in whose politics they are indirectly involved) and who serve as intermediaries who drain off […] external resources in the form of development aid. […] They are supposed to represent *the* local populations, express its [*sic*] "needs" to the structures in charge of aid and to external financiers (Bierschenk *et al.* 2002: 4).

Even though the authors refer to the comprehensive field of development aid, we can extend the notion of brokers to the more specific "Adaptation brokers", for these are the social actors who occupy exactly the same positions, as they form part of the fragmented politics in a postcolonial state. Furthermore, there are many good reasons to approach Adaptation to Climate Change as a new form of development aid (Cannon & Müller-Mahn 2010). Particularly in the case of

---

[44] One reason for this inaccessibility could be a general research fatigue that seems to be currently hunting Tanzania. I was told that the number of researchers has increased over the years, which is also why the procedure to gain a research permit is nowadays increasingly complicated.

[45] This can also be understood as a change from what Rottenburg has called a "metacode", to a "cultural code" (Rottenburg 2005).

[46] Other authors have called these brokers who are caught in between different worlds, norms and infrastructures "transnational agents", which can refer to a social movement or an individual "norm entrepreneur" (Acharya 2004); "translators" (Merry 2006; Lewis & Mosse 2006); "mediators" (Behrends *et al.* 2014); or "travel agents" (Czarniawska & Sévon 2005: 11).

Tanzania where Adaptation is decentralized and channelled by means of a "multi-sectoral approach" (URT 2007), it is for a considerable part embedded in the existing field of development cooperation. The key point is that brokers operate at the interface between the international world of development aid and local realities. One can imagine that in order to navigate successfully between these distinct worlds, they have to be masters in mediation and role ambivalence (Rottenburg 2009 in Bierschenk 2014: 80), as they have to bridge and translate different norms, interests and epistemologies into both directions. It is important to note that these brokers are not just passive executors of the "logic of dependence", but are rather key actors in "the irresistible hunt" to carry out projects in and around African villages (Bierschenk *et al.* 2002: 4).

As such, and crucially, it will become clear that paying attention to these translators allows for understanding the ways in which local actors play out strategies and evoke certain rhetorics that seek to establish a delicate balance between serving their own interests (and the beneficiaries'), while similarly meeting the requirements that are set by the donors. In this sense, it forecloses some of the critique expressed towards deconstructivist approaches of development that offer a merely "diabolic image" of the development world, and view development solely as a hegemonic, Western discourse to maintain dominance over the "rest".[47] As Mosse and Lewis (2006) rightfully point out, such "*ideological* deconstructivism" (Olivier de Sardan 2005, in Mosse & Lewis 2006: 4) does not pay sufficient attention to inconsistencies and uncertainties in this field. For instance, it fails to notice collaboration and complicity of marginal actors and institutions in development who employ their own strategies, as well as the beneficiaries who understand and manipulate the rules and rewards of aid. In brief, it is a perspective that demotes local actors' agency, and fails to understand the complexity and social life of projects, as well as the way they aer lived through by development actors (Mosse 2004, in Mosse & Lewis 2006: 4). In line with the authors, I take a non-normative and empirical approach towards understanding the translation practices of Adaptation. Moreover, even though I am not abandoning a deconstructivist view, the analysis of the social life of Adaptation should be understood in a *methodological* rather than an ideological way (Olivier de Sardan 2004, in Mosse & Lewis 2006: 5).[48] In other words, I try to approach the

[47] The authors distinguish three modes of anthropological engagement with development. The first is *instrumental* (as carried out by applied researchers or consultants); the second is *populist* (celebrating indigenous knowledge and denigrating global science and top-down technology transfer); the third has been the critical, poststructuralist, or *deconstructive* analysis. This latter perspective has been informed by Foucault's work and analyzes development as "discourse", as a system of knowledge, practices, technologies and power relationships that orders and limits action (Mosse & Lewis 2006: 2-4).
[48] While building upon the ethnography of "brokerage" as developed by Bierschenk *et al.*, Mosse and Lewis complement their actor-oriented approach with the notion of translation, as employed by Latour

translation practices and the rationale underpinning them through the eyes of all the actors involved. Finally, in order to study the actors' strategies and their relationships, I have focussed on the range of literary inscriptions, and the discourses and narratives that buttress and sustain them.

The field as translation zones

Considering the manifold concepts that have emerged over the past years to make sense of the dissemination of global models and all sorts of hybrid forms, I deem it necessary to explore the analytical novelty, as well as the methodological merits and pitfalls, of employing a travelling idea. To begin with, and as will be laid bare in this chapter, despite the feeling of being everywhere (or *Nowhere*); the strength of employing the notion of a travelling idea as an analytical concept – and its tailored method of "following" – lies in grasping those moments and practices where ties are established, connections forged, assemblages (re)configured, and where meanings and translations are contested (the *Now Here*).[49] It contributes to the study of how ideas and things move, and how meaning is produced and altered in idiosyncratic ways across a distance. Indeed it shines light onto how things come into being. It is during these moments of encounter between different actors and worlds in which friction occurs (Tsing 2005), struggles are played out or silenced before its meaning is temporarily congealed, gains hegemonic momentum, and travels further to live life anew. Put otherwise, it enables us to gain insight into the rather contingent processes of translation that occur when ideas travel, for they are not neutrally moving across a landscape – ready to be unpacked in those places where they are ultimately intended to arrive – but are rather actively remaking it (on mobile policies, see Peck and Theodore 2010: 170). This approach allows us furthermore to understand the travelling idea of Adaptation not as a unidirectional journey from the "global" to the "local" or from North to South, but rather as the fruit of a continuous coproduction – a narrative in the making – between highly interdependent and multiple constituencies. So by conceiving of the idea's trajectories as our empirical object, which by its mere travelling establishes ties and forms alliances, it follows that our analytical focus has shifted from studying structure to studying practices of making things hold together (Marcus

---

and others in ANT. So their social theory differs in the sense that in the ethnography of aid by Bierschenk and others, the brokers are considered to be part of, or "by-products" of, an a priori structure of the "development configuration". Yet, Mosse and Lewis rather take their role as performative and always as the result of translating interests (Mosse & Lewis 2006: 13). It may be clear by now that this is in line with my own position; see also the next section on translation zones.

[49] An obvious comparison is made with "situational analysis" as developed by Max Gluckman and the Manchester School. I come back to this comparison in the following pages.

1995; Behrends *et al.* 2014: 10). Furthermore, this research seeks to do justice to the complexity of emergent global interlinkages that are brought into being by the idea of Adaptation to Climate Change. Yet I have similarly attempted to remain faithful to ethnography's main tenet of longevity by capturing the idiosyncrasies of daily life in a Maasai village, where the idea of Adaptation is ultimately supposed to be received. Here is a fragment from an ordinary day of herding cows:

> It was an exhausting but pleasant day. I joined Leboi with herding cattle. I carried three litres of water and some bread, and in order to cope with the heat I had to drink continuously. It struck me that throughout the day Leboi did not drink a single drop of water. He told me that his breakfast (a litre of milk) was sufficient to support him until dinner. Around noon we sought refuge under the shadow of a tree. It was one of those trees where the phone signal worked, so Leboi climbed up the tree and made some calls. Then he fell asleep under the tree, while his herd grazed on. When he woke up it took him a split of a second to figure out where his cows had gone to and he ran after them. With extraordinary speed he disappeared out of sight, and within some minutes I received a phone call that he had found his herd back. When we were reunited I asked him whether it was he herding the cows, or the cows herding him. He explained that during the rainy season the cows might take the lead, for there is sufficient grass and water (with well-known restrictions that are under strict social control). But during the dry season the herders have to take the lead, for this period requires careful land-use planning. While walking I gained insight into the relationship between herders and their herd, the strength it requires, human- environment relations, land-use planning, social control etc. In brief, I gained an insight into their day-to-day lives that one only acquires by "being there".

To make things more concrete, I have identified three interrelated *translation zones* in tracing the translation chain of adaptation from global platforms all the way to Northern Tanzania. Political geographer Andrew Barry (2013) has introduced the concept of a "translation zone" in the field of international relations as a way to attend to those instances where translation turns out to be difficult (Apter 2006, in: Barry 2013: 4).[50] Barry draws our attention to the politicized borders of translation, to untranslatability, and to the possibility of resistance, for it corrects an earlier erroneous assumption of actor-network theory, that the hybrid actor-networked world was understood as a world without boundaries or structural inequalities in resources in which all translations were in principle possible. Yet, the field of international relations can be marked by contestations, ambiguity and "enduring blockages" (ibid). First, there where the Adaptation to

[50] Barry has borrowed the term translation zone from literary theorist Emily Apter (2006). By making use of the metaphor of international conflict and language wars in the aftermath of 9/11, with the term *translation zone* Apter envisaged "a broad intellectual topography that is neither the property of a single nation, nor an amorphous condition associated with postnationalism, but rather a zone of critical engagement that connects the "l" and the "n" of transLation and transNation" (Apter 2006: 5).

Climate Change paradigm is "talked into existence" before it sets on its journey to travel all around the world (the international climate change negotiations): Let us call it "upstream". Secondly, I have paid attention to the end of the translation chain, or the "receiving context" (Terrat village). Let's call it "downstream". And thirdly, I have interrogated the so-called interstitial spaces, which is neither there where the idea originated nor where it is supposed to be implemented (Rottenburg 2009: xiv) and can be found somewhere "in-between" (e.g. NGOs and international advocacy organizations etc.).

We can think of this field as a riverbed that channels the stream. It is important to note that global ideas travel up and down all the time and that there is perhaps not a clear-cut direction. Yet, the flow of a river is an apt metaphor for describing the general movement of the idea of Adaptation, for I believe that it would be a mistake to think that there is no direction at all. There is clearly a discernable "upstream" where the idea accumulates volume and gains sufficient power (expertise, money and political will) before disseminating in different directions. The general direction Adaptation takes is to some extent predictable (just like a river's stream), for it can be traced back to historically produced unequal power relations between the Global North and South. As such, the river's stream symbolizes the historical debt of the disproportionate emission of greenhouse gases by the industrialized countries, expressed in a tangible financial flow to compensate those countries that are vulnerable to climate change (with the greatest emphasis on the Global South). In other words, the river flow that is branched off along the stream in endless bifurcations constitutes by and large a new development rationale that shapes the new landscape of "*The Will to Adapt"* (see next chapter).[51] It may be superfluous to mention that a researcher can never follow the full trajectories of the travelling idea of Adaptation, for its connections are endless, so we have to limit ourselves in trying to grasp the most prominent contours that came to the fore during fieldwork.

Nevertheless, the chronological order of analysis has been much more messy and at times prone to serendipity. But in principle I worked as follows: I took the village as my "base camp", and

[51] "The Will to Adapt" refers to Tania Li's "The Will to Improve", which builds upon Michel Foucault's notion of "The Will to Govern". As Li explains, "The Will to Improve" is the development rationality shared by many partners who operate as trustees, and whose aim is to enhance and direct the capacity for action of others. Their intentions are benevolent, even utopian as they wish to make the world of others better than it is (Li 2007: 4-5). This idea of improving populations falls under Foucault's wide use of the notion of "government", which he understood as "the conduct of conduct". He proposed that "governmental rationality", or "governmentality", should be understood as the attempt to govern and condition people's behaviour through a whole set of calculated means. According to Foucault, government was not so much about imposing laws on men, but rather a question of disposing things, to employ tactics rather than laws, or even use laws as tactics (Foucault 1991: 95).

stayed there as long as possible, only to leave when there was a climate-change-related activity, or a meeting somewhere, or on a more mundane level, when I needed to buy vegetables at the market in Arusha. Some of the climate-change conferences could not always easily be planned in advance.[52] For instance, while being in the village I could not always be aware of all the climate-change-related activities and meetings that were going on, so it happened that I had to leave the village unexpectedly and jump on a bus, a motorbike, a car, a taxi, or an aeroplane in order to arrive on time. One can perhaps imagine that the challenge of such a mobile approach lies mainly in its practical nature, as the road from the mud hut in Maasailand to these air-conditioned venues was often long, exhausting and expensive.[53] In order to participate in the international high-profile meetings of the UNFCCC (Conference of the Parties), I had to fly to Durban (COP17 in 2012) and Doha (COP18 in 2013) where I immersed myself fully in two weeks of exhausting and highly technical talk. Other influential policy meetings took place in Arusha, Dar es Salaam or other places in Tanzania. For example, I attended the yearly African Ministerial Conference of the Environment (AMCEN) meeting that was hosted by the Tanzanian Government in Arusha in 2013, where African delegates prepared for their position during the conference in Doha that would take place a few weeks later. After Doha, I attended workshops in Tanzania in which policies (elaborated through endless speech acts and inscribed in documents) were further developed that had been drafted at the international level. In this sense, at times, I was able to literally follow the generative path of the idea of Adaptation and the ways in which it materialized.

In other instances the trajectory appeared more abstract when I tried to witness the idea's inception in new institutional surroundings, for example when I simply attended climate-change meetings that had no traceable prior referent. Because Adaptation is in fashion, it is just a matter of time before different actors jump on the bandwagon. Yet, the idea does not fall from the sky, and usually there is an international call for projects, or texts to which organizations will refer before they begin drafting their own documents, texts, and proposals, and build new heterogeneous networks. Building upon Foucault's notion of a "governmental rationality" (Foucault 1991), Li (2007) has demonstrated that calculated programs of intervention are not

[52] For the international conferences complex processes are demanded in order to get accreditation. Over the years this process has become increasingly difficult due to the overwhelming amount of people who are willing to partake in these meetings. One needs to affiliate with an accredited organisation, which in turn only has a limited amount of participation 'sloths'.

[53] As such, I see these very practical challenges as inherent in research that was designed to follow a travelling idea across remote distances, which similarly can be taken as an invitation to future, more collaborative ethnographic approaches in which the skills of different researchers can be bundled.

invented out of nothing, but are traversed by the will to improve and are seldom the product of a singular intention. Such programs are more often "pulled together from an existing repertoire, a matter of habit, accretion and bricolage" (Li 2007: 6). In other words, as much as Adaptation draws upon a wider (and older) utopian field of the will to improve, once picked up, it will be situated in already existing organizational structures, vocabularies, repertoires and modes of conduct. What follows from this is that a genealogy of older travelling ideas, and historical contextualization of the webs within which the travelling becomes embedded, enriches our understanding.

Now Here & Situational Analysis

The first observable step towards bringing Climate Change Adaptation into being usually begins with the organizing of a meeting. These gatherings are those "Now Here" situations in which regional NGOs in northern Tanzania decided that they also need "to do something about climate change adaptation". The regional meetings that were organized by NGOs and which dealt with pastoralism in general or Maasai in particular took place in and around Arusha and were fairly easy to gain access to. In the course of my stay in Tanzania, sensitization workshops and conferences about Adaptation mushroomed. The meetings varied between expert meetings (knowledge accumulation and exchange), workshops in which several stakeholders took part (NGO workers, policy makers, government officials and grassroots communities), or sensitization workshops that were solely aimed at informing the local population about "this thing called climate change". I tried to attend as many of these workshops as possible, and described in meticulous detail everything that was being said and done. In many ways, attending and observing these events – including the international mass conferences – bears similarities to Gluckman's analysis of the opening of a bridge, which later came to be known as "situational analysis" (Gluckman 1958; van Velsen 1967). He demonstrated that by the detailed description of social situations (i.e. complex micro-social events) as a starting point for analysis, one could abstract the social structure, relationships, and institutions of that particular society.

For example, by describing in close detail everything that happened during the opening of a bridge in "Modern Zululand", he excavated the power structures that were prevalent at that particular time and place.[54] He described in exact and rich ethnographic fashion how he got there

[54] The bridge was planned by European engineers, built by Zulu workers who had also paid taxes for it, and would be used by a European magistrate to rule over a Zulu community, and by Zulu women to attend a European hospital; it was opened by European officials and a Zulu Regent in a ceremony that

and with whom, who opened the bridge, who funded it, who greeted whom, where everybody was sitting, why the bridge was built, its historical context, who was invited by whom, what was being said by whom, and people's clothes, codes, rituals, behaviour, singing, silencing and so on. Crucially, the fact that Europeans and Zulu were cooperating in the celebration of the bridge together meant that they formed a community with specific modes of behaviour, which were directly observable.[55] Gluckman called these "social situations", for he analysed them in their relationship with other situations in the social system of Zululand. He defined (the analysis of) a social situation:

> A social situation is thus the behaviour on some occasion of members of a community as such, analysed and compared with their behaviour on other occasions, so that the analysis reveals the underlying system of relationships between the social structure of the community, the parts of the social structure, the physical environment, and the physiological life of the community's members (Gluckman 1958: 9).

So it was the centrepiece of a bridge that brought people into association with one another, which enabled Gluckman to unravel several and complex layers of interaction. On closer inspection we learn that what Gluckman methodologically proposed – starting an analysis from an event such as the opening of a bridge – was indeed already (even though somewhat indirectly) a detailed analysis of human and non-human networks; perhaps even some sort of material semiotics *avant la lettre*. Whereas some elementary principles on the origins of organization differ, such as Gluckman's assumption of an a priori social system within which people operate, as opposed to material semiotics' conviction that this is rather the effect of ongoing practices and interactions, my concern here is only methodological. And as empirically grounded approaches I draw on some of these valuable and shared characteristics. In brief, the detailed ethnographic descriptions of the social "Now Here" situations have ultimately enabled me to gain insight into Adaptation's journey, and into some of the intricate processes that are entailed by translating Adaptation. We can now finally turn to an exploration of the concepts "travelling" and "translation".

---

was attended by both Europeans and Zulu, whose actions could be historically derived from their respective culture, and must partly be related to a system of European-Zulu relations etc. (Gluckman 1958: 10).

[55] Of course, this always occurred in segregated ways and on unequal terms; however as Gluckman noted, enforced separation is also a form of association (Gluckman 1958: 12).

To Translate is to Travel and to Transform

What do a climate model, the front cover picture of this book, the daily weather forecast, an NGO officer talking to the Maasai about Adaptation to Climate Change, a Maasai giving account to changing patterns of rainfall, Al Gore's movie "An Inconvenient Truth", a scientific journal article on increased atmospheric levels of carbon dioxide, methane and nitrous oxide; a newspaper item about melting glaciers, the depiction of an ice bear holding onto a disappearing ice sheet, and an anthropologist writing about it all have in common? They are all acts of translation. The basic aim or ideological orientation of these translations might differ, for example, the one evoking emotions by employing "sensational forms" (Meyer 2011) – such as a drifting iconic ice bear – in order to spark activism, while the other seeks to achieve an accurate representation of reality in the name of science. In every instance an abstract climatic phenomenon or atmospheric materiality is mediated and rendered understandable from one actor, medium or audience to another. And it involves people. As Latour succinctly put it:

> The spread and time of anything – claims, orders, artefacts, goods – is in the hands of people; each of these people may act in different ways, letting the token drop, modifying it, or deflecting it, or betraying it, or adding to it, or appropriating it (Latour 1986: 267).

This process is not only bound to the translation of complicated jargon by experts to lay people, or to NGO workers explaining climate change to indigenous people, but extends to the rather closed circles of epistemic communities as well. In this sense, whatever the form in which it is cast, the direction it travels to or its ideological intention, "Climate change communication is ultimately an issue of translation" (Rudiak-Gould 2012: 46). Also, Adaptation's journey is driven by continuous acts of translation. And, we can add another layer of translation to this intractable translation chain: the anthropologist writing about it. Not only in this chapter, but also throughout this manuscript I intend to reflect on my translation of translations (sometimes indirectly), for we should not forget that our own stories further weave webs and enact realities that are never innocent (Haraway 2004).

Much can be said about the comprehensive concept of translation, for it has played an equivocal role within the history of anthropology, linguistics and philosophy, and it has reoccurred in a variety of shapes in the wake of the "ontological turn" (Hanks & Severi 2014), as well as with the development of science and technology studies. In this work I limit myself to two forms of translation. Firstly, as already touched upon, it is understood as a general operation – a way of

exercising power (Callon and Latour 1981) – in which both the translator and what is translated are transformed (Serres 1982 in: Czarniawska and Sévon 2005: 7). The second form of translation that I employ attends to the "ontological politics" entailed by the fascinating linguistic journey that the term *climate change* undergoes from English into Swahili into Maa. While this first approach to translation features throughout all the chapters, the second linguistic focus will receive less, but more specific, attention in chapter six. In the following I shall flesh out some of the elementary principles of translation that will prove fruitful for my overall analysis.

If we take a look at Translation's etymology and meaning, two essential features spring to mind. Stemming from Latin *translationem* it refers to "a carrying across, removal, transporting; transfer of meaning".[56] And as the participial stem of *transferre*[57], its first signification is: "Transference; removal or conveyance from one person, place, or condition to another" (OED). Thus first of all, translation always involves transformation and motion. What follows is that there is no such thing as a perfect translation (otherwise there would be no translation necessary at all), an observation and challenge that is very well known to linguistics. Secondly, and crucial to my analysis, is the fact that translation connects formerly disparate phenomena, forging a passage between two domains, or establishes communication (Serres 1982, in Brown 2002: 5).[58] Simply put, translation connects what was separate before. By assuming the existence of an endless number of realities, the notion of translation as introduced by Serres (and after him employed by many others), is a way to circumvent the ancient controversy about the question of whether there is only one reality, or many equivalent realities instead (Rottenburg 2005: 259).

How to make sense of shifting rationalities?

Throughout my fieldwork I witnessed several times that an informant radically shifted perspective once he or she was out of the public debate or "stage". An important question therefore that I have been grappling with has been how to make sense of these shifting rationalities? Put otherwise, why would a person say something in a particular public context, while radically opposing this view in another (such as during an interview with me)? Perhaps part

[56] Online Etymology Dictionary, which should not be confused with the Oxford English Dictionary that shares the same acronym.
[57] Transfer is in turn defined as: "To convey or take from one place, person, etc. to another; to transmit, transport; to give or hand over from one another" (Oxford English Dictionary).
[58] The work of social scientist Michel Serres – and particularly his concept of translation – has been of profound influence to Science and Technology Studies, since Callon (1980) and Latour (1986) have picked it up and placed it at the heart of ANT (see Brown 2002; Czarniawska and Sévon 2005).

of the answer can be found in "opportunism", since people often simply say what suits their interest best, resulting in a different account across different contexts. Yet, the question remains then how or why did they get into this conflicting situation to begin with? As will be elaborated below, on a philosophical level Rottenburg provides us with some helpful insights. For a sociologically grounded understanding, I first turn to Goffman and to the metaphor of a theatre stage. I am aware that the use of a theatre metaphor bears the risk of getting carried away by discussions about "backstage" and "on-stage", what is scripted or non-scripted, or about notions of "authenticity" as opposed to acting. It is not my intention to drive the metaphor this far, but it serves first of all as a way of organizing and bringing into being one cohesive narrative out of a mesmerizing complex of narratives that I collected in the field. Metaphors are in the first place foundational communicating devices that are at the heart of how we give meaning to the world. In order to circumvent some of the abovementioned technical debates, I build my theatre metaphor on the idea that there is no clear distinction between on-stage and backstage in the sense of what is "unreal" (transformed, staged, fanciful, make-believe) or "real" (everyday life); but as Goffman proposed in his *Frame Analysis,* one must rather speak of "multiple realities" (Goffman 1974: 3-5).[59]

> *Being part of the official delegation of the Tanzanian government, Leon featured prominently through all the presentations given at the international negotiations. Tanzania positioned itself as a REDD+ pioneer, which means that tree planting is seen as an effective strategy to mitigate climate change. It is also presented as a fair economic strategy, for the developed countries pay the Global South for the planting of trees. Once back in Tanzania, I finally managed to interview Leon. When I asked him about his own opinion about REDD+, he replied: "REDD+ is neo-colonialism in its purest form. You are a researcher, you will see it with your own eyes: our people do not benefit from tree-planting. What they need is food, not trees".*

In the end social life is engrained with performativity and ever-changing roles, sometimes more and sometimes less scripted but always governed by certain rules of conduct, and organized around and sustained by a set of ritualized practices. Put in the words of Robert Ezra Park

[59] Goffman follows here a tradition established by William James, who, instead of asking "what reality is" gave it a phenomenological twist and asked: *under what circumstances do we think things are real*? This theme was taken up by Albert Schutz in 1945 who introduced the term "multiple realities", and was later taken up again by Harold Garfinkel, who further looked for rules that allow us to generate a "world" of a given kind. Goffman in turn questioned whether one can know how many different worlds there actually are, and whether everyday life can be seen as "but one rule-produced plain of being". He stressed the methodological hindrance that "the announcement of constitutive rules seems an open-ended game that any number can play forever". It is in this context that he then pointed to the structural similarities between everyday life and the various "worlds" of make-believe, but that there is no way of knowing how this relationship should modify our view of day-to-day life (Goffman 1974: 3-6).

(1950): "It is probably no mere historical accident that the word person, in its first meaning, is a mask. It is rather a recognition of the fact that everyone is always and everywhere, more or less consciously, playing a role… It is in these roles that we know each other; it is in these roles that we know ourselves" (Park in Goffman 1959: 19).[60] In order to account for the multiple realities and shifting roles of actors, it is worth mentioning that beyond the focus on climate change events, performativity and "stages", I have also followed actors to other localities where their role – and their account of climate change – transformed. To understand narratives and human actions it does not really matter whether things are supposedly staged or not; they exist – are thus observable – and form part and parcel of social life. As Czarniawska has stated in line with Goffman: "what appears as "untransformed reality" in one context is a transformed reality in another context – it is, after all, turtles all the way down. That is why "theatre" is a good metaphor of life and not a contrasting notion" (Czarniawska 1997: 30).

> *Another instance that caught my eye was of a different nature. The Emir of Qatar, who hosted the COP18, had promised to tackle climate change through a range of technological and scientific innovations and by investing in renewable energy; a position that he explicitly and repeatedly made clear during the negotiations. At the same time, I came across an article in a local newspaper (outside the venue) in which the Emir was shown on a picture together with religious leaders of Qatar, performing a countrywide rain prayer.*

If we think of Adaptation as an idea that is drafted "upstream", it makes a lot of sense to assume that in the long journey down the stream it not only shapes, and is also shaped by, an endless number of different realities, while still maintaining a certain consistency or lifeblood – at least as long as we can still speak of it as Adaptation. In other words, drawing on Rottenburg's work, in order for the model or idea of Adaptation to move across space and be communicable, it needs to be recognized as Adaptation to begin with. Rottenburg has framed this shared language, which is the indispensable driving force for this idea to be translated, as a *metacode*. Conversely, this assumption that presupposes the existence of one describable reality suggests that all the other codes are particular cultural codes. Instead of trying to solve the somewhat paralyzing question about the nature of reality or realities, Rottenburg takes the issue to an analytically more fruitful and interesting level, and shines light on the question of how and under what conditions people shift from a metacode to a cultural code (Rottenburg 2009 [2002], 2005).

[60] In Classical Latin the word *persōna* referred to a mask used by a player, or a character in a play, a dramatic role, the part played by a person in life, individual personality, role, position, personage, human being in general etc. (Oxford English Dictionary).

During the COP17 in Durban, one of the largest climate change protest marches in history took place to strive for "climate justice". It was a truly impressive and massive event, and driven by curiosity I took part in the march. Taking a closer look at all the banners, quotes, t-shirts, propaganda and people that "walked and shouted along" this social event appeared to be a mesmerizing potpourri of activists who all had their own agenda, and used climate change as a platform to raise their voices. For example, the Durban "waste pickers club" was telling: wearing green outfits they were carrying banners bearing on the front the text: "Fight for Climate Change"; while on the rear the banners were covered with quotes such as: "Malema for president"; or "Malema until Jesus comes back".

This navigation between a metacode and cultural code becomes particularly interesting in the context of the international negotiations, or any other event where people gather in the name of climate change. It is under the denominator of a metacode that can be (tremendously simplified) framed as: "climate change is a threat to humanity that urgently needs to be tackled" that brings thousands of people together at the UNFCCC conferences. To be able to communicate the participants need to agree on this metacode so that the negotiations can take place, after which people take it home and start translating it into a cultural code. Moreover, if one looks more closely, under the negotiation-surface into all the niches that are present at such mega events, one manages to distil manifold cultural codes and the occurrence of continuous shifting between the meta- and cultural code. As we shall see throughout the following chapters, the concept of translation seeks to examine whatever happens in this process.

After attending one of the technical negotiation sessions, my colleague and I talked to a Ugandan delegate. We inquired about his take on the ongoing negotiations of the Nationals Adaptation Plans (NAPs), and the continuous attempt of the OECD countries to delay the money that was supposed to assist the developing countries. He replied: "Let Them (the OECD countries) pay for their sins, because they have caused all this". I took his answer to be an explicit moment of unearthing the shift to a cultural code, in which morality took centre stage. It became clear that one could only scrape off the thick surface of technical talk, which revealed the cultural code, outside the negotiation room.

Also the story of Eric, a civil society representative and young climate change activist, reveals the somewhat hidden shifts from the metacode to a cultural code. Because the Tanzanian group was underrepresented during one session they had asked him to take a part in the session on Tanzania and REDD+. I was surprised to see him playing a prominent role in the panel, as I had got to know Eric very well and I knew that he did not support many of the views of the government. After the panel we went for lunch and I also asked him about his personal take on REDD+. Then he carefully and somewhat secretly (looking around if none of his colleagues could see him) took out a book with the title: "No REDD!" Similarly to Leon, he figured that REDD was a very bad idea. He explained that this is just a smart and easy way for the developed nations to offset their emissions in Africa, while the source of the problem remained untouched.

What travels, what stays behind and what puts it into motion?

Understood as a general operation, translation implies definition. These definitions depend on past translations, and must be inscribed into intermediaries. Hence, Callon has argued that one needs to specify the medium or material into which a translation becomes inscribed. In the case of climate-change adaptation some of the following intermediaries have crossed my path: presentations, group discussions, people, models, graphs, money, stories, pictures, drought-resistant seeds, erosion measurements, embodied skills, policy prescriptions, movies, radio programmes and so on. Whatever the form translation takes, the elementary operation is always triangular: there is a translator, something to be translated, and a medium in which it is inscribed (Callon 1990: 143). And translation involves transformation of all three. But it changes almost everything that is involved in this transference, including the sending site (in case a model travels successfully the sender gains in power) as well as the receiving site (where actors will translate and interpret it anew). Nevertheless, in this de- and re-territorialization process not everything travels along; but some things stay "behind". In fact, the only thing that is transportable is the objectified idea or model and its vehicle. What stay behind are the social and material orders in which the idea was enmeshed together with the rationalities that gave life to it, for these are reinvented along the way. The extents to which some elements change in the process depend on many factors. We can look at the degree of transformation of different elements in the translation process as a continuum. If the travelling idea does not impact the receiving site much, we can speak of it as appropriation or vernacularization. So we find that one extreme side of the translation spectrum is when the travelling object becomes appropriated and all the rest remains the same; while on the other extreme side is when the object remains the same and the receiving context changes (Behrends *et al.* 2014: 2-3).

From this basic understanding of translation we can now move on to the essential question of what is the driving force behind translation; or, what makes models and ideas move in the first place? A very obvious and almost banal answer is: money. Therefore, it is surprising to find reflections on the role of money conspicuously absent from the literature on translation and travelling ideas (with an exception of Callon's concept of TENs, and Rottenburg's work on development cooperation, 2009 as mentioned above). Notwithstanding the fact that there is certainly more to making ideas travel than this materialist take, it comes perhaps as no surprise that it does play an indispensable role in the context of translating Adaptation in relation to North-South configurations. And even though it is always there, it is usually hidden, under a thick

layer of rhetoric, technical negotiations and moral talk. Thus money is not sufficient to explain the whole set of intricate forces and relations that puts the vehicle into motion, for it also needs social and material infrastructures to have value and to "work". Moreover, there are always legitimizing narratives needed to hold each other accountable for our actions. As mentioned earlier, for ideas to travel they must be translated, which is a process that occurs through their being picked up, modifying and interpreting it. It is also a process prone to friction, as Latour and Callon have proposed:

> By translation we understand all the negotiations, intrigues, calculations, acts of persuasion and violence, thanks to which an actor or force takes, or causes to be conferred on itself, authority to speak or act on behalf of another act or force (Callon & Latour 1981: 279).

While this is an apt description of the process, it does not explain the driving force behind translation, because there must be something that prompts people to translate. Callon has proposed the idea of a shared desire:

> Considered from a very general point of view, this notion [translation] postulates the existence of the single field of significations, concerns and interests, the expression of a shared desire to arrive at the same result (Callon 1980: 211, in Czarniawska and Sévon 2005).

However, I believe that we need to go one step even further back and ask: what is it that instigates this shared desire to begin with? Czarniawska and Sévon (2005) raise the same question and guide us further by introducing the concepts of fashion and imitation. In order to describe this process they use the allegory of a vehicle: "Translation is a vehicle, imitation its motor, and fashion sits at the wheel" (Czarniawska and Sévon 2005: 7). Perhaps it does not hold for all forms of translation or travelling ideas, but if we look at Adaptation, we can easily and meaningfully extend the vehicle allegory by adding the missing notion of fuel – as a representation of money – that very sticky substance, which is needed by the motor to generate power so that it can imitate. Still, the question about what is worth imitating, and what is not remains partly open. The answer revolves around the notion of how to deal with "superiority", and brings us closer to the analytic novelty of the travelling idea. Remarkably enough, what we learn from Behrends and her colleagues is that the first rival theory of the travelling models concept is *rationalization* (in the Weberian tradition). The idea underpinning rationalization in this sense is that models, which increase rationality, will always thrive and beat other models. This approach thus assumes a force of superiority inherent to some models as opposed to others, which is a heavy supposition that

cannot be found in the travelling models perspective (cf. Behrends *et al.* 2014: 2). By leaving the idea of a higher or "superior" rationality behind, I believe that we must attribute more power to the somewhat unpredictable forces that we call contingency. In other words, we simply cannot always predict why, how and under which circumstances a model will travel or not. This is comforting in so far as we do not need to come up with yet another model in order to analyze travelling models.

In order to cope with unpredictability, Czarniawska and Sévon have brought in the notion of *fashion*. Drawing on the work of Tarde (1890/1962), the authors refer to fashion as a collective choice among an endless number of tastes, things and ideas; which can thus be understood as an ordering principle that seeks to find and create a "time collective" (Sellerberg 1994, in Czarniawska and Sévon 2005: 9). Speaking within the context of management, they argue that fashion works like an ordering practice that appears to bring some sort of predictability into a disorderly and unpredictable future (ibid: 10). Put otherwise, we can see fashion as an *ordering practice of time*. Since it is very difficult, if not impossible, to foresee future fashions or explain what forces brought them into being, I believe that we are left with the task of exploring the ways in which it prompts people to choose and imitate particular ideas and elements, and how these become appropriated by different actors, and why. However, I suggest that the question of how fashion itself comes into being can be explained by treating imitation – initially – as its antecedent, instead of its consequence alone. It is not only fashion that makes people imitate, but also imitation that generates fashion. And then of course the order of things is turned around and people also imitate because of fashion, which owes its inherent appeal to the fact that being in vogue has the power to enhance a sense of belonging. And this is exactly how travelling ideas accumulate power. The more an idea is picked up and translated, the more easily it travels and possibly reaches the status of a model or policy. It is important to note that part of the success of a widely embraced model is that it becomes stabilized and ultimately black-boxed (Behrends *et al.* 2014: 3). For the Global South in general and sub-Saharan Africa in particular the idea of Adaptation – as an Adaptation imperative – has to a large degree attained an unchallenged status. Notwithstanding the fact that the way in which Adaptation is supposed to be implemented is prone to debate, the bare conviction *that* people have to adapt is not (or is to a much lesser extent). However, as we shall see, the further down the stream the idea flows – i.e. when the idea leaves policy-making circles and enters Maasailand – the more it seems to be prone to meeting forms of resistance.

The final step towards understanding why certain ideas are imitated and others are not can perhaps best be explained by the notion of an *aura*, a certain persuasive quality that is at the same time convincing yet invisible. But it has nothing to do with rational choice, and rather depends on dimensions such as past translations, and on how well the model adapts to the ontological and epistemological circumstances of the receiving site (Rottenburg 2005). Moreover, for diverging rationalities to accept a metacode, widely accepted categories are needed to make it communicable. In addition to rationalization there are two other predecessor concepts from which translation and "travelling models" distinguish themselves, in the sense of being an explanatory concept for the spread and circulation of ideas and customs. The first one is *diffusionism* and the second one *modernization*.[61] The basic idea underlying diffusionism was that certain cultural traits (e.g. languages, religion, objects) spread from cultural centres to peripheries through physical contact. By drawing an analogy with a physicalist metaphor (Czarniawska & Sévon 2005; see also Rogers 1995), the spread of ideas into outward circles was understood as the natural consequence of a concentration of contact in one place that provided the energy for its mobility.[62] Diffusionism differs from translation and travelling models in the way it seeks to explain the moving force, for the latter does not assume a physical necessity to make things move but rather interrogates how and why a certain model is picked up as opposed to others. Moreover, as also mentioned earlier, there is a different approach to centre and periphery, which are considered to be generated by the translation and travelling of the idea itself (Behrends *et al.* 2014: 11). The idea of a centre and periphery is thus again considered to be the outcome of translation, and not the cause. Also within modernization theory this centre and periphery distinction holds, as it sees the world divided into industrially and economically more advanced societies, being a worldwide desired model, which is blindly followed by less developed societies (ibid: 13). The concept of a travelling idea does not make such clear a priori assumptions, and focuses instead on the contingent processes that occur when things, ideas and objects are travelling across a distance, and as such, continuously remake and reorder the world.

[61] It should be noted that Behrends *et al.* 2014 refer to modernization theories as introduced by Rostow (1960, that all societies go through the same stages towards modernity) and Huntington (1968, on social mobilization and economic development as driving forces behind modernity). Thus the travelling models concept differs from this type of modernization thinking, and not from other sophisticated theories of modernity such as introduced by Foucault, Adorno, Luhmann and many others (Behrends 2014: 12-13).
[62] According to Rogers, diffusion is a kind of special communication, a message that deals with the spread of new ideas. Therefore it always carries a certain uncertainty that leads to social change (Rogers 1995: 6).

4

The Will to Adapt

A view from the interstitial spaces in northern Tanzania

Sensitization workshop on climate change in Monduli

Introduction

"What we need to talk about when we talk about Adaptation"

My research partner Naini had arranged a meeting with a man "whom I definitely needed to talk to". She insisted on an encounter with him, for she had been told that he was an honourable man, widely known among Maasai communities for his efforts to engage broader development issues with pastoralism. Moreover, it appeared that he had initiated a project that was dealing with climate change adaptation and pastoralism. And so we jumped on her *pikipiki* and rushed to a local restaurant in Arusha town, where, to my great surprise, I came to realize that the man she had been referring to was Joseph. Since my arrival in Arusha, a couple of months before the public hearing that took place in Dar es Salaam (described in chapter two), all my attempts to get in touch with him were to no avail. From the very moment that I had witnessed his appearance during the climate change conference he had left an indelible impression with his graceful rhetoric, as well as with the persuasive power with which he had pleaded for Leboi's case and the rights of the Maasai at large. When we arrived at the restaurant, Joseph was encircled by a group of Maasai men – who were wearing their customary dress and eating *nyama choma* (roasted meat) – while being engaged in lively discussions. Apparently, they had just come back from a conference where they had spoken to the government about politics. Upon arrival Naini greeted Joseph respectfully by bowing her head, which is a common way of greeting elders among the Maasai, and so I followed suit.

After this first conversation many other fruitful encounters followed, which all the more confirmed my impression that I was dealing with a knowledgeable man of great dignity. Furthermore, he formed an essential pillar in the way adaptation to climate change projects and discourses emerged in the so-called *interstitial spaces* of northern Tanzania. With years of experience as a key actor in this "in-between" arena he had become a skilled broker who masterfully navigated between the (often irreconcilable) worlds of global development discourses, which have largely informed Tanzania's national development rationale and the local realities of the Maasai pastoralists. While being a Maasai himself, he had also worked for and cooperated with several international development organizations as well as Tanzanian CSOs; he was the quintessence of the social category that Bierschenk and others have called "development broker". As explicated in chapter three, brokers operate at the interface between the target group on the one hand, and the development institutions (or donors) on the other. They do so by representing local populations' interests and translating their needs to the structures of aid and to external

financiers (Bierschenk *et al.* 2002: 4). Our first interview with Joseph was a mesmerizing experience, as it not only revealed what it takes to occupy such an intermediate arena, but also laid bare the intricate and complex web of relationships – which forms part of the so-called "global architecture of aid" (Mosse 2005: 1) – within which these actors operate. In line with these authors I demonstrate in this chapter that brokers are far from passive receivers of aid within the overall structural logic of dependence, but are rather key players in the active search for projects. As such, as is the case within many contemporary African states that can be characterized as being "extroverted" (Bayart 1989, in: Bierschenk *et al.* 2002: 5); after the socialist era in Maasailand in northern Tanzania (where the state is rather grudgingly present), brokerage too, has indeed come to play an important role in (re-)ordering contemporary local realities.

Joseph's account gave proof of the fact that that if one wishes to understand the fate and future of the Maasai pastoralists in Tanzania a comprehensive view of transnational ties is needed, as well as an understanding of historical processes with a particular emphasis on the way in which the nation-state has drafted policies that have been, and continue to be, detrimental to the well-being of the pastoralists. And, crucially, whatever the form or content of the new discourse – at least as far as the Maasai at the grass roots are concerned – one of their greatest anxieties revolves around the fear of losing access to and control over land. While sketching this complex picture for us, he stipulated his trenchant vision on what we need to talk about when we talk about adaptation to climate change for the Maasai pastoralists. He mentioned, almost in one breath: multilateral and bilateral aid arrangements, Millenium Development Goals, national poverty strategies, the nation-state, sectoral policies, decentralization, UN aspirations, IMF, World Bank, privatization and neoliberal discourses and reforms, *Ujamaa*, capitalism, land alienation, powerlessness, culture of silence, drylands, livestock, hybrid breeds, resilience, pastoral livelihood systems, mobility, conservation, wildlife, tourism, natural resources, national parks, climate change, drought, rain, God, law and policies, adaptive capacity, and science and technology, to mention only a few. The complexity *and* sensibility of the topic of Adaptation for the Maasai began to dawn upon me. Here is a fragment of his account:

> Adaptation is when you allow people to adapt to changing circumstances in various ways, for example, when you allow pastoralists to move from one place that did not receive rainfall to another place that received sufficient rainfall. Or another way is that people sell cows during the dry season and buy again during the rainy season; these are all strategies carried out by the communities. This is to make sure that their lives will not be greatly affected by the effects of climate change; it is to make them resilient to these changes. But if you look at the policies in our country, for instance one of the policies is that cows are not allowed to walk by foot but must be transported by using lorries. On the other hand, the government says we don't allow a nomadic way of life, which involves the movement

> of people from one area to another in search for water and pastures. Here the government says that: "We don't allow that because this is the root cause of environmental destruction". So if you prohibit or stop these people from moving to different places in search for water and pasture, what do you think will happen? What will actually happen is that their cattle and also their economy will collapse, and if this happens, you find that the government has once again created many poor people within its own country. It increases poverty, and contradicts with the dream of the government that by the year 2025 many people should have moved from severe poverty to a better life. So this is where the politics are and so our role is to do a lot of research, small, big, to show the government: don't decide this way on policies because you will kill your people! Sometimes we are listened to, sometimes we are not. Sometimes our points are taken, sometimes our points are refused. It depends on which interests are being addressed.

By enrolling varying policymakers and arenas Joseph has been one of the driving forces behind the emergence of an "Adaptation community". We are left with the impression that a great part of engaging new development discourses rests on a process of "trial and error". Indeed, as we shall see, part of the translation process builds upon social technologies understood as "skilled practices" (Haraway 1991, in Behrends *et al.* 2014: 2). Just like Joseph's extensive experience of more than 25 years in the field of development as a consultant, teacher, trainer, development worker and policymaker has most certainly enabled him to skilfully espouse and meaningfully translate international discourses that have passed the revue over the years. So too did he push this nascent discourse of Adaptation into maturity. Fascinatingly enough, one day Joseph invited Naini and me to his house at the outskirts of Arusha. While his house clearly showed all the properties of being a "modern" or urban house, he similarly told us about his boma, his herd, his family and the strong ties he still maintains with life in the village. In the course of our discussion he showed us a book, which was an anthropological study that I knew all too well, and he proudly told us that he was the young Maasai man portrayed on the front cover. Without being aware of it, I had been talking to and following a man with whom I was already familiar. And I realized that though at first sight this seemed a fully serendipitous encounter, on second thought, perhaps we could read more into this in terms of ever-ongoing entanglements. It is indeed very likely that if I had carried out my research 20 or 30 years ago – on a topic that was in vogue at that time, say gender or indigenous rights – I would have stumbled upon the same man (or a similar visionary). And the same holds true for the wider network of people, technologies of representation and organizations within which Adaptation is being embedded. And who knows what battles Joseph will be fighting 10 years from now, and which anthropologist will find this work somewhere in a living room in Arusha.

The question of agency arises here, which does not solely lie in the hands of these key actors, but is rather distributed across the wider network that consists of both human and non-human

actors. These models, once they are picked up, translated and disseminated, widely gain a certain appealing power (just like fashions) and thus agency of their own. Therefore, we can view the practice of development as a matter of selecting one of the globally circulating and highly esteemed development models, which generally come with specific technologies, which are then adapted to a local context (Rottenburg 2009: xxvi-xxvii). Against this background, it is not surprising that NGOs' agendas – in order to meet the ever-changing international standards, paradigms, fashions and goals – are regularly relabelled and redesigned as a means to safeguard their continuity and to attract donor funds.[63]

The Will to Adapt

In this chapter I wish to bring to life the ways in which Adaption is brought into being in the interstitial spaces in northern Tanzania. As already touched upon in chapter three, by *interstitial space* I mean that middle ground between there where global ideas or models take off and their local sites of reception and implementation. Each time the idea of Adaptation is translated and communicated from one group of actors to another, a new interstitial space emerges. It is this space between different understandings and worldviews that provides not only grist for contestation, but also serves as a creative ground for novel ideas to take root and flourish. By exploring this space as an organizational field where borders are unclear and ideas contested, we gain insight into connectivity, and into how they are entangled with global and local orders. In this regard, the world of NGOs and CSOs and the brokers that work in the sector of development cooperation also operate in interstitial spaces. Considering Joseph's positioning, it may be clear that political economy (and political ecology) will stand alongside my analysis as a necessary and overarching critical lens in understanding "what we need to talk about when we talk about Adaptation". Notwithstanding the fact that my account follows Joseph's traces here and there, my intention is not to study brokerage per se, since other excellent ethnographies have already been carried out on this topic (Bierschenk *et al.* 2002; Lewis and Mosse 2006; Merry 2006). Neither is it my aim to contribute to an understanding of how NGOs or CSOs (Civil Society Organizations) "work"[64], or to contribute to the rich body of development theories that also have received widespread attention within anthropology (see e.g. Ferguson 1990; Fisher

[63] This process of adaptation by NGOs to meet foreign standards and agendas has been termed "co-optation" by Fisher (1997). It is a common critique of development aid, for it has led to an overreliance on donors and their agendas.

[64] For an analysis that gives insight into the ways in which aid contributes to the maintenance of a regime of global inequality, see the work of Gould (2005), who draws both on his own ethnographic work carried out in Tanzania as well as on comparative case studies (Gould 2005).

1997; Li 2007; Escobar 1995; Tsing 2005).[65] I also do not intend to condemn, or to come up with guidelines or prescriptions for how people should adapt.

Instead, I align with Tania Li, who sees her predicament as an anthropologist as diagnostic. In her seminal book "The Will to Improve" (2007), in classic anthropological fashion, Li aims to "make improvement strange" as a way to probe the inherent peculiarities and effects (Li 2007: 3). In a similar mode, I attempt to "make adaptation strange" by bringing to the fore those dissenting voices that generally find no resonance on global platforms, or get silenced and black-boxed all along the way. I found it striking to observe that the fiercest opposition to this new discourse on Adaptation came from the grassroots. Is it not paradoxical, to say the least, that the most resistance to this *will to Adapt* comes from the people whom it seeks to aid? Following Li, this diagnostic stance can be seen as a way to prompt questions about what ways of thinking are required to "translate messy conjunctures, with all the processes that run through them, into linear narratives of problems, interventions and beneficial results" (Li 2007: 4). This chapter seeks to flesh out what happens at the very moments in which the idea of Adaptation is translated, storied, picked up, confronted, contested, rejected, re-crafted and endowed with meaning, before it sets foot at the end of the translation chain (which is the focus of chapter six and eight). In order to understand what happens in the interstitial spaces it will indeed prove fruitful to analyze the brokers and mediators, like Joseph, who translate formal ideas and models into understandable and meaningful concepts. However, by zooming in on this process and employing a microscopic analysis of translation, we find that the (discursive) practices of mediators constitute only a part of the picture. The interstitial space of Adaptation is caught in between the irreconcilable perspectives of the Maasai herders, who continue to fear land alienation on the one hand:

> […] While efforts to mitigate effects of climate change are welcome, it is also important for pastoralists to stay alert because some people, parties or institutions may use the issue of global warming as an excuse to evict cattle keepers, hunters and gatherers and other minority groups from their native lands in the name of environmental conservation.
>
> - *Pastoralist representative,* during a meeting to "push for climate change"

And the stubborn "wisdom" about the Maasai as "environmental destroyers" that is propounded by both the media as well as the national government on the other:

[65] As it is not my intention to criticize development organizations or how they work, inspired by Rottenburg, I have decided to make both the organizations and the individuals working for them anonymous in order to draw attention away from individual responsibility and towards the more structural properties that are inherent to the field of development cooperation.

> We have too many cows in Tanzania! Our recent experience shows that there are too many cows to be sustained on the land. The carrying capacity of the land has by far been exceeded.
>
> - *Member of the Vice President's Office* (VPO), interview fragment

> A recent study visit to Maasai land [*sic*] in Arusha revealed that people who keep large number of cattle contribute to global warming and therefore to climate change significantly. This refers particularly to local people in Maasai land, Mwanza and Mara regions in Tanzania.[66]
>
> - *The Arusha Times,* 7 February, 2009

Finally, the pastoralists are generally pictured as victims of climate change and in need of technical support and assistance from expert organizations:

> We all know that dryland areas are the most hit by climate change and other stress factors. TNRF's [Tanzania Natural Resources Forum] interventions will certainly have remarkable impacts.
>
> - Prof. Pius Yanda, guest of honour opening an Adaptation workshop

However, the "victimization" and "masters" narratives do not always unfold as mutually exclusive approaches. By some leading CSOs the vulnerability (or victimization) discourse is articulated together with the resilience (or masters) approach. This might seem contradictory, but if we look closely at the following fragment we see that vulnerability is explained as the result of an exogenous force, while the idea of being masters of adaptation is seen as an endogenous feature of the pastoral livelihood system itself:

> First, climate change is likely to affect the drylands earlier and more severely because these areas, for lack of investment, are not as developed as other areas of the country. Increasing climate variability in the form of more severe droughts and floods will thus be more keenly felt. Second, people who live in dry lands are masters of climate variability and climate change. They have lived with uncertainty for hundreds of years and have developed strategies to deal with climate unpredictability. These strategies today are no longer as effective, not because they are not relevant, but because they have been undermined by a range of external factors (e.g. loss of pastoral land, loss of livestock mobility, increasing population) that are squeezing people into smaller and smaller areas.
>
> - Presenter IIED, during a learning group workshop[67]

---

[66] By Ramadhani Kupaza. *The Arusha Times*, 7 February, 2009. Newspaper article. The heading of the newspaper article reads "Tanzania: Maasai Cattle Cause Global Warming". Online: http://allafrica.com/stories/200902090821.html. Accessed 13 April, 2016.

[67] In "Mainstreaming Climate Change Adaptation in Dry Lands Development Planning in Tanzania. Monduli Learning Group Workshop Report", 21-22 February 2012. Mto Wa Mbu (TNRF/ IIED).

It becomes clear that climate change is challenging the already complex and conflicting set of development narratives that have principally revolved around the issue of pastoralism's agency in the face of unpredictability and hazards. The very basic question that emerges is who can learn from whom? While the CSOs acknowledge the increasing challenges of the pastoralists in face of climate change, they also tend to emphasize the fact that policy makers can actually learn from the longstanding experience of pastoralist communities in how to deal with climate variability. As the abovementioned IIED representative also stressed:

> So although people living in the drylands are facing many challenges today, it is important we learn from them on how their strategies helped them to respond to climate variability and change. These lessons will be important for other districts in Tanzania (presenter IIED).

Furthermore, adaptation policymaking is highly informed by climate science and so the role of the epistemic community; a role often fulfilled by development experts, will also receive ample attention in chapter five. Furthermore, the calculated programmes of interventions that are entailed by it do not fall from the sky, but are by and large "traversed by the will to improve" (Li 2007: 6). Drawing an analogy with Foucault's notion of "the will to govern", Li situates what she has wittily called "the will to improve" in the field of power in which Foucault dealt with the question of government as the "conduct of conduct". Or, in other words: "a form of activity aiming to shape, guide or affect the conduct of some person or persons" (Foucault 1991, in: Gordon 1991: 2). In contradistinction to sovereignty, which according to Foucault comprised a circular finality (i.e. the end of sovereignty is nothing other than submission to sovereignty), he argued that government has specific finalities that reside in the things it manages:

> Government is defined as a right manner of disposing of things so as to lead […] to an end which is "convenient" for each of the things that are to be governed. […] On the contrary [to sovereignty], with government it is a question not of imposing law on men, but of imposing things: that is to say, of employing tactics rather than laws, and even of using laws themselves as tactics – to arrange things in such a way that, through a certain number of means, such and such ends may be achieved (Foucault 1991: 95).

In brief, government, in Foucault's understanding, concerns the well-being of populations at large, and is the attempt to shape human conduct by a multitude of calculated means. As Li succinctly put it, since it is not possible to coerce each and every individual or to regulate their actions in close detail, government rather operates through the education of desires and by configuring habits, aspirations and belief (Li 2007: 5). Foucault further argued that the purpose of government is the welfare of the population, the improvement of its condition, the increase of its wealth, longevity, health and so on (p. 100), which is always guided by a particular governmental rationality – or *governmentality* – that thinks of government as the "right disposition of things"

(Foucault 1991: 93; 95). In order to achieve this goal, calculation is key, for the government demands "the right manner" to be defined, and that the processes to be governed can be characterized in technical terms. This is, in turn, the precondition for interventions to be devised (Foucault 1991; 1984, in: Li 2007: 6).

What can be taken from this notion of government is that power runs through it as a rather subtle force that does not seek to impose authority or coerce people as such, but is rather a way to make people believe, through particular techniques, what is best for them and induce certain practices and desires that enables people to enhance their own well-being. Based on her longstanding experience in Indonesia, Li has come to see the array of programmes and development schemes that set out to intervene and improve the lives of others in line of the will to govern, more specifically as the will to improve. Nevertheless, what is crucial to bear in mind is that – notwithstanding the utopian intentions that guide these programmes – the very positioning of actors to improve the lives of others, and the assertion that they have the particular expertise to do so, is also a claim to power that warrants critical scrutiny (ibid: 5). I argue that we can fruitfully extrapolate this concept to the context of northern Tanzania, which is currently seeing an influx of parties who all seek to take part in – what we can rephrase here as – *the will to Adapt*. The rhetorical shift from an "Adaptation Imperative" (as employed in the introduction) to the "Will to Adapt" is intentional, for along the way a more subtle form of power is exerted when actors in the interstitial space appropriate the adaptation paradigm by allegedly creating "ownership". The era of structural adjustments is over in which competition, confrontation and ideological contestation were key drivers of aid. This has given way to a language of convergence and mutual complicity. Also Jeremy Gould has framed this "ethos of the new modality of aid" in terms of governmentality, for key words are *partnership*, *complicity* and *ownership*, which form the normative ideals upon which aid relations are justified (Gould 2005: 61-65).

Central questions that will be addressed in this chapter are: How is Adaptation translated in the interstices? What is being said, and who is speaking to and for whom? Who is listened to and who is silenced? What are the continuities and discontinuities with older travelling narratives? Which (new) entanglements can be observed, and what can they reveal to us about patterns of power? Finally, and crucially, what are the effects of translating Adaptation in the interstitial spaces for different groups? What are the challenges that are being confronted, and which opportunities are created? In this chapter I advance one basic argument. The first argument contends that there are many good reasons to believe that Adaptation to Climate Change bears structural similarities with "conventional" development paradigms. This, in turn, raises questions

about the very notion of "The will to Adapt" that is freighted with salvation for the Global South. Put differently, while Adaptation yields a new vocabulary to think through development in the drylands, many of the issues confronted are a mere relabelling of existing projects and struggles; or, a typical case of "old wine in new bottles". In order to illustrate my point, we need to go back in time.

Maasai NGOs and the politics of being, becoming and belonging

Before the globally circulating idea of Adaptation to climate change set foot in the northern circuit of NGOs in Tanzania around 2009/2010[68] - since more than two decades – a range of international development paradigms had already undertaken similar trajectories. A glance through the historical conjunctures that enabled Maasai NGOs to emerge and the political struggles confronted by them is needed to understand the echoes over time. Moreover, it reveals how the recurrent discourses, political debates and assumptions are historically produced and thrive in some periods and contexts while losing their (political) relevance in others. Prior to the turn of a changing political landscape of the 1990s virtually no NGO existed in Tanzania. When the socialist era came to an end and gave way to political and economic liberalization, Tanzania experienced an influx of foreign investors in search for land and other natural resources (joined by Tanzanian elites). Due to land-tenure reforms and schemes that ignored traditional land rights, such as conservation, state farms and private agribusiness, pasturelands underwent the most immediate pressure (Cameron 2001: 55).[69] Maasai leaders of grassroots movements responded to this changing political landscape by establishing a variety of officially registered NGOs to resist the alienation of traditional grazing land (Igoe 2006a: 399-400). The emergence of NGOs was thus the result of new constraints and increased pressure on land and other natural resources, as well as new possibilities that were brought about by democratization and neoliberal reforms.

The first Maasai NGO (KIPOC, which means "we shall recover" in Maa) was founded in 1990. Its formation was an attempt by several Maasai men to engage the global struggle of indigenous peoples and "to restore respect to their rights, cultural identity and land of their birth" (KIPOC 1991, in Hodgson 2011a: 63). Traced and described by Hodgson with vivid detail, we learn about the fascinating story of its founder, an influential Maasai activist and former member of the Tanzanian Parliament, a man called Parkipuny. During one of his travels to the U.S. Parkipuny

[68] I locate the "arrival" of Adaptation in this year when the first policy proposals were drafted and ongoing research reports presented. However, it took a few years before the first projects were initiated in 2011-2012. Mititgation was already under discussion around the year 2007.

[69] In 1998 a land bill was passed in Parliament, which according to some NGOs, just signalled the *de jure* recognition by the state that village lands were officially open for sale (Shivji 1998, in Cameron 2001: 55).

met a Navaho Native American at the airport who talked about the pressing issues that they as indigenous peoples were confronted with. Parkipuny's curiosity grew, so he spontaneously accompanied him to his reserve and stayed with the Navaho for two weeks. He was struck by the resemblances between the injustices suffered by the Native Americans and the Maasai in Tanzania. Inspired by this encounter – which would become a truly "transformative epiphany" (Hodgson 2011a: 28) – he introduced the idea of the struggle of indigenous peoples back home in northern Tanzania, where it began to live a new life. This marked the beginning of the widespread engagement of grassroots organizations with the indigenous rights movement in Tanzania, which in part also fostered the establishment of a great many NGOs in the region.

The reason I dwell on this story in detail is that it captures both the contingency of encounters, as well as the influence of visionary actors (similar to Joseph) on specific articulations. What if Parkipuny had never met this Native American at the airport? Would the indigenous peoples' movement have taken shape in Tanzania and Africa regardless? It was this particular encounter that broadened Parkipuny's horizon, which instigated the connection with global discourses and political agendas beyond their own Maasai context and nation-state. What prompted Parkipuny and his fellows to join the transnational community of indigenous peoples was a sense of recognition and belonging that they didn't find at home; a shared history of structural inequality, and ongoing marginalization and economic disenfranchisement within their respective nation-states (Hodgson 2011a). They saw a commonality in the circumstances and structural problems faced by all indigenous peoples throughout the world, such as a strong attachment to land, distinct identity, vulnerability and marginalization (IWGIA 2016: 421). Parkipuny addressed the UN Working Group with the following words:

> The most fundamental rights to maintain our specific cultural identity and the land that constitutes the foundation of our existence as a people are not respected by the state and fellow citizens who belong to the mainstream population (Parkipuny 1989).

Considering the fact that most African countries regard all their citizens to be indigenous (cf. Yatsuka 2015), the decision to "become indigenous" was to say the least a remarkable move. Furthermore, the history of settlement and migration in Africa differs significantly from the white settler colonies such as Australia, the Americas and New Zealand where there is clearly a notion of "first peoples" (Hodgson 2002a; 2002b).[70] This international engagement made them the first

[70] While also sharing similarities, an important difference between the Americas (together with Australia and New Zealand) and Africa is the latter's contemporary absence of a dominant colonial population; a long history of migration, assimilation and conquest, and thus the lack of a clear notion of territorial

African representatives at the UN Working Group on Indigenous Populations in history (Parkipuny 1989). Interestingly enough, internationally, Parkipuny's efforts were yielding success. The Maasai predicament (together with that of other groups from Tanzania, such as Hadzabe and Barabaig) found resonance with the fate and histories of other long-recognized "first peoples" from white settler colonies. As such, the UN Working Group showed a willingness to consider their claims that the Maasai and other groups do indeed share structural positions and grievances with other indigenous peoples throughout the world. Crucially, their involvement in this forum challenged common definitions of what it means to be "indigenous", and encouraged the consideration of a more encompassing notion (Hodgson 2011a: 26). Nevertheless, despite the international recognition and visibility of their situation, in the national context of Tanzania – after its initial flourishing – the idea did not take root; gradually lost its appeal and political relevance. While voting in favour of the UN Declaration on the Rights of Indigenous Peoples in 2007, Tanzania does not recognize the existence of any indigenous peoples in the country (IWGIA 2013; 2016).

This shows that some discourses are only "useful" internationally, but are not always very relevant domestically, which has been the case with claims to indigenousness in many African countries (cf. Yatsuka 2015: 42). The newly embraced positioning even eroded the already precarious relationship that existed between the Maasai and the Tanzanian government. Partly due to internal differences and struggles among the different NGOs, but also because their claims to indigeneity were met with great hostility at home (in the context of Tanzania's nation-state), in the course of time, a change in the development rhetoric became inevitable. As such, the Maasai reframed the language of indigenous rights to a less value-laden term, "pastoral livelihoods" (cf. Hodgson 2002b; 2011a). This language continues to be used today and also features prominently within the Adaptation rhetoric. For instance, as Joseph kept reminding the audience during workshops: "The government needs to recognize the fact that pastoralism is a livelihood *system* [my emphasis]. Pastoralists depend on three things: natural resources; the herd and the institution of people." This point will be further elaborated below.

---

precedence. In Africa the term indigenous has been adopted much more recently and does not refer to the notion of first-comers as such, but rather includes structural properties such as cultural distinctiveness, a long experience of subjugation and marginalization, and dispossession by colonial and postcolonial powers (Hodgson 2002a). Jim Igoe also points to the paradoxical nature of the term *indigenous* in the African and Tanzanian context. While the term implies a primordial state that precedes something foreign, the term "indigenous Africans" does not represent a "miraculously preserved pre-colonial existence". Instead, it is an identity category that would not have made a lot of sense prior to the 1990s. It should, in part, be understood in relation to increasingly close ties with global networks of institutions, ideas and money (Igoe 2006a).

The founding story of KIPOC is a striking example of how global ideas circulate, shape and entangle local concerns. Yet, this case is all the more interesting because the idea took shape through the outward movement of a local concern that found an alliance with a transnational platform. This trajectory challenges the more common understanding of development paradigms circulating from global platforms through international organizations, and being then dispersed to different localities around the globe. It illustrates how, as Parkipuny also explicated, this NGO was an important platform to challenge a state apparatus that he considered to be biased against pastoralism (Gardner 2016: 28). Due to the visible success and the ability of these nascent NGOs to attract donor money, a remarkable mushrooming of NGOs began to take place in northern Tanzania and they expanded to one hundred of such organizations in the year 2000 (Hodgson 2002b: 1088). By 1993 these NGOs were no longer just Maasai NGOs, but included Barabaig herders and Hadzabe hunter-gatherers as well. These organizations began to collaborate and formed the first umbrella organization in 1994, called Pastoralist and Indigenous NGOs Forum (PINGOs Forum) (Cameron 2001).[71]

Climate change and "being indigenous" again

Remarkably enough, it turns out that climate change has provided new avenues for PINGOs and other organizations to re-engage with the transnational indigenous rights movement. This has been, in part, a response to the international call for the full involvement of indigenous peoples in the UN climate-change process. On August 9th 2007, during the celebration of the International Day of the World's Indigenous Peoples, UN Secretary General Ban Ki-Moon emphasized that:

> Recently, the international community has grown increasingly aware of the need to support indigenous people – by establishing and promoting international standards; vigilantly upholding respect for their human rights; integrating the international development agenda […]; and reinforcing indigenous peoples' special stewardship on issues related to the environment and climate change (Ban Ki-Moon 2007, UN Press release).

Also the UN Permanent Forum on Indigenous Issues in 2008 focused on "Climate change, bio-cultural diversity and livelihoods: the stewardship role of indigenous peoples and new

[71] For a detailed account of the emergence of PINGOs Forum see the work of Greg Cameron. He argues that an analysis of this organization provides an important case study in understanding the rise and fall of pastoralist NGOs, as it exemplified some of the problems typical of the Tanzanian NGO sector. An important conclusion is that due to the influence of donors in framing their responses ultimately led the Forum to lose control over their organization and marginalized their own priorities (Cameron 2001). This is a typical case of "co-optation".

challenges".[72] Over the past years, within the UNFCCC there has been an increased interest in the role of indigenous knowledge systems (IKS) in the global effort to respond to climate change. This global call for indigenous peoples' engagement trickled down to NGOs in northern Tanzania in 2007. However, the urge for engagement of indigenous NGOs (INGOs) was born out of their initial exclusion from the national REDD-strategy (funded by the Norwegian government). The indigenous peoples were not represented in the newly established national task force, which was against the Operational Guidance issued by the UN-REDD policy board. After realizing this exclusion, representatives of indigenous organizations in Tanzania formed the National Indigenous Peoples' Coordinating Committee on REDD (NIPCC on REDD) in March 2009 (Laltaika 2009). Another advocacy organization (Alapa) was founded because they saw an urgent need in keeping an eye on the rights of indigenous peoples concerning the REDD programme in Tanzania. During a strategic meeting with different indigenous NGOs[73] in 2007 it was observed that:

> […] if indigenous peoples do not meaningfully engage in the REDD-process, there will be a perpetuation of the negative stereotype that pastoralists/ indigenous peoples destroy the environment. Another threat is the possible enactment of laws, policies, plans and strategies that continue to negatively affect indigenous people's rights to land, natural resources, livelihood and culture.

During a workshop that I attended in 2012 about "indigenous peoples and REDD", organised by PINGOs, their critical and cautionary stance became all the more clear. Because the organizers were very well aware of the land dispossessions that had taken place elsewhere in the name of climate change mitigation, they were seeking strategies to protect land rights and fight negative stereotypes. As the representative of Alapa explained:

> The key driver of deforestation is agricultural expansion, and forest burning, but we [pastoralists] have also been identified that we are doing deforestation and forest degradation according to that strategy. […] This may result in reducing the number of livestock. Therefore, when they say that overgrazing is one of the key drivers of deforestation it worries us that it might be in their head, they are planning to reduce the number of livestock. […] But the biggest challenge is that our land laws are under the President. REDD wants to implement projects on general land, which is open land. And this is where the pastoralists are. Therefore, again the current land act that exists gives power to the President to evict pastoralists in favour of the investors of REDD.

[72] See UN press release August 9th 2016: www.un.org/esa/socdev/unpfii/documents/int_day_press_release07.pdf

[73] These were PINGOs, CORDS, UCRT and TAPHGO. In 2009 Association for Law and Advocacy for Pastoralists (Alapa) was founded to follow up on REDD and climate change issues on behalf of indigenous peoples in Tanzania.

The involvement with REDD by indigenous groups has thus principally been driven by a defensive incentive; i.e. to make sure that indigenous peoples shall not be negatively affected by it. And since the implementation of REDD projects requires land, representatives of indigenous groups saw the need to make sure that REDD does not become yet another excuse to sell off pastoral lands.[74] There was clearly also an element of opportunism involved, for the question was raised how to channel the financial benefits to local communities.

With support from the International Working Group of Indigenous Affairs (IWGIA), PINGOs found again its way to the UN platform by participating in the UNFCCC process during the COP21 in Paris. It was also the year when the Tanzania Indigenous Peoples' Taskforce on Climate Change (TIPTCC) was established in order to coordinate all programmes related to indigenous peoples and climate change in the country. This taskforce was hosted by PINGOs on behalf of 7 member organizations (IWGIA 2016: 426). However, back home in Tanzania their language remained more politically "neutral"; allowing thus for more encompassing development notions, such as "livelihood rights challenges". In policy documents and research reports, ethnicity or culture-based identity issues are virtually absent, but revolve around the notions of livelihoods and land tenure security instead. For instance, a climate change study that was carried out in 2012 on behalf of PINGOs focused largely on "the impacts of climate change on land use patterns and livelihoods of pastoralists and hunter-gatherers" (Bwagalilo & Mwakipesile 2012). Other NGOs have also embraced Adaptation to climate change as a "general" development issue that needs to be "mainstreamed with existing development planning processes" (TNRF 2012a, see also below). The alternation between international platforms (where their indigenousness is embraced) and Tanzania's national context (where being indigenous is look upon with disdain), requires a constant repositioning and change of language, which reveals the somewhat polarized identity politics of these INGOs.

On Tradition and Modernity: Retrofitting Climate Change Adaptation

The marginalization of the Maasai has not only been material, but has always been accompanied and underpinned by (mostly) derogatory discursive practices as well. Disparaging stereotypes, archetypical projections of the Maasai as backward and labels such as "second-class citizens" formed part of efforts by the elite to disenfranchise Maasai (Hodgson 1999). Taking a longer historical perspective – from the time of the first explorers in the 19th century – the array of Western perceptions, ideas and myths manifested in either heroic *or* horrific depictions of the

[74] Because my focus is on adaptation and not on mitigation, I will not elaborate further on the INGOs' engagement with REDD. For more details see the work of Laltaika (2009) and IWGIA.

Maasai as the embodiment of "untamed" and "authentic" Africa, have proven to be remarkably stubborn. Even today the Maasai continue to be promoted as "primitive savages" and culturally conservative, for these depictions serve the lucrative tourist industry very well (ibid). Also, during interviews and encounters with government officials it became clear to me how these stereotypes have lodged in their imaginations. Whenever I explained that I was staying among the Maasai, jokes were made, and comments would follow about whether I had already been circumcised or had received a brideprice. In any random travelogue we can still find unchanged depictions that have their root in the colonial imaginations. For instance, in a safari advertisement from this weekend's newspaper I found a picture of a Maasai man, elegantly leaning on his spear while overlooking the Ngorongoro Crater. The advertisement reads: "safari through prehistory".[75] These archetypes, which were in part triggered by (what foreigners perceived as) "aesthetically splendid" or fearless warriors, continued to resonate with the colonial and also postcolonial state imageries today (Hodgson 1999; 2004). And whatever the form or content of these disparaging stereotypes and resultant interventions, it can be said that they have by and large been played out against the background of a "traditional" versus "modern" dichotomy (this discussion is further detailed in the next chapter). The discursive marginalization is important to consider how the nascent idea of Adaptation – and the concomitant articulations and positioning that it fosters – draws on these "historically sedimented practices" (see Li 2007).

Particularly pertinent for the Maasai has been the fact that some of these ambivalent images and clichés – in the name of promoting modernity *or* preserving tradition (or both simultaneously) – have had far-reaching consequences for: the constellation and the development of their cultural identity and political representations (Igoe 2006a; Hodgson 2002a; 2002b; Gardner 2016); livelihood strategies and socio-economic position as an "ethnic" group (Spear 1993b; McCabe 2003); as well as for their internal gender relations and shifting masculinities and femininities[76] (see Hodgson 1999; 2000; 2011) their religiosity (Hodgson 2005; Groop 2006); and conservation policies and land tenure insecurity (Homewood *et al.* 2009; Igoe 2002; Igoe & Brockington 1999) etc. The history of perceptions of the relationship between the Maasai pastoralists with their

[75] *Dagblad Trouw,* 11 June 2016.

[76] For a detailed ethno-historical analysis of the articulation of modernity and shifting gender relations among the Maasai, see the valuable work of Dorothy Hodgson in which she (and others) dissolves the "myth of the patriarchal pastoralist" (Hodgson 2000a) in Africa in general, and the stereotype of the Maasai as being predominantly seen as a "pastoralist and a warrior", in particular (Hodgson 1999; 2004; 2000b). One important insight that she reveals in her work is the fact that most interventions in the name of "modernity" were all guided by an image of pastoralism as a purely masculine endeavor. The resultant interventions have not only reinforced the opposition between Maasai as "traditional", against other people as "modern", but has also led to a fixation of certain masculinities and the expansion of male power over women (Hodgson 1999).

cattle on the one hand, and their environment and wildlife on the other, has been fraught with controversy. As briefly touched upon in chapter one, dominant scientific paradigms have been infused with ideas of pastoralists being the main cause of overgrazing, environmental degradation, poaching, overstocking and poor-resources management. The fact that these paradigms (which were informed by colonial, and later Western range ideas based on "productivity" and "efficiency") overlooked complex social relations of production, exchange networks and reciprocal ties of Maasai systems (Basset 1986; Homewood & Rodgers 1991, in Bwagalilo & Mwakipesile 2012: 11), attests to the prejudices of the Maasai as backward, careless planners. Particularly these deep-rooted conceptions turn out to resurface over and over again, for they are given new life through the Adaptation to Climate Change paradigm. Finally, in turn, the Maasai themselves have tried to make use of global discourses on cultural authenticity and the rights of indigenous people to access development resources, and as an attempt to leverage changes in their relationship to the state (Hodgson 2011a).

Here is only a snapshot of the most common, yet persistent clichés. Thomas Spear has nicely put a classical imagination of the Maasai: "Uncowed by their neighbours, colonial conquest, or modernization, they stand in proud mute testimony to a vanishing African world" (Spear 1993a: 1). From the very early encounters with Western travellers, the Maasai have been depicted and described as the antithesis of modern Europeans (Hodgson 1999: 125). These images are not only propounded by outsiders, but have to some extent also become part of the Maasai self-imagination, as a booklet prepared by a Maasai community to commemorate *The Maasai Cultural Festival* (which took place at "The National Village Museum" in Dar es Salaam) attests:

> The Maasai are among the few Tanzanians who are still holding onto their culture and traditions while many other communities are forgetting and neglecting their own cultures and traditions. As if this is not enough, the Maasai customs and traditions have had a special attraction (Msemwa 1998: 9).

While displaying cultural pride, among these Maasai representatives there is similarly an awareness of the misrepresentations that these images can lead to:

> Unfortunately this same special attraction contributed to the reporters and the media press penchant for glaringly misdirecting their reporting to sensationalism […]. Naturally this erroneous misrepresentation of facts displeased the Maasai people whose only special attribute appeared to be the killing of lions! (ibid).

Thus in contrast to a celebration of the "noble savage" and the "authentic" Maasai culture that needs to be quarantined, stands the widespread idea of a tribe that is a reminiscence of the "wild" past; hence the "progressive, modernizing urge" to control the dangerous and wild nomads (Hodgson 1999: 121). Hodgson writes:

> […] Such ambivalent attitudes toward Maasai have shaped their long history of engagement with the complex, overlapping cultural processes and material structures of modernity. Structured and propelled by Enlightenment notions of individuality, progress, order, rationality, and civilization, these processes include colonialism, economic and social development, missionization and nation-building. […] The complex intertwining of modern interventions and reified cultural differences have had substantial material consequences; as an ethnic group, Maasai have been marginalized from both political and economic resources in first the colonial and now in the postcolonial nation-state (Hodgson 1999: 122).

A lot of ink has been spilled over the question of what modernity is, and what it is not (see Latour 1993), and it is beyond the aim of this work to dwell on it in detail.[77] The discussion is relevant in so far that adaptation to climate change seems to trigger an amalgamation of a tendency to attempt to stay true to, or revitalize "ancient wisdom" on the one hand, and to seize new opportunities that "fit" the modern world on the other. In an in-flight Kenyan Airways magazine a portrait of a Maasai man, or "modern eco-warrior", figured in a touristic account of the Maasai:

> The Maasai have been here for centuries. They have to adapt to a changing climate by creating new green jobs and protecting the flora and fauna to create a future for the generation to come.[78]

Another "responsible" tourism company coined the term "climate warriors", thereby referring to a programme that seeks to raise awareness and provide solutions concerning the adverse impacts of nature and people (Basecamp Foundation). The basic idea behind this program is to provide carbon neutral travel by planting indigenous trees in Maasailand. Put differently, by investing in the pristine nature for the Maasai, tourists can "offset their own traces of modernity". One of the basic threads of the Adaptation debate is the idea that climate change allegedly impinges upon "traditional" knowledge systems, forecasting techniques and adaptation strategies of the Maasai. It is said that these old techniques are no longer viable due to the climate's increasing unpredictability; hence the need for experts to bring in more "sophisticated" knowledge systems.

---

[77] It is important to note that I use the notion of modernity here as a power-laden concept that is imbued with a teleology of progress and development, which has always been inclined towards a certain positioning of the West (and all the Enlightenment values) that has set the norm for an "ideal" trajectory for development (Said). In Latour's understanding, "modern" denotes all those people (not specifically designating a certain geography), who perceive the world behind them as an archaic past in which Facts and Values are combined, while being pushed to a brighter future in which these two realms will be distinct (Latour 2013: 8). Furthermore, Latour puts forward that even though "we" have never been modern, The Moderns have certainly thought of themselves as such, which has "made them act in a thousand contradictory ways" (Latour 2013: 14). We should understand the notion of modernity here as a certain appeal of progress and its material manifestations, under which many developmental discourses have travelled to northern Tanzania in general and Maasailand in particular.

[78] *Kenya Airways Magazine*, Edition 83. September – October 2012.

In many ways climate change discourses reinforce the existing dichotomy between "modernity" and "tradition" – a point that deserves more careful examination in the following chapter.

Before setting a new stage, a short vignette will inform us about the broader political context and timing in which my research took place. This is necessary for it was a time of heightened tensions, in which ongoing land conflicts came to the fore. The sensitivity of the topic became clear during public meetings, particularly when grassroots people emotionally raised their voices (at times publicly crying or shouting out of despair), but also during those instances when I was asked to switch off my audio recorder. Here is a story about how the nascent climate change adaptation narrative entangles *and* obscures the eternal problem of land.

How Adaptation entangles the eternal problem of land

During the closing ceremony of the African Ministerial Conference on the Environment (AMCEN) that took place in Arusha in October 2012[79], the president of Tanzania at that time, Jakaya Kikwete, addressed the international crowd of African ministers of the environment and other high-profile delegates on the topic of climate change with the following words:

> Ladies and gentlemen: it is common knowledge that the planet we all call our home is facing serious environmental degradation and threats. […] Developing countries, particularly those in sub-Saharan Africa, are suffering the most, for lack of the capacity, or adequate capacity to adapt and mitigate the effects of climate change and environmental degradation. As we all know this is the case because the majority of these countries are either poor or very poor, or they are marginally above the poverty line. […] As a result they do not have adequate financial resources, technology and the human skills to respond effectively to the challenges. It is important to note that these countries, however, contribute least to the serious environmental challenges threatening our planet today. As a matter of fact, they contribute minimally to carbon emissions, which are responsible for global warming. This fact speaks volumes about our interconnectedness in the world we all live in. […] Droughts are much longer. Too frequent. I think between 2005 and now we've had three attacks of drought. I call them attacks because they are very severe. This part of Tanzania [northern Tanzania] is home to the Maasai. The Maasai are cattle keepers. […] We have a district called Longido. People lost close to 500,000 heads of cattle. The Maasai families became suddenly poor. And he is not a Maasai if he doesn't have cattle. So their way of livelihood was completely wiped out. We have just begun a program of giving them three to four heads of cattle, to start a life again.

In the first part of Kikwete's speech we observe a sound resonance of global climate change discourses. We hear about Africa's "Adaptation Deficit", and about the unequal distribution of

[79] The topic of climate change took centre stage during this conference, as it took place a few weeks before the COP18 in Doha. It was the platform for African delegations to work on a united "African position" to stand strong as one "negotiation block" during the international conference that would take place a few weeks later.

responsibilities (developed countries) vis-à-vis the countries that have to bear the burden of global warming (developing countries). In the course of his closing words, the President continued to emphasize that in Africa people suffer the most but contribute the least. And while lamenting that "those countries" are not doing enough, he concluded with the observation that it is all a matter of lack of political will. He then shared a story of a small boy from a particular tribe that one day took his arrow and bough and went out for a walk:

People asked the boy: "Where are you going?"
The boy replied: "I am going out hunting."
People asked the boy: "What are you going to hunt?"
The boy replied: "An elephant."
People asked again: "You, hunting an elephant?"
And the boy said: "Yes, me hunting an elephant."
"Can you do it?"
"Yes, I will try, try, try and try again."

The President continued: "So we have to continue trying. And we have done that from the several COPs. We are now going to COP18, in Doha. Try, try, try again. Some day, the elephant will fall." While embracing part of the global discourse in which Africa is victimized and in need of support from the developed countries; Kikwete also gave this metacode of climate change a pan-African twist, by drawing a sharp distinction between those who pollute and those who suffer. He did so by finding an external cause for all the ills of the African continent in the name of global warming. A seamless switch to a "national code" was easily made, and so the unfortunate fate of the Maasai cattle keepers was in a similar vein posited in the global picture of climate change, while washing the hands of the Tanzanian government in innocence. Instead, he positioned himself as their saviour who enabled them "to start a life again". To frame the cause of the Maasai's poverty in technical terms (i.e. to adapt to climate change one needs support in enhancing particular skills, for "the poor" lack adequate capacity), falls under what James Ferguson has termed the "anti-politics machine" of development that reposes political questions such as land and resources, as technical "problems" that are amenable to technical (development) interventions (Ferguson 1990). As will be further elaborated below, it is also part and parcel of expert discourses and practices to posit themselves as indispensable players in the field of development cooperation.

By making us believe that it is due to climate change that the Maasai "became suddenly poor", Kikwete drew all the attention away from the structural inequalities that have contributed to their marginalization. If we juxtapose president Kikwete's explanation of climate change as the principal cause for the cattle keepers' deplorable condition in Tanzania with accounts of local communities and NGOs representing them, a fairly different picture emerges. A brief historical contextualization and political ecology lens are helpful in understanding the contrasting truth claims between the President on the one hand and the Maasai on the other (cf. Bollig & de Wit 2014). In the year 2009 a severe drought indeed struck large parts of northern Tanzania, which led to massive losses of livestock among pastoralists.[80] Yet, there was another event in the country that particularly drew national and international media attention to the northern parts of Tanzania. It was in the same year that a longstanding land conflict between the Tanzanian government and the communities of Loliondo Division (Ngorongoro district) surfaced and reached heightened tensions. The government initiated a police operation under the Field Force Unit and violently evicted thousands of Maasai from a disputed area east of the world famous Serengeti National Park, leaving more than 3,000 people homeless and more than 50,000 cattle without access to grazing lands. Allegations of human rights abuses followed, and economic losses to the communities like burnt houses, death of livestock and property loss were reported (Tanzania Natural Resources Forum 2011: 4). The 2009/2010 droughts that struck the northern part of the country escalated the tensions. As a matter of courtesy and in order to express his sorrow for the loss of livestock due to the drought, Kikwete visited various affected communities, and promised to give support for a restocking program. It was the same year in which president Kikwete officially leased their land, after which the villagers were violently evicted. Villagers were outraged and felt utterly helpless. An NGO collected some of the grassroots accounts in a documentary as a way to give them a platform to voice their anger. Here is one account of a villager who responded to the land alienation during a village assembly meeting:

> Hasn't Kikwete been here? Wasn't he the one who stood on that platform? When he arrived here, didn't I receive him with four levels of welcome? First, I received him with great happiness and joy. Second, I received him in a land full of wildlife and trees. Third, didn't I contribute the fuel for his car? Above all, I gave him a bull as a token, a token of our livelihood. But he decided to destroy us in return of all that kindness? It's really hard

[80] Longido was one among the seven districts in the country that was severely affected by the drought. The government has provided support to two of the affected areas in Maasailand: Longido and Monduli. According to the Red Cross approximately 65% of total livestock was killed due to the 2009/2010 drought: http://www.ifrc.org/docs/appeals/11/MDRTZ012EA.pdf

> to believe he is really the one who is doing this to us! Go and tell him we disagree with his proposal![81]

The source of the conflict dates back to 1992 when the government leased a Game Controlled Area (GCA) for hunting purposes to an influential private investor from Dubai, who owned the Ortello Business Corporation (OBC). While the GCA partly overlapped with Loliondo village land, and invoked controversies among different stakeholders at the time, it did not have any direct bearing on land use management. However, the situation changed when the 2009 Wildlife Conservation Act was passed, which prohibits living and livestock grazing in the area and gives GCAs effectively the same legal meaning as Game Reserves (TNRF 2011: 15). The exclusive hunting rights that were granted to OBC had far-reaching consequences for the communities who used to dwell in this area for generations. Ironically, the government of Tanzania legitimized the malevolent police operation by stating that the pastoralists had allegedly both "invaded" a private hunting block as well as degraded the environment in the respective area by cutting down trees in a protected forest. This "discursive trick", in which nature is framed as vulnerable and in need of protection from these "perpetrators", is in line with what Seagle has framed as a process of "inverting the impacts", whereby local people are posited as being the primary agents of environmental degradation (Seagle 2012: 456).[82] The irony here is of course that by mimicking dominant conservationist discourses the government of Tanzania is framing the Maasai as destroyers of the environment, as a means to legitimize land acquisitions by private investors. After the royal family from the Arab Emirates bought the land and built their own airstrip, they were free to hunt for wild animals. Here are other voices from villagers of Loliondo who were all too aware of this discursive trick:

> I grew up here witnessing herds of wildlife roaming around. I am sure we haven't killed wildlife, we don't kill or sell wildlife. But the Arabs did!
>
> The government says we're a threat to the environment. I would like to tell them that we are not! Look, we live in a land with succulent grass and evergreen trees; they have destroyed their lands walking on floors instead of grass. (Applause from villagers). Is it because they think we are weak and cowards that we deserve to be branded as destroyers? We became slaves in our own country while a foreigner enjoys it to the fullest.
>
> They burnt our homesteads so the Arab could go hunting. We have been living for centuries with wildlife grazing together with our livestock, but this Arab does not want us to live next to him. So the government is telling us to move using the excuse that we kill wildlife. How dare they say that! We take care of them, not kill them. […]

---

[81] "People have Spoken: The Voices from Loliondo." (TNRF, Sponsored by Oxfam).

[82] In her study on the Rio Tinto/ QMM mining company in Madagascar, Seagle shows how a mining-conservation partnership creates a narrative of biodiversity scarcity, and posits the mining company as the active biodiversity saviour, while the local population is fined for trespassing on the highly restricted zones (Seagle 2012: 448-451).

This highly controversial move of the government to sell off land to a foreign investor at the expense of its own people unearths the striking truth about how the devastating drought of 2009 – in the name of climate change – came in handy as a discursive framework within which to cast aside all national political responsibility related to the Maasai's fate. In 2012 the conflict further escalated when it became clear that the government had pushed the deal with OBC forward. The minister of National Resources and Tourism proposed to divide Loliondo into two sections – 2,500 sq. km for the Maasai and 1,500 sq km for a "wildlife corridor" to be reclaimed "for the benefit of the country", as the minister put it.[83] It reached widespread media attention worldwide – including being the subject of a petition by the Avaaz community – which has put a renewed pressure on the Tanzanian government to reconsider their highly controversial decision. As an example of a recent land grabbing, "Loliondogate" – as it became internationally known – does not stand alone in Tanzania. In the past decade, pastoralists have suffered several incidents of abrupt and large-scale land loss (Igoe and Brockington 1999: 8).[84] While it is beyond the scope of this thesis to elaborate on the complex land matters in detail, this conflict was a case in point, for those in power tangibly linked it to climate change.[85] Furthermore, and crucial for my analysis, as will be demonstrated in the following section, the grassroots accounts speak for themselves: the Maasai do not see climate change as the biggest threat; what they truly fear is first and foremost the loss of land, and restrictions in grazing areas. Another telling example is a climate change movie made by local CSOs, in which journalists and documentary makers are showing apocalyptic scenes of cattle that died a slow and painful death as a consequence of the drought. Notwithstanding the journalists who were in search of local climate-change testimonies, the communities that were interviewed were conspicuously aware of the fact that the drought and changes in the climate cannot alone be blamed for the loss of their cattle, as one elder emphasized:

> We were removed from our pasture grounds; we were evicted with our livestock. We are relocated to this area without enough grassland. I will lead you to see the carcasses that died around the settlements. I am wondering what I should feed my entire family with.

Others gave similar explanations for the cause of the death of livestock in this particular area:

---

[83] See http://www.wilderutopia.com/international/humanity/welcome-to-loliondo-maasai-struggle-against-game-hunters-for-land-rights/. Accessed 23 December, 2016.
[84] For an overview of recent land losses and evictions of pastoralists in 2015, see IWGIA 2016.
[85] For a detailed study and overview of land alienation of pastoral rangelands see the work of Igoe and Brockington, 1999. An overview of the genesis of colonial and postcolonial land-tenure regime and their bearing on current land politics and land-tenure problems can be found in Shivji's extensive study *Not yet Democracy,* which he wrote as the appointed chair of the Commission of Inquiry into Land Matters, 1998.

> This was brought about by the congestion of all the livestock in this place, when they were removed from the pasture grounds, by the hunting companies here.
>
> When Arabs burnt our homes, livestock were congested here, they died to date. When this [*sic*] cattle get finished then people will die also.[86]

Whereas for the media and politicians too climate change is alluring as an explanation for poverty and dying cattle, since it is a trendy topic, the affected communities continue to refer back to land-use practices and land alienation. Local community members see drought not as the root cause of poverty, but rather as a dimension that exacerbates their marginalized position. In line with these grassroots accounts, John Galaty has argued that "[…] pastoralism is most critically challenged by the appropriation of rangelands by a variety of actors who use political means to achieve what would normally be socially and economically impossible" (Galaty 2011: 1). Also, Benjamin Gardner writes: "It is not unreasonable to read the history of the Maasai in East Africa as one long land grab in the name of global conservation and national development" (Gardner 2016: 19).

The problem of land and land alienation for the pastoralists (as well as for other communities throughout Tanzania) dates back to the colonial times, when the Maasai were forced to move into one of the most desolate areas in the country. Furthermore, that was the era when the mainland's current land tenure regime had its genesis (Shivji 1998: 1).[87] Later, as part of President Nyerere's *Ujamaa* ideology government officials also continued with colonial practices of land alienation and redistribution of the most fertile areas of Masai District to economically more "productive" people (Hodgson 2011a: 66). Yet the issue of land reached its peak during the period of increased economic liberalization around the 1980s, when the state began to encourage commercialization and intensification of land use. As is written in the report of land commission:

> […] One of the tendencies which has gathered considerable momentum during this period (of economic liberalization since the mid-1980s) is the alienation and allocation of rural and village lands to outsiders – individuals, local and foreign companies, etc. involving thousands of acres of land (Report of the Land Commission of Inquiry into Land Matters 1991, vol.1: 137-138, in Igoe and Brockington 1999).

The crux of the matter for the pastoralists – according to the NGOs and CSOs representing them - is that the strength of their adaptive capacity is essentially based on (seasonal) mobility and flexible land use patterns, which can only be maintained if there is sufficient access to land and

---

[86] Movie "Where is my Future?" about climate change and the 2009 drought, produced by Orkonerei Mass Media (Ormame) in collaboration with Partners Indigenous Heartland Organization (IHO) and IOPA.

[87] Both the land regimes established by the German (1885-1916) as well as by the British (1918-1961) colonial authorities, were based on the "convenient" assumption that indigenous occupants had no ownership rights over land (Shivji 1998: 1).

concomitant natural resources, such as water and pastures. Whereas the government and other expert communities alike "neutralize" the problem of adaptation to climate change, and frame it as a global and external force, for the Maasai communities on the ground adaptation is intricately bound to the politics of land use.

Concluding reflections

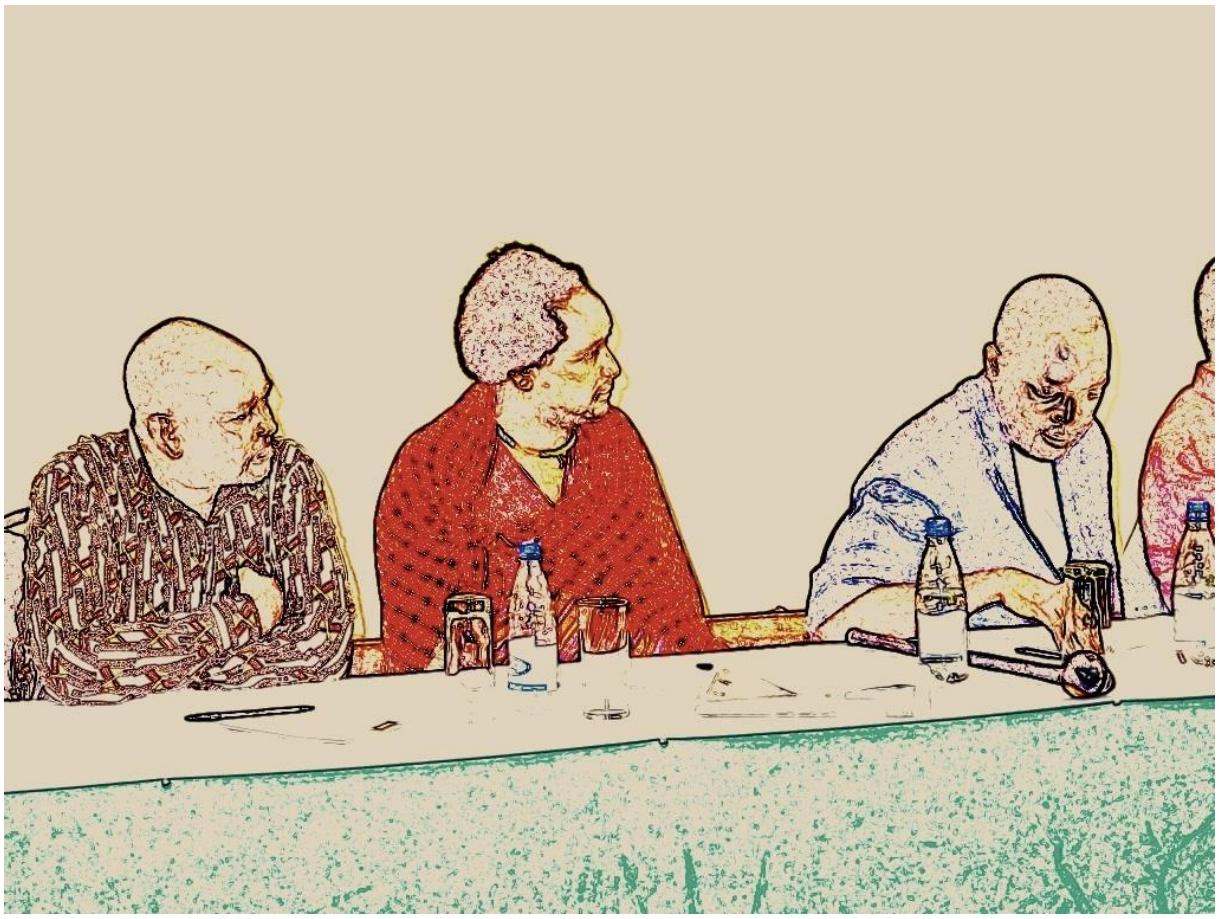
In this chapter I have demonstrated how the translation of Adaptation in the *interstitial space* in northern Tanzania draws upon earlier engagements with travelling ideas and development discourses, which have become "historically sedimented practices" (Li 2000: 151). These have become meaningful experiences for Maasai representatives and development brokers, for they have contributed to an understanding of what "works" (or rather what does *not* work) as political strategies; both internationally as well as in relation to the Tanzanian state. The development of certain skills forms part of the rather contingent way in which new articulations and a unique time/ place positioning emerges. What we can learn from the brief historical detour around grassroots organisations and their shifting articulations in northern Tanzania is that their emergence should first and foremost be understood as a way to manoeuvre oppressive politics, to leverage change and create opportunities in the absence of a benevolent state. Moreover, NGOs also have to position themselves between transnational discourses and policy regimes (such as with REDD), and the lack of political representation at the national level. Nevertheless, while NGOs have played an important role in building political representation and advocating for indigenous rights; from the work of Dorothy Hodgson (2011a) and Jim Igoe (2006a) we also glean the limits of NGOs as agents of change. One important factor has been the overreliance on donors and their respective development agendas, which entail the risk of "speaking for" rather than "listening to" Maasai communities (see Hodgson's work on FGM 2011b).

Moreover, also global factors and hegemonic discourses about nature conservation have been essential in shaping the trajectories of NGOs. Increasingly close ties with complex transnational networks, shifting donor agendas, and entanglements with global ideas, money and alliances have facilitated their emergence. As Benjamin Gardner once again reminds us in a recent study, the safari tourism industry and foreign-owned ecotourism – facilitated by a neoliberal landscape that is focused on private investment, and buttressed by hegemonic conservation discourses – exert an extraordinary influence on the livelihoods and culture of the Maasai. However, he contends, the weakening of the state is not necessarily lamented by the Maasai, who never enjoyed the full benefits of Tanzanian citizenship. As many Maasai associate land dispossession as much with the nationalist state since independence as with the German- and British led-colonial state,

neoliberalism is also celebrated as a "potentially promising change" to fight for their long-sought land rights (Gardner 2016: xv). Nevertheless, I argue that whereas it is indeed within this neoliberal political landscape that indigenous rights organizations have found ways to link their concerns with transnational platforms and discourses, it is that very same political landscape that has exacerbated the problems that they now seek to address. More concretely, this is certainly in part due to the environment in which unprecedented land acquisitions and human rights violations continue to take place. The Maasai and CSOs representing them are therefore squeezed in a narrow political space where they seek to manoeuvre between transnational resources that provide chances and opportunities on the one hand, and an increasing hostile environment of the Tanzanian nation state on the other. It is against this highly precarious background that we have to understand the translation of Adaptation to climate change. How this translation process looks on closer inspection will be illustrated in the next chapter.

5

Adaptation: a Workshop



Introduction

Whereas the former chapter has drawn attention to historical trajectories and the more structural logic underpinning the *Will to Adapt*; in the following a microscopic analysis of translating Adaptation in the interstitial spaces will be advanced. This chapter takes to heart the very basic presupposition (as laid out in chapter three) that narratives not only operate as a cognitive instrument for imposing a meaningful order onto human experience, but are as much a part of the condition of social life itself. In other words, narratives have performative and ordering power through which they constantly make and remake the world. A workshop offers a fruitful insight into these dimensions, and opens the "black-box" of a narrative in the making that is continuously contested, unstable and in flux. Furthermore, it gives a platform to those voices that are too often silenced along the translation chain. While we have to situate this workshop in a particular time and place, I believe it also offers a window into particular power dynamics that are at play that form part of the art of translating development in northern Tanzania in general, and the Maasai predicament in particular. In this section I employ a similar narrative strategy as in chapter one. However, the public hearing that I introduced earlier was narrated in actual chronological order and as it occurred in real time and (in one, confined) space. In what follows I have taken the liberty of allowing my cumulative results to aggregate so as to effectively constitute archetypical spokespersons that stand for and represent varying communities in the debate. It should be mentioned that all the quotes or speeches are real; none are invented. However, for the sake of readability I have united varying opinions (which were spoken out in a manifold different workshops) into one workshop.

I believe that I have amassed sufficient data to be able to stay true to the varying positions that have come to occupy the interstitial spaces of Adaptation.[88] As will be shown, a great many parties – fulfilling the position of trustees – share in the will to Adapt. Trustees are parties that can be characterized by a claim to know how others should live and what is best for them, and whose aim is ultimately to enhance and direct others' capacity for action (Li 2007: 4-5). Even though the position of different ideational communities varies significantly, and no community is fully homogeneous, for my own narrative I deem it legitimate to distil the principal contours of the convictions and narrative strategies of each distinct community. However, it should be clear

[88] This involved participation in workshops, sensitization meetings and conferences, from which I analyzed hundreds of pages of conference transcriptions, many hours of movie and audio material; heaps of policy documents, PowerPoint presentations, handouts, briefings, educational videos, newspaper articles, interviews with key actors, and so on. I am immensely indebted to my research assistant Saruni Shuaka Kaleya, who transcribed and translated most of the conference and workshop material from Swahili to English with extraordinary care and attention.

that these have to be imagined as ideal-typical forms. For this reason, in order to do justice to the heterogeneity that can also be found across different archetypes, at times, where I deemed necessary, I have chosen to let one community speak with two or more voices.[89]

Work-"shopping": adapting to Adaptation

Beyond the organizers' expectations it was a full house when the inception workshop "Mainstreaming Adaptation into Drylands Development Planning" took place. The event was held at the Equator Hotel in Arusha, where I had attended a series of similar workshops and conferences before. The participants seemed to appreciate the location because of the excellent catering facilities. Some NGO workers were complaining about the "culture of daily allowance", which referred to the fact that too many people were only conference-(s)hopping in order to get a daily allowance, a reimbursement of their travel costs and a good meal. In the beginning of my fieldwork, these workshops were fairly small and I was the only researcher from abroad who attended. Almost a year later, more than a hundred participants attended the workshop (including a whole team of researchers), all sharing the same interest in adaptation to climate change, and pastoralism. A fashionable topic it had become indeed. If we take a look at the recent history of the development-projects alone that are concerned with pastoralists in this area, it becomes clear that it has been just a small step to adapt to Adaptation by "mainstreaming" it into "conventional" development planning. In this regard a parallel can be drawn between northern Tanzania and Peru, as Orlove (2009) has also demonstrated how the continuity of Adaptation in relation to other development paradigms works in the context of Peru:

> Because of its loose, multifaceted quality, the term "adaptation" allows the organizations to continue working in areas in which they already have expertise: small-scale technical assistance in one case, disaster relief or water development in others. It also lets them to function in a familiar world of projects, in which they submit and receive proposals, manage budgets and personnel, run and evaluate projects themselves, and produce reports and other briefings" (Orlove 2009: 158).

In northern Tanzania we find buzzwords such as, "livelihood resilience", "poverty reduction", "reducing vulnerability", "adaptive environmental management", "strengthening customary leadership institutions", "natural resources management", "coping strategies", all of which lend

[89] Richard Rottenburg has employed a similar narrative approach, which he framed as being part of "experimental ethnographic writing". He has placed this in the context of the end of the grand narratives and critique, a time in which anthropologists needed to develop new vocabularies and novel ways of "speaking truth to power". Furthermore, my attempt aligns with his position to maintain a balance between engaging with the practices of powerful organizations with the respectful affection of an anthropologist, while not glossing over things that might have negative effects (Rottenburg 2009: xix- xx).

themselves fairly well to a relabelling of projects in Adaptation planning in the drylands. As also one participant from the grass roots remarked:

> The issue of the environment is not a new thing; we have been talking about the environment for a long time. But still there is a problem and we have not attained a good solution. […] The other things that we have been talking about, like the issue of reducing the number of cows, having the appropriate budget to deal with the issue of climate change, and many other things that we talked about in this meeting: I want to say that nothing is new.

This observation is not intended as a critique, but is rather to illustrate how Adaptation allows development projects to reconstitute themselves – indeed, to adapt to Adaptation – by relabelling their aims and following fashions. Following Foucault, we can view this stability as being part of "the art of government", which, he argued, can be characterized by the essential continuity of one type with the other (Foucault 1991: 91). Nevertheless, if we differentiate the varying development paradigms that have passed the revue over the years it becomes clear that climate change adaptation is a particularly encompassing notion. We can imagine that issues such as wildlife conservation, the fight against HIV/Aids and FGM or the protection of indigenous rights have addressed more specific development goals and therefore require new institutional arrangements (e.g. fences, anti-poaching measurements, health infrastructure, education). Adaptation to climate change, on the contrary, relates to an array of general development issues that have been addressed before. To mention only a few examples, environmental conservation, access to natural resources, mobility, poverty reduction etc.

As the workshop convener and program coordinator, Joseph had taken up the role of moderator. In his welcoming words Joseph urged the participants to stick to the "*mzungu* time" (referring to the "white man's time"), and not the "*kibongo* time" (Tanzanian time), which made people burst into laughter because everybody knew exactly what he was talking about. After some jokes were made about how Europeans deal with time, the workshop participants agreed that – considering the full agenda – a strict German approach to time management was needed. During the time of the workshop, the project was in the middle of a one-year preparatory phase to build up the "adaptive capacity" of the government officials of the three districts of Monduli, Longido and Ngorongoro. Each district had established a "Climate Change Adaptation Learning Group", consisting of 25 people such as government officials, customary leaders, NGO workers and community members. This phase was funded and technically supported by international donors and implemented with relevant national institutions, local government authorities of the three districts, customary leaders and CSOs. The workshop's aims were threefold: (1) firstly, to explore how Adaptation could be mainstreamed into dryland development planning; (2) secondly, to

evaluate the research findings in order to design a four-year pilot project that would be carried out in three different districts in northern Tanzania; (3) and thirdly, to assess how the finances could be devolved from the national government to the districts. The following representatives were present:

***Joseph**: workshop organizer and convener (development broker)*
***Vincent**: guest of honour (working for the Ministry of Livestock Development and Fisheries)*
***Tim**: member of the Vice President's Office (VPO)*
***Adam:** Maasai herder (from the community level)*
***Madumi**: expert working for Tanzania Meteorological Agency (TMA)*
***Elijah**: researcher from the university of Dodoma, (carried out research for an indigenous CSO)*
***John**: expert (a scientist working for a European knowledge centre)*

Vincent

Joseph introduced the guest of honour, who replaced the Minister from the Ministry of Livestock Development and Fisheries. After observing all protocols by thanking and congratulating everybody for organizing this event, the guest of honour explained the challenges related to adaptation to climate change for the livestock sector:

> My name is Vincent and I am replacing the Minister, who apologizes that he could not make it today, as he had other obligations. […] As we all know climate change is really happening; it is a fact. It is not news. And it has some long-term consequences for the livelihoods in many sectors, particularly in the livestock industry. In the past 50 years we have seen extreme changes, such as droughts. And unfortunately, most of the droughts are occurring in the drylands. As you all know for the livestock sector drought is a major problem. Not others. The frequency of droughts is increasing. The one drought of 2008/ 2009 was so severe that the President himself came to look what is happening and he gave 12 billion Tanzanian Shillings to compensate for the loss of their cattle. So there is a need to come up with an adaptation strategy because we cannot prevent these things from happening. We as a poor country like Tanzania, we can only adapt. So despite all the efforts, we still have many challenges. We have a low level of awareness and understanding of climate change. […] We also need funds for the projects. We also lack the adequate capacity to address climate-change impacts. If it continues like this, vision 2025, which was expected to be a time by which everybody will have improved their lives, will not be successful.

Vincent continued to explain that climate change is mainstreamed into the national environmental management policy. He then enlisted all the government's efforts, some focusing on mitigation, some on adaptation. "We have the NAPA; we have the National Adaptation Strategy Action Plan; we have the – currently very recent – National Climate Change Strategy; we

have the guidance for the Climate Change Adaptation into Policies and Programmes; we have the National Climate Change Communication Strategy of last year [2012]; we have tried to mainstream climate change into MKUKUTA II [national poverty reduction strategy] etc." In many ways, Vincent's technical account is typical for a national policy-maker, as questions relating to the political economy are entirely cast aside. In his emphasis on the vulnerability of the drylands a certain victimization of the pastoralists can be observed, while in turn, he lauded the national support and proudly presented all the initiatives carried out by the government so far. Furthermore, by stressing that as a poor country, Tanzania cannot do it alone, he also appealed to the international donors for financial support.

In line with Kikwete, as well as with the aforementioned international "adage" "Africa's Adaptation Deficit", Vincent's emphasis on the capacities of the poor (or rather the lack thereof) has the tendency to "depoliticize" climate change. It does so by framing vulnerability as an inherent property of the poor, without questioning what made them poor in the first place. Climate change is also pointed out as the main culprit for the possible failure of vision 2025 to eradicate poverty in Tanzania. Ferguson and others have identified the practice of excluding questions about the means of production, and forces that support systemic inequalities, as a key feature of expert discourses (Wisner *et al.* 2012; Ferguson 1990; Li 2007).[90] It is important to note that this practice – what Li has called "rendering technical" – is never neutral, as it is an intervention in itself with far-reaching consequences that "both limits and shapes what improvement becomes" (Li 2007: 7-8; cf. Callon 1986). In the following we shall see how defining the problem exclusively in technical terms forms one of the key practices of translating the will to Adapt into concrete projects.

Victims versus Masters

The fact that the national government of Tanzania[91] – largely informed by international expert discourses – is framing adaptation in technical terms has resulted in a discourse that reduces the pastoralists to primary *victims* of climate change. Furthermore, pastoralists continue to be framed as irresponsible destroyers of the environment who are keeping cattle irrespective of the "carrying capacity of the land" (see also URT 2007: 22). In the National Climate Change Strategy and Action Plan – as part of mitigation strategies – appropriate livestock management practices are also promoted that seek to reduce greenhouse gas emission (URT 2012, annex). As

[90] For a similar observation regarding climate-change discourses, land grabbing and "anti-politics" in Tanzania, see Wisner and others (2012).
[91] I am referring here mainly to formal documents that have been drafted within the context of international policy-making of the UNFCCC, such as the NAPA and other climate change strategies.

mentioned before this process of "environmental othering", has prompted a counternarrative from the side of NGOs in northern Tanzania that postulates that the pastoralists are *masters* of adaptation. Notwithstanding the recognition that climate change impedes development efforts and their adaptive capacity, this stance similarly brings into view the broader socio-political context. Therefore we can see this discursive move as a way to "repoliticize" adaptation, because the source of the problem is not perceived as an inherent lack of capacity of the livelihood system of the (Maasai) pastoralists. This point of view also became clear during the workshop when a fragment of a movie was shown. Horrific images of cattle carcasses, drought-stricken grazing plains and a starving population were all portrayed as part and parcel of the "novel climate change landscape". Nevertheless, the documentary did not lose sight of the overall land-use practices. Here is a telling fragment from this educational movie about adaptation, resilience and resources mapping:

> For centuries pastoralists in East African Drylands have supported their livelihoods through a deep knowledge of the ecological dynamics of their surrounding environment. They are experts at adapting to climatic changes and resource limitations. But in the last five decades the Maasai have found it more difficult to effectively adapt. This is due to population growth, loss of access to pasture and water, to other land uses like industry and farming, and more frequently, droughts. […] For communities in Longido, land use planning is not typically done on paper, but as the government tends to view pasture and grazing land as open areas, it is clear that unless communities in Longido are able to formally demonstrate the value and actual use of this areas, land tenure will be threatened. […] And as climate change adds pressure to Tanzanian drylands, flexibility, adaptive capacity, and mobility will be key to securing the livelihoods for those who live there.[92]

As mentioned in chapter one, this perspective in which *mobility* is propagated as a key adaptation strategy stands in sharp contrast with Tanzania's (overall) official take on pastoralism as it is formulated in the NAPA, which advocates controlling the mobility of livestock and the implementation of zero grazing instead (URT 2007: 22). Joseph then took the opportunity to share his take on adaptation and largely agreed with Vincent, while at the same time assessing the role of the government more critically:

> As the guest of honour already said, the issue of climate change is a very big issue bringing a lot of problems to our country Tanzania. The issue is no longer a secret; it is no longer a dream. So we must agree with each other, we have been talking much about climatic changes. But also we saw that people who are living in the drylands, they are the ones who are facing very big problems. […] For example the people who depend on pastoralism have been really, I can say they are experiencing the loss due to climate changes. If you try to consider these changes, they do not come from humans, or from the government. I can say that it is something coming from the sky. But scientifically we

[92] Educational movie "Resource Mapping to build livelihood resilience" – Kimmage; TNRF; IIED. Funded by Gorta and Cordaid.

> talk about it more practically. But the problems that are coming out of this, is also because policies, strategies and methods, and manners which are used by the government – all social – are not exactly capable of reducing or preventing the effects of climate change. Let us not forget that pastoralists are masters of adaptation.

During interviews with development brokers the term "masters of adaptation" was used frequently to characterize pastoral livelihoods; and it also figured in newspaper articles (representing CSO voices), as well as in policy briefs and conference reports.[93] As a CSO worker expressed in an interview with me, and also in the *Daily News*: "We found that while pastoralists are masters of adaptation, climate change has proved to make this impossible but unfortunately government formal planning processes are not incorporating their knowledge though being possible" (*Daily News*, 20 February 2013). More implicitly referring to the strength of the ecosystem itself in a summary of an adaptation workshop, it was stated that: "Dryland pastures in Tanzania and East Africa are diverse, complex, adaptable and resilient – contrary to popular perception they are not inherently fragile" (TNRF/ IIED 2012b: 11). Also in our conversations Joseph repeatedly made this point clear, as illustrated in the following interview fragment[94]:

> Climate change is not new in Africa, especially for pastoralists. They are masters of adaptation; they have key strategies and knowledge. You don't need to tell them about climate change, this is not new to them. They will tell you! The only problem is the laws and policies in our country. Our government is ignorant and there is a big knowledge gap. The minister of livestock was pro-mobility! He said that mobility is a key strategy, and then there was a radical shift of 180 degrees. All we need to have acknowledged is that the livelihoods of pastoralists is a system, and that mobility is part of it. […] Our leaders are very embarrassed. 52 billion dollars are collected in Ngorongoro Conservation Area and people are dying of hunger! One Maasai man saw that the water in his vicinity was gone, so he followed the pipe and saw that it is being collected to flush the toilets of tourists. One flush of a toilet is enough to keep a Maasai family alive for two days! Tourists need glittering toilets. Then the Maasai man rightfully complained: "and then they tell us about conservation".

Considering the historical continuity of the hijacking of scientific misconceptions by those in power – usually at the expense of the pastoralists' interests - I believe that we can understand the newly coined term "masters of adaptation" as an explicit move to counter the victimization of pastoral communities. Moreover, in opposition to being "reckless wanderers" in need of

---

[93] At times, the term "masters" was also interchangeably used with "experts" at adaptation. Many other terms in policy documents are used to describe the adaptive capacity of the pastoral system and dryland pastures. For example: "autonomous adaptation" is defined in a policy brief as "a unique understanding of how communities can best adapt to climate change, which is due to their in-depth and accumulated knowledge of their local environment".

[94] It is important to note that Joseph clearly would not have articulated this point in the same words during the workshop in presence of the government as in the way he did to me. This strategy is in line with what Rottenburg (2009) and Bierschenk (2014) have observed; if people want development projects to succeed all actors must be "masters in role ambivalence" (Rottenburg 2009, in Bierschenk 2014).

education, it is a shift that emphasizes agency and denotes a more sophisticated environmental understanding and sustainable livelihood instead. Joseph's statement above is interesting in so far that the shift from the metacode to the cultural code is unveiled.[95] As Rottenburg reminds us, we need a metacode as the basic precondition for making a discussion possible in the first place (Rottenburg 2009; 2005). The metacode is employed in the language of objectivism: i.e. "climate change is real and it is affecting us all". Outside the workshop setting, during interviews or informal talks, the cultural code manifested itself explicitly as a counternarrative. Hence, the term "masters of adaptation" can be regarded as the cultural code that seeks to debunk age-old myths that regard pastoral communities both as victims and perpetrators of the environmental changes.

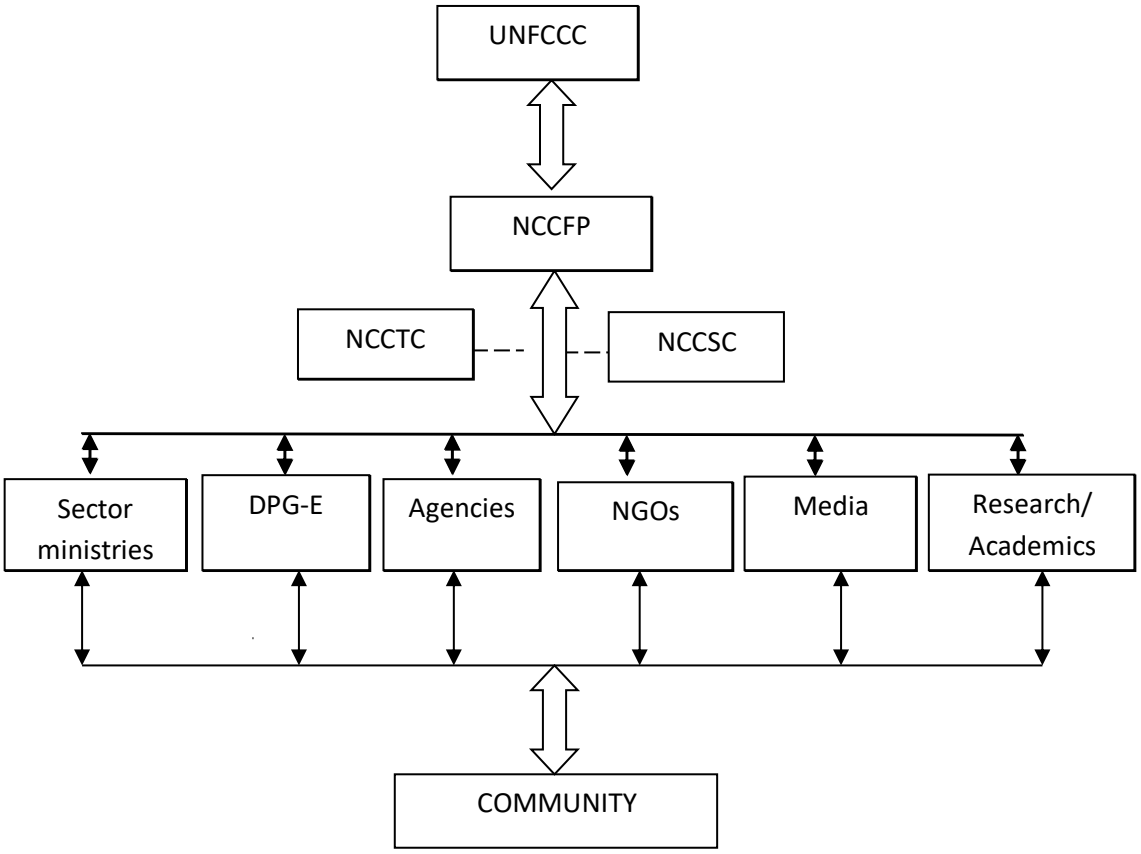
Tim

As a member of the Vice President's Office (VPO), Tim was invited to present the recently launched National Climate Change Strategy (NCCS). He summarized the main goal of the strategy, which is "to adapt to climate change and participate in global efforts to mitigate climate change with a view to achieving sustainable development". Furthermore, he elaborated on how climate-change issues follow the institutional arrangement established in the Environmental Management Act (EMA) Cap 191 of 2004. In other words, climate change in Tanzania is channelled through existing frameworks and policies, and there is no stand-alone climate-change policy framework. As Tim further explicated:

> Climate change in Tanzania is addressing the politics of environmental management. We are using the environmental policy of 1997. We don't have a policy working on climate change, because we recognize it as a crosscutting issue that cannot be treated in isolation.

Here is a schematic representation of his account:

[95] Following Rottenburg, the cultural code occurs when "players in the game" comment on the moves of other players before or after the game. Empirically speaking we can only observe code switches and code uses, whereas frameworks and perspectives remain explanatory models underpinning them (Rottenburg 2009: xxix).



Source: URT 2011, National Climate Change Strategy (first draft), p. 43.

He clarified how the overall coordination of the NCCS will be under the responsibility of the National Climate Change Focal Point (NCCFP, which is the VPO), and is at the same time in charge of preparing the national climate change framework guidelines (NAPs, NAMAs[96] etc.). The National Climate Change Technical Commitee (NCCTC) and the National Climate Change Steering Commitee (NCCSC) will guide the implementation of the strategy, while being evaluated and supervised by the VPO. While the scheme gives a fairly decentralized impression, on closer inspection we glean that a great deal of climate-change-related responsibility is centralized in the VPO.[97] Namely, the Division of Environment (DoE) – which is responsible for all climate change activities (in the VPO) – is both the NCCFP for the UNFCCC, as well as the Designated National Authority for Clean Development Projects under the Kyoto Protocol. Moreover, the NCCST and the NCCTC are respectively chaired by the Permanent Secretary in the VPO and the Director of Environment (NCCS 2011: 41). It is in part against this background that we have to understand the aim of the workshop organizers to find ways to devolve the finances to the respective districts.

[96] National Adaptation Plans; Nationally Appropriate Mitigation Actions.
[97] In spite of various "sectoral policies" that are said to address climate change (NCCS 2011: 41).

Tim talked also about the institutional set-up and how it is in turn embedded within and shaped by international agreements and conventions: "With the convention we mean the UNFCCC and with the Protocol we mean Kyoto Protocol, and with agreements we have some like the Cancun and Bali agreements, the Marrakesh Accords; those are some of the agreements that belong to the convention." He then proceeded to sketch the financial picture:

> For the financing plan, the implementation of the strategy will largely depend on financial support from international community. Domestic funding from government budget, private sector, and individual contributions. Development partners are encouraged to support the government in implementing the strategy by providing technical and financial support, as well as facilitating resource mobilization.

An insight into these complex transnational linkages and money flows illustrates that the positioning of the government of Tanzania regarding climate change can be characterized by a high degree of "extraversion".[98] For instance, one of the specific goals of the NCCS, as Tim explained, is to "facilitate accessibility and utilization of the available opportunities in the context of the convention and related protocols, as well as agreements". And for financial support major funds are expected to come from the "external environment" through multilateral and bilateral funds, loans and grants and also revenue collection by the government. This is in a nutshell the financial plan of the Tanzanian government to access climate-change-related funds (as presented by Tim, but see also the NCCS 2011: 78).

Multilateral Funds	**Bilateral Funds**
Global Environmental Facility (GEF) Kyoto Protocol: Adaptation Fund (AF) UNFCCC: - Least Developed Countries Fund (LDCF) - Special Climate Change Fund (SCCF) - Green Climate Fund (GCF)	Governments of: - Australia - Germany - Japan - Spain - U.K. & E.U. - Norway, Denmark, Sweden - Ireland - Canada - The Netherlands - Switzerland
Government Revenues	**Loans & Grants**
- National Environmental Trust Fund[99]	- World Bank Fund

[98] According to Bayart, leading actors in sub-Saharan societies employ strategies of extraversion and resource mobilization – derived from the (possibly unequal) relation with the "external environment" – in a context when these actors seek to compensate for the fact that they have difficulties in autonomizing their power. He writes: "The 'external environment' is then turned into a 'major resource in the process of political centralisation and economic accumulation', and also in the conduct of the social struggles of subaltern actors from the moment they attempted to take control, even in symbolic ways, of 'the relations with the exterior on which those who dominate the society base their power'" (Bayart 2000: 218-219).
[99] Not yet operational in 2011.

- Payments for Ecosystem Services (PES) - Private- Public Partnerships - Local NGOs	- Africa Development Bank Fund - East Africa Climate Change Fund - Individual Foundations and Funds

The outward-directed financial gaze was met with criticism from the audience, and people questioned why there is a need to look for donors outside the country instead of creating their own resources within Tanzania. During a learning group workshop it was concluded, "this [outward] economic behaviour is being transformed by globalization and regionalism, trends which undermine inward looking economic nationalism" (TNRF/IIED 2012b: 5). After presenting the financial plan, an overview of all sector-related adaptation strategies followed. On the specific goals of the NCCS for the livestock sector Tim articulated two basic strategies as stipulated in the document:

(1) First, it needs to promote climate change resilient livestock farming practices. We need to do research to see which type of cattle can be resistant, which has been brought about by climate change.
(2) So there is a need to acquire appropriate technologies for livestock production systems.

Finally, Tim concluded by emphasizing the fact that according to him the biggest challenge is related to land-use plans:

> I think this is among the big problems in Tanzania. Most of the areas do not have land-use plans. So if people see a forest they just enter, and harvest what they want to harvest, bring their cattle and whatever. So if we have a land-use plan, so that we have a plan with the land we are doing this and this, this piece of land will be for this and this, the strategy needs to promote and enhance sustainable land-use planning at all levels.
> And also to mainstream climate change into land-use planning. Thank you!

Adam

After the audience had patiently listened to an hour of political rhetoric and expert talk, Adam, a Maasai man from the grassroots stood up and calmly began to articulate his concern:

> It is a pity that the minister never attends these conferences himself, and he always sends a representative. Because it would be good for us to speak to the minister himself. The first thing to say is that we are happy that the government made a [climate change] strategy, and that it has been brought to us, so we have understood that there is a national strategy. But here we have the members from three pastoralist societies, local pastoralists for more clarification. This project is being carried out in three districts inhabited by local pastoralists, namely Monduli, Ngorongoro and Longido. The government in this country is using a lot of money to protect animals like giraffe and elephant, but it does not even use a single shilling to protect a person known as the pastoralist. We are in danger of being chased away by the government from our land, where we have been living for several years. If we are not sure of the ownership of the land we have been inhabiting

> today, you're sleeping in the village but you are not sure if it is yours, because tomorrow the government may come and chase you away. […] I was born in 1956 at a place known as Sirotera. Before independence we were living in the Serengeti, later the government chased us away arguing that it is government land. So you are just chased away like animals. So how will this strategy help us so that we are going to have assurance of our land, which we are using for pastoralism? Because for me the big threat to pastoralists is not climate change! The big threat is that the government is going to take away our land and increase the vulnerability of pastoralists. To me this is the issue. To me climate change is not the issue.

Though Adam began speaking serenely, towards the end of his speech he could not suppress his anger any longer. And in his attempt to peacefully communicate his grievance about the land situation of the pastoralists in Tanzania, he got carried away by his emotions and burst into fierce outrage. His anger was felt throughout the room, and the audience responded with an uneasy mixture of supportive applause and laughter. It was not the first time that I had observed such an emotional statement. Adam's account was remarkable in so far as he did not only remind those in power of the marginalized position of the Maasai, but relegated the alarmism of climate change to the margins altogether. As will be demonstrated in chapter 6, Adam's reluctance towards this new prophecy does not stand alone among Maasai communities. The same course followed when Rehema, a Maasai woman from the community level, stood up and aligned with her "brother". She began her talk with a rather soft and careful tone of voice, but during the course of her speech anger gathered and she became very emotional:

> We can see that when the investors come they quickly get the land to invest but if you look the kind of the life that the indigenous peoples are living, it is very difficult that some of us have no land to establish settlements!

Joseph thanked Tim for his presentation and for elaborating on the finances. He also supported Adam by reiterating the importance of his point, which according to him will need careful attention in the policy process. Two more questions from the audience were allowed before the next presenters were given the floor. The first question came from a Maasai herdsman, who aligned with Adam:

> Mr. chairman. I guess we want to have this point regarding different sectors clear. Concerning livestock you have mentioned two strategies, but there is this issue that is highly controversial, as my fellow here already mentioned, which is the issue of land acquisition for the pastoralists. I think it should be addressed in the national policy that the land acquisition of pastoralists is very important. It has not appeared; perhaps I did not catch it well, but I don't think it was mentioned.

A district officer raised the second concern:

> I cannot see in our general strategy, where is the local adaptation strategy for climate change reported in the national climate change system that we are trying to implement

> now at the district level? Let me just remind you. Climate change is very [inaudible] […]. It is not the first time that this appears in the globe, it has been there several times particularly in those drylands, where people are living in semi-dry areas with local climate-change strategies.

While the second interlocutor did not reject climate change as such, in line with Adam he also relativised the threat by framing it rather as being part and parcel of normality in the drylands. As such, he reminded the audience that the pastoralists are all too familiar with changes in the climate, and have their own knowledge system. For the same reason, in his view, the district level is better equipped to deal with the issue than the national government. Tim and Vincent addressed the questions together:

> Tim: For the man about the government taking away the land from the pastoralists, I believe that what has been written about land use in the project, if we work with it I think we can get the solution. That the government and the pastoralists should sit together to see where can we have pastoralists in an area, and where can we also keep the animals. I think this is very very important for settling these disputes.
>
> Vincent: I have written myself about pastoralists, and I like the pastoralists so there is no way that the land could segregate the pastoralists. So it is in the strategy. The ministers are going to discuss how to solve the issue of pastoralism, and especially the issue of Loliondo. The prime minster saw the letter that the ministry is going to try to appoint certain people to deal with that issue.

According to Joseph, this week in which a particular meeting took place (presumably about the Loliondo conflict) marked an historic moment, for it was the first time since the 1960s that the sector of livestock and pastoralism was given special weight within the nation-state. The Prime Minister had appointed a certain committee of experts in order to find a solution to this conflict. It was also the first time that I sensed a glimmer of hope in Joseph's tone; as if a certain political breakthrough was about to take place. According to him, it was now the time to look forward for constructive solutions: "This is a very, very big issue. But what I have heard yesterday, there is a way. The Prime Minister is recognizing the current problems and wants to solve the issue once and for all by including the pastoralists. So let us now concentrate on how to talk to the government on how to move forward".

Expanding the network and rendering adaptation technical

Joseph reiterated the aims of this workshop, which can be summarized as the attempt to expand the network and enrol different actors:

> The reason we are here is to discuss the proceedings of this project. Furthermore, we are trying to see how we can cooperate with different partners who are all doing the same work. We have our fellows doing different research for different organizations. We also have our colleagues from England, who will share their experiences. Some of you might

> remember that we have cooperated before on the issue of natural resources. The district cannot stand alone, and must try to connect to the national level. For example, we have talked to TMA [Tanzania Meteorological Agency], and we saw that there is no way to move forward without them telling us about climate change.

Part of translating Adaptation forms the establishment and expansion of a network of both people and things. Sociologist Michel Callon (1986) has called the implementation of strategies – in which the various roles allocated to others are defined and interrelated – *enrolment*, and this also forms part of translating the will to adapt. We can see that in this adaptation programme enrolment occurs through the reinforcing of existing ties, as the revitalization of these old entanglements also attest to. This means that a partner organization that was providing expertise before, in terms of, let us say, natural resources or conservation, can now also offer knowledge on climate-change adaptation. But first a problem needs to be identified. Expert knowledge, underpinned by science and accompanied by certain technologies, is deemed indispensable in this process. Very often this type of expertise is imported from technologically "advanced societies", such as Europe or the U.S. Interestingly enough, as other authors have also demonstrated, sometimes the order of things is completely reversed and a problem is identified according to the solution experts have to offer (Rottenburg 2009: xxvii; Li 2007: 7). This *problematization* falls under the second key practice that Li distinguishes as part of translating the will to improve into explicit programs (which is linked to rendering things technical, see also Callon 1986 below). It is a process in which a whole set of practices concerned with representing the domain to be governed is made into an "intelligible field". This is the job of experts who are trained and paid to define problems in technical terms (Li 2007: 7).

In studying the role played by science and technology in structuring power relationships, sociologist of science Michel Callon has also discerned four moments of translation that have proven fruitful for my analysis. According to Callon, translation is a process in which researchers impose themselves and their definition of the situation upon others. He has defined problematization (the first moment of translation) as follows:

> […] the researchers sought to become indispensable to other actors in the drama by defining the nature and the problems of the latter and then suggesting that these would be resolved if the actors negotiated the "obligatory passage point" of the researchers' programme of investigation (Callon 1986: 196).

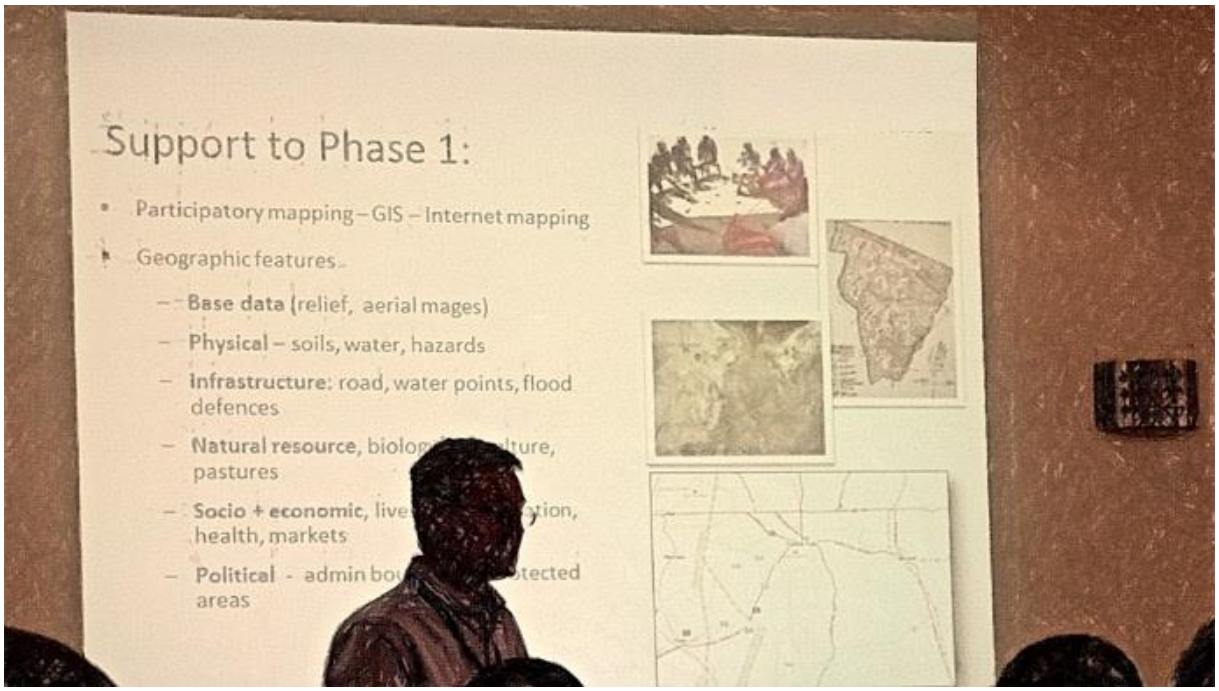
The obligatory passage point is in this case when actors accept the problem of climate change as real, and consequently agree to the experts' role as being indispensable in the overall program of intervention. Experts are to some degree similar to scientists, as they are academically trained and employ scientific methods, but their strategies are directly aimed at the improvement of the

situation (Bierschenk 2014: 79). In order to illustrate their instrumental role let me introduce you to the experts John and Madumi.

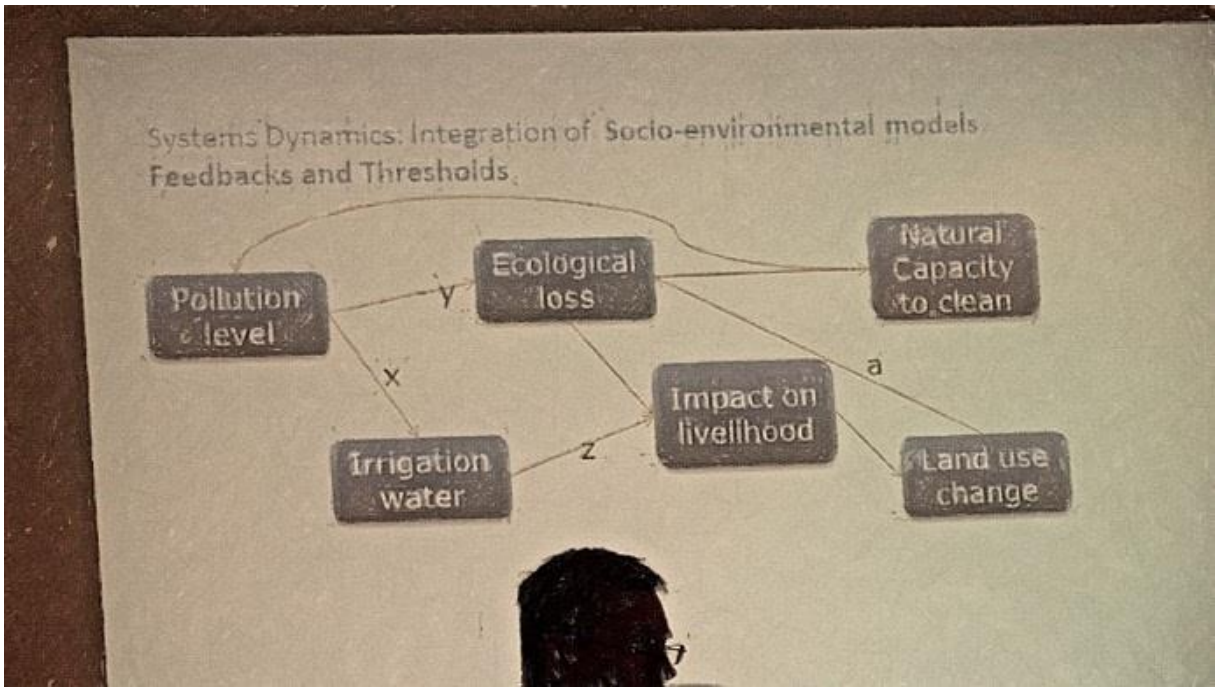
John

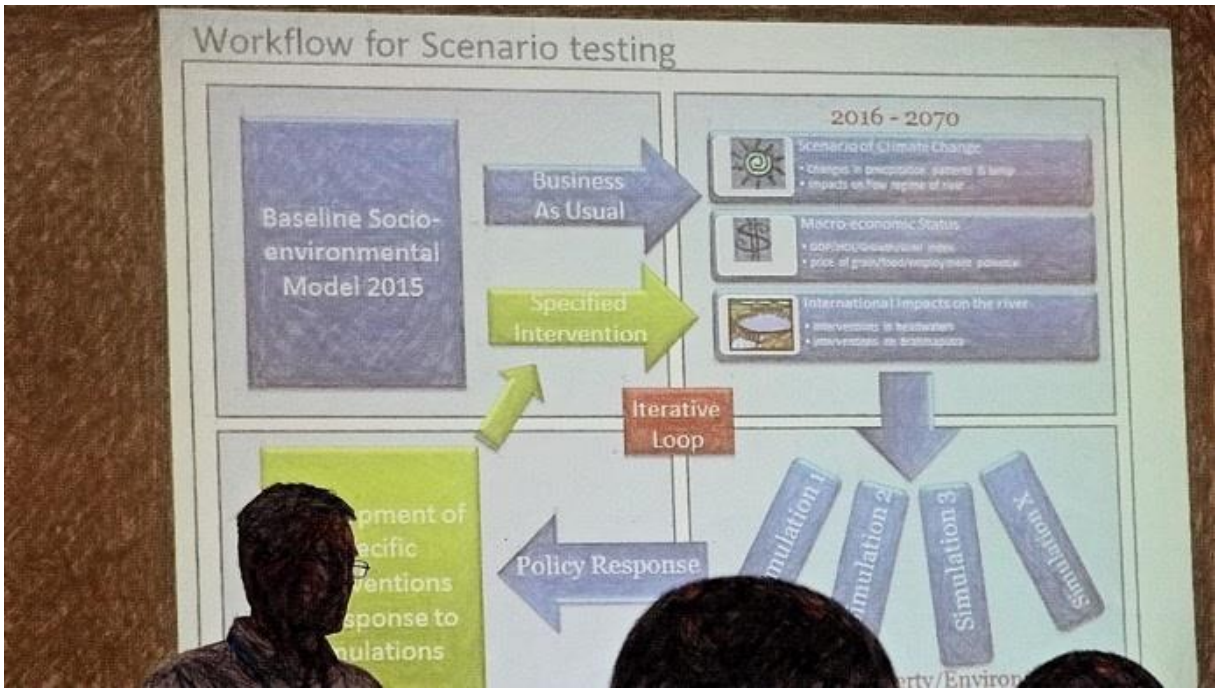
One of the member organizations of the adaptation project is a European knowledge centre that provides basic mapping technologies and data-management support. As a researcher working for this organization John was invited to share his scientific insights with the workshop participants. John began to work with the adaptation project in the comparative phase, about a year prior to the workshop, and has been supporting them mainly with data management.

> We are specialized in information and social systems. So I am gonna talk about what we have done over the last year, in terms of modelling the impact of climate change, response and adaptation. […] Through a chain, a process by which data came from local people, which was validated, checked in the field and integrated into a standardized data system. It contains a whole draft of information sources, different types, base data, social data, physical data, information about pastures, location.



What often happens in this "problematization" process is that experts represent the field of intervention in extremely complex terms. For example, digital representations of the field are shown in highly sophisticated schemes, graphs, and figures and explained by complex feedback-loops. Here are other illustrations presented by John:

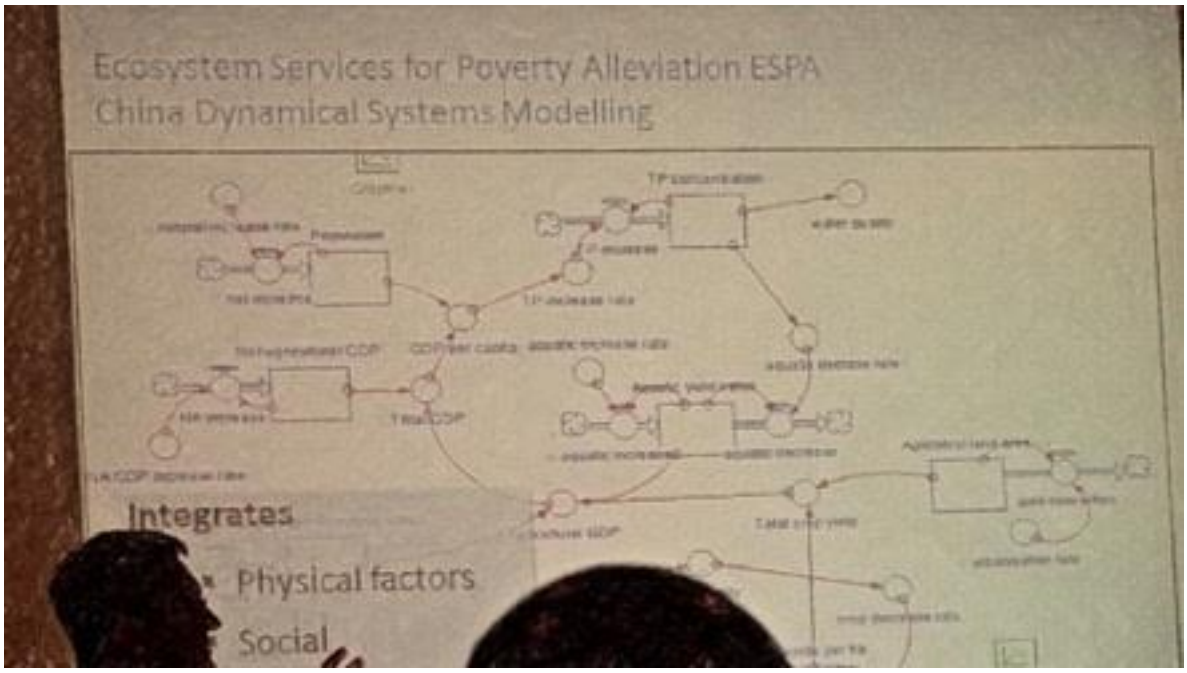




Furthermore, what I have often observed during these workshops is that the technical solutions are based on other, remote socio-ecological systems that are at best analogous to the situation at hand (pastoral systems elsewhere, e.g. in Ethiopia), but at worst may be very different. This can result in far-flung experiences from Jamaica, Bangladesh or China being used as blueprints for adaptation planning in northern Tanzania. As John explained:

> I will go on to explain some of the current things that we have been doing, not in Africa so much but in Asia. […] We did a lot of things in the Ganges, in the Bangladesh Delta.

> Now these are riverine examples but the principles remain the same: how do we use ecosystem services and how do we measure what those are?



John's representation of adaptation as an extremely complex reality on the one hand, and yet as an "intelligible field" – for those who are endowed with the appropriate knowledge and technology – on the other, forms a part of his making himself, as an expert, indispensable. The "obligatory passage point" is attained when the different parties accept their knowledge as truth, after which ties are officially established. It was clear from the audience's quiet response that his presentation had left people in great awe of the alleged complexity. When Joseph took over the floor he remarked that:

> The only thing that I understood was the blue charts. So you will hopefully forgive me, I got lost a lot but it is really mind-blowing, but … ehm, I think this is part of the complexity of science, and part of the visualization and so on.

I take the silence that followed after John's presentation as a testimony of the discrepancy between the highly abstract and complex scientific representation of reality on the one hand, and how local Maasai communities express and relate to the particulars and lifelikeness of human experience on the other. Two Maasai men responded by saying that images and satellites always need to be crosschecked and complemented with what is "really going on in different localities". They objected to the static representation of these images, and argued that landscapes change all the time so these images might already be outdated. These two Maasai men were in fact contrasting the abstract method of science – and its universal value – with their personal observations that have emerged from (embedded) engagement and experience with their environment.

In fact, this was a frequently heard response from local community members. Whenever satellite images of a particular locality were presented, many felt that the pictures needed to be complemented with "the real situation". Furthermore, when climate change was presented as the main cause of (environmental) change, it was not necessarily accepted at face value by the pastoralists. For instance, a Maasai man challenged the conclusion that climate change is causing changes by arguing that we have to look at environmental destruction instead:

> The main reason for the disappearance of the green colour [representing grass and forests on the satellite picture] is just environmental destruction, because rain can fall only in a place where there is a good distribution of forest. Thus if all the trees have been cleared it will not rain, unless there is a mountain that can pull the rain. So these have a great effect, because for example bees need flowers to make honey. So when there are no trees to produce these flowers how are the bees going to make honey? Also keeping cows requires grasses, so how can we continue keeping cows if land is used for agriculture? This is the problem of environmental destruction.

Sheila Jasanoff has described this encounter as "the tension that arises when the impersonal, apolitical and universal imaginary of climate change projected by science comes into conflict with the subjective, situated and normative imaginations of human actors engaging with nature" (Jasanoff 2010: 233). John's standardized chain of causal explanations of how to analyze changes and make use of ecosystem services, clearly follows what cognitive psychologist Jerome Bruner (1986) has termed a "paradigmatic" or "logico-scientific mode" of knowing. The objective of the paradigmatic mode is to fulfil the ideal of a formal, mathematical system of description and explanation. Moreover, in its higher reach for abstraction this mode of knowing is in search of universal truth conditions and general causes; hence, it disclaims the explanatory value of the particular (Bruner 1986: 11- 13). Bruner has placed this mode of thought in opposition to the "narrative mode of knowing"; which has a distinctive way of ordering experience and constructing reality. It is important to add that, while these distinctive modes are irreducible to one another, Bruner sees them as complementary. He summarized the narrative mode as follows:

> The imaginative application of the narrative mode […] deals in human or human-like intention and action and the vicissitutes and consequences that mark their course. It strives to put its timeless miracles into the particular of experience, and to locate the experience in time and place (ibid: 13).

The point of differentiating two different modes of knowing is that it enables us to observe that when the story of climate change travels, the abstract paradigmatic mode of knowing the world becomes increasingly beset with a particular and *located* (Hastrup 2015) understanding and

expressing it.[100] On a somewhat different level, but one I deem useful and comparable here nevertheless, pragmatist philosopher Richard Rorty has criticized the general preoccupation of the Anglo-American philosophy, which he brings down to the question of "How to know truth" (which he overall rejects); and which he then contrasts with the more comprehensive question of "How we come to endow experience with meaning" (the question that occupies the poet and the storyteller) (Rorty in Bruner 1986: 12). Therefore, perhaps the role of the anthropologist does not differ much from that of the poet or the storyteller, with the primary task of bringing into view the relation between people's lived climatic experiences and the system of meaning it engenders.

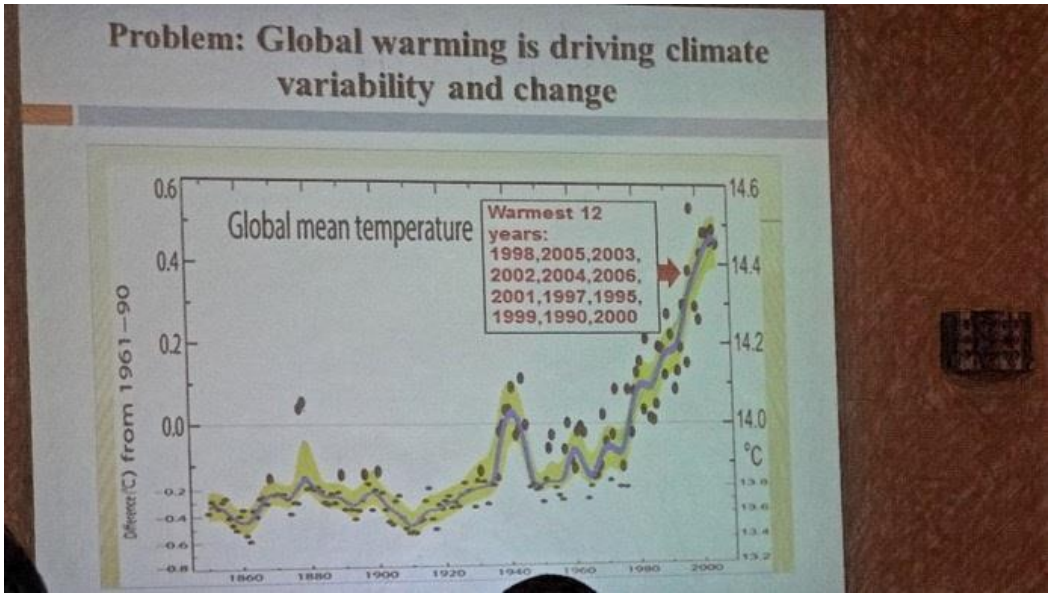
It is important to emphasize that I am not trying to create a dichotomy between so-called "indigenous knowledge" (i.e. Maasai) and science (as represented by John). Instead, I follow Arun Agrawal, who dismantled this divide by arguing that all knowledge systems are endlessly heterogeneous. Moreover, he rightly stated that the focus on difference seems to fix and seperate in time and space systems that can never be separated, because they have been in intimate interaction since at least the 15th century (Agrawal 1995, see next chapters). Nevertheless, the fact that we cannot treat these knowledge systems in opposition does not mean that there are no differences. In line with Mara Goldman (Goldman *et al.* 2015) and many other authors who have embraced the "ontological turn", I argue that these differences should not so much be explained in epistemological terms (how do people know about the climate), but rather in ontological terms (how do different enactments of climate take place). The authors build their argument on recent case studies in which contradictory responses to drought were explored. In 2008/9 a severe drought hit much of Eastern Africa, and the Maasai were badly affected. The problem was not so much the rainfall quantity (they had experienced worse years), but rather that the pastures were depleted. For them it was the worst drought in living memory and they reacted by moving with their cattle. In 2010/11 another drought hit the region. And according to scientific data this drought was much worse, even the worst in the region in over 60 years. Yet, for the Maasai and regional NGOs it was not a drought, so neither humanitarian aid nor livestock sales were mobilised. What mattered for the Maasai were their mobilising strategies and systems of reciprocity; in other words, their enactment of drought was key in how they experienced it. As the authors have rightfully observed in the context of different responses to drought in Maasailand: conflicts over knowledge are usually about a lot more, about ontological differences (Goldman *et al.* 2015). I have termd this inseperability between ways of knowing and being an "inclusive ontological weave" of the world through which the Maasai nurture their relationships to each

[100] John's account can also not be reduced to "science" alone, but I see it as the manifestation of what is expected of an expert in his role.

other and to nature.[101] In other words, in the next chapters we shall see that for the Maasai in Terrat, the notion of climate evokes a whole different set of social, moral and environmental connections from those recognized in a scientific and technocratic understanding of it.

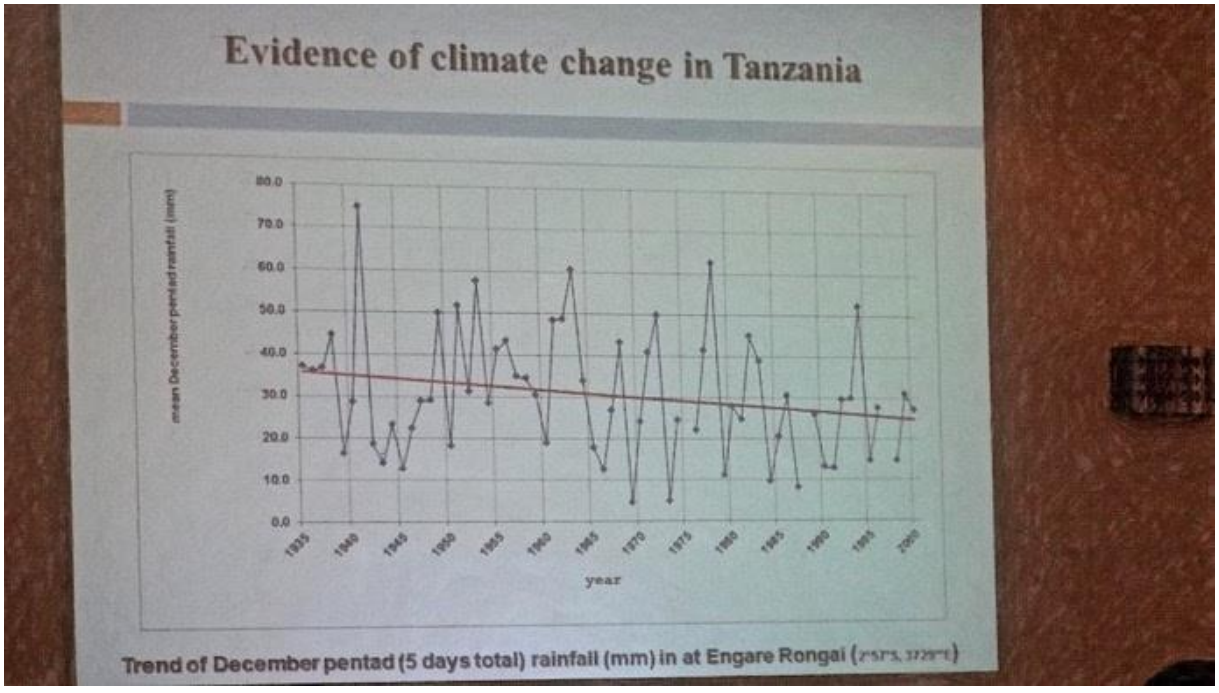
Madumi

Let us now turn to another expert. As a member of the Tanzania Meteorological Agency (TMA), Madumi was invited to explain the evidence behind climate change in Tanzania. TMA is the main institution for the collection and dissemination of climate data and weather forecasting in the country. A challenge for Maasailand and the northern highlands is that a huge lacuna of data exists. For places like Terrat, the most reliable rainfall data can be obtained from private farms in the vicinity such as Sukuro (McCabe, personal communication). Since independence, many weather stations and instruments have been out of order. And during my visits to the TMA offices in Dar es Salaam and Arusha Airport, I was told that they do not have the money to maintain the instruments. For the workshop Madumi came to talk about the "observed impacts, climate-change scenarios, and on how to monitor information": "As you can see the problem is global warming. We had twelve years that were too warm":



[101] As Agrawal also argued "Instead of trying to conflate all non-western knowledge into a category, it may be more sensible to accept differences within these categories and perhaps find similarities across them". (Agrawal 1995: 427) He further assured that it makes much more sense "to talk about multiple domains and types of knowledges with differing logics and epistemologies" (p. 433). The author furthermore distinguished three themes that have emerged in differentiating these knowledge systems. The first theme is *substantive* and refers to the subject matter that is addressed (IK is allegedly only dealing with daily livelihoods of people rather than abstract ideas and philosophies). The second theme is *methodological* and sees IK methods as based on common sense, intuition, and as closed and non-systematic. The third theme is *contextual* and holds that IK is more deeply rooted in its context. These claims can easily be discarded. Nevertheless, as I demonstrate in chapter 8, I believe that the idea that Maasai knowledge is embedded in a different worldview can be sustained.

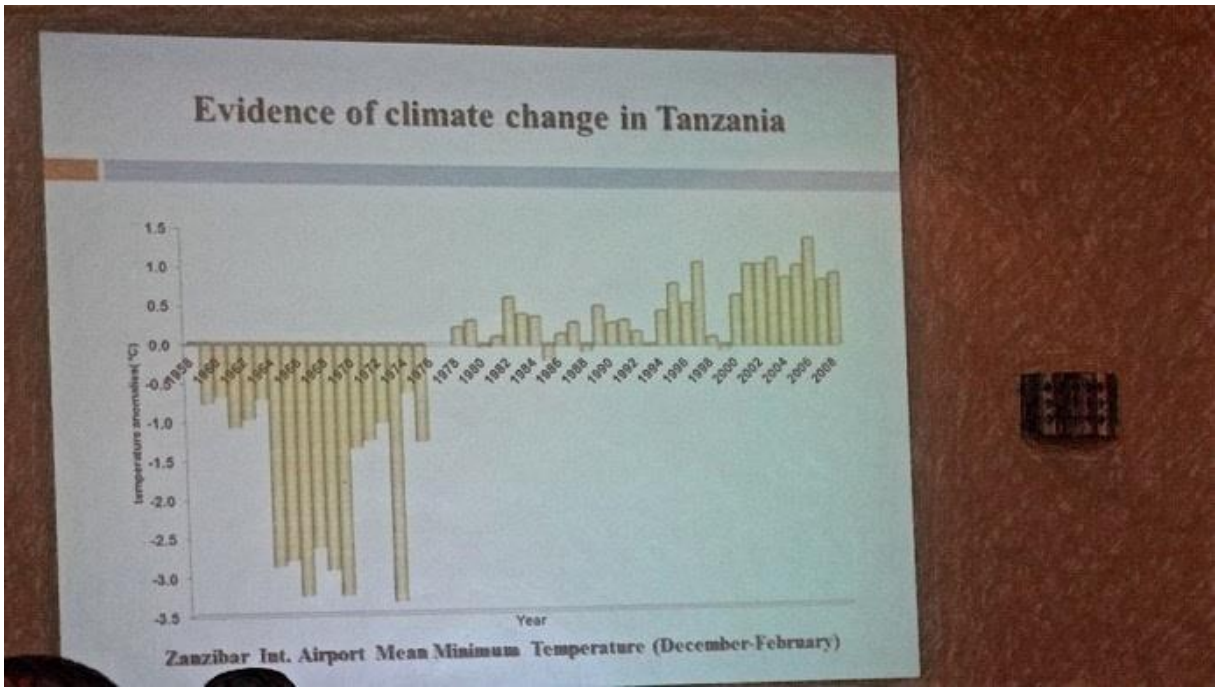
Madumi explained that when we talk about global warming we mean the industrial revolution, which is basically "done in the developed world", and which has pumped lots of Greenhouse Gasses into the atmosphere. In order to explain the accumulation of carbon dioxide in the atmosphere, he made a comparison with wearing a thick blanket that captures the heat, "whereby the long-wave radiation instead of being backtracked into space it bounces back into the atmosphere, and thereafter you know the warming". For evidence of climate change in Tanzania he showed graphs from Zanzibar and explained that TMA has observing stations that have data from the 1920s. He also showed data from a place called Engare Rongai, which he picked because it is fairly close to the three dry districts (Monduli, Longido and Ngorongoro) that are also characterized by a bimodal rainfall pattern. He showed the rainfall for the month of December because this month usually receives most rainfall. He concluded that: "We can see on this graph that there is a decline in rainfall. So it explains something."

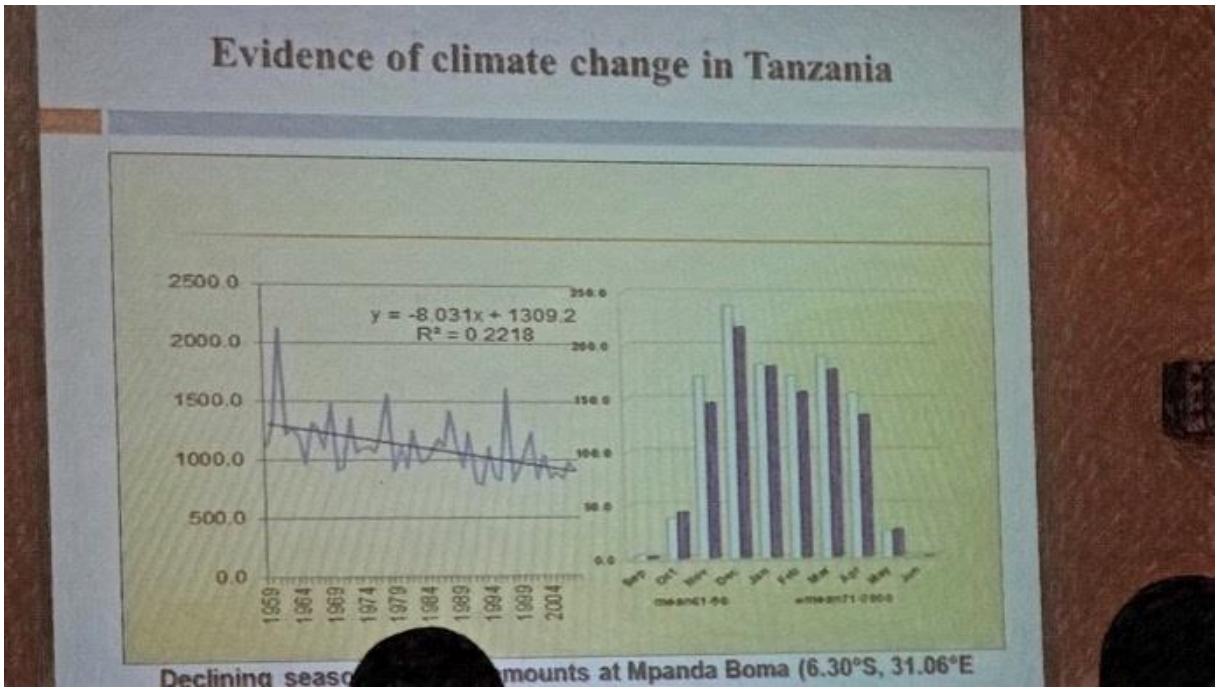


Madumi furthermore spoke about the shifting seasonal rains and increasing dry spells in a place called Mpanda Boma, which is located in southwest Tanzania. They have observed both a shortening of the rainy season from 4 to 1.5 months, and an increasing risk during dry spells. The dark line (in the figure on the right) represents the period from 1959 until 1983, and the pink line is the period from 1983 until 2007. He clarified the graph as follows:

> Comparatively, if you look at the latter years, you see that in November when the rain sets, the risk is also 10%. But look at the way in which risk is fluctuating with time, as you

go towards the end of the season. Between January and March, look at the dry spells; they will get to a risk of about 60%.





It is worth noting that the case of Mpanda Boma does not lend itself very well to a comparison with northern Tanzania, because the southern part of the country can be characterized by unimodal rainfall as opposed to bimodal rainfall patterns in the northern part of the country. The climate predictions for both regions differ significantly. It is expected that an increase in rainfall of 5% - 45% will occur in areas with a bimodal rainfall pattern, whereas those regions with unimodal rainfall are expected to experience decreased rainfall of 5% - 15% (URT, NAPA 2007:

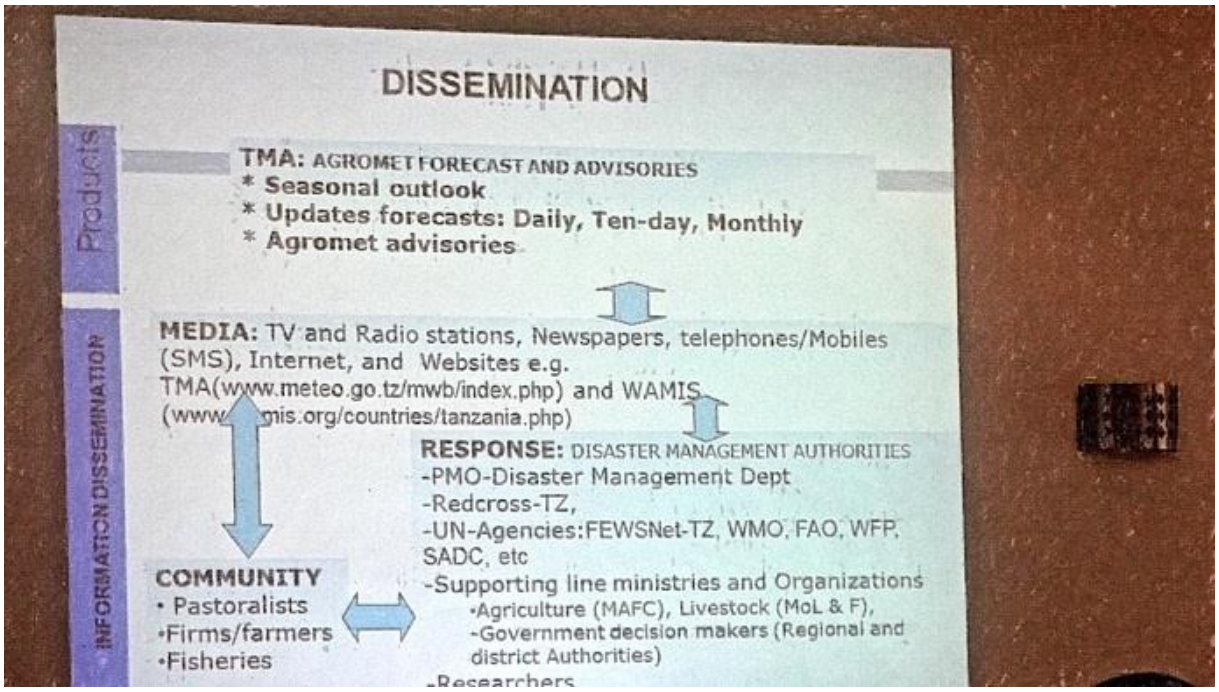
14).[102] It should be clear that for my analysis I am not necessarily interested in the question of whether science is used correctly or not, but rather in how science – while being circulated and translated – produces certain truths. We shall see below that these underpinning strategies can be fairly random and selective, for different actors arrive at conflicting conclusions. All these claims and counterclaims form part of the politics of translation.

Finally Madumi elaborated on TMA's strategy to improve the monitoring and dissemination of climate-change data in the country. They are facing many challenges regarding data collection, as they lack the financial means and do not have enough stations, which impedes accurate measurement and makes countrywide forecasting impossible:

> We have the plan to increase our stations, because the stations that we have are few. We need 108 stations, working on the land, to measure land, wind and rainfall. We are having now 28 that TMA is directing.

He also explained that TMA wants to improve the dissemination of data, which is occurring now only occasionally and with a seasonal outlook. The data are collected at the regional centres and brought back to the national level, so it takes a while before they reach the rest of the country. In addition to the conventional media such as television and newspapers, mobile phones are increasingly being used. Madumi said that they want to find ways to get this information to the pastoralists. He also added that he thinks it is important to include traditional forecasting, and receive feedback from the local level, as he knows that the pastoralists are good forecasters because they have their own traditional forecasting techniques.

[102] In the NAPA it is furthermore concluded that: "An analysis of total annual rainfall for 21 meteorological stations in selected regions of Tanzania indicated that there is a decreasing trend for over 13 stations (61.9%) whereas an increasing rainfall trend was observed over 7 stations (33.33%) and 1 station had almost a constant pattern" (URT, NAPA 2007: 15).



One Maasai man from the audience (with a very low voice) made an important comment:

> We are pastoralists and we know about the rainfall. Even though I did not go to school, we know about the weather. We can look at the birds, at the clouds, so if TMA says it will rain, we may not accept it sometimes. But for this year the information really worked. The Maasai and the pastoralists do not always believe in the information that is given by TMA, because we have our local ways of predicting.

This herder touched upon the heart of the challenges that are brought about by the encounter of different knowledge systems. The question arises regarding under what conditions people accept certain knowledge claims as truth. There are both epistemological and cultural reasons why the Maasai do not easily embrace weather forecasting information from scientific sources (to which I will come back in the next chapters). Whereas science in the context of climate change is circulating as a hegemonic and privileged knowledge regime, it is important to keep in mind that weather information as disseminated by TMA in its current form is not very useful for people living in the northern drylands. As the following question pointed out:

> You have been giving out this prediction and we are getting it. The big problem for the farmers and also the pastoralists is that if you say it will rain, for us, you might predict a big rainfall. Is it possible that you give at least accurate information that if the rainfall will rain it is for how long? For example, you can say four months or three months. Because that is more useful to us, for us who are farmers and pastoralists.

One of the challenges of climate- and weather forecasting for the northern highlands is the fact that the area can be characterized by a high degree of spatial and temporal variability. And the

stations can only predict regionally without differentiating between localities, which makes the information for the pastoralists generally inadequate. Furthermore, these semi-arid regions are subject to both inter- and intra-annual variations in rainfall, which means that rainfall fluctuates not only between years but also during seasons. For the predictions to be of any use they must be much more accurate, in terms of both the temporal and the spatial dimensions. The pastoralists are very well aware of this and therefore prefer to trust their own forecasting techniques. Finally, the visualized form in which the information is cast is often very abstract and too complex to understand for local communities, as one Maasai woman remarked:

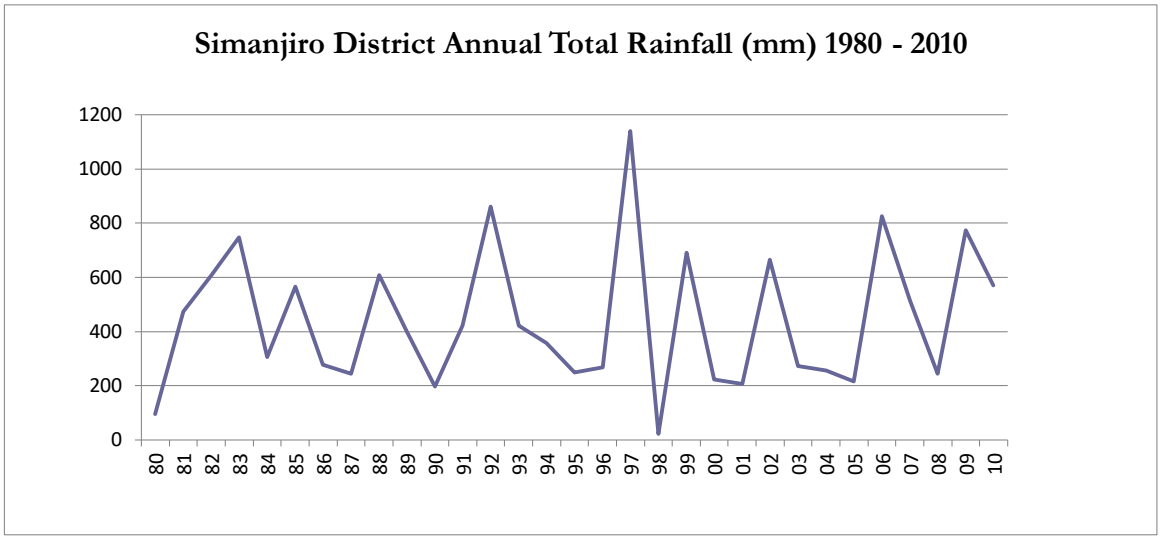
> They should go further to try to simplify at least the ways the chart, the diagram, the pictures – what does it mean? It is sometimes a bit difficult for the pastoralists to understand. It is good that you are giving out information through TV, radio, but there is a problem. Some parts in the country, especially the parts where the pastoralists are found, radio and TV don't reach those places. So we need to be critical and find a way, so there is a need to find a way much more that the information can reach the pastoralists because radio and TV are not found in the interior part.

Nevertheless, there appears to be a certain ambiguity in the way in which the science of climate change (adaptation) is communicated. The visualized abstractions (in the form of facts, figures and graphs) and the level of complexity trigger both a certain fascination and detachment. In the case of the latter, little resonance is found among the pastoralists, and we can observe that in the translation process a disjunction emerges between science and local ways of knowing and relating to the climate.

Elijah

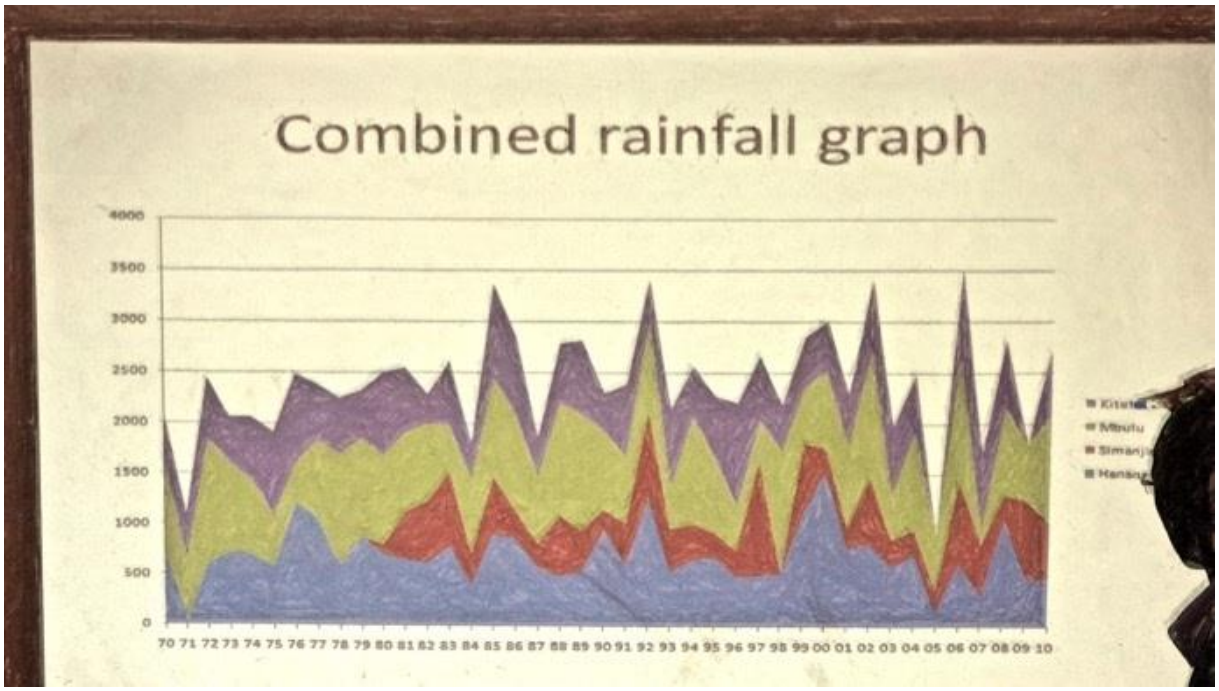
The last presenter was Elijah, who gave a very noteworthy presentation. As a researcher based at the University of Dodoma, Elijah had carried out research in name of an Indigenous CSO. Elijah talked about the study that he and a colleague had been carrying out in different regions inhabited by pastoralists and hunter-gatherers (P&H-G). One of the districts under scrutiny was Simanjiro, and by sheer coincidence, part of their analysis has been the village of Terrat. Elijah summarized the aim of the research, which was to study "the impacts of climate change on land use patterns and on livelihoods of pastoral and hunter-gatherer communities". He shared a graph of annual total rainfall in Simanjiro District:

Figure 5.1: Simanjiro District Annual Total Rainfall (mm) 1980 – 2010



Source: TMA 2012, in Bwagalilo & Mwakipesile 2012: 17

A combined rainfall graph of the different study areas was also displayed in order to illustrate the inherent climate variability of the region. The red line depicts Simanjiro:



Elijah used these graphs to make it clear that rainfall variability is an important characteristic of rangelands, or Arid and Semi-Arid Lands (ASAL) including Hanang and Simanjiro. As a result of this inherent variability, he explained, "pastoralists in these areas have adapted to variations by developing different mechanisms to ensure their resilience".

After clarifying the different methods that were used, which was a combination of both quantitative mapping (using remote sensing, GIS and satellite images of land-use cover) and qualitative techniques (focus group discussions, interviews), Elijah went on to share the main research findings:

> Findings suggest climate change to be an insignificant reason to change of [*sic*] way of living of P&H-G communities. Therefore the impacts discussed refer greatly to climate variability and land-use change rather than climate change per se. […] This study therefore, is aimed at looking at changes that have occurred in land-use plans in P&H-G communities.

Against all alarming predictions the researchers have intentionally put forward "a thoroughly [*sic*] and thoughtful challenge that an ongoing advocacy of the impacts of climate change on P&H-G communities does not balance the reality" (report 2012: 16). It should be mentioned that this research distinguishes itself from the other scientific studies presented above, in the sense that "detached" scientific data have been complemented with more engaged ethnographic fieldwork. Local experiences and perceptions of the pastoralists themselves have been included; hence also social and more localized and contextualized data feature throughout their analysis.[103] After considering both socio-cultural dimensions; land use changes; detailing an extensive literature review about the equilibrium versus non-equilibrium paradigm; and an historical analysis of the adaptation skills of the pastoralists the researchers have come to conclude that:

> […] P&H-G communities have existed in ASAL [Arid and Semi-Arid Lands] for more than three hundred years with climatic variability. Nevertheless, the influence of both internal and external forces like policies and legislations on land and wildlife has placed these communities at more risks [than climate change]. Their livelihood systems' resiliency has decreased significantly following a change in herds' mobility patterns and hunting-gathering patterns, for example as a result of land use and cover change.[104]

Elijah made it clear during the workshop that they are not denying climate change and its worldwide impacts. Their findings support the fact that the pastoralists and hunter-gatherer communities are greatly affected by climate variability, such as the severe drought of 2009. But by the very comprehensive nature of their analysis, the researchers have sought to bring complexity

---

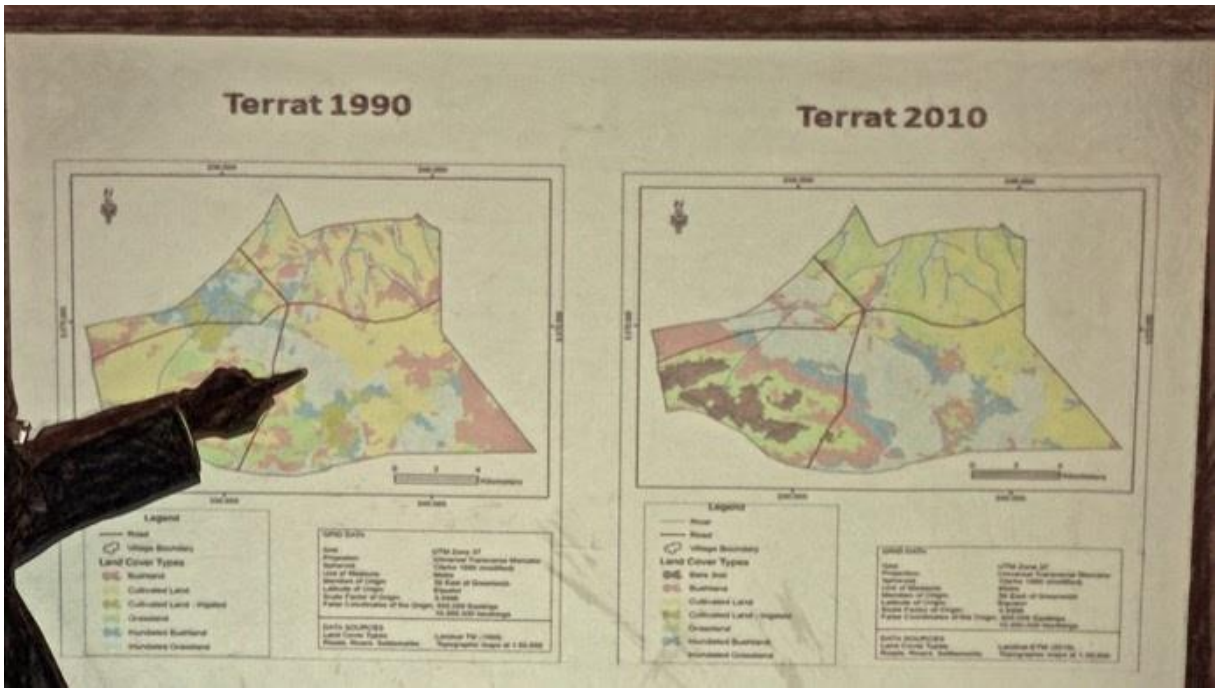
[103] In the research report decision-makers are criticized for largely drawing upon technical expertise without taking local understandings into account. For instance, the expansion of conservation lands has been undertaken without considering the needs of the adjacent communities (Bwagalilo & Mwakipesile 2012: 50).

[104] Another partner NGO in the region has come to a similar conclusion and argues that there are no data to confirm a permanent shift in the patterns and amount of rainfall over the last 30 years. In a training manual for the districts it is written that: "The rainfall variability we are seeing today is not so different to rainfall variability we have seen in the past". Furthermore, it is also acknowledged that rainfall predictions are not very certain in comparison with temperature measurements, for which more confident meteorological data exist (TNRF 2012: 4-5).

into the debate, and their results suspended the singling out of climate change as the primary determining factor of vulnerability. Indeed, their research findings can be read as a critique against climate determinism:

> Nevertheless, it should also be understood that ASAL including Hanang and Simanjiro are characterized by rainfall variability, which is an important characteristic of rangelands. Pastoralists in these areas have therefore adapted to variations by developing different mechanisms to ensure their resiliency. Findings on pastoralists' awareness on [*sic*] the effect of climate change impacts suggest that pastoralists have suffered greatly, however, one factor should not be singled out. There could be more factors perpetuating many challenges facing pastoralists in Tanzania. […] Despite the fact that climate change impacts have negatively affected livelihoods of different communities in the world, it is not the only paramount reason to some areas.

Elijah elucidated how limited access to land has severely impacted upon herd mobility, which in turn led to decreased milk production and impeded herds' resilience. Furthermore, lack of land has forced the pastoralists to sell cattle as a way to adapt to land and water scarcity. Elijah showed the results for changing land cover for Terrat over the period from 1990 until 2010:



Terrat Village Land Cover 1990 – 2010 in percentage

Land Use/ Cover Types	Coverage				Cover Change	
	1990		2010		1990-2011	
	Ha	%	Ha	%	Ha	%
Bare Soil (brown)		0	2,540	13	2,540	13
Bushland (pink)	4,268	21	2,360	12	-1,908	-10
Cultivated Land (yellow)	7,961	40	4,782	24	-3,179	-16

Cultivated Land Irrigated (dark green)	1,011				-1,011	0
Grassland (light green)	2,150	11	3,811	19	1,661	8
Inundated Bushland (dark blue)	1,157	6	5,219	26	4,062	20
Inundated Grassland (light blue)	3,321	17	1,156	6	-2,165	-11
Total	19,868	100	19,868	100		

Source: UDSM-IRA 2012, in Bwagalilo & Mwakipesile 2012: 41

Elijah explained that the land-use cover changes in Terrat are somehow shrouded in mystery, since there has been biofuel plantation (Jatropha) expansion and also the establishment of private ranches, making it fairly unclear whether grassland and cultivated land have increased or decreased. Another factor that is important to take into account – beyond these satellite images that clearly always reduce complexity – is that Terrat forms a breeding ground for wildlife, which makes the area for a large part of the year inaccessible for cattle (I will come back to this point in chapter 7). Godson, a Maasai man from Terrat, took the floor to correct some of the conclusions and to give more details to the satellite images as presented:

> On the pictures the blue land is demarcated for pastoralists but we should not forget that the same area is not only for cattle but it is being used by a lot of wild animals, because we are close to Tarangire [national park]. So conservationists consider this to be part of their breeding ground. […] Also in 1990 there were no trees in that area, only grasses, and even when a lion came there was no place to protect yourself. Trees were uprooted to combat the tsetse fly. Now we see a lot of regrowth of the trees in Terrat. Perhaps there is a way to make it clear in the picture.

In line with Godson, some other pastoralists followed and added an extraordinary amount of localized data and information about soil type, grasses, trees, seeds, etc. etc. What Godson and others tried to do was to "add reality" to the colourful abstractions depicted in these satellite-produced representations. The researchers thanked Godson for his clarification, and added that this kind of information is really important for them. The researchers concluded that the main factors that have contributed to land use and cover change in the study areas – as their findings suggests – are climate variability, population growth and (in other localities) also the expansion of agriculture. They found that these changes are likely to affect P&H-G communities in several ways "including food security, way of life as well as peace and tranquillity". As Elijah explained, P&H-G communities are victims of agricultural expansion because their land is taken to be idle land (while it is actually being used or left fallow for grazing). This has resulted in the establishment of farms at the expense of pastoral land. The expansion has involved rapid clearance of forest, and also – "as we all know" – rapid and uncontrolled grabbing of land. Elijah concluded by reiterating their main conclusion:

> Climate change currently has emerged as a reason for many impacts on many aspects that threaten human existence on earth. Literatures and facts are put forward to prove the same as well as documentaries to support the same. Nevertheless, climate change alone cannot be established as a sole fugitive to [*sic*] crime against earth and survival of human being on earth. There are bunch of reasons to why the survival of human on earth is at threat [*sic*] and yet does not receive a big attention compared to climate change.

In line with their findings therefore, the recommendations regarding adaptation to climate change are rather cast in the more encompassing language of "human rights", including the securing of land rights. The report stresses that without the protection of land rights of indigenous communities, human rights violations will continue to take place in the form of massive land grabs. In a similar vein, other proposed solutions relate more broadly to the political economy and address the structural inequalities entailed by it, such as the political will to solve land issues, creating a conducive environment for an effective dialogue between policy makers and land users, and control the rapid agricultural expansion. Finally, this study proposes to mainstream land use cover changes as a priority into the Forum's programmes with the aim to "guarantee tapping of local experiences in addressing the impact of climate variability to P&H-G communities in ASAL" (Bwagalilo & Mwakipesile 2012: 51).

The way ahead

After Elijah's fairly unconventional and surprising talk it was time for the three districts to present their experiences with the adaptation project during the preparatory phase of the project. An important finding that was shared by all three districts was their experience of the conflicting ways in which the national government operates (slow, centralized and rigid mechanisms) and how the communities themselves adapt to the climate (highly flexible). For instance, local government authorities gather community opinions through a process called Opportunities and Obstacles for Development (O&OD). This meeting usually takes place in July and marks the beginning of the annual government planning and budgeting cycle. This is in contrast to community planning, which begins usually before the onset of the wet season in October and after that adjusts throughout the year, responding to the changing nature of the season (IIED April 2015). They all complained that the inflexible government planning mechanisms undermine the overall resilience of the districts. For example, the district officials explained that during the drought of 2009 the money from the national government came very late because it follows a pre-fixed budgeting cycle. Therefore, one of the aims of this workshop was to find ways to devolve climate finances to the respective districts, which is in turn an attempt to create more autonomy. As a colleague of Joseph lamented:

> The districts do not have enough authority and autonomy to modify plans and budgets once they have been approved, so they cannot make flexible decisions. But farmers and pastoralists just look at the climate: is it going to rain, or is it not going to rain?

Another contradiction between the two planning systems, as one participant from the districts made clear, is that one of the greatest adaptation strengths of the social system of the pastoralists is mobility:

> The social system and the government system on how to deal with adaptation are not matching. For example, the issue of mobility, the pastoralists cannot just stay in one place while the things are getting worse, so they keep on moving from place to place. So the issue of moving, a nomadic way of life, and the government plans cannot be put there so that is where the contradiction arises with this system of adapting to climate change. […] The plans of the government cannot be changed very easily; there is permission needed for changes to be made, while the social systems can change every time depending on the weather conditions.

In fact, during the learning group sessions (consisting of 25 members) a consensus was reached among the district members that the pastoralists are actually mastering adaptation to climate change, and that their livelihoods can be very resilient. As a member from the Monduli learning group remarked: "The big thing that we have learnt here is that the pastoralists are capable of curbing the challenges of climate change". The major problem that has been identified lies rather in the rigid government planning structure, which is not designed to capture the complexity of pastoral livelihoods. Hence, the proposed way ahead for the Adaptation project has been to find ways to bridge the planning gap by finding ways to draw down finance from national funds (cf. IIED 2015). The financial strategy that has been put forward is to create an Adaptation Fund – a decentralized and discretionary budget to support climate change – that will be under the control of the district, for which no permission from the national government is needed. One of the project coordinators, Sam (on behalf of Joseph and his colleagues) gave the last overview of the state of the project. He concluded by stating that:

> The objective is not to invest in Adaptation. But why? Adaptation is in order to build strong economies and livelihoods to address poverty and build economic value. That is all that we are looking at. We need to be able to demonstrate that investing in Adaptation is worthwhile. Then the Adaptation Funds that are available that we saw this morning that is available at the global level with various global actors they become more accessible. We also hope that this will demonstrate the benefits of channelling national climate adaptation funds down to the districts.

One district official also mentioned that: "Climate change is not an environmental issue, but a development issue that is why we need to mainstream it within our development planning." Indeed, I believe that there are many good reasons to argue that Adaptation has gained status as a new development narrative, which with all its discursive power shapes and is shaped by an array

of different actors who all seek to pursue their very own development goals and strategies (see Roe 1991).

Concluding reflections

By employing a microscopic analysis of the translation of Adaptation in the interstitial spaces in northern Tanzania, I have sought to bring to life the manifold ways in which this new narrative in the making unfolds and is enacted. The workshop has served as a window to look into the different practices and representational techniques that are used in a variety of ways by different actors and ideational communities. As such, it has given us insight into how the network is expanded, and how old ties are reinforced between actors that already cooperated in the past. I have demonstrated how the encompassing nature of the Adaptation to climate change discourse can strategically be used as a way of relabelling old fashions and development goals and projects. Hence, as is generally the case with development projects that are informed by transnational paradigms and newly available funds, it enables actors on the ground to support their own interests and pursue particular aims so as to safeguard their existence. This is also made possible due to the uncertainty of climate-change science, and the many opposing claims that have come to occupy the debate. Furthermore, I have given attention to the way in which science circulates and in this process appears to be fairly flexible, for it can randomly and strategically be used to support opposing and contrasting truth claims. It became clear that experts and policy-makers have a tendency to "render Adaptation technical", whereby the Maasai are by and large portrayed as innately vulnerable or as "victims of climate change". This needs to be considered as a political act in itself, because it masks the systemic injustices and a long history of marginalization that form part of the broader political economy and the Maasai predicament. Therefore, the fact that an umbrella CSO has refused to single out climate change as the paramount cause for the vulnerability of the Maasai – by bringing back the politics of land use – can be understood as a strategic counternarrative.

While situating the workshop explicitly in a particular time and place, I have similarly tried to do justice to both historical continuities and discontinuities – in relation to older travelling ideas - that can be observed in the process of translating Adaptation. Over the years, experts (local NGO workers and visionary leaders such as Joseph) have acquired skilled practices that enable them to draw on a particularly useful rhetoric, while discarding a vocabulary that aggravated existing tensions between the pastoralists and the national government in the past. What is even more striking is that the voices from the grassroots attest to a general reluctance to accept climate change as a key driver of change and vulnerability. As Adam's and Rehema's account reveal,

these “grassroots” Maasai are not so impressed by the alleged looming climate-change crisis that is generally cast in the language of an ever-more catastrophic future. It is not the climate that they fear, but rather land alienations that have been made possible by their own national government. Although Adam and Rehema are given a platform to voice their concerns, it is hard to tell whether their voices matter and are actually “being heard” or whether they occupy a mere symbolic role. Only contingent forces and unforeseen political processes will tell whether this new narrative in the making will leverage change in their eternal struggle for autonomy and recognition of their rights and control over land.

6

To See or not To See

On Climate Change and Epistemology

Glossary of Maa words[105]

Eleenore	Exploration of grazing areas by the young men
Emanyata	Warriors' village
Emooto	To cope with difficult circumstances (loosely translates as "to adapt")
Endito	Young, unmarried girl (pl. *intoyie*)
Eng'ai	God, rain, sky/ heaven
Engijape	Air (direct translation means air, but it can also include clouds, winds, weather, temperature)
Engolong	Sun
Engop	Earth/ soil/ ground
Engibelekeny	Change
Enkang'	Homestead (often referred to as *Boma*, the Swahili term)
Enkanyit	Mutual respect
Ewoi aang'	Environment around the *boma* (it does not capture the "environment" as we know it)
Ilang'eni	People who are knowledgeable about weather forecasting
Imbaalon	Lambs
Ilopir	Clouds that appear at the end of the dry season
Irkisirat	Summer (or *vuli* in Swahili)
Koko	Grandmother (*Bibi* in Swahili)
Kurumari	This is best translated as "winter" because it is relatively cold (*kipupwe* in Swahili)
Lengare	Water (or *L'enkare*)
Lolodoendolit	Red bone marrows
Olaigwanani	Traditional Maasai leader (elected by the community)
Olaimg'ang'a	Sky

[105] Here I follow Maasai orthography, but there are dialectic variations. Some words in Terrat are pronounced differently, for instance, *olaigwanani* is pronounced as *alaigwanani*. Also pronounced with an a are *alari*, *aileilili* and *alamei*.

Olaji	Age set/ grade (pl. *ilajijik*)
Olamei	Dry season (*kiangazi* in Swahili)
Olari	Year (and also denotes the long rainy season, or *Masika* in Swahili)
Oleilili	Dry-season reserve
Olmorani	Warrior (pl. *Illmuran*)
Oloiboni	Traditional spiritual healer and diviner
Oltau	Soul, spirit
Orkujita	Grasses
Osiwo	Strong winds
Shumata	Heaven

Terrat in the rainy season, picture taken by author

Introduction

> In the prairies of Alberta, Canada, winters are cold, wood is scarce. This is a place that is home to Native Indians – many of them are well educated nowadays. One summer, a young Indian Chief, college-educated, but incapable of reading the signs of Mother Nature, was asked by his people how cold the next winter would be. Embarrassed about not having mastered the traditional skills for predicting the weather, and to be on the safe side, he just said to his people: "Well, I think this will be a pretty cold winter this year". He then sought help from his college friend, a meteorologist at the local Weather Channel station. "Tell me, Michael, don't you think we are facing a cold winter this year?" Equally unable to predict the weather so far ahead, and also to be on the safe side, Michael the meteorologist confirmed the Chief's opinion: "Yes, you may be right, Chief. This winter could turn out to be pretty cold". Happy about this confirmation the Chief went back to his people and confidently declared: "I see signs that the next winter will be pretty cold – let's start collecting wood now". And so the Indians started to collect wood along the few rivers. As autumn neared, the young Chief returned to the meteorologist and asked: "Michael, now that winter is getting closer, how cold do you think will it be this year?" – "Oh, I think this will be a really cold winter", came the answer. So the Chief went back to his people and announced: "Folks, this year, I know, the winter will be particularly cold – let's all join forces to collect as much wood as we can". A few weeks later the Chief asked his meteorologist friend for a more accurate prediction of the winter. The meteorologist answered: "I am certain this will be an extremely cold winter!" Back with his people, the Chief announced: "People – I have signs that this winter will be so cold that none of our fathers, as long as our memory reaches, have encountered. Let's collect all the wood we can find!" Just before the winter the Chief consulted his meteorologist friend again, and the meteorologist told him: "This is going to be a record-breaking winter!" Curious about his certainty, the Indian Chief asked: "Michael, tell me, how do you know this?" To which the meteorologist replied: "You know, my friend, I have never seen this before: all the Native Americans have been collecting wood like crazy this year" (adopted from Huang 2013: 415-416).[106]

While intended somewhat jokingly by the storyteller, I believe there is a striking truth about this "folktale of the Indian and the meteorologist" in the context of this study. It captures vividly the positive-feedback cycle that is possibly incited by the global circulation of climate-change discourses and scientific information. And, as will be argued here, there are many good reasons to believe that anthropological climate-change studies are part and parcel of, and to some extent also nourishing, this corroborative chain. I remember my research assistant's reply after I had asked her on the phone, upon my return from the field, how she was doing: "We are doing fine, but we are really suffering from climate change." Her answer had triggered some discomfort about the traces that I had left, as she was unaware of the phenomenon of climate change before we had met. The point here is only partly a constructivist one – in the sense that we use language to give meaning to and create the world. In other words, once we have the discursive frame of

[106] There are many different versions of this story found online and it is difficult to trace the original source, but it is circulating as some sort of modern folktale or "weather joke".

"global warming" at hand, we can begin to see the world through this lens. But the issues that are at stake here are also about *representation* and translation. A tricky epistemological dilemma that arises in this context, which has occupied the anthropology of climate change for a while now, is the question how our informants can know about climate change. It is important to note here that the epistemological practices of "remote" communities in the Global South are by and large treated in a radically different way (acquired solely through observation) from the ways in which people in the Global North accumulate their knowledge (through reception). Inspired by the work of Rudiak-Gould, in this chapter I wish to advance the argument that in this increasingly mediated and connected world, it is a timely exercise to dismantle this divide. Another question (which has received less attention) is: what role does the ethnographer play in the representational practices, which unavoidably form the basis of these truth-claims? And are the "global" or *etic* categories (often advanced in the language of crisis and catastrophe) that we have at hand well equipped to accurately describe and do justice to local realities? Indeed, these questions might very well bring us back to the older debate that held anthropology in sway in the 80s, which came to be known as the *Writing Culture* debate, to which I will return only briefly below.

A sharp reader has perhaps already observed the similarities between Leboi's story at the beginning of this manuscript and that of the well-educated Indian Chief. When Leboi (among others) was asked to share his own local weather observations on an international platform it was taken as "evidence" of climate change, with him being a representative of the "grassroots" and "nature-bound" people. The rationale behind organizing a public hearing on grassroots climate testimonies was based on exactly the idea that "environmentally-savvy" people, who live close to and are directly dependent on nature, know what they are talking about when they talk about climate change. For their long-standing knowledge is built on ancestral wisdom, and moreover, unlike "detached" urban Westerners who have lost touch with Mother Nature, grassroots people have by and large "ecologically trained" senses. So the argument goes.[107] Yet crucial here for our

[107] Even though this take on the difference between these knowledge-making traditions is exaggerated here, it is not uncommon to find such general statements about indigenous knowledge as opposed to science. Of course, the reverse argument – that science is superior to indigenous knowledge – is more often pursued, as science forms the basis of all IPCC reports etc. (Even though this is changing since there is an increasing appreciation of incorporating indigenous approaches into scientific reports such as the IPCC). Yet, as anthropologist Kirsten Hastrup has also pointed out, since the increasing interest in knowledge-making as a field of inquiry (testified by the success of science studies), the uneasiness with this opposition has grown (Hastrup 2015: 140). See also Julie Cruikshank's work on the Arctic in which she debunks this stark opposition between scientific and indigenous knowledge (e.g. Cruikshank 2007). As mentioned in the previous chapter, a landmark attempt to dismantle the divide between indigenous and scientific knowledge has already been proposed by Arun Agrawal, when the notion of indigenous knowledge became "a glamorous phrase" within development thinking (Agrawal 1995).

understanding of Leboi's account is that prior to the meeting, the information about this phenomenon had already reached him. Just like the Indian Chief, considering the fact that Leboi featured in several educational programs, we can assume that during that time he was already fairly well educated about climate change. Thus being exposed to scientific information Leboi inevitably embarked on a process of reception, here understood as "the uptake of scientific theories, measurements, and predictions of global warming as disseminated by journalists, teachers, government officials, and other science communicators" (Rudiak-Gould 2014a: 75). This is not to say that his account at the conference was necessarily untruthful; but the point here is rather that these allegedly disparate knowledge systems are increasingly entangled, and should thus – when deemed necessary – be treated as such.

This is not to say that people cannot know their climates (or environments) directly. By proposing a theory of direct perception Tim Ingold has criticized such a "cognitivist account of perception" – which holds that people can only know and act upon their environment indirectly through the medium of cultural representations – the roots of which lie, according to Ingold, in a Western dualistic worldview. He proposes an alternative theory of perception by introducing the notion of mutualism (as a continuous intercourse between a person and the environment), which in very general terms he refers to as "the life process". According to Ingold, a person can in fact acquire direct knowledge of his environment in the course of his practical activities (Ingold 2000: 39-40). While I embrace Ingold's phenomenological take, the point here is related to knowing *climate change* directly, which is of a different nature than knowing the environment. The difference lies in the type of knowledge that is generated. To give just one example, the statement "it is raining" is a first-order observation; but to say "this is climate change" is inevitably a second-order observation for nobody can say with certainty if and when a particular weather event or climatic manifestation falls under (human-induced) climate change. I believe therefore, that there are good reasons for anthropologists to be wary of contributing to this positive-feedback-cycle, as in the "folktale of the Indian and the meteorologist". This caution is important for reasons that I wish to make clear throughout this chapter. One point of interest that is worth mentioning here, and which is due to the overall focus on observation, is that the anthropology of climate change has positioned itself initially as a subfield of environmental anthropology. This has brought about a research paradigm that treats global warming mainly as a local ecologically experienced hazard, rather than as a globally disseminated idea or discourse (Rudiak-Gould 2011).

In this regard I share Kirsten Hastrup's (2015) uneasiness with the current engagement of anthropology with the climate that seems to include "a rather strange return to a kind of holism", in which traditional knowledge is treated as an immutable and bounded system (Hastrup 2015: 146). Therefore, she proposes to replace the old-fashioned concept "local", so well-known to anthropologists, with the notion of "located" knowledge that denotes the entanglement of place and epistemic practices. Particularly vital is her observation that we need to get away from both puzzle-solving (the unproductive residue from twentieth century anthropology) as well as casting people as mere victims; and instead we should aim to contribute to demonstrate how different perspectives and practices of place may *locate* climate change differently (ibid). And she rightly remarks: […] "today we realize that all worldviews are plastic and continuously incorporating – and *locating* – knowledge coming from elsewhere, along with new patterns of weather and wind, for instance" (Hastrup 2015: 143). Nevertheless, while there seems to be indeed a burgeoning realization of the fact that cultures and related knowledge practices do not emerge in static and autonomous ways, there is also enough evidence within the climate-change literature that to a large extent they are still treated as such. As we learn from Rudiak-Gould for example, there are largely two sources through which people can gain knowledge about climate change. The first is through direct observation (with the naked senses) that can be interpreted as being linked to climate change, and the second is by the reception of information as mentioned above (Rudiak-Gould 2011; 2014). In this context he has called to attention that, while the majority of studies dealing with so-called "frontline communities" focus on observation, and only some on reception, there is very little research carried out on the interaction between the two (Rudiak-Gould 2014a: 75). Particularly within anthropology there is a tendency to focus on observation studies, in which local observations by communities in the Global South are by and large taken as a direct proof of climate change (e.g. Crate 2008; Crate & Nuttal 2009). In the following analysis we shall incorporate both observation and reception dimensions, for they mutually influence and are co-constitutive of each other.[108]

[108] Rudiak-Gould has also demonstrated in his work in the Marshall Islands that reception does have a significant influence on people's perceptions of climate change (2013b; 2014a). In a similar vein, the asymmetries regarding media coverage and people's concern for global environmental problems also came to the fore in the ethnographic research carried out by the research team of the *Climate Worlds* project (see Greschke 2015). In my work on the Bamenda Grassfields in Cameroon I have come to a similar conclusion that people who are more exposed to discourses of global warming are more prone to talking about it and thus observing it (de Wit 2015).

Another important aspect that is touched upon by the "folktale of the Indian and the meteorologist" is the parallel struggle that both scientists and "environmentally savvy" people are confronted with in their pursuit to "know" and predict the weather and the climate. Whereas both knowledge systems are perhaps grounded upon different ontological principles, the climate, let alone climate change, barely allows itself to be known and understood. This holds particularly true for the Simanjiro plains, of which Terrat village forms a part, as it is characterized by climatic conditions that are spatially and temporally highly variable and unpredictable (McCabe 2003). The Maasai agro-pastoralists of Terrat are very well aware of this, yet they have their own detailed environmental knowledge and ways of forecasting the weather (for examples of weather forecasting indicators see box 6.1 and 6.2). The story of Leboi continues in this chapter, in which the deeper layers that underpin his climate-change testimony will be uncovered. It will be argued that in order to make sense of his translation and interpretation of climate change – and that of his fellow Maasai villagers who were generally less cognizant of climate change – we need to gain insight into Terrat's "interpretive context". In other words, if we wish to understand how the novel idea or worldview of climate change travels and is translated, a thorough understanding of the new place in which it takes root, or is refuted, will prove fruitful. It is this vital conjuncture where different worldviews meet – a space to manoeuvre in which seemingly disparate horizons fuse or rather confuse in their encounter – that forms the focus of analysis here. At the heart of these encounters always lies a moment of translation; this process (in its comprehensive sense, see methods chapter) lies at the basis of what this chapter seeks to explore. Therefore, the leading question here is a deceivingly simple one: How is climate change translated in Terrat village? Being aware of the fact that I cannot exhaust all the constituents of the "interpretive context" of Terrat village, I will limit myself to some basic structural dimensions that came to the fore during my fieldwork, which I deem essential here for the analysis.

Box 6.1 Weather forecasting methods of the Maasai in Terrat used by the *ilang'eni* (people who have a particular knowledge about the environment and are skilled in interpreting weather signs)

Strong winds:	[*Osiwo*] This is a type of strong wind that can be used to predict rainfall.
Flowering plants:	When plants start to blossom and give out flowers in the dry season it signifies that rainfall is near. [*Olekitelyan*] This plant only grows when the dry season is ending. It is not appearing in the rainy season. When it first appears people will say: "grace is not far", and speak about the approaching rainfall.

Clouds:	[*Ilopir*] When this type of cloud appears people know that the end of the dry season is approaching and that rainfall is very near. Different types of clouds have different levels of predictability. (See box 6.2 for a typology of different clouds.)

Shape of the moon:	Only during the rainy season does the moon have predictive value. The first, second or third day of appearance the moon is interrogated. When it bends like the horn of a cow [*irmowarak*] – as if a bowl of water is pouring – it indicates that rainfall is approaching.
Star:	[*Ingakua*] A star that disappears on the 25th of May after a loud thunderstorm. That is the last sound of the year to be heard in the sky. When the star goes down the rain ceases. After 7 days of not being seen the star appears again on the 8th day on the other side and remains until the next year to announce the rainy season again. The end of this spring rains coincides with the disappearance from the Pleiades cluster of stars. No ceremonies shall be mounted until the cluster has reappeared at dawn (see also Spencer 2003: 72).
Animals:	Great and reliable sources of prediction are the animals. For example, when the cattle give out faeces and urinate while they sleep and are lying down a lot, one can be sure that the coming year will be bad. When a cow sleeps with its front legs straight the year is (or will be) bad. (Even though the environment is still profitable and there are sufficient green pastures). Furthermore, when the calves don't run to their mothers and the bulls abstain from fighting, this predicts a bad year. Reversed, when the cows express happiness, and the bulls are fighting – despite the fact that there are no pastures – a good year is ahead. Also when the goats and donkeys are crying a lot it is a sign that a bad year is ahead.

Box 6.2 Typology of clouds [*Ilopir*] with varying levels of predictability

There are different types of *Ilopir*:

1. Altatwani	Is the most reliable type of cloud and appears in the west and is said to come from the Atlantic Ocean. This cloud never lies, which means that when it appears one can be sure that the rains are approaching.
2. Olorkeri	Also appears from the Atlantic Ocean but in the southern part.
3. Olengaresero	Appears in the northwestern part from the strong heating of the Atlantic Ocean.
4. Arpalakangai	Appears in the East and is the result of strong heating of the air above the Indian Ocean. This cloud (or group of clouds) has also a high predictability. It is trusted by most people and signifies that the rains will not be late this year.
5. Larkaria	Also appears in the east and comes from the heating of the Indian Ocean. Many people do not have faith in this cloud and that is where it derives its name from, which means liar. This means that the cloud may appear but the rains may not come.

6. Engatambo	A type of white cloud that indicates that the rainy season is about to end. The whiteness tells that the cloud does not host any rain, and only very little rainfall will follow before the rainy season is really over.

First, we shall explore the ways in which climate change evokes stories of declining cultural values. Secondly, drawing upon Hastrup's supposition that we need to focus on "the entanglement of epistemic practices and place", we shall briefly touch upon some basic environmental and climatic features of the area and how this relates to people's perception of risk. Thirdly, and inextricably linked to environmental issues, are the ways in which people relate to and perceive the climate, which can be understood through cultural and ontological horizons by exploring religious beliefs and practices. The deeply engrained conviction that the domains of the sky and rainfall belong to *Eng'ai*, the Maasai's (predominantly) female deity, forms the most essential fundament for how climate change is translated in Terrat (for an overview of different names that exist for *Eng'ai* see box 8.6 in chapter eight). As part of the epistemological quest for understanding the reception of climate change, we need an insight into the linguistic practices that are entailed by translating climate change, to which I will now turn.

On linguistic translation and the struggle over meaning

The process of translation of the idea of climate change to northern Tanzania entails many challenges, first of all because there is no widely accepted language for it in *Maa* yet. In order for climate change to be understood, a double translation is needed: from English, to Swahili, and then into Maa – a translation challenge that thus finds expression in the linguistic struggles over meaning-making. The term *climate* stems from Greek – *Klima* – and means slope or inclination. It refers to the inclination of the earth in relation to the sun. Originally, the climate was seen only as the result of the latitude, and thus the position or height of the sun at the horizon (Fleming 1998: 11).[109] Scientifically, in its most basic sense, climate is defined as "the average weather in an area over a long period of time" (calculations are based on conditions over a 30 year-period, WMO). Also in its contemporary usage the term *climate* has come to occupy a meaning that solely refers to statistical descriptions and atmospheric proxies. However, as Fleming and Jankovic demonstrate, if we consider the term historically it appears that the description of the climate as solely an index and indicator of weather trends is rather an anomaly. They argue that such a

[109] For a historical overview of different ways in which humans have come to understand the climate in Europe and America since the Enlightenment, see the work of Fleming 1998.

definition of the climate only holds validity in relation to an "instrumental, quantitative and weather-biased understanding of the atmosphere". Outside this context the climate has been more often defined as something that *does* rather than what *is* (Fleming & Jankovic 2011: 1-2). This shift in meaning from a biophysical description ('is') to something that can act ('do') has important implications for the notion of agency. For instance, the Swahili translation for "it is going to rain" is *mvua* (rain) *inataka* (wants or wishes to) *kuenyesha* (fall), which literally means: "it wants to rain". In this case "it", or nature, is the agentive force. Let us now consider the fascinating linguistic journey of the idea of climate change from English into official Swahili and then into the vernacular expression.

The official Swahili term for climate change – *mabadiliko ya tabianchi (or tabia ya nchi)* – is a highly technical one that remains largely incomprehensible to native Swahili speakers. A literal translation means something like "changes (*mabadiliko*) in the habits or behaviour (*ya tabia*) of the country/ land/ soil *(nchi*)". However, this literal translation does not capture its technical meaning because *tabianchi* simply means climate. Even at the Institute of Kiswahili Research at the University of Dar es Salaam a group of teachers told me that they found it difficult to make sense of the term, and expressed that the term is too technical for many people to understand. They also could not tell me the source of the term, as they had all grown up with it. In the TUKI dictionary of Swahili, the translation for climate is "*tabia ya nchi*" (*yaani joto* (heat), *baridi* (cold), *upepo* (wind), *mvua* (rain) TUKI 2006: 141). A more widely used and better-understood term (in daily conversations, both also often used in media and during workshops) is *mabadiliko ya hali ya hewa. Hali* means condition or situation and *hewa* means air, but *hali ya hewa* combined refers to the weather. At times these two expressions were also mixed, which resulted in the term *mabadiliko ya hali ya nchi* (freely translated as a change in the condition of the country/ land/ soil). For Terrat the situation is even more challenging, because only a part of the population understands Swahili.

As is always the case with languages, but all the more prominently in formerly colonized nations of the world, the ways in which languages develop and become official and hegemonic systems of expression reflect historical and political trajectories of domination and subjugation. As Wisner and others (Wisner *et al.* 2012) also point out in the context of Tanzania, the Swahilization of society has become a political practice in itself, and the highly technical coinage of Swahili terms for *climate change* is a testimony to this top-down creation that carries the superior knowledge and

authority of the Tanzanian state.[110] They write that "while the political project died by the time Tanzania had abandoned *ujamaa* in the 1990s, the effects had already penetrated deeply into society; so linguistics survived but only serving a new master". Based on a combined research effort, in which it became clear that only a tiny percentage of the population is familiar with the term *mabadiliko ya tabianchi* – the authors conclude that the translation of the term climate change has been targeted at Swahili-speaking bureaucrats; a Swahilization of the term has taken place, but the discourse has not been localized (Wisner *et al.* 2012: 10). My own research findings in Terrat underpin their conclusion, and only a handful of people were familiar with the official term.

For the case of Maasailand this lack of "localization" holds even truer, as for many people Swahili remains the language of the elite and the educated. How then does one meaningfully translate *climate change* into the Maa language? The contestation over an accurate linguistic translation from Swahili into Maa reveals that there is more at stake than merely a talk about a changing atmospheric reality; and rather attests to the ontological politics that are brought into being by the arrival of a new global discourse. One advantage of the fact that the term *climate change* has not yet been widely translated into Maa, at least for our analysis, is that it enabled us to know whether or not somebody had already received information about climate change. In other words, if our informants had never heard about the terms "*mabadiliko ya tabianchi*" or "*mabadiliko ya hali ya hewa*" before, we would be confident that climate change as a scientific notion was still alien to them. However, a methodological challenge emerged, for how can one ask about a changing climate if there is no language for it at hand? To overcome this dilemma, we resorted to querying different indicators, such as rain (*Eng'ai* or *engan* – a semantic goldmine, for it has the same word as the supreme being, a remarkable observation to which I will come back in chapter 8); or the environment more generally (in Swahili the term *mazingira* was known to many people, but of course does not capture the climate dimensions well, so it evoked other observations); or the different seasons that exist in Maa (*irkisirat, olari, kurumari,* or *olamei*).

While according to my knowledge there is no official term for climate change in the Maa language yet, there have been some translation attempts by the people working at the radio station in Terrat. One term that was coined by a documentary maker was: *engibelekenyata* (change) *engijape* (air) *engop* (earth/ ground). This was the term that was used in videos and for educational purposes. Yet, according to many informants this translation in Maa is not appropriate, for it is a too literal translation from Swahili, which does not do justice to the idiosyncracies of the Maa

[110] Since independence in 1961, Tanganyika (and from 1964 united with Zanzibar, Tanzania) the Swahilization process (a vigorous policy of making Swahili an official and vernacular lingua franca) was part and parcel of the construction of a socialist vision of an *ujamaa* society (Wisner *et al.* 2012).

language and culture. Here we are at the heart of every the translation dilemma, for there is no language or culture perfectly commensurable. In this context, anthropologist Rudiak-Gould argues that climate change communication is ultimately a matter of translation, even within the same language and culture (for example from experts to a lay audience). Drawing on translation theory, the author has demonstrated that the translation challenge consists essentially in the inevitable trade-off between fidelity (to the source text) on the one hand and transparency (to the target audience) on the other (Rudiak-Gould 2011). Adhering to either one of these strategies comes at the expense of the other, as became visible in the abovementioned example. The translated term for climate change in Maa is so close to the original text in Swahili that it has become incomprehensible to the target audience. Before bringing to attention the larger epistemological and ontological debates to which this chapter seeks to contribute, let us first follow Leboi to Terrat so that we gain a snapshot impression of the study site.

Leboi with his herd in Terrat (in *ewas*).

Vignette

"Leboi's revelation"[111]

From the "folktale of the Indian and the meteorologist" we move on to a similar anecdote, taken from my own fieldwork, which I have named "Leboi's revelation". In this *vignette* – or empirical episode – I want to shed light on the questions of why some ideas do not travel, and why some ideas that do travel are picked up and welcomed, while others might be looked at indifferently or are even refuted. More specifically, I will explore the possible reasons for why the idea of climate change is wholeheartedly embraced by several actors along the translation chain from international to regional actors, until it reaches the village of Terrat in Maasailand where it is not conspicuously present, and (parts of) the discourse are by and large even rejected. This void has fascinated me in my fieldwork ever since I was confronted with the absence of that which I was looking for, at least as far as Maasailand was concerned. Climate-change discourses were omnipresent throughout Tanzania, and regularly found on the radio, in newspapers and in daily talk. Yet, I hardly encountered any traces of climate change narratives in Terrat. I will explore this conundrum by continuing the journey that began in Dar es Salaam. After attending the international meeting, in which pastoralist Leboi featured prominently as a climate-change witness, he brought the message back home to the village, to which I followed him. My choice to do research in Terrat village was mainly guided by preliminary online research. Yet, during this digital engine search for climate-change-related projects in Maasailand in Tanzania, I realized that they were fairly rare, or at least hard to find online. Being aware of some NGO work that had already been done on climate change, and of a radio station that broadcasted environmental programs, Terrat promised all the appealing features for an interesting research site. *Orkonerei Radio Station* (O.R.S.) is located in Terrat and is the only nationwide radio station that – in addition to Swahili – broadcasts programs in the Maa language, which was another major factor of appeal for carrying out my fieldwork there. It was the meeting with Leboi and traditional leader Meshak in Dar es Salaam that strengthened my decision to carry out my fieldwork there, and which sparked my curiosity further. What brought these two men to travel all the way to this international conference to talk about climate change? It must be of pressing concern to them, I thought.

[111] A shortened version of this vignette has been presented as a conference paper at the second results conference of the SPP1448, which took place in October 2014 in Saly, Senegal. It was subsequently bundled with other conference papers as a joint working paper, see: de Wit (2015) in Gebauer (ed.), pp. 6-10.

Eager to find out how climate change discourses were translated at the "local" level, I set out on my journey to the breathtakingly beautiful plains of Maasailand in the Simanjiro plains, soon to realize that climate change – both as a scientific discourse and a physical observation – was not so much part of peoples' daily concerns and talk. Crucial to note is that, while there were accounts of increasing droughts and irregular rainfall patterns, tales about the climate and the weather hardly ever came alone, but were rather accompanied by general observations about a rapidly changing world, new ways of praying and believing, and loss of (cultural) values. Confusing but revealing was the following fragment of a focus group discussion held in Terrat in December 2011, (R = researcher; X/Y/ Z = first, second and third informant; A = research assistant):

> **R:** Do you think that the rains [*Eng'ai*, or *engan*, or *mvua* in Swahili] nowadays are different from the past?
>
> **X**: Yes; before, my grandfathers, they went to large trees to pray to their God, then they made a sacrifice. Some cattle, maybe a sheep or a goat. It must be a black one. And at the same time they went to see a witchdoctor to ask for rain. […] But now we are Christians, we have to go to church to pray: "God give us the rain".
>
> **R:** Does that mean that you are praying to a different God to get rain; or what about the Maasai God?
>
> **X:** We found that this God lied to us, including the witchdoctors [*oloiboni*]. Because the witchdoctors, they pretend to be God. But we realized that they are not really God because they die as normal people, so they are not really God. So when the Christians came and told us about Christ we decided to follow them. […] Now in church we are happy to have found the real God, and we believe that when we pray everything will be possible.[112]
>
> **R:** So you don't believe in the Maasai God anymore?
>
> **Y:** We hate them so much.
>
> **R:** Really? What about you? [Asks research assistant].
>
> **A:** Me too! I never ever believed him.
>
> **R:** So it is God who decides to give you good or bad weather?
>
> **Y:** We see that God is capable, God does everything for us. […]
>
> **R:** And how come that sometimes He doesn't give you rain?
>
> **Y:** He is the only One we believe that can do everything for us. But sometimes when He stops to give us the rain, there is nothing to do.

[112] Interestingly enough, as will become clear in the section on new trajectories of believing, the relatively recent conversion to Christianity in Maasailand has incited a rejection of some Maasai "traditional" religious forms. For example, praying to the spiritual diviner (*Oloiboni*) is looked upon with grave disdain; while at the same time there is a certain continuity in believing in the divine being (*Eng'ai*).

Z: We find that God is the end of everything. No one can do anything apart from God.

X: For me I don't know what is the reason, but we believe that God, God gives us the rain and that sometimes He does not want to give us the rain. But for this year, God gave us enough rain.

R: And what about the seasons? Are they changing? I mean the rainy season and the dry season are they different from before?

Y: In the past it was also changing. But not so much like now.

It was certainly not uncommon to begin a conversation about rainfall or the weather and promptly enter into a discussion about God, morals and a changing society and culture. In the midst of this confusing attempt to make sense of the conversation, a herder by the name of Leboi entered the compound. I then came to realize that this was the herder who had given an impressive speech about climate change at the international conference that took place in Dar es Salaam the previous month. After introducing ourselves we asked him to join the conversation. My research assistant rushed to ask Leboi: "So, Leboi, what can you teach us about the weather?[113]" After which he explained (L = Leboi):

L: For us it is terrible, since we do not have enough education. We are poor people [inaudible] so with this climate change it is very terrible for us, yes.

R: And if people explain what climate change is, do you understand what it means?

L: We see it maybe when we go to town because we didn't hear anything in the village.

R: So what was the first time you heard about it?

L: We see the changes since 1993. Yes, the climate change began. It was in April 1993. The rains stopped. Then years passed by. We decided to move from our village to another village. When we went there, still no rain. No changes, our cattle died a lot. Also people died. It was terrible. We started to ask ourselves, "what is this"? Before, there was nothing like this. What kind of bad things have we done? And what are we going to do?

R: And did your grandparents maybe also experience difficulties in the climate?

L: Everybody is wondering "what is this?" But we are not sure. Maybe it is because we are cutting down trees and make destruction.

X: And maybe because of our sins.

R: Sins?

L: Because since that time there is a goldmine.

R: Goldmine?

[113]She used *mabadiliko ya hali ya hewa*.

X: Yes the Maasai decided to go there to look for gold. Then when they didn't get it they came to our village and started killing or taking our blood. Because they went to the witchdoctor who told them to kill somebody, then you will get enough money. Later they came to take the blood of that person during the night. That was for those who are not Christians. But for us, we went to church and decided to follow the mighty God.

R: There seems to be a different understanding about God who arranges rain and drought, or climate change. What did Leboi understand when he heard about climate change?

L: It is not God so much, for me it is not God. We have learnt that it is not God, but it is us, due to our activities. When we fail we now learn that it is not God, it is us, according to our human activities. We were few in number in previous times, but now we are high in number. And this *boma* [enclosed compound, or *kraal*] because of human activities like cultivation, people are cutting down trees. There are some people who go to the river to take stones for selling as a business. They need money. And the rest they sell firewood because they need money. So I believe that human activities are making these changes.

R: And is there something you can do to stop it?

L: In this village we try to stop people from cutting down trees, especially in the river. Then we try to stop people from taking away the stones to sell the stones. And then we try to convince people to grow the trees, a large number of trees. The village government decided to elect some people for such work.

R: Do you talk to other people about this climate change?

L: People are very busy, looking for money. The rest is taking care of cattle and other activities. I try to tell them but people are not serious about this.

While Leboi's interference confused the group, I had the impression that to me at least some clues were unfolding. Asking the villagers about changing rainfall patterns or changes in the weather was as if I was asking about their modes of living and believing. It appeared to be irrational for most informants to detach changes in the weather and the climate from more general societal changes. For the Maasai in Terrat the climate is rather part and parcel of an integral moral weave of the world that binds society together. These tales about environmental degradation were related to a loss of morals and values that once were so vital to holding Maasai society together. And these were now threatened by the temptations entailed by globalization and modernity, such as mining and other attempts at diversifying their livelihoods in the pursuit for money, wealth or for bare survival. Talking about the climate or the weather is like a commentary upon society in which morality is being held up to scrutiny; a fertile ground for cultural stories to make sense of their place in this world (compare de Wit 2015).

My thoughts were drifting back to Dar es Salaam, and to Leboi's performance at the conference. Part of the conundrum remained unresolved. If climate change was indeed so "terrible for them",

why was he among the very few villagers to talk about its effects? Was it because he was well informed as opposed to the others? This seemed rather strange to me considering the sensitization activities that had taken place. Leboi had certainly come to play an important role as a climate change ambassador, linking Terrat to wider transnational discourses and platforms. This is how it happened. First, he was enrolled by an international climate change NGO because he works a community game scout in Terrat. This means that Leboi is being paid by several conservation organizations to keep the area (where wildlife congregates) free from cultivation and settlement, and to spot illegal poachers. He then played a role in a movie about climate change; after which he was spotted by another NGO who traced his phone number and invited him to testify in Dar es Salaam. From a community game scout, Leboi thus became an actor and then a climate change ambassador, and finally now figures in my research. I came to know Leboi as a very friendly and charismatic person, a man of laughter, jokes and goodwill. In Terrat he appeared to be friends with everybody. He regularly invited me to his *boma* where he proudly introduced me to his two wives, and ten schoolgoing children. He owned a small moped with which he regularly went to check on his herd, in case they were grazing far away. He belonged to the minority of herders in Terrat who did not cultivate. According to him the environment is not very suitable for agriculture, and in the past he had tried, but all his attempts had failed. Moreover, as a community game scout he receives an extra monthly income with other activities.

But Leboi was not the only one who was "climate-change cognizant". There were other herders who took part in the climate-change sensitization activities, and also featured in a movie. Furthermore, prior to my stay in Terrat, a team of other researchers carried out a climate change study (as referred to in chapter 5). Some informants referred to these researchers as their source of information through which they came to know about climate change. My exploration continued and I first wanted to know more about Leboi's experience in Dar es Salaam, so I asked him whether he enjoyed the trip:

> **L:** I really enjoyed it. I have never been there before and it was good. They [NGO] gave me money for transport and food. I wish I could get another chance to go there and speak out. I tried to ask the secretary of the president's office [VPO] – his name is Joshua Ngang – why the animals from Tarangire come here to eat our grass, but our cattle are not allowed to go to Tarangire and eat their grass there. But he did not answer me well.
>
> **R:** Did you feel that the government was taking you seriously?
>
> **L:** I didn't like Mr. Joshua Ngang. Because when I was there I shared my feelings, but Mr. Ngang tried to talk falsely to everybody. But thank God there was Mr. Joseph [NGO] who tried to tell them the truth about his speech. Mr. Ngang wanted to convince everybody that the Maasai are foolish people, and that we don't want to take care of a small number of cattle. But Mr. Ngang forgot that we have to take care of three or four

> wives, and kids and shelter, food and other things. Also for treatment. […] I wanted to get enough time for my speech but there was not enough time. I also wanted to talk to Mr. Ngang to elaborate on our life here, what it is like. But there was no time. I don't think that he knows what is going on here in the village.

Listening to Leboi's experience of having felt gratified at having had the chance to speak out on the one hand, and the frustration of ultimately not being heard by those in power on the other, Spivak's (1988) postcolonial critique of the mute subaltern comes to mind. While sympathizing with Leboi and his attempt to voice his concerns, I did not perceive him to be merely a voiceless victim but quite the contrary in fact. It gradually became clear to me that Leboi had creatively used the climate-change platform to address an issue that was of (more) serious concern to him; namely, encroaching wildlife and the loss of land to the creation of national parks. Of course, he greatly enjoyed the trip to Dar es Salaam that was being paid for, and he masterfully fulfilled his role as a "climate-change witness". But it was not climate change that he had travelled for. This glimpse of a focus group discussion turned out to be only the beginning of the time that I would spend with Leboi and other villagers in Terrat. Many hours of herding cattle, talking, joking, and walking through the plains followed. I believe therefore that "being there" enabled me to establish a certain level of trust with my informants, which provided the conditions under which Leboi's "official" climate-change rhetoric in the course of time (i.e. more than half a year later) took a drastic and remarkable turn. That is, he revealed to me that he in fact does not *believe* in climate change. At least not in the way that these scientists are talking about it:

> Because we are aware that these changes are coming from God, and God is having many things, and nobody knows the secret of God. Sometimes we say "Okay today it might rain probably", because all the things that we normally use to predict the weather, showing that maybe today there is a star. All the things that we use to predict […] but while we expect that it will rain maybe that year there will be no rain at all. And sometimes we might say "Okay this year is very dry so I think there will be no rain, because we cannot see the star, you cannot see this". So all the signs indicate that the rainfall cannot be seen, so they don't expect rainfall. But while we are expecting no rainfall, the rain falls down. Enough rainfall. And in our locality the climate knows a lot of fluctuations. One year you might expect rain and there will be no rain, in another year you expect drought but there is enough rainfall. And because of these fluctuations nobody knows the secret of God. And that is why also we cannot trust these men [the scientists] who are telling us about climate change.

Leboi's reluctance to ultimately accept climate change as an explanatory framework for the ongoing changes in the weather and the climate does not stand alone in Terrat. Initially, the fact that I stumbled upon an apparent "climate-change void" and a rejection of the discourse left me somewhat despairingly questioning "the point of all this inquiry". But now I know that *this is* the point. The remainder of this supposition is that we are faced with the challenge of how to make sense of absence. How does one write about something that is (allegedly) not there? I argue that

one way of circumventing this is to juxtapose this void with the things that we *do* encounter; such as older environmental discourses that travelled to northern Tanzania and that have profoundly shaped human-environment relations. Moreover, we shall then embed these narratives in the context of older discourses that have travelled to Maasailand before, and interrogate the "truth effects" that have consequently been brought about. Let us now turn to the broader debate on representation and epistemology, after which we move on to Terrat's interpretive context.

Blinded by Sight[114]

> We tend to find what we are looking for. This does not mean that there is no real basis to what we find. Rather, it is just that reality has a tendency to reveal itself in accordance with the perspectives through which it is engaged.
>
> Garreth Morgan 2006: 338

It is remarkable that since climate change rose to prominence as a key theme within anthropology – for approximately one (Roncoli *et al.* 2009: 87) or two (Crate 2011: 178) decades at the time of writing – anthropologists have also begun to "see" and encounter the broader socio-cultural and political effects of climate change all across the globe (Crate & Nuttall 2009: 9). It has even been argued that the flourishing interest in these dimensions has changed the scale (as in particular perspectives) of anthropology accordingly (Hastrup 2015: 144). Similarly, in his seminal historical reader on the anthropology of climate change, Michael Dove has come to the observation that: "Anthropologists, like scholars in other disciplines, often seek to link their studies to the overweening concerns of the day. In the mid-twentieth century, that was the threat of global nuclear war; today it is global climate change" (Dove 2014: 24). If we take Morgan's words to heart, perhaps it is somewhat unsurprising that a new research focus has come along with a lens that brings to light exactly that what it was "designed" to unveil. This new research fashion is certainly not limited to anthropology, for climate change is a widely shared cross- and interdisciplinary concern. Nowadays we can speak of a true efflorescence of ethnographic

[114] I took the liberty of borrowing the title of this subheading from Francis Nyamnjoh's fabulous article on postcolonial power structures within anthropology departments in South Africa, in which he raises an extremely valuable epistemological question: "How do local knowledge practices take up existential issues and epistemological perspectives that may interrogate and enrich more global transcultural debates and scholarly reflexivity?" (Nyamnjoh 2012).

climate-change studies that progressively set the stage for the anthropological research agenda.[115] This outlook is not just good news for our discipline, but it should all the more be embraced as it meets the call for a re-examination of climate change by the humanities and interpretive sciences as called for by scholars like human geographer Mike Hulme (Hulme 2011b). This disciplinary engagement is vital as it contributes – to mention only a glimpse of the merits – to a critical understanding of the universal and globalizing tendencies that climate-change discourses entail (Hulme 2008b; 2010b; Wisner *et al.* 2012; Arnall *et al.* 2014). Moreover, it has also proven fruitful in the attempt to give insight into the discordances between locally grounded approaches and global models and discourses (Greschke & Tischler 2015; Hastrup 2014).

This growing body of ethnographic work that documents climate-change realities can lead to two distinct (though not mutually exclusive) lines of thought. On the one hand, one can argue that – if we take into consideration the (expected) devastating impacts upon the Global South in general and sub-Saharan Africa in particular – climate change is increasingly visible and observable on the ground. Hence, it is not surprising that anthropologists who set out looking for climate change will inevitably find it. Yet, an alternative interpretation of this increasing "visibility" holds that this is, at least in part, the consequence of a new research focus and corresponding paradigm. For, put in the words of Günther Schlee: "Scientists do not open bottles of champagne when their assumptions have been falsified. They do so when they have been corroborated" (Schlee 2010: 223). Notwithstanding that there is a philosophical truism in both positions, since the first stance has become the engine that largely drives climate-change research, we shall here explore the consequences of embracing the second. Seen in this light we can pursue the argument that there is a need for some epistemological caution in making claims about the a-priori devastating effects of climate change, for we might fall into the tempting self-fulfilling trap that "Leboi's revelation" also bears witness to. A point of concern in this regard which brings us back to the *Writing Culture* debate, is the question of whether – by relying closely on observation – we aren't denying the fact that to some extent we as ethnographers are also shaping our objects of research?[116] In other words, as we are looking for climate-change realities, and witnesses thereof (who are said to be observing climate change firsthand) aren't we feeding our own climate-change

[115] For a review and overview of foundational studies on climate and culture see Crate 2011; Dove 2014; and for notable edited volumes with rich ethnographic case studies see Casimir 2008; Crate and Nuttal 2009; Strauss and Orlove 2003; De Bruijn *et al.* 2005 among many others.

[116] As Bornemann & Hammoudi (2009) have pointed out, one diagnosis of anthropology that was identified in the *Writing Culture* debate was the three denials running through its practice: 1) that ethnography is a literary genre; 2) that reliance on observation leads to a denial of the role of the ethnographer in shaping our object/ subjects of study; 3) that ethnographers tend to deny the constructed character of their object, and hence the knowledge that is produced (Bornemann & Hammoudi 2009: 2).

"gaze"? It is certainly not my intention to open up a deconstructionist Pandora's box that was brought about by the "crisis of representation" (Marcus and Fischer 1986: vii) as in the *Writing Culture* debate. But there are important lessons about self-reflection to be drawn (Schlee 2010: 217). These lessons touch upon the role of the ethnographer, the lenses that we use and construct, and hence, upon the data that we (hope to) collect and bring back home. Considering the thriving climate-change "fashion" it is necessary to ponder over the question: what are we looking for when studying climate change?

To begin with, anthropologists do not see or feel climate change with the naked eye or bodily senses, nor are we or our informants capable of observing it directly, for it is a phenomenon that is – unlike manifestations thereof – not perceptible in unmediated form.[117] Yet we ask questions about it and we very frequently receive satisfying answers that by and large testify to the fact that climate change is real, and that it is also already being experienced by "vulnerable", or so-called "frontline", communities on the ground. But on closer inspection we might glean from our field studies that an excessive focus on climate change might obscure as much of the socio-cultural complexity of local realities as it aims to reveal. Let me illustrate my point with one experience (among several others) that I had while presenting my work at a conference in a "climate change in Africa" panel. After the five presenters (all anthropologists including myself) had presented their work, during the question-and-answer session a person in the audience raised a general point that was addressed to all of us: "If we carefully listen to your presentations, it seems that none of you is *actually* talking about climate change but rather about something else". I was both stunned and comforted by the sharpness of the question, as I had been grappling with this concern for a while, and it often surfaced all the more prominently during conference panels. All five of us got the chance to reply, and I was very keen on paying a compliment to his observation, for it succinctly captured the argument that I tried to put forward. But to my disappointment, my fellow presenters were instead defending their results by arguing that "in fact – even though perhaps under the surface – we *are* dealing with climate change". Arguments were made in line of "we [educated researchers] know that it is climate change, but they [uninformed informants] don't know it yet". Even though this point might be relevant in the context of scientifically uninformed communities, by positioning oneself in this way the issue turns the basic

[117] I am aware of the fact that this is not an uncontested statement. And even though it is not the focus of this chapter, it should be emphasized that this stance is certainly not to say that climate change is not real, nor that people are not directly affected by it; but it should principally be understood as a philosophical position that holds that as soon as we claim that a certain climatic event is the result of climate change, it is always mediated by language. This point deserves further explication below. For a detailed and insightful discussion of the differing ideational standpoints in this debate, see: Rudiak-Gould "We have Seen it With Our Own Eyes: Why We Disagree About Climate Change Visibility" (2013b).

anthropological pursuit around; namely that we have to enlighten our interlocutors instead of learning from them. It not only installs a problematic difference in the power relations but also amounts to a problematic epistemological challenge.

Namely, by assuming that "we" know something that "they" don't know, we are foreclosing the possibility of local and alternative categorizations of climate change (that often deviate from global notions of it). Moreover, this approach does not allow for the possibility that people might have other things on their mind. For example, another interesting reply from a presenter was: "my informants did not want to talk about climate change, but they only wanted to talk about the threat of elephants that are killing people". And instead of wondering why people insisted on talking about elephants and discarded the topic of climate change, the presenter had developed a sophisticated scheme as a means to "locate" climate change in the field. Here we touch upon an important political and representational issue: if our informants wish to talk about elephants, should we continue talking about climate change instead? A central question that arises in this regard is: what can we make of the absence of that what we are initially looking for, while similarly assuming that it must actually be "there" – somewhere – if not in the minds of people, it must be hanging in the air as a looming crisis that one day will inevitably reveal itself? Based on findings (or rather a lack thereof) that are similar to my own, Greschke and her research fellows have raised questions that I deem relevant in this context: "are they [informants] all 'sceptics' or ignorant"? And: "Do we primarily have to enlighten our research fields about the 'real' causes and dynamics of the global socio-ecological system […]"? (Greschke 2015: 124). For reasons that will be explained below, I will pursue the argument that – instead of "enlightening our research subjects" – an approach that is more faithful to anthropology's basic tenet is to interrogate the reasons for "absence" by means of juxtaposing it with "presence". Also Foucault reiterated the central role of the "visible" for philosphy as opposed to the scientist:

> For a long time one has known that the role of philosophy is not to discover what is hidden, but to make visible precisely what is visible, that is to say, to make evident what is so close, so immediate, so intimately linked to us, that because of that we do not perceive it. Whereas the role of science is to reveal what we do not see, the role of philosophy is to let us see what we see (Foucault 1994: 3.540-541, in De Vries 2016: 4).

The first problem of assuming a worldwide climate crisis is that it uncritically leads to the creation of an omni-explanatory framework that sees climate change as the main culprit for all possible societal ills. Or, touching upon a similar problem is the perceived urgency that drives this new research focus, which tends to bring about a hyper-focus that *exclusively* focuses on climate change. As such, it possibly obscures other issues that are – considered from an *emic* point of

view – of much more pressing concern, thereby leaving us indeed blinded by our own sight. [118] Anthropologist Kirsten Hastrup has put forward a similar critique by stating that "[…] climate is no longer seen to *make* places but rather mostly to *destroy* them, with anthropologists called upon to mediate local understandings through their incomparable method of fieldwork" (Hastrup 2015: 146). To be sure, the fact that climate change is not conspicuously present (as a second-order observation) in Terrat does not mean that it is not there. Nevertheless, and as already touched upon in chapter one, I contend that this climate change focus similarly bears the risk of engendering blind spots that are co-constituted by crisis narrations (cf. Roitman 2014). As such, this chapter speaks to the large body of literature that takes climate change to be the dominant or sole determinant factor of social life, and instead seeks to bring "complexity" back into the analysis. As already mentioned in the introductory chapter, the singling out of climate change has been criticized by Mike Hulme, who termed this erroneous tendency a new form of climate determinism, or reductionism, in which the climate is elevated to become the dominant predictor variable in a complex matrix of interdependencies (Hulme 2011a: 247).[119] While this critique in itself is thus not new, this chapter seeks to fill the void of the scant attention that has been given to the phenomenon of *absence.*[120] By doing so it thus critically engages with current climate change debates in social sciences and the humanities and questions the general tendency to "see" and hence construct climate change as an overall dominating reality of lifeworlds "on the ground". It explores the taken-for-grantedness of the universal, all-embracing and threatening biophysical effects of climate change, and instead questions the effects of these knowledge claims.

These points touch in fact upon ancient epistemological dilemmas about the relationship between the models of abstraction that the anthropologist generates, and the subject of research or empirical reality they seeks to describe. To mention just one old disciplinary example, anthropologist Edmund Leach criticized the structural-functionalist idea that the social structure of a society is directly observable, and he insisted that this is rather an abstract model created by

---

118 In the work of anthropologist and Maasai expert Dorothy Hodgson (2011b) a very similar argument is advanced in relation to gender issues and the ways in which these have taken root as "a travelling idea" in northern Tanzania. She demonstrates that the Western obsession with abandoning FGM as a "traditional" and violent cultural practice results in a move to speak for, rather than listen to the priorities of Maasai women themselves (Hodgson 2011b). In this sense, Hodgson's argument (and my own) to a large extent underpin Spivak's critique of the well-intended and benevolent attempts to give a voice to, and hence, "save" the voiceless subaltern from oppressive system of power; while in fact perpetuating the silencing that it seeks to oppose.

119 Climate determinism is here understood as the epistemological fallacy that individual and collective human behavior is predominantly (or ultimately) determined by climatic influences.

120 The notion of absence that I am talking about should not be confused with the term "invisibility" as used by Rudiak-Gould and others. While absence refers to the general lack of (overly) experiencing and talking about climate change the latter refers to the question of whether climate change can actually be observed with the naked senses.

the analyst that is the product of a particular way of looking at the world. Thus his criticism was directed at how anthropological analyses create "entities" by lifting them out of space and time of social interaction (Leach 1970, in Moore & Sanders 2014: 6). These dilemmas remind us that the knowledge that we generate as social scientists is always bound to a certain form of abstraction. The same holds true when we seek to describe and try to make sense of climate-change realities; therefore this relationship deserves more critical attention within current climate-change debates. It is in this context that Greschke (2015), in line with Albert Schutz (1953), has pointed out the underlying difference between physical and social facts, thereby reminding us that natural and social climate scientists depart from a radically different reality. Whereas the natural scientists focus on the physical facts, social scientists predominantly deal with the social facts of global warming. This type of knowledge should be considered as "second-order observations" – being part of the epistemologies of social scientists – as opposed to "first-order observations" or the biophysical effects of climate change – being part and parcel of the climatologists' quest for knowledge production (Schutz 1953, in Greschke 2015: 129). It is important to keep this distinction in mind to contextualize the following discussion, which has provoked quite some debate among varying ideational climate-change communities.

In recent years, the question of whether climate change can directly be observed with the naked senses has sparked a heated debate, centred around the contrasting positions of the "invisibility" on the one hand vis-à-vis the "visibility" of climate change on the other. The first stance holds that it is inherently impossible to observe climate change firsthand; while the latter stance stipulates that its effects can, and are in fact already being seen, particularly in the Global South. There is also a third approach, which can be placed somewhere in between and which assumes that climate change cannot be observed from the outset, but can be made visible with communication strategies such as the miner's canary (Rudiak-Gould 2013a: 120). Anthropologist Rudiak-Gould has convincingly demonstrated how and why these divergent approaches are propagated by different ideational communities (such as indigenous advocates, anthropologists, physical scientists etc.) thereby revealing the political dimensions underlying this controversy (ibid). This debate will be addressed in more detail later, in which the value of local climate change accounts will be interrogated. In other words, how can we, in an increasingly interconnected world, make sense of the grassroots accounts that we collect in the field? With the positive-feedback cycle in the back of our mind it will be argued that these seemingly different knowledge systems should not be treated in isolation from the outset, but instead we have to allow for the possibility of the entanglement of epistemic practices. Furthermore, we need to account for the role of the ethnographer in mediating and shaping our object of knowledge.

What makes Terrat village an interesting site for exploring these spheres of mutual influence is the fact that the idea of climate change has entered (so far) only marginally.

7

Terrat Village in Maasailand

Introduction: On Tradition and Modernity in Maasailand[121]

> Without the land and cattle, there will be no Maasai. But my people are still holding on and continue to celebrate our culture despite the urgent demands that we change our ways and assimilate to contemporary modes of living. If change must come, as seems inevitable, it must be gradual, not abrupt. We will adapt, we will survive.
>
> Tepilit Ole Saitoti, *The Worlds of a Maasai Warrior: an Autobiography* (1986)

Our first exploratory trip to Terrat was an instant infrastructural "baptism of fire" for my research partner Naini and I, as we were tested in terms of our physical endurance and creativity to bear the obstacles of getting there in the first place. The village, located only 84 kilometres South of Arusha (see map 7.1), turned out to be a great many hours and challenges further than one could imagine possible for such a relatively short distance. Public transport offers two options. There is the *Simanjiro Express*, a touring-car-sized vehicle that usually departs once daily from Arusha town. One needs to be early enough to secure a ticket, and a lot earlier to secure a seat. While the bus is scheduled according to a fixed timetable, in practice its departure resembles more a "stuff and go" time. I have observed with great awe not only the skills of the bus station workers' precise emplacement when getting all the passengers in, but all the more the art of masterfully putting things, parcels, food, people and animals into a certain order that follows the itinerary chronology; or in other words, according to a "first out, last in principle". At times it occurred that we were late and the bus was so full that we needed assistance to be pulled in (or out) through the windows in order not to destabilize the efficient composition of the bus. And if one thinks that the bus has reached its saturation point upon departure, then it might come as a surprise that along the way, even more passengers are embarking and that only in exceptional cases (flat tyre, bad roads) is the bus considered to be full.

In the dry season one has better chances that the bus actually leaves, and also arrives sometime before dusk. But this depends on both the state of the road and vehicle. Due to the drought, fractured roads are inevitable, while the loose sand turns the surface into a substance that is as slippery as ice, and the safest way to pass is at high speed. If everything runs normally though, one can expect to arrive within 3 (at best) to 5 hours. The picture in the rainy season looks much bleaker as there is the risk of muddy, flooded and inaccessible roads, rivers that overflow their

[121] As Homewood and others write about Maasailand: "Maasailand denotes a loosely bounded area of East Africa whose rural population is dominated by Maa-speaking communities which, despite their diversity, self-attribute to Maasai ethnicity. It is not a formal term and does not denote an administratively recognized region" (Homewood *et al.* 2009: 1).

banks, or collapsed bridges. Despite these challenges, this large bus is the most comfortable and safest option to reach Terrat by public transport. The second option is to take the smaller, privately organized four-wheel-drive cars, which are more expensive and take even longer to arrive, if at all. These old, run-down cars – already discarded long ago by safari companies – are in such a deplorable state that after our third miserable experience, Naini and I had relegated this form of transportation to an emergency option. Even after I had bought my own (admittedly, twenty-year-old) car, much time has been spent along the side of the road waiting for creative solutions to befall upon us, usually with the grace of some helping hands. Much time was also passed at different garages and shops, buying and replacing car parts, waiting, and some more time waiting before we could continue our journey. This rather lengthy description of mundane practicalities is not intended as some sort of ethnographic exhibitionism. The sheer obstacles of getting (and leaving) there not only reveal a part of people's infrastructural hurdles, but they are foremost a symbol and tangible example of how (many parts of) Maasailand are largely disconnected from urban centres and excluded from access to basic infrastructure such as good roads, health facilities and education. In this chapter I situate Terrat in the wider context of Maasailand, and sketch the basic contours of how earlier travelling ideas – and policies that emanated from them – have come to shape contemporary life.

Map 7.1 Terrat in Simanjiro District (Manyara Region). Cartography: Monika Feinen.

On the absent state and the "invisible Maasai"

The lack of access to resources and the large deficit of development initiatives for the Maasai, and their general marginalization in the country go back to the colonial state, yet continue to persist until the present day. With independence, the African elites who took power embraced the outlook of progress and development, which was clearly out of step with what the "primitive" Maasai stood for. As Hodgson writes:

> Except for their photo opportunities, Maasai were generally out of sight and out of mind. Mocked by the elites as primitive, accused of cultural conservatism, and excluded from most state-sponsored development initiatives, Maasai became increasingly impoverished as their land, livestock, and possibilities for viable livelihoods continue to disappear. […] Similarly, the rudimentary rural health services available to Maasai have been sponsored primarily by private (usually religious) sources, since the government has also neglected its obligations to care for the health of one of its most marginalized populations (Hodgson 1999: 121).

These perceptions of the Maasai's "conservatism" and "cultural backwardness" are still widespread among government officials and the Tanzanian elite. This became vividly clear to me during interviews that I conducted with officials. The current political landscape of economic liberalization has in many ways also impeded Maasai development, particularly concerning land matters and access to natural resources. And while the Maasai are put back into view as aesthetic icons of a primitive and traditional Africa in order to attract tourists, it is the same gaze that has led the few state-sponsored development initiatives to have almost vanished. This is the consequence of a government that is afraid to lose the lure of the authentic Maasai who are considered to be part of the landscape, which forms a lucrative foreign exchange for the development of the Tanzanian nation-state (Hodgson 1999: 122). Particularly from an economic standpoint, as well as for national and international conservation organizations, Maasailand is of invaluable significance. Tourism plays into this complexity, as northern Tanzania is among the country's most prominent areas of touristic appeal. And thus in order to reap the benefits of tourism the government of Tanzania rather leaves the Maasai "untouched" and marginalized as they are, as colourful but timeless figures in a tourist brochure; like fossils exhibited in a museum that bear witness to a former geological epoch. This idea is succinctly echoed in the words of Edward junior, a young Maasai man, a radio presenter and documentary maker and indigenous rights activist from Terrat: "Many white people are interested in the Maasai that is why the government can get money of [*sic*] them, because we are keeping our culture. The government benefits from the Maasai, but the Maasai do not benefit from the government. That is the reality." The long history of the marginalization of the Maasai in Tanzania, explains, at least in

part, the overall lack of climate-change knowledge and information in Terrat, which is a direct result of an "absent state".[122]

The village and the city are not only physical worlds apart, but have a long history of being produced as antagonistic forces that have come to stand in an ambiguous relation to each other. It can by and large be said that most interventions have been buttressed by the pursuit of either planting the seeds of "modernity", or to preserve the Maasai's "cultural authenticity". The resultant conflicting relationship between these two distinct ideals vividly speaks to the imagination when one travels to Maasailand. Village life symbolizes "tradition", sense of community, agro-pastoral modes of living and all the values and practices that are encapsulated by what it means to be a "true" Maasai. Yet city life stands for all the disenchantments that are considered to be part of modernity's progressive quest for wealth and development. However, this depends on the perspective one takes. For Naini, who explicitly presented herself as a "modern Maasai" (proudly driving on her motorbike, or *piki piki,* in town), the life in the village is seen as backward, trapped in the past with an immutable culture that is foremost oppressive to women (through its maintaining of practices such as FGM[123], polygyny and forced marriage); and a culture in which people are still carrying out derogatory religious practices (visiting traditional diviner and spiritual leader, drinking blood etc.). In turn, through the eyes of the Maasai family with whom we lived in Terrat, the city dwellers have fallen prey to greed, individualism and to an array of erosive cultural values ("modern" clothing, loss of proper greeting and of mutual respect etc.). They would often exclaim about the "urban" Maasai: "They are not real Maasai. They cannot even greet you properly anymore!" It is in view of the long history of engagement of the Maasai with the complex discursive and material structures of modernity, or of what we have come to *think of* as modernity, that we need to understand the ways in which climate change is received. Moreover, it will be demonstrated that this narrative not only evokes imaginations about a changing climate, but all the more of a rapidly changing world that impinges a particular form upon this dichotomy.

The communities inhabiting Terrat and the wider Simanjiro plains belong predominantly to the Kisongo tribe. Originally they are semi-nomadic herders, who are – like Maasai elsewhere – increasingly diversifying their livelihoods through the adoption of agriculture and labour migration (McCabe, Leslie & DeLuca 2010). The gatekeeper who introduced us to Terrat and the

[122] Absent in the sense that it does not provide the Maasai with basic social services that one can expect from the state. Its presence is felt, however, in the appropriation of land for conservation purposes and the fear this has evoked among the Maasai communities.
[123] The official term is *Female Genital Mutilation*. Dorothy Hodgson has reframed it into the more neutral term Female Genital Modification (2011b).

village executive officer (called Israel), and kindly mediated our permission to carry out research was Naini's uncle. As he was the village executive officer of another village in Maasailand, he knew Israel personally. This greatly smoothened our access and secured us of some top-down support. It turned out that Israel was a faithful church attendant of one of the popular Pentecostal churches in the village. When he was asked to accommodate us with a homestead (an enclosure or *kraal*; *boma* in Swahili, *engang* in Maa) in which we could live during my research, he logically brought us to a family that was a member of the same church. And so it happened that we found ourselves living in a small mud hut (a former goat- and henhouse, see picture) amidst a deeply faithful Pentecostal family, who at the same time considered themselves to be "traditional" Maasai. The Maasai encounter with Christianity has certainly complicated the relationship between what is considered to be "modern" and what "traditional", to which I will return in the next chapter.

The livelihood of the family where we stayed was in many ways representative of the homesteads that were found in the village, even though the *boma* was relatively small, comprising only two families. Petro, the head of the *boma* had two wives and ten children. His younger brother Logolie also had two wives and five children. Like most families in Terrat they were engaged both in raising livestock as well as in agriculture, mainly cultivating beans and maize. There are a few natural water points and self-dugg wells in the area, and one water pump constructed by the local NGO *Llaramatak*. While the natural water points are highly polluted, as cattle use it, people do not hesitate to drink from it. When water becomes scarce in the dry season, women fetch the water from the pump (if they have money, otherwise they have to walk a long way with their donkeys). In the rainy season the women can earn a little extra income by selling the surplus of milk to *Llaramatak*.[124] On Sunday's they all go to church, except for Logolie. He has a small shop in Terrat centre where he sells fuel, cigarettes and some other basic articles.

Logolie complained to us about the importance of the church in Petro's life. He said that "a lot of money and time is going to the pastor, and he does not even have time to look after his own herd". After attending a few church services myself, it became clear where the wealth (and the flatscreen television) of the pastor had come from. Little did I realize at that point that the church played such an important role in the lives of this Maasai family. I also learned that they were not an exception. Terrat is home to six churches: one Lutheran, one Catholic and four Pentecostal

[124] There is a true Dutch cheese factory that produces cheese from the milk of local cows. The cheese is sold throughout Tanzania, and it gives women in the area a good opportunity to earn a little extra income.

churches.[125] There is also one small Mosque with only a handful of attendants. While explaining our research topic to Israel, he agreed to give us permission under the condition that we would treat the topic of land conflicts carefully. His caution was driven by the fear that it could bring him and other villagers into trouble, because the issue had evoked heightened political tensions (the police and the national government were already involved) and the village council was in the middle of settling the manifold ongoing land disputes with bordering villages.[126] He explicitly told us "the biggest challenge in Terrat is land, and wildlife that destroys our crops or eats our maize."

Despite the vast area that comprises Terrat (some 400 km^2) and Simanjiro at large, and the relative low population density (6,000 inhabitants) struggles over land are on the rise, and access to land is prone to ever more tensions. Land management and changing livelihoods in this area should be understood in view of the many conflicting interests between different interest groups and communities; varying from conservationists (with wildlife conservation priorities), to development agencies (aiming at poverty reduction); the state, which is encouraging commercial cultivation; hunting companies and private investors (for economic purposes), and the agro-pastoral Maasai dwelling in the Simanjiro Plains (seeking to sustain their livelihoods). The conflicts in Terrat mainly contributed to the challenges entailed by Tarangire National Park, increasing population pressure, the expansion of cultivation of both small-scale farmers (many of whom have immigrated to Simanjiro in the 80s and 90s), and large-scale commercial farms in the area (see also Igoe 2006b; Leslie & McCabe 2013). Moreover, restricted access to key resources, and thus constraints on movement due to land privatization, subdivision, conservation policies that lead to the creation of national parks and (expansion of) wildlife reserves, have greatly impacted upon the Maasai (see also Homewood *et al.* 2009; Århem 1985: 28).

Since the pastoral economy has deteriorated over the last decades as a result of the loss of land, agriculture has formed an important livelihood diversification strategy (Nelson *et al.* 2010: 81; McCabe 2003). Many conflicts are occurring and are likely to increase between agriculturalists and pastoralists, and between pastoral communities and national park officials, as well as between villages about unclear borders and complicated legal regulations concerning land rights. Yet crucially, as already touched upon in chapter four, according to my informants the greatest challenges for the agro-pastoralists of Terrat are entailed by the Tarangire National Park. Against this background, I share the concern expressed by Wisner *et al.* (2004) and Homewood *et al.*

[125] The four different Pentecostal churches are called, respectively: Tanzania Assemblees of God (TAG); Free Pentecostal Church Tanzania (FPCT); Kanisa La Pentecosta Arusha (KLPA); Kanisa La Mitume.
[126] For a detailed insight into the sensitivities related to land issues and conservation, and the hostilities it evoked among informants towards a researcher dealing with this topic, see the work of Sachedina 2004. It is once again a testimony to the deeply engrained fear of losing land for conservation purposes.

(2009) that it is not unlikely that climate change – and not just its biophysical conditions but all the more the political and economic responses it might trigger – will exacerbate matters concerning access to vital resources for local populations (Wisner *et al.* 2004; Homewood *et al.* 2009: 2). Against this background some recent historical and political dimensions shall be considered, with a focus on present land-use patterns and how access to natural resources is arranged.

Notes on recent history & the politics of land use

Due to the lack of (access to) written historical data and archives, these notes on the history of Terrat are predominantly based on oral histories from elders and the traditional leader (*olaigwanani)*[127], and were crosschecked with other village administrators and complemented by secondary sources. The area that is now Simanjiro District (that contains roughly some 20,000 square kilometers, see map 7.1), formed part of the territory of the Kisongo Maasai. It is said that the Maasai have utilized the plains and dwelled here since mid-1800. Several crises, such as severe droughts, zoological epidemics and intensified British control over land, pushed the Maasai to follow a more regular pattern of transhumant pastoralism around the 1900s within the Simanjiro Plains (Davis 2011: 27). [128] Before Terrat was officially established as a village in 1974, it formed part of the broader area that was known as Simanjiro proper (at times referred to by my informants as Maasai proper). The area was vast and stretched from what is now Tarangire National Park, all the way up to Orkesumet. At the time of its establishment the majority of the pastoralist Maasai were still leading a nomadic life. To be more precise, at the heart of their transhumant pastoral mode of living were the seasonal migration patterns in which families were on the move with their herds in search of water and green pastures, and followed a migratory pattern similar to that of the wild ungulates (Igoe 2002: 80). This meant that during the dry season (July to October) both people and animals concentrated around permanent water sources,

[127] The traditional leader is chosen by the villagers and does not hold an official administrative function, yet he is a highly respected person as he is chosen on the basis of his moral conduct and personal qualities (see also Århem 1985: 18). He plays an essential role in mediating conflicts and helping people by giving advise in certain difficult situations. When he is elected he receives a cow and a bull, which is his only payment and symbolizes that he has to treat women and men equally. In brief, it can be said that he decides about how local injustices should be compensated (this happens generally through the gift of cattle).

[128] Contrary to commonly held ideas of the Maasai as archetypical pastoralists, historical evidence shows that they are in fact among the most recent arrivals in East Africa. Moreover, their adoption of a purely pastoral mode of living is a relatively recent innovation, and some Maa-speakers – who consider themselves to be Maasai – are not even pastoralists at all (Spear 1993a: 1; Spear 1993b). For a history of the development of Maasai identity in relation to the economic specialization of pastoralism, and Maasailand with a longer historical time span in which also more general existing myths are debunked, see the introduction of Thomas Spear (1993a) and the seminal edited volume *Being Maasai* (Spear & Waller 1993).

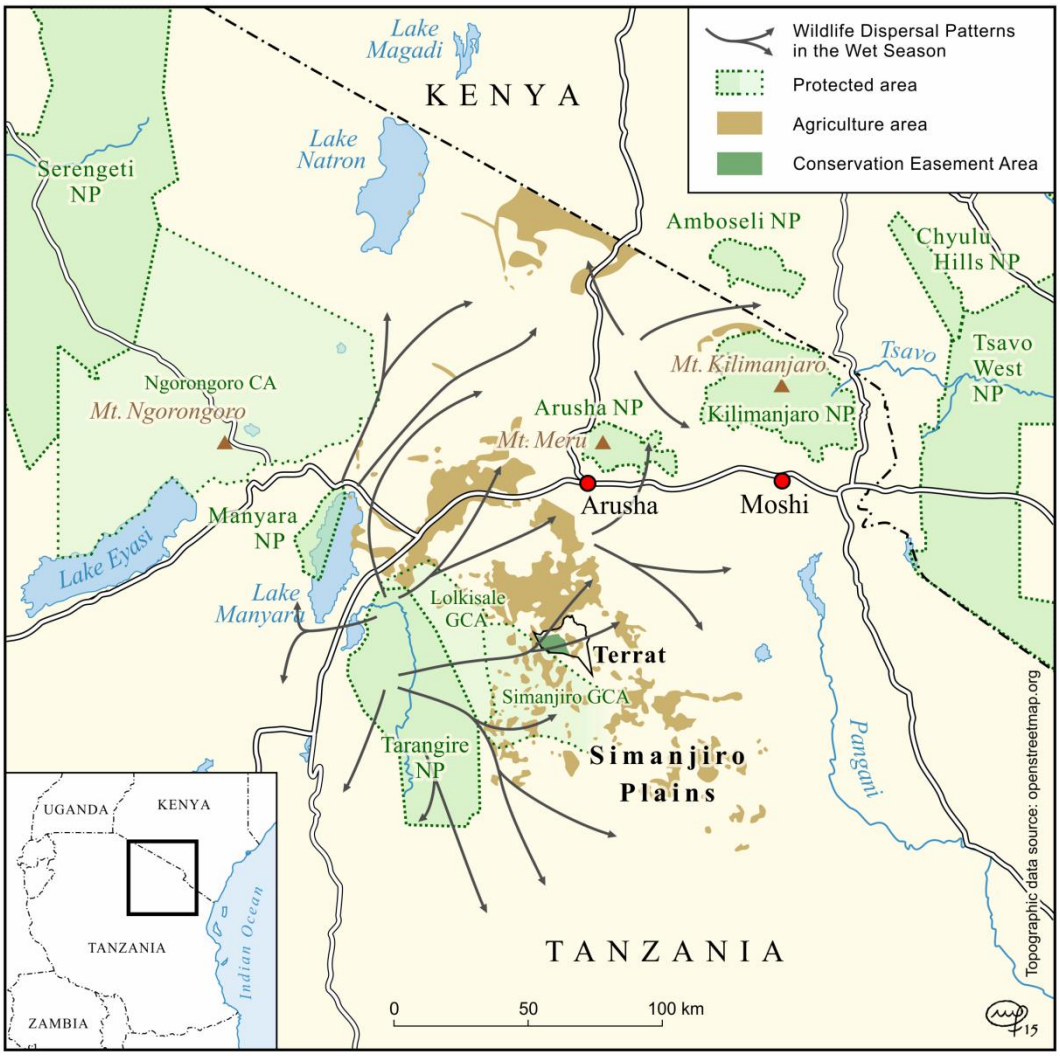
particularly around the Tarangire river, reliable dry-season water sources which are now found inside the borders of the national park. And with the onset of the brief rains (around October or November) they would disperse into the Simanjiro Plain (Borner 1985, in Igoe 2002: 80). Because of their nomadic lifestyle, and also because of the low population density, during the time of its official formation, the village counted only three *bomas*. This is in part due to the fact that there were no permanent settlements at that time.[129] Moreover, the *bomas* at that time were relatively large, comprising many families and many herds at the same time. When the rains ceased, people and herds moved all together, leaving the area – which according to my informants mainly consisted out of forest – completely desolated. Thus temporary settlements sufficed and the houses were of a provisionary nature made of cow hide, not comprising the mud-hut style houses that can be found nowadays.

Wildlife generally returned to the river in June (and still does). And according to Igoe (2002), even though depending on the conditions, pastoralists stayed in the wet-season dispersal areas (which now thus form part of Terrat and other bordering villages) until August (Igoe 2002: 80). It should be noted that oral accounts revealed that the pastoralists also avoided many parts of this area altogether, for the wildlife posed major challenges to the Maasai and their herds. The sub village that is now called Lomukuta B (see map 7.2 Terrat) was infamous for its abundance of wildebeest, which grazed and calved there in the rainy season, and continue to do so until the present day. When wildebeest give birth a substance is emitted that results in poisonous grasses, which are lethal to cattle or cause blindness (leading to the Malignant Cattarhal Fever). In the thickly forested areas there was also the danger of predators such as lions and hyenas that attacked both people and livestock. Moreover, there were a variety of diseases (for example caused by the tsetse fly that carries *trypanosomiasis* or sleeping sickness) that made parts of the area uninhabitable, because both health services and dipping facilities for treating livestock were non-existent. Nevertheless, despite these natural or environmental restrictions that were inherent to the human-animal relations, there was free movement of people and animals – although it was a regulated management system based on common property[130] – until Tarangire National Park was officially gazetted in 1970 (see map 7.2).

---

[129] According to some informants, the only permanent settlements at that time were built by the first British settlers in the area, who had constructed some buildings in Loiborsoit. Upon independence in 1961 they left the buildings to the Maasai of that area, which was the beginning of the first settlements.

[130] It is important to make the distinction between an "open-access" system in which the resource is found in the public domain and to which there are no rights, as opposed to common property such as these grazing lands that are regulated by the communities who dwell there. It is said that Hardin's argument on "the tragedy of the commons" was flawed because it mistook pastoral grazing land for open-access land (McCabe 2003).



Map 7.2 Terrat village, Tarangire NP and wildlife dispersal patterns. Cartography: Monika Feinen.

Needless to say that this enclosure drastically impacted upon people's livelihoods after they lost access to crucial water points (an issue that deserves further explication below). People who were found inside the enclosed borders were removed that same year (see also Igoe 2006b: 86), which remains a painful memory to those who were forcefully evicted (Igoe & Brockington 1999). Another political decision that impinged upon the mobility of people occurred around 1974-75 when Julius Nyerere's socialist ideology of *Ujamaa* reached parts of Maasailand.[131] During this

[131] In Swahili *Ujamaa* means familyhood, and in Maa this operation was called *Operation Imparnati,* which means "permanent settlement". According to Nyerere, his ideal of a Tanzanian version of socialism could be captured by the name *Ujamaa* itself. He wrote: " […] it is an African word and thus emphasizes the African-ness of the policies we intend to follow. […] its literal meaning is family-hood so that it brings to the mind of our people the idea of mutual involvement in the family as we know it. By the use of the word 'ujamaa', therefore, we state that for us socialism involves building on the foundation of our past […]. We are doing this by emphasizing certain characteristics of our traditional organization, and extending them so that they can embrace the possibilities of modern technology and enable us to meet the challenge of life in the twentieth century world" (Nyerere 1968: 2).

period nomadism was prohibited, for people were forced into nucleated villages (also called development villages) that were permanent settlements. According to some of my informants the effects of this policy were not felt in Terrat until 1977.[132] In their memories it was the beginning of a visible increased population density, and an altered socio-political and ecological landscape, as the seeds were planted for the Maasai's (widespread) engagement with agriculture. Part of the *Ujamaa* ideology was to increase the agricultural productivity countrywide, but the need for increased agricultural productivity was also triggered by the Tanzania-Uganda war in 1978, which drained the country economically. Also the Maasai pastoralists were obliged to pay taxes, and instead of selling cattle they gave preference to selling crops, permitting the maintenance and possible increase of their herd, which ultimately forms their most fundamental source of living.

Several other reasons can be pointed out for the Maasai's adoption of cultivation in this area, which overall should be seen in light of the unprecedented pressure that African pastoral systems are facing. As mentioned before – in the face of increased population pressure, modernization and reduced grazing areas (among other stressors) – among the Maasai of northern Tanzania cultivation was the most significant step to diversify their livelihood (McCabe 2003). Interesting to note in this context is that the engagement with agriculture contains a paradox. It might lead us to think that cultivation is a step away from the pastoral identity (which we have come to think of as being part and parcel of "Maasaihood"); yet the opposite is true. As McCabe has also demonstrated, the principal reason to begin farming is indeed to save the livestock (ibid 2003: 106). This is in line with my own findings, and most informants explained to me that despite the risks inherent to cultivation, any successful harvest was considered worth undertaking as it prevented them from selling their cattle. As one informant put it: "We cultivate so we can keep our cattle, they are like a bank to us so we only sell an animal in case of an emergency". A second crucial reason concerns land-tenure security. Approximately twenty years ago villagers began allocating land to individual households as a defence mechanism to foreclose further land alienation and appropriation by the state for wildlife conservation (see also Sachedina 2008; Leslie & McCabe 2013: 119). This has to do, in part, with the Village Land Act that became operative in 1999, to which I will return below. Other factors that have spurred cultivation as pointed out by my informants were hunger and the need to supplement their diet; a change of diet driven by an

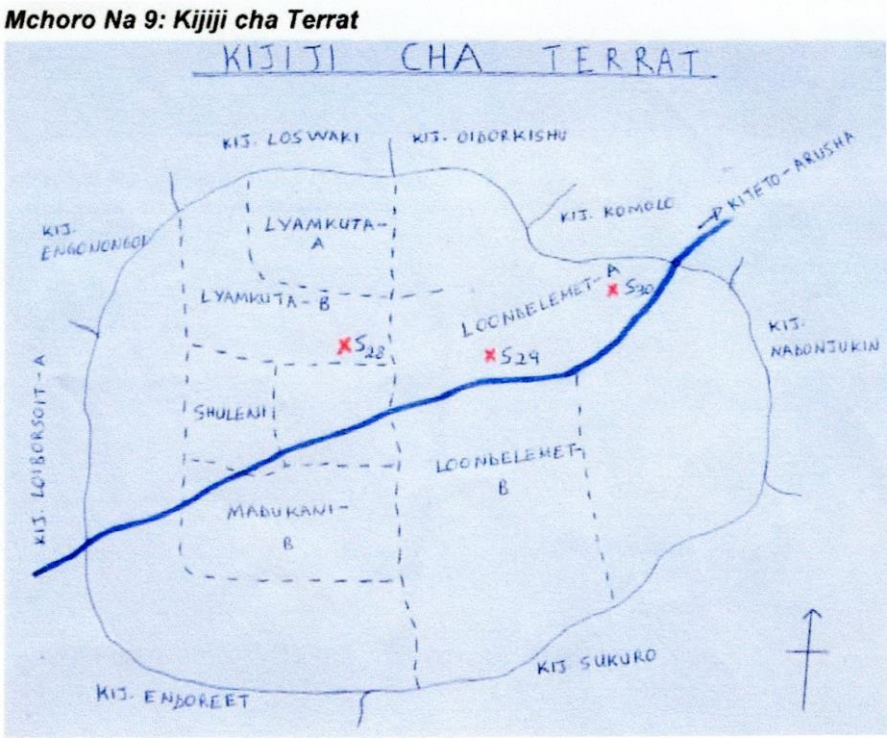
[132] While the country-wide villagization program of resettlement officially began already in Dodoma in 1971, the Maasai were initially excluded from the U*jamaa* resettlement program, because – like all other pastoral communities – they were considered to be a problem by the policy makers (Nyerere 1968: 140, in Ndagala 1982: 28). And it was only after 1974 that for the pastoral areas it was recognized that development trajectories needed to be adapted to pastoral conditions, and the concept of "livestock development villages" was created (Parkipuny 1979: 154).

increasing taste for eating maize (as the basis of *ugali*); and increasing costs of living (education of children, medication, vaccination for cattle etc.).

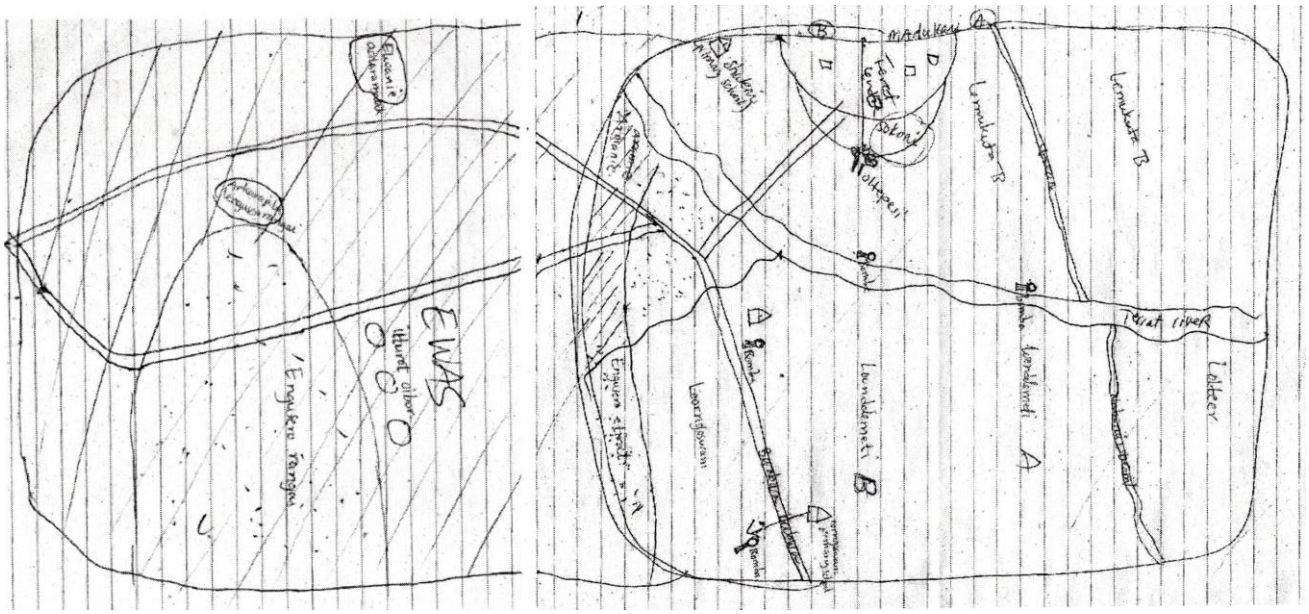
Thus *Ujamaa* was only one factor in a complex web of other socio-political and economic dimensions that made cultivation part of the day-to-day activities of the Maasai in the Simanjiro Plains. One of the fundamental ideals that underpinned this African (or Tanzanian) version of socialism was that by moving people permanently into settled and demarcated areas, basic social services could be more effectively provided. Indeed, as my informants also explained, the good thing about *Ujamaa* was that children for the first time received drugs and vaccinations, which brought a halt to widespread diseases (such as chicken pox) and child mortality that was prevalent at that time. The downfall of the permanent settlement into villages for the pastoral communities was clearly the restriction of mobility patterns, but also a rapidly changing environment. Yet most significant for the Maasai, the socialist ideology (combined with the single-party autocratic State) maintained the centralized forms of resource control, which resulted in the reinforced economic opportunity for national elites. These lucrative economic opportunities in turn infused conservation ideology with new life, and led to repressive models of power (Homewood & Rodgers 1991; Igoe & Brockington 1999). It is very likely that in East Africa the Maasai have been the most severely affected by protected areas (Neumann 1998, in Sachedina 2008).

Thick forest gradually diminished as larger concentration of people demanded more charcoal for cooking, leading some animals to disappear, and water sources to diminish (this was in combination with the enclosure of TNP). As one informant put it: "the health services were really improved, but it was the time when the destruction of the environment began". Some informants also gave account of trucks coming in and stripping off large number of trees, most probably for selling as charcoal in Arusha (see also Schade 1997, in Igoe 2006b: 92). It is very likely that the effects of socialism were felt differently throughout the region, as different scholarly have come to different conclusions. While according to some records the actual relocation of *bomas* did not "mean real change in the Maasai settlement", or have far-reaching social and economic consequences (Ndagala 1982: 30), others have claimed that it drastically disrupted territorial and authority relations (Hodgson 2004: 161), and that it entailed a rearrangement of traditional settlements, leading to the emergence of single-family *bomas* (Jacobs 1978, in Homewood & Rogers 1991: 209). What certainly stands out is that the forced resettlement of "Operation Imparnati" was thought of by many pastoral Maasai as another attempt of the government to subjugate them and alienate them from their grazing lands (Ndagala 1982: 29). Ultimately, the villagization program thus formed an infringement on their

political autonomy as it imposed a new authority structure, and the move towards a sedentary lifestyle was seen as a threat to their transhumant pastoral way of life. Furthermore, the policies that were predetermined to limit herd size touched upon the very core of the Maasai culture (Århem 1985: 25).



Map 7.3 Terrat Map sub-villages (Source: Mansoor *et al.* 2009: 33)



Map 7.4 Terrat Map drawn by Traditonal Leader (*olaigwanani*)

Demarcations & enclosures: the impact of Tarangire National Park on local communities

Terrat is the oldest village and can thus be seen as the mother village from which the other villages in the vicinity of Terrat have sprung. Initially, Terrat formed the area up to Naberera, and was later split into several other villages (among which Sukuro, Naberera, Loiborsoit, Komolo, Emboreet, Loswaki). It should be noted that Terrat is both a ward (consisting of 11 villages)[133], and a village (consisting of 10 sub-villages, see map 7.3, 7.4, and 7.5).[134] My research comprised Terrat village. According to the *olaigwanani* of Terrat and another senior elder, the demarcations of these villages occurred during a meeting in 1981 that took place in Terrat village. It was a procedure in which they were involved during a meeting, which was attended by them and some other villagers and administrators from Simanjiro District. According to their account it went as follows:

> In 1981 there was a meeting of the people from Simanjiro District. We followed them and sat in a meeting here in Terrat. And they decided that "now we have to define the villages". Loboirsoit needs to be demarcated from Terrat. We are natives here so we knew every place. So we put an agreement, let's separate Loboirsoit from Terrat through a certain tree, and let's separate Sukuro from Loborsoit through a certain place. So we made an agreement over those demarcations and then we wrote letters, which we gave to the government so that the government could come and recognize these places. […] After that the decisions that were made in that particular meeting, the tree that was used in 1981 is still present until today (*focus group discussion with olaigwanani, educational officer and another respected elder*).

As mentioned before, the land-use patterns and the causes of livelihood changes (and conflicts) that have occurred over the past years in Terrat and in the broader Simanjiro Plains are complex (see also McCabe, Leslie, and DeLuca 2010), and it is beyond the scope and intention of my study to dwell on the subject in detail. But in the face of the overall theme "adaptation to climate change", a few insights into the major challenges and conflicts concerning landholdings and land-use patterns deserve mention. The basic premise on which the following discussion rests is the notion that pastoral mobility – as flexible and opportunistic movement – is among one of the key adaptation strategies in response to unpredictable and highly variable climate of semi-arid and arid landscapes (Scoones 1995; Scoones & Graham 1994; Goldman & Riosmena 2013; Homewood 2008; Bollig & Schnegg 2013; Galaty 2013).[135] While these demarcations were the

---

133 The villages (or *kijiji*) are Terrat; Loswaki; Engonongoi, Nambatano; Losunyai; Sukuro; Komolo; Kitiengare; Nadonjukin; Oiborkishu and Lorokare.

134 The subvillages (or *kitongoji*) are Madukani A & B; Loondelemeti A & B; Lomukuta A & B; Shuleni; Ormanie; Loorng'oswani and Lolteer.

135 There is of course an array of complex and interdependent adaptive strategies related to pastoral livelihoods that have evolved and changed in the course of history. We can think of changing herd

beginning of the separation of distinct villages in administrative terms, the Simanjiro Plains remain a multiple-use, semi-open and communal grazing land for the pastoral communities – although with clear regulations based on traditional grazing patterns. Maasai resource-management systems and land-use patterns are grounded upon principles of reciprocity and solidarity. An important notion that generally guides reciprocity principles among the Maasai is known as *enkanyit,* which means mutual respect. However, many of my informants lamented the decline in important cultural values such as *enkanyit*. Also some authors have demonstrated that this customary adaptation strategy is declining due to several stressors (see Goldman & Riosmena 2013).

The land that surrounds the TNP and that forms part of the Simanjiro Plains is so-called "village land". This land falls under the authority and jurisdiction of the local communities of the respective villages, which are predominantly Maasai pastoralists. The villages are governed by village assemblies (all adult residents), and an elected village council (consisting of 25 members) which is headed by the village chairman. Whenever decisions are made about access to land, such as setting aside dry-season pastures, a meeting of the village assembly is organized and decisions are made and enforced collectively (cf. Nelson *et al.* 2010).[136] In Terrat, usually before the general meeting of the village assembly takes place, the *olaigwanani* of the different villages organize themselve and draft a proposal that they can discuss in the assembly meeting. Also in case of conflicts or misunderstandings the traditional leaders are called upon to mediate. Nevertheless, while the Village Land Act was said to strengthen land tenure rights through village institutions, it catalyzed land privatization instead (Celender et al. 2005, in Sachedina 2008: 274) and it did not prevent further land loss experienced by the Maasai (as the Loliondo case attests to). It can be said that land tenure security at the village level is far from stable and desirable for local communities, which is in part due to the complexity of the procedures to acquire formalized rights, and land laws that are cumbersome and fraught with inconsistencies. Since the inception of the Village Land Act, one particular clause has been of great concern to the pastoralists, namely the fact that the President of Tanzania remains with the power to redistribute land that is considered "unoccupied" or "unused" (TNRF 2012a); often also referred to as "idle land". The

composition, livelihood diversification, trade, social networks, values such as reciprocity, and the introduction of new species. I highlight mobility here because it appeared to be an important adaptation strategy in Terrat, which is increasingly being challenged by changing land-use patterns and competition over land.

136 Since the Village Land Act (1999) came into force, Village Councils have been set up with the task of categorizing their land according to pre-existing or new land-use plans, a task that needs to be approved by the Village Assembly, and is subject to advice from the District Council.

definition of what constitutes this unoccupied land remains open for interpretation.[137] For example, pastoralists leave large grazing areas deliberately aside for a part of the year as dry-season reserves. Hence the fear of the Maasai pastoralists that their fallow grazing lands - which are left to recover for a considerable period of time – are considered to be unproductive (Sachedina 2008: 274). Not only in Terrat but also in the wider region this fear has set into motion the allocation of individual plots for cultivation to hedge against land appropriation.

Passengers on the road close to our *boma* in *Loondelemeti B*, which is the name of these white flowers.

Basic land-use patterns, adaptation and customary institutions in Terrat

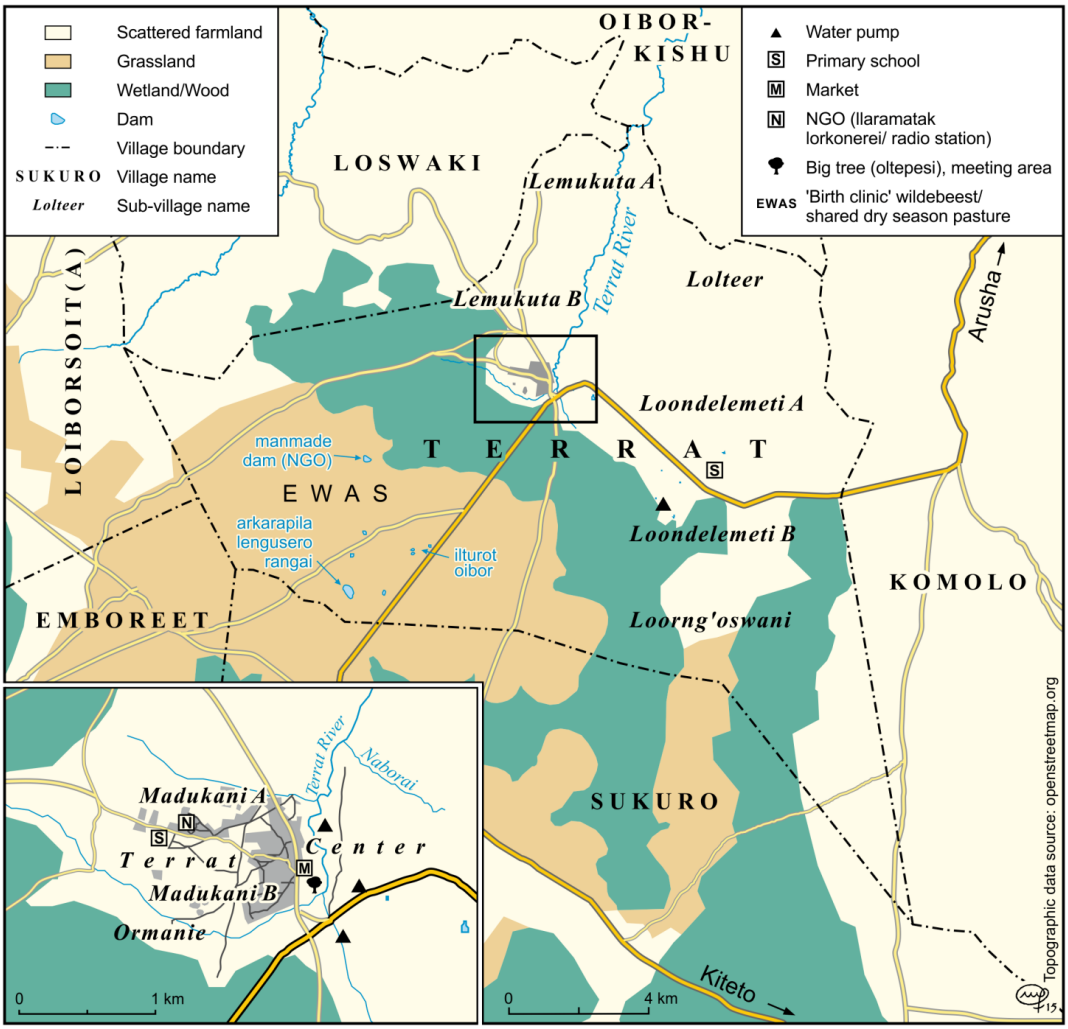
> *After having stayed in the boma with Petro's family for some weeks, I witnessed the remarkably regular pattern of their days. Particularly sunset occurred to me as a miraculous chronicle. First, the smallest animals (lambs and kids) returned, playfully taken care of by the smallest members of the family. Then the bigger animals (calves and goats) followed, herded by the older children of the family. Finally, before dusk the cows and bulls returned, usually in guidance of the* illmuran *or the* intoyie *(unmarried girls). After milking, the female and male elders of the family gathered around the fenced animals and stared at*

[137] The confusion over what constitutes what type of land is rather technical. In Tanzania "All land is public land vested in the President as trustee on behalf of all citizens" (URT 1999: 25); and thus it is the President who has the ultimate say in land allocation and transfer of rights. There are three categories of land: 1) Village Land; 2) General Land and 3) Reserved Land. The major threat and challenge for the pastoralists is the confusion and lack of agreement over what falls under General versus Village Land. General Land is defined as: "all public land which is not reserved land or village land" (URT 1999: 14) and includes unoccupied or unused village land. However, the Village Land Act does not state that general land includes "all unoccupied or unused village land", which is thus prone to uncertainty (TNRF 2012). Furthermore the President is authorized to transfer village land to general or reserved land for public interest, which includes investments of national interest (URT 1999: 26).

> *them with almost sacred devotion. I learned that each family member followed the genealogy of one of his or her animals until they were assured that their flock was complete and in good health. Now it was time to eat and socialize.*

If one wanders around into the vast plains of Simanjiro – particularly during the dry season – there are not many clues that unveil the fact that access to land is in many ways controlled and regulated. Only on closer inspection, for example by witnessing social interaction or herd movement, do existing grazing rules become apparent. The basic land use in Terrat is managed and arranged according to spatial and temporal movements, following a rotation system with dry-season pasture reservation that allows for grasses to recover. There is common grazing land (divided into wet-season pastures and dry-season refuges); and there is individually owned land for farms, homesteads and *kraals* for calves or sick animals (cf. Nelson *et al.* 2010: 80). The communal dry-season reserve – also called *oleilili* in Maa – can only be accessed from the first of July (with the onset of the dry season) until February. In exceptional cases, when one has a weak or sick herd, with permission from the traditional leader, herders are allowed to let their herds enter. There is strong social control to make sure that all protocols are observed, which prevents people from taking their herd into lands that are reserved for the dry-season, unless one has official permission. I have observed this social control while herding cows with a pastoralist who had gained permission to take his herd into the *aleileli* before the dry season. If one encounters other pastoralists there is an elaborate question-and-answer session to make sure that nobody is entering this land illegally. For example: where are you from, what is wrong with your herd, who is your father, who gave you permission to bring your cows here, etc.? These rules of access are strictly obeyed and the dates of access remain the same for each year. As the traditional ruler emphasized:

> We do not need to repeat the dates for when people can enter *ewas* [communal *oleilili*]. They are planted into people's minds. So everybody knows that in February cows have to leave the place and we cannot enter again before the first of July.



Map 7.5 Terrat village. Cartography: Monika Feinen.[138]

The use of an *oleilili* is an important adaptation strategy that serves as a drought refuge to survive the dry season, which is the most vulnerable period of the year. But it similarly functions as a way to prevent over-grazing. Furthermore, each homestead has its own individual *oleilili* that is designated for calves and sick animals that cannot range far in search for pasture, and can thus be found close to each *boma*. In principle, this is individual property belonging to a single homestead (comprising several households), but people are always free to ask each other permission to access any individual *oleilili*. There exists a significant difference in planning between the dry season and the wet season. During the dry season there are no demarcations, for most land (including farm land) turns into grazing land, apart from the individual *oleilili*. There are several traditional institutions and meetings in which the land management of the dry season is planned. The so-called *engigwana engishu* is a traditional meeting (without any involvement of the formal

[138] Not everything is depicted on the map. Terrat has 2 primary schools, 1 secondary school, 1 health centre, 5 bore-holes, 1 river, and 1 NGO.

government) in which all elders and the young men or warriors (*illmuran*)[139] discuss the improvement of land management of the dry-season pastures and the use of water sources. The traditional leader pointed out the importance and ongoing procedures of this meeting:

> The main thing that is being discussed in the meeting is about the improvement and land management based on pastoralism. For example, we may say "now the dry season is coming". And because we are depending on this area, this river for example, or the underground water, which has been drilled, we will depend on here. "Your cattle for example" – the cattle of this elder will be the first to come, they come maybe at 7 o'clock early in the morning. And they leave maybe at 9 o'clock. The second group of cattle are from another person. We decide here in this meeting. "Your cows should come maybe at 9 o'clock and they leave maybe at 5". So we arrange it in that way.

These meetings take place before the onset of the dry season, or are called whenever new decisions need to be made about issues concerning land, cattle or natural resources, mainly water. Another traditional practice for the Maasai to plan the dry season – or to recover from it – is an institution called *orpul*. This customary practice is a healing retreat in which large (or rather excessive) quantities of meat are consumed, knowledge about herbal medicines is exchanged, and the *illmuran* are taught general traditional lore (about the environment, as well as songs, dances, veterinary knowledge) by the elders. The retreat can last several weeks and usually takes place in a forest. *Orpul* is an important retreat to recover from physical disorders, stress, diseases or general bodily weakness after the dry season, or rather to prepare both physically and mentally for the upcoming hardships of the dry season. Leboi explained to me that they see *orpul* as a garage for the body. As one *olmorani* (korianga age-set) in preparation of *orpul* explained to me:

> We eat as much meat as possible. If we go for a long period we try to collect enough money to buy half a cow each. We feel so strong after *orpul*, because of all the meat that we eat. We only eat meat in that period and take herbal medicines. […] And we also listen to a lot of lectures from the older men so that we know what to do with our cattle in case of a serious drought, for example.

In addition to this, *orpul* is also said to have spiritual and psychological dimensions and should thus be seen as a holistic system of health care. Much time is dedicated to songs and dances, meditation, communal prayer and remembrance of ancestral spirits (Burford *et al.* 2001). Nevertheless, especially elder men in Terrat lamented that the importance of *orpul* is diminishing among the current generation of *illmuran*. One elder told me that the *illmuran* of today do not like to go to *orpul* anymore because "they don't like it, it is another generation. They are used to eating

[139] The status of the *ilmuran* within Maasai society can best be described as "a society within a society" that functions within a gerontocratic model. As Spencer put it: "The *murran* are suspended somewhere between boyhood and full adulthood and are placed in limbo for an extended period of adolescence that stretches well into their twenties. They are trapped in a regime imposed by the elders and yet at the same time are a law to themselves [...]" (Spencer 1993: 141).

ugali (maize porridge), they are used to eating beans, and whenever you give them milk they say 'that is not food'. So they don't like it". But some *illmuran* gave me the explanation that they are more drawn to the city and to finding alternative ways of generating income, such as trade and mining.[140] In a similar vein, many other customary adaptation strategies are losing their value, are fully abandoned or even prohibited. For example, drinking cow blood was a very common practice among the Maasai, which formed an important nutritional supplement in times of food scarcity. Nowadays this practice is prohibited by all churches, which disdain this "devilish" traditional practice. I have observed only a few men drinking blood during a circumcision ceremony. However, all the women that I met stated that they abstained from drinking blood nowadays. The traditional sacrifices and rain prayer in lead of *oloiboni* (the traditional healer and diviner) are also prohibited by the church. For an overview of the most significant adaptation strategies as pointed out by my informants, see box 7.5 below.

Box 7.5 Basic land-use management strategies and most significant adaptation practices and traditional institutions to cope with climate variability and drought

Seasonal mobility	Seasonal mobility was pointed out as the greatest and most vital adaptation strategy of the pastoralists. This is not a random strategy, but a highly planned and organized livelihood strategy.
Selling cattle	In order to survive harsh conditions such as drought, herders sell cattle, goats and sheep in order to complement their diet.
Networks and reciprocity	[*Enkanyit*] Mutual respect is a sacred notion that guides the building of relationships and networks of solidarity

Exploration of dry-season pastures	[*Eleenore*] Before the *illmuran* move with their cattle to other pastures a few selected warriors (two or three) will explore the new grazing area. They investigate the availability of water and pasture, and check the health and population density of local livestock, check for diseases, and talk to people about major challenges that exist in the area. After their exploration the *illmuran* come back and make a decision in a meeting (*engigwana engishu*) with elders and other *illmuran* about whether to bring the cattle there or to continue with finding an alternative grazing area. Nowadays the use of mobile phones has to some extent made this communication between different localities easier.

[140] Many young men from Terrat and other villages in Simanjiro have migrated to Mererani to become middlemen in trading the rare gemstone Tanzanite. However, in the past years this trend has declined. For an overview of how many men have migrated in the past years from Terrat, see McCabe *et al.* 2014.

Dry-season reserve	[*Alailili*] The area surrounding each *boma* is protected by leaving it fallow during the rainy season so that there are enough pastures left in the dry season for weak or sick cows, calves, lambs and kids (young goats).

	[*Ewas*] This is the communal dry season reserve that is shared by the villagers in Terrat. It is the area where wildebeest give birth and emit a liquid that is dangerous for cattle. It is free from trees, which enables the wildebeest to choose a place to keep an eye on the predators. Since the pastoralists cannot use the area in the rainy season they have effectively turned the area into a communal dry-season reserve. Access to the area is strictly arranged by the traditional authorities and one can only enter with permission from the traditional leader, and only if one's herd is weak. There is strong social control.
Wet-season grazing	[*Engusero*] This is the area that is used for grazing during the rainy season when the *Ewas* is not accessible for cattle.
Temporary settlement	[*Ronjo*] This is a temporary fenced *boma* without houses. It serves as a protection during the night for the warriors and their herd while they are far away from home taking care of the cattle during the dry season.

Warrior healing retreat	[*Orpul*] This is a recurring yearly gathering – or healing retreat – organized by different groups of warriors who assemble together with some elders in the forest. It is a retreat for the body to recover and gain strength, but this event also has a spiritual and social significance to connect with members of the group. One aim of this meeting can be to prepare for (or recover from) the dry season. They do so by eating an excessive amount of cow meat, and use traditional medicine in order to make them strong and survive the upcoming harsh dry season. They also discuss the best adaptation strategies. Also, in the longer term the *Orpul* is meant to hand over detailed knowledge of plants, medicines etc. by the elders to the younger generation of warriors. The *Orpul* also has a spiritual dimension and the *illmuran* spend time singing, dancing, meditating, and remembering the ancestors.
Drinking cow blood	According to the account of some elders, drinking cow blood was an important adaptation strategy to survive the dry season when there was not enough food. They would drain the blood from the cattle without the need to kill them. Nowadays this practice is hardly carried out because most churches prohibit this "traditional" habit.
Traditional meeting	[*engigwana engishu*] This meeting takes place whenever it is necessary, when urgent things need to be discussed concerning

	land use, cows etc. At least every year before the onset of the dry season it is organized to plan the adaptation strategies, and the access to land, grasses and water are discussed. This meeting is attended by all adult men and *illmuran*.
Restriction on drinking water	[*angaroni*] On this day cattle are not allowed to drink water, as a way of saving water resources.
Place with good pastures	[*engaron]* At the day that cows are not allowed to drink water, they are allowed to go to *engaron*, a place with good pastures.
Drinking day	[*Okore*] On this day cows are allowed to drink water.

Let us briefly go back to the function of one of the most important dry-season adaptation strategies, the communal *oleilili* as mentioned above, which has not been turned into a large drought-refuge without reason. While villages are dealing with livelihood changes in different ways, the villages of Terrat, Emboreet, Sukuro and Loiboirsoit have intelligently bundled their resources and turned the obstacles posed by the enclosure of TNP into a commonly shared dry-season grazing reserve[141] (the place is called *ewas*, see map 7.2 "Land use in the Simanjiro Plains" and map 7.3 "Terrat Village"). The wider Tarangire-Manyara ecosystem (or "Maasai Steppe") is renowned for its large seasonal migration of large ungulates. And as mentioned earlier, the Simanjiro Plains belong to a vital calving and dispersal areas for wildebeest, zebra and elephants (Sachedina 2008: 25). In the wet season large concentrations of zebra and wildebeest (thousands of animals, which is a considerable proportion of Tarangire's wildlife) disperse into the heart of *ewas*. Here they graze for 6 to 7 months until the dry season sets in, which is the period when the wildlife returns to TNP. During my stay in the area I witnessed indeed large groups of zebras and wildebeest congregating in this area on a daily basis. When I drove past *ewas* with Petro, we observed large groups of zebras and wildebeest, after which he exclaimed: "Ai ai ai, these animals are finishing all our grasses! And we still need to survive the dry season". This was a widely heard complaint in Terrat. The attraction for the wildebeest to graze in *ewas* during the wet season lies in the availability of enriched nutrients in the soil, which comprise higher mineral levels and are phosphorous-rich (Nelson *et al.* 2010: 80; Sachedina & Nelson 2012: 150). Moreover, because the area is wide and not thickly forested the animals prefer to give birth there so that they can see predators from afar. This is where Terrat derives its name "birth clinic" from.

[141] For an overview of response diversity and the different livelihood stratification strategies in Simanjiro see: Leslie & McCabe 2013.

The idea to designate *ewas* as a communal *oleilili* is an efficient way of turning an obstacle into an opportunity. The first reason for keeping the area free from human intervention is driven by a recent pilot project that was initiated in 2004 by several tour operators and NGOs together with Terrat. The idea behind a so-called "Conservation Easement Area" has been to spur local communities to protect wildlife and keep the wildlife corridors free from human intervention (i.e. settlement, cultivation, charcoal burning, hunting, poaching). This initiative was set up by several tour-operators and NGOs to engage local communities with protecting wildlife habitats, and pay them in their effort to protect the area. This payment scheme can be framed as a so-called Payments for Ecosystem Services (PES) agreement, and the designated area comprises 93,00 ha (Nelson *et al.* 2010), which logically forms part of the *ewas*, the shared dry-season reserve and wildebeest "birth clinic". Game scouts have been appointed to take care of the monitoring, and watch for illegal poachers and hunters and other forms of human intervention. As mentioned before, Leboi is one of the game scouts.

Secondly, it is during the calving period of the wildebeest that the pastoralists with their herd are forced to abstain from entering this area altogether, until the moment arrives when the first rains wash away the poisonous fluids emitted by the wildebeest. Just like Leboi and Petro, my informants unequivocally complained about the lack of pasture, and the wildlife that "finishes all their grasses". They found that the greatest injustice of TNP is the fact that the wild animals can graze everywhere all year round, whereas in turn their cattle cannot enter into the park. As one male informant lamented:

> We are really affected because during the rainy season wildlife from TNP are coming to Terrat to Tokota [plain area without trees, which is in *ewas*] to give their young ones, and they are staying here 7 to 8 months. They call it a clinic for the wildlife. Cattle are not going there because of Malignant Cattarhal Fever. They also finish the grass and water of the animals. But during the dry season when people from here or from other villages try to go back for water and pastures they are not allowed, while the animals from Tarangire are coming here, and finish our grass and also water.

Wildebeest in Ewas.

What clearly stands out among the major challenges to which the villagers in Terrat gave testimony was the restricted access to dry-season pastures and water sources that are found inside TNP, as well as the encroachment of wildlife onto their farm lands and grazing areas. One of the reasons why many villagers in Terrat did not plant maize in 2012 and 2013 was because zebra had eaten their crops in previous years, so they felt it was safer to plant beans instead (which are however also more drought-prone). Petro went out to check his farmland three times at night in order to chase away the zebras. Others paid young boys to keep an eye on the farmlands at night. Petro's elder brother, who lives a couple of kilometres further away, mentioned that he really missed the lions that used to be present in the area in much larger concentrations, which kept zebras at a distance. And of course the threat of wildlife to their animals was also pointed out, and the injustice that wildlife are much more protected than their cattle:

> When we kill a lion you can be in trouble with the government, so they can say the government can displace your cow […]. Maybe a lion can come into my *boma* and kill my cattle but when you kill a lion they come and take you to jail. So there are many challenges.

Another influential component in shaping the livelihoods of pastoral communities adjacent to the park is the fear of (further) alienation from land, or restricted access to resources due to conservation imperatives, which is not surprising if we consider the history of past land evictions of many Maasai communities (cf. Leslie & McCabe 2013: 119), which continue to take place today. The lack of land-tenure security is at the heart of many of the challenges the Maasai are

facing, which is an issue that particularly well-educated Maasai are strongly aware of. Edward, a young Maasai man and documentary maker that I mentioned earlier, succinctly put it as follows:

> The Maasai don't have a high number of land rights […]. They say the land belongs to the President. So sometimes if you can live here, and this is a nice place, people maybe come to hunt or maybe to put a camp there. They say because the land belongs to the President. So you have to move here, go to find another way. […] So in the kind of tribes based in Tanzania, the tribe that is suffering is Maasai. Really around Tanzania a lot of Maasai are more suffering.

If we go back to the time in which Tarangire was established as a national park, it becomes clear that – despite its promises to give local people control over natural resources (Igoe 2002: 77) – it was not intended to serve the interests of the local communities. It foremost entailed a radical rupture in the seasonal migration patterns of the Maasai. The following account from a well-educated elder (who spoke English) also reveals that the "agreement" to demarcate the land occurred without considering the long-term consequences of local communities properly:

> Tarangire was Simanjiro Proper. But when the government saw that there is a variety of animals and water sources they saw it is better to be a national park. So the government sat down with the leader who was known as *Mariko*. He was the traditional leader of Maasai, he was the *olaigwanani* and they made an agreement. […] It was sold after independence. But at that time people were not affected because the population was very small […]. So you may pass from here to Naberera and you find no people! So the land was very large that is why it was not bad to make a national park because the main land was very big (*interview with elder*).[142]

Furthermore, as the traditional leader at that time made a secret agreement with the park management, most people were not informed that they had lost access to this land. Their eviction came rather as an unfortunate surprise, and the long-term effects were unforeseen:

> The man [Mariko] made that agreement secretly. He did not inform the people about the fact that this place is going to be a park. Therefore, when people were grazing their cows inside that place they found an aeroplane to chase them very far away from that place, saying that "this is a national park". Now we have come to realize that Tarangire was a very good place because water sources are available throughout the year. Whether it is dry season or rainy season, water was always available. And we are now realizing that this place was very valuable after all these changes are taking place. Because you may find your cows two days in a row, they don't find water. You are normally running from here to there and you go through the national park you will find that water sources are available throughout the year. There are pastures but it is only for wild animals. Wild animals that are kept by people to help them make a living. Safari and tourists also. So we came to realize that Tarangire is a good place for the people here also (*olaigwanani* Terrat).

[142] At that time there was only one *olaigwanani* among the whole of Maasai community, as opposed to nowadays, when every village (or even sub-village) has its own traditional leader.

Many informants indeed explained that the negative effects of the enclosure of TNP were felt only later (see also Igoe 2006b: 86), and were particularly deplored in times of severe drought. Among the Maasai, eventful years and years that can be characterized by a pronounced environmental or climatic feature are given special names (see box 7.3). Sometime in the 80s, it was the year of the lamb (the exact year was apparently forgotten, but people referred to its name *olari laambaalon*), in which the dry season lasted for an unbearably long time, when some village leaders of Terrat asked the government of Tanzania (TANAPA) – as a matter of exception – for permission to enter the park with their herds. Water sources were dried out and many cattle were dying, or struggling for survival (as were the people). Their request was denied. In addition to this, people are telling stories about the consequences of trespassing the boundaries of the park with their cattle, which for good reasons have left the people frightened. As one senior elder told me:

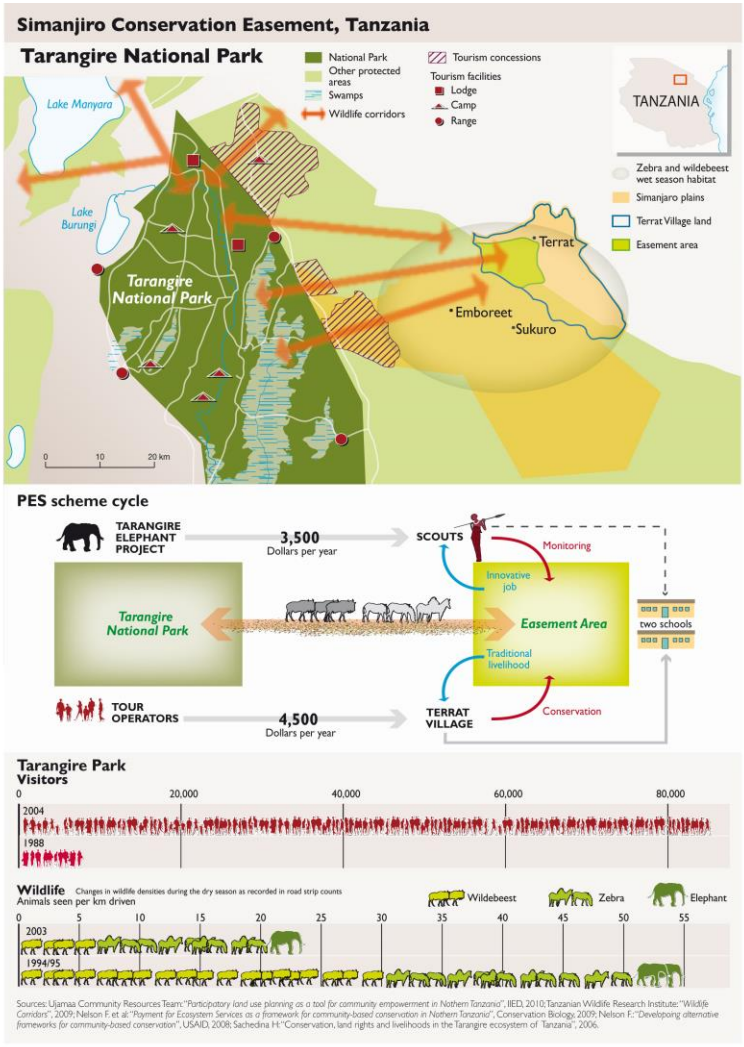
> They will fine you [if you enter]. There are some police who are taking care of that. They can kill you even. There was even a case in which 50 cows were killed. They killed the cattle.

Fundamentally, with the establishment of TNP the Maasai of the Tarangire/Simanjiro ecosystem lost their most reliable dry-season water source, the Tarangire river, and their primary drought-refuge, the so-called Silalo swamp (Igoe 2002: 81; Leslie & McCabe 2013: 127). The enclosure of Tarangire National Park has been driven by Western-dominant international discourses about nature conservation, infused by the conviction that nature and culture need to be detached. This ideology is a typical vision of African environment and society and is largely the lifeblood that shapes conservation throughout the continent. As mentioned earlier, this falls under what Brockington (2002) has coined "fortress conservation", and is buttressed by three (generally erroneous) premises. First, the vision is purported that the environment was once threatened by destruction, but is now saved.[143] Secondly, the argument is defended that the people who were evicted were not indigenous to the area so it was not their ancestral land, and that it was an indispensible step towards a return to a pristine wilderness. And finally, conservation is legitimized by the need to provide for the development needs of the communities around the national parks, such as education and health care (Brockington 2002: 3). Particularly the history

[143] Interestingly enough, there is often little or no ecological evidence to support this stubborn idea of environmental damage done by local people. This has been brought to the fore by Homewood and Rodgers in the case of Ngorongoro. This touristic attraction had been the battleground of continuous political struggle without much sound ecological evidence about the ecology of the Maasai, until their study came out in 1991. While conservationists continue to see the Maasai as a threat to the environment, historical evidence shows that the Maasai have a long history of successful and sustainable land use in the area (see: Homewood and Rodgers 1991).

of wildlife conservation in Eastern Africa has been driven by two lingering myths that formed the heart of policy design. The first relates to the tales about both the African untamed wilderness *and* its paradisiacal qualities, which were brought into being by the first explorers and were an antagonism to industrial Europe. Secondly, the myth related to the people who inhabited these places – most notably the Maasai. The attitude towards them was perceived in a similarly ambiguous way: they were greatly admired for their "warlike instincts", but similarly feared for the same reason, and seen as an obstacle to development that needed to be tamed by outside intervention (McCabe 2002: Hodgson 1999).

It is beyond the scope of this study to elaborate on conservation issues in detail, but it is important to point out the "truth effects" of these convictions in order to understand the construction and politics of nature in environments like Simanjiro. The tragic irony of the conservationist paradigm is that by justifying the removal of people, the resultant policies in fact contributed to environmental degradation and biodiversity loss that were aimed at being prevented in the first place. For example, research has shown that in the past the Serengeti grassland ecosystem was maintained by the presence of Maasai and their cattle until they were expelled which resulted in less grazing for antelope (Adams and McShane 1992, in: Chatty & Colchester 2002: 8). Furthermore it is important to point out that Western conservation ideology bears similar ontological premises to (parts of) the Adaptation to Climate Change discourse. The categorical separation between Nature and Culture features in both, as well as the idea that there is something like a pristine nature or climate that we have to preserve, and go back to a situation that we can "reset", like a default setting.



Source: Cartography GRID-Arendal[144]

Good neighbours: Conservation versus Development

A large body of literature exists about the relationship between sustainable development and nature conservation, and as always the arguments that are advanced and the proposed solutions depend on the ideational community one belongs to. It therefore comes as no surprise that historically there exists a conflict of interests between local communities and wildlife conservationists (Igoe 2002, 2006b; TNRF 2011). In northern Tanzania, the horizons between social scientists (and those who advocate for indigenous rights and development) on the one hand, and conservationists on the other have also been out of tune for a long time, to the extent that (at times intentionally) no communication has existed between these groups (McCabe 2002).

[144] See website: www.grida.no/graphicslib/detail/simanjiro-conservation-easement-tanzania_42db (accessed 7 January 2017).

Since the 1980s conservationists have been concerned with the loss of dispersal areas and corridors outside of the TNP for wildlife, due to agricultural extension and ranches that have blocked migratory routes in the Maasai steppe (Borner 1985; Davis 2011). But the villagers of Terrat have primarily been concerned with sustaining their livelihoods, and securing land tenure for their land-use patterns, and have been strongly influenced by the fear of losing land for the protection of wildlife. As mentioned earlier, this impasse is principally caused by the fact that since independence "proper land use" in Tanzania is equated with farming. In other words, "open" land can be considered "unused" or idle – despite the fact that this type of land has great significance for pastoralism – and can thus be taken away from them and sold to investors or used for conservation purposes. Cultivation has thus become a defence mechanism to prevent further land loss (Sachedina 2008).

Although the wildlife policy that was adopted in Tanzania in 1998 advocated the need to increase the economic benefits for local communities, wildlife remains under central control and financial benefits are limited (Sachedina 2008; Nelson *et al.* 2010). A widely heard complaint that was expressed by village administrators in Terrat was been the fact that TANAPA has never sufficiently compensated the village for the establishment of TNP and the challenges that it continues to entail. Over the years the relationship between the Maasai communities in the proximity of the park and TNP has deteriorated. Israel, the VEO of Terrat who was introduced earlier, shared his disappointment about TANAPA and his attempts to negotiate about compensation strategies with us:

> We try to discuss things with the leaders of Tarangire about *Ujirani Mwema* [in Swahili this means good neighbourliness]. How they can compensate us if a lion injures somebody or eats our livestock maybe, what happens? Who can be responsible for paying that animal? We are discussing but there is no solution yet. […] They have helped us with building one classroom a long time ago, but we want them to help us every year. Our cows die. Animals make many destructions [*sic*] in the village, diseases, destruction of farms, injuring people, sometimes killing people. They [TNP] say "we can't pay', but maybe share in the costs". But you cannot pay for a life of a man that is lost.

Israel emphasized that Terrat is fulfilling their role as good neighbours since they try to keep the area free from cultivation and settlement, but that the village has hardly received any benefit in return. The *Ujirani Mwema* concept goes back to 1988, when TANAPA initiated a programme known as Community Conservation Service (CCS). In 1994 it became the official mechanism to channel benefits and information to local communities (Igoe and Brockington 1999: 39). The programme's mission was intended to share park benefits with adjacent communities, and improve relations between national parks and neighbouring communities as well as promote sustainable development (Kangwana and Mako 2001: 5). Nevertheless, in 1989 the enmity

towards TNP among local communities rose to prominence when a group of conservationists proposed a 6,000-sq. km extension of a conservation area on the eastern side of the park (Igoe 2002: 83; Igoe and Brockington 1999: 41). This proposal of a large conservation area, which recommended the prohibition of agriculture and the forced destocking of local herds, was motivated by the concern about large-scale farms in the area that impacted upon wildlife corridors (Borner 1985).[145] The sheer focus on conservation as expressed in this proposal shows the overall lack of concern for the local communities' well-being. Therefore, it comes as no surprise that an assessment of this project related to TNP concluded that it has not resulted in any meaningful support for pastoral communities (Kipuri and Nangoro 1996, in Igoe 2002: 85).

Other studies, too, have revealed that local populations in the vicinity of the park have expressed various levels of distrust and perceived risks associated with the park (Davis 2011: 27). These findings are in line with what I encountered in Terrat. Not only Israel but also many villagers in Terrat expressed their fear and mistrust vis-à-vis TANAPA, despite efforts such as *Ujirani Mwema*, which attempted to foster better relationships between the park and local communities. The problem has been that for the Maasai the idea of good neighbourliness is based on the principle of reciprocity, which should allow the herds of the pastoralists to access Tarangire, just as wildlife is entering their grazing areas. Accounts of my informants reveal the experiences with park rangers who forced them to pay high fines (or bribes) up to 700,000 Tanzanian Shillings, because for trespassing the boundaries of the park. Others reported that police had beaten them, violently chased them away or confiscated some cattle. While the intention of TANAPA (together with the African Wildlife Foundation who partnered this initiative) was to engage local communities in conservation efforts, their subsequent attempts to limit farming in the area and establish a wildlife corridor were met with great hostility from the local people, who saw this *Ujirani Mwema* initiative as a trick to extend the boundaries of the park (Sachedina and Nelson 2012: 152; Igoe 2002: 85). Subsequent proposals followed by the government that called for the Simanjiro Plains to be protected and farming restricted, and even a new game reserve was proposed by the District authorities of 3,822 km^2 (URT 1993, in Sachedina and Nelson 2012: 152). Furthermore, their mandate was to interact with local communities and to fund community projects. According to my informants, only one classroom has been built in Terrat. Two elders were not really impressed by the attempts of TANAPA to provide the village with funds, which they rather saw as a strategy to silence them:

[145] The motivations for this proposal were outlined by Marcus Borner of the Frankfurter Zoological Society in the article "The Increasing Isolation of Tarangire National Park", Borner 1985.

> There is at times for leaders who are responsible, they give some funds, they help in building maybe a classroom. That is just to minimize the noise of the people, crying about the destruction of those animals. So sometimes you cannot cry because you have received something from them. […] But there is no direct compensation because now when a lion has eaten your cow you need to be paid. There is not something like a direct compensation.

Concluding Remarks

Considering the highly politicized history of conservation, land appropriation and violent land evictions, it is hardly surprising that everything revolving around national parks and conservation has bred distrust among the Maasai. This suspicious attitude became clear during my interviews, in which many informants were asking me questions about the purpose of my visit and whether they would receive something in return. One very old man critically stated: "I am tired of NGOs coming to talk about the background of the Maasai and so on, because we never see any impact. Maybe there is some help from abroad but they never brought it to us. Instead they come to take our land so our cattle does not get enough grass". The history of marginalization and general neglect has inevitably left traces of injustice, and incited sufficient reasons for the Maasai to be cautious towards the influx of alien (environmental) discourses. As we shall see in the next chapter, climate change is at times seen as yet another such travelling discourse. The overall resentment towards conservation was shared by many of the NGO workers representing the Maasai that I met in Arusha, which was articulated more than once with the words "the animals in Tanzania have more rights than the Maasai". These complex historical processes of land use and settlement that have largely been shaped by ideas about development and conservation, reveal only a glimpse of Terrat's "interpretive context". By focusing on Terrat's cultural background and complex set of norms, local ideas and "prior commitments", we can now finally turn to a description of how climate change discourses dawn upon Terrat.

8

Love in Times of Climate Change

Terrat Village – a Portrait

Introduction

After the market day had come to an end my research partner and I were about to return to our *boma*. Every Thursday, Terrat's usual tranquil ambience gives way to the bustling vibrations of the weekly market, which attracts a great many people, both Maasai from all over Simanjiro and non-Maasai coming from Arusha to sell their foodstuffs and produce. Male pastoralists come to trade cattle, or to inquire about the current state and prices of the animals. Women are preoccupied with buying and selling food and household goods, such as soap, cooking utensils and calabashes, but also with clothes and bodily paraphernalia, like cloth, beads, jewels, shaving knives, ornaments etc. The marketgoers also seize en masse the opportunity of having access to an electricity hub, and mobile phones are cued up to be charged in the local small stores and barber shop. If one has nothing to sell or buy one comes to socialize. It was my last day of fieldwork in the village and as the day progressed, I did not have enough time left to say goodbye to my friends and informants, as their houses were too far apart. Twilight was majestically heightening the colours of the surroundings, and for the sake of having a ritual closure I ordered my last warm *Kilimanjaro* beer. While looking back at my fieldwork in a rare moment of quiet contemplation, and puzzled by the awareness that time had escaped me once again, a sensation struck me that can best be described as the "fieldwork goggles". (Adopted from the "graduation goggles", the term refers to a nostalgic feeling when a particular time in life is about to end, and makes one forget all the hardships that were part of it).

And by the fortuitous grace of *kairos* – the conception of time that dictated the rhythm of life in Terrat much more than *chronos* – one by one, my friends appeared and sat together with me for some last jokes, stories, questions, laughter and exchange. Elijah, a friend of the family where I stayed, said: "So Sara, you have been living with us in the village for a while and have been asking a lot of questions to us. Now it is our turn". Filled with pleasure as I found their curiosity more than fair, because it was the only way that I could possibly reciprocate their hospitality, I sat, listened and answered. "Tell us about these airplanes that we see. How do they work?" "How big are they?", "Can we bring our cattle inside?" And, "How do these mobile phones work?" "How does your government deal with farmer- pastoralist conflicts?" Or, "Is the sun moving, or is it us who are moving?" And, "What about the moon, is it attached somewhere, or is it just hanging there", and "Where does it go to when it disappears for some days?" "Is it true that you also have a culture, just like us?" "Who is taking care of our cows that are in your country" (according to Maasai myth, they believe that all the cows on Earth were given to the Maasai by *Eng'ai*. Here the question was intended more as a joke). This interrogation by the villagers was nothing new to me.

In fact, their curiosity had already appeared at an early stage in my fieldwork. And because I was often confronted with an absence of climate-change vocabulary, I greatly profited from the questions posed by my informants. In brief, reversing the roles between informant and myself became a methodological means to sharpen my own questions. This portrait of Terrat seeks to do justice to the idiosyncracies that guided the villagers' lives, curiosity, anguish, anxieties, dreams, hopes and great sense of humour.[146] The following account provides insight into a village that is confronted with a new (and still somewhat alien) discourse, which is seeking to impose new explanatory pathways about a changing world. This chapter addressess the very basic question "what does climate change mean to the villagers of Terrat?"

Weekly market in Terrat centre.

[146] I find it more legitimate to use the term "portrait" for this account than "ethnography", since I have only scratched the surface of understanding the lifewords of the people who dwell in Terrat. One of the disadvantages of carrying out a nodal and multi-sited ethnography (at least as a novice anthropologist to a certain locality) is the fact that I was often travelling in and out of the village. This account should therefore only be seen as the beginning of a conversation about the ways in which climate change discourses travel to Maasailand.

Barbershop, Terrat Centre (*Tunachaji simu hapa* means "Here we charge mobile phones")

Climate change dawns on Terrat

Many villagers in Terrat have the impression that the rainfall is diminishing nowadays, which they relate to a decreased sense of morality in society. Others, who have heard about "this thing called climate change", find this new scientific prophecy unconvincing, or utterly confusing, since they see it as nothing new. Again others, particularly the elderly, say that they have not observed changes in the weather or climate, and they emphasized that bad years have always been part of normality in Maasailand. Villagers who own a radio in Terrat hear about a global problem that is dawning upon Maasailand. And they are told that the main culprits of the looming crisis are the rich countries with their polluting industries, but that the Maasai – together with all the other poor people in this world – are the ones who will suffer firsthand the most. They are encouraged to plant trees, and explained that carbon dioxide is dangerous, that God has nothing to do with it, that there is something like an ozone layer protecting the earth that we as humans are depleting, that science is real (more real than God for this matter), among many other things. While there are other sources through which the "new prophecy" is disseminated, such as NGOs, researchers and the church, I observed an overall lack of climate-change information, awareness and discussion. Furthermore, while some informants complained about the lack of rain, people's day-to-day worries did not resonate with global climate crisis narrations, for they had more pressing concerns like access to basic health care, medication, vaccinations for their animals, education

and basic access to natural resources like land, water and grasses. Environmental hardships, such as recurring droughts and irregular rainfall, play into this complex set of challenges.

As mentioned before, the overall absence of climate change discourses is in part due to an absent state that continues to neglect one of its most marginalized populations in the country. It will be demonstrated that both the dissemination and the translation of climate change discourses, as well as the lack thereof, are highly political processes. But there is more to this absence, since there are villagers who have heard about climate change, but who were not impressed by it or who were somewhat indifferent towards it. This section explores this complex mixture of "absence", translation, observation and reception. It interrogates how a nascent story dawns on Terrat and entangles old and new horizons, and how it is at times embraced by some, but refuted by others. I argue that a rejection of this incoming discourse should be seen – in part – as a form of resistance, an attempt to remain faithful to ones own set of norms, values, beliefs, principles of causality and "cosmological configuration" (compare with Rudiak-Gould 2013b; 2014b). What happens when a rural village like Terrat is confronted with a new story about a changing world that carries a message of doom and decay? How do villagers, who have never seen industries with their own eyes, receive this narrative for which they hold no responsibility and in which God and morals are relegated to the margins? Here is a snapshot of this translation process.

In an educational short movie clip called "Climate Conscious Program", made by several NGOs and recorded in Terrat with a group of villagers, we witness Leboi herding cows in the Simanjiro Plains. He and his fellow "actors" are lamenting about a changing world:[147]

> *Actor 1*: There are changes in this world and I don't know why.
>
> *Leboi:* There has been a prolonged drought, at least three years with little rain. Even those who came here from Kenya had their cattle die because of the drought.
>
> *Actor 2*: So where will I give my cows water?

Then Edward, the documentary-maker, sits with them under a tree and begins to explain in Maa:

> *Edward:* Let me tell you something. I learned about this at school. We are not the only ones experiencing these changes. It is like if you pinch yourself on the finger. You will feel the pain all over. It is the same for the world.

Then Edward then takes a football that symbolizes the globe. He continues his explanation:

[147] This movie was produced by an international NGO together with Ujamaa Community Resource Team (UCRT) and Tanzania Natural Resources Forum. The movie is scripted so that is why I refer to these Maasai herders as actors.

Edward: Let's say this is the world we are living on.

Actor 2: That ball?

In the next shot the ball has turned into a globe.

Edward: There is a place called America, which is here (points it out on the globe). And a place called Europe, here, and another one called China. These places produce a lot of smoke because they have a lot of vehicles, and airplanes, and they have these things called industries. (Accompanied by images of industries, smoke, cars etc.).They burn a lot of fuels, like diesel, petroleum and oil. After they burn, the smoke comes out, which is called carbon dioxide. That is the bad one. The pollution rises into the sky where it affects our protective blanket. Then the blanket becomes denser and denser. And the whole world becomes hot.

Leboi: So now the world is like someone who is suffering from malaria. It is heated, becomes hot, and gets malaria.

Edward: Right, these climate changes we are getting is because the world is heated. Droughts come and we don't get rains when we expect, like these past ten years. It is caused by humans and humans should fix it.

Actor 1: So it is not God's fault?

Edward: It is not God's fault. This is not caused by God. It is caused by humans themselves. Like those countries I mentioned. So don't cry to God, we are destroying our environment ourselves.

Actor 1: So humans are beating themselves?

Edward: Yes, we are. It is caused by humans and humans should fix it. Yes, humans should have to stop cutting the rain forests we still have. And protect the world's forests for our future generation. Our protected trees will help meet the growing generation.

While this scripted video fragment is partly meant to serve educational purposes, considering its limited outreach possibilities among the grassroots people (there is one mobile cinema), it was certainly also intended to target the donors.[148] The fragment is so intriguing because it gives us a vivid insight into the translation process of climate change – including the mediating forms and practices – at the very end of the "translation chain". It reveals a glimpse of the climate narrative in the making; here a story (supposedly) told by the Maasai to the Maasai, yet a clear NGO rhetoric can be discerned. A new allegiance is forged between Terrat and the globe. The actors are placed in the role of ignorant and helpless victims who need to be enlightened by NGOs, who operate as true "pedagogues of progress" (Englund 2011). However, at the same time their observations are used as a way to confirm that climate change is actually happening. The picture is painted as if the Maasai, while wandering around, are complaining to each other about a hotter

[148] The educational movie was shown at the COP17 in Durban where it won a prize.

world, questioning what is going on in this world, and therefore seek recourse to the NGO for clarification. While, of course, the reverse is actually happening. It is the NGO that aims to illuminate the villagers, and makes them question "what all this is", prior to, and as a necessary step towards, their own intervention.

Image from an educational movie in which a documentary-maker explains a few Maasai from Terrat about CO2 and industries as the causes of climate change on the globe.

Put in Michel Callon's terms, the NGO is here engaged in a process of "problematization", in which it defines the nature of the problem after which it "makes itself indispensable" in order to solve it (Callon 1986). This fragment can in fact be read as the (staged) culmination point of the positive-feedback cycle, as featured in the "folktale of the Indian and the meteorologist". Furthermore, it also reveals the process of how the global is localized (e.g. the analogy with malaria, and how remote industries have a direct impact in Maasailand), and how the local is made global (plant trees to protect the globe). And while the polluting countries are pointed out as the major culprit, the Maasai themselves are also not spared from culpability as they are reminded of their own role as environmental destroyers. While I will touch upon the notion of cultural decline as an inherent element of the Maasai society's self- critique, I will not elaborate here on the questions of externally imposed blame and responsibility (i.e. blaming the victims), since I have written about this issue in another context where it was more prominent (De Wit

2015).[149] Of concern to my analysis here are rather the dichotomies that ermerge in the translation of climate change.

It is very tempting to understand the worldview of the Maasai in relation to natural dangers as "traditional", and as being radically different from a "modern" understanding of the world. As one of the "binary fruits" of enlightenment thinking, we all too easily create a dichotomy in which societies that are without science and technology are driven by superstition; whereas modern societies are allegedly intellectually free and have an "objective" view of natural dangers, such as climate change. Following Douglas and Wildavsky (1982), the common view has been that for all other societies "before us", every natural disaster is freighted with meaning and nature thus seen as constructed and endowed with political, social and moral significations. This is contrary to our understanding of modern society – that owes much to science – which is supposed to be privileged by seeing nature as "it really is", morally neutral, and politically empty (Douglas and Wildavsky 1982: 29-30). The authors' objection to this alluring opposition is:

> But no! Try not to get into an argument about reality and illusion when talking about physical dangers. There is no need to adopt any relativist standpoint about what is really out there to make our point. We are only concerned with selection and priority among real dangers. On this subject we shall see that there is not much difference between modern times and ages past. They politicized nature by inventing mysterious connections between moral transgressions and natural disasters as well as by their selection among dangers. We moderns can do a lot of politicizing merely by our selection of dangers. (Douglas and Wildavsky 1982: 30).[150]

In line with the authors who employ a "cultural theory of risk perception",[151] in the following I shall query the confrontation between these allegedly opposing worldviews, and focus on the

[149] See also the work of Rudiak-Gould (2013b) and Eguavoen (2013) on trajectories of blame and the translation of climate change. Their studies also demonstrate how both climate change discourses as well as local observations feed into a society's (cultural) narrative of "in-group blame". However, both authors come to a different conclusion. Eguavoen sees self-blame as something that "ignorant" societies need to be liberated from in the form of education, while Rudiak-Gould instead argues that we need to approach it as a form of local agency. This conclusion is in line with my own research findings. Yet an important difference is that in Rudiak-Gould's analysis local communities embraced climate change, while in Terrat people were much more reluctant towards it.

[150] It should be evident that the terminology to describe other cultures as "ages past", or "pre-modern" and "primitives" is archaic and has long been discredited within anthropology. They refer to societies that are "living without 'modern' science and technology". And even though the Maasai in Terrat have experienced an influx of mobile phones, radios and other technologies, and largely have embraced Christianity, I believe that much of their analytic framework in understanding pollution beliefs remains highly relevant.

[151] In line with Rudiak-Gould, I adhere to their "general" model of risk perception and not to Douglas's more rigid scheme based on group/ grid distinction, which has been criticized for being functionalist, for treating cultures as bounded systems, for assuming a too close fit between cosmology and society (or discourse and behaviour), and for not accounting for enough variance among individuals in risk perception (see Rudiak-Gould 2013b: 11).

existing dichotomies related to natural dangers in general and climate-change-related explanatory pathways in particular. That is, between the secular and the sacred; the morally blank and morally endowed; the depoliticized and politicized. And finally, I shall touch upon the crucial distinction between the anthropogenic and the natural – features that presumably mark the difference between "modern" climate worldviews and all societies that are considered not to be so. Following Douglas, first of all, risks are undoubtedly always selected. Secondly, ideas of nature are always deeply politicized (as is the notion of an untouched and pristine natural condition), as well as what it means to adapt to a changing climate. In earlier chapters I have shown the inherent moral and political nature of climate change and the ways they are advanced in "modern" society. Also, the video fragment above underpins the highly moralized tone of climate-change narratives. While God is discarded as a causal agent and even fully removed from the explanatory horizon, morality takes centre stage. "Humans are causing it, so humans should fix it". In brief, we can begin by doing away with the two supposed dichotomies relating to morals and politics (or modern and traditional) related to risk and danger, since we are all too aware in anthropology – thanks to Mary Douglas's enduring engagement with the subject – that the universe, at all times and in all places, is moralized and politicized (Douglas 1992: 5).

According to Douglas and Wildavsky, a sound point of departure in understanding the comparison between "moderns" with "primitives" (by lack of better terminology I shall henceforth use "traditional"), and the politicizing of nature is to look into the idea of pollution. Pollution here refers to a condition of impurity in which some harmful interference with natural processes has taken place. In other words, an abnormal intrusion of foreign elements is assumed that brings about destruction of what is perceived as normal. According to the authors, two forms of pollution can be distinguished. The first concerns a strict technical one (like river or air pollution) that rests upon a clear idea of a pre-polluted situation that can be measured precisely, and carries no moral load. The second notion of pollution is nontechnical and speaks of a contagious and harmful state, which carries the idea of moral defect and is mysterious in its origins (Douglas and Wildavsky 1982: 36). It is the latter, nontechnical pollution that they speak of as "pollution beliefs" or "pollution ideas", which is of particular importance to my analysis. Nevertheless, it should be pointed out that while talking about observable changes in the environment or the weather, many of my informants referred to the first, strictly technical form of pollution. This is perhaps not surprising as dwindling resources like grasses, plants, trees, rivers and water are more tangible, and indeed measurable, than an abstract phenomenon like the climate. Thus, notwithstanding the fact that these two forms of pollution are at times empirically mixed up (a dry river might be pointed out as a proof of climate change), analytically it makes

sense to disentangle them. For indeed it holds true that mere technical pollution is largely explained by overpopulation, in contrast to weather and climate conditions, which are predominantly attributed to society's moral conduct. We can reduce observations of a changing climate, to the two main variables of rain and drought, because they were put forward as the quintessential features of the climate (rising temperatures were only rarely mentioned).

Nothing new under the sun: On the climate's inherent variability

Coming back from Arusha town in the rainy season to the *boma* where I stayed, I was often overwhelmed by a sensational joy in the beautiful environment and cheerful Maasai family that was waiting for me on the side of the road. Their *boma* was located in the sub-village called *Loondelemeti B* (see map 8.2), which owes its name to the wealth of white flowers that are growing there. This *boma* was amidst other scattered compounds that are found in the vast plains of Simanjiro. During the period of long rains, in the case of a good year, the area is exceptionally beautiful and blessed with an abundance of lush pastures, blossoming flowers and sufficient crops like maize or beans to feed the family. It is the time of plenty. When the rains arrive on time, if they arrive at all, both people and cattle will have the chance to recover from the harshness of the dry season, and regain their strength in order to prepare for the next dry season to come. In this period of abundance there is no need for long-distance movement, because the grasses and water are usually found in the vicinity. Families are united; there is time for leisure and ceremonies as there is enough milk and meat to share. The contrast with the dry season couldn't be sharper, when the area turns into a semi-desert with dust clouds covering the pastures, the water resources drying up and the food for both people and cattle gradually diminishing. That is time to search for green pastures and water sources. The selected *illmuran* are sent out on their exploration journey (*eleenore*), after which they report their findings back in the traditional meeting (*engigwana engishu*) in which strategies for the dry season are planned. It is the time of scarcity. Women's daily activities amount to an ever-greater burden (see box 8.1), because men are often far away with their herds and women need to walk great distances to find firewood and water. Cattle and people lose weight and strength, while their concerns grow until the first signs of rain can be found in the sky, and villagers sigh with relief "thank God, we made it".

Mama Eliya milking a cow.

Children milking a goat.

Box 8.1 Account of dry-season activities from Mama Eliya

The dry season is too hard for us. It is very tough because everything is very difficult to get, and there is no milk. And if you want to buy maize it is too expensive. We buy 20 kg of maize for 12,000 TSH. During the rainy season it is cheap because most of the people have maize in their *shamba* (farm), fresh maize that we can cook directly. But during the dry season, there is no food. When I wake up I milk and then prepare *chai* (tea with milk) for the family. Then I prepare porridge for my kids who go to school. After cooking porridge I clean my house. Then I go and fetch water with the donkeys. When I come back I repair the house with mud and sometimes I also repair the goat pens. Later we go and look for firewood.

Pentecoastal church in Terrat.

Leboi climbed a tree to make a phone call.

The *boma* where I stayed.

It goes without saying that the seasonal motion of Terrat's climate impinges powerfully upon peoples' day-to-day activities and their physical and social well-being, as well as upon the environment and the ways they perceive and relate to it.[152] I found it remarkable that mainly among elderly villagers an explanatory pattern existed, in which they did not give testimony to (conspicuous) changes in the weather and the climate. It was also this group of people who were overall not "climate change-cognizant". In other words, since they had never heard about the term *climate change* (either in Swahili nor in Maa) their accounts principally relied on the experience of sensory observations and (social) memory. By social memory I mean the whole body of customary climate knowledge and environmental lore (cf. Oba 2014). The ways in which social memory is maintained in Terrat include for example warrior songs, in which *illmuran* sing about past hardships and adaptation strategies, or the names that are given to climate-eventful years (see box 8.3).

One of the questions that we asked during interviews was whether people had observed changes in the weather, rainfall, or seasons compared to when they were young. It became clear that their social memory echoed many dry spells, climate fluctuations and variability, years of hardships, environmental catastrophes, hunger, and events that were also remembered by their own parents.

[152] Whereas the climate obviously consists of many more components than rainfall alone, its vital role in shaping and maintaining pastoralists' livelihoods (and religious convictions), legitimizes the overall focus on rain.

Some elders recalled the years when they suffered from hunger. For instance, they mentioned years in which they were forced to eat the skin of their animals in order not to starve. It was the time when they were still nomadic and did not use maize or other crops to supplement their diet. To cope with these climatic difficulties they pointed out two crucial coping strategies that enabled them to survive the dry season: mobility, and drinking blood. Many elders referred to the period in which drinking blood was still a common practice, some with nostalgia but others with God-fearing disdain. But consensus existed about the importance of both these behaviours as a survival strategy in the past. In brief, flexible adaptation mechanisms formed the lifeblood of a nomadic way of life in Maasailand, as hardships, environmental hazards and catastrophes have been part and parcel of the highly variable climate.

Box 8.3 Climate-eventful years that have been given special names (*Olari* means year)

2005 [Olari leunoto oorkoryanga]	*Eunoto* is the ceremony that is carried out to hand over the authority from one age set of warriors [*illmuran]* to the next. The *irkoryanga* is the age group that was in power during my fieldwork. 2005 was the year when this age group underwent the ceremony. It was a very bad year since there was no rainfall.
1997 [Olari lengolong]	*Engolong* means sun. It was a year of excessive heat in which the sun was very hot. The pastoralists shifted to different areas in search of water and pasture. Most water sources and grasses dried out.
1993 [Olari Lolodoendolit] –	*Lolodoendolit* means red bone marrows. It was a year in which livestock was attacked by a disease that converted bone marrows into a red colour. The mystery was that there was enough rainfall during this year but the grasses did not grow, hence the weakness of the cattle. According to the elders this situation was caused by the late appearance of a star called *Alakira*. This is the star that is said to make pastures grow.
1990 [Olari Lengare]	*Lengare* means water. It was a year of extremely heavy rainfall and resulted in floods.
198? [Olari laambaalon]	*Imbaalon* means lambs. People could not recall the year, only the name but it was said to be around the 1980s. It was the year in which the rains came very late so people started to sacrifice a lot of lambs as a traditional way of praying to God.
198? [Olari lolodongujit]	*Lolonogujit* means a time in which the grasses were red. *Ingujit* means grasses and *edo* means red. Even though the grasses were red in this year, the colour had no effect on both people and cattle; they just had a different colour.

Against this background, the first question in relation to pollution beliefs arises. If pollution indeed denotes an abnormal state, how does one under such stochastic conditions define the "normal" condition that is breached? In order to understand the reasons why climate change as a new discourse enters as an alien idea, and is somewhat at odds with local realities, we need to make sense of the climate in Terrat and in the wider Simanjiro Plains, which is spatially and temporally highly variable (McCabe & Leslie 2013: 120). This semi-arid environment can be characterized by inherent pronounced climate variability, and is to a large extent unpredictable. To recall Leboi, "[…] in our locality the climate knows a lot of fluctuations. One year you might expect rain and there will be no rain, in another year you expect drought and there is enough rainfall". Some informants found my question incomprehensible and referred to this variability as being the norm, such as one who responded: "of course the rains have changed, they have never been the same in this locality." Also telling was the answer given by a very old woman (approximately 100 years old)[153], "There are no changes. The weather was like this from the very beginning. Sometimes there is less rain, sometimes there is more". The climate follows a bi-modal rainfall pattern, consisting of short rains (November – December) and a long rainy season (March – May/ June). Also the fact that many people gave account to different periods for the long and short rains, attests to an inherently variable climate.

Moreover, my informants have pointed out the unpredictable climate of this area as a great obstacle for cultivation, which was characterized as random trial and error. For example, one man told me that, "farming is some sort of gambling game, sometimes you win but more often you lose". Yet, despite frequent crop failures many villagers continue to cultivate, as the benefits of one successful harvest may outweigh the costs of many failed attempts. This is also pointed out by Leslie and McCabe, who have shown that cultivation is inherently risky, which is due to the limited and highly variable precipitation in Simanjiro. Complete or partial crop failure is common. On the other hand, there are years in which both cultivation is productive and livestock thrive, or other years when livestock die and crops fail, or periods in which only one of the two does well (Leslie & McCabe 2013: 120). There was consensus among villagers that cattle are more suitable for the drylands as they are more resistant to drought than cultivation, and the people can always decide to move their herds to other localities. Furthermore, what I found remarkable is that villagers of Terrat seem to take hazards rather lightly; in the sense that to me it appeared to be a complete opposite of the industrialized, modern "risk society", in which security has become

[153] For more information about the informants and their responses, see the appendix to this chapter.

sacrosanct (Beck 1992; 2009).[154] For example, common answers that surprised me when asking informants whether the previous year had been a good or a bad year for them, were in line with what mama Eliya said: "Last year was not bad, we only lost young goats so we thank God that we didn't lose cows". Or as Petro's brother Kalaya said, "In 2009 there was a severe drought, but I only lost a few cows, and the ones who remained recovered fast. We are used to losing cows. It becomes normal. We are not afraid like farmers". Loserian, a very wealthy neighbour who owned a large herd, talked about the losses he had suffered the previous year: "Last year was very dry. The small rain came very late, but for a short time so we decided to cultivate only beans. The goats were affected. We had 990 goats together [three homesteads] and 500 died, but 490 remained. Only 20 cows died". Another answer from Leboi was also telling: "Last year was a normal year. Only three cows died and I only had to sell five, but five were born also". Put differently, to speak about a "normal" or even a good year in terms of loss, or minimized loss, is in stark contrast to the securitized "global risk society" (Beck 2009).

Box 8.4 Seasonal variations of the drylands in Terrat according to local accounts[155]

1. *Irkisirat* [Swahili: *Vuli*]	First rains, or short rainy season. This seasonal rain can be characterized by a very strong temporal and spatial variability. In some years these rains do not appear at all; in other years the rainfall is very sparse. Since the rain can fall in only one particular place the *illmuran* generally move with their cattle during this period. (November – December).
2. *Olari* [Swahili: *Masika*]	The period of heavy rainfall, or long rainy season. When it rains the rainfall is widespread throughout the country and generally the pastoralists do not need to look for greener pastures elsewhere. Both people and cattle remain in the area. (March – May/ June).
3. *Kurumari* [Swahili: *Kipupwe*]	During this period the temperatures drop, it is much colder and only short rain showers can occur. It is a short dry season. (January - February).
4. *Olamei* [Swahili: *Kiangazi*]	This is the long dry season, and clearly the most challenging season for people and cattle to survive. Both water sources and grasses are gradually drying up. At times the *illmuran* need to shift to other places very far away in order to keep the cattle healthy. Only a few milking cows are left

[154] Here I am referring to two particular features of what Ulrich Beck defined as being part of the "risk society". Firstly, the fact that fear determines our attitude towards life and that security is replacing freedom and equality as the highest value. Secondly, the idea that more science does not translate into less risk but rather makes its perception more acute (Beck 2007: 8).

[155] This overview should be seen as an approximation, since most people gave a fairly different indication of when the seasons occur, precisely because it is also inherently variable.

behind for the women and children. Otherwise people sell cows and buy milk and food. (June-August is the "cold" dry period and September – October is the hot dry period).

Depending on the altitude, rainfall in the semi-arid rangelands of Simanjiro averages around 500-800 mm (Igoe and Brockington 1999: 4) or 650-700 mm annually (Sachedina and Trench 2009: 265). Statistics from the Tanzania Meteorological Agency (TMA) show that in the period 1980-2010 the annual average rainfall in Simanjiro District was 500 mm (TMA 2012, in Bwagalilo & Mwakipesile 2012: 17). Moreover, it is said that this drought-prone region is among the most diverse and complex grassland savannah ecosystems in the world (Olson and Dinerstein 1998, in Baird 2014: 4). Due to the spatial variability of rainfall, I was eager to find climate data for Terrat in particular. However, in my quest for rainfall data I was once again confronted with a severe lack of information. At the governmental level, there are hardly any data available for Maasailand. At the TMA in Dar es Salaam they could only provide me with temperature and rainfall data from Loiborsoit and Naberera from 1940-1970. I was told, "there was no regular inspection to these stations as the area was not accessible and communication very difficult, thus the observers could also abandon the stations" (personal communication TMA 2013). In Arusha they explained to me that the British had installed some stations but these were abandoned after independence due to lack of volunteers. At the District in Orkesumet the weather station was also out of order, because nobody knew how to use the instruments. Moreover, the rain gauge was broken and they lacked funding to replace it. The most reliable rainfall data come from the large private farms that are found in the area. In Terrat I found rainfall data that were collected daily by a primary school teacher since 2007.[156] The measuring of rainfall was an initiative of a ward educational officer, who upon the beginning of his employment in Terrat, found the rain gauge unused. He exclaimed, "it is important to know how much rain is falling in this area!" He sends his information to the districts where it is used for wider predictions. While the data from such a short period are clearly far from representative, I have visualized the information in the graph below (figure 8.1). It gives at best an indication of the extent to which inter-annual rainfall variation can occur.

[156] The yearly average was 490 mm for over four years. However, data from 2010 was missing.

Figure 8.1 Terrat total monthly rainfall 2007-2011

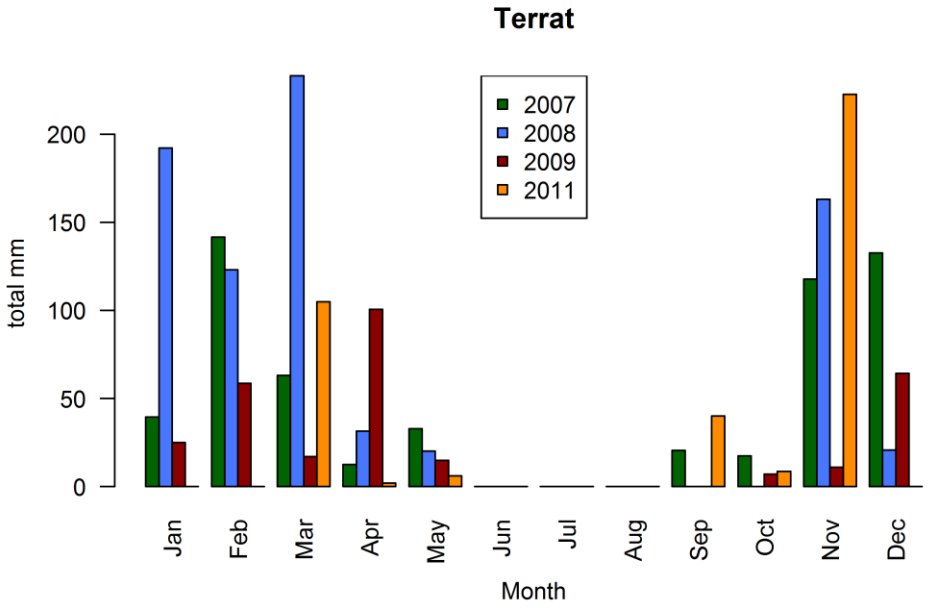
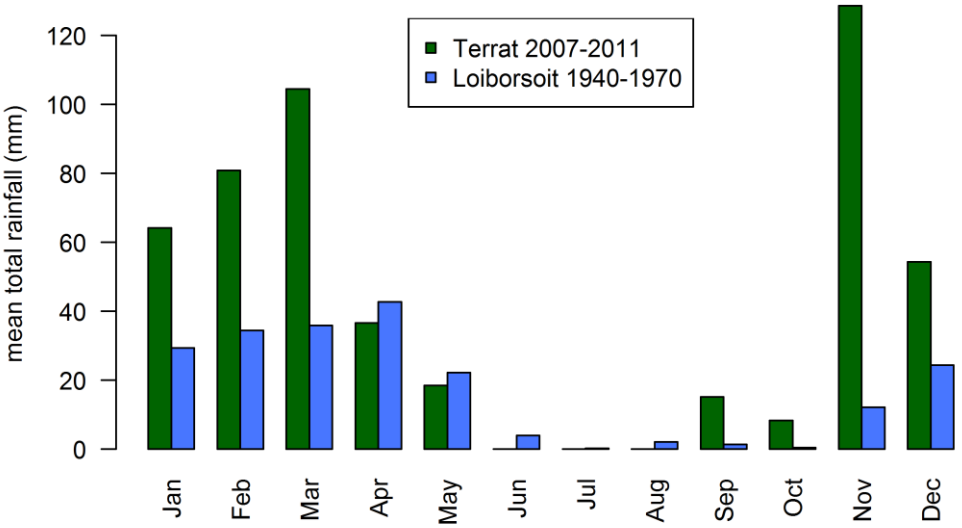


Figure 8.2 Monthly total rainfall Terrat (2007-2011) compared with Loiborsoit (1940-1970)[157]



Despite the lack of meteorological data for the wider area, and even the disagreement about whether these semi-arid lands form part of an equilibrium or non-equilibrium ecosystem, or

[157] The monthly average was taken over all measured years (4 years in Terrat because 2010 was missing, and 31 years in Loiborsoit, although measurements were incomplete for 10 years, missing between 1 and 7 monthly totals). Unfortunately the effect of location could not be separated from the temporal effect, because measurements were done in different periods.

rather encompass elements of both (see chapter 2), the defining characteristics of unpredictability and fluctuation stand out. My informants underlined the extreme spatial rainfall variability in the area. Meshack, the traditional leader said as an example, "It can rain here in this *boma*, but look at that *boma* over there and you see, there is no rain at all!" Ian Scoones comes up with an interesting approach about these environments in relation to climate change:

> Highlighting complexity, non-linearity and non-equilibrium dynamics has major consequences for thinking about responses to climate change. We can learn a lot from settings where uncertainty has always been part of day-to-day life and survival: where systems are not at equilibrium, where sometimes chaotic, often stochastic, dynamics prevail and where predictability and control are false hopes. The pastoral rangelands of the world are such places (Scoones 2009: 114).

So how does one define a norm, and consequently, a deviation from the norm within such a hazard-prone and unstable climate? As these sketchy figures above also show, in spite of the fluctuations there is of course an approximation of regular seasonal patterns within the irregularity itself. Yet, while a clear dry season can be discerned, the rains differ greatly from year to year and place to place (even though we cannot compare Loiborsoit directly with Terrat because this graph shows a different time scale). Hence, some of the climate-cognizant informants found this notion of climate change challenging and for them it rather echoed something that the Maasai have already experienced in the past, as the following interview fragment with the traditional ruler (*olaigwanani*) of Terrat shows:

> *Olaigwanani:* The first time I heard about climate change was in 2009, when some people who were sent by the government were going around telling about climate change. And also there were some people who came for observation of climate change [researchers] and I was taken to *ewas*. I tried to ask them many questions, and they told me that it is the industries destroying the ozone layer. That is what these white men told me. […] So when I heard about these changes I went to Dar es Salaam, talking about climate change [together with Leboi]. […] So now I really observed the changes because the Maasai have their own way of predicting rainfall, but nowadays it is very complicated. It is difficult to apply. You may apply but the answer may come wrong, wrong direction.
>
> *Researcher:* And what did you think when you heard about it for the first time?
>
> *Olaigwanani:* So when I heard about this climate change for the first time I thought it is just a repetition of the past. Because many years ago you may find five good years and then again seven not so good years. So this is what I thought when I heard about climate change, that it is about these old changes of 5 good years, and 7 bad years. But by then, I did not know about the industries yet. Because I am saying only what I know. Here in Tanzania there are no big industries, which could maybe destroy the ozone layer or change the climate of the earth.
>
> *Researcher*: Do you understand now what it means?

Olaigwanani: I don't understand it very well because I did not carry on with those researchers. The government is not serving to educate people here in the village about climate change anymore. But I think that these changes are maybe those changes of 5 good years and 7 not very much good years. We had many drought spells in our history.

Researcher: When were those years taking place, of 5 bad and 7 not so good years?

Olaigwanani: For example those bad years started in 1972, '73, '74 up till 7 years were not very good, although not very bad compared to three years ago (2009). 1977, or '76 and eh.. '78 until '81 there was a period of 5 years that was nice. And also other not very many good years followed there. And also another year that was good was 1998. After that very bad years again started. And a year that is very good again is this year of 2013.

Researcher: And what about the time of your parents, was this similar when your parents were young?

Olaigwanani: I have asked my parents and they said that these are old habits. But the period of bad years was not long. It was not about 7 years as our period. So it seems that with our generation the situation is going in a bad direction. Also the life expectancy of people. In the past people could live for 100 years up till 150 years sometimes. But nowadays a person can live only 70 years and we say "the man is too old, he has 70 years".

Notwithstanding the manifold statements about the lack of rain and increasing unpredictability within an already variable climate, translating the notion of climate change appears to be a challenging undertaking, for climate-change discourses construct an unstable climate as a deviation from normality. A very similar answer was given by the father of Mama Eliya (Kitimanga, 85 years old) who recalled the droughts of the past, and the years in which they were hungry. He had never heard about climate change and when we tried to explain it to him he replied, "These are the same changes that we had in the past. First there are 7 good years, and then 3 bad years". In other words, in Terrat's fluctuating climate the norm of a constant climate – which is inherent to climate-change discourses that consider changes in the climate as an abnormal state – enters as an alien notion. Finally, if we look at the last part of the fragment above, another important dimension comes to the fore. As mentioned already before, talking about changes in the weather and rainfall patterns cannot be detached from societal changes, and goes hand in hand with accounts about people's general wellbeing, altered lifestyle and customs, and eroding values and morals. This finding is in line with Fleming and Jankovic, who have argued for a less reductionist view on the climate, and have come to apprehend it "as a framing device in which the verities of life such as food, health, wars, housing, economy, social movement, or local identity change synchronically with Klima" (Fleming & Jankovic 2011: 9).

What is crucial to bear in mind here is the fact that the villagers of Terrat have abandoned their nomadic lives based solely on pastoralism and complemented them with cultivation and permanent settlements. This has inevitably changed peoples' understanding of and relation to the climate. Mobility restriction and loss of grazing areas have not only resulted in changing livelihoods, and in diversification strategies such as cultivation, but also in a deeply altered identity about what it means to be Maasai. The answer of a middle-aged man illustrates well how shifting human-environment relations and changing perceptions of the climate go hand in hand:

> It could be that the rains are less nowadays, but it is hard to tell because we are also more dependent on rain because we live and eat differently. Our mentality has changed.

In a similar vein, a middle-aged woman explained how she perceived change in relation to ritual prayer, as opposed to the church:

> The years have changed, and people have changed. Nowadays people are eating a lot. In the past you could have one bag of maize, but now you buy a lot of bags and put them in store and you finish all of them. Families are big now. Now we also don't take blood because the church has prohibited drinking of blood. And when there was no rain, we would just take a goat and women prayed to God and sacrificed a goat, then it would rain again. During the days of sacrifice it rained a lot.

The mother of Petro (approximately 90-93 years old) spoke about land use and the difference in individual property as opposed to open access:

> There was one year without rain when I was a child that I cannot forget. Nowadays it happens more often. But in the past land didn't belong to anybody, so we moved until we found grass. Now everybody has his or her own land, so you have to stay in your own land.

Another very old woman remarked about changes in the weather [*engijape*]:

> Perhaps the weather has changed, but we have changed too. We used to follow the clouds, nowadays we have settled.

Thus while "following the clouds" guided the relationship the Maasai had to their environment and the climate, due to drastic changes in their ways of living it is not fruitful to disentangle climatic and societal changes. What can we learn from these stories about change in relation to pollution beliefs? Following Douglas and Wildavsky (1982), since pollution beliefs carry the idea of moral defect, they come in handy as a political argument as they trace causal chains from actions to disasters. Furthermore, as will become clear below, these ideas about pollution are also the product of an ongoing political debate about the ideal society (Douglas and Wildavsky 1982: 36). Talking about the climate is more than just a discussion about an atmospheric materiality; it permeates the social, political and even the religious realms of society. While this section has

shown that ways of knowing are fundamentally inseparable from ways of being, we shall now make a move from an epistemologically based discussion towards a more ontologically oriented understanding of the climate.

On the climate-morality-religion nexus

In the course of my fieldwork it increasingly became clear to me that what I perceived to be a climate change "void", in the sense that the climate was not prominently on the lips of people, was in fact revealing something very crucial, even existential.[158] While I was interested in knowing about peoples' climate-change understanding and observations, our conversations by and large prompted stories about loss of culture and respect, society, love, money, globalization, church, traditional religion versus Christianity; almost everything that encompasses Maasai culture and ways of being and believing. In order to make sense of local climate accounts, it was indispensable to broaden my "environmental horizon" and be sensitive to the lifeworlds, practices and ontologies that people attached to their "rain tales". For example, many elder informants whom we talked to recalled the fact that they and their forefathers have adapted to the climate by "following the clouds as long as we can remember", and deplored its current impossibility. And while pondering the climate and environment of the past, their nomadic lifestyle was often invoked, but so was their cultural identity and what it once meant to be a "true" Maasai. I argue that an understanding of these stories of cultural and environmental decline is key for making sense of how climate change is interpreted and translated. As many scholars have already demonstrated, these prior commitments (Jasanoff 2010) or pre-eixsting political norms (Cass 2007: 46) are profoundly influential in shaping the way in which people assess, respond to and render anthropogenic climate change meaningful, or inform notions of responsibility and blame (Rudiak-Gould 2013b: 10; 2014b; Eguavoen 2013). In Terrat people's stories of cultural and moral decline were foundational and of invaluable significance for the way in which climate change was translated. These stories have been framed by Rudiak-Gould as "trajectory narratives", which he defined as discourses about the moral outlook of a society and

[158] An important difference between the ways in which the climate or the weather feature in daily conversation in Terrat, as compared to for example The Netherlands, is that the Dutch people are obsessed with the weather, for it is among the few things that is beyond their control and is extremely variable from day to day. It is said to be even subject of conversation number one, a common way to begin a conversation. But while complaints about the weather serve as entrance for sociality, the climate is considered to be part of the society's shared identity (Van Beek 1999). This is in contrast to Terrat where the weather does not differ much from day to day, and is as such also not part of people's conversations. It is instead the climate, the changing seasons and the timing of the rainfall that form the subject of discussion.

how blame and responsibility are associated with that trend (ibid). Let's have a look at Terrat's trajectory narratives and their temporal dimenions.

On temporality and degradation

While the older group of informants often emphasized the physical hardships of the past and were not romanticizing the nomadic way of life per se, their social memory spoke of ecological abundance, and at the same time echoed the vigour of cultural norms and values that they perceived to be prevalent in those days. More rain, sufficient grasses, abundant trees, plenty of water, animals and flowing streams were all imagined as part of the ideal past, and mentioned on a par with the rootedness of cultural values, such as respect, love, reciprocity, faithfulness and solidarity. In early ethnographies it already becomes clear that mutual respect, *enkanyit,* formed the heart of Maasai culture and sociality. *Enkanyit* has been the lifeblood that sustained relationships, and was expressed through appropriate greetings, forms of address and certain behavioural codes that differed according to age, gender, and kinship relations (Hodgson 2005: 9). The themes of love and respect were very prominent during interviews, and referred to principles of solidarity and reciprocity that now seem to be disappearing from society. Male informants often attributed this to the encounter with other cultures, and processes of globalization and modernization, as Petro explained:

> People were spreading love a lot. So they were visiting each other during the night and during the day, to exchange ideas and to spread love. But this is now disappearing. These things are changing because of the introduction of other cultures. We used to share everything before, like everything. If I have tea in my cup I can drink half a cup and give you the other half. We used to share milk from a calabash. We even used to share the knives with which we shave our hair. But since the introduction [of other cultures] comes, other tribes used to tell us "don't do that" because you can spread diseases to each other. So now we don't share the same cup and knives anymore.

A very old man related the changes of culture and rain in society to the introduction of industrial oil, which can be understood as a symbol of a monetary economy:

> Rain is a big problem. Things have totally changed and the one who changes these things is God. A big problem is lack of rain and human diseases. Increasing of diseases and this is due to industry oil that nowadays people prefer rather than cattle oil. And also during the dry season – during hunger year – we took blood from the cow and cook for kids, but nowadays you cannot do something like that. […] If there is the possibility to stop the oil from the industry, the oil must be stopped. Because all source of problems is because of industry oil. Everything is money nowadays. You could die with your cattle because of money.

While men by and large spoke about money, modernization and globalization at large, or a change in *oregie* (culture and customs); fascinatingly enough, it was the group of elder women who

unequivocally deplored more specifically the eroding of *enkanyit* and *enyorotto* – the disappearance of respect and love – from society, which was often brought up in relation to lack of rainfall. This female preoccupation with respect can be explained by a gendered conception of morality, as historically women were considered to be naturally more religious and closer to *Eng'ai* (see below). As such they saw it as their responsibility to ensure the moral order of the daily world (Hodgson 2005: ix-x); a role that they continue to assume and fulfil today (cf. Hodgson 2011b). A widely shared explanation given by female informants for the decreased rainfall was indeed to be found in the moral conduct of society, and lack of *enkanyit*. The following quotes from female informants illustrate the interconnection between rain, morality and (more implicitly) gender:

> The rains are bad nowadays because we are behaving badly, nobody is respecting each other any longer.
>
> People nowadays cannot even greet you properly any longer. Our society is losing their culture, and people do not love each other anymore. This is what is causing climate change to happen.
>
> When God decided to give us no rain, it is because we have sinned. People only want money nowadays. So they kill each other, do abortion and go to the mines.
>
> When I hear that there are changes in the weather this is maybe because of wrongdoings like homosexuality.

What we learn from pollution beliefs is that attributing responsibility for natural disasters (or climate anomalies) to society is a common way to protect a particular set of values, which belong to a particular way of life (Douglas and Wildavsky 1982: 6). Sufficient rainfall denotes a condition in which a stable world is imagined, and things as they ought to be. God is content and expresses Her satisfaction by blessing people with rainfall. In a year of severe drought, pollution beliefs speak about chaos and instability or society's moral defect, and invoke Maasai's cultural loyalty and religious faithfulness of the past. For the Maasai, in the face of past and ongoing pressures from the forces of "modernization" and political economy, it is unsurprising that values that deserve protection are, in part, a question of culture that in many ways are treated as sacrosanct. In other words, discussions about the climate also have a temporal dimension in which a somewhat utopian and timeless culture of the past is imagined, mirroring ecologies of abundance.

Two questions arise in this context. Firstly, what can we learn from an imagined pristine past and a perceived-to-be eroding present? And secondly, how do we give meaning to a relationship between nature and morality that has been – and to a large extent still is – inextricably intertwined? I shall first briefly explore the temporal dimension before probing the question of morality and the climate in more detail. As mentioned before, rain tales about the past are a

commentary upon an ideal present. To paraphrase anthropologist Van Beek (1999; 2000), there exists a strong identification between society and the climate, as the latter forms part of a shared identity. What follows from this observation is that "we are the climate", and conversations about the climate can be seen as meta-commentaries upon society. As such, the author has argued that climate-change discourses are a critique of society in which worries about the future are expressed, and can be treated as a (secular) end-of-time tale (Van Beek 2000; cf. De Wit 2015). Moreover, what has been relevant in the past is still important today and has its bearing on the future (Van Beek 2000: 31). To find an answer to the question of whether environmental degradation has repercussions on oral traditions (myths and other stories reflecting on the relation between humans with their source of existence), Van Beek explores projected futures in various cultures, and interrogates tales about end times.[159] In his original eschatological excavation he comes up with a remarkable thesis. Apart from the fact that worldwide end-of-time stories are rare, much rarer than creation myths, he identifies only three major culture areas that know of an abrupt apocalyptic future. These are Scandinavia, the Judeo-Christian (and Persian) Middle East, and Meso-America.[160] Contrary to this, the majority of cultures around the world, he states, including most African groups, do not envisage cataclysmic endings but instead a gradual fading away, *Ablauf* in German, which represents a slow degradation of life. In other words, we can speak of a "gentle eschatology" in which time is running down, but slowly and almost imperceptibly (Van Beek 2000: 37, 46).

Furthermore, the author argues that inherent to this message of decay, in which the present is less than the past and the future again less than the present, is the notion not only of diminished resources but also of loss of power and knowledge.[161] And based on my own findings we could meaningfully add faith, culture, love and all its constituents. Finally, according to Van Beek the explanation for this sense of gradual loss in tradition and ecology over time stems from the dynamics of orality. So in the rituals and local discourse, tradition is considered to be the wisdom and practices that are passed on from past generations, which is seen as a weak reflection of the past and leads to an even bleaker future (Van Beek 2000). This observation indeed resonates with the ways in which my informants spoke about the current generation, and the fears they

[159] Van Beek mentions that while normally one might treat religion with a written script differently from oral traditions, he takes them in his analysis as being on a par, for the processes sought about projected futures and the intensity of change seem to differ little in both types of religions (Van Beek 2000: 33).
[160] At the same time, most end-of-time tales speak of a new beginning (ibid).
[161] The discourses on tradition are different from the dynamics of tradition itself, which are flexible and adaptive (ibid). Also Horton states that many African people see their cosmologies as timeless, but that certainly does not mean that they really are frozen (Horton 1975: 222).

expressed about "the direction of the bad changes for the future", with rain as the tangible locus for contemplation, as the following quote from Rehema, a female elder, illustrates:

> Our culture is changing a lot because when we were young the children used to have respect for their parents. But this generation does not listen to their parents. These changes, the direction in which we are going is bad. Today there is no love among the people that is why life has changed. Today you can identify somebody who is poor, but in the past you could not because of love among people. We used to help the poor. […] There are also changes in rainfall. In the past there was enough rainfall but currently there is not enough rain, which puts people in trouble. These changes in rainfall are caused by the church. Because in the past we used to sing in case of a bad year. We sang, gathered together with the women and sang to God "give us the rain". We were also going to *Oloiboni*. He told us "do this and do that" and the rain came. But today people are not visiting *Oloiboni* any longer that is why it is not raining as usual.

Here too temporality plays a role, which goes back not only to the Maasai tradition but to the more recent establishment of the first Christian churches. The point of attention that is remarkable in Rehema's account is the fact that she attributes society's moral failure and lack of rain to the introduction of the church, while at the same time being a Christian herself. When I asked her about this she explained to me that the Christians of the beginning were very different from the Christians of today. She is a member of the first Lutheran church that was established in Terrat in 1972:

> The Christianity of that period was not prohibiting practices of the Maasai like blood drinking and the circumcision of girls. […] I was in the group of people who were the first to enter the church, and at that time there was no prohibition of our practices. So we didn't change and so I am still wearing these beads. But there are people who say that we cannot wear these beads in church.

Her account also touches upon other dimensions that bring me to the second question posed above. In order to make sense of climate change "realities" (both observation and reception) in Terrat we need to gain insight into the complex interconnection between the climate, morality and religiosity, which is in turn vested in systems of power. This is important for my analysis as it challenges the alleged "secular" versus "sacred" dichotomy on which (scientific) global climate change discourses are premised. It is important to note that, as much as we owe many conceptual polarities (e.g. nature/ culture; body/ mind; fact/ value; subject/ object) to Enlightenment thought and practice, so too is the contrast between the "sacred", "religious" and "spiritual" as opposed to the "secular" realm a residue of the same purification process (Latour 1993; Hodgson 2005: 14; Armstrong 2009: 285; Taylor 2007). Nevertheless, as Hodgson argues, while this opposition might hold for some societies, the case of the Maasai reveals that until the twentieth

century the secular and the sacred were one and the same.[162] This becomes clear through the absence of a word for religion in Maa, but for which they have adopted the Swahili term *dini* (from Arabic) (Hodgson 2005: 14).[163] Therefore, in line with Hodgson I will use "religion" as an analytic term to probe and discuss those beliefs, convictions, (ritual) practices and experiences that express a relationship to some powerful divine being(s) or essence(s) (see Hodgson 2005: 14); and to explore the stories that reflect on the Maasai's relation to their source of existence (Van Beek 2000).

On Continuity: *Eng'ai ai!*

> God is God. Who enables the sun to shine and the rains to fall. *Eng'ai* means three things: God, sky [or heaven] and all its contents, and rain. (*Koko Theresia*)

"I don't know", "Only God knows", "We cannot know God's secret", "God brings us the rain", "God decides", "It is God's plan and She changed a lot". "Nobody can change the years but God and we can receive the changes from God", "Nobody but God is causing this, so nobody is causing it. Just the condition of the weather by God Himself is causing these changes"; these were among the most widely heard answers to the question of what could possibly cause these changes in rainfall. Thus while the former section revealed how people are seeking an explanation within society – the climate as a mirror of society's behaviour – the realm of rain ultimately and exclusively belongs to the sole supreme entity, *Eng'ai*. And it should be emphasized that in addition to the gentle eschatology as mentioned above – in which time might be running down and fading away gradually, an idea in which the present is a weak echo of the past – for the Maasai the future remains an inaccessible domain shrouded in obscurity. Considering the precarious bond that has existed between Maasai pastoralists and rain it comes as no surprise that the nature-culture connection is engrained with religious and symbolic meaning and ritual

---

[162] Philosopher Charles Taylor (2007) in his seminal book "A Secular Age" has also stated that it does not make sense to distinguish between the whole set of aspects of society that we make in the West, such as the political, economic, religious etc. Hence, the role of religion in "early" societies should be rather treated as interwoven with everything else and in no sense constituted a separate "sphere" of its own (Taylor 2007: 2).

[163] In fact, as theologian Karen Armstrong fervently put forward in her historical work on God and religion, since the Enlightenment in the Western world – with the separation of church and state in the eighteenth century – a very peculiar view of religion has developed as something that is separate from other activities, or a private quest that deals with a supernatural God and should not interfere with public life. It is peculiar because it was an entirely new invention, no other culture knows anything like that and words we translate religion into, like "din", or "dharma" (Sanskrit) mean a whole way of life. This is not because people were too stupid to see that there is a distinction between the two, but because religion permeated all aspects of life, including political life. This can be related to the fact that we are meaning-seeking creatures so we need to infuse everything we do with significance (Armstrong 2009).

interaction. From my conversations with people it became clear that an intrinsic transcendental and moral connection exists between God, society and the climate. This bond is indeed revealed by the most significant word in Maa, *Eng'ai* – which simultaneously means God, rain and the sky (or heaven, see box 8.6). The weather is a tangible manifestation of *Eng'ai*, a way to communicate Her satisfaction as well as discontent with the people. Sufficient rain is received as God's grace, while prolonged droughts are understood as a curse. Drawing on early ethnographies (such as Merker 1910; Hollis 1905; Johnston 1902), Hodgson describes the Maasai and their relationship to the environment and religious practices as follows:

> As pastoralists, Maasai had a close customary relationship to and dependence on the environment for their sustenance and social reproduction. Nature and its elements were understood as manifestations of Eng'ai or expressions of Her will, and were therefore central to Maasai religious beliefs and practices. The symbolic meanings of these aspects of nature were dynamic and contextual; they were shaped (and reshaped) through their use in ritual practice, and, in turn, shaped the form and content of these practices (Hodgson 2005: 25).

It is important to bear in mind that, despite the fact that *Eng'ai* manifests itself in different forms and goes by many different names, the Maasai religion is a monotheistic belief system, (see box 8.6). Despite the mass conversion to Christianity that took place in Maasailand relatively recently,[164] tales about the weather in relation to God and society form a testimony to this persistent and intricate relationship. Remarkably enough, while the Maasai's adoption of Christianity (or Christianity's adaptation to the Maasai) has entailed ruptures in certain cultural and religious forms and practices, at the same time a particular continuity in religious conviction and belief can be observed that continues to play a role in climate-society interactions. Put more precisely, I argue that the continuity of an entrenched faith in *Eng'ai*, which in part smoothed the conversion to Christianity, for the very same reason makes climate change and the ways it is translated difficult to accept.

In addition to the notion of *Eng'ai* that is central in Maasai ideas of religion, faith and conversion is the notion of an inner spirit or soul, called *oltau.* And as Hodgson demonstrates, conversion itself was seen as a process that took place outside of somebody's individual will, but was rather to be found in the readiness of a person's *oltau* (Hodgson 2005: 222). A tricky point in my analysis is the question of what can be identified as "Maasai religion" or cosmology, and what can be labelled as Christian. My basic point of departure is that we should not try to disentangle them in the first place. For, just like Maasai culture, religious beliefs and practices – as in any other

[164] For example, as late as 1969 it was estimated that there were not more than 300 practising Maasai Christians in the Evangelical Lutheran Church, even though many more had been baptised (Groop 2006).

tradition and culture – have also always been in flux, highly diverse and dynamic (cf. Spear and Waller 1993); which makes any attempt at grasping a fixed and delineated essence futile. Furthermore, it is likely that what is currently categorized as "Maasai" practices and beliefs are amalgamations that resulted from earlier encounters with other ethnic groups. In a similar vein, Christianity itself is as dynamic and idiosyncratic as Maasai religion and this must thus be understood in its local expressions and manifestations (Hodgson 2005: 14-15). For example, in Terrat alone there is a highly diverse proliferation of churches, with different denominations all having their own prescriptions, convictions, values, prayers, doctrine, (ritual) practices, (sacred) symbols, media and material forms etc.[165] My intention is certainly not to map out the complexities that are encompassed by these varying cults. But my point here is rather that we need to understand the encounter between Christianity and Maasai religion as the ontological and epistemological windows through which climate change is translated. While it is clearly impossible to exhaust all its constituents, we can distil some basic patterns, and describe the most pronounced contours of the pre-existing norms and commitments. As such, my take on Maasai "tradition" or culture aligns with a "coproduction theory", which treats it as the "result of creative friction between past lifeways and newer influences during the intensive cultural contact of colonialism and its aftermath" (Rudiak-Gould 2013b: 11).

Furthermore, even though a break with past traditions might be claimed (particularly in Pentecostal denominations), it is likely that the new is also an amalgam of old and incoming traditions. In other words, the fact that most villagers are Christians and go to church (among the females there was no exception, but quite a few males have not converted to Christianity or do not go to church), does not exclude the continued existence or transformation of certain elements and lived experiences of Maasai customary forms and practices of religion and faith. This approach to religious encounter is encapsulated by the notion of a "double model" of local and Christian tradition on which most new messianic traditions, including the indigenous churches in Africa, are based (Lanternari 1963 in Van Beek 2000: 41). For instance, Lutheran messengers in northern Tanzania, due to "cultural problems" that they encountered in their missionary work, tried to make their work "fit" into local customs by accepting cultural elements that were considered harmless from a Christian perspective. In the course of time there was an

[165] While there are some commonalities between the churches in terms of which Maasai practices are forbidden, such as drinking blood, female circumcision, polygyny and visiting the *Oloiboni*, there are also many differences. Overall the Catholic church in Terrat is seen as most tolerant of "indigenous" elements and practices, while the Pentecostal churches are more strict, and prohibit a considerable number of old practices like drinking alcohol, use of tobacco, certain forms of ritual slaughtering, and eating meat from cows that died a natural death and were not ritually slaughtered. And also certain Maasai aesthetics and bodily incisions are forbidden (wearing certain beads, pierced ears, the removal of one front tooth etc.).

increasing interest in indigenization, a process that in the 1970s became known as inculturation and contextualization (Groop 2006: 16-17). The Catholic Church was even more renowned for its inculturation approach, and many church attendants told me that the reason for them to "go to the Catholics", was that they did not see it as a threat to their culture.

As a "thought-pattern" and belief system that has previously "travelled" to Maasailand and set new conditions of belief, we might very well draw lessons from the ways in which Christianity has taken root in the African context in general and in Maasailand in particular. In his instructive article "on the rationality of conversion", which deals with comparative African pathways of conversion, anthropologist and philosopher Robin Horton (1975) has put forward the thesis that the acceptance of Islam or Christianity has been highly selective, and that what is accepted and rejected is determined by the structure of the "basic" cosmology. He argued that crucial variables in this process are not the external influences (Islam or Christianity), but the pre-existing thought-patterns and values as well as the socio-economic structure (Horton 1975: 221).[166] Even though we cannot speak of the existence of a "basic cosmology" as Horton meant it (as pre-Islamic or pre-Christian), for my analysis I deem it meaningful to take local "religious horizons and practices" that I encountered as the basic locus of thought-patterns and explore climate-change discourses as the external influence. However, instead of seeking to find selection principles in either the basic cosmology or in the external variables, I believe that it is more fruitful to lay bare the relationship and interaction between these two realms. In order to do so we shall move on to a discussion of continuities and ruptures, with a focus on *Eng'ai* (supreme being) and the *oloiboni* (the local diviner and spiritual healer), two points of attention that featured prominently in local "rain tales".

According to my informants, the major difference between the Maasai religion and Christianity lies in the ways of worshipping and not in the "essence" of faith or believing itself.[167] It appeared

---

[166] Even though taking a much more dialectical approach, Horton's thesis is to some extent supported by Hodgson's fascinating historical account of the dynamics that triggered Maasai women to convert to Christianity, despite the long-term concerted missionary efforts to convert men. She puts forward two basic factors that indeed speak of the internal "basic cosmology" and socio-economic matrix, rather than Christianity alone. Firstly, it was a matter of timing as women were gradually losing political authority, were also disenfranchised from their basic economic rights and had to cope with an increased workload. Secondly, as I mentioned earlier, women were considered to have greater spirituality and hence embraced Christianity as an extension of their connection with *Eng'ai* (Hodgson 2005).

[167] However, a different way of worshipping possibly installs a different transcendental configuration, or allegiance, through an altered mediation process. I am aware that I am not paying sufficient attention to the role of materiality and media in this discussion, but this is beyond my scope of analysis as climate change has not yet been translated so much through material forms in Terrat. It is important to acknowledge however, that apart from belief and personal experience with the divine, media – broadly understood as central to practices of mediation through which the 'sacred' becomes manifest in "this

that in their conversion process their image of the divine being had largely remained unaltered, *Eng'ai* is still *Eng'ai*. As these quotes attest:

> There are no two gods, there is only a single god. The only difference is the way of worshipping. That is why people used to surround a tree called *oreteti*. That is a tree that they believed when you surround it and sing God can listen to your prayers. […] And normally they went to *Oloiboni* and tried to make him their God. But actually there is only one God.
>
> There is only one supreme being and that is *Eng'ai*.
>
> God is for everybody. Not just for the Maasai. It is not a special God for Maasai only, it is a God for everybody under the blue sky.
>
> The same God as we are worshipping today [is the one from the past]. […] There is no difference, it is the same God. Although the way of worshipping is different. Because there were times when we worshipped under big trees. Quite different from now when we go to church and we see something like a cross, which we didn't know before. So the God is the same, but the way of worshipping is different. The worshipping of the past was through the *Oloiboni*.

However, there is a difference between former Maasai notions of *Eng'ai* and their newly espoused Christian approach, which relates to where she is localized. Whereas *Eng'ai* used to be above all located in the sky (and sometimes apparent or embodied in the sacred tree), for it was considered to be one and the same ("everything that is found in the sky belongs to *Eng'ai*"); in church they have been taught that God is everywhere. As Leboi explained:

> When we were growing up we thought that God was maybe found in that blue place there. But after we have grown up we have been told that God is not found there but that that is just the place where your eyes can reach. Now we think that God is found everywhere, which is what we learn in the church. So that is the difference that exists.

The supreme being played and continues to play the quintessential role of provider of rain, and all natural phenomena – particularly related to the weather – were understood as a manifestation of Her divine powers. The weather thus echoed God's judgement; a theme that is well known within various religious traditions worldwide. In Maasai society, while praying and asking for rain needed mediation through authorized practices and ritual forms of purification, guided by the spiritual diviner and prophet, the realm of God (and thus the climate) could not be known. Anthropologist Paul Spencer (2003) has argued that for the Maasai, God was seen as an all-powerful and arbitrary force of providence whose intentions could impossibly be known, not even by the prophets "who have no more than a dim notion of the cosmos" (Spencer 2003: 6).

---

world" – are central to religious experience as it renders the transcendental accessible (Meyer 2011). And I believe the same holds true for climate change, as it can be rendered "real" through tangible objects, pictures, atmospheric materialities etc.

As mentioned before, this notion of God (and the transcendental) as an undisclosed sphere inevitably has its bearing on ideas of the future. Spencer goes even further, to argue that "The flamboyance of Maasai ceremony and self-regard is offset by a sense of resignation to an unknown and unknowable future. They see themselves rather like Plato's prisoners in a cave, ill equipped to delve into ultimate truths" (ibid). While I am more hesitant to speak about "ultimate truths", the notion of an unknowable future was underpinned by my informants, who refuted any attempt to probe future climate scenarios or ideas of the future in any sense. Questions related to futurology were always cast away with laughter, followed by "we cannot know", or "only God knows". Yet mediation with God was common and necessary as it was through sacrifices and (communal) prayers that the Maasai tried to repent of their sins, re-establish social and moral order and reinforce their bond with *Eng'ai*. Women served as the midwives between *Eng'ai* and her people, for women were given the power to create new life (Hodgson 2005: 64, 213). The forms of mediation and intercession with *Eng'ai* have taken a different turn since Christianity has made its way to Terrat, which has impinged upon local perceptions on power, faith and the climate.

Box 8.6 Different names for *Eng'ai* which are different manifestations of God's nature[168]

"Traditional" names	
Naomoni ai	The One to Whom one prayed and begged for something
Endapesh	Wide God, Who is covering the whole earth
Engai Narok	Black God – Gentle, respectful and moral God. When somebody observes something unusual; especially something terrible. People want God to forgive them for the bad condition they are in. It often refers to a severe weather condition, and also signifies the black clouds that carry rain
Engai Naborr	White God (signifies the white clouds that carry rain)
Engai Nanyokie	Reddish brown God (referring to a harmful state, fire, heat of the dry season)
Noongipa	The wet One, which signifies fertility. Also signifies the amniotic water that is released when women give birth. So women call God *Noongipa* to ask for strength.
Engaretoni	Helper, or The One Who helps

[168] Also written as *Engai*, *Ng'ai*, *Enkai* or *Nkai*. However, there is only one supreme being. *Eng'ai* itself can mean three things: God, rain and the sky (or heaven), while in turn, there are many words to describe *Eng'ai*. Note that *Eng'ai* largely goes by feminine pronouns, except for those two names that denote ruler, which are male, and the "modern" name referring to the Father of Heaven. Source: Lemburis Justo 2015, Voshaar 1998: 135 in Hodgson 2005, in addition to my own findings.

Noompees	My One of newly formed grass (referring also to the cows which are a source of life)
Nendaran'ai	My red light of dawn (God brings each day into existence)
Nalakua- natana	The far and near One
Pars'ai	Ruler
Alaitoriani	Ruler
Nolkila orok	She of the black garment
Yieyio nashal inkilani	My mother of wet clothes (referring to wetness, darkness, motherhood)
"Modern" names:	
Armagilani	Powerful God
Papa leshumata	The Father of Heaven
Osinyati	Holy, the Holy One
Eng'ai ekeper	God from Heaven

On Rupture: *Oloiboni*

A few informants, however, expressed their disdain towards the Maasai God of the past by stating that "he was a big liar", or "we hate him so much" and referred to him as the *oloiboni* (pl. *iloibonok*) – the traditional spiritual healer, ritual expert and diviner. In the past people – and some elders still do so – also referred to the spiritual diviner as *Eng'ai*. According to Maasai myths the *iloibonok* were direct descendants of *Eng'ai*, with a distinction between major *iloibonok* with superior powers of prophecy leading people in times of crisis ("public prophets"), and minor ones that performed more mundane divinations ("individual practitioners") that operated on individual demand (Berntsen 1979: 137).[169] Furthermore, they were believed to have a unique close relation to *Eng'ai,* who had given them special power. Their powers were looked upon with a mixture of fear and fascination for they could do both good and harm (Hodgson 2005: 41). And Spencer notes that as intermediaries of the unkown, the major diviners (*Loonkidongi* dynasty

[169] One version of the story goes that a warrior found the "first prophet" on a hill near Nairobi. Eventually the warrior adopted this young man, called Kidongoi, who possessed strange powers. This man had prophetic powers through the interpretation of dreams and natural phenomena. And he had the ability to divine with his *enkidong*, which is a calabash full of stones. The prophetic dreams were said to come from God, whereas the divination was an acquired skill (Berntsen 1979: 135). There are other version of this story, but all based on the idea that they were always seen as outsiders who later intermingled with Maasai.

of prophets), had a "shadowy, double-edged reputation and deep respect was edged with fear". They saw themselves as having superior knowledge, higher standards of behaviour and as being members of a class above ordinary Maasai (Spencer 2003: 7). This ambivalent attitude towards the diviner could still be sensed and observed in Terrat, despite people's claim that they no longer considered them to be endowed with spiritual powers. While the *oloiboni* was not one and the same as God, the idea that he embodied God's divine powers or that he was Her personification were now looked upon with great disdain. As the following statements makes clear:

> We found that, we found out that this god lied to us. Because *oloiboni* they pretend to be god, but they are not really god because they die as normal people.
>
> *Oloiboni* is the same person as us so it is not fair to go and worship him. To tell him that there is no rainfall and so bring us the rainfall.
>
> Since we go to church we found that there is no difference between us and *oloiboni.* We came to realize that he was just lying to us.
>
> I don't believe that *oloiboni* can bring rain. But there are different people and some might visit him and come back with rain. But I don't believe he can bring rain. The pastor can bring rainfall because he is praying to God and not to a human being himself.

Thus a basic ontological rupture with the Maasai religious "configuration" that was explicit in the conditions of belief in the conversion to Christianity was the dismantling of the *oloiboni's* godlike status; from a deification he was relegated to the status of a normal human being, or even worse, a liar. However, as we shall see below, the implicit processes involved in conversion might work in a subtler way, and reach beyond mere doctrine. Another reason for the *iloibonok's* disgrace was the fact that they were said to misuse their power for self-enrichment:

> The church came to tell people the truth because in the past years *oloiboni* can see a good bull and say "I want this bull", and he really will take it. Nobody can prohibit him from taking it. Or he can see a beautiful girl and say "I should marry her", and no bride price and no discussion. And he will marry her. And then the preachers came and told us the truth.

Also here a "gentle eschatology" was echoed in the ways people talked about the *oloiboni* of the past. The very first *oloiboni* were considered to be more sincere, more powerful, more honest, and "real"; while the *oloiboni* of today are said to be useless, "fake" drunkards who use their religiosity for business. Intriguingly enough, while almost all of my informants said that they no longer visited *oloiboni* – as the church strictly prohibits it – through my own experience of paying *oloiboni* a visit, a fairly different picture emerged.[170] As a figure shrouded in mystery, due to peoples'

[170] There are usually several *Oloiboni* in a village. To my knowledge, in Terrat there are currently two. Their power is passed on genealogically, and all the sons of one diviner are said to inherit his spiritual powers.

stories about the spiritual diviner, my curiosity rose and I decided to try to arrange an interview with this person, who once had the aura of an "infallible godfather" (Spencer 2003: 7). This was easier said than done. The first challenge was finding another research assistant because my first assistant, a faithful (female) Christian, refused to assist me in this task. Fortunately, I soon encountered another (male) research partner who was willing to come along with me. And off we went carrying a container of *Konyagi* pouches (strong locally brewed liquor). While my intention was to ask *oloiboni* a few questions, before I could reverse the situation we slipped into an intense divination session. After taking a piece of my clothing and throwing some stones from his calabash, his first remark already sparked both our laughter and admiration, "I know that Leboi told you not to bring *Konyagi*, but I know that you did".

A divination session with *Oloiboni*.

I don't know whether it was due to the *Konyagi* that he had finished in barely ten minutes, or that he had invoked his divine spiritual powers (or a combination thereof); but an ecstatic force overpowered him, leaving us caught between an increasing fascination and frustration. Not only due to the mundane interruption of his mobile phone and the fact that he was stuttering, which created an absurd sensation that did not bring to mind a man of power; but also because he continued to insist that we paid him an excessive high "consultation" fee. Interestingly enough, when I asked him whether he considered the church to be a threat to his work or authority – since I assumed that he had lost some of his "clientele" – he calmly said: "No. The only problem is that since the establishment of the church, I also have to work more during the night." He

referred to the fact that many people still visit him, and many do so secretly, not only the non-Christians.[171] And when we left the session, indeed there were at least three people queued up waiting outside to have their own consultation with the *oloiboni*. The primary reasons for people to visit him are cattle-related problems, conflicts, diseases, economic problems, women having difficulties with conceiving, or lack of rainfall. But to my knowledge the collective, ritual rain prayers of the past no longer (or rarely) take place in Terrat.[172] There appears to be a very pragmatic element to spiritual and religious experience that follows a principle that simply "works". Many people converted to Christianity because they were healed from a particular disease by the missionaries or in church, and in turn, if in church people find no success they have recourse to *oloiboni*. Put in another way, in addition to the explicitly formulated matters that are part of a doctrine (visiting *oloiboni* is preached as a diabolical act), these secret practices attest to more implicit notions that drive belief and faith which touch upon deeper layers of existence, to which I will now turn.

In the past, the mediation of rain took place through the ritual prayer under a sacred tree (*oreteti*) or close to a water source, by sacrificing a black sheep or a goat.[173] As women were considered to be more religious than men, have a greater sense of spirituality and to be closer to *Eng'ai* (Hodgson 2005) this ritual was carried out by several women (in different stages of fertility) who prayed and sang naked while surrounding a dam. This ceremony was guided by the *oloiboni,* who was responsible for the timing and also for giving instructions to the participants. Nowadays the rain prayer in church, under the charge of the pastor, has replaced this practice. Yet the timing of the rain prayer was not only instigated by the pastor, but could be demanded by any member of the church. Whereas many elder women did not rejoice in this Christian democratic principle of praying for rain, others argued that the God of the church is still capable of bringing rain, "perhaps a little bit slower though" and "less powerful than in the past". Overall, there is a decreased sense of the bond between God, society and rainfall, for which people sought an explanation in either the lack of ritual or the loss of faith.

Mediating rainfall has always occurred through the dominant (religious) authorities, and was brought about in connection to a transcendental force, *Eng'ai*. Here we inevitably touch upon notions of power, for the question emerges: who has the authority to mediate (the epistemics of)

---

171 Even though I think that only a minority of the people still attend *Oloiboni*, certainly not the same number as in the past.
172 I only heard of a rain prayer that took place in 2006. In other places like at the volcanic mountain Oldonyo Lengai it is said that rain prayers are still carried out, for this was (and by some still is) considered by the Maasai to be the holy mountain of God.
173 It must be a black one because this relates to morality and signifies a gentle God.

the climate and rain? Particularly female informants have attributed the lack of rain in society to the fact that this ritual prayer through sacrifice has ceased to exist, and blamed the church for prohibiting this practice. For example, these three *Kokos* (older women) remembered the effectiveness and power of this prayer:

> After we carried out this practice by surrounding a dam, the rain occurred the same day and not any other day. The same day the rain fell down. But nowadays the church is not allowing us to go.
>
> In former days when there was no rain we just took a goat and we made a sacrifice, and women sang to God and pray for some days and we got rain again. […] During the day of sacrifice the rain rained a lot. Nowadays we start going to church and that is why the rains do not come. The church is not bad but what we can say is that years changed a lot.
>
> When we were young the water was flowing. There were water sources, if you compare now the river is dry. But also there used to be an organization that came to *oloiboni* and people came to sacrifice to that river so that the water will not be finished. That it will not be dry, we slaughtered a black sheep in the river or a black bull in those years. That is how we tried to protect the river from becoming dry. But for these years now, something like that cannot be done. Maybe that is why the river is dry.

Picture 1 *Koko* Rehema; picture 2 *Babu* Langona; picture 3 Women dressed for circumcision ceremony in Sukuro

The ritual prayer guided by the power of the *oloiboni* was important to bring rain, but faith also played a vital role. As one old man (non-Christian) put it:

> When I was young people went to pray for rain with *oloiboni*. Praying for rain is about faith. When people went they had very strong faith, they were very faithful to him. Nowadays people go to church because they love church. It is difficult to know if they are truly faithful. The *oloiboni* is not remembered because they pray for Jesus. But the difference was that people were faithful and he gave the instruction of what to do. Now in church there are no sacrifices. In church there is only preaching.

Or another middle-aged man who was quite happy in church:

> We do not longer believe in the power of *oloiboni* so we directly pray to God. Sometimes we make a special prayer for rain in church so that the rain may come. God normally listens to our prayers. When we realized that the rains came when we prayed to God, we left the *oloiboni*.

However, many women came with opposite claims. While generally being content with the church, they regretted that the ritual rain prayer – and their own role as moral mediators thereof – no longer existed. While expressing their disdain about the contemporary *oloiboni*, in terms of channelling rainfall they found them good ritual leaders in the past, as they gave precise instructions of what to do. It is crucial to note that the *oloiboni* was not the one empowered to bring rain himself, but he was rather endowed with the power to mediate rain through *Eng'ai*. As a *koko* explained: "We visited the *oloiboni* and he tried to do something. Sometimes it would rain but not because of the *oloiboni* but only because God decided to give us rain". Rain and power are

intrinsically connected, particularly in a context where rain sustains all forms of life (for studies on rain and power in Tanzania see also: Sheridan 2012; Sanders 2008). Therefore, it comes as no surprise that rain is seen as a sacred matter that, in part, both conceptually as well as linguistically coalesces with the supreme being. For when it rains people exclaim, "There is *Eng'ai!*". The disappearance of the ritual rain prayer – accompanied by the collective sacrificing of a black animal as a gift for *Eng'ai* – has entailed a weakening of the ways in which people (mainly women) sought redress for society's behaviour, and maintained a relationship with *Eng'ai*.

Hence, they also find the explanation for lack of rainfall in the eroding power of the *oloiboni*. Apart from the church, there is a more intrinsic reason for the *oloiboni's* loss of ritual authority. When I asked people whether they still believed in the power of the *oloiboni*, many replied that this depends on the faith of the people. As Leboi explained:

> God also depends on the faith of people. If somebody believes in the church he may succeed there, if they pray to the Maasai God they may also succeed there. It depends on the faith of the people.

Or put in the words of Petro, who was deeply engaged in (Pentecostal) church-life but used to attend the *oloiboni* regularly in the past:

> In the past we believed that he [*oloiboni*] could do that [bring rain]. But since things are changing, his power is also becoming less. In previous times, the *oloiboni* did not eat sheep meat but now they do. And they did not drink alcohol in public and now they go and drink with other people. […] So in that way their spirit is also becoming less. […] In the past they had the power to bring rain but now they lost that power, because there are few people who believe in that. But also some things work in faith. If you trust that something will happen, it will happen. So even for people who still trust that *oloiboni* can help them, they are still helping them. But if people do not believe in that, it is not going to work.

Because of people's strong resentment towards the diviner, I had assumed that this attitude entailed at the same time a new and exclusive ontology that relegated his powers to the margins. However, it appeared that the *oloiboni's* powers are not necessarily "unreal" or that they cease to exist, but rather that to get in touch with him or establishing a bond is to engage with ungodly spirits, and part of the realm of the "occult". Furthermore, just as one's spirit or soul (*oltau*) operates like another inside oneself, who decides for you what to believe – the power of the *oloiboni* is not an intrinsic agentive force that exclusively belongs to him which he can exert over the people. Put otherwise, in addition to his own "derogatory" practices (or what have been downgraded as such) that in part corroded his power, in order for the *oloiboni's* power to "work" he needed the dialectical enforcement from below that came to fruition by people's faith. As the following (Lutheran) man recalled:

> When I was young others went to pray for rain with the *oloiboni*. It is about faith. When people went there they had strong faith, they were very faithful to him. Nowadays people go to church, because they love church it is difficult to know whether they are really faithful. The *oloiboni* is not remembered, because they pray to Jesus. The difference was that people were very faithful, and he [*oloiboni*] gave directions for what to do in case of diseases. Now in church there are no sacrifices. In church there is only preaching.

In sum, less ritual, less faith, less power, less rain. In this section I have tried to show the historically complex and intricate relationship that has existed between society, rain and God, in which morality featured prominently and was sustained through ritual prayer. Furthermore, whatever the external influences that brought about new cosmological configurations, and institutional or ritual ruptures, the deeply entrenched notion of *Eng'ai* remained and continues to be the quintessential lifeblood that runs through this bond.

Climate Change as Disenchantment

One of the primary sources through which people have access to transnational discourses in Terrat is the radio. The reach of the radio for Maasailand makes it the only platform in their own language that weaves connections to international and national concerns and imaginaries. As already mentioned, Orkonerei Radio Service (ORS community radio) is headquartered in Terrat.[174] The main vision of the radio has been to enhance knowledge and educate the pastoralist community for the purposes of development, by promoting accountability, equality, peace and unity. Also a particular point of attention is to empower the Maasai women by establishing radio community groups and donating radios to women. [175] However, I found that while the majority of men own a radio and listen regularly to radio programmes, women do so to a much lesser extent. Moreover, when women are at home they have less time than men to just sit and listen because they are burdened with an array of time-consuming household tasks. Hence, among my informants there were more climate-cognizant men than women, and often they had received information through the radio. What makes ORS such an important source of information for the Maasai is that it is the only radio station that broadcasts in the Maa language. While it connects the Maasai to global concerns, at the same time it operates as a mediator of culture and tradition. In a sense it thus invokes and remediates notions of Maasai identity. Let me illustrate this by telling the story of Babu Philipo (73 years old). Many years ago Babu worked as a guard for the local NGO *llaramatak*. After a few years he resigned. Some years later the radio station

[174] The radio station was initially owned by the Institute of the Orkonerei Pastoralist Advancement (IOPA), which is a voluntary community membership organization that started in 1991. From 2009 the ownership of the radio station was transferred to Orkonerei Mass Media (ORMAME).
[175] See link: http://www.cto.int/media/events/pst-ev/2014/DBSF/Lukas%20Kariongi.pdf. Accessed 1 December 2016.

was established and the programme makers were looking for somebody who had very detailed knowledge about the Maasai language. Then they remembered Babu and asked him to come and work for the radio station. For more than ten years Babu has been presenting a programme called "*Orngara le Maa*" (which means "to unite the Maasai") about the Maasai language and culture. The programme seeks to unite all the Maasai throughout Tanzania and even Kenya in informing people about their language and traditions. During the program Babu receives phonecalls from Maasai from many different regions and they ask him questions about particular Maa words, ceremonies and habits etc. According to Babu this radio program is very important because he has observed many cultural changes that are eroding important values such as *enkanyit*. Babu explained:

> People are not following the Maasai tradition as in the past. For example, to make holes in the ears. Also when there was no milk they could drink the blood from the cow but nowadays people are no longer doing that. The major effect is that people are leaving the culture and some people are dying. Like drinking blood. Nowadays because of the church we are not doing that again. Even when people are in pain and are not using the traditional medicine anymore, while it was renowned.

Thus, following Babu, his role as a radio programme maker has fundamental significance in keeping Maasai traditions alive. And to remind the Maasai of their own traditions and language even has life-and-death importance. However, while remediating tradition and cultural values, the radio also plays into the complex relationship between Maasai traditions and all the disenchantments entailed by modernity. As Harri Englund (2011) has compellingly demonstrated in his study on the role of the radio (and the hundreds of mundane stories that radio listeners shared) in Malawi, "insights emerge into how Africans pursue their desires under the condition of globalisation".[176]

But in Terrat the radio also leads to a particular disenchantment of the world, and informs people about the dangers of globalization. For example, people hear about scientists who reject the existence of God, about nuclear wars, environmental destruction, industries, explosive weapons, air pollution, cancer, and climate change. When *babu* heard of climate change on the radio he thought that it was a change in culture and lack of respect in society. In one of the radio

[176] The role of the radio in Maasailand deserves a whole ethnographic study on its own. By analyzing the stories that people shared on the radio, Harri Englund found that radio listeners' understandings of human rights differed considerably from the language used by NGOs. As such he presents an alternative to liberal thought on notions of equality and obligation. He concludes that "In their rush to appreciate the new media, social scientists may confuse what is technologically cutting-edge with what is theoretically innovative. The mundane battery-powered radio can broadcast claims that go through the heart of the intellectual challenges confronting contemporary debates about liberalism and equality" (Englund 2011: 11).

programmes "*Mazungumzo ya Mazingira*" (in Swahili: "talk about the environment") produced by ORS, a special edition was fully devoted to the topic of climate change. A special guest was invited, called Hassan, to explain climate change to the people. Here is a fragment:

> Hassan: *It is the change based on environment, e.g. temperature, moving winds and rainfall. These changes are repeating all the time. […] Scientific investigation found that changes are occurring […] . Climate change can be human-induced and it is also naturally occurring. This is because human activities pollute the atmosphere. Human activities like burning charcoal and burning forests increases the level of Co2 in the atmosphere and causes global warming. The industrial revolution which began in 1730 caused emission of poisonous gases that made a layer of thick gases, and allow rays to penetrate, but prevented gases from escaping. These poisonous gases come from different places such as industries, volcanic eruption, burning charcoal or forest, explosion of weapons used in wars. […] Trees that normally absorb carbon dioxide are being cut and this is very dangerous.*

His advice to the people was to minimize industries and the burning of forests, and motivate people to plant trees to reduce gases like CO2. This explanation seems rather complicated for people who have never heard of CO2, the atmosphere, the industrial revolution, or even science. Moreover, a giant leap is made between the global causes (industries) and local responsibility (planting trees). Another guest was invited to the studio and got the time to explain his ideas about climate change:

> Frederik: *This is caused directly by human activities. How does this climate change take place? Like I said. Directly by human activities. A human being because of her poverty can go into the forest and cut down trees for different purposes. For example for charcoal burning and the smoke that is produced in this process is directly released into the atmosphere and causes climate change. This ozone layer is destroyed and some holes are appearing, ozone layer depletion. […] We are also the causes of this thing, since we are cutting many trees, burning charcoal […].*

The rest of the programme was concerned with tree talk, and how to sensitize people about tree planting and prevent people from cutting down trees. My interest in this context lies in the confrontation between the scientific perspective on nature and the climate on the one hand, and the Maasai ontologies as described above on the other. What features prominently in climate-change discourses is the anthropogenic approach to the climate. The NGO in "Leboi's revelation" also explained to the group of actors that they should "stop praying to God for it is not God's fault", and that they have to plant trees instead, since humans themselves are responsible. While in the educational movie the actors obviously swallowed this scientific explanation, as much as Leboi has been perfectly able to reproduce it in different public fora (including in his accounts to me), reality proved much more subtle, stubborn and complicated than this. In one of the many conversations that I had with Leboi he asked me a question that I had grown familiar with in the course of my stay in Terrat, and it evoked a fascinating and

controversial point in the translation of climate change: "Is it true that there are people in Europe who call themselves scientists and who don't believe in God?"

> *Researcher:* Yes, that is why many people in Europe maybe don't believe in God because they cannot find a proof that God exists, because science is all about proving things and if you believe that you have to prove something before it can exist you might lose faith in God. And instead you focus on science and technology. What do you think about science Leboi?
>
> *Leboi:* I do not know the meaning of science. Probably you learn about that when you get education.
>
> *Researcher:* Okay, well for example this climate change is based on scientific findings by measuring the temperature and rainfall.
>
> *Leboi:* If these scientists are saying that climate change is happening, I can say it is true, these men may be correct in some things maybe. But if those scientists are saying there is no God, they are wrong. Because when I was growing up my parents never told me that God was present. But one day when I was still very young I was walking in the forest. I was alone. Suddenly, a very big and dangerous snake appeared and then I screamed: "Eng'ai ai! Oh my God". I just mentioned it. So I questioned myself and wondered: if my soul [*oltau*] itself seems to know about God, then really He must be present.
>
> *Leboi:* So if these scientists say that God does not exist, do they have a different God?

After a while I finally began to see the advantage of my methodological trial in which the roles my informants and I played were reversed. Leboi's confusion about science was not rare, and quite some others had inquired about it too. And whatever the scientific rationale behind climate change that was propagated by educators, according to my informants it was not only impossible to reduce the narrative solely to a secular causality, but completely senseless. The sheer idea of having no God (as those scientists claim), must mean that they have at least a different god, as Leboi's *oltau* has revealed to him. Climate science can be characterized by an "hermetically sealed ontology", in which human-induced climate change has relegated God to the margins (at least in the way it reaches Terrat). This does not resonate with the ways in which the villagers of Terrat perceive and relate to the climate, which is a cosmology based on inclusivity and continued transcendence. While for some it seemed possible to embrace (at least parts of) the new "cosmological configuration" called climate change – including a new vocabulary that speaks of industries, CO2 and the atmosphere – nature's entanglements remain characterized by inclusivity, with *Eng'ai* as the seat of life and rain. The translation of *climate change* seeks to dislodge the weight of a relationship between rain, God and society, with a profane worldview emptied of God and purified of "superstition". In addition to this, the scientific complexity of the story played a part in the "demystification" of nature.

The example of Rehema, a middle-aged Maasai woman living in Terrat, is also telling. We met Rehema in Arusha during one of the many climate change workshops in which my research partner and I participated. Several Maasai villagers attended this workshop from different regions, along with a few researchers and NGO workers, and the aim was to sensitize grassroots people. During the meeting I was wondering what villagers from a village like Terrat would possibly make of these graphs, models, statistics as presented to them in PowerPoint? After we realized that one of the participants was living in Terrat, we got the chance to ask her these questions once we were back home. She explained that she was invited by PINGOs, the organizing NGO, after attending a village meeting in Terrat. When we asked her what she thought about climate change she replied:

> It was very tough to learn about climate change because it was my first time and it was very complicated. But I myself cannot know what causes these changes. Only God knows. Only God is the One Who changes everything.

Whatever the explanations given for the changes in the climate, for Rehema *Eng'ai* remains axiomatic in the ultimate judgment of the world, manifested in the weather. Similarly to the process of embracing Christianity, with the arrival of climate change as a new discourse, there are several roads of belief and understanding to travel that do not necessarily work as exclusive options. As much as Leboi sees changes in the climate happening, he contends that the realm of rain is bound to *Eng'ai* and cannot be explained by science (alone). Put otherwise, human beings or industries might play a role in the destruction of the environment, but it is up to God to decide if rain should fall or not. In a similar vein, villagers perceived the role of scientists – who not only claim to be able to predict the weather, but also discard the existence of God – as some sort of self-declared apotheosis, the ultimate form of hubris. For, indeed nobody but God can decide about the climate. Dora, the school teacher who measures rainfall in Terrat, explained to us that "People do not trust the information from the weather forecast on the radio because they do not know where they get the information from. Because there is no communication with God. Only if they communicate with God they will trust it." The following questions asked to me by a middle-aged man (here *mzee*, Swahili for older man), who seriously questioned the notion of climate change, are also revealing:

> *Mzee*: We hear nowadays that scientists say there is no God, is it true?
>
> *Researcher:* Yes. […]
>
> *Mzee:* I think there is a God because She is the one who created us. Do you have an *oloiboni* in your country? […]

Researcher: No. Not really […]

Mẓee: In your country there is no rainfall? Because in our country we say the rain comes from God. How do you explain rain? What about a thunderstorm? We say that it is God talking. What about in your country?

Researcher: We say that it is just friction between hot and cold air.

Mẓee: Ai, ai, ai, it seems that science is really trying to say there is no God at all!

The role of the scientist is perceived as self-declared "weather prophet" and is as such critically rejected, for he assumes to be able to unearth God's secret and as such incorporate His power. It appeared that some cognizant informants were (in their own ways) able to relate to the scientific rationale underpinning climate change and its anthropogenic origin, and also take it seriously. But the fact that science could develop models for the future was irreconcilable with their own worldview. Such an opinion was given testimony to by Elijah, a 40 year-old-man:

> I have heard about climate change on the radio. First of all, temperatures have increased. And also rainfall has declined. Industries which emit fumes in the atmosphere are causing this climate change to occur. And also the application of weapons, explosive weapons during the war which turn the ground soil to come up. And also cutting down of trees. […] But nobody can answer the question how it will be in the future, because nobody can predict.

It is the church leader who has taken over the ritual power to pray for rain from the *oloiboni*, yet the deification of the latter ultimately led to his own symbolic (and institutional) downgrading. Thus whereas the pastor nowadays only assumes a mediating role, the *oloiboni* has been taken to task for claiming to posses prophetic qualities. And the fate of the scientist – who not only intervenes in the realm of *Eng'ai* by assuming forecasting skills, but even denies the existence of God altogether – seems to be governed by the same principles of (dis)qualification. However, that people did not express "trust" in science and scientists does not mean that all anthropogenic causes of climate change were discarded. As mentioned before, there always existed a strong bond between society, morals and nature, which means that humans do have agency in bringing about cosmological harmony. From historical sources we learn that *Eng'ai* (as in God, sky and rain) had a dialectical relation of mutual dependency with *enkop* (the land or earth). So there existed a complementarity between *Eng'ai* and *enkop*, between heaven and earth. The agency to alter and maintain the relationship resided in both hands, for both humans and *Eng'ai* created and nurtured life (Hodgson 2005). So to bring deforestation, population growth, even industries and CO2 into the causal chain of blame and pollution beliefs, were for some informants acceptable and reconcilable with their own "prior commitments". But to discard *Eng'ai* as an agentive force was considered to be a true disenchantment of the world. Interestingly enough, the initial Maa

translation as proposed by the radio station workers, *engibelekenyata engijape engop*, which means a change of air and earth, was contested by the traditional leader. He proposed a remarkable alternative instead: *engibelekenyata* (change) *Eng'ai* (of God, rain and the sky). He explained: "You talk about rainfall, plants, temperature. Is there anybody who can change these things? No! Only God!" He contended also that we should not make a literal translation from the official Swahili translation (*mabadiliko ya tabia nchi*). As he stated: "*Nchi* [meaning country, earth or ground] is referring to us, but it is not us. We should not try to translate directly, because it will be misleading. You should look at what does this mean for us". According to the traditional leader, while explaining about the industries as the principle cause of climate change, the domain of rain, air and sky [or heaven] is, ultimately, in the hands of God.

I shall conclude by taking the traditional leader's words to heart, and treat them as the Maasai's prerogative for translating climate change: "you should look at what does this mean for us". In this chapter I have argued that in order to understand the translation of climate change, we need to bring to light the complex set of pre-existing norms and prior commitments that consists of entanglements, ruptures and continuities that will ultimately define the conditions for accepting or rejecting a new narrative. I have sought to embed the reasons for the Maasai villagers of Terrat in the broader historical and political "interpretive context", as well as epistemological and ontological principles that account for the possible incompatibilities between global discourses and local realities. Against the background of longstanding marginalization of the Maasai and increasing pressure from a globalizing world, their (initial) rejection of climate change as an incipient new doomsday scenario about the world, should be taken as a form of agency and resistance. First of all, global climate narratives do not resonate with local concerns as people have other pressing issues to deal with, for they lack the most basic access to health care, education, water, land, pastures, infrastructure, medication, vaccination and so on. Secondly, the longstanding precarious bond that they have cherished between nature and themselves in a highly variable climate, and the array of livelihood diversification strategies that they have developed over time, have made them overall robust adapters to a changing climate. In other words, it is not the climate that they fear, but rather the possibility of losing their land and rights to access land. Finally, I have demonstrated that the relationship of the Maasai to the climate – as an element of the complex entanglements between Christianity and Maasai cosmology – remains embedded in an inclusive ontology in which society, morals and nature are interwoven; a way of living that ceases to make sense when purged of *Eng'ai*.

In front of my hut.

Appendix to Chapter 8, interview results

Name/ Age/ Sex	Cognizant/ Source of reception	Observation	Cause	Remarks
Leboi (m) 47	Yes, highly NGOs	Changes in rainfall, cattle diseases, drought, unpredictable climate, Sun is hotter But climate fluctuates a lot in general.	God's secret! Industries from those developed countries.	Ultimately rejects science.
Israel (m) Middle aged	Yes	In the past the rains started earlier. Prices of maize are high now.	Because of cutting of trees for cultivation and charcoal. Population growth, destruction of environment.	
Petro (m) 50	No			People were spreading love a lot. Now it is over.
Loserian (m) Middle aged	Yes he heard about it, But it is all done by God and not by industries.	Cattle diseases are increasing. Not enough rain compared to the past. But his parents faced similar challenges.	Changes come from God, who is controlling everything.	
Olaigwanani (m) Traditional leader Middle aged	Yes Government in 2009/ white men & NGOs	Irregularity but sees this as a repetition of past; Lack of rain; Heat, lack of grasses. Type of grass perishes fast; Animals are born in dry season, because you can't plan properly	Not sure because in Tanzania there are no industries; Also no clear understanding, even after explanation. Because government never explained. Ozone layer and gasses.	God is in charge of the rain.
Edward Philipo Junior (m) thirties Radio Station	Yes, highly Education	Droughts are on the rise.	Co2 caused by the industries from industrialized countries.	
William (m) Middle aged	Yes	Lack of rain and grasses	Population growth Climate change	
Kalaya Lesindi (m) 47 Petro's brother	Yes Radio and other people	Different weather conditions Too hot, too much sun But for Maasai it is normal to lose cows.	God brings the rain; Factories in your country that make nuclear bombs.	We are not afraid a lot, like farmers because we can take cows far away. Serious droughts 1997, 2009.

Babu Kureso (m) 100	No, not really Only heard people talking about it	Less rainfall, too hot, diseases. Things have changed nowadays, due to industry oil	Only God knows, He brings us the rain	The God from church does not have rain. When we sacrificed a black sheep, rain came directly.
Koko – Rehema Lindimayo (f) 80 traditional healer	No	These years are bad, worse compared to before. Shorter rainy season, can end already in April or May, which leads to a shortage of grasses. River is drying up	No more traditional sacrifices like a black sheep or visiting *Oloiboni*, maybe that is the reason for lack of water. Also loss of tradition, love and respect.	She says that people are eating flower because there is not enough rain & milk.
Koko mama Eliya (f) 100	No	No changes, the weather was like this from the very beginning. Sometimes there is less rain, sometimes more. No changes.		
Babu Langona Milei (m) 79	Yes Heard it on the radio. People talked about Mt. Kilimanjaro and the snow that is disappearing, and water is drying up.	Rains are not good nowadays, even though 2013 is good. Air is not good because people are sick.	God is punishing us.	
Theresia (f) 29	No	Not observed so much changes. Grasses are the same. Perhaps less rain.	God brings the rain.	
Mama Theresia (f) 50	No	There were also bad years when she was young; There are generally more good years than bad years in this area.		
Neighbour (m) Middle aged	No			We hear that scientists want to disapprove the existence of God!
Older lady – neighbour (f)	Somehow People in church are talking about it, but speak about immoral behaviour like homosexuality	Not many changes. Rains of short season come late. Dry season is thus longer. But rains are irregular, sometimes good and sometimes bad years.		
Koko mama Saruni (f) 74	No	Bad years also occurred in the past, so nothing new	God is in charge	She wonders whether the traditional way of praying was more efficient for

				rainfall. Because when we prayed to *Oloiboni*, rain came the same day.
Oloiboni (m) Spiritual healer Middle aged	No	Talks about changes in behaviour and religion and slaughtering/ sacrificing.		Does not see the church as a threat, people still come to him but during the night.
Mama Eliya (f) 48	No	Less rain than in the past	Doesn't know	Did not mention lack of rain at first sight. Only after asking about it.
Mama Nasinyari (f) 30	No	Zebras and wildebeest are biggest challenge for cultivation. Sometimes we plant seeds, but after heavy rainfall it suddenly stops so the harvest fails.	We can only pray to God	
Babu Philipo (m) 73 Works for radio as a *Maa* language expert	Yes He just heard it in Swahili and thought about changes of Maasai culture	When he was young there was enough rainfall, grass and water sources. We cannot predict anymore. Years are bad now, but 2013 is like when I was young.	God Bombs and explosive weapons that are used in war.	2009 and 2010 were bad years.
Kitimanga (m) 85 Baba mama Eliya	No only heard people complaining about lack of rain	Bad years part of normality and the past. Remembers very bad years of the past without rain, with hunger. Some years enough rain, others not. No more water in the river.	He thinks that it are normal changes like 7 bad years and 3 good years.	Cultivate when bad years came, already in 1977. Also speaks about 7 bad years since 1975 (see traditional leader). Then 3 good years followed.
Pastor of Free Pentecostal church (m) Middle aged	Yes Radio and television, he knows it is about destruction of environment but he forgot what it is about.	Great changes in rainfall. When he was young rainfall was heavy and came early, now they are late and only short period.	Perhaps cutting of trees. Maybe just another period without rain	He comes from another area (Monduli), that receives more rain. Church sees it as their responsibility to pray for rain
Koko Theresia (f) 75	No	Weather is always irregular. Sometimes high rainfall, sometimes no rainfall at all. No changes	God is God who enables the sun to shine, and the rains to fall.	God means three things: sky and all its contents, God and rainfall
Koko (f) Mama Petro 90-93	No	Rain is less nowadays. But in the past land belonged to everybody, so we moved a lot. Now everybody has his own land. She experienced 1 year without rain when she was	Only God knows. Since we go to church no more rain.	We depended on milk, blood, honey and meat. So in the past there was enough food.

		a young girl. Now more of those years.		
Mama (f) – neighbour of Koko	No	We did not have long dry seasons like now. The years have changed, but people have also changed. We drank blood and nowadays people are eating a lot.	When there was no rain we used to sacrifice a goat and it would rain again. God's plan and He changed a lot. We receive the changes from God. Punishment from God because of our sins.	Relates sacrifice and eroding customary practices to lack of rain
Loserian (m) 1953 brother of Petro	No	They had enough rain before.	Maybe because of environment	1997 worst year
Rafael Ngaibata (m) 88	No	Some bad years, some good years. World has changed drastically, because we depended on milk only. Only challenge is rain. In the past also many bad years.	We can't say to God 'give us rain'. If he gives us rain we say 'thank you'.	
Logolie (m) 34	Yes A long time ago in 1990 when he was in primary school, through the radio (He understood it was the result of research that was presented)	The fluctuation of rainfall is recent. In the past there was enough rainfall. His father explained that rains may come in February, or March. And not in April or May. Now in some years it may come in May and that is the end. Water sources are drying up, despite rainfall. Some grasses are disappearing.	Population increase, man-made machines (e.g. industries that destroy the air from developed countries), roads cause fractures and floods. Human beings are causing this.	Harvest is generally poor. Rainfall is not reliable and animals destroy crops. 1997 and 1999 bad, 2009 very bad; 2010 good.
Lakanet Matinda (m) 55	Yes Through the radio they said that 'world climate change is taking place'.	Recently very bad rainfall. Only this year 2013 was good again, so maybe the good years are coming back.	Industries producing gasses which mixes with air, but take place in developed countries where they make weapons, and nucleair bombs.	Often poor harvest, only few good ones. Maize is too expensive so they cannot buy every year. Therefore they keep on cultivating. Serious problem of lack of water and grasses.
Godson (m) Middle aged (We met him at a climate change meeting in Arusha)	Yes, highly Attended several meetings in Arusha and met with several researchers. But before he read it in newspaper and heard it on radio.	Cattle diseases are increasing due to climate change, lack of rainfall and grass species are disappearing. Drying up of water sources. Lack of crops, heat increased a lot. Long dry	First he thought it was just God. Then later he understood it is us humans who are doing this. People build around water sources, cut down	1964, 1977, 1978 drought. And 2009 was a crazy year, but Terrat was not bad. People from Kenya came.

		season.	trees and too many industries. People want to become rich too fast (and cut trees to sell).	
Dora (f) Teacher primary school who measures rain		Rainfall is very different every year, and in every place.		Weather forecast is spatially too large, so not useful for people. And people do not trust the information on the radio because no direct communication with God.
Lesian (m) 64 Sukuro	Just from talk in the street		People are talking that the people from developed countries said that the sun is very near to the Earth	
Nemburis (f) 72 Sukuro	No	There is complication in weather patterns. Especially in rainfall. It is leading to hunger nowadays. Also higher temperatures nowadays.		
Rebeka (f) 50 Sukuro	No		When she hears about that there are changes in the weather this is maybe because of wrong-doings like homosexuality	
Mathayo (m) 62 Sukuro	Yes Church	He sees a change in the culture as old people are complaining about these changes.	People told us about the importance of planting trees to avoid desertification.	
Noyoyo (m) 26 Sukuro	No	Only observed disappearance of certain type of grasses called *Orkujita Onyokie*		
Sembeyan (f) 20	No	Normally it is changing. There is no fixed period for the long rains to come, long rains could be in November and short rain in July. Sun is very hot nowadays	No explanation	Her parents told her that when they were young there was enough rain.
Rehema (f) 56 Sukuro	No	Deforestation	When she hears about this change it might be	

			because of our wrong-doings and deforestation.	
Sanya (m) 51	Yes, somehow People are talking But I thought maybe the air has changed.	Irregular rainfall is increasing. In the past heavy rainfall, and light rain until June. Now you may find no light rainfall and rains can end already in May or June. 2013 is a good year so good years seem to come back! It is a challenge to find water in this area, but part of life. Sun is hot.	We don't know the secret of God. Maybe because we are doing bad things. Like in Mererani (mining site) where people get money through minerals. People can kill each other for money, or bewitch each other.	Combination of factors contribute to failure of crops: unreliable rainfall of the area, some seeds variety take too long. Government has distributed very bad seeds!
Netapuake (f) old	No	Rainfall in this environment has always been irregular. Lack of pastures is also not something new. This happened in the past. But in the past there was heavy rainfall, now not anymore. And it comes late.	It is God who created everything and who we worship.	
Tumokinoi (m) 58 Sukuro	No	Changes in rainfall, Rains come late	Cultivation and deforestation. Not sure if these industries are causing it. God can help.	Focus group, so this was a consensus answer
Mwarusha (m) 40 Sukuro	No	Changes in rainfall, Rains come late	Cultivation and deforestation Not sure if these industries are causing it. God can help.	Focus group, so this was a consensus answer
Lucas (m) 45	No	Changes in rainfall, Rains come late	Cultivation and deforestation Not sure if these industries are causing it. God can help.	Focus group, so this was a consensus answer
Supuk (m) 40	No	Changes in rainfall, Rains come late	Cultivation and deforestation Not sure if these industries are causing it. God can help.	Focus group, so this was a consensus answer
Saning'o (m) 60	Yes, a little bit but does not know what it means	Changes in rainfall, Rains come late	Cultivation and deforestation Not sure if these industries are causing it. God	Focus group, so this was a consensus answer

			can help.	
Elisha (m) 42 Pentecostal church (Also part of the focus group, the only one who was climate-cognisant)	Yes Thought that this was a name given to those years without rain, to drought	Changes in rainfall Rains come late. This started in 1983 or 1984	Industries that emit fumes, application of weapons, deforestation	1997 very bad year for cattle and crops. No rain. Diseases are biggest difference with the past.
Naomi (f) 29	No	Rainfall has decreased.	Because of our sins. People bewitch each other because of money. There is no love in society anymore.	
Moses (m) 44 Pentecostal church	No	Rainfall is irregular. But nowadays more irregular than before. Dry season is too long nowadays.	No explanation.	Very bad years that he remembers are 1993. And 2009 when Maasai came from Kenya.
Chairman Terrat (m) 1963	No	We are not harvesting anymore like in the past. Lack of rain nowadays.	No explanation. In the past there were no trees but enough rain, now there are enough trees but no rain.	It is more normal not to harvest than to harvest. But we cannot lose hope and we keep trying.
Babu Lonyokie (m) Old	Yes, through the radio but he does not understand it. They say that development brings these changes.	Biggest challenge is water. Rain is a challenge, but out of our power. In God's hands. It used to rain a lot.	God. Nobody knows God's secret, not even the oldest man.	Decided to stay with Maasai belief. A very bad year that he remembers is a very long time ago.
3 *Illmuran* (m) *korianga* age set	Never heard about climate change, while they listen to the radio	Years are not similar. Each year is different. Some years are good and others are bad. But the years were better in the past.	No explanation. Just a period of bad years.	
Rehema (f) middle aged (We met her in Arusha at a climate change meeting)	Yes She attended several climate change meetings in Terrat and Arusha	There is not enough rain.	She said that only God knows. She thought that they were talking about development at that meeting.	Despite the fact that she attended several meetings, she does not understand climate change, and argues that only God can bring about these changes.
Jacob (m) thirties Veterinary at NGO	No	Speaks about 'technical pollution', like lack of water sources, grasses, trees. But also mentioned lack of rainfall, and too heavy rain, and strong winds.		
Yeye (f) old	No	Rainfall is irregular. There are no changes. Always changes. Two good years, two bad years maybe. Sometimes heavy rainfall	God is the One who makes rain to fall and the sun to shine.	Recalled the time when people were starving and exchanged children for food.

		and sometimes no rainfall. Speaks a lot about hunger in the past.		
Daudi (m) 41 Bone doctor – Changed from Lutheran to Kilakuno	No	Rainfall has decreased. River is not flowing throughout the year and trees have changed. Temperature is higher.	No explanation.	2004, 2005 and 2006 were very bad years. Greatest challenge is lack of grasses and cattle diseases.
Meshak (m) 71 Lutheran	No	River has dried up, rains have declined. But bad years were normal in the past too.	Deforestation, cutting down of trees and burning the forest.	His parents were facing the same challenges. Only difference is that the population was very small.

9

Concluding reflections

Relevance and theoretical contribution of this study

> "There are two young fish swimming along and they happen to meet an older fish swimming the other way, who nods at them and says "Morning, boys. How's the water?" And the two young fish swim on for a bit, and then eventually one of them looks over at the other and goes "What the hell is water?"
>
> David Foster Wallace 2005

In 2005 author David Foster Wallace was asked to address a crowd of young, liberal arts students in a commencement speech. What followed was an awe-inspiring and beautiful talk in which Foster Wallace outlined – what he deemed to be – the fundamental value of a liberal arts education. Having arrived at the end of my own journey, during which I have dwelled for some years on a topic with a history of being dominated by the natural sciences; the question of relevance naturally emerges. When I try to explain my research to a lay audience, during family gatherings for instance, I simply state that I have been exploring climate-change realities among the Maasai in Tanzania (which is of course far from representative, but also not untrue). The first question that always follows is, "And, how bad is it for the Maasai?" My reply that I am not really sure either evokes disbelief or laughter. "So what is your solution then?" is another frequently asked question. I have come to learn that not only lay people but also (social) scientists and anthropologists dealing with climate change are endowed with a great dose of solution-oriented aspirations. It is very likely that a solution-minded gaze and research agenda are so inherent to contemporary societies' default setting that we – as Roitman (2014) so lucidly reminds us – narrate the world around us, predominantly and constantly, in terms of crisis. Crisis and critique are cognates, as we now know. And in its most basic form, speaking of crisis is a way to imagine a new future for humanity. Concluding a study on climate change carried out among a vulnerable community like the Maasai without a solution therefore necessitates a great deal of explanatory power. And so I felt encouraged, even elevated, by Foster Wallace's words.

The so-called "hard sciences" have unmistakably left profound traces on the contemporary ways in which climate-change adaptation is talked about and approached from a variety of different disciplines. More importantly, the international climate change regime (UNFCCC), underpinned

by leading scientific assessments (by the IPCC) has adopted a true "adaptation science" (Pittock and Jones 2009), which is guiding policymaking all around the world – most notably in the developing nations. While adapting to environmental and climatic changes is as old as life on earth itself, in face of irreversible anthropogenic climate change, only the last two decades scientists and policymakers are increasingly grappling with "how humanity can actually adapt in a planned and strategic way as the climate that life depends on changes" (Schipper & Burton 2009: 2). This is in a nutshell the basic storyline of the Adaptation paradigm. The scientific assessments that are informing adaptation strategies can by and large be characterized by technocratic solutions, which need to develop into highly planned ways with "toolboxes of best practices" that ultimately will need to work as blueprints for development.

The prelude about Easter Island has served as an entry point to challenge technocratic and reductionist approaches to human-environment relations. This story is exemplary of the close link between the physical or natural environment on the one hand, and the symbolic or cultural system on the other. It tells us that the environment does not determine societies, and that such a mono-causal view does not offer a full comprehension of the relationship between humans and their natural environment. Put otherwise, environmental change often coincides with societal and ontological changes. Furthermore, the historiography of Easter Island gives us insight into the role of circulating knowledge and dominant paradigms in shaping our perceptions, without adequately questioning the claims to such thinking. Largely informed by environmental deterministic thinking, in the former collapse theories, societies' cultural adaptive processes (the birdmen culture) have largely been overlooked and disregarded. Finally, and crucially, the single-minded focus on environmental issues has occluded the external political force (arrival of the Europeans) that ultimately brought about the real societal collapse. Perhaps it is superfluous to say, but it should be noted that the alternative interpretation as presented above should not serve to legitimize the continuing depletion of natural resources and the ozone layer, or to state that cultural adaptation always occurs "naturally" so that we can discard any pre-emptive tactic altogether. But it rather challenges us to think differently about the many ways in which human adaptation to a changing natural environment occurs; yet always as part of a continuous mutually constitutive relationship. In this research I have argued that adaptation can be seen as a process that encompasses all aspects of human life, taking place concomitantly with socio-cultural, political, and also with ontological and ideological "adaptations". In other words, while we are living in times of a changing climate our societies are similarly adapting to a new way of seeing and talking about these changes.

By following the manifold and intricate translations of the idea of Adaptation in northern Tanzania, I have been witnessing a continuously changing storyline in which the alleged universal value of science has not only been met with friction, but also with the utmost resistance. It is against this background, that I have been preoccupied with articulating the value and the possible contribution of the social sciences and humanities within the comprehensive debate and urgent issue of climate change. As my research ensued I was increasingly confronted with an absence of "crisis convictions" among the Maasai pastoralists of northern Tanzania. This was remarkable, not only considering the fact that crisis forms one of the cornerstones of climate-change discourses; but all the more so because the Adaptation paradigm is intended to serve the most vulnerable communities (such as the Maasai), at the end of the translation chain. It was at the "grassroots" level where most resistance could be felt. What do we do when we are faced with such discordances between transnational and local discourses? As such, I naturally felt the need to explore the stakes involved in positing the term crisis itself. And I believe that it is at this point that the relevance of the humanities and social sciences (here more specifically anthropology) within my research deserves most merit.

As laid out in my introduction, what has followed from the urgency with which adaptation and climate-change discourses are permeated is a global recognition that for many people in the Global South adaptation is not just an option but a sheer necessity. The alarmism pertains particularly to the small island states and sub-Saharan Africa. Considered to be the most vulnerable continent, Africa is said to be facing a large "Adaptation Deficit" (IPCC 2014a). Put in very basic terms, what follows from the idea that Africa is suffering from an Adaptation Deficit, is the need for – what some policymakers have called – an "Adaptation Imperative" (WRI 2010-2011). Furthermore, due to the historical greenhouse gas emissions of the industrialized nations as well as the lack of "adequate adaptive capacity" of the developing countries, the technical and financial assistance are expected to flow from the rich to the poor. The similarities between older development narratives and the adaptation imperative are obvious. Inspired by Roitman's work, one of the consequences of the preoccupation with crisis is that we tend to lose sight of the stakes that are involved when positing the very term *crisis* itself. In other words, claims to crisis and the overweening concerns that are entailed by it engender blind spots and politicizes certain interest groups. Whereas Roitman has built her work on the financial crisis that held the world in sway in 2008, I believe that her historico-philosophical excavation can meaningfully be extrapolated and provide insight into the discursive framings of the global climate-change crisis. I have demonstrated in my work that while the international climate change community (through the UNFCCC regime) is concerned with finding ways to support Africa in its quest for

adaptation, the discourse on Adaptation is running its own course. Without discrediting the large body of adaptation literature that is dealing with the question how people are and should adapt to the biophysical consequences of climate change, I believe that there are also other reasons for concern. What is worrisome, for instance, is the reinforcement of a dependency relation and the victimization within which sub-Saharan Africa (and other developing countries) are cast.

The basic critique that I postulate in this work should be understood in this broad line of thought, which can be framed as an attempt to denaturalize "Adaptation" (see also Gesing *et al.* 2014). I perceive this move as a general quest to develop ways to recalibrate the hubris of Western epistemologies (that Africa has an Adaptation deficit that can only be overcome by experts and money from the developed world) and as a counter-voice to programmatic solutions to tackle climate change. This overall pursuit can perhaps best be described as a re-humanization of the climate's dominant "episteme", and seeks to deprive the scientific hegemony of its universal truth pretensions and of its inherent detachment of situated stories, local particularities and socio-cultural entanglements. I have argued that the notion of climate change as a travelling idea is well equipped to reveal the discrepancy between global discourses (or what happens in the process of translation), and what people experience and narrate on the other. A narrative approach has helped us to grasp these locally embedded virtues, situated knowledge and politics, values and intimacies by seeking to understand how epistemologies and ontologies respectively shape, and are shaped by, the story of climate change. As Fleming and Jankovic among other social scientists have argued in their attempt to find a more inclusive understanding of climate "The modern sense of "climate" has been eroded to an abstract three dimensional geophysical system, rather than an intimate ground-level experience" (Fleming and Jankovic 2011: 4; cf. Jasanoff 2010). As such, as has been addressed in chapter six, the increasing epistemic power of the "hard sciences" prompts us to reconsider and reformulate the contribution of the "softer disciplines" to the climate change debate. It has been argued that the value of the social sciences and the humanities lies in exploring "second-order observations", and thus with an understanding of the visible, rather than the invisible.

One of the basic arguments that I have put forward in this thesis, is that instead of focusing on how communities are adapting to the biophysical effects of climate change, we should not lose sight of the ways in which people adapt to the *idea* of Adaptation. I could not have wished for a better approximation that voiced my concern about relevance (or rather apparent lack thereof), than that captured by Foster Wallace's take on the value of liberal arts. He writes: "The point of the fish story is merely that the most obvious, important realities are often the ones that are

hardest to see and talk about". He concluded his address to the young students with the following words:

> It is about the real value of a real education, which has almost nothing to do with grades or titles, but everything to do with simple awareness; awareness of what is so real and essential, so hidden in plain sight all around us, all the time, that we have to keep reminding ourselves over and over:
>
> "This is water."
>
> "This is water."
>
> Foster Wallace 2005.

Towards an anthropology of travelling ideas

Beyond this very general and disciplinary relevance as described above, I hope that this study has also fostered insights into the anthropology of "travelling ideas". As such, my work has pursued a critical engagement with the climate-change research agenda by bringing into view the political aspects of translating Adaptation in the postcolonial context of Maasailand in Tanzania. On a theoretical and methodological level I have done so by adhering to a material-semiotic approach in which it is assumed that "reality is permanently in the making, that humans are involved in the enactment of realities, and finally, that they do so not under conditions of their own choosing" (Riedke & Rottenburg 2016: 5). More concretely, in this thesis I have traced the manifold ways in which the idea of Adaptation to Climate Change travels to and is translated in northern Tanzania. This occurs in complex networks and assemblages that are formed by things and people, and thus draws together the material world and the ideological realms of social life. The basic questions that have been addressed throughout my work are: what are the consequences of translating Adaptation to Climate Change for different social groups? Who can benefit from these emerging discourses and who cannot? What makes the idea of Adaptation travel, or in the case of Maasailand, what are the conditions under which the idea does *not* travel or is by and large rejected? And finally, what happens in the encounter between different "truth regimes" or "climate horizons"?

In order to address these questions this study has drawn both on STS approaches and the general cultural theory of risk as advanced by Mary Douglas and others. While STS (i.e. ANT or, more general, material-semiotics) have served as descriptive tools to gain insight into *how* ideas are translated – in the sense that semantics always need material infrastructures to be translated – cultural theory has been better equipped to provide answers about *why* certain ideas travel or are

translated in particular ways. We owe a great deal of our understanding of risk perceptions to cultural theory, which is premised upon the idea that evaluating the likelihood of a particular danger can never be value-free. This body of theory has thus enriched our knowledge about how prior commitments, entrenched narratives and existing norms and values shape our risk assessments. It was Mary Douglas who reminded us of the fact that risks are always selected, not just among "the primitives" but also in the modern world in which a utopian horizon of omniscience is hold dear. In a similar vein, Ulrich Beck has compellingly argued that more science and technology do not render our modern "risk society" less crisis-prone, but rather make the perceptions of risk more acute. Following the idea of climate change along its translation chain has brought the contrasts to the fore between the risk society in which fear, security, prediction and control have become dominant markers of life, as opposed to the lifeworlds of the Maasai in which unpredictability and the unknown manifestations of nature are accepted dimensions of "being in this world".

The very basic pursuit of following a travelling idea along its itinerary has been to understand processes inherent to globalization in which developments in one place shape developments elsewhere (cf. Behrends *et al.* 2014). I will summarise a few of the most important lessons that can be drawn from tracing this complex chain of translations. Chapter two has set the stage by introducing all the actors that became part of the process of the expansion of a network, which I have come to see as an "Adaptation Community". A first observation has been that the way in which ideas travel is not so much in a unilinear way from the Global North to the Global South, or from the "global" to the "local", but is rather enmeshed in complex webs and networks. However, I align with criticisms of earlier ANT approaches that contest the idea that all translations are in principle possible and that there are no borders or structural inequalities (cf. Barry 2013). In other words, some actors and entities are more powerful than others and there are borders and political structures that make some translations impossible or controversial. For instance, for many stakeholders in political arenas climate change has become the new bandwagon, whereas for the Maasai at the grassroots level the key issue at stake is about the politics of land. In other words, it is not the climate that they fear but their own government that continues to fail to protect their land rights. Therefore, Barry has rightfully argued that in analysing the relation between actor-network theory and international relations we have to pay attention to the political, geographical and literary aspects of translation (Barry 2013: 4). Furthermore, my study brought to the fore that a thorough understanding of historical processes was needed to make sense of why and how certain translations take place. It became clear that

much of the travelling idea of Adaptation is translated through "sedimented practices" and entangles existing webs of knowledge, institutions and paradigms. For instance, by analyzing the public hearing in detail I have demonstrated how climate change has the power to revitalise old tensions that have existed for a long time between the agro-pastoral Maasai and the Tanzanian government. Also archaic scientific concepts such as the "carrying capacity" of the land, and the pastoralists' alleged unsustainable relationship to their environment are given new life by this nascent idea of climate change. As such, social issues are "incarnated as natural threats" (Fleming and Jankovic 2011: 10).

Leboi's testimony was a case in point, as he used this public hearing as a platform to voice his concerns about Tarangire National Park, a concern that is in turn sedimented upon older travelling ideas about nature and conservation. It turned out that Leboi did not necessarily travel for the purpose of talking about climate change; he simply liked his role and he was given the chance to travel all the way to Dar es Salaam. Moreover, he had become a well-known climate-change ambassador by that point. Like many other actors in the "game" he had become acquainted with the rhetoric. By bringing to life the different actors and their takes on climate change, I have furthermore sought to demonstrate that narratives are not only guiding our practices but are co-constitutive of social life itself. Thus it is the enactment of a new narrative through which new configurations of power emerge or old ones are perpetuated. In this sense, drawing in part on science and technology studies, the analytic concept of a travelling idea is both practice- and actor-oriented. From a methodological point of view, I have tried to show how 'ideas' can be followed in real time and space at the moment they becomes tangible and translated into things and objects, or by people. From the public hearing onwards, therefore, I was able to trace the threads and actors that initially came together in Dar es Salaam. And so I followed Leboi to Terrat, Joseph and many others to Arusha, and the documents and policies to the various government offices where they were used and drafted in subsequent fields and networks of power. I also traced the translation practices and the emergence of the Adaptation Community in the northern part of Tanzania, mainly in Arusha where most of the NGOs and CSOs have their offices.

My exploration into the enactment of this new narrative was a timely exercise, for it was the beginning of a mushrooming of Adaptation projects and workshops. In these so-called interstitial spaces – i.e. between global discourses and their local implementation – I found the explicit emergence of a counternarrative that was espoused by the NGOs that seek to represent the Maasai. Thus while transnational and national discourses on climate change discursively render

the Maasai as vulnerable victims, these development organizations oppose this rather old-fashioned approach with an explicit take on pastoralists as *masters of adaptation*. Drawing on the detailed historical work of Hodgson on identity politics among the Maasai in which she explores how older transnational ideas have travelled to northern Tanzania (Hodgson 2002a; 2002b; 2011a; 2011b), it has been demonstrated that experienced development brokers in the interstitial space are building upon their long-term experiences as "masters of role ambivalence". In other words, they make use of their "skilled practices" in translating Adaptation. In the course of time they have come to learn which forms of rhetoric "work" on transnational platforms such as the UN, and what vocabulary does not work back home within their respective nation-states. Moreover, the idea of climate change has become a new resource through which transnational ties are made possible. Also visionary actors are crucial translators that masterfully navigate their way through the expectations of transnational donors on the one hand, and the more hostile environment of the nation-state on the other. I have shown that due to Adaptation's comprehensive nature, existing development projects are undergoing a relabelling of old fashions that inevitably prompt questions about the very nature of the Adaptation paradigm. Without questioning the well-intended motives, or resorting to any sort of strategic thinking that explains discourses merely as a way to dominate others, it may be stated that *The Adaption Imperative* is driven by a hegemonic managerial worldview that is grounded upon scientistic principles that only rarely resonate with local climate-change realities.

My observations about the ways in which this paradigm is advanced – particularly as far as North-South relations is concerned – bear similarities to the critique that has been directed at the world of development aid before. For instance, in his work on development experts, Rottenburg has pointed towards a fundamental paradox that is running through the world of development aid. Based on his own experiences working for a development bank, he demonstrates how a failed attempt at reorganizing a project by foreign experts is due to the structural denial of (1) the existing power relation between "developed" and "underdeveloped" societies; and (2) the political nature of aid itself (cf. Ferguson 1990; Li 2007). The denial of these two cornerstones and paradoxes of development is sustained by the rhetoric that is used by the all the players in the game (Rottenburg 2009). While James Ferguson has also put forward the same critique in his seminal book "the Anti-politics Machine" (Ferguson 1990), Rottenburg (among others) has argued that Ferguson overlooked the fact rendering development technical is beneficial for all actors, not just for the donors but also for the organisations that are receivers of aid (ibid). Rendering adaptation technical appears to serve the national government of Tanzania well, for it enables officials to draw attention away from the politics of land use, and the large-scale land

alienations that continue to take place under the name of conservation.[177] While my research findings support the idea that adaptation is rendered technical and thus denies the wider structural problems related to the political economy, I have also observed that the receivers of aid (i.e. NGOs) at least try to nuance the technical foundation underpinning the problem of adaptation. The counternarrative of "masters of adaptation" is a testimony to this point. In line with Tania Li (who draws on Foucault), I have come to see the translation of Adaptation at the interstices as a more subtle form of power, or as *The Will to Adapt*.

By employing a microscopic analysis of translation – based on my participation in several Adaptation workshops – it became vividly clear to me that grassroots communities have something else on their minds other than climate change. Put in Adam's words: "to me the issue is not climate change; to me the issue is about our government taking away our land." While some people from the grassroots were invited and also spoke out during the workshops, the question remains whether their voices are actually being heard (compare with Hodgson's work on FGM). What stands out is that climate change is used as an opportunistic resource by the government to cast the political source of the problems away, obscure the politics of land use and land alienation, and even espouse it as a scapegoat to explain why the Maasai are dwelling in poverty. As former president Kikwete exclaimed during an international conference on the environment about the 2009 drought that hit Maasailand: "The Maasai became suddenly poor!" Against the highly politicized issue of land politics, it comes as no surprise that grassroots people like Adam are more concerned with their land security than with a changing climate. Hence, the translation of the Adaptation to Climate Change paradigm has to be understood in the context of a neoliberal political landscape, in which ongoing land evictions continue to take place that exclude many Maasai pastoralists from their most basic source of existence. Therefore, against Adaptation's highly political journey, perhaps a more critical question to be asked in the Adaptation debate is not only how to adapt, but rather how the ideological underpinnings of this question can be brought to light.

A climate-change scholar might argue that while Adam's point above is well taken, perhaps Adam is not sufficiently knowledgeable about climate change, so he is not aware of the looming crisis; hence his reluctance to embrace it. Here we touch upon an important political point that goes back to the history of pastoralism. But it also brings into view important epistemological

[177] My research took place when president Kikwete was still the head of state, and was reaping the full fruits of neoliberalism. The political landscape might look very different under the presidency of John Magufuli, who has already been nicknamed "the bulldozer", as a result of a programme to build roads across the country. Moreover he began his presidential career with a radical move against corruption.

questions that I have addressed in chapters six, seven and eight, to which I will turn in the final section. First some notes on pastoralism. One of the paradoxes of the Adaptation paradigm is that on the one hand there exists overwhelming archaeological evidence that suggests that pastoralism in Africa emerged and spread in a time of major climatic changes in the earlier part of the Holocene (Kuper and Kröpelin 2006, in Bollig and Schnegg 2013: 1); while it is predicted that they are bound to suffer more than other groups when future climate change sets in on the other (Oba 2014: xi). As has become clear in my research, the scientific foundation upon which local experts base their understanding of climate change in Maasailand is very uncertain. As Scoones has pointed out, "while the striving for increased predictive power over the effects of climate change has yielded some results in the past; it is also very likely that climate science will improve in the future". However, crucial for understanding the role of science and technology in my study, "the nature of climate-ecosystems interactions is such that non-linearity and the complexity of dynamic interactions means that uncertainty will always be present" (Scoones 2009: 114). As I have tried to show in the final chapters, uncertainty indeed forms part and parcel of the environmental and spiritual configuration that inform the lifeworlds of the Maasai in Terrat, most notably of their understanding of *Eng'ai*.

Climate Change and Anthropology

The contribution of my work to the anthropology of climate change easily deserves a whole study in itself. Yet I see my attempt to grasp the encounter between Maasai "climate horizons" and the scientific notion as it is currently travelling only as a tentative beginning and invitation to a more thorough probing of this issue. The case of Leboi, and his revelation that he in fact does not *believe* in climate change as a scientific notion, has prompted me to explore some of the older debates on representation and epistemology that pervaded anthropology in the 1980s. I have pointed out that we at least need to be wary of not contributing to the process that I have come to understand as a "positive-feedback cycle". The caution is here directed to the ways in which anthropologists (as well as other translators) use their informants' accounts as a direct "proof" of climate change. Inspired by the work of Rudiak-Gould, a more critical approach therefore needs to take both observation studies and reception dynamics into account. One of the limitations of my study has certainly been that it has been mainly a qualitative inquiry, and more quantitative data could have enriched my analysis. Yet, the wider interpretive context of Terrat has informed my argument, for I encountered many people who refuted the idea of anthropogenic climate change, while others framed the unpredictability of the climate as part of normality. That being said, it has to be made explicit that many villagers also mentioned the increasing lack of rainfall

that they experience nowadays. Nevertheless, instead of taking these accounts to attest to the worldwide devastating effects caused by global warming, my guess is that it is more fruitful to consider the question of, what climate change means for the Maasai in Terrat? It appeared that climate change – as a new explanatory framework for a changing world – did not find resonance among many villagers. Crucially, I believe that the fact that the Maasai in Terrat and at the grassroots are refuting the climate change prophecy should not be understood as a sign of ignorance, but as an act of resistance. In other words, their rejection should be explained in terms of agency rather than ignorance or victimhood. This means that their stance should be taken seriously, and prompts us to explore the underlying rationales and ontologies. As such, this study has tried to give insight into the intertwinement of environmental, political and cultural dimensions that underpin the reluctance to accept this nascent discourse.

It has been demonstrated that a complex relationship exists between morality, the environment and religion, which can best be described as an inclusive weave of the world in which these notions are intricately linked. As scholars of the ontological turn are very well aware, for many cultures in the world ways of being (ontology) are inseparable from ways of knowing (epistemology). Also for the Maasai, it has been argued that a different approach to dealing with the climate – as opposed to scientific accounts – have to be understood not so much in epistemological, but rather in ontological terms. For instance, when a drought hits the region systems of reciprocity, networks and mobilising strategies – or the *enactment* of drought – are key in how the drought is experienced (Goldman *et al.* 2015). The enactment of the climate and the weather is sustained by *Eng'ai* and forms the lifeblood of the general cosmological configuration that enhances morality and social cohesion in society. Discourses about the weather are inevitably a way of probing morality within society. In the translation of climate-change discourses an explicit move is made (by NGOs) to purify the Maasai's ontological-epistemological weave from *Eng'ai*, for climate change is translated as an alleged "secular" discourse that has nothing to do with God, but everything to do with industries and planting trees. Furthermore, it has been demonstrated that making sense of climate-change discourses in Terrat occurs through a complex blend (or creative "coproduction") of local cosmologies and more recently embraced Christianity. Much of the moral power of the traditional diviner and spiritual leader *Oloiboni* has shifted onto the church leaders, who hold a different set of ideas and ritual prescriptions on how to bring rainfall. Yet, despite the many cultural and religious ruptures or transformations that have been brought about by Christianity, an unmistakable continuity can be observed in the faith of the Supreme Being *Eng'ai*.

The case of Terrat is telling as this nascent prophecy of climate change as caused by humans (in which *Eng'ai* is relegated to the margins) is met with great hesitation, pointing not only to the "incompatible ontologies" between what is drafted globally and experienced locally; but it also reveals that along the translation chain a "clash of adaptations" occurs between the sacred and the secular. However, it should be noted that I have argued at the beginning of this study that climate change as merely a secular notion needs to be reconsidered. It is a highly moral discourse that is increasingly demanding that humanity rethink its own place on earth. As Mike Hulme has recently suggested in his apologetic to "a reacquantaince with the ancient and religious ideas of virtue":

> But listen carefully to the new voices speaking in the desert […] and one will hear a new language emerging around the fringes of climate change research, discourse and action… the language of empathy, story-telling, trust, wisdom, humility, integrity, faith, hope and love. I want to suggest that this is a vocabulary which, carefully deployed and realized, constitutes a re-discovery of virtue (Hulme 2014: 303).

When probing issues around the weather and the climate among the Maasai in Terrat, these are exactly the notions that are evoked. The Maasai are all too aware of the fact that talking about the climate is a way of questioning morality, which relates to the ways in which love features throughout social life. Perhaps it is time therefore, that ideas not only travel from international platforms to places such as Maasailand, but that ideas also travel up from these fringes of the world – from communities that did not contribute to the causes of climate change – to those places where a reacquantaince with virtue appear more pressing. I cherish the hope that my study can contribute to such a journey.

References

Acharya, Amitav. 2004. "How Ideas Spread: Whose Norms Matter? Norm Localization and Institutional Change in Asian Regionalism." *International Organization* 58: 239–275.

Adger, Neil W., Tor A. Benjaminsen, Katrina Brown and Hanne Svarstad. 2001. "Advancing a Political Ecology of Global Environmental Discourses." *Development and Change* 32: 681–715.

Adger, Neil W., Saleemul Huq, Katrina Brown, Declan Conway, and Mike Hulme. 2003. "Adaptation to Climate Change in the Developing World." *Progress in Development Studies* 3(3): 179-195.

Adger, Neil W., Jouni Paavola, Saleemul Huq, M.J. Mace. 2006. *Fairness in Adaptation to Climate Change.* Cambridge, MA & London: The MIT Press.

Agrawal, Arun. 1995. "Dismantling the Divide Between Indigenous and Scientific Knowledge." *Development and Change* 26(3): 413-439.

Agrawal, Arun, Maria Lemos C., Benjamin Orlove, and Jesse Ribot. 2012. "Cool Heads for a Hot World - Social Sciences under a Changing Sky." *Global Environmental Change 22*(2): 329-331.

Apter, Emily. 2006. *The Translation Zone. A New Comparative Literature.* New Jersey and Oxford: Princeton University Press.

Århem, Kaj. 1985. *Pastoral Man in the Garden of Eden. The Maasai of the Ngorongoro Conservation Area, Tanzania.* Uppsala: Uppsala Research Reports in Cultural Anthropology.

Armstrong, Karen. 2009. *The Case for God.* Toronto: Random House of Canada.

Arnall, Alex, Uma Kothari, and Ilan Kelman. 2014. "Introduction to Politics of Climate Change: Discourses of Policy and Practice in Developing Countries." *The Geographical Journal* 180(2): 98-101.

Ayers, Jessica, and David Dodman. 2010. "Climate Change Adaptation and Development I: the State of the Debate." *Progress in Development Studies* 10(2): 161-168.

Baird, Timothy D. 2014. "Conservation and Unscripted Development: Proximity to Park Associated with Development and Financial Diversity." *Ecology and Society* 19(1): 4.

Bal, Mieke. 2002. *Travelling Concepts in the Humanities: A Rough Guide.* Toronto, Buffalo & London: University of Toronto Press.

Barry, Andrew. 2013. "The Translation Zone: Between Actor-Network Theory and International Relations." *Millennium – Journal of International Studies* 0(0): 1–17.

Bassett, Thomas J., and Charles Fogelman. 2013. "Déjà vu or something new? The Adaptation Concept in the Climate Change Literature." *Geoforum* 48: 42-53.

Bayart, Jean-François. 2000. "Africa in the World: A History of Extraversion." Translated by Stephan Ellis. *African Affairs* 99: 217-267.

Beck, Ulrich. 1992. [1986] *Risk Society: Towards a New Modernity.* London: Sage.

Beck, Ulrich. 2009. [2007] *World at Risk.* Translated by Ciaran Cronin. Cambridge: Polity Press.

Beck, Silke. 2011. "Moving Beyond the Linear Model of Expertise? IPCC and the Test of Adaptation." *Regional Environmental Change.* 11: 297- 306.

Behnke, R.H., Ian Scoones, and C. Kerven. 1993. *Rangeland Ecology at Disequilibrium: New Models of Natural Variability and Pastoral Adaptation in African Savannahs.* London: Overseas Development Institute.

Behrends, Andrea, Sung-Joon Park and Richard Rottenburg. 2014. *Travelling Models in African Conflict Management. Translating Technologies of Social Ordering.* Leiden and Boston: Brill.

Berntsen, John L. 1979. "Maasai Age-Sets and Prophetic Leadership: 1850-1910." *Africa: Journal of the International African Institute* 49(2): 134-146.

Berrang-Ford, Lea, Tristan Pierce, and James D. Ford. 2015. "Systematic Review Approaches for Climate Change Adaptation Research." *Regional Environmental Change* 15(5): 755-769. Accessed August 2, 2016, doi:10.1007/s10113-014-0708-7

Bierschenk, Thomas. 2014. "From the Anthropology of Development to the Anthropology of Global Social Engineering." *Zeitschrift für Ethnologie* 139: 73-98.

Bierschenk, Thomas, Jean-Pierre Chauveau, and Jean-Pierre Olivier de Sardan. 2002. "Local Development Brokers in Africa. The Rise of a New Social Category." Working Paper 13, Department of Anthropology and African Studies – Johannes Gutenberg University, Mainz.

Bjurström, Andreas, and Merritt Polk. 2011. "Climate Change and Interdisciplinarity: A Co-citation Analysis of IPCC Third Assessment Report." *Scientometics* 87(3): 525-550.

Boersema, Jan J. 2011. *Beelden van Paaseiland. Over de Duurzaamheid van een Cultuur.* Amsterdam & Antwerpen: Atlas.

Bollig, Michael, Michael Schnegg, and Hans-Peter Wotzka. 2013. *Pastoralism in Africa: Past, Present and Future.* New York: Berghahn.

Bollig, Michael, and Michael Schnegg. 2013. "Introduction: Specialisation and Diversification among African Pastoral Societies." In *Pastoralism in Africa: Past, Present and Future,* edited by Michael Bollig, Michael Schnegg, and Hans-Peter Wotzka, 1-30. New York: Berghahn.

Bollig, Michael and Sara de Wit. 2014. Commentary on Orlove, Ben, Heather Lazrus, Grete K. Hovelsrud and Alessandra Giannini. "Recognitions and Responsibilities: On the Origins and Consequences of the Uneven Attention to Climate Change around the World." *Current Anthropology* 55 (3): 262-264.

Bornemann, John and Abdellah Hammoudi. 2009. *Being There. The Fieldwork Encounter and the Making of Truth.* California: University of California Press.

Borner, M. 1985. "The Increasing Isolation of Tarangire National Park." *Oryx* 19: 91-96.

Bravo, Michael T. 2009. "Voices from the Sea Ice: the Reception of Climate Impact Narratives." *Journal of Historical Geography* 35: 256-278.

Brockington, Dan, Rosaleen Duffy, and Jim Igoe. 2008. *Nature Unbound: Conservation, Capitalism and the Future of Protected Areas.* London: Earthscan.

Brockington, Dan. 2002. *Fortress Conservation: The Preservation of the Mkomazi Game Reserve, Tanzania.* The International African Institute in collaboration with: Oxford, James Currey, Dar es Salaam: Mkuki Na Nyota; Bloomington & Indianapolis: Indiana University Press.

Brown, Steven D. 2002. "Michel Serres. Science, Translation and the Logic of the Parasite." *Theory, Culture & Society* 19 (3): 1-27. Accessed February 10, 2014. doi: 10.1177/0263276402019003001

Bruner, S. Jerome. 1986. *Actual Minds, Possible Words.* Cambridge, MA: Harvard University Press.

Burford, G., M.Y. Rafiki, and L.O. Ngila. 2001. "The Forest Retreat of Orpul, a Holistic System of Health Care Practised by the Maasai Tribe of Northern Tanzania." *Journal of Alternative Complementary Medicine* 7(4): 547- 551.

Burton, Ian. 2009. "Deconstructing Adaptation … Reconstructing." In *The Earthscan Reader on Adaptation to Climate Change,* edited by E. Lisa F., and Ian Burton, 11- 14. London: Earthscan.

Bwagalilo, Fadhili, and Augustino Mwakipesile. 2012. *Impacts of Climate Change and Land Use Patterns and Livelihoods of Pastoralists and Hunter Gatherers. A Case Study of Mbulu, Hanang, Kiteto and Simanjiro Districts.* Submitted to PINGO´s Forum.

Callon, Michel. 1986. "Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay." In *Action, Power and Belief: a New Sociology of Knowledge?* Edited by John Law, 196-223. London: Routledge.

Callon, Michel. 1990. "Techno-Economic Networks and Irreversibility." *Sociological Review Monograph Series: A Sociology of Monsters: Essays on Power, Technology and Domination* 38 (S1): 132-161.

Callon, Michel, and Bruno Latour. 1981. "Unscrewing the Big Leviathan: How Actors Macro-Structure Reality and How Sociologists help them to do so." In *Advances in Social Theory and Methodology. Toward an Integration of Micro-and Macro-Sociologies,* edited by K.Knorr-Cetina and A.V. Cicourel, 277-303. Boston, London & Henley: Routledge & Kegan Paul.

Cameron, Greg. 2001. "Taking Stock of Pastoralist NGOs in Tanzania." *Review of African Political Economy* 28 (87): 55-72. doi: 10. 1080/03056240108704503, Accessed 21 June, 2016.

Cannon, Terry & Detlef Müller-Mahn. 2010. "Vulnerability, Resilience, and Development Discourses in Context of Climate Change." *Natural Hazards* 55: 621-635.

Casimir, Michael, J. 2008. *Culture and the Changing Environment. Uncertainty, Cognition and Risk Management in Cross-Cultural Perspective.* New York: Berghahn Books.

Cass, Loren R. 2007. "Measuring the Domestic Salience of International Environmental Norms: Climate Change Norms in American, German and British Climate Policy Debates." In *The Social Construction of Climate Change. Power, Knowledge, Norms, Discourses,* edited by Mary E. Pattenger, 23-50. Aldershot: Ashgate Publishing Limited.

Clifford, James. 1997. *Routes: Travel and Translation in the Late Twentieth Century*. Cambridge, MA: Harvard University Press.

Conway, Declan, and E. Lisa F. Schipper. 2011. "Adaptation to Climate Change in Africa: Challenges and Opportunities Identified from Ethiopia." *Global Environmental Change* 21(1): 227-237.

Cook, Ian. 2004. "Follow the Thing: Papaya." *Antipode* 642-664.

Cook, Ian and Michelle Harrison. 2007. "Follow the Thing: "West Indian Hot Pepper Sauce." *Space and Culture* 10: 40-63. Accessed 12 July, 2012. doi: 10.1177/1206331206296384.

Crane, Todd A., Carla Roncoli and Gerrit Hoogeboom. 2011. "Adaptation to Climate Change and Climate Variability: The Importance of Understanding Agriculture as Performance." *Journal of Life Sciences* 57: 179-185.

Crate, Susan A. 2008. "Gone the Bull of Winter? Grappling With the Cultural Implications of and Anthropology's Role(s) in Global Climate Change." *Current Anthropology* 49(4): 569-595.

Crate, Susan A., and Mark Nuttall. 2009. Introduction to *Anthropology and Climate Change: From Encounters to Actions*. Walnut Creek, CA: Left Coast Press.

Crate, Susan A. 2011. "Climate and Culture: Anthropology in the Era of Contemporary Climate Change." *Annual Review of Anthropology* 40: 175-194.

Crist, Eileen. 2007. "Beyond the Climate Crisis: A Critique of Climate Change Discourse." *Telos* 141: 29-55.

Cruikshank, Julie. 2001. "Glaciers and Climate Change: Perspectives from Oral Tradition." *Arctic* 54(4): 377-393.

Cruikshank, Julie. 2007. "Melting Glaciers and Emerging Histories in the Saint Elias Mountains." In *Indigenous Experience Today,* edited by Marisol de la Cadena and Orin Starn, 355-378. Oxford: Berg.

Czarniawska, Barbara. 1997. *Narrating the Organization. Dramas of Institutional Identity.* Chicago and London: The University of Chicago Press.

Czarniawska, Barbara, and Guje Sevón. 2005. Introduction to *Global Ideas. How Ideas, Objects, and Practices Travel in the Global Economy.* Malmö: Liber.

Daniels, Stephan, and Georgina H. Endfield. 2009. "Narratives of Climate Change: Introduction." *Journal of Historical Geography* 35(2): 215-222.

David, Catherine, Frédéric Lenoir, and Jean-Philippe de Tonnac. 1999. "Voorwoord." In: *Gesprekken over het Einde der Tijden,* 7-10. Translated by Nele Ysebaert. Amsterdam: Boom.

Davis, Alicia. 2011. "'Ha! What is the Benefit of Living Next to the Park?' Factors Limiting In-migration Next to Tarangire National Park, Tanzania." *Conservation and Society* 9 (1): 25-34. Accessed December 7, 2015. doi:10.4103/0972-4923.79184.

De Bruijn, Mirjam, Han Van Dijk, Mayke Kaag, Kiky van Til. 2005. *Sahelian Pathways. Climate and Society in Central and South Mali.* Leiden: African Studies Centre.

De Bruijn, Mirjam and Rijk van Dijk. 2012. *The Social Life of Connectivity in Africa.* New York: Palgrave MacMillan.

De Laet, Marianne, and Annemarie Mol. 2000. "The Zimbabwe Bush Pump: Mechanics of a Fluid Technology." *Social Studies of Science* 30 (2): 225-263. Accessed 26 July, 2012. doi:10.1177/030631200030002002

De Vries, Gerard. 2016. *Bruno Latour.* Cambridge: Polity Press.

De Wit, Sara. 2014a. "Denaturalizing Adaptation, Resocializing the Climate: Theoretical and Methodological Considerations on How to Follow a Travelling Idea of Climate Change." In *Denaturalizing Climate Change: Migration, Mobilities and Space,* edited by Friederike Gesing, Johannes Herbeck, and Silja Klepp, 56-64. Artec-paper 200.

De Wit, Sara. 2014b. "Changing Patterns of Rain or Power? How an Idea of Adaptation to Climate Change Travels Up and Down to Maasailand, Northern Tanzania." *Working Paper of the Priority Program 1448 of the German Research Foundation* 11: 1-22.

De Wit, Sara. 2015. *Global Warning. An Ethnography of the Encounter Between Global and Local Climate-Change Discourses in the Bamenda Grassfields, Cameroon.* Leiden & Bamenda: African Studies Centre & Langaa.

Diamond, Jared. 2005. *Collapse: How Societies Choose to Fail or Survive.* Penguin Books: London.

Douglas, Mary. *Natural Symbols: Explorations in Cosmology.* London: Routledge.

Douglas, Mary. 1975. "Environments at risk." *Implicit Meanings. Selected Essays in Anthropology.* London and New York: Routledge.

Douglas, Mary. 1992. *Risk and Blame. Essays in Cultural Theory.* London and New York: Routledge.

Douglas, Mary and Aaron Wildavsky. 1982. *Risk and Culture. An Essay on the Selection of Technological and Environmental Dangers.* Berkeley and Los Angeles: University of California Press.

Dove, Michael R. 2014. "Introduction: The Anthropology of Climate Change. Six Millenia of Study of the Relationship between Climate and Society." In *The Anthropology of Climate Change: An Historical Reader,* 1-36. Oxford: Wiley Blackwell.

Dove, Michael R., and Carol Carpenter. 2008. *Environmental Anthropology: A Historical Reader.* Malden, Oxford & Victoria: Blackwell Publishing.

Downing, Thomas E., Lasse Ringius, Mike Hulme, and Dominic Waughray. 1997. "Adapting to Climate Change in Africa." *Mitigation and Adaptation Strategies for Global Change* 2: 19-44.

Eco, Umberto. 1999. "Ten Overvloede". In *Gesprekken over het Einde der Tijden,* 11-60. Translated by Nele Ysebaert. Compiled by Catherine David, Frédéric Lenoir and Jean-Philippe de Tonnac. Amsterdam: Boom.

Eguavoen, Irit. 2013. "Climate Change and Trajectories of Blame in Northern Ghana." *Anthropological Notebooks* 19(1): 5-24.

Eguavoen, Irit, Karsten Schulz, Sara de Wit, Florian Weisser, Detlef Müller-Mahn. "Political Dimensions of Climate Change Adaptation. Conceptual Reflections and African Examples." In

Handbook of Climate Change Adaptation, edited by Walter Leal Filho, 1183-1198. Berlin, Heidelberg: Springer, 2015.

Endfield, Georgina. 2011. "Reculturing and Particularizing Climate Discourses: Weather, Identity, and the Work of Gordon Manley." *Osiris* 26: 142-162.

Englund, Harri. 2011. *African Rights and African Airwaves. Mediating Equality on the Chichewa Radio.* Bloomington & Indianapolis: Indiana University Press.

Escobar, Arturo. 1995. *Encountering Development. The Making and Unmaking of the Third World.* Princeton: Princeton University Press.

Escobar, Arturo. 1999. "After Nature: Steps to an Antiessentialist Political Ecology." *Current Anthropology* 40(1): 1-30.

Evans-Pritchard, E.E. 1951. *Social Anthropology*. Glasgow: The University Press.

Farbotko, Carol, and Heather Lazrus. 2012. "The First Climate Refugees? Contesting Global Narratives of Climate Change in Tuvalu." *Global Environmental Change* 22 (2): 382-390.

Ferguson, James. 1990. *The Anti-Politics Machine. 'Development,' Depoliticization, and Bureaucratic Power in Lesotho.* Cambridge: Cambridge University Press.

Ferguson, James. 2006. *Global Shadows. Africa in the Neoliberal World Order.* Durham & London: Duke University Press.

Fisher, William F. 1997. "Doing good? The Politics and Anti-politics of NGO Practices." *Annual Review of Anthropology Annual* 26(4): 439-464.

Flannery, Tim. 2005. *The Weather Makers: How Man is Changing the Climate and What it Means for Life on Earth.* New York: Grove Press.

Fleming, James R. 1998. *Historical Perspectives on Climate Change.* New York: Oxford University Press.

Fleming, James R., and Vladimir Jankovic. 2011. *Klima.* Osiris, Volume 26. Chicago: The University of Chicago Press.

Ford, James D., Will Vanderbilt, Lea Berrang-Ford. 2012. "Authorship in IPCC AR5 and its Implications for Content: Climate Change and Indigenous Populations in WGII." *Climatic Change* 113: 201-213.

Foster Wallace, David. 2005. "This is Water: Some Thoughts, Delivered on a Significant Occasion, About Living a Compassionate Life." A commencement speech, Kenyon College, 21 May 2005.

Foucault, Michel. 1972. *The Archaeology of Knowledge.* London: Routledge.

Foucault, Michel. 1980. "Two lectures". In *Power/knowledge: Selected Interviews and Other Writings 1972– 1977*, edited by C. Gordon. New York: Pantheon Books.

Foucault, Michel. 1988. "Technologies of the Self." In *Technologies of the Self. A Seminar with Michel Foucault,* edited by Luther H. Martin, H. Gutman, Patrick H. Hutton, 16-49. London: Tavistock Publications.

Foucault, Michel. 1991. "Governmentality." In *The Foucault Effect: Studies in Governmentality,* edited by Graham Burchell, Colin Gordon and Peter Miller, 87- 104. Chicago: The University of Chicago Press.

Frank, Elisa, Hallie Eakin, and David Lopéz-Carr. 2011. "Social Identity, Perception and Motivation in Adaptation to Climate Risk in the Coffee Sector of Chiapas, Mexico." *Global Environmental Change* 21: 66-76.

Galaty, John G. 2011. "The Modern Motility of Pastoral Land Rights: Tenure Transitions and Land-Grabbing in East Africa." *Paper Presented at the International Conference on the Future of Pastoralism in Africa,* Addis Ababa 21-23 March, 2011.

Galaty, John G. 2013. "The Indigenisation of Pastoral Modernity: Territoriality, Mobility and Poverty in Dryland Africa." In *Pastoralism in Africa: Past, Present and Future,* edited by Michael Bollig, Michael Schnegg, and Hans-Peter Wotzka, 473-510. New York: Berghahn.

Gardner, Benjamin. 2016. *Selling the Serengeti: the Cultural Politics of Safari Tourism.* Athens: The University of Georgia Press.

Gebauer, Claudia and Martin Doevenspeck. 2014. "Adaptation to Climate Change and Resettlement in Rwanda." *Area* 47(1): 97–104.

Geertz, Clifford. 1988. *Works and Lives. The Anthropologist as Author.* Stanford: Stanford University Press.

Gesing, Friederike, Johannes Herbeck, and Silja Klepp. 2014. "Denaturalizing Climate Change: Migration, Mobilities and Space." *Artec-Paper* Nr. 200.

Giddens, Anthony. 2011. *The Politics of Climate Change.* Cambridge: Polity Press.

Gluckman, Max. 1958. *Analysis of a Social Situation in Modern Zululand.* Manchester & New York: Manchester University Press.

Goffman, Erving. 1959. *The Presentation of Self in Everyday Life.* New York: Doubleday Anchor Books.

Goffman, Erving. 1974. *Frame Analysis. An Essay on the Organization of Experience*. Norwich: Penguin Books.

Goldman, Mara J., and Fernando Riosmena. 2013. "Adaptive Capacity in Tanzanian Maasailand: Changing Strategies to Cope with Drought in Fragmented Landscapes." *Global Environmental Change* 23: 588-597.

Goldman, Mara J., Meaghan Daly and Eric Lovell. 2015. "Exploring Multiple Ontologies of Drought in Agro-pastoral Regions of Northern Tanzania: a Topological Approach." *Area* 48(1): 27-33.

Gordon, Colin. 1991. "Governmental Rationality: an Introduction." In *The Foucault Effect: Studies in Governmentality,* edited by Graham Burchell, Colin Gordon and Peter Miller, 1-51. Chicago: University of Chicago Press.

Gould, Jeremy. 2005. "Timing, Scale and Style: Capacity as Governmentality in Tanzania." In *The Aid Effect: Giving and Governing in International Development,* edited by David Mosse and David Lewis, 61-84. Northampton: Pluto Press.

Greschke, Heike. 2015. "The Social Facts of Climate Change: An Ethnographic Approach." In *Grounding Global Climate Change. Contributions from the Social and Cultural Sciences,* edited by Heike Greschke & Julia Tischler, 121-138. Dordrecht: Springer.

Greschke, Heike, and Julia Tischler. 2015. *Grounding Global Climate Change. Contributions from the Social and Cultural Sciences.* Dordrecht: Springer.

Groop, Kim. 2006. *With the Gospel to Maasailand. Lutheran Mission Work among the Arusha and Maasai in Northern Tanzania* 1904-1973. Biskopsgatan: Åbo Akademi University Press.

Hamblyn, Richard. 2009. "The Whistleblower and the Canary: Rhetorical Constructions of Climate Change." *Journal of Historical Geography* 35: 223-236.

Hanks, William F., and Carlo Severi. 2014. "Translating Worlds. The Epistemological Space of Translation." *HAU: Journal of Ethnographic Theory* 4(2): 1-16.

Hannerz, Ulf. 2003. "Being There ... and There ... and There! Reflections on Multi-Site Ethnography." *Ethnography* 4 (2): 201-216.

Haraway, Donna. 2004. *The Harraway Reader.* New York: Routledge.

Hardin, Garret. 1968. "Tragedy of the Commons." *Science, New Series* 126(3859): 1243–1248.

Hastrup, Kirsten. 2014. *The Social life of Climate Change Models: Anticipating Nature.* New York & London: Routledge

Hastrup, Kirsten. 2015. "Comparing Climate Worlds: Theorising across Ethnographic Fields." In: Greschke, H. & J. Tischler (eds.) *Grounding Global Climate Change.* Dordrecht: Springer.

Herskovits, Melville J. 1926. *The Cattle Complex in East Africa.* Ph.D. dissertation. Columbia: Columbia University Press.

Hodgson, Dorothy L. 1999. ""Once intrepid warriors": Modernity and the Production of Maasai Masculinities." *Ethnology* 38(2): 121-150.

Hodgson, Dorothy L. 2000a. "Gender, Culture & the Myth of the Patriarchal Pastoralist." In *Rethinking Pastoralism in Africa: Gender, Culture & the Myth of the Patriarchal Pastoralist,* edited by Dorothy L. Hodgson, 1-28. Ohio: Ohio University Press.

Hodgson, Dorothy L. 2000b. "Pastoralism, Patriarchy & History among Maasai in Tanganyika 1890-1940." In *Rethinking Pastoralism in Africa: Gender, Culture & the Myth of the Patriarchal Pastoralist,* edited by Dorothy L. Hodgson. Ohio: Ohio University Press.

Hodgson, Dorothy L. 2002a. "Introduction: Comparative Perspevtices on the Indigenous Rights Movement in Africa and the Americas." *American Anthropologist* 104(4): 1037-1049.

Hodgson, Dorothy L. 2002b. "Precarious Alliances: The Cultural Politics and Structural Predicaments of the Indigenous Rights Movement in Tanzania." *American Anthropologist* 104(4): 1086-1097.

Hodgson, Dorothy L. 2004. *Once Intrepid Warriors: Gender, Ethnicity, and the Cultural Politics of Maasai Development.* Bloomington: Indiana University Press.

Hodgson, Dorothy L. 2005. *The Church of Women. Gendered Encounters Between Maasai and Missionaries.* Bloomington: Indiana University Press.

Hodgson, Dorothy L. 2011a. *Being Maasai, Becoming Indigenous. Postcolonial Politics in a Neoliberal World.* Bloomington: Indiana University Press.

Hodgson, Dorothy L. 2011b. ""These Are Not Our Priorities": Maasai Women, Human Rights, and the Problem of Culture." In *Gender and Culture at the Limits of Rights,* edited by Dorothy L. Hodgson, 138-157. Philadelphia: University of Pennsylvania Press.

Homewood, Katherine M., and W.A. Rodgers. 1991. *Maasailand Ecology. Pastoralist Development and Wildlife Conservation in Ngorongoro, Tanzania.* Cambridge: Cambridge University Press.

Homewood, Katherine M., Patti Kristjanson, Pippa Chenevix Trench. 2009. " Changing Land Use, Livelihoods and Wildlife Conservation in Maasailand." In *Staying Maasai? Livelihoods, Conservation and Development in East African Rangelands,* edited by Katherine M. Homewood, Patti Kristjanson, Pippa Chenevix Trench, 1-42. Dordrecht: Springer.

Horton, R. 1975. "On the Rationality of Conversion." *Africa* 45: 219-235.

Huang, Sui. 2013. "When Peers are not Peers and Don't Know it: The Dunning-Kruger Effect and Self-Fulfilling Prophecy in Peer-Review." *Bioessays* 35: 414-416.

Hulme, Mike. 2008a. "The Conquering of Climate: Discourses of Fear and Their Dissolution." *The Geographical Journal* 174(1): 5-16. DOI: 10.1111/j.1475-4959.2008.00266.x

Hulme, Mike. 2008b. "Geographical Work at the Boundaries of Climate Change." *Transactions of the Institute of British Geographers* 33: 5-11.

Hulme, Mike. 2009. *Why We Disagree About Climate Change. Understanding Controversy, Inaction and Opportunity.* Cambridge: Cambridge University Press.

Hulme, Mike. 2010a. "The Idea of Climate Change. Exploring Complexity, Plurality and Opportunity." *GALA* 19(3): 171-174.

Hulme, Mike. 2010b. "Problems with Making and Governing Global Kinds of Knowledge." *Global Environmental Change* 20: 558-564.

Hulme, Mike. 2011a. "Reducing the Future to Climate: A Story of Climate Determinism and Reductionism". *Osiris* 26(1): 245-266.

Hulme, Mike. 2011b. "Commentary: Meet the Humanities." *Nature Climate Change* 1: 177-179.

Hulme, Mike. 2014. "Climate Change and Virtue: An Apologetic." *Humanities* 3: 299-312.

Hulme, Mike. 2015. "Climate and its Changes: A Cultural Appraisal." *Geo: Geography and Environment,* 1-11.

Hulme, Mike. 2017 (forthcoming). *Weathered: Cultures of Climate.* London: SAGE.

Huq, Saleemul and Hannah Reid. 2009. "Mainstreaming Adaptation in Development." In *The Earthscan Reader on Adaptation to Climate Change,* edited by E. Lisa F. Schipper, and Ian Burton, 313- 322. London: Earthscan.

Igoe, Jim. 2002. "National Parks and Human Ecosystems. The Challenge to Community Conservation. A Case Study from Simanjiro, Tanzania." In *Conservation and Mobile Indigenous Peoples. Displacement, Forced Resettlement and Sustainable Development,* edited by Dawn Chatty, and Marcus Colchester, 77-96. New York & Oxford: Berghahn Books.

Igoe, Jim. 2006a. "Becoming Indigenous Peoples: Difference, Inequality, and the Globalization of East African Identity Politics." *African Affairs* 105(420): 399-420. doi:10.1093/afraf/adi127 Accessed 20 June, 2016.

Igoe, Jim. 2006b. "Ecosystem Dynamics and Institutional Inertia: A Discussion of Landscape Conservation in Northern Tanzania." In *Savannas & Dry Forests: Linking People with Nature,* edited by Jayalaxshmi, Mistry, and Andrea Berardi, 77-104. Aldershot: Ashgate.

Igoe, Jim, and Dan Brockington. 1999. "Pastoral Land Tenure and Community Conservation: A Case Study From North-East Tanzania." *IIED Drylands Programme: Pastoral Land Tenure Series 11.*

IIED. 2015. "Climate Change, Drylands and Pastoralism". *Briefing*, (IIED, TNRF, HAKIKAZI Catalyst). April 2015.

Ingold, Tim. 2000. *The Perception of the Environment. Essays on Livelihood, Dwelling and Skill.* London and New York: Routledge.

International Work Group for Indigenous Affairs (IWGIA). 2013. Tanzania: 384-393. *The Indigenous World,* IWGIA. Copenhagen.

International Work Group on Indigenous Affairs (IWGIA). 2016. Tanzania: 421-429. *The Indigenous World,* IWGIA. Copenhagen.

IPCC. 2007. Boko, M., I. Niang, A. Nyong, C. Vogel, A. Githeko, M. Medany, B. Osman-Elasha, R. Tabo and P. Yanda. 2007. "Africa". In: *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change,* edited by M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, 433–467. Cambridge: Cambridge University Press.

IPCC. 2013. "Summary for Policymakers". *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change,* edited by Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley. Cambridge and New York: Cambridge University Press.

IPCC. 2014a. Niang, I., O.C. Ruppel, M.A. Abrado, A. Essel, C. Lennard, J. Padgham, and P. Urquhart. "Africa". In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change,* edited by [Barros, V.R., C.B. Field, D.J. Dokken, M.D. Mastrandrea, K.J. Mach, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White], 1199-1265. Cambridge & New York: Cambridge University Press.

IPCC. 2014b. *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Summaries, Frequently Asked Questions, and Cross-Chapter Boxes. A Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change,* edited by [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S.MacCracken, P.R. Mastrandrea, and L.L. White]. World Meteorological Organization, Geneva, Switzerland.

Jamieson, Dale. 2009. "Climate Change, Responsibility, and Justice." *Science and Engineering Ethics* 16(3): 431-445.

Jasanoff, Sheila. 2007. "Technologies of Humility: Citizen Participation in Governing Science." *Minerva* 41: 223-244.

Jasanoff, Sheila. 2010. "A New Climate for Society." *Theory, Culture & Society* 27: 233-253.

Jurt, Christine, Maria Dulce Burga, Luis Vicuña, Christian Huggel, and Ben Orlove. 2015. "Local Perceptions in Climate Change Debates: Insights from Case Studies in the Alps and the Andes." *Climatic Change* 133(3): 511-523.

Justo, Lemburis. 2015. "Maasai and Christianity. Bible in Contemporary Perspective." Presentation during *Maasai/ Bible Workshop*, 26-27 May, 2015. Stavanger, Norway.

Kangwana, Kadzo and Rafael Ole Mako. 2001. "The Impact of Community Conservation Initiatives Around Tarangire National Park (1992-1997). " *Community Conservation Research in Africa. Principles and Comparative Practice.* Working Paper no. 9: 1-23.

Kates, Robert W. 2000. "Cautionary Tales: Adaptation and the Global Poor." *Climatic Change* 45: 5-17.

Kelbert, Thekla. 2016. *Encounters at the Water Point. An Ethnography of the Travelling Model of Community-Based Water Management and its Application to Rural Water Supply in Namibia.* Ph.D. dissertation. University of Cologne.

Ki-moon, Ban. 2009. "Adapting to Climate Change." *UN Secretary General's Address in Ulaanbaatar* (Mongolia), July 27th 2009. https://www.un.org/sg/en/content/sg/speeches/2009-07-27/adapting-climate-change.

Koselleck, Reinhart. 1988. *Critique and Crisis: Enlightenment and the Pathogenesis of Modern Society.* Cambridge, MA: Berg Publishers.

Koselleck, Reinhart. 2002. *The Practice of Conceptual History. Timing, History, Spacing Concepts.* Translated by Todd Samuel Presner and Others. California: Stanford University Press.

Klein, Naomi. 2014. *This Changes Everything. Capitalism vs. the Climate.* New York and London: Allen Lane/ Penguin Books.

Laltaika, Elifuraha Isaya. 2009. "Tanzania: Indigenous Peoples' Recent Engagement in the Redd Process." *Indigenous Affairs* 1-2: 28-31.

Latour, Bruno. 1986. "The Powers of Association." In *Power, Action and Belief. A New Sociology of Knowledge?* Edited by John Law, 264-280. London, Boston & Henley: Routledge & Kegan Paul.

Latour, Bruno. 1993. [1991] *We Have Never Been Modern.* Translated by Catherine Porter. Cambridge, MA: Harvard University Press.

Latour, Bruno. 1996. "On Actor-Network Theory: A Few Clarifications". *Soziale Welt* 47 (4): 369-381.

Latour, Bruno. 2004. "Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern." *Critical Inquiry* 30: 225-248.

Latour, Bruno. 2007. "The Recall of Modernity." Translated by Stephen Muecke. *Cultural Studies Review* 13 (1): 11-30.

Latour, Bruno. 2013. *An Inquiry into Modes of Existence: An Anthropology of the Moderns.* Translated by Catherine Porter. Cambridge, MA & London: Harvard University Press.

Law, John. 1992. "Notes on the Theory of the Actor- Network: Ordering, Strategy and Heterogeneity." *Systems Practice* 5: 379-393.

Law, John. 2007. "Actor Network Theory and Material Semiotics." Accessed 22 February, 2016. http://www. heterogeneities. net/publications/Law2007ANTandMaterialSemiotics.pdf

Leal Filho, Walter. 2015. *Handbook of Climate Change Adaptation.* Berlin Heidelberg: Springer.

Lee, Martha F. 1995. *Earth First! Environmental Apocalypse.* New York: Syracuse University Press.

Leslie, Paul W., and Terrence J. McCabe. 2013. "Response Diversity and Resilience in Social-Ecological Systems." *Current Anthropology* 54(2): 114-129.

Lewis, David, and David Mosse. 2006. *Development Brokers and Translators: The Ethnography of Aid and Agencies.* Bloomfield: Kumarian Press.

Li, Tania M. 2000. "Articulating Indigenous Identity in Indonesia: Resource Politics and the Tribal Slot." *Comparative Studies in Society and History* 42(1): 149-179.

Li, Tania M. 2007. *The Will to Improve. Governmentality, Development, and the Practice of Politics.* Durham & London: Duke University Press.

Lovelock, James. 2006. *The Revenge of Gaia: Earth's Climate in Crisis and the Fate of Humanity.* London: Penguin.

Lwasa, Shuaib. 2015. "A Systematic Review of Research on Climate Change Adaptation Policy and Practice in Africa and South Asia Deltas." *Regional Environmental Change* 15(5): 815-824.

Mace, M.J. 2006. "Adaptation Under the UN Framework Convention on Climate Change: The International Legal Framework." In *Fairness in Adaptation to Climate Change,* edited by Neil W. Adger, Jouni Paavola, Saleemul Huq, and M.J. Mace, 53-76. Massachusetts, Cambridge and London: The MIT Press.

MacIntyre, Alasdair. 1981. *After Virtue. A Study in Moral Theory.* Indiana: University of Notre Dame Press.

Malinowski, Bronislaw. 1922. *Argonauts of the Western Pacific. An Account of Native Enterprise and Adventure in the Archipelagoes of Melanesian New Guinea.* London: George Routledge & Sons Ltd. New York: E.P. Dutton & Co.

Mansoor, H.A., I.K. Kullaya, D. Shirima, and W. Msacky. 2009. *Rutuba ya Udongo wa Vijiji Teule vya Simanjiro na Matumizi kwa Kilimo Endelevu.*

Marcus, George E., and Michael M.J. Fischer. 1986. *Anthropology as Cultural Critique.* Chicago: University of Chicago Press.

Marcus, George E. 1994. "On Ideologies of Reflexivity in Contemporary Effects to Remake the Study of Social Sciences." *Poetics Today* 15 (3): 383- 404.

Marcus, George E. 1995. "Ethnography in/of the World System: The Emergence of Multi-Sited Ethnography." *Annual Review of Anthropology* 24: 95–117.

McCabe, Terrence J. 2002. "Giving Conservation a Human Face? Lessons from Forty Years of Combining Conservation and Development in the Ngorongoro Conservation Area, Tanzania." In *Conservation and Mobile Indigenous Peoples. Displacement, Forced Settlement, and Sustainable Development,* edited by Dawn Chatty, and Marcus Colchester, 61-76. New York & Oxford: Berghahn Books.

McCabe, Terrence J. 2003. "Sustainability and Livelihood Diversification among the Maasai of Northern Tanzania." *Human Organization* 62(2): 100-111.

McCabe, Terrence J., and Paul W. Leslie, and Laura DeLuca. 2010. "Adopting Cultivation to Remain Pastoralists: the Diversification of Maasai Livelihoods in Northern Tanzania." *Human Ecology* 38(3): 321-334.

McCabe, Terrence J., Nicole Smith, Paul Leslie, and Amy Telligman. 2014. "Livelihood Diversification through Migration among a Pastoral People: Contrasting Case Studies of Maasai in Northern Tanzania." *Human Organization* 73(4): 389-400.

Merry, Sally E. 2006. "Transnational Human Rights and Local Activism: Mapping the Middle." *American Anthropologist* 108 (1): 38-51.

Meyer, Birgit. 2011. "Medium." *Material Religion: The Journal of Objects, Art and Belief* 7(1): 58-64. Accessed January 16, 2016. doi: 10.2752/175183411X12968355481737.

Moore, Frances C. 2010. ""Doing Adaptation": The Construction of Adaptive Capacity and its Function in the International Climate Negotiations." *St Anthony's International Review* 5(2): 66-88.

Moore, Henrietta L., and Todd Sanders. 2014. "Anthropology and Epistemology." In *Anthropology in Theory. Issues in Epistemology,* edited by Henrietta L. Moore and Todd Sanders, 1-18. West Sussex: Wiley Blackwell.

Morgan, G. 2006. [1986]. *Images of Organization.* London & Delhi: Sage.

Mosse, David. 2005. "Global Governance and the Ethnography of International Aid." In *The Aid Effect: Giving and Governing in International Development,* edited by David Mosse & David Lewis, 1-36. Northampton: Pluto Press.

Mosse, David, and David Lewis. 2006. "Theoretical Approaches to Brokerage and Translation in Development." In *Development Brokers and Translators. The Ethnography of Aid and Agencies,* edited by David Mosse & David Lewis, 1-26. Bloomfield: Kumarian Press.

Msemwa, Paul. 1998. "The Maasai Cultural Festival". *The History and some Traditions of the Maasai. National Museum of Tanzania, Village Museum.* Ruvuma: Peramiho Printing Press.

Ndagala, D.K. 1982. "'Operation Imparnati': The Sedentarization of the Pastoral Maasai in Tanzania." *Nomadic Peoples,* 10: 28-39.

Niggol Seo, Sungno, and Robert Mendelsohn. 2007. "Climate Change Adaptation in Africa: A Microeconomic Analysis of Livestock Choice." *World Bank Policy Research Working Paper* 4277.

Nelson, F., Foley C., Foley L.S., Leposo, A., Loure E., Peterson D., Peterson M., Peterson T., Sachedina H., Williams, A. 2010. "Payments for Ecosystem Services as a Framework for Community-Based Conservation in Northern Tanzania". *Conservation Biology* 24(1): 78-85.

Nyamnjoh, Francis. B. 2012. "Blinded by Sight: Divining the Future of Anthropology in Africa." *Africa Spectrum* 47(2-3): 63-92.

Nyerere, Julius K., 1968. *Freedom and Socialism. Uhuru na Ujamaa. A selection from writings and speeches 1965-1967.* Dar es Salaam: Oxford University Press.

Oba, Gufu. 2014. *Climate Change Adaptation in Africa. An Historical Ecology.* New York: Routledge.

Oreskes, Naomi and Erik M. Conway. 2010. *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming.* New York: Bloomsbury Press.

Orlove, Benjamin. 2009. "The Past, the Present and Some Possible Futures of Adaptation." In *Adapting to Climate Change: Thresholds, Values, Governance,* edited by Neil W. Adger, Irene Lorenzoni, and Karen O'Brien, 129-163. Cambridge: Cambridge University Press.

Paavola, Jouni. 2006. "Justice in Adaptation to Climate Change in Tanzania." In *Fairness in Adaptation to Climate Change,* edited by W. Neil Adger, Jouni Paavola, Saleemul Huq, and M.J. Mace, 201-222. Massachusetts, Cambridge and London: The MIT Press.

Paavola, Jouni, and Neil W. Adger. 2002. "Justice and Adaptation to Climate Change." *Working Paper* 23, Tyndall Centre for Climate Change Research.

Parkipuny, Moringe 1989. "The Human Rights Situation of Indigenous Peoples in Africa." *Fourth World Journal* 4(1): 1-4. Address to the Sixth Session of the United Nations Working Group on Indigenous Populations in Geneva, 3 August, 1989.

Peck, Jamie and Nik Theodore. 2010. "Mobilizing Policy: Models, Methods, and Mutations." *Geoforum* 41: 169-174. Accessed 7 February, 2016. doi: 10.1016/j.geoforum.2010.01.002.

Pettenger, Mary E., Loren L. Kass, Takashi Hatori, Cathleen Fogel, Karin Bäckstrand, Eva Lövbrand, Matthew Paterson, Johannes Stripple, Myanna Lahsen, Heather A. Smith, William D. Smith. 2007. *The Social Construction of Climate Change. Power, Knowledge, Norms, Discourses.* Aldershot: Ashgate Publishing Limited.

Pielke, Roger Jr. 1998. "Rethinking the Role of Adaptation in Climate Policy." *Global Environmental Change* 8(2): 159-170.

Pielke, Roger Jr., Gwyn Prins, Steve Rayner, and Daniel Sarewitz. 2007. "Lifting the Taboo on Adaptation." *Nature* 445(8): 597-598.

Pittock, Barrie A., and Roger N. Jones. 2009. "Adaptation to What and Why?" In *The Earthscan Reader on Adaptation to Climate Change,* edited by E. Lisa F. Schipper, and Ian Burton, 35-62. London: Earthscan.

Polkinghorne, E. Donald. 1988. *Narrative Knowing and the Human Sciences.* New York: State University of New York Press.

Ponting, Clive. 1991. *A Green History of the World.* Sinclair-Stevenson: London.

Riedke, Eva, and Richard Rottenburg. 2016. Introduction to "The Ordering Power of Narratives", edited by Eva Riedke, 5-15. *Working Paper of the Priority Program 1448 of the German Research Foundation* 21.

Roe, Emery M. 1991. "Development Narratives, Or Making the Best of Blueprint Development." *World Development* 19(4): 287-300.

Roe, Emery M. 1999. *Except Africa. Remaking Development, Rethinking Power.* New Brunswick & London: Transaction Publishers.

Roe, Emery M., Lynn Huntsinger, and Keith Labnow. 1999. "Old (Risk-Averse) Pastoralism versus New (High-Reliability) Pastoralism." In *Except Africa. Remaking Development, Rethinking Power.* New Brunswick & London: Transaction Publishers, Roe, Emery M., 57-92.

Rogers, Everett M. 1995. *Diffusion of Innovations.* Fourth Edition. New York: The Free Press.

Roitman, Janet L. 2014. *Anti-Crisis.* Durham and London: Duke University Press.

Roncoli, Carla, Keith Ingram, Christine Jost, and Paul Kirshen. 2003. "Meteorological Meanings: Farmers' Interpretations of Seasonal Rainfall in Burkina Faso." In *Weather, Climate and Culture*, edited by Sarah Strauss and Ben Orlove, 181-202. Oxford: Berg.

Roncoli, Carla, Todd Crane, and Ben Orlove. 2009. "Fielding Climate Change in Cultural Anthropology." In *Anthropology & Climate Change. From Encounters to Actions,* edited by Susan A. Crate, and Mark Nuttall. London & New York: Routledge.

Rorty, Richard. 1979. *Philosophy and the Mirror of Nature.* Princeton & Oxford: Princeton University Press.

Rosen, Miller A. 2007. *Civilizing Climate. Social Responses to Climate Change in the Ancient Near East.* Plymouth: AltaMira Press.

Rottenburg, Richard. 2009. [2002] *Far Fetched Facts. A Parable of Development Cooperation.* Translated by Allison Brown and Tom Lampert. Cambridge, MA & London: MIT Press.

Rottenburg, Richard. 2005. "Code-Switching, or Why a Metacode is Good to Have." In *Global Ideas. How Ideas, Objects, and Practices Travel in the Global Economy,* edited by Barbara Czarniawska and Guje Sevón, 259-275. Malmö: Liber.

Rudiak-Gould, Peter. 2011. "Climate Change and Anthropology. The Importance of Reception Studies." *Anthropology Today* 27(2): 9-12.

Rudiak-Gould, Peter. 2012. "Promiscuous Corroboration and Climate Change Translation: A Case Study From the Marshall Islands." *Global Environmental Change* 22 (1): 46-54. Accessed 29 January, 2016. doi:10.1016/j.gloenvcha.2011.09.011.

Rudiak-Gould, Peter. 2013a. ""We Have Seen It with Our Own Eyes": Why We Disagree About Climate Change Visibility"." *Weather, Climate, and Society* 5: 120-132.

Rudiak-Gould, Peter. 2013b. *Climate Change and Tradition in a Small Island State. The Rising Tide.* New York & London: Routledge.

Rudiak-Gould, Peter. 2014a. "The Influence of Science Communication on Indigenous Climate Change Perception: Theoretical and Practical Implications." *Human Ecology* 42(1): 75-86.

Rudiak-Gould, Peter. 2014b. "Climate Change and Accusation: Global Warming and Local Blame in a Small Island State." *Current Anthropology* 55(4): 365-386.

Sachedina, Hassanali. 2008. *Wildlife is Our Oil: Conservation, Livelihoods and NGOs in the Tarangire Ecosystem, Tanzania.* Ph.D. dissertation. Oxford: University of Oxford.

Sachedina, Hassanali, and Fred Nelson. 2012. "The Development of Payments for Ecosystem Services as a Community-Based Conservation Strategy in East Africa." In *Integrating Ecology and*

Poverty Reduction. The Application of Ecology in Development Solutions, edited by Fabrice DeClerck, Jane C. Ingram, and Cristina R. del Rio, 149-172. New York: Springer.

Sachedina, Hassanali and Pippa C. Trench. 2009. "Cattle and Crops, Tourism and Tanzanite: Poverty, Land-Use Change and Conservation in Simanjiro District, Tanzania." *In Staying Maasai? Livelihoods, Conservation and Development in East African Rangelands*, edited by Katherine Homewood, Patti Kristjanson, Pippa Chenevix Trench, 263-298.

Said, Edward W. 1983. "Traveling Theory." In *The Text, the World, and the Critic,* by Edward W. Said, 226-247. Cambridge MA: Harvard University Press.

Saitoti, Tepilit Ole. 1986. *The Worlds of a Maasai Warrior: An Autobiography*. Berkely and Los Angeles: University of California Press.

Sanders, Todd. 2004. "(En)Gendering the Weather: Rainmaking and Reproduction in Tanzania." In *Weather, Climate, Culture,* edited by Sarah Strauss and Benjamin S. Orlove, 83-102. New York: Berg Publishers.

Schipper, E. Lisa F. 2009. "Conceptual History of Adaptation in the UNFCCC Process." In *The Earthscan Reader on Adaptation to Climate Change,* edited by E. Lisa F. Schipper, and Ian Burton, 359- 376. London: Earthscan.

Schipper, E. Lisa F., and Ian Burton. 2009. "Understanding Adaptation: Origins, Concepts, Practice and Policy." In *The Earthscan Reader on Adaptation to Climate Change,* edited by E. Lisa F. Schipper, and Ian Burton, 1- 8. London: Earthscan.

Schlee, Günther. 2010. "Epilogue: How Do Paradigm Shifts Work in Anthropology? On the Relationship of Theory and Experience." In *Beyond Writing Culture: Current Intersections of Epistemologies and Representational Practices,* edited by Olaf Zenker and Karsten Kumoll, 211-227. New York & Oxford: Berghahn Books.

Scoones, Ian, and O., Graham. 1994. "New directions for pastoral developments in Africa." *Development in Practice* 4(3): 188-198.

Scoones, Ian. 1995. "New Directions in Pastoral Development in Africa." In *Living with Uncertainty: New Directions in Pastoral Development in Africa,* edited by Ian Scoones, 1-36. London: Intermediate Technology Publications.

Scoones, Ian. 2009. "Climate Change and the Challenge of Non-equilibrium Thinking." *IDS Bulletin* 35(3): 114-119.

Seagle, Caroline. 2012. "Inverting the Impacts: Mining, Conservation and Sustainability Claims Near the Rio Tinto/ QMM Ilmenite Mine in Southeast Madagascar." *The Journal of Peasant Studies* 39(2): 447-477.

Sheridan, Michael J. 2012. "Global Warming and Global War: Tanzanian Farmers' Discourse on Climate and Political Disorder." *Journal of Eastern African Studies* 6(2): 230-245.

Shivji, Issa G. 1998. *Not Yet Democracy: Reforming Land Tenure in Tanzania.* IIED & HAKIARDHI & The University of Dar es Salaam.

Smucker, Thomas, A., Ben Wisner, Adolfo Mascarenhas, Pantaleo Munishi, Elizabeth E. Wangui, Gaurav Sinha, Daniel Weiner, Charles Bwenge, Eric Lovell. 2015. "Differentiated Livelihoods, Local Institutions, and the Adaptation Imperative: Assessing Climate Change Adaptation Policy in Tanzania". *Geoforum* 59: 39–50.

Spear, Thomas. 1993a. "Introduction". In Spear, T. & R. Waller (eds.) *Being Maasai.* London: James Currey.

Spear, Thomas. 1993b. "Being 'Maasai', but not 'People of Cattle': Arusha Agricultural Maasai in the Nineteenth Century". In *Being Maasai,* edited by Thomas Spear, and Richard Waller, 120-136. London: James Currey.

Spear, Thomas, and Richard Waller. 1993. *Being Maasai.* London: James Currey.

Spencer, Paul. 1993. "Becoming Maasai, Being in Time." In *Being Maasai,* edited by Thomas Spear & Richard Waller, 140-156. London: James Currey.

Spencer, Paul. 2003. *Time, Space and the Unkown. Maasai Configurations of Power and Providence.* London & New York: Routledge.

Spivak, Gayatri C. 1988. "Can the Subaltern Speak?" In *Marxism and the Interpretation of Culture,* edited by C. Nelson & L. Grossberg, 271-313. Urbana & Chicago: University of Illinois.

Stott, Philip A., and Sian Sullivan. 2000. *Political Ecology: Science, Myth and Power.* London: Arnold.

Strathern, Marilyn. 2006. "Knowledge on ist Travels: Dispersal and Divergence in the Makeup of Communities." *Interdisciplinary Science Reviews* 31(2): 149-162.

Strauss, Sarah, and Ben Orlove. 2003. *Weather, Climate, Culture.* Oxford: Berg.

Sullivan, Sian. 2002. "On Non-Equilibrium in Arid and Semi-arid Grazing Systems." A Critical Comment on A. Illius and T. G. O'Connor. 1999. "On The Relevance of Non-Equilibrium Concepts to Arid and Semi-Arid Grazing Systems". *Ecological Applications* 9: 798–813. *Journal of Biogeography* 29: 1595–1618.

Swyngedouw, Erik. 2010. "Apocalypse Forever? Post-Political Populism and the Spectre of Climate Change." *Theory, Culture & Society* 27(2-3): 213-232.

Szerszynski, Bronislaw, and John Urry. 2010. "Changing Climates: Introduction." *Theory, Culture & Society* 27(2-3): 1-8.

Tainter, Joseph A. 1988. *The Collapse of Complex Societies.* Cambridge: Cambridge University Press.

Tanzania Natural Resources Forum (TNRF). 2011. "Integrating Pastoralist Livelihoods and Wildlife Conservation? Options for Land Use and Conflict Resolution in Loliondo Division, Ngorongoro District." Technical review, supported by Maliasili Initiatives.

Tanzania Natural Resources Forum (TNRF)/ IIED. 2012a. "Mainstreaming Climate Change Adaptation in Dry Lands Development Planning in Tanzania. Monduli Learning Group Workshop Report", 21-22 February 2012. Mto Wa Mbu.

Tanzania Natural Resources Forum (TNRF)/ IIED. 2012b. "Training Workshop: The Implications of Climate Variability and Change on District Planning in Northern Tanzania. Summary of Training Materials". Monduli, 2 – 4 April, 2012.

Taylor, Charles. *A Secular Age.* 2007. Cambridge MA, and London: The Belknap Press of Harvard University Press.

Thornton, Thomas F., and Nadia Manasfi. 2010. "Adaptation – Genuine and Spurious: Demystifying Adaptation Processes in Relation to Climate Change." *Environment and Society* 1(1): 132-155.

Tsing, Anna L. 2005. *Friction: An Ethnography of Global Connection.* Princeton: Princeton University Press.

TUKI, English – Swahili Dictionary. Kamusi ya Kiingereza –Kiswahili Toleo La Tatu. 2006. Third edition. Dar es Salaam: Institute of Kiswahili Research.

United Republic of Tanzania. (URT). 1999. The Village Land Act.

United Republic of Tanzania. (URT). 2007. National Adaptation Program of Action (NAPA for the UNFCCC).

United Republic of Tanzania. (URT). 2011. National Climate Change Strategy and Action Plan. Draft October 2011.

United Republic of Tanzania. (URT). 2012. National Climate Change Strategy and Action Plan. Final Report.

Van Beek, Walter E.A. 1999. "Het Einde van het Klimaat." In *Een Klimaat voor Verandering. Tien Essays over Klimaat en Klimaatbeleid,* edited by M. Kok & W. de Groot, 171-191; 214-217. NOP: Van Arkel.

Van Beek, Walter E.A. 2000. "Echoes of the End. Myth, Ritual and Degradation." *Focaal* 35, 29-51.

Van Velsen, Jaap. 1967. "The Extended-Case Method and Situational Analysis." In *The Craft of Social Anthropology,* edited by A.L. Epstein, 129-149. London: Tavistock.

Vetter, Susi. 2005. "Rangelands at Equilibrium and Non-Equilibrium: Recent Developments in the Debate." *Journal of Arid Environments* 62: 321–341.

Viehöver, Willy. 2010. "Governing the Planetary Greenhouse in Spite of Scientific Uncertainty." *Science, Technology & Innovation Studies* 6(2): 127-154.

Vigh, Henrik. 2008. "Crisis and Chronicity: Anthropological Perspectives on Continuous Conflict and Decline." *Ethnos: Journal of Anthropology* 73(1): 5-24.

Weisser, Florian. 2014. "Practices, Politics, Performativities: Documents in the International Negotiations on Climate Change." *Political Geography* 40: 46-55.

Weisser, Florian, Michael Bollig, Martin Doevenspeck, and Detlef Müller-Mahn. 2014. "Translating the 'Adaptation to Climate Change' Paradigm – The Politics of a Travelling Idea in Africa." *The Geographical Journal* 180(2): 111–119.

West, Paige, and Dan Brockington. 2012. "Introduction: Capitalism and the Environment." *Environment and Society: Advances in Research* 3: 1-3.

Wisner, Ben, Adolfo Mascarenhas, Charles Bwenge, Tom Smucker, Edna Wargui, Dan Weiner, and Pantaleo Munishi. 2012. "Let Them Eat (Maize) Cake: Climate Change Discourse, Misinformation and Land Grabbing in Tanzania." *Paper presented at the International Conference on Global Land Grabbing II*, New York, October 17–19.

Wisner, Ben, Piers Blaikie, Terry Cannon, Ian Davis. 2004. *At risk. Natural Hazards, People's Vulnerability and Disasters.* London and New York: Routledge.

World Resources Institute (WRI). 2010-2011. "World Resources. Decision Making in A Changing Climate. Adaptation Challenges and Choices." UNDP, UNEP, World Bank, World Resources Institute.

Yanda, Pius, and Chipo Mubaya P. 2011. *Managing a Changing Climate in Africa.* Dar es Salaam: Mkuki na Nyota Publishers Ltd.

Yatsuka, Haruna. 2015. "Reconsidering the "Indigenous Peoples" in the African Context from the Perspective of Current Livelihood and its Historical Changes: The Case of the Sandawe and the Hadza in Tanzania." *African Study Monographs* 36(1): 27-47.