Digging deeper for benefits: rural local governance and the livelihood and sustainability outcomes of devil’s claw (Harpagophytum spp.) harvesting in the Zambezi Region, Namibia

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DECLARATION

I, Jessica-Jane Lavelle declare that

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is my own work in concept and execution, that it has not been submitted for any degree or examination in any other university and that all sources I have used or quoted have been indicated and acknowledged by complete references.

Signed: … [Signature]  Signed by candidate

Supervisor: Professor Rachel Wynberg (University of Cape Town, South Africa)
ABSTRACT

Natural resource governance in Africa is characterised by increased commercialisation of natural resources, the promotion of community-based natural resource management, and a re-appropriation of traditional authorities and customary law as evidenced by their inclusion in statutory frameworks. Yet, knowledge of the interaction and effect of these multiple governance arrangements on local communities is limited. Using the lens of devil’s claw (*Harpagophytum* spp.), a commercial non-timber forest product, this research examines the interface between statutory, traditional and co-management governance systems; the broader historical and political-economic contexts that shape governance systems; livelihood and sustainability outcomes at the local level; and the role of power in determining environmental, social and economic outcomes.

The research adopted a case study method with three study sites selected in the Zambezi Region, Namibia – Balyerwa Conservancy, Lubuta Community Forest and Sachinga. All rural communal areas, selection was based on their distinct governance arrangements, including a range of traditional and co-management institutions, development interventions and statutory regulation. Qualitative methods were used and included questionnaires, focus group discussions, interviews, participant observation and documentary evidence. An institutional mode of analysis and a political ecology approach were applied. Theoretical perspectives to inform the research were drawn from discourses on governance, institutions, political ecology, power and access. The novelty in using a political ecology approach to develop adaptive governance theory was to move beyond understandings of the conscious mechanisms of institutions embodied in their structure, to a more nuanced understanding of socially-embedded institutions and the unconscious mechanisms that also determine social and environmental outcomes. The empirical knowledge gained from this research shows that both structural and socially-embedded institutional constraints are hindering the objectives of non-timber forest product governance.

The results of this research affirm that governance is hybridising and that dichotomised descriptions of governance as customary or statutory, self-organising or hierarchical, do not capture the complexity of these evolving fusions of governance at the local level. Where a multiplicity of institutions existed at the local level, the role of the State was diminished and where co-management was in place, communities benefited from non-governmental organisation support which enabled greater benefits for harvesters and more sustainable practices. However, power was not restructured under such arrangements and differentials in access, knowledge, decision-making and benefits remained. Where co-management was not in place, harvesters were not supported in their harvesting activities and
were most vulnerable to exploitation by traditional leaders and buyers. This exacerbated competition over the resource and unsustainable harvesting was more prevalent.

Devil’s claw was used as a traditional medicine by some members of these communities but did not hold significant socio-cultural value. Customary systems of management for devil’s claw were therefore weak or absent and oversight of the resource was perceived to be the jurisdiction of the State. Statutory regulation of devil’s claw was however found to be ineffective; when in place, the State perceived the co-management institutions to be responsible for monitoring and evaluation. The implementation of quotas, traceability and better pricing from exporters exerted a greater influence than regulation in promoting sustainability. In the absence of non-governmental support and exporters adhering to quotas, unsustainable harvesting prevailed. A central finding is that alteration, the bending or breaking of rules by local communities, is a strategy to cope with economic precariousness that is inflicted by broader political-economic conditions. This affirms the need for an alternative economic logic to be examined that incorporates non-timber forest products into diverse agroforestry production systems that stimulate markets within rather than external to localities and draws on existing cultural practices and preferences to shape landscapes and economies in more holistic, equitable ways.

The research concludes that benefits for harvesters and the sustainability of devil’s claw are currently hindered by institutional complexity, overlapping mandates, insufficient value of the resource at the local level and a failure to instil harvester autonomy. To address these structural and socially-embedded institutional constraints several recommendations are made. First, to shift co-management from decentralisation to bottom-up democratisation by devolving authority, not just responsibility, to the resource users themselves. By enabling the freedom to experiment, socially-embedded institutional constraints such as dominant narratives of ‘traditional’ and ‘uneducated’ that perpetuate unproductivity and disincentivise learning can be reframed. Second, to remove unnecessary and inefficient bureaucratic layers through re-evaluating the social scale at which natural resource management would work best and scale-up in responsibility as required to match ecological and functional scale. This would diffuse the decision-making power of the traditional authorities and the ineffectiveness of the State in communal areas whilst maintaining a role for these institutions. Lastly, to enhance market transparency to promote the mutually beneficial and regulating role between harvesters and exporters, and to emphasise the commercialisation of non-timber forest products with socio-cultural value, robust customary systems of management and local markets. The objective is not to eliminate statutory governance in favour of customary governance, nor to denounce traditional authorities in favour of co-management institutions, but to democratise power in brokering new invited spaces of modern rural governance. This study contributes to governance
theory by conceptualising a framework that addresses the structural and socially-embedded institutional constraints hindering adaptive governance of NTFPs and which offers an operational solution to balance power in a bottom-up process of democratisation where legal pluralism is prevalent.
ACKNOWLEDGEMENTS

The journey to this PhD started nearly ten years ago when I was first introduced to the communal areas of Namibia. I was awestruck by the magnificence of the landscapes and the warmth of the people and fell deeply in love. I could not get enough. Heat, dust, extraordinary stars, cultural complexity, Nguni cattle, the Kwando River, the Kavango River, unimaginable vastness, mopane trees, Zambezi teak, beautiful baskets, grunts of hippos, herds of elephants, endless nights camping, fires and the distant roar of lions. It seemed so romantic and idyllic but as I worked among the diverse communities of the Kunene and Zambezi Regions, I realised my naivety, how little I understood and how much there was to learn. And so, the questions arose…

This PhD was inspired and made possible by the contributions of many people in Namibia and I thank you all. A heartfelt thank you goes especially to the communities of Balyerwa Conservancy, Lubuta Community Forest and Sachinga – to all the participants who willingly gave of their time and shared their experiences and knowledge. I have been deeply humbled and am truly grateful for all you have taught me. I would like to particularly thank Miriam Chahuli and Beauty Manyando from Balyerwa Conservancy; Bester Mtulumuke, Innox Tembwe, Orbet Makumbi and Precious Ntirimuke from Lubuta Community Forest; and Gediaus Mukuchila from Sachinga, for tirelessly helping me find participants, translating hundreds of questions, and providing unique insight into your communities. Without you I would have been lost.

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Field work comes with many challenges, especially car trouble in this case, but there are special individuals who keep you going. When I was hot and tired and the field work was not going well, Nadja le Roux was always there to welcome me with a smile, incredible food and a cold Savanna. Thank you Nadja for all the laughs and crazy times we shared in the Zambezi. Le Roux van Schalkwyk, thank you for making an excellent field assistant and for your superb photographs. I have fond memories of starting the field work on my birthday, our nights around the fire in Mudumu National Park and your
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This PhD would not have been possible without the encouragement and support of my incredible family and friends. I thank each of you wholeheartedly for the many ways you have shown your special love and deep care for me through these years. To my husband, Tim Curtis, thank you for enduring this PhD journey with me. I am so very grateful for all the cups of coffee, avo toast, housework and most importantly, your emotional support when I lost confidence in myself. Now to some adventures!

Finally, I dedicate this thesis to my father, Brian Lavelle, who loved knowledge, was my greatest supporter in my academic journey and was so excited for me to embark on this journey. Yet, despite his own brave fight did not live to see the completion of this thesis.
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# ACRONYMS

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<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>ABS</td>
<td>Access and benefit-sharing</td>
</tr>
<tr>
<td>CAMPFIRE</td>
<td>Communal Areas Management Programme for Indigenous Resources</td>
</tr>
<tr>
<td>CBNRM</td>
<td>Community-based natural resource management</td>
</tr>
<tr>
<td>CFN</td>
<td>Community Forestry Namibia</td>
</tr>
<tr>
<td>CITES</td>
<td>Convention on International Trade in Endangered Species of Wild Fauna and Flora</td>
</tr>
<tr>
<td>CPR</td>
<td>Common pool resource</td>
</tr>
<tr>
<td>CRIA SA-DC</td>
<td>Centre for Research Information in Africa, Southern Africa Development and Consulting</td>
</tr>
<tr>
<td>DCWG</td>
<td>Devil’s Claw Working Group</td>
</tr>
<tr>
<td>DoF</td>
<td>Directorate of Forestry</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>GIZ</td>
<td>Deutsche Gesellschaft für Internationale Zusammenarbeit</td>
</tr>
<tr>
<td>INP</td>
<td>Indigenous Natural Product</td>
</tr>
<tr>
<td>IPTT</td>
<td>Indigenous Plant Task Team</td>
</tr>
<tr>
<td>IRDNC</td>
<td>Integrated Rural Development and Nature Conservation</td>
</tr>
<tr>
<td>KFW</td>
<td>German Development Bank</td>
</tr>
<tr>
<td>MAWF</td>
<td>Ministry of Agriculture, Water and Forestry</td>
</tr>
<tr>
<td>MCA-N</td>
<td>Millennium Challenge Account-Namibia</td>
</tr>
<tr>
<td>MET</td>
<td>Ministry of Environment and Tourism</td>
</tr>
<tr>
<td>NACSO</td>
<td>Namibian Association of Community-Based Natural Resource Management Support Organisations</td>
</tr>
<tr>
<td>NBRI</td>
<td>National Botanical Research Institute</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-governmental organisation</td>
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<tr>
<td>NTFP</td>
<td>Non-timber forest product</td>
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<tr>
<td>PPO</td>
<td>Producer and Processor Organisation</td>
</tr>
<tr>
<td>SHDC</td>
<td>Sustainably Harvested Devil’s Claw</td>
</tr>
<tr>
<td>UCT</td>
<td>University of Cape Town</td>
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<tr>
<td>US</td>
<td>United States</td>
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<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
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<tr>
<td>WWF</td>
<td>World Wide Fund for Nature</td>
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1. INTRODUCTION

1.1 Introduction

Governance has been in existence in society since time immemorial (Weiss 2000) yet has only recently become central in debates around the sustainable and equitable use of natural resources (Kooiman 2003; Sowman & Wynberg 2014; Wiersum et al. 2014). In this study, governance in and of modern societies is understood by the perspective of Kooiman (2003:3) as, “a mix of all kinds of governing efforts by all manner of social-political actors, public as well as private; occurring between them at different levels, in different governance modes and orders”. In many rural areas customary systems of rules and practices are the dominant systems of governance (Laird et al. 2010a). However, with the involvement of international organisations, non-governmental organisations (NGOs), the State and the market, governance has become a heady cocktail of multifarious interactions and institutions which result in varying modes at multiple scales (Kooiman 2003). Governance is further complicated by the very nature of social-ecological systems as complex, dynamic and unpredictable (Berkes & Folke 1998).

Recent decades have brought a paradigm shift in natural resource management away from the State and towards an interaction between the various actors who access and use resources, and an interplay between statutory and customary systems. This shift aims to increase resource user participation in decision-making processes through the decentralisation and democratisation of management authority to local institutions, customary or otherwise, to improve sustainability outcomes (Shackleton & Campbell 2001). It has been spurred by a loss of credibility of the State-centric approach in which natural resources are considered as public goods to be managed, regulated and controlled by government bureaucracies (Agrawal et al. 2008; Wiersum et al. 2014). In southern Africa, both decentralisation of natural resource management and a re-appropriation of traditional authorities as the custodians and enforcers of customary law and governors of rural communities is observed (Nuesiri 2014). Many African states are incorporating the inherited traditional structures of governance within the structures of modernity as expressed in their constitutions (Hinz 2008; Nuesiri 2014). With trends towards the decentralisation and democratisation of natural resource management, alongside the re-appropriation of traditional governance, governance arrangements are changing with resulting effects on access to land and natural resources, and benefits for resource users. This renders governance systems complex, context specific and constantly changing (Ros-Tonen & Kusters 2011).
To address this, adaptive governance has emerged as the need to foster governance arrangements that are resilient to change and uncertainty and can deal with complexity (Dietz et al. 2003; Folke et al. 2005). Multiple cross-scalar institutions that are flexible and adaptive; networks of actors that promote collaboration, social learning, feedback and change; and rights and responsibilities that are jointly shared between numerous actors at multiple scales have been suggested to achieve this (Folke et al. 2005; Berkes 2007; Nunan 2010; Armitage et al. 2011). However, the theoretical ideal of adaptive governance has been difficult to actualise and it remains uncertain as to whether adaptive governance can become institutionalised under current political and legal contexts (Chaffin et al. 2014). The approach has been criticised for insufficiently understanding the political ecology landscape in which adaptive governance systems operate and the role of power relations and human agency (Nadasdy 2007; Nunan 2010; Wilson 2018). Market forces also dictate how natural resources are used (Treib et al. 2007) as do customary practices and laws (Laird et al. 2010a; Sowman & Wynberg 2014).

Non-timber forest products (NTFPs) have experienced a rapid increase in consumer demand over the last two decades with the advent of NTFP commercialisation as a ‘strategy’ for poverty alleviation and conservation (Booker et al. 2015). As a result, these products have stimulated income opportunities for the rural communities harvesting the raw product (Neumann & Hirsch 2000; Kusters et al. 2006). NTFPs also have substantial subsistence, cultural and spiritual value for many communities (Belcher et al. 2005; Cocks et al. 2011). NTFPs, as defined by De Beer and McDermott (1989:17), include, “all biological materials other than timber which are extracted from forests for human use”. In line with this definition most researchers include floral products such as grasses, roots, flowers, fruits and bamboo, as well as faunal products such as fish, birds, insects or game which people use for a variety of purposes (Shackleton et al. 2011). For this research game, fish and insects have been excluded owing to their mobility which does not tie them to a specific geographic location. The term ‘forest’ is defined as a land area of more than 0.5 ha, with a tree canopy cover of more than 10%, which is not primarily under agricultural or other specific non-forest land use (FRA 2015).

The governance of NTFPs is receiving increasing attention as attaining poverty alleviation and ecological sustainability objectives remain elusive. Despite the numerous communities who are largely dependent on the sale of NTFPs, these primary producers are often among the poorest in the world and are typically exploited in trade (Neumann & Hirsch 2000). In addition, concerns about environmental sustainability have increased with consumers, predominantly in the global North, wanting surety that products are sustainable and ethical. This has resulted in increasing formalisation of the trade to promote environmental sustainability and equity for producers but also to generate revenues for the State (Schumann et al. 2010; Wynberg et al. 2015). As such, NTFPs face increased regulation by the State and certification schemes have gained popularity, yet it remains that these
measures have had little impact on benefits or sustainability. On the contrary, regulatory regimes have been found to often discourage sustainability and equity (Laird et al. 2010a).

In southern Africa, many NTFPs are managed *de facto* by customary systems that operate in parallel but largely subservient to and in conflict with statutory laws (Okoth-Ogendo 2008; Claassens 2011). That is, legal pluralism, where customary and statutory systems of law coexist in the same social field (Griffiths 1986), is widespread. These customary systems differ widely across the region with varying strength depending on the plants in question, levels of disruption by colonial and post-colonial regimes, and influence of the market. The role and authority of traditional leaders, which in southern Africa is proposed to be on the rise (Nuesiri 2014), also influences these systems. The legitimacy of these traditional leaders is partly attributed to the co-option of the traditional authorities by the colonial and apartheid administrations, and their inclusion in post-colonial governance structures (Mamdani 1996). Here, ‘traditional leader’ refers to traditional authorities and their associated headmen recognised by the State as the custodians of customary law.

In addition to traditional governance, co-management as an approach to adaptive governance has become popular in decentralisation efforts whereby natural resource management and utilisation is jointly undertaken by the State and community-based institutions such as forest and wildlife management committees devised for implementation (Jones 1998). Of particular significance in the southern African context is the Namibian conservancy and community forest programme studied in this research, and the Communal Areas Management Programme For Indigenous Resources (CAMPFIRE) in Zimbabwe under which ‘appropriate authority’ of wildlife management is devolved to local communities at the sub-district level who incur the cost of management (Murombedzi 1991). Development and conservation interventions by NGOs have emphasised ‘participatory’ practices to engage communities in projects, community monitoring and sustainable management of resources with a focus on ‘conservation by commercialisation’ of wildlife and NTFPs (Nepstad & Schwartzman 1992; Belcher & Schreckenberg 2007). The result is a messy concoction of multiple institutions, with legal pluralism governing natural resources.

The end of the century saw a shift away from the dominance of mainstream Western science and conservation ideologies to an acknowledgement and search for understanding customary systems of governance for natural resources. Within Kooiman’s (2003) conceptualisation of governance, modes describe structural levels of governance and include hierarchical governance, self-governance and co-governance, with all societies being governed through varying combinations of these modes. Hierarchical governance refers to statutory systems with top-down intervention, self-governance to customary or self-organising systems independent of the State, and co-governance a collaboration
between State and non-State systems (Kooiman & Jentoft 2009). Similarly, in assessing governance of NTFPs Wiersum et al. (2014) found that dual systems of self- and hierarchical governance are hybridising to co-governance arrangements. Swyngedouw (2005) argues that while these new governance spaces may promote greater engagement from non-State actors, they may also provide scope for powerful political and economic actors to impose their agendas with the resulting governance processes questionable in ‘democratic content’. Sunderlin et al. (2005:1388) articulate that, “forest-dependent people who live in or near forests tend to be politically weak or powerless”. Similarly, Ball and Brancalion (2016), in their assessment of jucara pulp, attributed governance challenges to a function of poor access, or the ‘bundle of powers’ that enable the ability to benefit (Ribot & Peluso 2003). Various scholars have pointed to the failure of the governance discourse to adequately address the complex histories of domination and power relations, as well as the broader international political-economic drivers within which interventions take place (Swyngedouw 2005; Gaventa 2006; Torfing et al. 2012). The adaptive governance discourse is especially criticised for having evolved into a set of normative principles for ‘good governance’ that drive development and conservation interventions (World Bank 1989) rather than being committed to understanding the contextual details and processes that drive governance (Mwangi & Wardell 2012; Cleaver & Whaley 2018).

It follows that greater understanding of governance arrangements and processes is required if the objectives of social justice and environmental sustainability are to be achieved (Wynberg & Van Niekerk 2014). Given the interplay of the State, the market and local systems on NTFP governance it has been suggested a political ecology perspective should be incorporated into analyses (Ros-Tonen 2012). A research gap has thus emerged in the NTFP literature around using a political ecology approach to understand how local governance arrangements and processes work, and the causal power relations and conditions that drive livelihood and sustainability outcomes. Drawing on empirical research from a case study of devil’s claw in the Zambezi Region of Namibia, this study aims to undertake an institutional analysis that examines the interface between statutory, traditional and co-management governance systems at the local level. It seeks to explore how local governance is shaped by the broader historical and political-economic contexts, and the interplay of institutions and power in determining local governance outcomes. The intention is to use this understanding to develop a conceptual framework that addresses the structural and socially-embedded institutional constraints hindering adaptive governance of NTFPs and which offers an operational solution to balance power in a bottom-up process of democratisation where legal pluralism is prevalent.
1.2 Devil’s claw as a case study

Devil’s claw (*Harpagophytum* spp.) is one amongst many ‘natural’ products that have experienced a rapid increase in consumer demand over the last two decades. It is a NTFP harvested in southern Africa for export to Europe and the United States (US) where it is processed and sold as a natural medicine to treat arthritis and tendonitis (McGregor *et al.* 2005; Stewart & Cole 2005). At least 9 000 rural people in Botswana, Namibia and to a lesser extent, South Africa, rely on devil’s claw harvesting, often as their only source of income, with an estimated 5 000 to 10 000 harvesters in Namibia (Wynberg 2004; NRI 2011a). Namibia is the primary exporter and following a peak in 2002 at 900 tonnes, exports from Namibia have varied annually ranging from 300 to 700 tonnes (Export data, Ministry of Environment & Tourism Namibia, 2015). The final product on the international market retails at US$300 to US$700 per kilogram with annual global retail sales worth an estimated US$42 million (Wynberg 2004; NRI 2011a, 2014). In Namibia, approximately US$1.5 million (3.6%) is captured in foreign exchange earnings by exporters and middlemen. Five or less exporters currently handle 80-90% of the export volumes (NRI 2011a). Local harvesters earn no more than 1.5% of the trade with earnings of US$0.50 to US$3.00 per kilogram of raw product (Wynberg 2004; NRI 2011a, 2014).

First commercialised in the 1950s, devil’s claw is formally regulated by the State as a protected plant owing to its economic value. Customary systems for its management are not recognised, although permit applications require the approval of the relevant traditional authority in communal areas. A ‘communal area’ refers to communal land vested with the State with allocation of customary land rights by the traditional authorities and Communal Land Boards. Traditional authorities are legally recognised by the State as the governors of land and communities in communal areas, all of which are rural. At the same time, Namibia has an extensive co-management programme that grants rural communities conditional rights to manage and utilise wildlife and plants for economic benefit. These rights are implemented through State permitting systems which allocate tourism concessions and quotas of wildlife and timber for commercial sale by the communities, who then retain the income generated. Recently commercial harvesting of devil’s claw has been widely expanded to these formal co-management areas – conservancies and community forests – as a development intervention funded by a major international donor. The range of governance arrangements in which the harvesting of devil’s claw is situated presents a complex and valuable case study from which to deepen understanding of governance challenges. While the last major studies of devil’s claw in Namibia focused on population dynamics, the value chain and sustainable trade (Wynberg 2004; Stewart & Cole 2005; Wynberg 2006; Strohbach & Cole 2007), no in-depth studies have been undertaken.

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1 Export data from 2016 onwards was not available from the Ministry of Environment and Tourism, Namibia.
examining governance of devil’s claw. For the purpose of this study, the asymmetry of the global value chain is assumed. Therefore, this study is not intended as a value-chain analysis but rather an interrogation of the governance arrangements and processes and whether they enhance or hinder the ability of rural communities to develop power from the bottom up through which empowerment would enable structural change to the global value chain.

A similar high-value, medicinal NTFP traded in the international market and with a complex governance arrangement is the bark of *Prunus africana*. It is one of most highly regulated forest products in Cameroon, both formally by national laws and international conventions, customarily and by project-based arrangements. A complex regulatory framework, limited organisation and capacity of the government, open-access tenure, and a breakdown in customary control led to widespread overharvesting in the 2000s (Ingram 2014). Collective action assisted by projects, including state legitimated community forests, had a positive impact on governance arrangements but continued overharvesting resulted in a CITES suspension of exports in 2007 until sufficient inventories and management plans were instituted. Only with intervention by international agencies to develop the necessary management plan was Cameroon allowed to resume trade in 2012 with strict quota control (Ingram 2014). Like devil’s claw, *Prunus africana* exports fall into a grey area of access and benefit-sharing agreements as only components of the bark extract are prospected, not the gene directly (Ingram 2014). In southern Africa, Wynberg and Laird (2007) examined the interface between statutory and customary governance of marula (*Sclerocarya birrea*) in Namibia and South Africa. In Zimbabwe, Kozanayi et al. (2014) described the coexistence of customary and statutory systems that govern the use and management of baobab (*Adansonia digitata*). In both these studies, the role of traditional authorities and customary systems in natural resource governance in post-colonial southern Africa were emphasised. While it has been highlighted that customary systems can break down in the face of economic pressure, it remains that in some cases they are resilient. On the contrary, these three cases all highlight the failure of statutory regulatory frameworks for the sustainable management of commercial NTFPs. Nonetheless, the State remains the central locus for the conferment of rights and the main representative of harvester interests in multilateral conventions and agreements as observed with CITES in Cameroon. Therefore, examining how local institutions can collectively form a significant political constituency of the State is critical (Murphree 2000).

1.3 Aim and objectives

In Namibia, 38% of land is designated as communal with approximately 1.1 million people or just over half the total population living in communal areas, who largely depend upon natural resources for
subsistence (Mendelsohn et al. 2012). Natural resources also generate income from commercial hunting, tourism, crafts and the selling of firewood, fish, thatching grass and other NTFPs. Therefore, understanding rural governance and barriers to poverty alleviation and sustainability requires attention as it concerns a high proportion of Namibia’s land and people. Using commercial harvesting of devil’s claw as a lens, the research seeks to examine the local governance arrangements, processes, and livelihood and sustainability outcomes, given the interplay of statutory, traditional and co-management governance systems. By situating local governance in the broader historical and political-economic contexts, existing differentials in power can be identified and traced thereby providing insight on socially-embedded constraints and structural changes that are required to address access to resources.

To achieve this aim the research has the following objectives:

i. To identify and characterise the various local governance arrangements for devil’s claw harvesting;

ii. To examine the institutional processes within these governance arrangements that shape governance outcomes;

iii. To determine linkages between those processes and imbalances in power created by the broader historical and political-economic contexts;

iv. To evaluate outcomes for livelihoods and sustainability;

v. To develop a conceptual framework that addresses the structural and socially-embedded institutional constraints hindering adaptive governance of NTFPs and which offers an operational solution to balance power in a bottom-up process of democratisation where legal pluralism is prevalent.

1.4 Rationale for the research

The study aims to contribute to understandings of ongoing challenges faced in the governance of NTFPs despite interventions aimed at greater equity. It also contributes to debates about the governance discourse; the inadequate attention given to power (Nadasdy 2007; Nunan 2010; Wilson 2018); and the question as to whether effective governance can become institutionalised under current political and economic contexts (Chaffin et al. 2014).

The governance of NTFPs has more recently emerged as a theme in the literature although an elaborated analytical framework is still undefined (Laird et al. 2010a; Wynberg & Van Niekerk 2014) and most research has focused on high-level governance, governance processes between the State and local communities, benefit-sharing agreements and value chains (Marshall et al. 2006; Wynberg
& Laird 2007; Ingram 2014; Wynberg & Van Niekerk 2014). Studies on the interaction of statutory and customary systems are emerging (Laird et al. 2010b; Novellino 2010; Kozanayi et al. 2014) but there is currently little understanding of their integration and the emerging power dynamics and processes. Ingram’s (2014) study on NTFP value chains in Cameroon focused on developing indicators for assessing the economic, environmental and social values of NTFPs and the influence of governance arrangements on the sustainability of the value chain. For the purpose of this research, it is assumed that while all products have value and the potential to be sustainably harvested, it is a matter of governance whether this is achieved. While useful for ascertaining the value of NTFPs and how governance of the chain affects sustainability, a value-chain analytical approach fails to investigate how those values and governance arrangements come about and what drives their change. An institutional analysis contributes to these lesser understood phenomena by unravelling the multiple institutions at play, tracing their origins and examining their change. This analysis also contributes to the growing literature and more nuanced understandings of customary and traditional governance (Mamdani 1996; Nuesiri 2014).

Communities that harvest NTFPs often lack autonomy and secure property rights and are caught up in governance arrangements over which they exert little to no influence (Laird et al. 2010a; Ball & Brancalion 2016). For benefits to be accrued that go beyond poverty mitigation to poverty alleviation, identifying the invisible and visible forces of power that inhibit benefits at the local level is paramount (Gaventa 2006; Wynberg & Hauck 2014). A local level analysis allows for the tracing of power dynamics within the community to governance processes and the broader context. In this way empirical data can be generated that contributes to debates around a normative approach to governance, the design of institutions, and the conscious and unconscious mechanisms of institutional change (North 1990; Ostrom 1990; Cleaver 2012; Chaffin et al. 2014; Cleaver & De Koning 2015). Conscious mechanisms refer to those embodied in identifiable, structured institutions and relate to rational choice, while the lesser-understood and more nuanced unconscious mechanisms refer to those socially-embedded mechanisms shaping behaviour on a sub-conscious level that can fuel irrational choice. The research also contributes to political ecology perspectives on NTFPs (Ros-Tonen 2012).

In Namibia, NTFP commercialisation is seen as a strategy for poverty alleviation and rural development. Legislation recognises traditional authorities and customary law and enables co-management of natural resources. While advances have been made in improving benefits to rural communities, these have not enabled economic transformation (Suich 2013; Riehl et al. 2015). Therefore, this research provides insight for policymakers to evaluate how social and environmental justice can be better achieved and power imbalances redressed through democratisation and spaces
of opportunity. That is, how can cross-scale institutions be better defined and articulated to assist with the operationalisation of adaptive governance on the ground.

1.5 Theoretical perspectives and approach

The theoretical perspectives and approach engaged with in the research are briefly described below. These theories are elaborated on in Chapter 2.

1.5.1 Adaptive governance

Governance has become a catchword in the social sciences with multiple definitions and understandings. Governance here refers to the view of Kooiman (2003) that encompasses all institutions, actors and the interactions that take place between them in governing natural resources. Adaptive governance is an inclusive, iterative and flexible approach to governance that is resilient to change and uncertainty. It is viewed to enable adaptive co-management which is situated in a broader governance setting (Kooiman 2003). Suggested criteria necessary for adaptive governance include representation and participation; multiple cross-scalar nested institutions; mixed institutional types; and institutional designs that promote experimentation, learning and change (Dietz et al. 2003). Therefore, adaptive governance of social-ecological systems is an end-goal whereby change and uncertainty are expected but cross-scalar participation by the resource users enables feedback and learning which in turns allows for flexibility and adaptability in response to change and uncertainty. This normative view of adaptive governance is debated (Cleaver & Whaley 2018).

The context of this study is one where hierarchical, self- and co-governance are all observed to varying degrees. The concern of this study is how these governance arrangements and processes have emerged and how they are evolving over time. Further, what are the outcomes, and do they reflect a shift towards the normative ideal of adaptive governance? If not, what institutional constraints can be identified and addressed using a political ecology approach?

Co-management

Adaptive co-management is a participatory and iterative approach to natural resource governance that emphasises the need for feedback, learning and collaboration that considers the linkages between ecosystems, people, technology, local knowledge and property rights institutions (Armitage et al. 2008). Adaptive co-management as a collaborative approach involves numerous actors operating at multiple levels to jointly and adaptively manage natural resources with shared rights and responsibilities (Berkes & Folke 1998; Armitage et al. 2008). However, there is ambivalence on the benefits versus the challenges of decentralisation reforms as well as its ability to truly promote local
participation and create lasting and equitable governance arrangements for sustainable resource management (Mwangi & Wardell 2012).

**Scale**

The concept of scale has been identified as inherent to governance and institutions, and cross-scale representation and participation as critical to adaptive governance (Folke et al. 2005; Berkes 2007; Nunan 2010; Armitage et al. 2011). Scale relates to a graduated series or order and has a relational connotation. Using Murphree’s (2000) understanding, scale refers to progressive or cumulative articulations in systemic relationships, be they jurisdictional, functional, spatial, ecological or temporal. In environmental governance, functional scale refers to who performs the functions while jurisdictional scale refers to who has authority and responsibility for those functions. Spatial scale is geographic while ecological scale considers the extent of the ecological system in which a resource is situated. Temporal scale considers short-term practice in relation to long-term ecological change as well as inter-generational equity and sustainability.

Much like ‘getting institutions right’ remains elusive, so too does scale. A major challenge for many researchers and practitioners relates to how to recognise and address cross-scale dynamics to design and implement effective governance arrangements (Cash & Moser 2000; Murphree 2000; Cash et al. 2006). Ostrom (1990) in setting out principles for institutional design referred to the need for ‘nested’ enterprises. This concept of ‘nested’ to address scale is used repeatedly in the adaptive governance, co-management and institutional literature but its operationalisation has been limited. Decentralisation through co-management is one such attempt however it is argued it masks the need for true devolution (Murombedzi 2000).

**Access**

The rules, decision-making processes, institutional arrangements and measures that govern access to resources and markets are captured in the governance concept (Wiersum et al. 2014). In this vein, natural resource governance is centrally concerned with access. Ribot and Peluso (2003) argue that access to natural resources goes beyond property rights to include a wider range of mechanisms that constrain or enable actors to benefit from resources. Access is defined by them as the *ability* — not the right — to derive benefits from natural resources. That ability is determined by means, processes and relations by which actors are enabled to gain, control and maintain access to resources. Therefore, access to natural resources is not only determined by property rights but also by ‘bundles of power’. Or as Alchian (1987:1031) says of ownership, its strength “can be defined by the extent to which the owner’s decisions to use the resource actually determines its use”.
Power

Changing governance arrangements from hierarchical and self to co-governance arrangements challenges the traditional categories of the rulers and the ruled but also obscures inequalities of resources and power. Furthermore, increasing globalisation and delocalisation challenges ideas of ‘community’ and the ‘nation-State’, reconfiguring the spatial dynamics of power (Gaventa 2006). Power occurs at multiple levels from local to global, takes on different forms as visible, invisible and hidden, and can be understood in terms of the spaces created for communities to participate, define and shape governance. A critical aspect in examining these spaces for participation is evaluating how they were created, whose interests they affect and what terms of engagement are used; these reflect political ecology’s modes of explanation.

1.5.2 Institutions and institutionalism

New institutional economics

North (1990) defines institutions as the humanly devised constraints that shape human interaction in society. Institutions can be formal or informal, and they can be created or evolve over time. Informal institutions come from socially transmitted information and are a part of the heritage that we call culture. North (1990) highlights that while formal institutions can change rapidly, for example, through a change in government, the informal constraints embodied in customs, traditions, and codes of conduct are much more impervious to deliberate policies. Institutions determine the opportunities in a society with organisations created to take advantage of those opportunities. As organisations evolve, they alter the institutions. Thus, organisations and their actors are major agents of institutional change. While rational choice underlies North’s (1990) behavioural assumptions, he does emphasise that motivation is not as simple as the wealth-maximising or utility function of neoclassical economic theory. Rather, that where the price to individuals of being able to express their own ideology, or norms, or preferences is low, they are central to the choices made; but where the price is extremely high, they will account much less for human behaviour. Institutions alter the price individuals pay and hence determine to what extent ideas, ideologies, and dogmas play a role in the choices individuals make.

Ostrom’s (1990) work on institutions was based on decades of empirical evidence of long-enduring, self-governing common pool resource (CPR) systems that relied on institutions resembling neither the State nor the market. She argued that as long as analysts and policymakers presume that individuals cannot change situations themselves, they do not ask what internal or external variables can enhance or impede the efforts of communities of individuals to deal creatively and constructively with perverse problems such as the ‘tragedy of the commons’. She suggested a set of eight design principles that
were based on her observations of institutions which she defined as, “the sets of working rules that are used to determine who is eligible to make decisions in some arena, what actions are allowed or constrained, what aggregation rules will be used, what procedures must be followed, what information must or must not be provided, and what payoffs will be assigned to individuals dependent on their actions” (Ostrom 1990:51). Key observations and recommendations were that those affected by the rules, should have the authority to negotiate the rules. Also, that monitoring should be undertaken by the resource users themselves such that the self-interest of the resource users incentivizes them to monitor each other and to report observed violations so that the rules are enforced. Again, this is a theory based on rational choice, however Ostrom (1990) does emphasise that ‘getting institutions right’ is a difficult, time-consuming, conflict-invoking process that requires reliable information about time and place variables as well as a broad repertoire of culturally acceptable rules.

Institutional bricolage

Until recently, institutional theory specific to natural resource management was largely informed by Hobbes (1651), Hardin (1968), North (1990), Ostrom (1990) and Agrawal (2001) with a focus on institutional design and structure. However, this mainstream approach has been criticised for assuming rational choice of individual action and simplifying the complexity of societal dynamics and power relations. A new body of thought has now emerged that seeks to deepen institutional understanding by examining legal pluralism, local history, power and politics (Leach et al. 1999; Mehta et al. 1999; Cleaver 2002, 2012; Cleaver & Franks 2005; Cleaver & De Koning 2015).

Institutional bricolage, the ongoing conscious and unconscious moulding of institutional arrangements in an ad-hoc manner in response to opportunities and challenges, falls within this new body of scholarship (Cleaver 2001, 2002, 2012). This concept seeks to shed light on both the conscious and unconscious choices at the local level and examines the interaction between institutions and actors and how institutions are formed and adapted by the continuous constructing, borrowing and reshaping of institutional components (Cleaver 2001, 2002, 2012; De Koning 2011, 2014). In these adaptive processes of bricolage, actors inscribe configurations of rules, traditions, norms and relationships with meaning and authority. Old arrangements evolve into new ones, but these transformations are always linked authoritatively to acceptable ways of doing things (De Koning & Cleaver 2012).

1.5.3 Political ecology as an approach

While institutional bricolage specifically examines how institutions are adapted at the local level using human agency, political ecology evaluates the roles and interactions of the State and the market on equity and environmental outcomes. It also explores the historical processes that shape contemporary
structural relations between the State, civil society and the market (Neumann 2005). By doing so, political ecology seeks to provide insight into the causal power relations and conditions that sustain inequality in human-environment interactions (Blaikie 1985; Neumann 2005). This places local institutional arrangements and processes in a wider governance framework to address the challenge of showing how power works to shape participation, access and outcomes. Political ecology was adopted as a conceptual approach in this study.

To summarise, this research uses the arguments of North (1990) and Ostrom (1990) that institutions do matter and there may exist institutional design principles that enable long-enduring, self-governing CPR systems. However, this research is predominantly aligned with Cleaver (2001, 2002, 2012) in arguing that individual choice is not always rational and there are also unconscious mechanisms at play. Further, that power should be made explicit in understanding institutional constraints which are both structural and socially-embedded if we are to advance the operationalisation of adaptive governance. New institutional economics allows for an analysis of the structural constraints while institutional bricolage offers insight into the more nuanced socially-embedded constraints at the local level. By adopting a political ecology lens, these institutional constraints can then be traced to power relations across scales to contribute to the issue of how to balance power by addressing scale.

1.6 Methods and case study sites

The research applied an institutional mode of analysis and political ecology approach using a case study method (Yin 2009; Charmaz 2014). The theoretical framework informed the selection of the case studies with criteria including: i) a resource situated in a common pool resource system; ii) the presence of legal pluralism; iii) formal co-management areas versus customary areas; and, iv) varying degrees of external institutional design for common pool resource management. Qualitative data were collected using a combination of questionnaires, focus group discussions, interviews, participant observation and documentary evidence. Data collection was informed by the need to understand the governance arrangements and processes including identifying actors and institutions with particular attention paid to agents of change, power relations, bureaucratic versus socially-embedded institutions, the tension between statutory and customary governance, the interaction of statutory, traditional and co-management institutions, and livelihood and sustainability outcomes. Data were analysed by thematic coding and the iterative development of concepts.

Three case study sites were selected in the Zambezi Region, Namibia, according to their varying governance arrangements (Table 1). Within this region, two formal co-management areas were the

\(^2\) Until 2013, known as the Caprivi Region.
focus of the study: Balyerwa Conservancy and Lubuta Community Forest, together with the Sachinga community, an unregistered area. The socio-economic context of these areas is similar as is their history under colonialism and apartheid. Ecologically, the case studies fall within the same Zambezian *Baikiaea* woodlands ecoregion defined by a hot, semi-arid climate and deep, nutrient-poor Kalahari sands that can support forest and woodland vegetation but are ill-suited to agriculture (Mendelsohn *et al.* 2002). These study sites are in communal areas that have traditional governance institutions. The Mayeyi Traditional Authority governs Balyerwa Conservancy, and the Mafwe Traditional Authority governs Lubuta Community Forest and the Sachinga community. Associated with these traditional authorities are a suite of headmen who provide the interface between the traditional authorities and their communities. These areas differ in their governance arrangements and processes for management and trade of devil’s claw, allowing for a multi-faceted analysis of institutional dynamics, power relations and outcomes at the local level.

Devil’s claw is used by some members of the three communities as a traditional medicine but is not sold within localities.

Balyerwa (223 km²) was registered as a conservancy in October 2006 with approximately 1 069 members from the WaYeyi (Yei, Yeyi, Mayeyi or Bayeyi) ethnic community and presided over by the Mayeyi Traditional Authority. Throughout this thesis WaYeyi refers to the ethnic community, SiYeyi to the language spoken and Mayeyi to the traditional authority. Current conservancy enterprises include a joint-venture lodge, hunting, crafts and devil’s claw harvesting. In 2014, returns from tourism were N$40 500 (US$3 115), returns from crafts and devil’s claw were N$13 470 (US$1 036), and from hunting N$1 665 010 (US$128 078) (NACSO 2015). Devil’s claw harvesting, initiated in 2011, is the only direct cash-in-hand enterprise facilitated by the conservancy. In 2016, 82 harvesters earned N$77 849 (US$5 988) from 2 668 kg (Tjiteere 2017). Balyerwa’s management structure includes a management committee, an executive committee and staff. The management committee is the decision-making authority while the executive committee and staff undertake the operational activities. The conservancy is also a member of the Mudumu South Complex, a co-management forum including four conservancies and Mudumu and Nkasa Rupara National Parks (Figure 1).

Lubuta Community Forest (190 km²) was gazetted in May 2006. While it has its own constituted management committee, it falls partly within Mashi and Sobbe Conservancy boundaries. Members are predominantly from the Mafwe ethnic community but there also Mbukushu residents, although the community forest is presided over by the Mafwe Traditional Authority. Devil’s claw harvesting is Lubuta’s only enterprise. In 2016, 86 harvesters earned N$169 576 (US$13 044) from 5 470 kg. Lubuta is a member of the Mudumu North Complex, a co-management initiative that includes four

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3 US$1 = N$13 (US$1 = N$13.07043; 09/06/2018; [www.xe.com](http://www.xe.com)).
conservancies, four community forests, the Kyaramacan Association, Mudumu National Park and the eastern section of Bwabwata National Park (Figure 1).

Sachinga is an area south-west of the town of Katima Mulilo under the Mafwe Traditional Authority (Figure 1). The area is overseen by traditional leaders with no support from NGOs and limited support from government. While there are people harvesting devil’s claw they do not do so as a collective group.

The conservancy and community forest included in the study were recipients of donor support from the US-funded Millennium Challenge Account-Namibia (MCA-N) Compact from 2011 to 2014. Financial aid was channelled through a local NGO, Integrated Rural Development and Nature Conservation (IRDNC), who worked closely with the conservancies and community forests to improve environmental management and equitable trade of devil’s claw. IRDNC continues to provide some support but has decreased its involvement significantly since the conclusion of the MCA-N compact in 2014.

Table 1: Summary of governance arrangements for selected case study sites

<table>
<thead>
<tr>
<th>Area</th>
<th>Natural resource management status</th>
<th>Natural resource management authority</th>
<th>Presiding traditional authority</th>
<th>Support from local NGOs</th>
<th>Commercial harvesting of devil’s claw introduced under MCA-N Activity</th>
<th>Harvesting areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balyerwa Conservancy</td>
<td>Conservancy</td>
<td>Conservancy management committee &amp; MET</td>
<td>Mayeyi</td>
<td>IRDNC</td>
<td>Yes</td>
<td>Within conservancy</td>
</tr>
<tr>
<td>Lubuta Community Forest</td>
<td>Community forest</td>
<td>Community forest management committee &amp; DoF</td>
<td>Mafwe</td>
<td>IRDNC</td>
<td>Yes</td>
<td>State Forest</td>
</tr>
<tr>
<td>Sachinga</td>
<td>Unregistered</td>
<td>Traditional authority</td>
<td>Mafwe</td>
<td>None</td>
<td>No</td>
<td>State Forest Quarantine Camp</td>
</tr>
</tbody>
</table>

*Funded by the US government through the Millennium Challenge Corporation.*
1.7 Structure of the thesis

The thesis is set out in ten chapters. **Chapter 1** introduces the research including theoretical perspectives, rationale, aim and objectives. A summary of the case study, research approach, methods and case study sites are also given.

In **Chapter 2** the theoretical perspectives which informed the research are elaborated on. These include debates in the natural resource governance discourse around normative approaches and power, and challenges identified in achieving equitable and sustainable governance of NTFPs. These challenges are situated in political ecology perspectives, theories of access and power, and advances made in institutional theory.

**Chapter 3** presents the methodology and methods used for the research. It describes the case study method and provides justification for the method in this study. Further methods for data collection and analysis are provided. The chapter concludes with ethics, research protocols and ethical perspectives.
Chapter 4 describes the policy, legislative and institutional context for natural resource governance in Namibia. It traces the development of this context from the pre-colonial era to modern day highlighting policy and legislation informing traditional governance and the natural resource governance of communal areas.

In Chapter 5 an overview of devil’s claw is provided. This includes its ecology and use, commercialisation and trade, contribution to livelihoods and impact of commercialisation on the resource. The chapter also describes the development of interventions and policies in Namibia for sustainable use and management.

Chapter 6 presents findings from Balyerwa Conservancy as they relate to governance arrangements and processes, challenges and outcomes for the community and the environment.

Similarly, Chapters 7 and 8 describe local governance in Lubuta Community Forest and Sachinga community, respectively.

Chapter 9 summarises the findings from the three case study sites. It then goes on to relate the findings to the theoretical perspectives presented in Chapter 2. Insights are drawn regarding power and agency in governance arrangements and how governance processes that determine livelihood and ecological outcomes are shaped by the broader context.

Chapter 10 is the concluding chapter of the thesis. An overview of the aim and objectives as they relate to the findings is presented, key findings are highlighted and conclusions from the research are drawn.
2. THEORETICAL PERSPECTIVES

2.1 Introduction
The previous chapter introduced the research while this chapter elaborates the key theories and debates relating to natural resource governance used to inform the research. The chapter begins with a critical examination of the governance discourse, with a focus on co-management as a governance approach. Advances in institutional theory as they relate to natural resource governance, including considerations of legal pluralism, follow. The next section introduces political ecology and describes the central tenets that inform the political ecology framework. Following this, a theory of access and an analysis of power are presented. The chapter concludes with a review of non-timber forest products (NTFPs) and current understandings of the challenges to NTFP governance.

2.2 A definition of governance
Scientific natural resource management has its roots in an exploitative, utilitarian view that reduced the environment into discrete resources to be individually maximised (Gadgil & Berkes 1991; Berkes & Folke 1998). The resulting resource depletion from the classic utilitarian approach and the rising demand for sustainable development led to a reform in the management discourse to a systems approach. In this approach, the view is that natural resources cannot be treated as discrete entities in isolation from the rest of the ecosystem and social system. Thus, a new concept emerged that incorporated the social science of resource management articulated as ‘social-ecological systems’ (Berkes & Folke 1998; Olsson et al. 2004; Folke et al. 2005). Social-ecological systems theory frames relationships between social and ecological components as part of a complex system with multi-scale feedbacks and dependencies (Berkes & Folke 1998; Folke et al. 2005; Figure 2).

Prior to this paradigm shift, the institutional structures and processes for resource management were hierarchical and technocratic, dominated by legislature and bureaucracy that sought to achieve goals prescribed by the State. The government was employed as the agency of management. However, for resource management to be aligned with sustainable development, a reform of institutional structures and processes was required that was more socially integrated and went beyond the realm of the government (Ostrom 1990; Shackleton & Campbell 2001; Kooiman 2003).
In recent decades management has shifted away from the State and towards an interaction between the various actors who access and use resources, and an interplay between statutory and local/customary institutions. This shift aims to increase resource user participation in decision-making processes and benefits by restructuring the power relations between the State and resource users through the devolution of management authority to local institutions (Shackleton & Campbell 2001). As such, the concept of ‘governance’ has gained popularity in the social sciences and among policy makers. Social-ecological systems require multi-dimensional solutions and management tools for their so-called ‘wicked problems’ and governance must rely on the collective judgment of actors involved in a process that is experiential, interactive and purposeful (Jentoft & Chuenpagdee 2009). Governance of social-ecological systems is inherently challenged as the natural environment and human society are characterised by complexity, dynamism and, “unpredictable interactions between people and ecosystems as they evolve together” (Berkes & Folke 1998:10). Therefore, the notion of governance has become central in debates around achieving the sustainable and equitable use of natural resources (Kooiman 2003; Laird et al. 2010a; Sowman & Wynberg 2014; Wiersum et al. 2014; Ndeinoma & Wiersum 2017).

Governance, however, has become a catchword in the legal and social sciences with multiple definitions and understandings. With regards to natural resources, it includes political, institutional
and cultural frameworks. According to Kooiman (2003:3) the mixes of governing efforts by all manner of actors, “are societal ‘responses’ to persistent and changing governing ‘demands’, set against ever growing societal diversity, dynamics and complexity”. With this socio-political perspective in which governance is not a matter exclusively for traditional public governors, Kooiman and Bavinck (2005) identify governance as interactive, network-based or collaborative. Kooiman and Jentoft (2009:820) define interactive governance as, “the whole of interactions instigated to solve societal problems and to create societal opportunities; including the formulation and application of principles guiding those interactions and care for institutions that enable or control them”. Within Kooiman (2003) and Kooiman and Jentoft’s (2009) conception of governance, modes describe the structural level of governance and include hierarchical governance, self-governance and co-governance, with all societies being governed through varying combinations of these modes.

Co-governance as it relates to natural resource management, is the inclusion of non-centralised rules and institutions for the access, management and use of natural resources. These evolve from the values, norms and principles of the actors linked to the social-ecological system in which the resource occurs. Thus, effective co-governance requires shared moral responsibility, reciprocity, trust, mutual assistance and cooperation. With this in mind, Kooiman and Jentoft (2009) define three governance orders in their conceptual framework according to levels of activities. First-order governance is the day-to-day activity of governing; second-order governance includes the institutional arrangements within which first-order governing occurs; and third-order governance or meta-governance is at the centre of governance where the normative governance principles that inform first- and second-order governance are set and applied.

Kooiman and Jentoft (2009) argue that governance cannot operate without being guided by an explicit set of normative governance principles that have been discussed, defended and evaluated by all actors linked to the social-ecological system. Thus, it is important that meta-considerations are formed in terms other than the subject itself. For an overall evaluation of meta-considerations for governance Kooiman and Jentoft (2009) suggest nine specific principles: transparency, efficiency, accountability, respect, equity, inclusion, effectiveness, responsiveness and moral responsibility. In addition to modes, orders and principles, governance is also concerned with interactions, institutions, actors, policies, mechanisms and processes. The interplay of all these create governance arrangements which determine social-ecological outcomes. The complexity of governance underpins the challenge to scholars and practitioners in understanding and facilitating governance arrangements to enhance social-ecological systems (Folke et al. 2005; Berkes 2007; Armitage et al. 2009).
2.2.1 Co-management as an adaptive governance approach

Natural resource management was traditionally centred on efforts to control nature to extract benefits from it and management of individual entities rather than systems. This command-and-control management ultimately led to reduced biodiversity and variation in ecosystems. In attempting to control complex, dynamic, non-linear systems, natural resource managers faced unexpected negative outcomes. Thus, in the 1970s, strong criticism of traditional management arose, and several alternative approaches were proposed. These included, *inter alia*, adaptive management (Holling 1978), co-operative management (Jentoft 1985; McCay 1988; Pinkerton 1989), collaborative management and adaptive co-management (Berkes & Folke 1998; Folke *et al.* 2005). Adaptive management heeded the need to learn to live with change and uncertainty through shifting management to an ongoing, iterative process between interventions and environmental change in which hypotheses are tested and adapted (Holling 1978). Theories of adaptive management were further developed to also apply to common pool resources resulting in the concept of co-management.

Co-management, whereby local communities share management responsibilities with governments, was realised and furthered by the understanding that management approaches must also be adaptive to respond to changing circumstances (Berkes & Folke 1998). Thus, governance emerged from the shift away from top-down State-led natural resource management to more inclusive and interactive power-sharing arrangements. Adaptive governance is viewed to enable adaptive co-management which is a participatory and iterative approach to natural resource governance that emphasises the need for feedback, learning and collaboration that considers the linkages between ecosystems, people and technology, local knowledge and property rights institutions (Armitage *et al.* 2008; Armitage *et al.* 2009; Nunan 2010). Rights and responsibilities are jointly shared between numerous actors operating at multiple scales to jointly and adaptively manage natural resources through continuous co-learning (Berkes & Folke 1998; Armitage *et al.* 2008).

Adaptive co-management is situated in a broader governance setting, that is the political, institutional and cultural frameworks and all the interactions that take place (Kooiman 2003). Therefore, while the two concepts are closely connected, adaptive governance is concerned with the broader social contexts across multiple scales within which adaptive co-management operates (Folke *et al.* 2005). Central to adaptive governance is the need to foster governance arrangements for social-ecological systems that are resilient to change and uncertainty and can deal with complexity (Dietz *et al.* 2003; Folke *et al.* 2005).
Many have suggested this be achieved through multiple cross-scalar institutions that are flexible and adaptive, and networks of actors that promote social learning and change (Folke et al. 2005; Berkes 2007; Nunan 2010; Armitage et al. 2011). Dietz et al. (2003) proposed a list of criteria necessary to achieve adaptive governance including participation and representation among resource users; multiple cross-scalar nested institutions; mixed institutional types; and institutional designs that promote experimentation, learning and change.

However, Cleaver and Whaley (2018) highlight that in attempting to actualise the theoretical ideal of adaptive governance and co-management in practice, the concept has to some extent been reduced to a checkbox list for policymakers and donor agencies. That is, if policymakers and funders consciously craft mechanisms for *inter alia* representation, stakeholder participation, collaborative, iterative decision-making, transparency, accountability, and knowledge sharing; and integrate nested co-management structures and processes within existing structures of government then adaptive governance can be achieved (Nunan 2010). This normative approach has not been successful and according to Chaffin et al. (2014) it remains uncertain as to whether adaptive governance can become institutionalised under current political and legal contexts. The approach has been criticised for insufficiently understanding the political ecology landscape in which adaptive governance systems operate and the role of power relations and human agency (Nadasdy 2007; Nunan 2010; Wilson 2018). Market forces also dictate how natural resources are used (Treib et al. 2007) as do customary practices and laws (Laird et al. 2010a; Sowman & Wynberg 2014).

### 2.2.2 The issue of scale in adaptive governance

Critics have argued that the limited success of co-management is emphasised as community failure rather than a focus on the market, State and other external and internal factors affecting natural resource governance (McCay & Jentoft 1998; Blaikie 2006). Ojha et al. (2016) also highlight that research often focuses on reporting cross-scalar dynamics but fails to explain how and why they occur despite local community actions being significantly shaped by social embeddedness (Cleaver 2012), the wider political context (Blaikie 2006) and institutional arrangements (Ribot 2003). They argue that communities have been delocalised, that is a conceptual shift is required that situates local communities in multiple cross-scale networks with interactions among actors outside of the local domain that drive delocalisation trajectories. This contrasts to the geographically-bounded spatial model of community and the structural rule-based institutional model apparent in co-management. Therefore, there is a need to better understand how members of communities are associated with, and participate in, emerging spaces across scales in a range of natural resource management domains.
Murphree (2000) addresses the issue of localisation-globalisation by arguing that the motivational source for community-based problem-solving and institutional resilience lies in authority and responsibility and that resilience is a result of having the freedom to experiment. Therefore, the first step is strong local jurisdiction where jurisdiction refers to legally and socially delimited proprietorship that determines who has responsibility, who has authority, who has appropriative rights, and what the limits of these rights and responsibilities are. Jurisdiction is also constrained by conditions set by the resource base. Boundaries need to be closed through negotiated and reciprocal exclusion but, having been closed, they need to be transcended through negotiated and reciprocal interest and interaction. That is, scaling up is required for scaling down to be sustainable. He suggests a formula for this transcendence, which maintains the dynamic of local jurisdiction while being responsive to the requirements of ecological and functional scale.

The first component is ‘jurisdictional parsimony’ whereby the management requirements of specific resources are evaluated, and these requirements matched to jurisdictions no larger than necessary (Martin 1999; Murphree 2000). Jurisdictional scope is thus a response to resource-specific ecological and functional scalar considerations and will vary according to the resources addressed. Strong local jurisdiction is achieved through true devolution rather than the current models of decentralisation, which transfer responsibility to local jurisdictions but not authority. The second component is ‘delegated aggregation’ which is the upward delegation of aspects of the responsibility and authority of local jurisdictions to collective governance of greater scope while local jurisdictions remain in place and continue to play a role. These coalescive structures are created through negotiated aggregation rather than through the expropriation of authority by larger jurisdictional units. According to Murphree (2000) this principle of delegated aggregation is the democratisation of environmental governance. To achieve this given the asymmetrical nature of the power relationships that exist between local jurisdictions and the State, he argues that local jurisdictions must become a significant political constituency of the State, a constituency strong enough to counterbalance expropriative interests at the centre and one to which the State is accountable. This condition of ‘downward’ accountability is critical for effectively linking local and larger scale jurisdictions. It is posited that for this to be achieved local jurisdictions require two conditions, namely: i) they need to be able to organise and act collectively; and, ii) they need to embody, in principle and practice, an ideal that corresponds to a general public ethos that confers political legitimacy.

2.3 Institutions and institutionalism

Scholarship on institutions originated with traditional institutional perspectives which focused on formal institutions and the functioning of the State with formal rules and regulations. At the time the
belief was that institutions were able to determine and control human behaviour (Lowndes 2002). This deterministic view advanced to a shift away from the focus on the State to the individual and the rational, normative and social aspects of institutions. New institutionalism recognised the dynamic nature of institutions and did not view institutions as independent, functionalistic entities but examined the interactions between institutions and actors in shaping behaviour (March & Olsen 1984; Douglas 1987; Hall & Taylor 1996). In natural resource management, this change in institutional theory was reflected by a move away from the State as the formal institution determining the ‘rules of the game’ to institutions of co-management. Until recently, institutional theory specific to natural resource management was largely informed by Hobbes (1651), Hardin (1968), North (1990), Ostrom (1990) and Agrawal (2001) with a focus on new institutional economics and commons theory.

In *Leviathan*, Hobbes (1651) articulates his philosophy of men in a state of nature always seeking their own good and leading to conflict, therefore necessitating a strong, undivided State. In the *Tragedy of the Commons* (Hardin 1968) it was argued that over-exploitation of common resources was inevitable in the absence of privatisation or State regulation. This overarching pessimism of men locked into a system destined for ruin was further reflected in the models that were developed to explain the destruction of the commons. These included the ‘prisoner’s dilemma game’ (Dawes 1973, 1975) and ‘the logic of collective action’ (Olson 1965) both of which argue that when one individual cannot be excluded from the benefits that others provide, each person is motivated not to contribute to the joint effort, but to free-ride on the efforts of others.

On the contrary, Ostrom (1990) found examples of effective governance of common pool resources (CPRs) where local management structures, rooted in local ecological knowledge, provided rules that maintained these common resources. That is, robust, self-organised, self-governed, long-enduring institutions for CPR management. Ostrom (1990) recognised social interaction as an intricate part of natural resource governance and proposed, “*that neither the State nor the market is uniformly successful in enabling individuals to sustain long-term, productive use of natural resource systems,***” and that, “*communities of individuals have relied on institutions resembling neither the State nor the market to govern some resource systems with reasonable degrees of success over long periods of time***” (Ostrom 1990:1). Following from this, Ostrom’s work on common property theory focused on the elements or conditions of institutions to effectively and sustainably self-govern common resources. She suggested eight principles for the design of robust institutions for governance of the commons, with the eighth used in larger, more complex cases (Table 2). However, she did not argue that these design principles are necessary conditions for achieving institutional robustness in CPR settings. Rather that they helped to account for the success of institutions in the empirical settings she had studied. A key assumption in Ostrom’s school of thought is rational behaviour with individual choice
shaped by expected benefits, costs, internal norms, and discount rates. Also, there are various sets of rules that shape day-to-day choices, define policies for management and monitor and adjust governance. These are termed operational rules, collective-choice rules and constitutional-choice rules respectively.

North (1990) developed institutional theory in economic perspectives by arguing that institutions provide the incentive structure of an economy which evolves to shape the direction of economic change towards growth, stagnation or decline. As such, to reduce transaction, production and enforcement costs an effective economic and political institutional mix is required. North (1990) recognised the existence of formal and informal institutions, with the latter referring to norms, customs, traditions, and codes of conduct. He also recognised their different temporal scales of change with formal institutions, such as policy and legislation, able to change rapidly but changes in informal institutions embodied in culture, occurring much slower. A key observation of North (1990) was that incremental change comes from the perceptions of the actors in organisations that they could do better by altering the existing institutional framework at some margin. However, those perceptions crucially depend on both the information the actors receive and the way they process that information. In explaining why inefficient institutions persist, North (1990) argues that the actors must frequently act on incomplete information and process the information that they do receive through mental constructs which reinforce incentives for organisations and actors to engage in unproductive activity. Using new institutional economics theory Agrawal (2001) examined institutional structures to foster effective forest management including public-private partnerships and multi-stakeholder management approaches incorporating local communities. Agrawal (2001) further highlighted the importance of the relationship between the State, market and communities.

Thus, new institutionalism scholarship focused on the design of institutions for ‘good governance’ and suggested a set of principles that if applied correctly, could incentivise for collective action. That is, human behaviour could be shaped by ‘getting institutions right’. This rhetoric was adopted by development practitioners and policymakers who set about trying to design and implement institutions for ‘good governance’ of natural resources centred around ideas of representation, participation and accountability (Ostrom 2005). These models were all underpinned by the assumption that individual behaviour is based on rational choice and the devising of incentives, rules and sanctions to shape that behaviour in relation to the environment. However, this mainstream approach was criticised for assuming rational choice of individual action and simplifying the complexity of societal dynamics and power relations (Cleaver 2001, 2002). While Ostrom (1990) provided the classic model for a localised jurisdictional approach which seeks to link authority,
responsibility and incentive, the model did not make clear how to maintain congruence across spatial, functional and ecological scales.

Table 2: Ostrom’s design principles (After Ostrom 1990:90)

<table>
<thead>
<tr>
<th>Design principle</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Clearly defined boundaries:</td>
<td>Individuals or households who have rights to withdraw resource units from the CPR must be clearly defined, as must the boundaries of the CPR itself.</td>
</tr>
<tr>
<td>2) Congruence between appropriation and provision rules and local conditions:</td>
<td>Appropriation rules restricting time, place, technology, and/or quantity of resource units are related to local conditions and to provision rules requiring labour, material, and/or money.</td>
</tr>
<tr>
<td>3) Collective-choice arrangements:</td>
<td>Most individuals affected by the operational rules can participate in modifying the operational rules.</td>
</tr>
<tr>
<td>4) Monitoring:</td>
<td>Monitors, who actively audit CPR conditions and appropriator behaviour, are accountable to the appropriators or are the appropriators.</td>
</tr>
<tr>
<td>5) Graduated sanctions:</td>
<td>Approporators who violate operational rules are likely to be assessed graduated sanctions (depending on the seriousness and context of the offense) by other appropriators, by officials accountable to these appropriators, or by both.</td>
</tr>
<tr>
<td>6) Conflict-resolution mechanisms:</td>
<td>Approporators and their officials have rapid access to low-cost local arenas to resolve conflicts among appropriators or between appropriators and officials.</td>
</tr>
<tr>
<td>7) Minimal recognition of rights to organise:</td>
<td>The rights of appropriators to devise their own institutions are not challenged by external governmental authorities.</td>
</tr>
<tr>
<td>8) Nested enterprises:</td>
<td>Appropriation, provision, monitoring, enforcement, conflict resolution, and governance activities are organised in multiple layers of nested enterprises.</td>
</tr>
</tbody>
</table>

More recently, advances have been made in increasing understanding and awareness of legal pluralism, where customary and statutory systems of law are operating in parallel (Griffiths 1986; Hinz 2008; Koenane 2018). Critical institutionalism has now emerged that seeks to deepen institutional
understanding by examining legal pluralism, local history, power and politics (Leach et al. 1999; Mehta et al. 1999; Cleaver 2002, 2012; Cleaver & Franks 2005; Cleaver & De Koning 2015). This school of thought critiques mainstream institutional thinking for being too focused on structure, efficiency and functionality, assuming productive concern and paying insufficient attention to the informal or socially-embedded institutions embodied in culture, tradition and daily practices (Agrawal 2001; Cleaver 2012).

According to Cleaver and Whaley (2018) while critical institutionalism also evolved from commons theory it was informed more by social perspectives than ecology and conservation science. Thus, in response, critical institutionalism views natural resource governance systems as socially-constructed and seeks to understand how they are enacted and how things change with often unpredictable outcomes. With this view collective action is informed by economic, social, moral, historical and moral rationalities and not necessarily rational choice. As elaborated by Cleaver and De Koning (2015:2), "There is a need to place local institutional arrangements within the wider frames of governance (the political ecology and political economy) which shape the possibilities for resource allocation, adaptation and negotiated solutions. Institutional analysts must explain how institutions are animated by people, acting individually or collectively in particular spaces, in relation to others, and to the physical and material environment. Further, there is the challenge of showing how power works to sustain institutions and to shape participation, access and outcomes”.

2.3.1 Institutional bricolage

A key component of critical institutionalism is shedding light on institutional dynamics at the local level, that is the interaction between institutions and actors and how institutions are formed and adapted. Cleaver’s (2001, 2002, 2012) work developed the concept of institutional bricolage, which is the continuous constructing, borrowing and reshaping of institutional components. Adapted from intellectual bricolage and building on the work of Giddens (1984) and Douglas (1987), institutional bricolage is the ongoing conscious and unconscious moulding of institutional arrangements in an ad-hoc manner in response to opportunities and challenges. Giddens (1984) highlighted the dual relationship between structure and human agency in the creation of institutions while Douglas (1987) pointed to the less rational aspects of institutional formation such as reciprocity, trust and kinship. In contrast to new institutionalism which focuses on the design and/or conditions of formal institutions, institutional bricolage is the locally-placed process whereby actors piece together different formal and informal, traditional and modern institutional components. The result is a continuously adapting conglomeration of rules, practices, relationships and norms within the limits of available resources, circumstances and what is perceived as legitimate. It is the latter that gives these adapted institutions authority and meaning. These new institutional arrangements are legitimised and gain authority as
they do not conflict with accepted norms and practices and become socially-embedded through various means such as tradition, spiritual beliefs and social order. Institutional leakage occurs whereby meaning from one context leaks to another along metaphorically connected rules (Douglas 1987). The agency and identities of individuals was also highlighted by Cleaver (2001, 2002, 2012) as critical in shaping institutions. These ‘bricoleurs’ apply their knowledge, power and agency in respect of social relations, collective action and resource management in varying modes. Critical institutionalism does not argue that traditional identities, social norms and cultural beliefs are necessarily better institutions or result in better outcomes than introduced institutional arrangements but that they are pervasive in determining governance outcomes. Institutional bricolage offers a means of analysis of the interaction between formal and informal institutions and the resulting institutional change, which is often unpredictable.

De Koning (2011, 2014) went further to categorise three processes of institutional bricolage adopted by local actors in response to new introduced arrangements, namely aggregation, alteration and articulation. These can be likened to the adoption, adaption or rejection of different institutions in response to the social norms, cultural beliefs and circumstances of the actors. Aggregation relates to the integration of the introduced institutions with local socio-cultural elements to create a more practical, useful institutional framework. Alteration refers to the fine-tuning of institutions to make them fit better with livelihood priorities or claims to identity. Articulation is the asserting of traditional identities and culture in resistance to introduced institutional arrangements (De Koning 2011).

2.3.2 Legal pluralism

Critical institutionalism recognises the multiple institutional systems that interact to affect natural resource use and management. Further, there is a shift away from perceiving institutions as formal and informal but rather bureaucratic and socially-embedded (Cleaver 2002). This is important as customary or socially-embedded institutions can be highly formalised, for example rules pertaining to the allocation of land, and formal institutions can become socially-embedded over time. In the context of this research bureaucratic institutions are characterised by legal rights, contracts, formal procedures and organisations and are introduced by the State, development agencies and/or non-governmental organisations (NGOs). Socially-embedded institutions relate to kinship, culture, customary law and daily practices that are already in existence requiring them to be traced through historical processes. Nonetheless this categorisation should not be viewed as polarised or static but rather as a shifting gradient.

Challenges to adaptive governance can in part be attributed to oversimplifying complex realities at the local level and overlooking the role of traditional governance. Despite the advent of co-
management arrangements, it remains that the State still plays a heavy hand in regulating natural resource use. These bureaucratic institutions may be inappropriate and ignore the fact that resource users are often situated far from government and/or that State authorities lack the resources and capacity to actively enforce statutory law (Ndoye & Awono 2010). Adaptive governance and its counterpart co-management were developed in the global North and as critical institutionalism argues, are thus not sensitive to local histories or to the existence of socially-embedded institutions such as customary practices. On the other hand, it is also dangerous to assume that all local institutions are benign and inclusive with many rooted in exploitative history thus requiring nuanced understandings of customary, traditional and local institutions. It is in this messy interface of legal pluralism, culture and history that institutional bricolage reveals, “the blending of logics, the leakage of meaning, the exercise of authoritative power, as well as the creative exercise of agency, the generation of practical governance and the stubborn persistence of inequities” (Cleaver & De Koning 2015:7).

This is important in the African context where the livelihoods of millions of people depend on the direct access and use of natural resources in communal areas and where colonialism disrupted customary practices and the role of traditional authorities (Mamdani 1996). While Ntsebeza (2002, 2005) argues that post-colonial traditional leadership is inauthentic and reinforces colonial constructs of highly authoritarian and despotic traditional authorities, others argue that traditional leadership is still relevant as a trusted institution for governance in Africa (Koenane 2018). Irrespective of this debate, many African states are re-appropriating traditional governance and customary law by incorporating the inherited traditional structures of governance within the structures of modernity as expressed in their constitutions (Hinz 2008; Nuesiri 2014). Thus, traditional authorities continue to be legitimised by the State and have authority in matters of rural governance and this institutional plurality means that arrangements for natural resource management are complex, overlapping and reflect multiplicity of meanings and interests (Cleaver & De Koning 2015).

Ribot (2003) interrogated the democratic decentralisation of natural resources highlighting that despite the theoretical belief that representative authorities with meaningful discretionary powers are the basic institutional elements of decentralisation that should lead to environmental benefits, equity and development, in practice this has been rarely achieved. This has been due to poor institutional choice by the State and NGOs in devolving powers over natural resource management decisions. For example, many projects favour project-selected committees or traditional authorities to show sensitivity to customary claims, where custom often reinforces existing inequalities. According to Ubink (2008) the State strengthens its position by incorporating tradition into governmental power. Traditional authorities are supported because they can rally votes for national
elections and are easier to integrate into patronage networks than less-predictable elected local authorities. Alternatively, where elected local authorities exist these institutions are rarely entrusted to represent local communities in significant matters of natural resource management and have limited powers and/or are circumscribed by the State. Central control is retained over valuable natural resources while complex prescriptive systems of forest management planning that necessitate ‘expert’ and highly technical knowledge are required before local authorities can make any decisions as to how, when, where or by whom forests should be used and commercialised. Further, the devolved management obligations are rarely balanced with necessary financial resources or other benefits. Thus, poor institutional choice and insufficient discretionary powers are limiting spaces for democracy, citizenship and economic improvement (Ribot 2003).

Critical institutionalism places the nature of human action, power dynamics and outcomes for social justice at its centre (Cleaver & De Koning 2015). Therefore, as suggested by Cleaver and Whaley (2018) the application of a critical institutional lens can provide insight into the interplay between structure and agency and allude to the dominant power relations while highlighting the adaptability and resourcefulness of social life. While this approach examines power at the local level, global and national processes affect local institutions and local governance should be situated in the broader political-economic framework.

2.4 Central tenets of political ecology

2.4.1 Critical realism

Neumann (2005:22) identifies political ecology as, “constructed primarily through the merger of cultural ecology with political economy. The central premise in this definition is that the human transformation of natural ecosystems cannot be understood without consideration of the political and economic structures and institutions within which the transformations are embedded”. It is a bridging of the natural and social sciences underpinned by a critical realist philosophical view of the world. That is the world exists independently of our knowledge and therefore our knowledge is not a reality but merely an interpretation of the world. Therefore, in political ecology the importance of discourse representation, and imagery in structuring knowledge of the world is acknowledged (Blaikie 1996; Peet & Watts 1996). Central to the analysis is to recognise the materiality of nature while maintaining that our understanding of nature is discursively constructed. The theoretical challenge of political ecology then is to integrate political and ecological elements, and material and discursive elements (Neumann 2005).
2.4.2 Historical processes

Political ecology is also concerned with historical processes. Fairhead and Leach (1996) argued against discourses of degradation in West African forests by using historical, anthropological and ecological methods to describe the highly effective local management systems that had enhanced forests rather than depleting them, and how the discourse of degradation had become hegemonic, persisting for over a century. Notions of ‘wilderness’ and other ideologies of nature and conservation under Orientalism/colonialism are interrogated as they underpin many of the current struggles for land and resources, and dominant discourses of development and the environment (Adams 2003). As captured by Robbins (2012:68), “A human-environment science that begins with queries about our difference from them is ultimately a hand-me-down of not yet forgotten colonialism. Indeed, the foundations of the most modern development projects arguably remain rooted in these same binary colonial logics”. Further, there is also the tendency to code the global South, on the political/economic outskirts, as ‘natural’, and the global North as ‘despoiled’ thereby continuing the imperative to protect and enclose nature in the underdeveloped world (Robbins 2012).

2.4.3 The uncertainty of ecological systems

The agency of nature and the unpredictable dynamism of ecological systems are also considered in processes of ecological change, resonating with developments in governance theory of complexity and uncertainty, and analysis at multiple spatial and temporal scales. The ever-changing and often unpredictable nature of ecology is important in undermining long-held beliefs of degradation from grazing, harvesting and fire in rural landscapes (Sullivan 2000). It enables political ecologists to argue that uncertain conditions prevail in arid and semi-arid Africa and that density-independent factors, such as climate, are far more significant in determining vegetation dynamics than density-dependent factors such as grazing (Neumann 2005). A further argument is that existing customary systems or local management strategies evolved to cope with changing circumstances but are often impeded by external policy, inappropriate management and interventions with negative outcomes. Baker (2000) presents a case study of drought in The Gambia and the unintended consequences for farmers from development interventions to provide alternative livelihoods. A similar story is told about the extinction of the Khariar bull and increased dependence on marginal food crops in Orissa, India by the introduction of hybrids by government and NGOs to increase milk production (Sainath 1996). The relevance of acknowledging uncertain environmental conditions extends to NTFPs as part of multifunctional livelihood landscapes with local management strategies that are often poorly

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5 Orientalism (Said 1978) refers to a form of knowledge developed to describe the East by the West, characterised as exotic, spiritual and uncivilised, and highlighting the superiority of Western civilisations.
understood. Further, policy and legislation are most often not designed to take into account the dynamic, evolving nature of ecological systems.

2.4.4 Debating common property theory

Structuralist explanations for environmental destruction and change refer to the forces of economics or the State and their impacts on people and the environment (see, for example, Blaikie & Brookfield 1987). These explanations reflect the origins of political ecology in cultural ecology and political economy. Broadly, cultural ecology is concerned with understanding human-environment interactions through the controlling forces of ecosystems, while political economy is concerned with understanding human-environment interactions through the modes and relations of production. Here capitalist production is viewed to require the extraction of surpluses from nature and labour which are accrued by the capitalist to the degradation of society and nature. Nietschmann’s (1973) study on Miskito subsistence in Nicaragua strikingly revealed the limitations to cultural ecology in its assumptions of cultural adaptations in response to regulating ecosystems. His work found the Miskito subsistence livelihoods and turtle populations to increasingly be in crisis due to the broader regional and global markets for turtle meat and other products. This was exacerbated by State price controls and land seizures.

Here the link to common property theory and explaining the ‘tragedy of the commons’ (Hardin 1968) becomes apparent. As articulated by Muldavin (1996), the emergence of the State and new markets into the social economies of collective resource users results in the appropriation of communal capital by external elites. Overexploitation of the commons is the result of a breakdown in traditional systems as broader economic forces transform natural resource use practices and disempower resource users. Terms of trade established in the colonial era perpetuate in today’s economic order of over-production where the position of the global South remains disadvantaged as the centres of labour and nature extraction, for the accumulation of capital in the global North (Robbins 2012).

It has been argued that rational choice and the re-crafting of rules and institutions can recover sustainable management and collective action of the commons, as suggested by Ostrom (1990, 1994). However, political ecologists refute this apolitical approach as it does not examine the broader historical trajectory of socio-economic change, nor challenge the multiple scales of power and the economy. Rather it reinforces normative assumptions of rational decision-making, disguises disempowerment and supports the continued exploitation of communities (Robbins 2012). The consideration of the relations of power in shaping the condition and change in social-ecological systems is thus explicit.
2.4.5 Scale
Scale is also central with political ecology evaluating the influence of factors acting at several scales, nested in each other, with local decisions shaped by national policies, which are in turn directed by global politics and economics. This thesis is captured in the chains of explanation as developed by Blaikie and Brookfield (1987). In their seminal work on land degradation they linked local environmental problems to the broader political economy: how the system determines what choices individual producers and their communities have and what happens to the environment as a result. A chain of explanation starts with the environment and resource users and their extraction and/or production of that land. The next link is their relationship with others who affect them in determining management, while the State, international institutions and the global economy are the last links in the chain (Figure 3).

Figure 3: The ‘chain of explanation’ (After Robbins 2004)

2.4.6 The power of discourse
If the system determines what choices individual producers and their communities have, it is then important to interrogate not only how the market directs social-ecological change but how the specific ideas about nature and society that direct the system come about. Poststructuralism, led by Foucault (1980), examines the political forces of discourse in establishing truths. Discourse analysis plays close attention to the role of language in constructing social reality. Escobar (1995, 1996) undertook a discursive analysis of development to argue that the control of the global South has been achieved through the normalisation of development interventions that reinforce unequal power relations. Further, that ‘sustainable development’ authorises new modes of capitalising nature by reducing
‘nature’ to ‘environment’ as a collection of resources vital to maintaining the global capitalist economic system. In this way development interventions, it is argued, are more concerned with strengthening the power and authority of the State and international actors over local communities, than alleviating poverty or environmental degradation (Neumann 2005).

Similarly, the development discourse is criticised for ideas of localism and indigenism that bear similarity with earlier, romanticised visions of traditional native communities (Mohan & Stokke 2000). The emphasis on ‘local community’ and ‘traditional knowledge’ often homogenises social and cultural organisation and overemphasises the extent and potential of indigenous knowledge for environmental management and economic development. Amongst conservationists and environmental NGOs, the concept of indigenous traditional knowledge has been transformed into the ancient wisdom and spirituality of ‘tribal’ peoples living within nature. Brosius (1997:64) writes, “In linking knowledge to the sacred, commentators acquire a way to construct meta-commentaries about the meaning of a body of knowledge, rather than about that knowledge itself. The danger, of course, is that such meanings may only be interpolated and may, in fact, be Western in origin”.

The development of discourse is clearly not always one sided and is also shaped by the cultural politics of identity, history, community and territory. Communities can resist development or engage with development to try gain access to and control the process. Therefore, interaction with development interventions and modernising institutions can help restructure power and access to resources. Bebbington (2000) usefully suggests that development theory should be built at the interface of geography and history, around notions of place and livelihoods.

2.4.7 Property rights and territorialisation

Lastly, political ecology has an interest in who controls access to land and resources as it determines who participates in or is excluded from, and who benefits from the process of development (Neumann 2005). Special attention is given to the spatial nature of property rights including how ownership and rights vary by land type, land use, resource type and distribution, access control, and the importance of the political-economic context in specific settings. According to Elden (2010) ‘territory’ is a socially-constructed space that is characterised by its historical, cultural, technical and political-economic origins. Territories are purposefully created to achieve certain objectives and are recognisable by, “their discrete, distinctive, bounded, measurable, communicable spaces” (Murphy 2012:164). ‘Territoriality’ refers to, “the attempt by an individual or group to affect, influence, or control people, phenomena, and relationships by delimiting and asserting control over a geographic area” (Sack 1986:19). As a strategy, territoriality is linked to social relationships that determine the possibilities for producing territories. ‘Territorialisation’ refers to specific territorial projects in which actors deploy
territorial strategies to acquire bounded and controlled spaces to achieve certain effects, often to govern the people and resources located within and around the territory (Scott 1998). There are various modalities of territorialisation ranging from forced eviction to coercive conservation (Peluso 1993) or the more indirect strategy of prescribing or prohibiting activities linked to resource access, control and management. Laws, regulations and authorities are used to this effect as well as the deployment of environment and development discourses (Bassett & Gautier 2014). These discourses often portray the State and/or development agents as more sophisticated in addressing environment and development issues while resource users are characterised as destructive, inefficient and ignorant, and requiring of new institutional and spatial arrangements. New prejudices, collaborations and resistance may emerge within these redesigned environment-development geographies (Bassett & Gautier 2014).

2.5 Access and power

Political ecology provides a framework for understanding how collectively used or held resources are embedded in larger sets of political-economic and ecological relationships. Within any governance arrangement there are various means, processes and relations that determine who has access to natural resources. Ribot and Peluso (2003:153) define access as, “the ability to derive benefits from things,” that is dependent on mechanisms that go beyond property’s classical definition as, “the right to benefit from things.” In their definition, ability is akin to power, which they refer to as the capacity of some actors to shape the practices and ideas of others and power as emergent from, though not always attached to, people. Here access is fluid but dependent on an individual’s or group’s position and power within social relationships. They build on Ghani’s (1995:2) notion of ‘bundle of powers’ in relation to property, by incorporating it into their notion of access. “These powers constitute the material, cultural and political-economic strands within the ‘bundles’ and ‘webs’ of powers that configure resource access. Different people and institutions hold and can draw on different ‘bundles of powers’ located and constituted within ‘webs of powers’ made up of these strands. People and institutions are positioned differently in relation to resources at various historical moments and geographical scales. The strands thus shift and change over time, changing the nature of power and forms of access to resources” (Ribot & Peluso 2003:154). Thus, Ribot and Peluso (2003) suggest an analysis that goes beyond rights to examine the multiple mechanisms influencing access situated within the broader political and cultural context.

Gaventa (2005, 2006) provides a framework for examining power with a specific interest in assessing the possibilities of transformative action in various political spaces. With his suggested ‘power cube’ he builds on the forms of power identified by Lukes (1974) to include analysis of different levels of
power, and the spaces created for engagement. The cube is akin to a Rubik’s cube in that the forms, levels and spaces of power are interrelated and can be rotated (Figure 4).

Closed spaces are akin to more traditional forms of hierarchical governance where decisions are made behind closed doors and without consultation. With a shift away from hierarchical governance to more participatory forms of co-governance, described in Section 2.2, invited spaces are created. Here the actors that held the power in closed spaces, for example the State and NGOs, start to open and invite participation. Claimed or created spaces are those where less powerful actors use their agency to reject hegemony or create spaces for themselves related to identity or shared concerns (Soja 1996; Cornwall 2002).

![Figure 4: The ‘power cube’ (After Gaventa 2006)](image)

While many variations of spaces exist, the concern is with who creates the space as they are more likely to hold power within it. These spaces are also dynamic and constantly evolving as actors vie for legitimacy. Institutional bricolage, described in Section 2.3.1, provides a framework for analysing how actors use their agency to construct and adapt institutions in spaces. Gaventa (2006:27) articulates, “the creation of new institutional designs of participatory governance, in the absence of other participatory spaces which serve to provide and sustain countervailing power, might simply be captured by the already empowered elite”. Thus, while legal provision for co-management creates an invited space through devolving rights, it does not necessarily address issues of ability as identified by Ribot and Peluso (2003).

Multilevel analysis of power is required as local, national and global processes are increasingly connected with spaces in each level, also shifting between levels. Governance arrangements, including
legislative frameworks and institutional structure, often determine the level(s) in which spaces are created.

The last aspect to the cube is the dimensions of power as visible, invisible and hidden (Lukes 1974; Gaventa 2006). Visible power is that which is explicit and includes rules, structures and procedures for decision-making. Hidden power is concerned with who sets the political agenda. This is not necessarily limited to actors and institutions but can be expanded to include the influence of discourse. Invisible power is the most insidious and is concerned with how ideologies and psychologies determine the boundaries of participation. Rhetoric then, “shapes people’s beliefs, sense of self and acceptance of the status quo – even their own superiority or inferiority. Processes of socialisation, culture and ideology perpetuate exclusion and inequality by defining what is normal, acceptable and safe” (Gaventa 2006:29).

Thus far, this chapter has examined the broader debates around natural resource governance, institutionalism and political ecology. To provide theoretical context to the case study, the final section of this chapter examines the origin and current understandings of NTFP governance.

2.6 Perspectives on non-timber forest products

NTFPs provide benefits for consumers, the countries providing the biological material, the companies processing and marketing them, and the rural communities that derive cultural, subsistence and economic value from NTFPs (Wynberg & Van Niekerk 2014). However, governance of NTFPs is challenged by the varying objectives of multiple stakeholders. These objectives include environmental sustainability of harvesting, maximising profit from trade, economic development and social justice for harvester communities.

2.6.1 Sustainable trade of NTFPs: the development of the commercialisation-conservation-development narrative

NTFPs have always been an integral part of rural livelihoods for the provision of food, fuelwood, grazing, construction, homeware and tool materials, and medicine (Cocks & Wiersum 2003; Shackleton & Shackleton 2004; Laird et al. 2010a). In addition, for many communities NTFPs hold cultural and spiritual significance with their management and use often tied into age-old religious beliefs and customary law (Areki & Cunningham 2010; Cocks et al. 2011; Kozanayi et al. 2014). Nonetheless they have attracted little attention reflecting perceptions that they are low value goods consumed locally by rural communities or confined to limited markets (Laird et al. 2010a). However, recent decades have seen the advent of NTFP commercialisation as a ‘strategy’ for conservation of tropical forests and other biodiversity-rich areas, particularly in the global South. This trend arose in response to the widespread logging of tropical forests for timber and/or agricultural expansion. It was
recognised that NTFPs already contributed in important ways to the livelihoods and wellbeing of communities living in and adjacent to forests (Arnold & Ruiz-Pérez 2001). As such, it was suggested that increased commercial extraction of NTFPs could serve the dual purpose of biodiversity conservation and poverty alleviation as the net value of revenue generated from NTFPs was found in some cases to be two to three times higher than that from timber (Peters et al. 1989). It was even suggested that commercial extraction of NTFPs compared favourably to agriculture and livestock (Hecht 1992; Nepstad et al. 1992). Starting with extractive reserves\(^6\) in Brazil for the harvesting of Brazil nuts and rubber-tapping (Anderson 1990; Nepstad & Schwartzman 1992), increased commercialisation of NTFPs as a sustainable development intervention rapidly spread across the globe to Africa and Asia (De Beer & McDermott 1989; Neumann & Hirsch 2000; Belcher et al. 2005; Kusters et al. 2006). As a result, while global trade in high-value products such as gum Arabic (Acacia senegal) and shea (Vitellaria paradoxa) have had a long history in ancient trading routes, international trade has flourished since the 1990s (Booker et al. 2015). As articulated by Belcher and Schreckenberg (2007) NTFPs became ‘the flavour of the day’.

An important distinction in the NTFP literature is that between subsistence-level and local market uses of NTFPs and trade beyond the local level. Shackleton and Shackleton (2004) describe the important daily net function of NTFPs to rural households in South Africa which represents a cost saving to the families involved and to the State. However, studies have also shown that households become less dependent on NTFPs for both their subsistence and cash income with increased income from market integration (Kusters et al. 2006; Heubach et al. 2011). Ad hoc trade of NTFPs also acts as a safety net during unexpected social-ecological shocks such as drought, disease and/or lack of income (Shackleton et al. 2011). Important here is the interpretation of poverty alleviation as a continuum between poverty mitigation (NTFPs for subsistence and as a safety net) and poverty elimination (NTFPs as a means to help people escape from poverty by generating savings, investment and assets, and sufficient income) (Sunderlin et al. 2005). In another study, Shackleton et al. (2009) found that harvesting of Ischyrolepis (Restio spp.) in South Africa was for small-scale trade and the income from harvesting was a primary source of income for only a few harvesters. This contrasts to the situation in Benin where kernels and butter from shea is the third most important national export (Schreckenberg 2004). At the interface are species that have significant economic, cultural and spiritual value such as marula (Sclerocarya birrea) which has been described as one of the great trees of the African continent.

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\(^6\) Extractive reserves are defined as, “forest areas inhabited by extractive populations granted long-term usufruct rights to forest resources which they collectively manage” (Brazilian Ministry of Agrarian Reform and Development in Schwartzman 1989:151). That is, State-owned land with legislative allocation of access and land use by communities.
Irrespective of the degree of commercialisation, NTFPs are important to rural livelihoods but few generate transformative incomes for harvesters, despite their high-value on global markets. Harvesters are primarily drawn from the least powerful members of society, the rural poor, and are typically exploited in trade (Neumann & Hirsch 2000).

### 2.6.2 Unimagined complexities: examining NTFP trade

With this emergence of the increased commercialisation of NTFPs research attention has been given to the multiple aspects that shape the nature and outcome of NTFP trade. In no particular order and not limited to, these include policy and legislation (Laird et al. 2010a; Wynberg et al. 2015), land and resource tenure (Neumann & Hirsch 2000; Duchelle et al. 2011), legal pluralism (Wynberg & Laird 2007; Kozanayi et al. 2014), market access and integration (Arnold & Ruiz-Pérez 2001; Lybbert et al. 2002; Lombard & Leakey 2010), value chains and certification (Shanley et al. 2008; Booker et al. 2015), contributions to livelihoods and economic considerations (Belcher et al. 2005; Ros-Tonen & Wiersum 2005; Kusters et al. 2006; Heubach et al. 2011; Mulenga et al. 2011; Ros-Tonen 2012; Kar & Jacobson 2012) and resource management and ecological aspects (Ticktin 2004; Belcher et al. 2005; Kusters et al. 2006; Chirwa et al. 2008; Vermeulen 2009; Shackleton et al. 2015).

Also significant has been a shift in the focus of research from the identification and assessment of factors influencing successful commercialisation of NTFPs and ‘how-to’ manuals (see, for example, Wollenberg & Ingles 1998; Sunderland & Ndoye 2004; Marshall et al. 2006; Wynberg 2006) to examination of the customary practices and laws underlying the local management and use of NTFPs (for example, Novellino 2010 and Kozanayi et al. 2014), and issues pertaining to the misappropriation of traditional knowledge, overregulation and social justice (Wynberg & Laird 2007; Van Niekerk & Wynberg 2012; Wynberg & Van Niekerk 2014; Wynberg et al. 2015).

Following the initial enthusiasm in NTFP commercialisation, reviews have challenged the notion that livelihoods can be significantly improved to alleviate poverty and that NTFP harvesting is benign in forest landscapes (Neumann & Hirsch 2000; Belcher et al. 2005; Ros-Tonen & Wiersum 2005; Kusters et al. 2006; Belcher & Schreckenberg 2007; Ros-Tonen 2012). Pertinent in these reviews is the role of market forces in driving overexploitation (Lybbert et al. 2004) and/or domestication of high-value species (Dove 1995) working against the ecological objective of conserving the biological diversity of landscapes. However, research has also revealed positive livelihood outcomes in cultivation and co-domestication of forests and trees (Belcher et al. 2005; Kusters et al. 2006). Evolutionary continuums of forest-people interactions, where forests are constantly evolving and being modified in response to management favouring high-value species, have also been proposed (Wiersum 1997a, b). Belcher et al. (2005) argue that if NTFPs are to be useful in lifting people out of poverty, it will have to be
through increased and/or more efficient commercial production and trade. Arnold and Ruiz-Pérez (2001) highlight that what may be considered degradation by conservationists is in fact transformation and possibly improvement of the landscape through local use regimes by those depending on the resource as a livelihood strategy.

Other identified challenges to sustainability and poverty alleviation outcomes include market volatility, which relegates income from NTFP harvesting to short-term opportunities while lack of skills, capital and technology further marginalises the poor in growing markets with increased domination by intermediaries further up the value chain (Belcher & Schreckenburg 2007). Market forces and overregulation by the State can also erode local systems of control over forest resources resulting in uncontrolled harvesting and exploitation of producers through ‘informal’ taxation (Ndoye & Awono 2010).

2.6.3 Interventions in NTFP trade to aid sustainability and social justice

Producers of wild harvested NTFPs are often invisible actors in exploitative value chains. As described by Belcher and Schreckenburg (2007) these value chains are complex often starting with insecure access to low-density resources on communal lands, continuing to intermediaries who organise transport, consolidate volumes, fulfil regulations for export and provide international market acumen, and ending with the highly sophisticated extraction and end-product development companies.

With growing awareness of inequitable trade and overexploitation of resources in NTFP value chains, and continued biopiracy there have been attempts to bring about greater sustainability and social justice. International environmental treaties have led the way with the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the 1992 Convention on Biological Diversity, and the supplementary 2010 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation. ‘Access and benefit-sharing’ (ABS), underlies the latter with the notion that prior informed consent and benefit-sharing agreements should be in place to obtain access to biological resources and associated traditional knowledge.

Additionally, growing consumer awareness has led to the development of a range of voluntary social and environmental certification schemes relating to the sustainable and organic/sustainable sourcing of raw products (Shanley et al. 2008). However, certification requires a high level of organisational

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7 ‘Biopiracy’ is the misappropriation of traditional knowledge and/or genetic resources through unauthorised collection for commercial purposes or through the patent system (Mgbeoji 2006).

8 ‘Biological resources’ includes ‘genetic resources, organisms or parts thereof, populations, or other biotic components of ecosystems with actual or potential use or value for humanity’ (UNEP 1992).
and technical expertise from producers and in the timber industry has not guaranteed a better market price (Belcher & Schreckenburg 2007).

Until recently, NTFPs at the national level were overlooked and poorly regulated by governments. Policy and legislation that has been adopted most often seeks to regulate use to ensure environmental sustainability and less often to protect local communities from exploitation by the industry (Laird et al. 2010a). In addition, regulations are almost always developed and implemented at the national level without consideration of the complex factors that influence trade or input from local institutions and producers (Wynberg & Van Niekerk 2014). This has often resulted in the further marginalisation of harvesters (Granich et al. 2010), new opportunities for corruption and exploitation (Ndoye & Awono 2010) and an increase in unsustainable harvesting (Shackleton 2010). A further challenge is overlapping laws and institutional mandates, and limited government resources and capacity for implementation resulting in confusion over which policies and procedures to follow (Arquiza et al. 2010).

In many cases, NGOs have intervened in an attempt to improve equity for producers and sustainable harvesting. Since public donor funds are the driving force of many NTFP commercialisation efforts (Neumann & Hirsch 2000; Belcher et al. 2005; Marshall et al. 2006), NGO support is often bound by project timeframes and available funding. This renders their role in supporting communities unsustainable (Wynberg & Van Niekerk 2014).

Despite a plethora of research and interventions it remains that the equitable and sustainable trade of NTFPs is elusive. There are complex and multi-dimensional factors that shape access to and benefits from NTFPs that determine the ecological and livelihood outcomes. While NTFPs are viewed by some as a ‘poverty trap’ (Belcher et al. 2005) and indicative of ‘economic precariousness’ (Ros-Tonen 2012) they continue to make significant contributions to national and local economies and are central to rural livelihoods and cultures (Laird et al. 2010a).

2.6.4 Interrogating NTFP governance

The rules, decision-making processes, institutional arrangements and measures that govern access to resources and markets are captured in the governance concept (Wiersum et al. 2014). As stated in the foreword to the Marshall et al. (2006:4) report on successful commercialisation, “Effective local governance and an enabling policy environment are needed to protect the natural resource base upon which rural livelihoods rely so heavily”. Further, with trends in decentralisation and democratisation of natural resource management and the re-appropriation of traditional governance, governance arrangements are changing with resulting effects on access and benefits for resource users. This
renders governance systems complex, context specific and constantly changing (Ros-Tonen & Kusters 2011).

Conceptual thinking relating to the governance of NTFPs has more recently emerged in the literature, although an elaborated analytical framework is still undefined (Laird et al. 2010a, Wynberg & Van Niekerk 2014). Significant contributions to the literature include Laird et al. (2010a) which is a comprehensive work on policy interventions and outcomes in case studies from across the globe. Laird and Wynberg (2007) examined the interface between statutory and customary governance of marula (Sclerocarya birrea) in Namibia and South Africa. In a similar vein, Kozanayi et al. (2014) described the coexistence of customary and statutory systems that govern the use and management of baobab (Adansonia digitata) in Zimbabwe. Importantly, both these works highlight the role of traditional authorities and customary systems in natural resource governance in post-colonial southern Africa. Van Niekerk and Wynberg (2012) and Wynberg and Van Niekerk (2014) reviewed the governance of the value chains of Hoodia gordonii and Pelargonium sidoides in South Africa in relation to contested intellectual property and ABS, which has been the focus of several other pieces of governance literature. Wynberg et al. (2015) used the case studies of baobab and Pelargonium sidoides to investigate the unintended consequences of the formalisation of trade.

Ros-Tonen & Kusters (2011) expanded the concept of governance to include both wild and cultivated NTFPs with a focus on identifying attributes of ‘good governance’ as they relate to property rights, equitable rule of law, market access and the building of partnerships. Wiersum et al. (2014) sought to clarify what distinguishes NTFP governance from the related concepts of forest governance and wild product governance. They define NTFP governance as, “the multi-stakeholder and multilevel process of interactive decision-making and creation of institutional frameworks for the allocation, use and trade of NTFPs” Wiersum et al. (2014:7). They suggest that NTFP governance is set apart from forest governance owing to: (i) its institutional complexity, (ii) the diversity of NTFP production systems and value chains that fall under both forestry (extraction) and agrarian (production) regimes, (iii) access to resources as determined by statutory and customary systems, and (iv) access to markets shaped by statutory and customary systems and voluntary and collective action. In agreement with other aforementioned studies they highlight that the institutional frameworks that govern NTFP harvesting and trade are based on statutory regulation, customary practices and market-based norms involving both local and/or external organisations at various scales. A further observation is that dual systems of self-governance (customary systems) and hierarchical governance (statutory systems) are hybridising to co-governance arrangements (Wiersum et al. 2014).
2.6.5 Situating NTFP governance in context

The literature presented thus far has articulated that the prodigious efforts made to improve the equity and sustainability of NTFP trade is impeded by the complexity of its governance. Resource degradation and poverty continue unabated, yet forest product commercialisation remains pertinent given the estimated 1.2 billion people that depend on forests for their livelihoods to some degree, and the overlap between forests and the world’s rural poor (Sunderlin et al. 2008).

Drawing on political ecology, governments and their environmental agencies often pursue policies that are more concerned with conservation measures being used to control the livelihood and subsistence practices of rural communities than with sustainably managing the use of natural resources (Robbins 2012). Forests often become contested spaces where the rights of resource users are removed or controlled based on sometimes unquestioned assumptions of science to determine what is harvested and how (Peluso 1992). Customary systems are discarded by the State in favour of technocratic systems with the enforcing of statutory regulations which undermine the social and ecological benefits from customary practices (Neumann 1998). At the same time, fickle invisible market forces determine what has value and when. As Sheridan (1995:46) states, political ecology is, “the historical dialectic that determines how and why certain natural resources are converted into commodities at particular places and times, and how commodity production transforms, and is transformed by local ecosystems and local societies.”

The interplay of the State and market underscore the importance of a political ecology perspective for analyses of NTFP governance. As aptly stated by Belcher et al. (2005:7), “Poor people are poor because they have poor access to markets, insufficient human capital, insufficient productive capital, weak institutions, and generally weak bargaining power”. Political ecology seeks to provide insight into the causal power relations and conditions that sustain such inequality in human-environment interactions by bridging natural and social science (Blaikie 1985; Neumann 2005).

Burwell (1995) interrogated the overharvesting of Agave spp. in Mexico using a regional political ecology framework. His ‘bottom-up’ analysis investigated the socio-economic and political contexts at multiple levels influencing land-use practices causing Agave depletion. An explicit political ecology framework was also used by Hansis (1998) to examine the entry of Latino and Southeast Asian immigrants to NTFP harvesting in the Pacific Northwest and the conditions driving unsustainable harvesting and conflict. These were linked to government policy, environmental conditions and world markets. In China, Yeh (2000) reported on how commodification of matsutake mushrooms in Yunnan had resulted in conflicts over access to forests and changed forest management, property and access conventions.
Ros-Tonen (2012) points out that political ecology has rarely been applied in the NTFP literature. In her study on NTFPs as part of a ‘productive bricolage’ process she suggests its use for analysing the multi-scalar and multi-level drivers of livelihood strategies and natural resource use on landscape dynamics. She posits that given the increasing integration of local resource use systems into broader economic and governance networks a local-level analysis of resource use and livelihoods is insufficient. Thus, a theoretical gap exists in using a political ecology framework to put local governance of NTFPs in a broader historical, political-economic, institutional and ecological context. In this way, understanding of barriers to rural and environmental wellbeing can be enhanced.

2.7 Conclusion

This chapter has sought to interrogate the key debates relating to natural resource governance and how objectives of equity and sustainability can best be achieved. Governance is complex and effective governance cannot be induced simply through the design of institutions, the application of normative principles or the allocation of rights. Challenges arise in achieving desirable outcomes when historical processes and the multi-scalar influence of politics and economics are not addressed. The result is the persistence of inequalities of power. Therefore, to understand the complexities of NTFP governance a framework is required that incorporates an analysis of power traced from the local level to the global level and situated in the historical and political-economic context. This research seeks to use empirical evidence in the development of a framework to this end.

The next chapter outlines the methodology and methods used to acquire such empirical evidence.
3. METHODOLOGY AND METHODS

3.1 Introduction

The methodology and methods used to collect and analyse the data for this research are described in this chapter. Given the complexity of non-timber forest product (NTFP) governance, an institutional mode of analysis and political ecology approach were applied using a case study method. Drawing on the perceptions and experiences of the research participants together with inference from documentary evidence the data were systemically coded by emerging themes which formed the basis of the analysis. The case studies were then related to the broader discourses of governance and institutionalism, informed by a political ecology framework to evaluate the influence of the broader historical and political-economic contexts, and the role of power as a mode of explanation for governance arrangements and outcomes.

This research was informed by qualitative data collected through questionnaires, key informant interviews, focus group discussions, participant observation and documentary evidence. Field work was undertaken in the Zambezi Region and Windhoek, Namibia between June and October 2015 with follow-up visits to Windhoek in February 2016 and December 2017. The research was also informed by working as a practitioner for Integrated Rural Development and Nature Conservation (IRDNC) from 2010 to 2014. Research protocols, limitations to the research and ethical considerations are also included in this chapter with supporting documentation for data collection and protocols provided in appendices.

3.2 Methodology

3.2.1 Case study method

According to Yin (2009:2), “In case studies the richness of the phenomenon and the extensiveness of the real-life context require case study investigators to cope with a technically distinctive situation: there will be many more variables of interest than data points. In response, an essential tactic is to use multiple sources of evidence, with data needing to converge in a triangulating fashion”. Thus, given the social complexity of governance, a case study approach is useful as it allows for the incorporation of a variety of evidence including interviews, documents and participant observation. Further a case study method is recommended when answering research questions of a ‘how’ or ‘why’ nature, and when the case study is examining contemporary phenomena, but the relevant behaviours cannot be manipulated (Yin 2009). In addition, where communities are the unit of analysis, the quantity of the communities researched is less relevant than the quality of the data collected as case study research
is not dependent on statistical units of analysis. Eisenhardt (1989) states the approach is especially appropriate in new topic areas with resulting theory that is often novel, testable and empirically valid. As NTFP governance is an emerging discourse this notion supports the use of the case study approach as the method of investigation. This is reflected by the predominance of case studies in research on NTFP governance (Wynberg 2004, 2006; Wynberg & Laird 2007; Van Niekerk & Wynberg 2012; Kozanayi et al. 2014).

Yin (2009:18) defines a case study as, “an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between the phenomenon and the context are not clear”. The method is highly iterative and tightly linked to data (Eisenhardt 1989). This is important as Glaser & Strauss (1967) highlight the development of a testable, relevant and valid theory is dependent on its intimate connection with empirical reality.

In conducting the research, elements of grounded theory were adopted including the use of systematic yet flexible guidelines for collecting and analysing data; simultaneous involvement in data collection and analysis; constructing of analytic codes and categories from data, not from deduced hypotheses; an iterative process of repeatedly revisiting the data and analysis; using comparative analysis; memo-writing to elaborate categories, specify their properties, define relationships between categories, and identify gaps; and, sampling aimed toward theory construction, not population representation (Glaser and Strauss 1967; Strauss & Corbin 1990; Corbin & Strauss 2008; Charmaz 2014).

The case study method, like all research methods, has its limitations. Concerns are focused on validity, reliability and that they provide little basis for scientific generalisation. The counterargument is that case studies are generalisable to theoretical propositions. According to Lipset et al. (1956) the goal is to do a ‘generalising’ and not a ‘particularising’ analysis.

When building theory from case studies the sampling of cases from the chosen population is based on theoretical not statistical reasons (Glaser & Strauss 1967). The cases may be chosen to replicate previous cases, advance emergent theory, or fill theoretical categories and provide examples of polar or extreme types. Eisenhardt (1989) articulates that while cases may be chosen randomly, random selection is neither necessary, nor even preferable. In the research design, devil’s claw was chosen as a case study owing to its possibility to most likely illuminate the research questions on NTFP governance. This was due to devil’s claw being an established commercial NTFP with a complex mix of laws, institutions and actors involved in its governance. Lastly, accessing sufficient and heterogenous data was assured by the widespread harvesting of devil’s claw in the study sites. Self-defined communities were chosen as the unit of analysis as the research was concerned with local
governance. Three communities were purposively selected owing to the unique governance arrangements of each, namely Balyerwa Conservancy, Lubuta Community Forest and the Sachinga community. Theoretical perspectives drawn from adaptive governance, institutionalism and political ecology, were used to inform the selection of these case study sites. Of particular interest in this study was the interaction of bureaucratic and socially-embedded institutions, their historical origins and power relations, and processes of institutional change. Also, processes and outcomes of decentralisation through co-management in relation to adaptive governance and nuances in customary and traditional governance. Therefore, key criteria for selection included a resource extracted from a common pool resource system, the existence of plural legalism in the form of statutory, traditional and/or customary institutions, formal co-management areas and customary areas, and varying degrees of external institutional design for common pool resource management. Balyerwa Conservancy is characterised by formal co-management of wildlife and traditional governance and has received much external support from the State and NGOs through the formation of new institutions for natural resource management. Lubuta Community Forest is also a formal co-management area but for forest resources. In contrast to Balyerwa’s five customary areas, Lubuta consists of only one customary area and has received far less external support. Lastly, Sachinga as an unregistered customary area remains solely under traditional governance and has received little to no external support. The strength of these case studies lies in their heterogeneity which allows for a comparative analysis.

3.3 Methods

According to Eisenhardt (1989), theory-building researchers typically combine multiple data collection methods to make triangulation possible for stronger substantiation of constructs. In this research, a range of qualitative methods were used for the collection of data and included focus group discussions, questionnaires, interviews, participant observation and documentary evidence.

3.3.1 Relationship with Integrated Rural Development and Nature Conservation (IRDNC)

IRDNC is a long-standing local non-governmental organisation (NGO) in Namibia. Formed by a group of conservationists in the 1980s, IRDNC has played an instrumental role in the development and support of conservancies and community forests. Further, from 2010 to 2014 IRDNC was the service provider in the Zambezi Region for the US-funded Millennium Challenge Account-Namibia (MCA-N) Indigenous Natural Products (INP) Activity that introduced the commercial harvesting of devil’s claw to several conservancies and community forests.

During the period 2010 to 2014 the researcher was contracted by IRDNC on several occasions to undertake research, provide technical support and develop products for the conservancies and
community forests in the Kunene and Zambezi Regions. During the INP Activity this included substantial support to the Zambezi Region in the development of resource and business management plans for the harvesting of devil’s claw, as well as training and monitoring support. It was the experience and questions that arose from this work that led the researcher to undertake a doctorate.

Prior to this study, the researcher was therefore familiar with the Zambezi Region, already knew the communities of Balyerwa Conservancy and Lubuta Community and was aware of some of the successes and challenges of devil’s claw harvesting. The researcher also had a good working relationship with IRDNC and MCA-N which greatly assisted access to the communities, supporting documents for the research permit and visas and the provision of additional data and documents.

3.3.2 Introductory meetings and preliminary data collection

Prior to conducting any fieldwork, meetings were held with IRDNC. The purpose of these meetings was to secure the support of the NGO for the research, to coordinate introductory meetings with the harvester communities, and for the researcher to be provided with the most recent information and statistics relevant to the harvesting and trade of devil’s claw in Namibia. In addition, the research was introduced to key individuals at the Ministry of Environment and Tourism (MET), identified by IRDNC as being explicitly linked to devil’s claw management and trade in Namibia. A meeting was also held with the MCA-N INP Activity manager during which general information relating to devil’s claw harvesting and trade in Namibia was relayed. None of the mentioned meetings were recorded however detailed notes were taken. These meetings also informed snowball sampling for key informant interviews.

The first fieldwork trip was undertaken in June 2015 over a period of three weeks. The purpose of this trip was to be formally introduced to the three harvester communities and their associated conservancy/community forest management committees and headmen. At each of these meetings the research intentions were explained, and prior informed consent was obtained. In addition, preliminary data were gathered to inform the development of the questionnaires and interview guides. As the trip was coordinated to coincide with IRDNC undertaking harvester and buying point manager training and registration in Balyerwa Conservancy and Lubuta Community Forest, and the Directorate of Forestry (DoF) distributing equipment in Sachinga, the researcher met with all available harvesters in each community simultaneously. Focus group discussions were also held with management committee members, staff, and headmen (Table 3).

During the harvester focus group discussions, participants were given the opportunity to ask any questions and/or raise any concerns regarding the research in addition to providing preliminary data. Within each conservancy and community forest there was a buying point manager. This was the
person who facilitated the weighing of and pay-outs for devil’s claw to the harvesters and assisted with the harvester training and registration. The buying point manager was also the main point of contact for IRDNC and the buyers. As such, the buying point managers lead the focus group discussions with harvesters to allow for a more participatory, informal approach as they were members of the communities themselves. Institutional mapping was a key aspect of these focus group discussions. In Sachinga, one of the headmen who had been chosen to be the chairman of the community forest facilitated the harvester discussion. Following introductions of the researcher and the study, participatory mapping of the harvesting areas and institutional mapping in the early stages of the focus group allowed for participants to share information as a group with the participants leading the process. Questions around the management of devil’s claw trade and harvesting, and any related issues followed. Discussions with each group were no more than three hours. Depending on the situation, information was spoken, written or drawn. For example, some participants drew in the sand which part of the plant was harvested and demonstrated how to harvest. Flipcharts were also used for participatory resource and institutional mapping.

Focus group discussions were also held with the committee members who manage the conservancy/community forest. It is the management committee that liaises with IRDNC, manages the devil’s claw permit, harvester training and monitoring, signs the contract and negotiates the price with the buyer in their areas. These discussions focused on the importance of the devil’s claw trade to the conservancy/community forest and harvesters, the role of the conservancy/community forest management in enabling devil’s claw trade, and management of the resource. Again, participants sometimes used illustrations, for example to show the decision-making structure of the conservancy/community forest. These discussions were more formal than those held with the harvesters. In general, the committee members were the most educated people in the community and were accustomed to discussions of this nature. The researcher facilitated these discussions to avoid jeopardising the position of the buying point manager.

In the absence of a management committee, a discussion was held with two of the headmen of Sachinga. This discussion was around how devil’s claw is managed given it is not collectively organised and supported by IRDNC as in Balyerwa Conservancy and Lubuta Community Forest. The researcher also facilitated this discussion.
<table>
<thead>
<tr>
<th>Focus group</th>
<th>Group</th>
<th>Location</th>
<th>Date</th>
<th>Type of participants</th>
<th>No. of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mudumu North Complex (Kwandu, Sobbe, Mayuni Conservancies &amp; Masida, Sachona, Lubuta Community Forests)</td>
<td>Kwandu Conservancy</td>
<td>08/06/15</td>
<td>Management committee &amp; staff</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Mudumu South Complex (Dzoti, Wuparo, Balyerwa, Bamunu Conservancies)</td>
<td>Dzoti Conservancy</td>
<td>09/06/15</td>
<td>Management committee, staff &amp; harvesters</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>Balyerwa Conservancy harvester training</td>
<td>Balyerwa Conservancy</td>
<td>12/06/15</td>
<td>Management committee, staff &amp; harvesters</td>
<td>64</td>
</tr>
<tr>
<td>4</td>
<td>Balyerwa Conservancy management committee</td>
<td>Balyerwa Conservancy</td>
<td>15/06/15</td>
<td>Management committee</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>Balyerwa Conservancy staff</td>
<td>Balyerwa Conservancy</td>
<td>15/06/15</td>
<td>Staff</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>Sauzuo harvesters</td>
<td>Balyerwa Conservancy</td>
<td>16/06/15</td>
<td>Harvesters</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>Lianshulu harvesters</td>
<td>Balyerwa Conservancy</td>
<td>16/06/15</td>
<td>Harvesters</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>Lubuta Community Forest management committee</td>
<td>Lubuta Community Forest</td>
<td>19/06/15</td>
<td>Management Committee</td>
<td>6</td>
</tr>
<tr>
<td>9</td>
<td>Lubuta Community Forest harvesters</td>
<td>Lubuta Community Forest</td>
<td>19/06/15</td>
<td>Harvesters</td>
<td>32</td>
</tr>
<tr>
<td>10</td>
<td>Sachinga harvesters</td>
<td>Sachinga</td>
<td>20/06/15</td>
<td>Harvesters</td>
<td>20</td>
</tr>
<tr>
<td>11</td>
<td>Sachinga sub-khuta</td>
<td>Sachinga</td>
<td>22/06/15</td>
<td>Headmen</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>Nongozi sub-khuta</td>
<td>Balyerwa Conservancy</td>
<td>04/09/15</td>
<td>Headmen &amp; other sub-khuta members</td>
<td>5</td>
</tr>
<tr>
<td>13</td>
<td>Mayeyi Traditional Authority</td>
<td>Sangwali</td>
<td>08/10/15</td>
<td>Traditional authority members</td>
<td>3</td>
</tr>
<tr>
<td>14</td>
<td>Mafwe Traditional Authority</td>
<td>Chinchimane</td>
<td>08/10/15</td>
<td>Traditional authority members</td>
<td>6</td>
</tr>
</tbody>
</table>
At times there were participants who did not actively participate in the focus group discussions, this was especially the case in the bigger groups. Also, there were occasions where one participant would try to dominate the discussion, especially men with authority. This was observed and the expression of such authority reflected on in the analysis. Follow-up questionnaires and interviews were held in-person with participants to elucidate further information.

### 3.3.3 Primary data collection

Qualitative data were collected by means of structured questionnaires, key informant interviews, focus group discussions, participant observation and documentary evidence with questions informed by the theoretical perspectives of the research. Data collection centred around identifying the institutions and key actors; examining interactions between institutions and processes of institutional change. Further, questions interrogated the nature of institutions as bureaucratic or socially-embedded, their historical origins and the role of power. The questionnaires and key informant interviews were developed based on the introductory meetings, focus group discussions, and documentary evidence. Interview schedules were adapted as data were collected and new themes emerged, as expected in an iterative case study approach. All data were collected by the researcher in-person; however, translators were required for most questionnaires. Where possible, key informant interviews were recorded with a cell phone. The preliminary list of key informant interviewees was informed by the introductory meetings with MET and IRDNC, and the focus group discussions. Further interviewees were identified using snowball sampling. Beyond interviews, this study relied on informal discussions, participant observation, and attending trainings and workshops. A thorough review of documents including NGO and donor reports, permits, monitoring forms, harvest and export data, and legislation further contributed to data collection and analysis.

Key informant interviews, focus group discussions and observations took place during two fieldwork trips in September and October 2015, totalling eight weeks. In addition, two follow-ups visits to Windhoek were undertaken in February 2016 and December 2017. While collecting data in the Zambezi Region the researcher camped at the conservancy/community forest office or nearby at IRDNC’s camp. The additional key informant interviews with MET, DoF, IRDNC and an exporter were held in Windhoek, Otjuo and Katima Mulilo depending on the location of the relevant offices.

The focus group discussions and interviews with the traditional authorities and headmen were the most difficult to arrange and facilitate, and one discussion was ended prematurely by the participants. This was because they maintained that the community member who had introduced me to the traditional authority was not from the correct suite of headmen. For these discussions the researcher relied heavily on the advice of the management committees and IRDNC, who were also the points of
contact. The focus of these discussions was on land, the role of the traditional authorities and headmen in devil’s claw harvesting and trade, and access and benefits. As a woman and outsider, I was not able to facilitate the discussions directly but did so instead through an appropriate member of the community.

**Questionnaires**

Structured questionnaires were used to gather data from the harvesters using a combination of closed, open-ended and Likert scale questions. The questionnaires had six question themes, namely: (i) demographics; (ii) general governance; (iii) devil’s claw harvesting and sustainability; (iv) devil’s claw governance; (v) permits and price negotiations; and (vi) NGO/service providers. Table 4 provides a brief description of each question theme and the full questionnaire can be found in Appendix I.

<table>
<thead>
<tr>
<th>Question theme</th>
<th>Description of questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics</td>
<td>These questions captured demographic data including age, sex, education, employment and income and household members.</td>
</tr>
<tr>
<td>General governance</td>
<td>This group of questions focused on the traditional authority and headmen, and where relevant, the management committees and staff of the conservancy/community forest.</td>
</tr>
<tr>
<td>Devil’s claw harvesting and sustainability</td>
<td>This theme focused on access to harvesting areas, maintaining sustainability, competition between harvesters, challenges and quotas.</td>
</tr>
<tr>
<td>Devil’s claw governance</td>
<td>These questions captured roles and responsibilities for devil’s claw including permitting, training, monitoring, equipment and payments.</td>
</tr>
<tr>
<td>Permit and price negotiations</td>
<td>Participants were asked about the buyer and price negotiations, expectations and earnings and value-chain awareness.</td>
</tr>
<tr>
<td>NGO/Service provider</td>
<td>Participants were asked about NGO and donor funding dependency in relation to devil’s claw.</td>
</tr>
<tr>
<td>Comments</td>
<td>Participants were asked if they had any further comments and/or feedback.</td>
</tr>
</tbody>
</table>

In Balyerwa Conservancy, the harvesters were accessed by working together with the buying point manager and resource monitor to go to harvester households and ask if they were willing to participate. In total, 40 harvester questionnaires were completed from the four main villages in Balyerwa Conservancy, namely: Sauzuo, Lianshulu, Mambali and Nongozi. In Lubuta Community
Forest, the management committee requested harvesters that were willing to participate to meet at the community forest office at a specified date and time. Due to the prevailing drought and low trading price many harvesters were not interested and only 20 harvester questionnaires were completed. In Sachinga, the chairman assisted the researcher with going from household to household; 20 harvesters participated.

**Key informant interviews**

Key informant interviews were the primary method adopted for the collection of qualitative data. The key informant interviewees fell into thirteen subgroups and a total of 34 interviews were undertaken (Table 5).

**Table 5: Key informant interviewee subgroups and number of participants**

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>No. of interviewees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balyerwa Conservancy management committee</td>
<td>4</td>
</tr>
<tr>
<td>Balyerwa Conservancy staff</td>
<td>7</td>
</tr>
<tr>
<td>Mayeyi Traditional Authority</td>
<td>1</td>
</tr>
<tr>
<td>Balyerwa Conservancy headmen</td>
<td>3</td>
</tr>
<tr>
<td>Sachinga headmen</td>
<td>2</td>
</tr>
<tr>
<td>Lubuta Community Forest management committee</td>
<td>3</td>
</tr>
<tr>
<td>Ministry of Environment and Tourism staff</td>
<td>3</td>
</tr>
<tr>
<td>Directorate of Forestry staff</td>
<td>3</td>
</tr>
<tr>
<td>Ministry of Land staff</td>
<td>1</td>
</tr>
<tr>
<td>National Botanical Research Institute</td>
<td>1</td>
</tr>
<tr>
<td>NGO staff (IRDNC &amp; MCA-N)</td>
<td>4</td>
</tr>
<tr>
<td>Legal Assistance Centre</td>
<td>1</td>
</tr>
<tr>
<td>Devil’s claw exporter</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>35</strong></td>
</tr>
</tbody>
</table>

Purposive nonprobability sampling was applied in the selection of participants informed by grounded theory which does not seek to undertake sampling that is representative of the population but sampling that aids theory construction (Glaser & Strauss 1967). Snowball sampling is initiated by
identifying those persons who meet the criteria for inclusion in the study and then asking those persons to recommend others who they may know who also meet the criteria until all of the recommended participants have been considered. Given the limited extent of the devil’s claw social network in Namibia most of the desired interviews were possible. All participants were interviewed at their relevant offices or at an agreed upon place. Interview times were agreed upon beforehand and were restricted to Monday to Friday 08:00 – 16:00. All interviews were recorded and transcribed to ensure accuracy.

Table 6: Question themes of key informant interviews

<table>
<thead>
<tr>
<th>Theme</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant</td>
<td>Demographic, role and responsibility in relation to devil’s claw</td>
</tr>
<tr>
<td>Resource management of devil’s claw</td>
<td>Permitting, resource inventories, monitoring, threats, status</td>
</tr>
<tr>
<td>Trade of devil’s claw</td>
<td>Permitting, pricing, illegal trade, quality, quantity, local and international market</td>
</tr>
<tr>
<td>Value-chain awareness</td>
<td>Local and international market, pricing, demand and supply</td>
</tr>
<tr>
<td>Traditional authorities and headmen</td>
<td>Roles and responsibilities, power, threats to communities</td>
</tr>
<tr>
<td>Perceived benefits of devil’s claw trade</td>
<td>Country, exporter, conservancy/community forest, harvester</td>
</tr>
<tr>
<td>Perceived barriers or challenges to devil’s claw harvesting and trade</td>
<td>Physical access, permitting and equipment challenges, market access, resource scarcity, land tenure</td>
</tr>
<tr>
<td>Suggestions to improve access to and benefits from devil’s claw</td>
<td>Open discussion based on above</td>
</tr>
</tbody>
</table>

An interview guide was designed for each of the interviewees and provided prior to the interview, where possible. For all subgroups, each interview consisted of an introduction, which included written consent to and recording of the interview, followed by a combination of closed and open-ended questions, and feedback (see Appendix II). The interviews were semi-structured to encourage detailed responses and allow the interviewee flexibility to discuss what they considered pertinent issues. Thus, interviews were structured around the guide but not limited to it. Questions fell into seven broad
themes (Table 6), within which the questions varied depending on the interviewee and not all themes were included in each interview.

The themes included questions about the role of the participant in the management and trade of devil’s claw, resource management and sustainability, trade of devil’s claw, value-chain awareness, perceived benefits of devil’s claw trade, traditional authorities and headmen, perceived barriers or challenges to devil’s claw harvesting and trade, and suggestions to improve access to and benefits from devil’s claw. Interviewees were also asked to name additional persons that should be included in the study. Before and on closing the interview, participants were reminded that at any given point they could stop the interview and choose not to participate in the study.

Informal discussions also proved fruitful sources of information as these were relaxed, spontaneous and took place whilst driving or walking.

*Participant observation and documentary evidence*

Participant observation was adopted as a means of providing supportive data to triangulate findings. These included observations of participants’ positions and communication, devil’s claw management and trade practices including training and registration of harvesters and buying point managers, and weighing and record-keeping of sales. In addition to providing supportive evidence, observation helped build rapport with participants. Observations from and knowledge of interventions by IRDNC were also drawn from the work that the researcher had previously undertaken with Balyerwa Conservancy and Lubuta Community Forest under the MCA-N project. As such, the researcher was also an actor in the governance arrangements the research sought to understand. While this could lead to bias the position of the researcher as an outsider, by race, culture, language and home country lent objectivity in the data collection. Limitations associated with the researcher’s pre-existing relationship with Balyerwa Conservancy and Lubuta Community Forest are described below.

Documentary evidence in the form of reports regarding the resource management, harvesting and trade of devil’s claw in Namibia was made available by IRDNC. All reports related to the Sustainably Harvested Devil’s Claw (SHDC) and MCA-N projects were also reviewed with additional reports and workshop proceedings supplied by the project lead. These documents were consulted in addition to all legal documents pertaining to the harvesting and trade of devil’s claw, as well as permit data, monitoring forms and grey literature as an additional means of triangulating data.
3.4 Data Analysis

Open and axial coding by hand informed by a grounded theory approach was used to categorise the data into concepts and themes. Also known as ‘pattern-matching’ several pieces of information from the same case are related to the theory (Campbell 1975). Throughout the data collection and analysis process, these themes were constructed, adapted and refined, and used to build upon or contest theory (Glaser & Strauss 1967; Corbin & Strauss 2008). The overlap of data collection, coding and analysis is an important aspect of an iterative research approach. This was achieved by maintaining field notes and regularly reflecting on the data when in the field. This helped to form impressions of what was happening in the research and push thinking through the asking of questions. In the grounded theory approach, the researcher is awarded flexibility to adjust data collection (e.g. adjusting questionnaires or interview schedules) to probe themes as they emerge or to take advantage of opportunities as they present themselves. For example, the researcher was invited to attend a government-organised workshop which presented interesting and relevant data. Eisenhardt (1989:539) points out that these adjustments are not unsystematic, “the flexibility is controlled opportunism in which researchers take advantage of the uniqueness of a specific case and the emergence of new themes to improve resultant theory”.

For each site, a detailed case-study write up was undertaken to identify and obtain an in-depth understanding of the unique themes of each case (Pettigrew 1988). Following this within-case analysis, the three sites were then cross-examined to determine differences and similarities in the identified themes. This corroborated the findings from the three sites to determine relationships between the data and theory. According to Strauss & Corbin (1990:278), “Theory consists of plausible relationships proposed among concepts and sets of concepts”. Thus, based on the strength of the relationships, the evidence was then used towards the iterative building of theory. Lastly the emergent theory was compared to the existing literature to determine similarities and conflicts.

3.5 Ethics, research protocols and limitations

3.5.1 Ethics

Ethical clearance was obtained from the Faculty of Science Research Ethics Committee, University of Cape Town (UCT) prior to any research being undertaken. The UCT Code for Research involving Human Subjects requires that all persons involved in the research are given reasonable and sufficient information about the researcher, background to the research and research intentions. Prior informed consent, either in writing or verbally, is required from all research participants with privacy and confidentiality guaranteed. Anonymity is considered as the default situation unless participants provide express permission to use their names and/or positions. These requirements were adhered
to throughout data collection and no physical, psychological or social harm was done to participants, the environment and/or UCT resulting from this research. All interviews were conducted in the participant’s language of choice and all participants were at least 18 years old. Where a translator was required, a member of the participant’s community was used.

3.5.2 Research protocols

Namibia’s MET required a research permit to be obtained for research on devil’s claw which is a protected species. Conditions of the research permit included obtaining prior informed consent from all participants, obtaining permission from the traditional or community-conservation authorities of the case study areas, and provision of a copy of the research findings to MET. A research visa was also required by the Ministry of Home Affairs before entering Namibia for the purpose of conducting research. Both these requirements were adhered to (see Appendix III, IV & V). At the regional level, no formal protocols had to be followed and permission to undertake the research was freely granted by the regional staff of MET.

3.5.3 Data collection and research limitations

There were challenges in obtaining permission to interview several participants. In particular, the traditional authorities, who have strict customs, were suspicious and do not often interact with outsiders or white women at their royal seat. Members of one of the traditional authorities in the study were unwilling to provide any information. While protocols relating to dress code, waiting our turn and greetings by bowing and the rhythmic clapping of hands had been followed, the researcher was not introduced to the traditional authority through one of their senior headmen. Instead introductions were through a community member who was also an employee of IRDNC, that worked with the conservancies under that traditional authority. Despite the IRDNC employee and the traditional authority being well-acquainted he was not from the correct traditional hierarchy. I was told, “First of all you must go to the sub-khuta [headmen], you were supposed to see the sub-khuta [headmen], you should not ask the traditional authority questions first. You should start in the sub-khuta [headmen]”9. Further, the traditional authority members did not feel the questions were of any relevance to them and were not willing to discuss anything further. They stated, “You are supposed to ask those questions to the community because they are the people that are busy harvesting devil’s claw, you must not ask that question at the traditional authority”10. In another traditional authority, while food was offered as a token for participation in a focus group the members made demands for payment at the onset of the discussion. However, this was soon dismissed, “It is just a matter of how

9 Focus Group #14, Mafwe TA, 12th October 2015.
10 Ibid.
to start our relations, so just feel free to continue”\textsuperscript{11}. The extent to which to give in to the demands of the traditional authorities was difficult to assess as the traditional authorities in the Zambezi Region are well-known for their flexing of power\textsuperscript{12}. Thus, the refusal of some traditional authority members to participate was used to inform the research as an example of this.

Government employees were sometimes reluctant to give interviews for fear of the research being critical of their actions, sharing unsolicited information or too busy a schedule. Also, at the time of the study, many harvesters were not harvesting that year and as such some harvesters were not interested in participating in the research. This was because they did not perceive their involvement to be relevant as they were not actively harvesting. To overcome these challenges the researcher requested assistance from IRDNC and/or members of the community to gain access to interviewees, where possible and appropriate. That said, not all desired interviews and focus groups were possible.

The researcher’s pre-existing relationship with Balyerwa Conservancy and Lubuta Community Forest through IRDNC was both an advantage and a limitation. The researcher was aware that participants generally perceived her as an employee of IRDNC, despite the research being introduced as independent of IRDNC. Thus, while the pre-existing relationship facilitated easy access to the case study areas, for the participants themselves the two separate roles as consultant and researcher were blurred and participants may not have answered truthfully as the researcher was still perceived to be associated with IRDNC. Social desirability bias is described by Neumann (1997) as social pressure that results in the under or overreporting of facts to be viewed in a positive fashion. Therefore, participants may have reported what they perceived was the ‘correct’ answer. Also, many participants were seeking assistance and/or wanted answers to the problems they were experiencing. For example, members of a traditional authority stated, “It’s one of your responsibilities as a researcher. That is why we are willing to share information. Even though you are a student when you go back to South Africa, get those clients, those buyers who can buy devil’s claw at a high price, not a low price. That’s why you have been sent here as a researcher. It’s up to you again to report back that there’s a challenge of low prices”\textsuperscript{13}. However, this was used to inform the research as phenomena related to NGO and development interventions. Reflexivity was also exercised by the researcher as part of the research process to assess how interpretations were being influenced by the researcher’s position and views (Berger 2015). Lastly, while a translator was used, detailed answers were difficult to elicit from some participants; this may in part have been due to the language barrier and/or NGO/research

\textsuperscript{11} Focus Group #13, Mayeyi TA, 8\textsuperscript{th} October 2015.

\textsuperscript{12} “There is a much higher degree of assumption of power by the traditional authorities than what there actually is, especially in Zambezi” (Interview #67, IRDNC, 13\textsuperscript{th} October 2015).

\textsuperscript{13} Focus Group #13, Mayeyi TA, 8\textsuperscript{th} October 2015.
fatigue. Research fatigue is the process or state in which individuals or groups tire of engaging in research or resist and avoid participation in any further research (Clark 2008). To mitigate these limitations the researcher sought to spend as much time as possible in the communities and data were triangulated with other forms of evidence.

3.5.4 Ethical considerations and feedback

In retrospect, several ethical considerations were raised. Like development interventions, doctoral research has a limited time span, but the lives and challenges of the participants continue. Current funding mechanisms and academic institutions seek to push students through the system in as timely a fashion as possible with a doctorate achievable in three to four years. Conducting research in communities with such limitations renders not only the quality but the use and ethics of the research questionable. Given the complexity of community-based research and the time required for acceptance it appears counterintuitive. This is especially the case when the researcher is an outsider and allowances should be made for social integration prior to the undertaking of any data collection.

Further the emphasis in doctoral research is to produce something theoretical rather than something practical with more funding geared towards academic publishing than the development of useful, practical products. Greater emphasis on reciprocal exchange as part of the doctorate would ensure there is improved equity in research. This is especially true with the availability of technology and social media that can be used to very powerfully capture and disseminate information through art, videos and photographic collections.

In seeking to understand local communities’ realities, critical self-reflection was stimulated. The researcher questioned where her norms, values and worldviews come from and what they reveal about the society that produced them? Krøvel (2018:59) states, “Science is also a social activity that reveals much about the community where the scientist is coming from”. In his research on communitarian research methods in Latin America he highlights that his understandings of ‘equality’ and ‘inclusion’ from the global North were not aligned with the indigenous people he was researching. This was because the communities did not want to be ‘equal’ or ‘included’ in dominant society, rather they sought to preserve their diversity confronted by a perceived process of cultural homogenisation. In this research, care was taken to be mindful of similar Northern understandings of ‘livelihoods’ and ‘sustainability’.

Feedback on the outcomes of the research was given to all participants and other interested stakeholders. The opportunity will be taken to further engage with participants on their experience of the research process and outcomes. This feedback will be used for the development of useful, practical products identified by the participants and other stakeholders.
3.6 Conclusion

This chapter has described the methodology and methods used to generate and analyse data and develop theory. The research used a case study method adopting elements of a grounded theory approach to iteratively collect and analyse data. This approach was chosen due to the nature of the research questions and need for in-depth examination. Qualitative data was collected from questionnaires, focus group discussions, key informant interviews, participant observation and documentary evidence. Research participants included harvester communities, government officials, NGO employees, traditional authorities and headmen, community management authorities, legal advisors and exporters. The use of multiple sources of data ensured the rigour of the research through triangulation of the data. Experience from previous work in the study area was also drawn on. While some challenges and limitations to the research were faced, these were incorporated as data and mitigated with additional sources of data.

In the following chapter the broader context of governance in Namibia is described including the legislative and institutional framework.
4. POLICY, LEGISLATIVE AND INSTITUTIONAL CONTEXT OF NATURAL RESOURCE GOVERNANCE IN NAMIBIA

4.1 Introduction

This chapter provides an overview of natural resource governance in Namibia at a national level. The national context is necessary to understand the impact of the broader legislative framework, processes and institutions on the local governance of devil’s claw presented in Chapters 6, 7 and 8.

Namibia is guided by a constitution, statutory law and governmental implementing agencies however, the country operates on legal pluralism recognising traditional leadership and customary law. This chapter highlights the progression of policy and legislation from the colonial era to present day. Special attention is given to the development of policy and legislation for conservancies and community forests in the communal areas. The chapter also introduces traditional leadership in Namibia, particularly in the Zambezi Region. Further, a brief description of the influential governmental and non-governmental institutions that govern natural resources in Namibia is provided. Table 7 provides a summary of key legislation for natural resource governance.

Table 7: Key legislation for natural resource governance in Namibia

<table>
<thead>
<tr>
<th>Act</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature Conservation Ordinance No. 4 of 1975</td>
<td>Regulation of wildlife and plants; schedule of protected species.</td>
</tr>
<tr>
<td>Nature Conservation Amendment Act No. 5 of 1996</td>
<td>Provision for co-management and sustainable use of wildlife in communal areas through conservancies.</td>
</tr>
<tr>
<td>Forest Act No. 12 of 2001 &amp; Forest Amendment Act No. 13 of 2005</td>
<td>Provision for co-management and sustainable use of forest resources in communal areas through community forests.</td>
</tr>
<tr>
<td>Communal Land Reform Act No. 5 of 2002</td>
<td>Allocation of customary land rights of up to 20 hectares for personal use by the traditional authority and Communal Land Boards.</td>
</tr>
</tbody>
</table>

4.2 Historical overview of statutory natural resource governance

Most evidence of pre-colonial customary practices for the management of natural resources has been destroyed or significantly altered by colonial conservation practices. Further, there is a dearth of
information regarding natural resource governance specific to the pre-colonial era of Namibia. However, it is widely accepted that pre-colonial natural resource governance was not based on separate categories for natural resource management but rather strategies were devised for conserving natural resources while at the same time guaranteeing access to them. This access was inherently linked to spiritual beliefs and customary practices that reflected the unity of humanity and nature (Murombedzi 2003). Both technological innovations and institutional regulations were developed to manage natural resources within a system of communal land tenure overseen by chiefs and headmen. With the arrival of Europeans, a vastly different colonial model of nature resource management was introduced which stratified natural resources and restricted access to exemplify ‘nature’ (Adams 2003).

In 1884, present day Namibia was colonised by Germany and declared German South West Africa with the Caprivi Strip added in 1890. In 1920 following World War I, German South West Africa was handed to the British-governed Union of South Africa to administer. From the 1920s, the government formalised control of wildlife management by prohibiting any use by local communities with only white officers permitted to hunt under the South West Africa Game Preservation Ordinance No. 5 of 1927 (Bollig 2016). The following decade, the South West Africa Fauna and Flora Protection Ordinance No. 19 of 1937 came into effect, further prohibiting local communities from utilising valuable natural resources. Following World War II, South West Africa was intended to be governed by the United Nations. However, the South African government objected, and South West Africa continued to be administered as a ‘fifth province’ of South Africa.

The South West Africa Native Affairs Administration Act No. 56 of 1954 and provisions of the Development of Self-government for Native Nations in South West Africa Act No. 54 of 1968 formally set apart ‘homelands’ along the Okavango River for, “the sole use and occupation of natives,” referred to as, “Okavangoland”, “Eastern Caprivi” and “Owamboland”. From the early 1900s the then German government had already assigned traditional authorities to administer the land and communities as per customary law as a means of indirect control of the rural population. This included the allocation of land for farming and settlement and granting access to grazing areas and other natural resources such as thatching grass, reeds and poles (Zeller 2000). These black homelands constituted nearly 40% of the country with ownership vested with the State (Jones 1998).

In 1961 the Republic of South Africa was declared with South West Africa remaining as a fifth province. Under the Government of the Territory of South West Africa the Nature Conservation Ordinance No. 31 of 1967 and the Forest Act No. 71 of 1968, for wildlife and forest resources respectively, came into

effect. The Forest Act sought to prevent overharvesting of valuable timber and non-timber forest products (NTFPs) through centralised regulatory processes including the requirement of permits for harvesting and export. This was effective for controlling export of forest resources, but it failed to effectively control harvesting especially in the large communal areas (Strohbach & Cole 2007). Multiple amendments were made to the Ordinance; of particular significance was the Nature Conservation Ordinance No. 4 of 1975. It specified the management and utilisation of game, inland fish and indigenous plants, and listed protected species of wildlife and plants. The Ordinance gave freehold (commercial white) farmers in Namibia ownership to use specially protected and protected species, through a permit system. The legislation also allowed for trophy hunting to take place on commercial farms under certain conditions and commercial trade in certain species of game. These rights did not extend to communal farmers. *Harpagophytum procumbens*, the more valuable species of devil’s claw, was listed as protected under Schedule 9 of the Ordinance. Initially the Ordinance did not apply to Okavangoland, Eastern Caprivi and Owamboland, areas with limited freehold land, but Sections 33 and 34 of the Nature Conservation Amendment Act No. 27 of 1986 extended the Ordinance to all of South West Africa.

4.3 The emergence and status of conservancies

Community-based conservation initiatives first started in the 1980s prior to independence. This was spurred by substantial declines in wildlife numbers and forests being cleared for settlement and agriculture, despite the strict State controls to regulate access. The decline was compounded by challenges to enforcement due to large distances from administrative centres and lack of government resources. In addition, customary practices for allocation of land and management of natural resources were viewed to have eroded creating an open-access scenario (Jones 1998).

Conservationists, predominantly white South Africans with Western technocratic ideologies of conservation, sought to address these issues in Kaokoland, a homeland. They started working together with village headmen to appoint community game guards and established a pilot project to bring tourism revenue as an incentive for conservation of local wildlife (Jones 1998; Owen-Smith 2010). Colonialism had deeply impacted customary natural resource governance, but for the communities living in communal areas, governance of natural resources was still tied into their livelihoods, cultural beliefs and daily practices, and increased autonomy incentivised conservation (Bollig 2016). This inclusive ‘bottom-up’ approach to conservation gained traction and following independence, the new Namibian government and then Ministry of Wildlife Conservation and Tourism sought to remove discriminatory conservation provisions in the communal areas that had prohibited use of wildlife since 1927. From 1990 to 1992 the Ministry with the assistance of the local conservationists, Integrated
Rural Development and Nature Conservation (IRDNC), carried out participatory socio-ecological surveys to identify key issues and problems from a community perspective. These surveys resulted in the development of several localised community-based conservation projects, supported by foreign conservation non-governmental organisations (NGOs), to address these issues and problems. It was realised that policy and legislation needed to be revised (Jones 1998).

The Nature Conservation Ordinance No. 4 of 1975 was amended by the Nature Conservation Amendment Act No. 5 of 1996 such that any group of persons living on communal land could register as a conservancy to provide for, “an economically based system of sustainable management and utilisation of game in communal areas”\textsuperscript{15}. Residents of communal areas could now obtain the same rights over wildlife as commercial farmers including those for specially protected and protected species, with the registration of a conservancy as the condition for gaining those rights. Other policies relating to the Nature Conservation Amendment Act include the Policy on the Promotion of Community Based Tourism (1995), the Policy on Wildlife Management, Utilisation and Tourism in Communal Areas (1995), the National Land Policy (1998), and the Policy on Tourism and Wildlife Concessions on State Land (2007). All seek to link sustainable utilisation of natural resources with rural development by enabling communities in communal areas to derive a direct financial benefit, as well as provide an incentive to conserve natural resources.

According to the Act, for approval by the Ministry of Environment and Tourism (MET), conservancies are required to have a management committee elected by the community to manage wildlife and the funds derived there from and distribute benefits. Conservancies are also required to have a constitution, a list of members and defined geographical boundaries. The Act makes provision that if a conservancy committee should no longer represent the interests of the persons of that conservancy, or is considered incapable of performing their duties, the Minister may revoke the conservancy or suspend the committee. Despite the historical role of traditional authorities in natural resource governance, the Act does not refer to traditional authorities with respect to conservancies. Thus, the amendment has introduced a new local management institution in the communal areas in addition to the traditional authorities, and utilisation of wildlife continues to be regulated by statutory law.

Following the passing of the Amendment in 1996, the first conservancy was registered in 1997, with three more registered in 1998. As these conservancies enjoyed success with substantial growth in income and some employment benefits, the number of communities wanting to register soared. Today there are 86 registered conservancies including over 189 230 members, covering an area of 166 045 km\(^2\) (19.8% of Namibia). In Zambezi Region there are 15 conservancies with approximately

\textsuperscript{15} Nature Conservation Amendment Act No. 5 of 1996, p.2.
31 908 members (NACSO 2019). This includes Balyerwa Conservancy which was registered in 2006. Income for conservancies is predominantly derived from trophy hunting and tourism concessions which are operated by external, white-owned businesses. Overall, the development and implementation of conservancies in Namibia has largely been led by what Murphree (1995) calls the ‘khaki shorts ecology brigade’, that is external conservationists and consultants who are predominantly white, funded by foreign donors and informed by technocratic science and trends in commons scholarship. While conservancies may hunt for own use, the species and number thereof are determined by MET. The financial and in-kind benefits generated from trophy hunting and tourism were evaluated on 77 communal conservancies in Namibia from 1998 to 2013 by Naidoo et al. (2016). It was found that conservancies typically started generating benefits from hunting within three years of formation as opposed to after six years for tourism, and that the main benefits from hunting were income for conservancy management and food in the form of meat for the community at large. The majority of tourism benefits were salaried jobs at lodges.

4.4 The emergence and status of community forestry

When independence was granted to Namibia in 1990, the Forest Act No. 71 of 1968 was still in place. In 1995, to address challenges to production, protection and participation in the forestry sector, the Directorate of Forestry (DoF) started the preparation of a Forestry Strategic Plan. This was done in close association with the Finnish government and resulted in the first Forestry Strategic Plan of 1996. Implementation of the plan was initiated in 1997 through the first phase of the Namibia-Finland Forestry Programme (1997 – 2001). The overall objective was to increase the role of forestry in the socio-economic development of Namibia through continuous development and implementation of sustainable forest management practices (FAO 2004). With the advent of conservancies, a community forest programme was initiated in 1999, and two years later DoF, then part of MET, introduced new legislation for forest resources with the Forest Act No. 12 of 2001. This legislation made provision for the creation of community forests by communities on communal land. Minor adjustments were made to this Act with the Forest Amendment Act No. 13 of 2005.

The Act states that registration as a community forest shall, “confer the rights, subject to the management plan, to manage and use forest produce and other natural resources of the forest, to graze animals and to authorise others to exercise those rights and to collect and retain fees and impose conditions for the use of the forest produce or natural resources; provide for equal use of the forest and equal access to the forest produce by members of the communal land where the community forest is situated; and provide for adequate reinvestment of the revenues of the forest and for the equitable
use or distribution of the surplus”\(^{16}\). It also specifies the role of the management authority to “manage the community forest in accordance with the management plan”\(^{17}\). However, should a management authority no longer represent the interests of the persons of that community forest, the Minister may revoke the community forest or suspend the management authority.

In addition to consent from the traditional authority, the geographical boundaries of the community forest must be specified, and a management plan included. As with conservancies, community forest management is guided by the principles of sustainable utilisation to maintain and improve the forest resource base, and of sharing benefits among all members. However, community forests differ from conservancies in that all residents within a community forest are members of the forest, and have member’s rights, whereas not all residents of conservancies are members. Also, conservancies fall under the jurisdiction of MET, whereas community forests are now under the Ministry of Agriculture, Water and Forestry (MAWF).

The objectives of the forestry sector in Namibia’s Second National Development Plan (2001 – 2006) included close integration of the community forestry programme with other community-based natural resource management programmes. However, it took more than seven years before the Forest Act became operational to provide the legal basis to implement the community forest strategy. This was due to poor institutional capacity, limited resources, and a shift of the Directorate from MET to MAWF in 2005 (FAO 2006). This raised DoF’s profile within the government hierarchy, but lack of community forestry expertise and insufficient resources continued to hinder its efforts to update and implement the Forestry Strategic Plan and increase stakeholder participation in decision-making. In addition, the Forestry Strategic Plan co-developed with the Finnish government focused more on the environment and management than on poverty alleviation (FAO 2006).

In 2004, Phase I of the Community Forestry in North Eastern Namibia project, which later became Community Forestry Namibia (CFN), began. It was funded by the German Development Bank (KfW) and implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). The following year the Ministry adopted the Community Forest Guidelines which sought, “To provide all stakeholders with a standardised, but flexible, method for establishing and managing community forests”\(^{18}\). The guidelines described legal procedures, organisational arrangements and administrative procedures, and specified the roles of government forestry officials, communities and other

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\(^{16}\) Forest Act No. 12 of 2001, Section 15:2(d, f, g).

\(^{17}\) Ibid., Section 15:2(e).

\(^{18}\) Community Forestry Guidelines 2005, p. 4.
stakeholders. In February 2006, the first 13 community forests, including Lubuta Community Forest, were finally gazetted\(^\text{19}\).

Included in the guidelines were stipulations for implementation and monitoring following registration of a community forest. A comprehensive forest resource inventory had to be undertaken and, based on the inventory, an integrated forest management plan developed. The plan needed to be approved by DoF before implementation of the plan by the management committee of the community forest. However, no process for a forest inventory had been approved by DoF therefore a forest inventory technique was developed under the German-led CFN project. GIZ provided financial and technical support for the inventories to be undertaken as the method was scientific and onerous, and based on commercial forestry in Europe. The inventories were incorporated into forest management plans and submitted to DoF; however, the plans were not approved (Schusser 2012). With the end of CFN Phase I in 2008, these steps became a huge hurdle to the progress of community forestry as the appointed project staff left and DoF did not have the capacity or resources to assist communities.

Between 2008 and 2013 communities were largely not supported and many were unable to complete their applications (KfW 2013). Existing community forests struggled to develop as they could not implement their management plans (Schusser 2012). In 2012, community forestry was further complicated by the introduction of a Community Forestry Manual and Community Forestry Toolbox which set out ten milestones to be completed for registration. Again developed by GIZ, the milestones set out requirements that were not reflected in the Forest Act. At the time, the Act did not specify a constitution, benefit distribution plan or forest resource inventory as requirements for registration\(^\text{20}\).

Unexpectedly in March 2013, an additional 19 community forests were announced\(^\text{21}\). CFN Phase II was initiated in December 2013 and continued until December 2015. It was also funded by KfW but implemented by GOPA, a German development consulting firm. One of the stated objectives was, “To support community forests to be established and managed effectively and sustainably, including measures to: formalise procedures and tools for establishing community forests; support the gazetting of selected new and emerging community forests; support forest management activities; harmonise land-uses; identify and provide priority training; and identify and procure essential equipment and infrastructure” (GOPA n.d.). However, no further community forests have been gazetted.

The Forest Regulations of 2015 set out to improve regulation of the harvesting of forest produce. It prescribes minimum education levels for members of the management authority; terms of office and

\(^{19}\) Government Gazette of the Republic of Namibia No. 3590, 14\text{th} February 2006.

\(^{20}\) Forest Amendment Act No. 13 of 2005, Section 15.

\(^{21}\) Government Gazette of the Republic of Namibia No. 5145, 8\text{th} March 2013.
the requirement of a constitution co-developed by the management authority and community forest members. The regulations also stipulate that local communities must obtain authorisation to carry out activities in the State Forest, including harvesting of medicinal plants.

The implementation of community forestry in Namibia as a series of donor-funded projects with poor institutionalisation in DoF has resulted in community forests being considered the poor cousins of conservancies, despite the substantial commercial, subsistence, and socio-cultural value of the forest resources they protect. In recent years there has been an attempt by NACSO to increase the profile of community forests, but they remain overshadowed by conservancies.

4.5 Integration of conservancies and community forests

Many rural communities have expressed interest in establishing both conservancies and community forests in the same area. Besides providing additional economic benefits it also provides an opportunity for integrated ecosystem management. However, legal issues and the integration of management approaches and tools for the use of different natural resources in the same or adjacent areas are challenges for integrated conservancies/community forests. While both conservancies and community forests follow similar approaches, they are based on different laws and regulations, implemented by different ministries and have specific technical requirements for resource management. In addition, not all protected plant species fall under MAWF. Thus, while community forests are awarded rights over forest resources by MAWF, both MET and MAWF have plant species under their regulation. To integrate both institutions in the same area it is necessary to harmonise constitutional arrangements and to develop joint co-management strategies between the multiple actors. The National Policy on Community Based Natural Resource Management (CBNRM) of 2013 continues to recognise the different CBNRM structures but creates the framework for a more integrated approach. Further, in 2015 a document was developed for DoF with tools for integration of community forests with conservancies (Jones 2015).

The three study sites chosen for the research have distinct governance arrangements, including a range of traditional and co-management institutions, NGO and state support, and statutory regulation. Table 8 provides a summary of the legislation, policy, regulations and supporting institutions applicable to each study site.
Table 8: Comparative table of policy, legislation and institutions applicable to each study site

<table>
<thead>
<tr>
<th>Study site</th>
<th>Legislation</th>
<th>Policy</th>
<th>Regulations</th>
<th>Supporting institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balyerwa Conservancy</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Lubuta Community</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Forest</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Sachinga</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
4.6 Traditional governance in Namibia

In Namibia, governance of communal land and traditional use of natural resources remains vested with traditional authorities and headmen. Therefore, to engage with the institutional complexity of each case study in the following chapters it is also necessary to understand the legislative framework that sets out the role and structure of the traditional authorities, together with an historical perspective and current context of the traditional authorities in the Zambezi Region.

4.6.1 Historical overview and status of traditional authorities in Namibia

With the onset of German colonialism in the late 1800s, the traditional authorities were empowered to carry out the will of the Kaiser in the communal areas, which remained the case with the ensuing colonial bureaucracies of Britain and South Africa. This was done under the auspices of assigning the chiefs and their councillors, known as traditional authorities, as the administrators of their land and communities as per customary law. Customary law refers to the rules and norms of that community including but not limited to rules pertaining to the allocation of land for farming and settlement, solving of disputes between community members, marriages, deaths, other traditional ceremonies, and granting access to grazing areas and other natural resources such as thatching grass, reeds and poles (Zeller 2000).

The position of traditional authorities in South West Africa was modelled on South Africa’s Black Administration Act No. 38 of 1927 which set up a separate legal system for the administration of traditional law. It made the proclaimed ‘black’ areas politically separate from the rest of the country, subject only to rule by proclamation, not parliament. In South West Africa, the Police Zone boundary also known as the Red Line separated the ‘African reserves’ in the north from white settlement areas to the south. In 1964, the directive of the Odendaal Commission defined the geographic, economic and political aspects of formal apartheid or ‘separate development’ in South West Africa and led to the establishment of 11 reserves in the 1970s for South West Africa’s African peoples and groups of mixed origin. These homelands had separate governmental structures and were divided along ethnic lines (Hinz 2008). With the exception of the San, all ethnic communities were given some kind of recognition by the apartheid government, however, some traditional authorities were more organised and dominant than others.

The role of traditional authorities was largely determined by the communities whom they governed but besides enforcing customary law, the traditional authorities were also tasked with assisting the police with apprehending persons suspected of criminal offences and assisting the government in executing their policies. In return for maintaining control and providing information, the traditional authorities received financial benefits, police support and more importantly, a designated area of land.
to govern (Bollig 2016). Under this regime, chiefs became traditional elites or politicians which allowed them to collaborate with South Africa’s colonial authorities and still manage to remain credible in the eyes of the people. Thus, the traditional authorities had a bifurcated role governing their communities and serving the colonial government (Mamdani 1996). While the traditional authorities realised their subjugation, they often lacked the education and awareness to fully understand South Africa’s subtle methods of control (Kangumu 2008). Lenggenhager (2018) highlights that while these homelands were to develop on their own, in order to win the loyalty of local inhabitants and particularly the chiefs, the South African authorities needed to sustain a narrative of ‘civilisation’, ‘modernisation’ and ‘development’. The three terms were all used concurrently and interchangeably by South African officials, although their connotations changed over the time. The term ‘civilisation’ signified not only economic endeavours but also more general attempts to ‘uplift’ local people, including the provision of missionary or ‘western’ education. According to Lenggenhager (2018:35), the ‘development’ discourse was a central aspect of South African policy, “especially in relation to the economic development of the so-called homelands, which were — according to the logic of apartheid — envisioned to become self-reliant. South African officials in Namibia therefore increasingly saw their role as being to establish spaces in which Africans were to ‘develop’ on their own. At the same time, with South Africa having been entrusted with holding the territory ‘in trust’, the South African authorities needed to show that their rule in northern Namibia provided no benefit to their own country and that their administration of the area was ‘supportive’ of and ‘non-exploitative’ towards local inhabitants. As such, the discourse and praxis of development became a central focus through which power-relations and questions of governance were discussed and disputed”.

With independence, a presidential commission was undertaken with respect to traditional authorities and it was recommended that the traditional system be retained in the Constitution of Namibia. Further, the administration of justice under customary law was investigated and principles determined for the drafting of a new legislation that would provide for the operation of traditional courts in line with constitutional requirements (Hinz 2008). Thus, provisions for traditional authorities and recognition of customary law as equal to common law were included in the Constitution of Namibia and the Traditional Authorities Act No. 17 of 1995 was passed. The Act was later repealed and replaced with the Traditional Authorities Act No. 25 of 2000 which served to, “provide for the establishment of traditional authorities and the designation, election, appointment and recognition of traditional leaders; and, to define the powers, duties and functions of traditional authorities and

22 Commission of Inquiry 1991: Report by the Commission of Inquiry into Matters relating to Chiefs, Headmen and other Traditional or Tribal Leaders, Republic of Namibia.

23 Constitution of Namibia 1990, Art. 102(5) & 66(1).
traditional leaders”24. The Act states, “a traditional authority shall in the exercise of its powers and the execution of its duties and functions have jurisdiction over the members of the traditional community in respect of which it has been established”25. This change in legislation made possible the establishment of a traditional authority for every traditional community whereas under the colonial regimes the government had given preference to more easily accessible and powerful ethnic communities (Zeller 2000). Thus, in the current context, Namibian traditional authorities have maintained administrative functions in communal areas not under local government. Traditional courts are lower courts that continue operating as they used to, and the Act explicitly recognises the power of traditional authorities to make law26 (Hinz 2008).

The Act defines a traditional authority consisting of a chief or head of the traditional community, and a chief’s or traditional council. The council includes a chairperson, senior and junior traditional councillors, and a secretary. The appointment of all positions is to be regulated by the customary law of the community and on approval by the Minister of Urban and Rural Development. The Act also makes provision for allowances to be paid to the chief, the secretary and no more than six senior traditional councillors and six traditional councillors. The attempt by the State to streamline the structure of the traditional authorities has however been problematic due to the widespread differences between areas (Hinz 2008).

The main functions of the traditional authority in relation to the community it leads shall be, “to promote peace and welfare amongst the members of that community, supervise and ensure the observance of the customary law of that community by its members”27. In addition the traditional authorities are also required to assist the Namibian police in the prevention and investigation of crime, and apprehension of offenders within their jurisdiction; to assist the government, regional councils and local authority councils; and to ensure that the members of his or her traditional community use the natural resources at their disposal on a sustainable basis and so as to conserve the environment for the benefit of all Namibians. As such the Act continues to promulgate the bifurcated role of the traditional authorities established during the colonial era.

Simultaneous to the changes in legislation with respect to the traditional authorities, the policy and legislation for conservancies and community forests was also being developed. It is important to note

25 Ibid., Section 2:2.
26 Section 3:1(a) of the Traditional Authorities Act No. 25 of 2000 in relation to the functions of the traditional authority states that they shall, “ascertain the customary law applicable in that traditional community after consultation with the members of that community and assist in its codification”.
that while the Nature Conservation Amendment Act No. 5 of 1996 did not make any specific reference to the traditional authority, the majority of communities on communal lands are bound to a traditional authority and its rules with respect to the governance of land and natural resources. The Forest Act No. 12 of 2001, however, specifically requires, “the consent of the chief or traditional authority,”28 for approval of a community forest. Irrespective of the legislation, as the de facto administrators of communal land and governors of communities, the traditional authorities have been integrated into the co-management framework as the authorising institution and delineation of boundaries is in most cases done in consultation with that traditional authority as part of the application process. As such, the traditional authorities remain influential.

Namibia has 46 recognised traditional authorities, but traditional leadership varies between communities and areas. The next section reviews traditional leadership in the Zambezi Region.

4.6.2 Historical overview and status of the Zambezi traditional authorities

The Zambezi Region (formerly Caprivi Region) was first part of the Itenge Kingdom of the Masubia (Kangumu 2008). With the arrival of the BaLozi it became part of the first Barotse empire established by the BaLozi. It is unknown whether the BaLozi originate from the area or whether there was a stepped migration south from modern-day Democratic Republic of Congo, which is the widely accepted notion. Nonetheless the Barotse empire was established sometime between the mid-1600s and 1700. While the early Barotse empire was centred around the eastern parts of the now Zambezi Region, they pushed west and south and dominated the areas of the WaYeyi, Mafwe, Mbukushu, Mashi and Masubia. The BaLozi were overthrown in 1838 by the MaKololo Sothos and the area was ruled by a MaKololo chief until 1864 when the BaLozi regained power (Zeller 2000; Kangumu 2008).

The first whites appeared during the second half of the 1800s and the Caprivi Region became part of German South West Africa in 1890, ending BaLozi rule. Colonial rule was established in 1909 when an administrative outpost was set up on the Zambezi River and protection contracts were negotiated by a German colonial army officer with the customary authorities. According to the Mafwe, it was this army officer that divided the Caprivi Region into areas for the Mbukushu, Mafwe and Masubia as they were the most dominant, visible and accessible and included the WaYeyi and Mashi under the Mafwe (Zeller 2000).

As described, under German colonial rule the traditional authorities were given jurisdiction to govern their communities according to customary law as a means of indirect control. Between 1920 and 1929 the region was administered under the Bechuanaland Protectorate. In 1930, South Africa established

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the Eastern and Western Caprivi Zipfel as a Bantu reserve (Lenggenhager 2018). It was administered by South Africa from Pretoria and was not developed, with few whites settling there besides missionaries and trading posts. In the 1960s, basic infrastructure was put in place according to the ‘homeland’ or Bantustan concept that was being applied in other parts of South Africa and South West Africa, maintaining the traditional authorities as administrators when a Legislative Council was put in place in 1972 (Zeller 2000; Hinz 2008). The era from the 1930s to 1960s, was also characterised by intentional displacement of hundreds of Tswana San from their traditional homelands in the Northern Crown Lands region of the Bechuanaland Protectorate. From 1981, the Caprivi Region was administered under the Administration for Caprivians, jointly by the Mbukushu, Mafwe and Masubia, as part of the South West Africa Administration. A land dispute that had been escalating between the Mafwe and Masubia was finally settled in South African courts in 1982, with the Mafwe winning the case. Also, during this time from the 1960s to 1990, Caprivi became central in the Namibian War of Independence between the South African Defence Force and the South West African People’s Organisation. With independence in 1990, the Caprivi Region became one of the political regions with a regional governor and councillors. The Mbukushu, Mafwe and Masubia Traditional Authorities are considered some of the oldest and strongest traditional leadership systems in Namibia, in part, due to the northern parts of Namibia largely being left to traditional governance during the colonial and apartheid eras (Mendelsohn 2008). Following independence, the colonial-constructed regional identity of north-eastern Namibians as ‘Caprivians’ persisted despite being insensitive to the local perspectives and multiple identities of the people in the area (Melber 2009). This collective identification of multiple ethnic communities and cultures spurred the desire for self-determination and the traditional authorities vied for their separate chiefdoms. It was then that the WaYeyi and Mashi ethnic communities sought to establish their own traditional authorities after long dominance by the Mafwe Traditional Authority. Government approved these traditional authorities despite the objection by Chief Mamili of the Mafwe Traditional Authority (Hipondoka 2008). At the same time, the central government continued to cultivate the ‘Caprivan’ geographical and cultural entity and viewed the area as a ‘problem area’. Dissension increased against the dominant political forces governing Namibia, culminating in a secessionist attack on the government in Katima Mulilo in August 1999. The attack, led by the Caprivi Liberation Movement with Chief Mamili of the Mafwe Traditional Authority as one of the leading figures, was suppressed by the Namibian army but it resulted in authoritative control, social ostracisation and economic isolation of the region by the government despite its potential for tourism and trade with neighbouring countries. The government indicted 132 people for treason with the ensuing trial lasting 16 years (Melber 2009).
In 2008, the Ministry of Lands and Resettlement (now Ministry of Land Reform) undertook a mapping exercise of the boundaries of the traditional authorities as limited information was available on the exact boundaries. The Mafwe re-articulated that land issues in Zambezi had been worsened by the government, encouraging communities to establish independent traditional authorities, in particular the WaYeyi and Mashi, who prior to independence, had been integral districts of the Mafwe Traditional Authority. With the approval from government, these two communities had now established their power on land under the influence of the Mafwe with no consultation done in the process nor was the delineation of borders discussed. As such, during the mapping exercise the Mafwe set their borders to include all their pre-independence area of jurisdiction thus only recognising the Mbukushu in the west and Masubia in the east (Hipondoka 2008).

![Figure 5: The Caprivi and Zambezi Regions of Namibia (Map: NACSO)](image)

The Mayeye area, which includes Balyerwa Conservancy, overlaps with that of the Mafwe, which includes Lubuta Community Forest and the Sachinga community, and up to 20 km of border overlaps exist with the Mashi authority to the north and north-east (See Figure 22, 23 & 24). In 2013, the Caprivi Region was renamed Zambezi Region and its western border changed from the Kavango River to the mid-point of Bwabwata National Park (Figure 5). With this change, the Mbukushu Traditional Authority is now part of the Kavango East Region.

4.6.3 Structure and definition of terms of traditional leadership in the Zambezi Region

The explicit albeit ambiguous use of the word ‘customary’ in the legislation allows for variation according to each ethnic community’s historical customary governance structure and as such, the traditional authority structure on the ground is more complex than defined by the Act with the said traditional councillors holding a range of positions with varying power. Similarly, according to the
legislation ‘customary law’ is to be determined by the traditional authority of said community and as such, leaves room for interpretation.

In the Zambezi Region traditional leadership is a multi-tiered hierarchy. Each traditional authority or *khuta* presides over a defined geographical area and is headed by a chief with their seat in a set location. Besides the chief, the traditional authority is made up of several positions. Each of these is a recognised civil servant who receives an allowance from the government. All traditional authorities in the Zambezi Region have next to the chief as the highest authority of traditional governance, a *ngambela* and a *natamoyo*. These can be equated to the prime minister and the first advisor to the chief, who represents the royal family (Hinz 2008). Other positions include *inter alia* senior *indunas* (headmen), *indunas* and the secretary. While the legislation only recognises the traditional authority, on the ground there are subsets of leaders beneath the traditional authorities that are the intermediaries between the traditional authorities and their communities. These *sub-khutas* are smaller areas within a *khuta* which include one or more villages and are presided over by a headman, the area *induna* or *induna silalo*. Not dissimilar to the traditional authority, beneath the *induna silalo* are several other positions.

Election of members of the traditional authority and sub-khutas is in accordance with customary law, which in the case of the Zambezi Region, is based on kinship and community consultation. Certain positions can only be elected from, “*the royal family,*” while other members can be, “*chosen from the general community,*” with positions chosen according to, “*qualities of leadership,*” and, “*a sense of honour.*” As traditional courts settle disputes and determine compensation for misdemeanours, leaders chosen from within families are considered crucial for fair judgement.

For this research, a distinction is made between the traditional authorities and the sub-khutas. While both originate from pre-colonial times under customary law, the intervention of the colonial administrations and post-independence government in customary leadership has given rise to legal pluralism and a complex combination of statutory, traditional and customary governance. In this thesis, all members of the statutory *khuta* will be collectively referred to as the traditional authority while all members of the traditional *sub-khuta* will be referred to as headmen.

### 4.7 Land tenure in the communal areas

Thus far the chapter has given the legislative and policy background to natural resources and traditional authorities. However, both are inextricably linked to land tenure in the communal areas. As highlighted by Hinz (2008:74), “*A chief without land is not a chief,*” which illustrates the importance

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29 Focus Group #13, Mayeye Traditional Authority, 8th October 2015.
of land in traditional governance. Under customary law, land is not individually owned but community members are allocated land use rights by traditional leaders. In the Zambezi Region, customary allocation of land is by the area headman through the village headmen.

Following independence, two land conferences were held at which the administration of communal land and the allocation of rights on communal land were discussed. Subsequently, the government of Namibia introduced the registration of land rights in communal areas through the Communal Land Reform Act No. 5 of 2002. It was adopted to reduce tenure insecurity in the communal areas in which most of the Namibian population lives and serves to, “provide for the allocation of rights in respect of communal land; to establish Communal Land Boards; and, to provide for the powers of chiefs and traditional authorities and boards in relation to communal land.” Prior to this Act, communal land was neither surveyed nor registered as is commercial and freehold land. This created tenure insecurity resulting in self allocation, boundary disputes, land grabbing, low investment and poor land management. According to the Act, “the primary power to allocate or cancel any customary land right in respect of any portion of land in the communal area of a traditional community vests in the chief of that traditional community; or where the chief so determines, in the traditional authority of that traditional community.” Also, any allocation of a customary land right made by a chief or a traditional authority, “has no legal effect unless the allocation is ratified by the relevant board,” thus, “upon the allocation of a customary land right the chief or traditional authority by whom it is allocated must notify the relevant board thereof.” Thus, statutory law vests communal land with the State with allocation by the traditional authorities.

The Communal Land Boards are tasked with land administration in the communal areas together with the traditional authorities. The Ministry of Land Reform supervises the work of the Boards. The customary land right, for personal farming and residential use up to 20 hectares, is valid for the natural life of a holder and can be inherited by surviving spouse and the children if re-allocated by the chief or traditional authority. Upon successful registration of the land, a certificate is issued which gives legal custodianship of the specified area to that community member. The Act also makes provision for lease hold rights, subject to the approval by the Minister.

According to Mendelsohn (2008) there is widespread awareness amongst communities of the need to register their land rights, but considerable confusion exists with regard to the 20-hectare limit on each

31 Communal Land Reform Act No. 5 of 2002, p.2.
32 Ibid., Section 20.
33 Ibid., Section 24:1-2.
property, the type and definition of farmland that may be registered, the size of a hectare, and the number of plots that can be registered as one property. The requirement for the application to be approved by the traditional authority rather than the area or village headmen also hinders progress. Therefore, while registration of land protects community members, many people have not yet registered their land. This has been exacerbated by the slow rate of the Ministry to process applications: of some 70,000 applications submitted since 2003 for customary land rights, only about 4,000 have been approved (Mendelsohn 2008).

4.8 Supporting institutions for natural resource governance in Namibia
The last section of this chapter briefly introduces the major institutions for natural resource governance in Namibia at a national level. Most relevant are the local NGO, IRDNC, and the government ministries tasked with supporting conservancies and community forests.

4.8.1 Government

Ministry of Agriculture, Water and Forestry
The MAWF is mandated with the management of the forest resources of Namibia. Amongst other duties, this includes the gazetting and supervision of community forests through the DoF. Originally under MET, the Directorate was moved to MAWF in 2005 and is also responsible for permitting of the use of forest resources. However, there are exceptions such as devil’s claw which was originally regulated by MET. The National Botanical Research Institute (NBRI) is also within MAWF and serves to promote the sustainable use of Namibian plants. The Economic Botany Programme run by the institute seeks to, “improve the exploitation of indigenous plant resources and the socio-economic role of plants harvested by local communities to benefit the rural poor” (NBRI 2019a). Alongside research and management, the institute also promotes the development of institutional linkages and partnerships. With the recognition of the important contribution that the commercialisation of indigenous natural plant products can make to poverty alleviation, job creation and biodiversity conservation, MAWF supported the creation of the Indigenous Fruit Task Team in 2000, which evolved in 2003 into the Indigenous Plant Task Team (IPTT). The IPPT is a multi-stakeholder forum that seeks to, “develop a coordinated approach and strategy for the promotion of the commercialisation of indigenous natural plant products in Namibia” (NBRI 2019b).

Ministry of Environment and Tourism
The MET is the governmental agency mandated with biodiversity conservation and the promotion of tourism in Namibia. Responsibilities of the Ministry include inter alia environmental management, permitting for consumptive use of wildlife and tourism concessions, and the registration and support of conservancies. In addition, MET is, “tasked with management activities linked to its [devil’s claw]
conservation, including sustainable use of the resource and optimising benefits to those who are involved in its harvesting and trade. To effect all decision-making regarding devil’s claw in Namibia, the national Devil’s Claw Working Group (DCWG), chaired by MET, was established in 1999. Further detail on devil’s claw is given in Chapter 5.

4.8.2 Non-governmental organisations

All conservancies and community forests are supported by NACSO, formed in 2000, which is a consortium of nine Namibian civil society organisations that work together to support, promote and strengthen community-based conservation. NACSO has forged partnerships between Namibian NGOs, the government, and international donor organisations such as the United States Agency for International Development (USAID), World Wide Fund for Nature (WWF) and GIZ.

Integrated Rural Development and Nature Conservation

IRDNC is the local NGO that provides technical, logistical and financial support to conservancies and community forests in northern Namibia, including the Zambezi Region. The organisation originated in the early 1980s, when a group of conservationists initiated community-conservation to curb rampant poaching in then Kaokoland of north west Namibia. The approach was successful in reducing both commercial and subsistence poaching and as such, following independence in 1990, the Namibian government approached IRDNC to advise on the development of new policy and legislation for CBNRM. With the passing of the legislation in 1996, IRDNC supported the registration of the first four conservancies in 1998, including the first conservancy in the Zambezi Region, Salambala. From its inception until 2011, the founding directors led the organisation. Upon their retirement, three co-directors from within IRDNC were appointed. IRDNC currently has over 50 staff members and continues to be the main NGO supporting the registration and development of conservancies and community forests in the Kunene, Zambezi and Kavango East Regions. Described in the following chapters, IRDNC has also been centrally involved in promoting sustainability and equitable trade of devil’s claw in the Zambezi Region and has played an important role in linking the ministries, the communities and the exporters.

Despite the intention for government to lead community conservation, the evolution of the system through IRDNC and the government’s lack of capacity and resources has resulted in deep entrenchment and dependence by many conservancies and community forests on the NGO’s ongoing support. This poses challenges for the NGO as the number of registered conservancies and community

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forests grow and donor funding is increasingly more difficult to obtain after the initial ‘sexiness’ of the programme.

4.9 Conclusion

This chapter has provided the historical and current policy, legislative and institutional context at a national level relevant to the case studies. The legislative framework was shaped by the colonial and apartheid eras but with independence was amended to enable more inclusive co-management approaches for natural resource governance and to re-define the role of traditional authorities for governance in communal areas. The next chapter provides a comprehensive overview of devil’s claw trade, regulation and institutional framework in Namibia.
5. THE ECOLOGY, TRADE, REGULATION AND INSTITUTIONAL FRAMEWORK FOR DEVIL’S CLAW (HARPAGOPHYTUM SPP.) IN NAMIBIA

5.1 Introduction

Devil’s claw (Harpagophytum spp.) presents a case study of non-timber forest products (NTFPs) that is steeped in exploitative history and is contextually complex. Historically a traditional medicine of the San, the roots of the plant are harvested for medicinal use to treat arthritis and rheumatism. Following commercialisation in the 1950s, devil’s claw gained popularity with increasing amounts exported from southern Africa to Europe, peaking in 2002. As a wild harvested plant that is the primary source of income for many rural communities, the widespread harvesting of devil’s claw has raised questions of sustainability. In addition, skewed economic benefits between local producers and European pharmaceutical companies requires social justice to be interrogated.

This chapter provides an overview of devil’s claw including its description, classification and distribution, its traditional and pharmacological use, and its commercialisation and trade. In addition, the chapter outlines the development of sustainable harvesting in Namibia through various donor-funded projects and the current policy framework for devil’s claw.

5.2 Description, classification and distribution

Devil’s claw (Family: Pedaliaceae) includes two species: Harpagophytum procumbens (Burch.) DC. ex MEISSNER (ssp. procumbens and ssp. transvaalensis) and H. zeyheri DECNE. (ssp. zeyheri, ssp. sublobatum and ssp. schiifii) (Ihlenfeldt & Hartmann 1970). It is a weedy, perennial geophyte with annually produced prostrate stems. The stems grow from a vertical, persistent primary tuber that extends into a deep taproot from which lateral secondary tubers grow (Stewart 2009; Figure 6). Varying assessments suggest the secondary tubers can grow as deep as 2 m, with lengths from 4 to 25 cm, and a diameter up to 6 cm (Taylor & Moss 1982; Hachfeld 2003). The leaves of devil’s claw are greyish-green and are irregularly lobed. The flowers are tubular and a mauve-pink colour with a yellow and white throat (Figure 7). The two species of devil’s claw can easily be discerned when alive, but they are very difficult to distinguish when the tubers are dried and sliced. The two, straight thorns and sharp grapple-like hooks of the fruit give devil’s claw its scientific and common name (Van Wyk et al. 2002; Wynberg 2004; Figure 8). The fruit attaches to the fur, tails and feet of animals and is dispersed in this manner. The fruit opens slowly and only 20 to 25% of seeds may establish soil contact in a given year (Stewart 2009). While devil’s claw is the name most widely associated with the plant the common
names for the plant include: grapple plant, wood spider, duiwelsklou, teufelskralle, griffe du diable, sengaparile, kamangu, kanako, and a number of other local names (Stewart & Cole 2005). In Balyerwa Conservancy where SiYeyi is spoken, devil’s claw is called *mashosho*. In Lubuta Community Forest and Sachinga where Sifwe is the predominant language, devil’s claw is called *malamata*.

*Figure 6: Harpagophytum spp. stem and tubers (Photo: Dave Cole)*

*Figure 7: Harpagophytum spp. flower (Photo: Dave Cole)*
Devil’s claw is endemic to the Kalahari region of Namibia, Botswana, South Africa, Angola, and to a lesser extent, Zambia and Mozambique (Ihlenfeldt & Hartmann 1970; Figure 9). *H. procumbens* grows in Namibia, South Africa, Botswana and Zimbabwe whilst *H. zeyheri* also grows in Zambia, Mozambique, and Angola (Cole & Du Plessis 2001). These areas are characterised by a semi-arid climate with high potential evaporation (2 300 – 3 800 mm) and frequent drought. Rainfall is spatially variable and is between 150 and 500 mm per year (Strohbach & Cole 2007), falling in the summer months from November to April (Hachfeld 2003). Across most of the devil’s claw distribution range, availability of water is the greatest limiting factor to plant growth (Schneider *et al.* 2006) although grazing pressure and inter-species competition are also limiting factors. Devil’s claw generally occurs where grass cover is less than 25% and herb cover less than 20% (Hachfeld 2003). The plant tends to be most abundant and locally occurs in the highest densities in degraded open-access areas that are trampled and/or overgrazed and as such, devil’s claw is considered a ‘common weed’ (Phillips 1938; Henderson & Anderson 1966; Nott 1986; Hachfeld 1999).

The growing season of the plant commences in December with the onset of the rainy season and ends between April and June after the plant has produced flowers and seeds and accumulated adequate phytosynthates to facilitate growth (Strohbach 1999). The flowers and leaves of the plant are only visible during the active growing season, but their appearance is dependent on sufficient rainfall. After rains these parts of the plant dry out and disappear, making location of the tubers extremely difficult to the untrained eye.
Given the extensive spatial distribution of devil’s claw, population estimates are incomplete. In South Africa, between the Northern Cape and North West Provinces, densities were estimated at between 11 and 50 plants per hectare, depending on the land tenure and management (Stewart 2009). Similarly, Raimondo et al. (2003) found varying densities in the Limpopo, North West and Northern Cape Provinces ranging from 1 to 500 plants per hectare. In Namibia, Nott (1986) found 5 to 7 plants per hectare but some local populations had up to 1 200 plants per hectare. Similar variability in the density of Namibian populations was found by Strohbach and Cole (2007). Nonetheless the patchiness of distribution and phenologic plasticity of the species makes any regional or national devil’s claw resource assessment complicated, challenging and to some extent inconclusive (NRI 2011b).

Based on average yield estimates and plant densities, it is concluded that production of \textit{H. procumbens} varies from 1.2 to 1 200 kg per hectare (wet weight). With an average weight loss of 90% after peeling, slicing and drying (Taylor & Moss 1982) this translates to production figures of some 120 g to 120 kg dry weight per hectare (Wynberg 2006).
5.3 Traditional and pharmacological use

Indigenous communities of southern Africa, mainly San and Khoi, have used the tubers of devil’s claw for medicinal purposes for centuries (Wegener 2000). Ethnomedical uses include digestive disorders, lack of appetite, dyspepsia, urinary tract infections, fever, sores, ulcers, boils and use as a general health tonic and analgesic, especially during pregnancy (Van Wyk et al. 2002). Traditionally, an infusion of the powdered root in boiling water is prepared and consumed or an ointment applied. It is still widely used by rural communities today.

The use of devil’s claw in allopathic medicine has only been recognised in the last 50 years. In the 1950s, G.H. Mehnert, an early bioprospector who had learnt about the properties of devil’s claw from the indigenous community in the early 1900s, sent samples back to Germany for chemical analysis at the University of Jena (Wegener 2000; Stewart & Cole 2005). The active ingredients are the iridoid glycosides: harpagoside, harpagide and procumbide (Van Wyk et al. 2002). Today, scientific studies have revealed that devil’s claw exhibits analgesic, antioxidant, antidiabetic, antiepileptic, anti-inflammatory, antimicrobial and antimalarial activities amongst others (Mncwangi et al. 2012). It is used for the treatment of rheumatoid arthritis, osteoarthritis, tendonitis, kidney inflammation and heart disease (McGregor et al. 2005; Stewart & Cole 2005). Previously, H. procumbens was thought to have higher concentrations of active ingredients and was the preferred species for commercial extraction. Recent tests on samples of H. zeyheri from the Zambezi Region in Namibia indicated an average harpagoside content of 1.84% m/m (concentration of solute/concentration of solution × 100%); higher than the minimum amount of 1.2% required by the European Pharmacopeia for H. procumbens (Heinrich et al. 2004; Stewart & Cole 2005). H. zeyheri is commonly included in products as an adulterant of H. procumbens (McGregor et al. 2005). In 1998, devil’s claw was listed in the European Pharmacopoeia (Blumenthal et al. 1998). Both species are harvested and traded in Namibia.

5.4 Commercialisation and trade

Following the initial research by the University of Jena in the 1950s, interest in devil’s claw grew. By 1962, the Namibian company, Harpago (Pty) Ltd, started exporting larger quantities of devil’s claw tubers to the German company Erwin Hagen Naturheilmittel GmbH (Wegener 2000). From the early 1990s to 2002, the international market demand increased, with total exports from the range states (Namibia, Botswana and South Africa) peaking in 2002 at nearly 900 tonnes (Strohbach & Cole 2007; Figure 10). In 2001, H. procumbens was the third most popular medicinal plant in Germany, with sales of approximately US$34 million (based on monopreparations and pharmacy sales). In 2002, 57 devil’s claw medicines were being produced by 46 different companies and licensed for the German pharmaceutical market (Kathe et al. 2003). The industry experienced 113% growth between 1999 and
2000, and an additional 59% between 2000 and 2001. The percentage of prescriptions for the treatment of arthritis and for back and joint pain increased from 40% in 2000 to 60% in 2001 and devil’s claw extracts accounted for approximately 74% of rheumatism treatments (Gruenwald 2002).

From 2002 to the present, exports have varied annually ranging from 300 to 700 tonnes (Figure 10). This fluctuating demand for devil’s claw is poorly understood but is attributed to several factors including: issues of sustainability; issues of quality; stockpiling by buyers; inconsistent consumer demand; and inconclusive scientific evidence on treatment effectiveness.

In 2000, the proposed listing of devil’s claw in Appendix II at the Convention on International Trade in Endangered Species (CITES) raised concerns about consumer demand but the proposal was formally withdrawn in 2004 due to the efforts of the range states to address sustainability. However, several natural medicines including devil’s claw, were removed from the German Medical Aid list. Consequently, natural medicine sales in Germany decreased by 50% in that year (Strohbach & Cole 2007). Also in 2004, the European Union (EU) Directive on Traditional Herbal Medicinal Products 2004/24/EC came into force which sought to simplify the entry of traditionally used medicinal products into the EU and ensure quality and safety standards to provide safe information and usage of traditional herbal medicine. All unlicensed products had to be registered by 2011 to remain in the market and registration required proof of at least 30 years of traditional use, 15 of those years in the EU. At the time there was uncertainty as to how the directive would affect the market, however, demand continued to increase until the recession in 2008 (Figure 10). The continued unpredictable annual demand for devil’s claw negatively impacts the supply chain, especially at the local level. Harvester are not able to plan their annual supply and exporters are uncertain of amounts to be purchased for resale to overseas buyers.

Namibia is the largest supplier to the market at 90% (NRI 2011b), followed by Botswana then South Africa. Export figures from Namibia are available only from the time devil’s claw was regulated and export figures from Botswana and South Africa are incomplete (Strohbach & Cole 2007). There is no available export data for Zambia or Angola. However, most devil’s claw harvested in Zambia and Angola is exported illegally from Namibia. The plant is either smuggled across the border to Namibia by harvesters, or informal traders from Namibia buy devil’s claw from Zambia and Angola with Namibian import permits and sell it on to Namibian exporters. Thus, devil’s claw from Zambia and Angola is exported from Namibia as ‘of Namibian origin’. However, regulated sales from Zambia and Angola to Namibian exporters are emerging (NRI 2012a, b).
Figure 10: Summary of total exports of devil’s claw from Namibia 1992 – 2015 (Data: Ministry of Environment & Tourism Namibia, 2015; Compiled by Dave Cole)
Figure 11: Summary of total exports of devil’s claw from Namibia by country of destination 2009 – 2015 (Data: Ministry of Environment & Tourism Namibia, 2015; Compiled by Dave Cole)
Exports are predominantly to France, Germany and Poland but also to Italy, Spain, China, South Korea, the United Kingdom, the US, Switzerland and Brazil. While exports to France have been steadily increasing, the German and Polish markets are more volatile (Figure 11). Several steps characterise the devil’s claw value chain. The plant is mainly exported in raw product as dried slices, then it is either milled or packaged for sale as a tea or herbal supplement or undergoes a greater degree of processing. This includes the extraction of active ingredients through water or alcohol-based extraction methods. Extracts are then manufactured into diverse products, often with patented formulations, before being sold in pharmacies, supermarkets, or health food shops (Wynberg et al. 2009).

A large international price gap has long existed between export prices and overseas retail prices for the end-product. Producers capture 0.45% and exporters 0.7% of value, while processors, extractors and manufacturers capture an immense 68% of value. Retailers obtain approximately 25% of the value of the final price (Wynberg et al. 2009). These discrepancies are due to the lack of long-term purchase agreements between exporters and overseas buyers, negotiating tactics used by the overseas buyers to play out the Namibian and other range state exporters against each other, and lack of organisation (cooperation and coordination) among Namibian exporters (and across range state stakeholders) (NRI 2011b).

Devil’s claw has been characterised by high levels of patent activity since the first patent was published in 1989. Extraction patents have been granted in Europe, Australia, Canada, China, South Africa, Japan, Korea and the US (Wynberg et al. 2009). As no patents exist in Namibia, extraction processes and compositions could be undertaken in-country. However, in many countries it is an infringing act to import the product of a patented process therefore eliminating the major markets Namibia could export to. In addition, the investment cost in industrial phyto and medicinal extracts production and retailing is high and is offset by pharmaceutical companies with throughputs of a range of different products (NRI 2011b). Therefore, collaboration between producers and exporters of multiple plant species is required for extraction and production to be viable in Namibia. No benefit-sharing arrangements have been instituted between commercial companies in Europe and local communities (Krugmann 2001; NRI 2011b).

At the local level, there is also a significant domestic price gap and a large percentage of trade between harvesters, middlemen and exporters is ad-hoc and characterised by exploitative harvester prices, minimal value-adding and few binding contracts (NRI 2011b). Exporters have the advantage in the larger volumes they trade. For harvesters, devil’s claw trades at US$0.50 to US$3 per kilogram, while the final product on the international market retails at US$300 to US$700 per kilogram (Wynberg 2004). Therefore, even as the predominant exporter, Namibia earns at most 4% of the US$100 million
in international trade of devil’s claw products, and despite co-management and benefit-sharing interventions, local harvesters earn no more than 0.5% of the trade (Wynberg 2004; NRI 2014). This stark market power asymmetry is also reflective of the continued exploitative global North-South relationship that has defined the trade since it was initiated 50 years ago.

5.5 Harvester groups and contribution to livelihoods

The commercial trade of devil’s claw in Namibia has largely developed as informal and unorganised in structure and process. The informal nature of the trade has resulted in limited concrete data regarding numbers of harvesters, harvesting sites and amounts harvested. However, it is known that most harvesting takes place in the communal areas of four regions including Omaheke, Otjozondjupa, Zambezi and Kavango East. While there are large resources of devil’s claw on commercial farms and protected areas these are currently not widely accessed (NRI 2011a).

Approximately 5 000 to 10 000 rural people are involved in the trade as primary producers with most devil’s claw harvested in remote open-access communal areas. The harvesters are the poorest members of society, often marginalised, and living under adverse agricultural and socio-economic conditions. These harvesters rely on the sale of devil’s claw to generate a cash income which is extremely important to household food security (Cole 2003). However, the harvesters lack information about the market and are in the weakest bargaining position in the supply chain which often results in exploitation by traders and exporters. Nonetheless, the contribution of devil’s claw to rural livelihoods is significant and is often the only cash income that supplements subsistence farming. Given the low income-earning potential and the extremely labour intensive and dirty, dusty nature of the work, it is perceived as a ‘low status’ activity reserved for the poorest of the poor (Ntseane 1993). Average annual income per harvester is erratic and varies across regions but estimates are N$100 to N$500 (US$16 to US$83) per annum, depending on volumes harvested (Wynberg 2006).

Of the approximately 100 to 200 traders in Namibia, most act as middlemen between the harvesters in the remote, rural areas and the exporters close to Windhoek. This happens via single- or multi-stage trading links and transactions down the trade chain, while some of the traders acted as agents on behalf of exporters (NRI 2011b). Harvesters groups are also used whereby external groups of harvesters are dropped off in an isolated area and are paid by volume of devil’s claw harvested. While devil’s claw is often the primary source of income for harvesters, in general all exporters have additional sources of income and export contributes only 2.5 to 25% of their income (Cole 2003).
5.6 Impact on the resource

Ironically, devil’s claw was considered a nuisance by livestock farmers because the seeds can be easily lodged in an animal’s mouth as it grazes, leading to starvation or dehydration. Additionally, a seed can cripple an animal if it becomes lodged in its foot or hoof. As such it was (and still is) commonly removed from grazing areas (Stewart & Cole 2005). However, as a valuable economic resource in phytomedicine, there have long been concerns about the sustainability of harvesting. Von Willert and Sanders (2004) estimated that 650 tonnes of dried tubers equates to the harvest of 8 to 11 million plants. With such pressure on the resource, sustainable harvesting is paramount to ensuring viable populations for the future.

Unsustainable devil’s claw harvesting methods include: damaging or entirely removing the taproot of plants; harvesting plants that are too young; failing to leave harvesting areas, plant populations, or individual plants fallow long enough for side-tubers to regenerate sufficiently; and failing to re-fill holes around plants after harvesting, thus disturbing the normal growing cycle and threatening plant survival (NRI 2011a). A major barrier to sustainable harvesting is the low prices paid to harvesters as for income to be viable relative to their labour, harvesters must harvest as much devil’s claw from an area as possible (Hachfeld 1999; Wynberg 2004). This is especially the case in open-access communal areas where regulation and monitoring are not easily implemented, and areas are easily accessible to greater numbers of harvesters. This has had negative effects on the health, stability and growth of local plant populations in these areas, with associated risks to the livelihoods of the harvesters (NRI 2011a). Population decline is difficult to ascertain however as other factors such as low rainfall and overgrazing contribute to population variability (Taylor & Moss 1982; Strobach 1999).

Based on monitoring, Raimondo et al. (2003) estimated that 32 to 80% of plants recovered after harvesting. If the primary tuber is damaged recovery of the plant is impeded, further exacerbated by lack of rainfall. Thus, sustainable harvesting methods that leave the primary tuber intact are crucial to maintaining populations. In addition, Taylor and Moss (1982) recommend a ‘quadrant harvesting’ system, whereby different areas are harvested in a four-yearly rotation. Therefore, harvested plants have three years to regenerate before being harvested again. Schneider (1997) applied this method on a farm in southern Namibia and concluded that quadrant harvesting combined with correct harvesting methods, did not endanger _H. procumbens_ or cause genetic erosion.

5.7 Cultivation

Most devil’s claw for commercial trade is wild harvested, however sustainability issues and growing demands from the pharmaceutical industry for an improved, standardised and secure product have driven efforts to cultivate devil’s claw. Attempts to grow plants from seeds have had little
success because the seeds have a high degree of dormancy although hormone treatment and removal of the seed testa resulted in higher germination rates (Ernst et al. 1988; NRI 2011a). However, propagation endeavours have had some success especially on predominately white-owned commercial farms in South Africa and Namibia where projects have been undertaken in collaboration with European pharmaceutical companies and research institutes (Levieille et al. 2001; Levielle & Wilson 2002; Kathe et al. 2003; Von Willert & Sanders 2004; NRI 2011a). These cultivation projects have included attempts at in vitro micropropagation, genetic manipulation to stimulate root production, cloning, tissue culture techniques, intercropping with food crops and cuttings (Wynberg 2006). Trials have also been established to develop cultivation methods suitable for rural communities who lack capital and technology and are located in harsher geographical areas (Kumba et al. 2002).

The effect of successful cultivation on the livelihoods of communities who wild harvest devil’s claw is widely debated (Cole 2003; NRI 2011a). Cultivated devil’s claw could be preferred and thus dominate the export market if large quantities are commercially cultivated. Given that most harvesters face severe agro-ecological, institutional and technical constraints in using such opportunities they would be excluded from commercial production. Under these conditions the expropriation of the rights of the original providers of traditional knowledge regarding devil’s claw would be complete, and only the predominantly white commercial farmers and European pharmaceutical sectors would benefit (Cole & Du Plessis 2001). However, if the participation of rural small-scale farmers was ensured, the resource base could be improved benefitting livelihoods and restoring overharvested areas. As it stands, cultivated devil’s claw remains limited to a small percentage of the total exports (Stewart & Cole 2005; NRI 2011a).

5.8 History and status of interventions to improve sustainability and benefits to harvesters in Namibia

5.8.1 The Sustainably Harvested Devil’s Claw Project

In the 1990s, concerns regarding the sustainability and fair trade of devil’s claw were raised by the Ministry of Environment and Tourism (MET), non-governmental organisations (NGOs) and researchers. In response to these concerns, the Sustainably Harvested Devil’s Claw (SHDC) Project was initiated in 1997 among San harvesters on the pre-independence resettlement farms in the Omaheke Region of Namibia. The main objectives of the SHDC project were to support harvesters to collectively manage and sustainably utilise devil’s claw and facilitate direct sales to exporters. The project was based on the insight that there was a growing congruence of interests linking ethical consumerism in the North to sustainable resource use and socio-economic equity in the South. Thus, by linking the
harvesters to exporters, benefits could be increased which would result in improved management and sustainable use of devil’s claw by the harvesters (Cole & Du Plessis 2001).

To achieve these objectives, a service NGO, the Centre for Research Information in Africa, Southern Africa Development and Consulting (CRIAA SA-DC) assisted harvesters to: organise themselves into registered groups to exchange knowledge about management and sustainable use; conduct surveys, monitoring and record-keeping; and, improve the quality of their product. Harvesters were also aided with equipment, storage facilities, formalising of sales agreements, obtaining harvesting permits and organic certification. To ensure fair pricing, CRIAA SA-DC facilitated direct sales between harvesters and an exporter. Pre- and post-harvest resource surveys were undertaken to set harvesting quotas (Strohbach & Cole 2007).

The SHDC Project (1997 – 2006) was successful in demonstrating the link between improved benefits and better management of the resource. With an increase in prices from N$1 to N$8 (US$0.08 to US$0.60) per kilogram to a minimum of N$12 (US$0.90) per kilogram, compliance with sustainable harvesting methods increased to between 80% and 85% (Cole & Du Plessis 2001). However, the project was limited in scale and scope with only about 1% or less of annual devil’s claw exports from Namibia originating from devil’s claw harvested in the project area (Cole 2008).

Between 1997 and 2006 other steps were taken to improve the sustainability and benefit-sharing arrangements of devil’s claw harvesting. These included inter alia: the first meeting of the Biotrade Working Group in 1998 which led to the drafting of the access and benefit-sharing (ABS) bill; the first Devil’s Claw Stakeholder Workshop in 1999 which led to the establishment of a national Devil’s Claw Working Group (DCWG)35 in 2000; the drafting of a policy in 1999 concerning the use of devil’s claw resources; further ecological studies; the First Regional Devil’s Claw Conference convened in 2002 which focused on trade issues, research needs, cultivation potential, and issues of biological and economic sustainability; the Namibian National Devil’s Claw Situation Analysis (June 2003), the Devil’s Claw Cultivation Workshop (September 2003), and the Devil’s Claw Traders Workshop (November 2003); and in 2007 the establishment of the Interim Bio-prospecting Committee.

PhytoTrade Africa was established in 2001 as the trade association of the natural products industry in southern Africa. Their purpose is to help develop the biotrade industry to be economically successful

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35 Officially constituted in 2000 and chaired by MET, the DCWG’s objective is to effect all decision-making regarding devil’s claw in Namibia.
and also ethical, sustainable and ABS compliant (PhytoTrade Africa 2012). Devil’s claw is one of the products the organisation supports.

Following the end of the SHDC as a donor-funded project, the harvester communities in the SHDC farms continued organised harvesting and trade but with lower levels of support from CRIAA SA-DC. With the growth of community-based natural resource management (CBNRM), conservancies and community forests also developed organisational and resource management frameworks within which management of plant resources like devil’s claw could be integrated along with wildlife. As such, two conservancies in Otjozondjupa Region, Nyae Nyae and N#a Jaqna, and the Kyaramacan Association in Bwabwata National Park in then West Caprivi Region also began organised harvesting and trade of devil’s claw according to the model developed during the SHDC project in 2006, 2007 and 2008 respectively. This included training in sustainable harvesting methods and correct practices for primary processing, monitoring during and post-harvest and resource surveys. In addition, multi-year sales agreements with Namibian exporters with annual price reviews and quota setting, and certification as organic. This now increased the volume of ‘sustainably’ harvested devil’s claw to 10% of exported volumes (NRI 2011b).

5.8.2 Millennium Challenge Account-Namibia Indigenous Natural Products Activity

In 2008, the Millennium Challenge Account-Namibia (MCA-N) Compact was signed between Namibia and the US Government to provide grant funding for public investments in education, tourism and agriculture. Through consultation, MCA-N identified the indigenous natural products (INP) sector as one of the sectors that could contribute to poverty reduction through economic growth. Thus, an INP Activity was included in the Agriculture Project of the MCA-N Compact, which ran from September 2009 to September 2014, to the value of US$6.7 million. The aim of the INP Activity was, “to sustainably increase the number and income of households involved in the INP sector by broadening the number of products, increasing the volume, improving the quality and adding value” (NRI 2011b:vi). Given the success of the ongoing SHDC project, the existing value of the international trade and potential to expand production devil’s claw was identified as a target INP.

The approach to implementation was to work within existing conservancies and community forests to strengthen them in governance, product delivery and knowledge of the market. The delivery of training was the primary action and secondly, the provision of small grants for primary production improvement. While it was known that substantial initial technical assistance and on-going liaison with buyers would be required, it was envisaged that the conservancies and community forests would develop their own capacity to interact with markets or find a suitable mechanism. The main risks
identified were unpredictable market demand, drought, inability to manage sustainable harvesting and unknown technical barriers to trade (NRI 2011b).

A diagnosis of prospective conservancies and community forests was undertaken to determine the suitability of each to participate and included a review of the capacity, resource and market (NRI 2010b, c). Balyerwa Conservancy and Lubuta Community Forest were amongst others selected for participation and IRDNC was the obvious service provider for the Zambezi Region. Other stakeholders consulted during the programme included the DCWG, MET, Ministry of Agriculture, Water and Forestry (MAWF), Indigenous Plant Task Team (IPTT), National Botanical Research Institute (NBRI) and relevant traditional authorities (NRI 2011b).

The MCA-N INP Activity resulted in broad-based expansion of devil’s claw harvesting in the communal areas. Following the conclusion of the compact in September 2014, devil’s claw harvesting has continued in most of the targeted conservancies and community forests, including Balyerwa Conservancy and Lubuta Community Forest.

The last section of this chapter outlines the development of policy and legislation for devil’s claw in Namibia as influenced by the SHDC project, CITES and MCA-N.

5.9 Policy and legislative framework for devil’s claw in Namibia

From the 1970s, sustainability of devil’s claw harvesting became a concern to the Namibian government. This was largely spurred by the economic value of devil’s claw exports and resulted in *H. procumbens* being listed as a protected species under Schedule 9 of the Nature Conservation Ordinance No. 4 of 1975. Under this legislation permits were required to harvest, possess, transport and export the plant. The outcome was the relatively effective regulation of exports but ineffective control of harvesting. In 1986, a study found the system for controlling harvesting was beyond the resources of the regulating body at the time and only 10% of the devil’s claw harvested was being harvested with a permit (Nott 1986). As such the permit requirements for harvesting, possession and transportation were suspended that year and only the permit system for export was retained (MET 2010).

In the 1990s, devil’s claw was listed in the international pharmacopoeia which increased demand triple-fold thereby renewing concerns about sustainability and illegal harvesting (Wynberg 2004). At this time, local NGOs were highly influential on government as they had been working with the communities living on communal land to combat poaching. In addition, they had been working with communities harvesting devil’s claw to improve sustainability. The SHDC project, initiated in 1997, led to a reassessment of the situation and informed the drafting of the Policy on the Harvesting and Export
of *Harpagophytum* Products in 1999. MET also re-introduced a permit system for devil’s claw harvesting.

In 2000, sustainability of devil’s claw was also raised at an international level at the CITES 11th Conference of Parties held in Kenya. Germany proposed that both species be listed on Appendix II. With protests from range states and NGOs, the proposal was withdrawn. However, it was decided that range states and importing states were required to submit information on trade, management, and the biological status of *Harpagophytum* spp. to the secretariat, as well as provide updates at further meetings on implementation of policies and management programmes (Wynberg 2006).

However, in 2003 the effectiveness of the re-introduction of the harvesting permit system was assessed and it was determined that the draft policy was not well understood and that there was a significant level of non-compliance with existing regulations, due to a general lack of awareness in MET and amongst harvesters, characterised by misinterpretations and inconsistencies across regions (NRI 2011b). The permit system was found to be ineffective with respect to improved management of the resource. It was also recognised that the rural communal context in which harvesting takes place was complex and challenging, making effective implementation of harvesting permits difficult.

In 2008, the MCA-N Compact was signed and with the status of devil’s claw as a protected species, MCA-N stipulated that the draft policy should be updated and finalised before implementation of the programme. As such, after a decade of use, MCA-N funded the finalisation of the policy which was signed off in 2010 as the National Policy on the Utilisation of Devil’s Claw (*Harpagophytum*) Products. While the Directorate of Forestry (DoF) had been moved to MAWF in 2005, it was decided to maintain regulation of devil’s claw under MET. The protected plants schedule was amended to include *H. zeyheri* alongside *H. procumbens*. The policy was largely developed by the NGOs who had been working on the various sustainable harvesting projects and who also sat on the National Advisory Committee for Devil’s Claw. The updated policy sought to improve the traceability of devil’s claw and to facilitate the registration of traders and exporters with the Directorate of Scientific Services in MET.

First and foremost, the policy dictates, “*any Namibian citizen is allowed to harvest, trade or export devil’s claw provided this is done within the framework of the Policy*.” The policy stipulates the following for harvesting permits: i) a harvesting season from 1st March to 31st October with no permits issued outside of this period; ii) permits are non-transferable, valid for a single harvesting season in a specified area and may be subject to a quota; iii) permits may be issued to individuals or a group that has obtained permission from the landowner, conservancy, community forest or traditional authority

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36 Interview #69, IRDNC, 14th October 2015.
prior to harvesting; iv) a report is to be submitted to MET within one month of the close of the season with all sales records including amounts sold from which locality, at what prices, to whom and when; v) no new permits will be issued unless the report has been received and there is confirmation of compliance with sustainable harvesting techniques. The policy also specifies the technique for harvesting to be sustainable. With the implementation of collective harvesting in conservancies and community forests, the NGOs negotiated with MET that harvesters could apply for a group permit eliminating the need for each harvester to obtain an individual permit. Also, that permission would be given by the conservancy or community forest chairman rather than the traditional authority.

Regarding trade and export it states, “any individuals or organisations dealing in devil’s claw (trading and exporting) will need to register with MET before applying for a permit,”\textsuperscript{38} which includes a test to verify that the applicant knows and understands the policy and regulations. Registration is valid for three years however permits are only valid for one year. Traders must also keep a register of all transactions, distinguishing between the two species, and should include the amount bought, permit numbers and names of harvesters and origin of the resource. They are also required to complete the details of transactions on the harvesters’ report back forms. To export devil’s claw, in addition to registration a valid export permit from MET must be obtained that specifies the origin of the material. A company registration certificate from the Ministry of Trade and Industry, and a phytosanitary certificate from MAWF are also required. A permit is also required to cultivate devil’s claw or to conduct research on the plant.

While the new Forest Regulations of 2015 did include an annexure of protected plants to which the new regulations pertained, \textit{Harpagophytum} spp. have still not been included. It has been suggested by IRDNC that this may not have been intentional but historical. As such, despite being a forest resource, devil’s claw remains protected under MET.

\textbf{5.10 Conclusion}

This chapter has provided a comprehensive background to the ecology, trade, regulation and institutional framework for devil’s claw. The commercialisation and trade of devil’s claw is complex, and several interventions have been undertaken to improve the sustainability and equity of the trade in Namibia. These include the SHDC Project and the MCA-N INP Activity. Harvesting and trade of devil’s claw is regulated by the State under formal policy. Several institutions support the industry most notably MET, MAWF and local NGOs. The next chapter presents the first case study on local governance of devil’s claw – that of Balyerwa Conservancy.

\textsuperscript{38} Ibid. p. 3.
6. BALYERWA CONSERVANCY

6.1 Introduction

In this chapter, the first case study, Balyerwa Conservancy is presented. Firstly, a general background to the conservancy is given including its history, its management as it relates to community-based natural resource management (CBNRM), and the social context of the members. Next the institutions that govern natural resources in the conservancy are described leading on to a detailed description of the history of devil’s claw harvesting and its governance. The chapter concludes with the outcomes of the current governance arrangements on harvesters and the resource in Balyerwa Conservancy.

6.2 Background to Balyerwa Conservancy

Balyerwa Conservancy is a communal land area covering 223 km² situated in the western part of the Zambezi Region. It is bordered to the north by Mudumu National Park, to the west by the Kwando River (also the border with Botswana), to the south by Nkasa Rupara National Park and to the east by Wuparo Conservancy (Figure 12). The Kwando River is a defining geographical feature as it irrigates the surrounding floodplain which is characterised by marshland, grassland, Kalahari woodland and riparian forest. Situated between two national parks it is rich in flora and fauna with many species traditionally used for food, medicine, building materials, grazing and firewood (IRDNC & NACSO 2016a). However, as Kalahari woodland is characterised by nutrient-poor sandy soils it is ill-suited to agriculture (Mendelsohn et al. 2002).

The conservancy includes five main villages and their surrounding areas, namely: Sauzuo, Nongozi, Mbambazi, Lianshulu and Mambali. These areas, traditionally known as sub-khutas, each have their own set of headmen or indunas under the jurisdiction of the Mayeyi Traditional Authority. Each sub-khuta is a cluster of families that practice collective land governance according to customary boundaries. The five sub-khutas were registered as a single conservancy in October 2006 making Balyerwa Conservancy the eighth conservancy to be registered in the Zambezi Region. With the population predominantly of the WaYeyi ethnic community, SiYeyi is the main language spoken as well as SiLozi and English. It has a membership of approximately 1 069 residents with membership determined by the conservancy’s by-laws.
Figure 12: Balyerwa Conservancy (Map: NACSO)
The governance of natural resources in Balyerwa Conservancy is formally regulated by the Nature Conservation Amendment Act No. 5 of 1996, the Traditional Authorities Act No. 25 of 2000 and the National Policy on the Utilisation of Devil’s Claw (*Harpagophytum*) Products 2010, with the Ministry of Environment and Tourism (MET) and Integrated Rural Development and Nature Conservation (IRDNC) providing management support. With no large-scale agriculture or development and containing charismatic wildlife and beautiful river frontage, Balyerwa like other conservancies along the Kwando River is well-positioned for tourism and hunting and has joint-venture enterprises in both.

The commercial trade of devil’s claw was introduced in 2011 as a collective enterprise by IRDNC through the Millennium Challenge Account-Namibia (MCA-N) programme. Prior to this, five to ten people were informally harvesting and selling devil’s claw to passing buyers (Focus Group #3, Balyerwa Cons., 12th June 2015). Of 20 harvesters interviewed, thirteen used it themselves as a traditional medicine but its monetary value was considered more important than its medicinal value. Due to its wide abundance and small amounts needed for personal use devil’s claw is not regulated by customary laws (Interviews #3 & 7 – 25, Balyerwa Cons., 2015). Devil’s claw harvesting is regulated by MET but is formally managed by the conservancy with all devil’s claw sold to a single buyer under contract. Devil’s claw is harvested within the conservancy boundaries from April to October in the dry season. The number of harvesters and income from harvesting fluctuates greatly from year to year ranging from 34 harvesters earning a total of N$98 650 (US$7 588) in 2015 to 161 harvesters earning a total of N$965 994 (US$74 307) in 2017. Average income per harvester per year ranges from N$949 (US$73) to N$6 000 (US$462) (Data provided by IRDNC for 2015 & 2016; Tjiteere 2017).

The use of plant resources for personal use is not regulated by the conservancy or MET but continues as per customary practices. That is, members seek permission from the relevant headmen in their area and use of natural resources is generally limited to that area.

6.2.1 History of the area pre-conservancy

Prior to being registered as a conservancy, the five areas or sub-khutas that make up the conservancy were governed according to customary law by traditional leaders under the direction of the Mayeyi Traditional Authority and government. The WaYeyi (Yei, Yeyi, Mayeyi or Bayeyi) immigrated to the area in the 18th century but from the 1700s the WaYeyi were dominated by the BaLozi, MaKololo Sothos and the Mafwe. Only after Namibia’s independence in 1990, was provision made by the government for the WaYeyi to form their own traditional authority, formalised by the Traditional Authorities Act No. 17 of 1995. Thus, the Mayeyi Traditional Authority was established giving the WaYeyi their own chief and land. This remains contested by the Mafwe Traditional Authority and some people believe the WaYeyi continue to be discriminated against by the government.
Following independence in 1990 (Figure 13), development in the region has been slow and infrastructure remains limited. This has been attributed to the government’s economic isolation of the area following the attempted secession in 1999 by the Caprivi Liberation Movement (Melber 2009). Further violence in the area between the Namibian army and the Union for the Total Independence of Angola rebels rendered the area unsafe for economic development in the early 2000s (Melber 2009). According to the National Planning Commission’s Poverty Report in 2016, poverty in the Zambezi Region increased by 7.2% from 2001 to 2011 and the region was the second poorest in Namibia with 39.3% of people classified as poor (NPC 2016). Also, the ongoing designation of the land as communal means that whilst land can be registered, title deeds cannot be given, hindering economic possibilities for residents.

6.2.2 Social context of conservancy members

Balyerwa Conservancy is a remote, rural area with almost all residents still living in traditional mud and thatch housing. The WaYeyi are pastoralists and cattle continue to be central to their culture and livelihoods. They are also subsistence farmers growing mainly rain-fed maize and sorghum and have a close association with the river from which they fish and harvest reeds and water lilies (Interviews #3 & 7 – 25, Balyerwa Cons., 2015). Farming is on small plots of less than 20 hectares per person as allowed by the Communal Land Reform Act No. 5 of 2002 which gives residents a customary land right for personal use. With tourism, commercial hunting and devil’s claw harvesting only being recently
implemented, the community remains predominantly agricultural with these endeavours as alternative livelihoods.

Table 9: Summary of people and infrastructure of Balyerwa Conservancy

<table>
<thead>
<tr>
<th>Majority population</th>
<th>WaYeyi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Languages</td>
<td>SiYeyi, SiLozi and English</td>
</tr>
<tr>
<td>Membership</td>
<td>1 069</td>
</tr>
<tr>
<td>Education</td>
<td>Limited, predominantly primary school</td>
</tr>
<tr>
<td>Livelihoods dependent on natural resources</td>
<td>Livestock, crop farming, crafts, non-timber forest products and fishing</td>
</tr>
<tr>
<td>Formal employment</td>
<td>Limited to conservancy and tourism-related employment; management committee and traditional authority members receive allowances</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Communal water points, three primary schools, combined school, conservancy office</td>
</tr>
<tr>
<td>Access</td>
<td>Kongola – 70 km; Katima Mulilo – 120 km</td>
</tr>
</tbody>
</table>

Given the history of the area, formal education is limited. Of 20 harvesters interviewed, five had no education, five had some primary education and ten had some secondary education (Interviews #3 & 7 – 25, Balyerwa Cons., 2015). The staff and management committee members are generally the most educated residents with 14 of 15 members that participated in focus groups having some secondary education (Focus Groups #4 & 5, Balyerwa Cons., 15th June 2015). Employment is also extremely limited, with no harvesters interviewed being formally employed but some residents supplementing their livelihoods with piecework (temporary work) when available, selling of crops and other goods, craft-making and devil’s claw harvesting (Interviews #3 & 7 – 25, Balyerwa Cons., 2015; Table 9). This is supported by Mosimane et al. (2014) who found that economically active household members are predominantly involved in informal economic activities and in most villages, members are involved in agricultural economic activities and other trades that are dependent on natural resources. Other sources of income include government pensions, social grants and remittances. Only committee and staff members of the conservancy, and members of the traditional authority received regular income.
albeit limited to N$1 000 to N$2 000 (US$77 to US$154) per month (Interviews #1, 2, 4 – 6, 26 – 30, 52, Balyerwa Cons., 2015). Balyerwa Conservancy has not yet been electrified and water is collected from communal water points in the villages. There are three primary schools, a combined school and the conservancy office. A tarred road links Balyerwa to Kongola, the nearest town to buy goods which is 70 km away, and the regional capital of Katima Mulilo, 125 km away, where the nearest hospital is located.

To-date conservancy benefits have included donor-support in the form of funding for training, infrastructure and equipment; logistical and technical support from NGOs; conservancy income from trophy hunting and joint-venture tourism; the distribution of meat from own-use hunting; and cash-in-hand income for devil’s claw harvesters. From its inception in 2006, Balyerwa’s total income has grown from N$140 000 (US$10 769) to N$1 829 000 (US$140 692) in 2015 (NACSO 2016). However, like all conservancies in Namibia, the early stream of funding from donor agencies has dwindled dramatically in recent years leaving the conservancy increasingly self-reliant as NGOs have less funds available to provide support. In addition, while conservancy members were initially led to believe they would benefit financially from conservancy income and do occasionally receive meat and cash pay-outs, this form of benefit is limited by the small amount available per member following conservancy expenditure on salaries, running costs and payments to the traditional authority. As a harvester from Lianshulu commented, “The conservancy benefits are less than what we were expecting” (Interview #13, Balyerwa Cons., 20th August 2015). The outcome is that the committees and staff benefit financially (allowances and salaries) and from the development of skills that can also be used outside of the conservancy e.g. bookkeeping; while the conservancy members remain reliant on cash-in-hand enterprises such as the selling of crafts or other natural resource products, including devil’s claw.

6.2.3 Management structure, procedures and membership of the conservancy

For the conservancy to be gazetted, the community required consent from the Mayeyi chief and a boundary delineated in consultation with the traditional authority. The legislation stipulates that there must be a management committee that is representative of the community who is responsible for governance of the conservancy. However, the management committee cannot include people that are already members of the traditional authority. Further the management committee is to be guided by a formal constitution that is developed in consultation with the community. While the management committee (11 members) does not include members of the traditional authority it is comprised of area representatives and trustees from each of the five sub-khutas. A member of the Mambali sub-khuta described, “The trustees are part of the sub-khuta, they are indunas [headmen],” whereas the area representatives, “They can choose anybody from the community” (Interview #52, Mambali sub-khuta,
4th September 2015). These area representatives are community members that have been nominated and democratically voted for by the community members of each sub-khuta. In addition, there is a chairman who is democratically voted for by all members of the conservancy from candidates nominated by each sub-khuta together with its community members. Quorums (5/11 members) and terms of office (three years) for management committee members are set out in the constitution and while committee members may not receive a salary, they may receive an allowance as agreed by the conservancy members at the annual general meeting (Focus Groups #4 & 5, Balyerwa Cons., 15th June 2015).

In addition to the management committee, Balyerwa also has an executive committee (four members) and a suite of staff (26 members). The executive committee includes a manager, a treasurer, an enterprise officer and a secretary who implement management, oversee administration and staff, and manage the finances. Staff is made up of community rangers, a field officer, resource monitors, security officers, cleaners and an environmental educator (Figure 14). Both the staff and executive committee members are selected through an interview process with the management committee and IRDNC, and earn a salary as determined by the management committee (Focus Groups #4 & 5, Balyerwa Cons., 15th June 2015).

![Management structure and staff of Balyerwa Conservancy](image-url)
To become a member of the conservancy it is necessary to be resident in the conservancy for a minimum of five years. Residing in the conservancy by an outsider requires the permission of the relevant sub-khuta for that area, and the permission of the Mayeyi Traditional Authority. Benefits from the conservancy to the members are determined by the management committee and approved by quorum at the annual general meeting.

6.2.4 Relationship with MET

When it comes to the governance of wildlife resources in Balyerwa, the conservancy must adhere to the Nature Conservation Amendment Act of 1996 and the conservancy receives support from MET who oversees natural resource management in the form of joint monitoring and the issuing of tourism concessions, hunting quotas and permits. When devil’s claw harvesting was introduced in 2011, Balyerwa already had a long-standing relationship with the staff of the regional office of MET at Katima Mulilo, and conservancy management and staff were familiar with the notion of formal monitoring and permit procedures. The MET regulates devil’s claw harvesting through the issuing of permits and has undertaken joint monitoring of devil’s claw harvesting areas together with the conservancy and IRDNC.

6.2.5 Relationship with IRDNC

Following the registration of the first four conservancies in Zambezi Region in 1998 and 1999, Balyerwa expressed interest in becoming a conservancy and IRDNC provided the necessary technical and financial support for their registration. IRDNC together with MET continues to provide management support today. The relationship with IRDNC was deepened in 2011 when devil’s claw harvesting was introduced as an economic opportunity and an additional suite of IRDNC staff and funding was provided. While there are several individuals from IRDNC that work with Balyerwa, there were two key individuals that provided support specific to devil’s claw. However, since 2017, lack of funding has resulted in no dedicated support for devil’s claw activities in the Zambezi Region beyond the facilitation of the buyer’s contracts.

The support provided by IRDNC has focused on three main elements: (i) training of committee and staff members to undertake their tasks effectively; (ii) guiding institutional and management processes; and, (iii) enterprise development and management including tenders and contracts. The linking of the conservancy to external markets is crucial to the conservancy’s survival and is the element on which the conservancy is most dependent on IRDNC. Dependency also extends to the solving of problems, as remarked by a Balyerwa staff member, “When we hand a problem to IRDNC they should solve it, even if they don’t involve us, they should tell us how the problem has been solved” (Interview #29, Balyerwa Cons., 27th August 2015). This positioning of IRDNC makes them extremely
influential in Balyerwa as IRDNC’s support is dependent on the conservancy implementing formal procedures which are largely pre-determined by the NGO, for example, management plans, monitoring forms and budgets. At the same time, IRDNC is to an extent dependent on conservancies for leveraging project funding from donors and thus, there is a mutual dependency.

6.2.6 Traditional authorities and sub-khutas

A general description of the traditional authorities and sub-khutas in Zambezi Region is given in Chapter 4. The Mayeyi Traditional Authority has its seat in Sangwali in neighbouring Wuparo Conservancy and oversees five sub-khutas in Balyerwa Conservancy (Figure 15). According to members of the Mayeyi Traditional Authority, sub-khutas and conservancy, the traditional authorities have three main roles: (i) they are the primary decision-makers; decisions affecting communities within a traditional authority area first require approval by the traditional authorities before being voted on by those communities; (ii) they are the governors of the land; (iii) and they resolve disputes that cannot be resolved by the sub-khuta. According to a member of the Mayeyi Traditional Authority, “The traditional authority has the power to make sure that whatever activities are taking place in the forest, they have to know what is going on there. It is their role to know any activities being done there before it can be done” (Focus Group #13, Mayeyi TA, 8th October 2015). Historically, it was the traditional authority that decided the community could register as a conservancy. Similarly, today all activities relating to the utilisation of natural resources to generate conservancy income, must first be authorised by the Mayeyi Traditional Authority.

![Figure 15: Structure of traditional leadership in Balyerwa Conservancy](image)

However, once agreed the responsibility for managing those natural resources, including devil’s claw, “lies with the conservancy and the sub-khuta, not the traditional authority,” as explained by a member
of the Mambali sub-khuta (Interview #52, Mambali sub-khuta, 4th September 2015). This was reiterated by a member of the Liashulu sub-khuta who remarked, “the khuta [traditional authority] just get the report” (Interview #50, Liashulu sub-khuta, 4th September 2015). The traditional authority received regular concession fees and a monthly fee was paid directly to the chief from conservancy earnings, which included contributions from devil’s claw. The conservancy had no legal obligation to pay the traditional authorities but to ignore the traditional authorities would threaten the existence of the conservancy. Figure 16 depicts the relationship between the institutions involved in natural resource governance in Balyerwa Conservancy.

Figure 16: Institutions related to natural resource governance in Balyerwa Conservancy

6.3 Devil’s claw harvesting in Balyerwa Conservancy

6.3.1 History of devil’s claw harvesting

In 2009, the Indigenous Natural Products (INP) Activity through the MCA-N Compact made available funds from the Millennium Challenge Corporation for implementing the harvesting and trade of devil’s claw in 12 selected conservancies and community forests in the Zambezi Region (see Section 5.8.2). At the time there were a few individuals harvesting devil’s claw to sell of their own accord but no conservancy organised harvesting activity. According to the harvesters these individuals, “had no permit and got permission from no one,” and were selling to passing buyers who on average paid N$8 to N$ 12 (US$0.60 to US$0.95) per kilogram (Focus Group #3, Balyerwa Cons., 12th June 2015). According to the management committee, the opportunity for members to earn cash-in-hand from
harvesting devil’s claw through the conservancy was well-received and the conservancy, in consultation with the traditional authorities, agreed to manage its implementation (Focus Group #4, Balyerwa Cons., 15th June 2015; NRI 2010c).

Having been supported by IRDNC since before the conservancy’s registration in 2006, Balyerwa had long been exposed to the formal procedures of IRDNC for natural resource management. The community members had been open to these external procedures as they did not come into direct conflict with their beliefs and practices and adhering to these procedures enabled the receiving of funds for training and infrastructure. As articulated by a staff member of Balyerwa, “IRDNC plays a big role between conservancies, MET and donors. Without IRDNC we wouldn’t access many things,” and further reiterated by another staff member, “There are many donors that have donated things to the conservancies through IRDNC. The money doesn't come straight to the conservancies, it goes through IRDNC” (Focus Group #2, Mudumu South Complex, 9th June 2015). IRDNC’s agenda of conservation by commercialisation resonated with the community wanting satisfactory livelihoods, “We need development, more jobs so benefits can be increased in the community,” (Focus Group #2, Mudumu South Complex, 9th June 2015), whilst maintaining daily practices of traditional use of resources, “There has been no change in the conservancy, when I go from here to another place I have to see that induna [headman] and tell him I need to cut reeds or catch fish, and if he agrees then I can go” (Interview #50, Lianshulu sub-khuta, 4th September 2015).

By 2011 when devil’s claw harvesting was introduced, Balyerwa had adopted the external procedures of monitoring and reporting for the management of wildlife. They had also developed a formal management plan and constitution for the conservancy, as required by law (NRI 2010c). As a donor-driven project and with devil’s claw listed as a protected species, the harvesting and trade of devil’s claw in Balyerwa was subject to the conservancy following further formal procedures introduced by IRDNC such as the training and registration of harvesters, monitoring and record-keeping as summarised in Table 10.

### 6.3.2 Harvester training, permitting and monitoring

From 2011 to 2014 MCA-N through IRDNC provided intensive financial, technical and logistical support with the aim of creating ‘virtuous value chains’ (sustainable, traceable, high quality, fairly traded) (NRI 2010a). All conservancy members interested in harvesting were trained in sustainable harvesting techniques, were registered as harvesters with the conservancy and received basic equipment (a knife, shade net and sacks) to harvest, slice and dry the devil’s claw to be sold as a raw product. IRDNC also negotiated with MET to acquire group permits for harvesters in the conservancy rather than individual permits which cost N$50 (US$4) each. This also served to enable the conservancy committees and
staff to assume responsibility for sustainable harvesting and quality control. To encourage sustainability, a formal natural resource management plan was co-developed by the conservancy and IRDNC, the committees and staff were trained in resource monitoring both during and after the harvest, and monitoring was undertaken jointly by the conservancy, MET and IRDNC. In Balyerwa, while the game guards were also trained in monitoring, the two resource monitors were charged with the responsibility of monitoring the harvesters and maintaining monitoring records using IRDNC’s prescribed monitoring forms. To ensure quality, the harvesters were taught by IRDNC how to slice, dry and store the devil’s claw, and the committees and staff were taught how to distinguish between poor and good quality (pers. obs. 2011 – 2014, see Chapter 2).

6.3.3 Quotas, contracts and pricing

As fair trade was an important aspect of the programme, to eliminate loss of income to a middleman and secure better pricing, IRDNC facilitated the choice of a single, reputable buyer that was also an exporter. An exclusive three-year contract with annual price reviews and set quotas was put in place for the period 2011 to 2013 (pers. obs. 2011 – 2014). The selection of the buyer was influenced by the MCA-N INP project leader’s history with devil’s claw harvesting and trade in another region of Namibia. As explained by IRDNC, “The head of INP in MCA-N, and Buyer Red, had worked together in Tsumkwe for many years where CRIAA SA-DC was operating and he recommended we take Buyer Red as one of our partners,” (Interview #66, IRDNC, 5th October 2015). Included in the contract were two prices: the price per kilogram paid to the harvesters, and the price per kilogram paid to the conservancy for ensuring sustainability and good quality, which was effectively a ‘management fee’.

A basic business management plan was also co-developed by the conservancy and IRDNC in which the conservancy committees and staff were encouraged to start budgeting the management fee to cover the costs of maintaining the enterprise when funding came to an end in 2014 (pers. obs. 2011 – 2014).

A system of traceability also needed to be implemented to ensure sustainability, fair trade and quality control. At the start of the season each registered harvester received a harvester card with a unique harvester number. On specified days a ‘buying event’ took place at the conservancy office whereby harvesters brought their bags of devil’s claw to be checked and weighed. The weight, the harvester number, and the amount owing to the harvester were recorded in a sales register. This process was handled by one of the resource monitors who was also appointed as a ‘buying point manager’. Once weighed and recorded the devil’s claw was stored in a hygienic storage unit provided by IRDNC with MCA-N funding. The devil’s claw would then be collected by the buyer, transported to his facility and checked for quality. Payments were then made to the harvesters through the buying point manager as per the sales register (pers. obs. 2011 – 2014).
The implementation of all these processes took place between 2011 and 2014 with IRDNC providing intensive technical support and training. In addition, IRDNC provided much logistical support such as obtaining the permits, making the harvester cards, sourcing and purchasing equipment, transporting devil’s claw, coordinating meetings with the buyer, providing monitoring forms and training materials. Thus, the management committees and staff were not yet accountable to harvesters as they were being assisted by IRDNC, who were working to meet donor indicators. Following the completion of MCA-N in September 2014, while IRDNC was still able to provide ‘light-touch’ support, the management of devil’s claw harvesting became the responsibility of the conservancy (pers. obs. 2011 – 2014, June – October 2015). While the conservancy faced significant challenges in 2015 and 2016 due to drought, price fluctuations and communication breakdowns, the conservancy has continued to harvest.

Table 10: External procedures introduced to Balyerwa Conservancy

| Sustainability | Training of harvesters in sustainable harvesting techniques |
| Formal monitoring with prescribed forms |
| Formal resource management plan |
| Quality | Training of harvesters in devil’s claw processing |
| Management fee to promote sustainability and quality |
| Traceability | Harvester registration with the conservancy |
| Harvester cards with unique harvester numbers |
| Sales register |
| Trade | Single buyer |
| Three-year sales contract |
| Annual price review |
| Group permits |

6.3.4 Harvester numbers and income

Devil’s claw harvesting in Balyerwa has been subject to major fluctuations in both harvester numbers and income (Figure 17; Table 11).

In 2011, the first year of harvesting, 59 harvesters earned a total of N$88 107 (US$6 777) from 4 993 kg of dry devil’s claw. At prices of N$17 (US$1.30) and N$18 (US$1.38) per kilogram, each harvester
earned an average of N$1 493 (US$115). The following year, 2012, saw an increase to 142 harvesters that earned N$334 626 (US$25 740) in total from 17 793 kg dry devil’s claw. This equated to an average of N$2 357 (US$181) per harvester at N$18 (US$1.38) per kilogram (Table 11). While a quota of 10 000 kg had been agreed upon by IRDNC and the buyer, the additional 7 793 kg was still bought by the buyer. However, monitoring undertaken following the close of the season showed Balyerwa’s harvesting to be largely unsustainable and the decision was taken by the management committee to prohibit harvesting in 2013. This decision was also influenced by MET proposing a moratorium for three years based on two internal reports from MET staff in the region who had sustainability concerns. This was queried by IRDNC who had data that indicated a mix of good and unsustainable harvesting practices in the Zambezi Region, but overall, an improvement. MET decided against the moratorium in mid-May (NRI 2013a, b).

Figure 17: Fluctuations in average harvester income (N$) in Balyerwa Conservancy from 2011 – 2017 with annual number of harvesters (No harvesting was allowed in 2013 due to unsustainable harvesting in 2012; Data: IRDNC and NRI)

At the end of 2013, the contract with Buyer Red concluded. As described a tender was put out and a new contract signed with Buyer Yellow who offered a significantly higher price of N$29 (US$2.23) per kilogram. Harvesting was re-instituted in 2014, and 109 harvesters earned a total of N$332 694 (US$25 592). While significantly less devil’s claw was harvested than the previous year Buyer Yellow had been explicit that he would not buy more than the agreed quota, thus when the quota was reached at the second buying event the season was closed (Becker 2015). Nonetheless the higher price resulted in a greater average income per harvester of N$3 052 (US$235).
In 2015, drought significantly impacted harvesting. Not only were the plants more difficult to locate but stunted regrowth of the tubers diminished the amount available to harvest. According to IRDNC, “In Zambezi, the decrease in harvesting, a lot of that is due to rainfall. They just can’t find the plants, I was there in March/April and it just didn’t rain and we didn’t see the plants” (Interview #69, IRDNC, 14th October 2015). Lack of interest was further exacerbated by the decrease in price per kilogram of dry devil’s claw from N$29 (US$2.23) in 2014 to N$25 (US$1.92) in 2015. The management committee also sought to better control the quota and instituted a quota per person which made harvesting unviable for most harvesters. Thus, at the time of the research, harvester numbers and prices were at their lowest and only 3 946 kg of dry devil’s claw was harvested with an average income per harvester of N$2 901 (US$223).

![Figure 18: Fluctuations in harvester numbers in Balyerwa Conservancy from 2011 – 2017 with annual price (N$) per kilogram of devil’s claw (No harvesting was allowed in 2013 due to unsustainable harvesting in 2012; Data: IRDNC and NRI)](image)

With the break in the drought in early 2016 and a better price of N$29 (US$2.23) per kilogram, there was a resurgence in harvester numbers to 82 (Figure 18). However, as the tubers had not yet recovered from the drought, a total of only 2 669 kg was harvested with an average harvester income of N$949 (US$73). At the end of 2016, the sales contract with Buyer Yellow expired. In 2017, a record price of N$34 (US$2.62) per kilogram was offered as the two buyers competed for the market in the Zambezi Region. It was also the first year that IRDNC did not have a dedicated staff member monitoring devil’s claw during the harvesting season due to lack of funding (IRDNC staff member, pers. comm., 10th April 2018). Harvester numbers were at their highest at 161 and a total of 26 466 kg
was harvested, more than double the quota (Figure 19). The buyer and conservancy both disregarded the quota and all devil’s claw was bought resulting in an average income per harvester of N$6 000 (US$462). That is, the buyers have a powerful effect on the sustainability of harvesting as the conservancy only adhered to harvesting quotas when enforced by the buyer.

Table 11: Summary of harvesting in Balyerwa Conservancy from 2011 – 2017 (Data: IRDNC and NRI)

<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013*</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyer</td>
<td>Red</td>
<td>Red</td>
<td>-</td>
<td>Yellow</td>
<td>Yellow</td>
<td>Yellow</td>
<td>Red</td>
</tr>
<tr>
<td>IRDNC support</td>
<td>Yes</td>
<td>Yes</td>
<td>-</td>
<td>Yes</td>
<td>Limited</td>
<td>Limited</td>
<td>No</td>
</tr>
<tr>
<td>No. of harvesters</td>
<td>59</td>
<td>142</td>
<td>-</td>
<td>109</td>
<td>34</td>
<td>82</td>
<td>161</td>
</tr>
<tr>
<td>Quota (kg)</td>
<td>-</td>
<td>10 000</td>
<td>-</td>
<td>10 000</td>
<td>8 000</td>
<td>8 000</td>
<td>10 000</td>
</tr>
<tr>
<td>Amount harvested (kg)</td>
<td>4 993</td>
<td>17 793</td>
<td>-</td>
<td>11 472</td>
<td>3 946</td>
<td>2 669</td>
<td>26 466</td>
</tr>
<tr>
<td>Average amount harvested (kg)</td>
<td>85</td>
<td>125</td>
<td>-</td>
<td>105</td>
<td>116</td>
<td>33</td>
<td>164</td>
</tr>
<tr>
<td>Price/kg (N$)</td>
<td>17 &amp; 18</td>
<td>18</td>
<td>-</td>
<td>29</td>
<td>25</td>
<td>29</td>
<td>34</td>
</tr>
<tr>
<td>Total harvester income (N$)</td>
<td>88 107</td>
<td>334 626</td>
<td>-</td>
<td>332 694</td>
<td>98 650</td>
<td>77 850</td>
<td>965 994</td>
</tr>
<tr>
<td>Average harvester income (N$)</td>
<td>1 493</td>
<td>2 357</td>
<td>-</td>
<td>3 052</td>
<td>2 901</td>
<td>949</td>
<td>6 000</td>
</tr>
<tr>
<td>Management fee/kg (N$)</td>
<td>3</td>
<td>2</td>
<td>-</td>
<td>4</td>
<td>3.50</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Total management fee (N$)</td>
<td>9 987</td>
<td>35 586</td>
<td>-</td>
<td>33 498</td>
<td>13 811</td>
<td>10 156</td>
<td>185 262</td>
</tr>
</tbody>
</table>

* No harvesting was allowed in 2013 due to unsustainable harvesting in 2012
Figure 19: Annual offtake of devil’s claw in Balyerwa Conservancy from 2011 – 2017 in relation to the annual quota (No harvesting was allowed in 2013 due to unsustainable harvesting in 2012; Data: IRDNC and NRI)

With the context of the history of the area, the conservancy and the introduction of devil’s claw harvesting, the next section focuses on the current state of devil’s claw governance in Balyerwa Conservancy and its impact on harvesters and the resource.

6.4 Devil’s claw governance in Balyerwa Conservancy

In Balyerwa Conservancy the governance of devil’s claw was shaped by influential and powerful actors. They included IRDNC, MET, the traditional authority and the buyers. Within any governance context a range of resources exist which are distributed and used in different ways by different actors. For harvesters to benefit they required access to devil’s claw, equipment, permits and a buyer. For the resource monitors charged with managing the harvesting of devil’s claw, they required conservancy management support. Knowledge of the market was the resource most needed by the management committee. While benefits had been actualised under the current governance arrangement, Balyerwa Conservancy was vulnerable to external factors and lacked autonomy. As captured by MCA-N, “I don’t really know the answer but it’s just going to be a sector that needs support forever and ever. I just can’t see that it will ever become self-sufficient” (Interview #68, MCA-N, 13th October 2015).
6.4.1 Conflict of interest between the traditional authority and conservancy

As the governors of the land and traditional law-enforcers, the traditional authority possessed significant power and status. In Balyerwa Conservancy there was strong community belief in the traditional authority as the decision-makers. As articulated by members of the Mayeyi Traditional Authority, “The traditional authorities give concession to harvest devil’s claw, if they don’t give concession to harvest in their community then there is no harvesting”. They further stated, “The traditional authority has more power than the conservancies, it is just like that” (Focus Group #13, Mayeyi TA, 8th October 2015). This was re-iterated by staff members, “The traditional authority has power not only for devil’s claw to be harvested but for the gazetting of the conservancies” (Focus Group #2, Mudumu South Complex, 9th June 2015). This belief has been partly reinforced by IRDNC, who in wanting to encourage the conservancy programme, has sought to involve the traditional authorities. IRDNC explained, “There is still this strong sense of the importance to involve the traditional authorities and there has always been some concerted effort to draw them in, rather than present the conservancy as an alternative structure of power” (Interview #67, IRDNC, 13th October 2015). On the other hand, it was recognised by IRDNC that the traditional authorities were not respecting the legislation. The legislation does not prescribe the traditional authorities as the authorising institution for the registration of conservancies, and once registered, it is the management committees of the conservancies that have decision-making power regarding the management and use of natural resources. “They [the traditional authorities] have, through a very good consultation process, agreed to the conservancies, agreed to the community forests. They signed off on them. But they’re not sticking to what that means” (Interview #69, IRDNC, 14th October 2015).

This rejection of the new mode of decision-making as unacceptable, irrelevant or socially inappropriate, resulted in friction with the conservancy which was detrimental to the harvesters. In 2015, the harvesters of Balyerwa Conservancy did not receive their devil’s claw harvesting permit until very late in the season due to a dispute between the advisory committee of the traditional authority and the conservancy around hunting. The trophy hunting concession is the conservancy’s greatest source of income. The quota given by MET is sold to a professional hunter by the conservancy to generate conservancy income. The advisory committee of the traditional authority had sourced a professional hunter instead of going through the management committee, as required by the constitution of the conservancy. This was a strategy for the traditional authority to receive a greater portion of the hunting income. Also, the advisory committee took issue with the terms of office for the conservancy staff as the committee did not understand the employment contracts. MET and IRDNC intervened to defend the conservancy through assisting with the constitution and employment contracts which in turn led to the advisory committee insulting MET and IRDNC. IRDNC withdrew their
support from the conservancy until the matter was resolved. The advisory committee was subsequently dismissed but without the support of IRDNC the conservancy had not managed to train harvesters, nor obtain the permit or the associated harvester cards (Interviews #2 & 5, Balyerwa Cons., 2015). “The permit was late because there was no support from IRDNC and because we’d had problems with the buyer in 2014, we needed support from IRDNC,” explained a Balyerwa staff member (Interview #29, Balyerwa Cons., 27th August 2015). Furthermore, the dispute over the professional hunter damaged the relationship between the traditional authority and conservancy with a management committee member remarking, “The traditional authority wants to force instead of following the budget, they want to demand income from the conservancy” (Interview #1, Balyerwa Cons., 17th August 2015). This was re-iterated by another management committee member who voiced, “They are against the conservancy because they want to take the money, they say the conservancy is doing the wrong thing” (Interview #26, Balyerwa Cons., 25th August 2015). According to a staff member of the conservancy, “The traditional authority doesn’t always make decisions according to the will of other people” (Interview #2, Balyerwa Cons., 17th August 2015). The Mayeyi Traditional Authority had the view, “This was not done properly because they [the conservancy] wanted to forget the traditional authority and put them aside, when it came to electing who is going to operate [the hunting] and coming to benefit they left us aside, and when we talked again is when they realised, ‘Oh, we have forgotten,’ and made the decision aside from the traditional authority” (Focus Group #13, Mayeyi TA, 8th October 2015).

The traditional authority was also perceived to potentially threaten benefits to harvesters as the traditional authority believed they should be included in negotiations with the buyer. According to members of the Mayeyi Traditional Authority, “We don’t know how the buyer has been chosen,” but they felt, “when those buyers are tendered, the traditional authority members must also be involved to see which one of the three buyers is best”, “before agreeing on a price let that buyer come to the traditional authority and have to sit and agree on what price and how he can buy” (Focus Group #13, Mayeyi TA, 8th October 2015).

While IRDNC supported the conservancy in upholding their constitution the NGO would not risk confrontation with the traditional authorities in addressing issues around access and benefits. IRDNC was very clear in stating, “It’s not appropriate for us as an NGO to take on the traditional authorities...we are trying to address the issue indirectly, but we can’t risk a confrontation with the traditional authorities” (Interview #69, IRDNC, 14th October 2015). IRDNC did however, recognise the threat of the traditional authorities in light of the new access and benefit-sharing (ABS) legislation that, at the time in 2015, was due to be passed. “I am very, very concerned about the traditional authorities and particularly with ABS...They [Mayuni Traditional Authority] said, ‘We saw you [IRDNC]
at the meeting in Windhoek you gave one of the presentations about ABS and everyone says that it’s based on traditional knowledge and we’re the traditional leaders and we should be getting it so where’s our money? We’re not going to allow any contracts to be signed in Zambezi this year until we’ve been paid for devil’s claw because ABS legislation says it should come to us. ‘And that’s the misconception’ (Interview #69, IRDNC, 14th October 2015). Thus, the institutional complexity of the traditional authority and the conservancy both vying for control with their competing sets of resources shaped the way in which harvesters benefitted from devil’s claw.

6.4.2 Perceptions and challenges of the conservancy committees and staff

Devil’s claw was jointly managed by the conservancy committees and staff. While the resource monitors did most of the legwork, the chairperson or manager was responsible for acquiring the permit. The management committee authorised harvesting in any given year, allocated funds for harvesting activities, oversaw the resource monitors in their duties and was the point of contact with IRDNC. The management committee’s main role was to participate in joint meetings with IRDNC, the buyer, the executive committee and the resource monitors to determine the annual price, and when required to choose a new buyer. In the event of incorrect harvesting practices, the management committee was required to determine the course of action. The conservancy received a management fee per kilogram in lieu of their role in ensuring the sustainability and the quality of the devil’s claw (Interviews #1, 2, 4–6, 26–30, Balyerwa Cons., 2015).

The conservancy committee and staff members had received substantial training from IRDNC (Focus Groups #4 & 5, Balyerwa Cons., 15th June 2015). As far as the management committee was concerned, they considered themselves to have the necessary skills to undertake their tasks and believed they were well-perceived by the harvesters. “The harvesters feel that the management committee is the best, they feel that management is doing well. They do appreciate the management committee” (Focus Group #4, Balyerwa Cons., 15th June 2015).

However, the committees and staff felt constrained by their lack of knowledge of the market and reported their continued reliance on IRDNC, who was viewed to choose the buyer as they facilitated the tender process. As remarked by a management committee member, “IRDNC organises the buyers, that’s why we can’t continue without them [IRDNC]” (Interview #26, Balyerwa Cons., 25th August 2015). This was re-iterated by an executive committee member, “We can manage the training on our own, but we need assistance with the negotiation of the price and access to buyers as we don’t have knowledge of where to find buyers” (Interview #5, Balyerwa Cons., 19th August 2015). While the conservancy wanted to negotiate for a better price, they felt powerless. As remarked by a staff member, “IRDNC discusses the price with the buyer and then it is just reported to the community”
From IRDNC’s perspective while the conservancy was probably able to do the training, monitoring and record-keeping on their own there was, “a little bit of dependency amongst the committee members and there is that assurance seeking, 'If we do it through IRDNC then we'll do it right. Or, maybe we just wait and they can assist us.'” (Interview #66, IRDNC, 5th October 2015). This was re-iterated by an executive committee member who remarked, “The conservancy can manage but they need to be pushed as they are relaxed about doing things at the right time” (Interview #28, Balyerwa Cons., 25th August 2015). IRDNC highlighted that high turnovers in committee and staff members and limited capacity to begin with were challenges to effective management. “There’s definitely been an improvement [in skills]. It’s not at the scale that we expect it should be with the investment because of this high turnover. And also because of the starting point, most of the committee members are barely literate when they start off so to get them from that point to super-duper manager is a big jump to make” (Interview #67, IRDNC, 13th October 2015).

Relationship with the buyers and price negotiations

While Buyer Red had been the buyer for the first three-year contract during the MCA-N programme, a new contract was signed with Buyer Yellow for the period 2014 to 2016. However, the changing of the buyer was fraught with confusion for the conservancy committees and staff. Initially Buyer Yellow offered a better price and management fee than Buyer Red. Also included in Buyer Yellow’s contract was a stipulation that any devil’s claw harvested over the quota would not be purchased. Given sustainability concerns, according to IRDNC they encouraged the conservancy to sign the contract with Buyer Yellow even though, “the conservancies didn’t want to sign with Buyer Yellow” (IRDNC staff member, pers. comm., 8th June 2015). However, communication around Buyer Yellow’s sustainability was not clear and when Buyer Red came back with pricing to match Buyer Yellow, it was understood by the conservancy that they would lose IRDNC’s support if they signed with Buyer Red. As explained by a staff member, “Buyer Red called a meeting with the resource monitors and offered the same price as Buyer Yellow but it was too late and IRDNC said if we didn’t sell to Buyer Yellow then they wouldn’t provide support but there was no explanation from IRDNC as to why Buyer Red is a problem” (Interview #5, Balyerwa Cons., 19th August 2015). According to IRDNC they had held a meeting with the conservancy to present the Expressions of Interest from the tender following which a meeting was requested and held with IRDNC, the conservancies and Buyer Yellow to discuss the contract and price. Buyer Yellow’s offer was very high at N$29 (US$2.23) per kilogram, but the conservancy was familiar with Buyer Red therefore the conservancy wished to take the information back to the harvesters before signing the contract. Then according to IRDNC, “I got a call to say that Buyer Red is going to meet with the conservancies, which is ok, we [IRDNC] didn’t have to be there...some of the
conservancies had a meeting with Buyer Red and he had contracts there...we made it clear to the conservancies that from IRDNC’s side, it’s ok if they select whoever they are going to trade with but the one thing that we hadn’t seen and that wasn’t shared with us, was the contract with Buyer Red. So now, if there is something that happens, and the conservancy wants our assistance regarding something wrong with the contract, how can we give that? Nevertheless, it was their choice, and we said we’d continue to assist with all the other stuff, technical support and all that stuff just not the contracting” (Interview #66, IRDNC, 5th October 2015). However, the misunderstanding in communication was prevalent amongst staff members, “I don’t know why the buyer had to change, people wanted to sell to Buyer Red but IRDNC threatened no support. We had no problems with Buyer Red” (Interview #6, Balyerwa Cons., 19th August 2015); “IRDNC said we needed to change from Buyer Red to Buyer Yellow. Some people didn’t want to change but IRDNC threatened to cut support if the conservancy didn’t change. No reason was given to the conservancy for why we had to change to Buyer Yellow, we asked for a reason but none was given” (Interview #29, Balyerwa Cons., 27th August 2015).

In 2014, while Buyer Yellow offered a good price the relationship was soured due to issues around quality and communication. “In 2014, we [staff members] checked all the bags and in our opinion it was clean. But when the buyer came he was insulting Dzoti, Wuparo and Balyerwa and was shouting about the cleanliness of the devil’s claw” (Interview #5, Balyerwa Cons., 19th August 2015). Another staff member added, “When it came to loading there were approximately 300 bags to load, with each person that helped paid N$100 (US$8). Buyer Yellow got angry and shouted insults like, ‘You are stupid!’ and, ‘You are no good!’ He insulted us and hasn’t been back since. IRDNC brought the contract this year [2015]” (Interview #6, Balyerwa Cons., 19th August 2015). An executive committee member explained further, “Buyer Yellow was shouting that the bags were not clean and the people loading were asking for too much money. Afterwards he apologised, he was angry because the devil’s claw in the bags in other conservancies was wet” (Interview #2, Balyerwa Cons., 25th August 2015). However, as the buyer did not return to the conservancy following the event the staff members articulated, “We didn’t receive an apology” (Interview #29, Balyerwa Cons., 27th August 2015).

In 2015, the committee members and staff were further demotivated as Buyer Yellow dropped the price from N$29 (US$2.23) to N$25 (US$1.92) per kilogram and reduced the management fee by N$0.50 (US$0.04). This was exacerbated by confusion as to why the price had been dropped so significantly. According to one staff member, “The reason we were given for the lower price was the exchange rate, but we haven’t seen any proof” (Interview #5, Balyerwa Cons., 19th August 2015). It was believed that information regarding the market and export values was being withheld from the committees and staff by the buyer, as remarked by a committee member, “The price is low because we don’t know the process of where it is going to and what is involved” (Interview #28, Balyerwa
Cons., 25th August 2015). However, other staff members believed the price had been dropped due to quality issues in 2014. “The price dropped in 2015 due to bad quality, but the devil’s claw was dry when it left the conservancy. We are just working on fear” (Interview #6, Balyerwa Cons., 19th August 2015). Re-iterated another staff member, “The price is not negotiated. We have had problems with the buyer with a price reduction from N$29 (US$2.23) to N$25 (US$1.92). Buyer Yellow told us the low price was because the quality was bad, it was wet. We [the staff members] did not feel it was wet, but the harvesters used bags that did not allow the devil’s claw to breathe so it rotted on the journey. This work of digging is very difficult, they [the buyers] should increase the price not decrease it. And if he gave extra bags that would make sure that the other bags are not used” (Interview #29, Balyerwa Cons., 27th August 2015). As a result, the conservancy committees and staff concluded that Buyer Yellow had not fulfilled his promises and they would rather sell to Buyer Red as, “He visited the conservancy and assisted with equipment, for example, if he saw bags weren’t clean he would provide bags, and he spoke politely when there was a problem and he didn’t blame us without first coming to the conservancy” (Interview #27, Balyerwa Cons., 25th August 2015).

The conservancy was aware that the harvesters were at the bottom of the value chain and that value-addition took place in Europe and not in Namibia. While the committee and staff members wanted value-addition to take place in the conservancy they would require intervention to do so. It was suggested by some management committee members that the government should take a more active role. “The government should take a lead in finding buyers and negotiating prices, as well as working hand in hand with us to ensure sustainability. The government should set the price” (Interview #4, Balyerwa Cons., 19th August 2015). As supported by another committee member, “MET must talk to the buyer, in 2012 people were happy but now the price has dropped. MET must talk to the buyer or MET must sign for the price not to change every year” (Interview #27, Balyerwa Cons., 25th August 2015).

Conflict between the conservancy committees and staff

The management committee authorised how funds were spent, with IRDNC specifying that the management fee should be used for the purchasing of equipment and other costs related to devil’s claw such as the provision of transport for monitoring (pers. obs. IRDNC training, 9th June 2015). However, the management committee used their authority to take advantage of the management fee. As described, in 2015 the training of the harvesters in the conservancy had already been delayed due to the temporary withdrawal of IRDNC’s support. However, as reported by an executive committee member, it was further delayed by the management committee having, “no running costs,” for the manager to travel to Katima Mulilo and acquire the harvesting permit from MET. The money that had been withdrawn for running costs had already been spent on, “office supplies”
Therefore, while the harvesting season officially started in April the permit was only acquired in July. Also, at the time of the research in 2015, no equipment had been purchased for the harvesters for two years despite the availability of the management fee for that purpose.

One of the other issues facing the staff responsible for devil’s claw was that they were not supported in their activities by the conservancy committees. As remarked by one staff member, “The conservancy has had the vehicle since 2007 but it has never been used for devil’s claw or crafts. For monitoring we rotate weeks in different areas, but transport is a problem as we are walking from home every day, the executive committee says the fuel is limited or the per diem gets used for other things” (Interview #6, Balyerwa Cons., 19th August 2015). Further, “The management committee is meant to monitor the sorting and weighing but they say it is too hot and too dirty” (Interview #5, Balyerwa Cons., 19th August 2015). Re-iterated by the other resource monitor, “The management committee hasn’t supervised any buying events since 2012 and they are not at the loading [of the devil’s claw]. We finish the buying events around midnight” (Interview #6, Balyerwa Cons., 19th August 2015). IRDNC agreed that the interest of the committees to develop cash-in-hand enterprises was far less than that for conservancy income enterprises, “The conservancy itself, and the management itself they are not interested because the benefit goes directly to the person that has harvested. And organising that, they are not interested” (Interview #66, IRDNC, 5th October 2015). Further, “The committees only consider activities from which they benefit, for example meat and cash distribution from wildlife, and just look that their own work continues. They don’t listen to the needs of the community and as a result marginalise their livelihoods” (Interview #6, Balyerwa Cons., 19th August 2015). This was re-iterated by IRDNC who noted, “The biggest challenge is priority. The management might think of putting priority and resources into something that brings more income, which is hunting, and then they leave the rest” (Interview #66, IRDNC, 5th October 2015).

Salaries were also considered an issue as the plant monitoring staff were paid less than the wildlife rangers. “Resource monitors are not valued as much as community rangers and they all get higher salaries” (Interview #6, Balyerwa Cons., 19th August 2019). As a result, the monitoring staff were threatening to quit, “The one resource monitor has already quit because of a too low salary, I will quit at the end of the year if the salary doesn’t improve” (Interview #5, Balyerwa Cons. 19th August 2015).

In summary, while the conservancy committees were enabled to manage the harvesting of devil’s claw, they did not always use their authoritative and allocative resources in the best interests of the staff supporting devil’s claw harvesting or the harvesters themselves. Further, they lacked the authoritative resources to fully engage with the buyers which limited benefits to the harvesters. Nonetheless they ensured that harvesters had access to the resource and could benefit in some way.
While staff used their allocative resources in the best interests of the harvesters, they were constrained by their lack of authoritative resources in the face of the conservancy committees.

6.4.3 Harvester access to devil’s claw

Of the 20 harvesters interviewed, 15 were women and all shared common ethnicity. Within each sub-khuta the harvesters were also bound by kinship with the majority interviewed (18 of 20) having lived in their village for over ten years and all harvesters dug for devil’s claw with friends and/or family. The harvesters of Balyerwa were relatively well-positioned to access land and natural resources. They were however only entitled to access land within the conservancy boundary for harvesting devil’s claw if registered and no non-member was permitted to access that land. Thus, while the harvesters did not hold formal land titles, they had protected rights of access; such rights were however limited to the conservancy. Within the conservancy, customary rules required harvesting to follow customary boundaries surrounding villages. While the harvesters interviewed had been harvesting devil’s claw for less than six years, in implementing the resource management plan the management committee, which had headmen from each sub-khuta, determined the rules of access as they would for any other plant resource. That is, the harvesters were organised by sub-khuta with customary rules of access limiting harvesters to their areas. As a harvester from Lianshulu explained, “Each community has to harvest in their area” (Interview #12, Balyerwa Cons., 20th August 2015). When government regulations demanded that harvesters be given a permit by harvesting per area rather than conservancy, this was easily coordinated and implemented by the management committee and sub-khutas. As remarked by a member of the Lianshulu sub-khuta, “We are working hard to help each other, we are working hand in hand [with the conservancy], we come and sit and talk to each other at the meetings” (Interview #50, Balyerwa Cons., 4th September 2015).

Thirteen of the 20 harvesters interviewed wished to harvest in the neighbouring Mudumu National Park, a core conservation area that MET did not grant conservancy access to and where harvesting was not permitted. A Lianshulu harvester stated, “We want permission to harvest in the park as there is not enough devil’s claw in the conservancy” (Interview #11, Balyerwa Cons., 20th August 2015). However, concern about being arrested prevented use of resources in Mudumu National Park despite harvesters being historically dispossessed from this land. “We used to live in the park, then we got forced to move to Lianshulu, now we have been chased out of Lianshulu” (Interview #12, Balyerwa Cons., 20th August 2015). Another harvester added, “There are other resources in the park, waterlilies, timber, fish, reeds, grass, and people are suffering from not accessing these resources. And in the past fines to the sub-khuta were not always paid but now you get arrested by MET for poaching” (Interview #13, Balyerwa Cons., 20th August 2015). Some harvesters also wished to access the State Forest however this was dependent on the management committee acquiring the necessary permission.
“We need permission from the Directorate of Forestry (DoF) through the management committee, so we are waiting for them” (Focus Group #7, Balyerwa Cons., 16th June 2015). This was re-iterated by another harvester, “We need permission to access the State Forest, the chairperson needs to get permission from the induna [headman] and send a request to DoF” (Focus Group #3, Balyerwa Cons., 12th June 2015).

Access was also constrained by a lack of economic resources for harvesting equipment and transport. From 2011 to 2014, average income per harvester per year was N$2 770 (US$213) (Table 11). With such constraints on income the harvesters could not buy additional equipment for harvesting or pay for transport thereby restricting the amount that could be harvested and processed at any given time. Further, the mishandling of the management fee went unaccounted for; none of the harvesters surveyed knew of the management fee or what it was used for. “We don’t get bags, knives or nets,” (Interview #14, Balyerwa Cons., 20th August 2015) stated a Lianshulu harvester. Another woman from Nongozi village remarked, “We are working hard to dig devil’s claw because even the equipment we have to buy for ourselves” (Interview #24, Balyerwa Cons., 24th August 2015). Her sentiment was supported by a woman from Mambali who said, “It is difficult to find transport and the price is too low,” (Interview #21, Balyerwa Cons., 24th August 2015) and a harvester from Mbambazi who felt, “Where we are digging is very far, they [IRDNC] must provide transport and equipment” (Interview #17, Balyerwa Cons., 21st August 2015). These constraints limited the amount of devil’s claw that could be harvested and resulted in harvesters using old maize meal bags that influenced the quality of the devil’s claw.

6.4.4 Harvester benefits from devil’s claw

Prior to the implementation of devil’s claw harvesting for commercial trade, members supported themselves with income from a combination of sources. These included government pensions, remittances, social grants, the selling of crafts, farm produce and/or other commodities, temporary work and conservancy income distributed as a cash payment of approximately N$200 (US$15) per person per year (MCA-N 2014). With the exception of social grants and government pensions all sources of income were ad-hoc and were not guaranteed. In 2011, with the advent of devil’s claw harvesting, members were able to earn an average of N$1 493 (US$115) for the year which increased to N$2 357 (US$181) for the year in 2012 (Table 11). However, from year to year the extent to which harvesters could benefit was dependent on the price per kilogram, the quota and the timeous acquisition of the permit. The combination of these factors determined whether the harvesters considered harvesting viable in any given year. Of the 20 harvesters interviewed, 18 harvesters used the income from devil’s claw to supplement other sources of self-generated income, while two harvesters generated income from devil’s claw harvesting alone. All harvesters expressed that income
from devil’s claw was very important. Detailed household income data were not collected for the purpose of this study, however approximations of total income (self-generated income, remittances and social grants) acquired per harvester per annum were ascertained. Values ranged from N$5 000 (US$385) to N$15 000 (US$1 154) in any given year. This is aligned with Mosimane et al. (2014) who reported 51% of households in the Zambezi Region earned between US$500 and US$1 000 per annum, while 37% earned less than US$500 per annum. In years of lower income, income from devil’s claw accounted for between 19% and 100% of total income acquired. In years of higher income, devil’s claw income accounted for between 6% and 40% of total income acquired (Interviews #3 & 7 – 25, Balyerwa Cons., 2015).

Changing buyers and price fluctuations: perceptions of the harvesters

In 2011 and 2012, all harvesters received harvesting equipment, and devil’s claw was abundant having not been widely harvested before. A harvester from Mambali village remarked, “2012 was 100%, many people, a lot of devil’s claw” (Interview #21, Balyerwa Cons., 24th August 2018). In 2014, there was lack of clarity amongst the harvesters as to why the buyer had changed. One Nongozi harvester remarked, “We don’t know why the buyer has changed but Buyer Red is better,” (Interview #20, Balyerwa Cons., 21st August 2015) while another harvester had the view that, “The old buyer didn’t come back to offer a contract” (Interview #13, Balyerwa Cons., 20th August 2015). This indicated that communication between the management committee and the harvesters regarding the change in the buyer had been inadequate. Thirteen of 20 harvesters believed IRDNC chose the buyer and several harvesters did not know who the current buyer was. At the time of the research none of the harvesters had met the buyer (Interviews #3 & 7 – 25, Balyerwa Cons., 2015).

In 2014, issues arose between the conservancy and the buyer regarding the quality of the devil’s claw and his communication with the staff. The following year the buyer dropped the price to N$25 (US$1.92) per kilogram without a personal visit to the conservancy to explain to the harvesters the reason behind the significant decrease. The harvesters were aggrieved by the low price and it was understood that the decrease in price was due to quality issues. As explained by a member of the Nongozi sub-khuta, “When they transport it to where they are exporting it, they will say that the devil’s claw was not in a good condition so then there are changes in price” (Focus Group #12, Nongozi sub-khuta, 4th September 2015). According to IRDNC, poor communication around pricing was a management committee issue, “If the harvesters didn’t know, or were confused then it is the management that should be accountable. If the harvesters are not happy then they have to hold their management committee accountable and say we don’t want this buyer, or how did we come to have this buyer. And that’s how it should be, the management committee must respond to that” (Interview #66, IRDNC, 5th October 2015). Other sub-khuta members had the opinion the buyer was simply
unscrupulous, “The buyer doesn’t feel any pain, he comes with a sweet, sweet voice. He can tell you stories but all he is interested in is to get more profit” (Interview #52, Balyerwa Cons., 4th September 2015).

The events of 2014 during which the staff had been insulted further demoralised the conservancy. As a result, in 2015 only 34 people harvested compared to 109 the year before (Figure 18). An Mbambazi harvester stated, “I am not harvesting in 2015 as the labour is too much, we don’t have transport, the price is very low, we don’t have enough equipment and it takes a lot of time. The buyer doesn’t have respect for us, he shouts, ‘Your devil’s claw is dirty!’ while it’s clean” (Interview #16, Balyerwa Cons., 21st August). Another Mbambazi harvester added, “The price is very low, but the work is very hard, so I need the price to be higher. Buyer Yellow used to shout that the devil’s claw is not clean, but it is clean. I need respect from the buyer. Buyer Red didn’t shout at us, we don’t know why Buyer Yellow is the buyer” (Interview #18, Balyerwa Cons., 21st August 2018). A harvester from Sauzuo remarked, “The price is too low. If the buyer wants to buy natural resources, he must make it more profitable. It is dusty, thirsty work and far away. Sometimes we dig 20 m. We live in poverty” (Interview #7, Balyerwa Cons., 19th August 2015). Another Sauzuo harvester added, “I worked from 07:00 to 16:30 and I didn’t even get one bag, we need a better price” (Interview #8, Balyerwa Cons., 19th August 2015). While the sub-khuatas were not directly involved in the price negotiations they too articulated that the price was too low, “Today’s life, it’s expensive but if you have got a good buyer, a buyer who is buying N$50 per kilogram then it is better, then people can live” (Interview #52, Balyerwa Cons., 4th September 2015). In 2016, it was discovered that the staff were fraudulently entering data in the sales book to increase the harvesters’ income. According to IRDNC, “When they weighed the bags and the amount was 6.9 kg they then later with a different pen and different handwriting turned this into 16.9 kg. This was done many times amounting to lots of money” (IRDNC staff member, pers. comm., 8th February 2017). This was discovered by the buyer when the devil’s claw was transported to his warehouse before payment was made to the conservancy. The harvesters believed that N$30 to N$35 (US$2.30 to US$2.69) per kilogram was a fair price for their labour, however the price offered at the time of the research ranged from N$25 to N$29 (US$1.92 to US$2.23) per kilogram.

Some harvesters felt the management committee did not have the necessary skills to engage with the buyer, “They [the management committee] don’t know how to talk” (Interview #16, Balyerwa Cons., 21st August 2015). “According to the management committee, they try to talk to the buyer, but he is just looking at the exchange rate” (Focus Group #3, Balyerwa Cons., 12th June 2015). Another harvester remarked, “We are not happy with the negotiations as the conservancy management committee just listens and accepts” (Focus Group #3, Balyerwa Cons., 12th June 2015). According to the harvesters, the price was low as they did not have the autonomy to negotiate directly with the
buyer. Given that the harvesters carried out the labour they believed price negotiations should be between the buyer and the harvesters. “The price is low because we [the harvesters] are not invited to the meetings for the negotiations” (Interview #18, Balyerwa Cons., 21st August 2018). “Why does the buyer not allow the harvesters to propose the price themselves? The management committee doesn’t know how hard the work is, so they [the management committee] just agree.” (Interview #9, Balyerwa Cons., 19th August 2015). This view was re-iterated by several harvesters, “The work is very hard, the buyers should allow the harvesters to tell them [the buyers] what price they’d like” (Interview #10, Balyerwa Cons., 19th August 2015). “The buyer decides the price, the harvesters do not negotiate directly with the buyer, but we would like to hear from him [the buyer] directly” (Focus Group #3, Balyerwa Cons., 12th June 2015).

Management of the quota

Each year the conservancy is allocated a maximum quota which is specified in the contract with the buyer. In 2014, the committees and staff were also encouraged by IRDNC to institute a simple recording system of tallying the amount already harvested by each individual at the end of each buying event such that harvesting could be stopped if necessary (Becker 2015). The management committee and staff were however ineffective in this regard and the harvesters continued to harvest above the quota. According to the resource monitors, no management committee members were present at the buying events to assist, and as such would not have known the quota had been reached. By the second buying event Buyer Yellow had bought a total of 11 472 kg but then refused to buy any additional devil’s claw. According to IRDNC, “As per agreement with the buyer, in some instances the extra bags could not be purchased. Many harvesters, therefore, did not have the opportunity to sell their devil’s claw. This is a management issue, as the conservancies were provided with the quota well before the harvesting season and buying point managers have been trained to calculate a set number of bags to be sold per registered harvester. Enforcement of this rule was poor and it was observed that many harvesters exceeded their allowed number of bags” (Becker 2015:4).

While the contract gave exclusive buying rights to Buyer Yellow some harvesters did not have the opportunity to sell any devil’s claw to Buyer Yellow. Given that the devil’s claw was already harvested, the difficulty of harvesting and the acute need for income, some harvesters broke the contract and sold their devil’s claw to passing buyers and at the market in Katima Mulilo. As the harvesters had previously been able to sell all their devil’s claw to Buyer Red, these new restrictions were not understood. The committee members and staff understood the restrictions to be related to cost. A staff member stated, “Buyer Red would buy extra bags [of devil’s claw] at a low price but Buyer Yellow says he budgets according to the quota and can’t buy more, he doesn’t have time to make extra negotiations” (Interview #29, Balyerwa Cons., 27th August 2015). While a member of the management
committee articulated it was because, “He didn’t want more tonnes and it [the devil’s claw] was wet” (Interview #26, Balyerwa Cons., 25th August 2015). In 2015, the management committee decided to institute an individual quota of 100 kg per harvester which rendered harvesting unviable for most harvesters.

Late acquisition of the permit

In 2015, the permit was only acquired by the management committee in July and the buyer concluded the buying season on the 3rd September. This severely limited the amount of devil’s claw people were able to harvest therefore many people did not harvest that year. As articulated by a staff member, “This year [2015] the training was too late to make harvesting worthwhile, 100 registered and only approximately 30 harvested” (Interview #5, Balyerwa Cons., 19th August 2015). The harvesters were not given an explicit reason for the late acquisition of the permit. “We get our permit very late, I don’t know why but every year it is very late,” remarked a Lianshulu harvester (Interview #14, Balyerwa Cons., 20th August 2015). Another harvester added, “I don’t know why the buyer changed or why the permit was late” (Interview #25, Balyerwa Cons., 24th August 2015). The harvesters requested the management committee to ask for an extension to the buying season from the buyer however this was not actualised. When questioned on accountability a member of the executive committee stated, “Apologies are accepted, the harvesters understand” (Focus Group #5, Balyerwa Cons., 15th June 2015).

In summary, institutionally and on paper, the harvesters had authoritative resources through the conservancy. That is, the democratically-informed constitution of the conservancy entitled the members to benefit from the commercialisation of their natural resources and to hold their leadership accountable should they fail in this respect. However, the power and legitimacy of the traditional authorities and management committee put limits on the harvesters in relation to their voice and institutional participation. The harvesters’ lack of autonomy made them dependent on others in decision-making, ultimately impacting on their access to and benefits from devil’s claw.

6.5 Outcomes for the environment and the resource

Among the 20 harvesters interviewed there was a unanimous belief that training, and government permits were necessary to protect devil’s claw as a valuable economic resource (Interviews #3 & 7 – 25, Balyerwa Cons., 2015). As a harvester in Sauzuuo remarked, “It is a very important resource that should be protected so it is not finished or used unnecessarily because people benefit from it” (Interview #13, Balyerwa Cons., 20th August 2015).
The headmen of the sub-khutas used their cultural roles and legitimacy as advisors and enforcers. A member of the Nongozi sub-khuta explained, “According to the sub-khuta, they [the headmen] inform members to take care of devil’s claw and cannot allow someone from outside to harvest devil’s claw because it’s how they [the harvesters] benefit. They [the headmen] must take some responsibility for that” (Focus Group #12, Nongozi sub-khuta, 4th September 2015). In the conservancy unsustainable harvesting was, “reported to the sub-khuta so the information from the area representative goes to the conservancy office that the resource monitors must go with the harvesters to the forest to see those holes are closed” (Focus Group #12, Nongozi sub-khuta, 4th September 2015). While all headmen were kept informed by the management committee, they did not play a direct role in choosing the buyer or negotiating the price. As an Mbambazi sub-khuta member stated, “It’s between IRDNC and the management committee” (Interview #49, Balyerwa Cons., 4th September 2015). In the event of a harvester being found harvesting unsustainably the matter was reported to the management committee who determined the course of action. This was according to customary rules that had been adapted as conservancy by-laws and included advising, warning, fining or in the worst-case suspension. The authority and legitimacy of the management committee ensured that harvesters did not question decisions around when or where they were permitted to harvest, however the enforcing of sustainable harvesting practices was less successful.

Monitoring of devil’s claw was introduced by IRDNC as a cornerstone to sustainable utilisation and a requirement for continued support. Two resource monitors were employed by the conservancy for this purpose and a monitoring form was developed by IRDNC to formalise the way in which the data were collected for their analysis. Given that Balyerwa had already adopted monitoring as a practice for wildlife, the resource monitors adopted monitoring for devil’s claw. However, IRDNC reported, “When reviewing the devil’s claw activities for last season, it became apparent that while monitoring was done in the PPOs [producer and processor organisations], it was often not recorded on the monitoring forms and therefore not passed on to management committees to take action” (NRI 2012b:24). During the research it was observed that unless the staff were monitoring in collaboration with IRDNC, the monitoring forms were not used. Instead, the resource monitors noted down their observations and gave oral feedback to the committees, as they did for other plant resources including thatching grass and reeds. The forms were deemed only necessary for the external institutions – MET and IRDNC (pers. obs. Balyerwa Cons., June – October 2015).

Monitoring and post-harvest impact assessments were undertaken together with IRDNC during and after the harvesting season to inform quota setting and flag areas of concern. Regrowth of the tubers is dependent on the holes dug being refilled and the tap root not sustaining any damage. For
harvesting to be considered sustainable 85% or more holes should be refilled, regrowth should be visible, and some plants should be left unharvested (Tjiteere 2017).

Following the end of the first year of harvesting in 2011, only 36% of holes were closed and the post-harvest impact assessment indicated that sustainable harvesting methods were not being used (NRI 2012b). In 2012, the post-harvest impact assessment in Balyerwa revealed that despite training most harvesters had not followed the prescribed harvesting technique and had not been monitored whilst harvesting as stipulated by IRDNC. The policy sets out the correct harvesting method of only harvesting side tubers and covering the holes, however, all monitored harvesting sites had more than 50% open holes. In total, only 24% of harvested plants were covered, 76% of harvested plants did not show regrowth (Figure 20; NRI 2013a) and the quota was exceeded by more than seven tonnes (Figure 19). While IRDNC noted that the post-harvest impact assessment had not been positive it was argued that, “The results of the post-harvest impact assessment are used by the management committees of the PPOs to take decisions for next year’s harvesting season...The results of the post-harvest impact assessment also provide a valuable tool to guide the harvesting training before the next season, as providing feedback to harvesters about their techniques can only help to gain a better understanding about the consequences of their actions” (NRI 2013a:36).

In response to the widespread unsustainable harvesting practices the decision of the management committee and IRDNC was that no harvesting would take place in 2013. The post-harvest impact assessment at the end of 2014 showed great improvement with 73% of monitored holes closed (Murphy 2014), and 71% in 2016 (Figure 20; Tjiteere 2017). These years also correspond to when better prices were offered indicating that harvesting practices could be influenced by price. A higher price enables harvesters to harvest less but earn more; while the conservancy benefits from a greater management fee.

While the results showed positive improvement in sustainable harvesting practices the conservancy did not consider harvesting to be sustainable without allowing the plants to recover. A management committee member recommended, “There should be no harvesting, we should take two or three years with no harvesting” (Interview #27, Balyerwa Cons., 25th August 2015). This was re-iterated by a staff member, “We can only harvest for one more year and then we must leave them to germinate for four to five years before harvesting again. People won’t harvest if they are told not to” (Interview #6, Balyerwa Cons., 19th August 2015).
According to committee members, staff and harvesters there had been a decrease in the amount of devil’s claw available with harvesters citing, “there is less devil’s claw,” (Interview #13, Balyerwa Cons., 20th August 2015), “there is not a lot available,” (Interview #24, Balyerwa Cons., 24th August 2015) or, “the devil’s claw is still small” (Interview #18, Balyerwa Cons., 21st August 2015). When asked why there were unsustainable harvesting practices one staff member responded, “As soon as the resource monitors aren’t there they don’t close the holes because it takes time and they want to rush to the next plant, however, harvesters claim not to have left holes open and there is no finger pointing” (Interview #29, Balyerwa Cons., 27th August 2015). This was supported by a committee member who added, “The harvesters don’t find enough plants, so they harvest a lot from one plant” (Interview #26, Balyerwa Cons., 25th August 2015). It was also acknowledged that there was, “the hiring of untrained harvesters” (Interview #4, Balyerwa Cons., 19th August 2015). In response to why sustainable harvesting practices were not being adhered to several harvesters stated, “They get tired”. However only two harvesters articulated that they would report another harvester for incorrect harvesting while the other 18 harvesters would “advise” (Interviews #3 & 7 – 25, Balyerwa Cons., 2015).

Devil’s claw harvesting was also impacted by drought which prevented regrowth of the tubers and made the plants more difficult to locate with no above-ground growth. A harvester in Lianshulu explained, “I am not harvesting in 2015 as not enough has regrown so we won’t reach the quota”
A Mambali sub-khuta member added, “The rain didn’t fall nicely so people didn’t harvest nicely” (Interview #52, Balyerwa Cons., 4th September 2015). With the drought, far fewer harvesters participated and only 3,946 kg and 2,669 kg were harvested in 2015 and 2016 respectively, well under the quota (Figure 19).

IRDNC was of the opinion there was no threat to the resource base as it was protected in national parks and commercial farmland, and, “eventually it won’t be worth people’s while because they’ll have to walk so far” (Interview #69, IRDNC, 14th October 2015). In contrast, MET expressed concern about sustainability and insufficient monitoring in the region. “I think the number of plants is decreasing as those harvesters are uprooting the whole thing so obviously there won’t be anything to regenerate next year. Harvesting is not sustainable in the long-term, not in this region” (Interview #65, MET Katima Mulilo, 2nd October 2015). It was articulated, “It [devil’s claw] is not properly regulated because there is illegal importation and monitoring is inadequate. We have no baseline without which we cannot do effective management of quotas or monitoring. I think we are not doing much” (Interview #65, MET Katima Mulilo, 2nd October 2015).

In 2017, the buyers competed for the Zambezi market which caused the price to soar to N$34 (US$2.62) per kilogram. This was likely spurred by increased international demand following low production in the preceding years. The buyer agreed to buy all devil’s claw harvested which resulted in unrestricted harvesting (IRDNC staff member, pers. comm., 10th April 2018). The number of harvesters in Balyerwa Conservancy doubled and unsustainable harvesting reached unprecedented levels with the quota exceeded by more than double, over 16 tons (Table 11). It was the first year that IRDNC did not have a dedicated staff member monitoring devil’s claw activities. It was suspected by IRDNC and MET that devil’s claw was also being illegally imported from Zambia and Angola. “Illegal importation of devil’s claw particularly from Zambia is high,” remarked a MET staff member (Interview #32, MET Katima Mulilo, 28th August 2015).

In summary, devil’s claw harvesting in Balyerwa Conservancy was undertaken with permits and harvesters adhered to rules around when and where to harvest. Sustainable harvesting practices improved with repeated training by IRDNC and better prices offered by the buyer. Unsustainable harvesting practices were difficult to trace to individual harvesters which made enforcement of disciplinary action difficult. Drought and the buyers adhering to quotas had the greatest influence on the amount of devil’s claw harvested.

6.6 Conclusion

Balyerwa Conservancy is a communal area that is formally registered as a conservancy and is governed by the Mayeyi Traditional Authority, conservancy management and staff, and the sub-khutas. The
traditional authority has great power and authority and does not always act in the best interests of the conservancy. The conservancy and traditional authority, both external constructs, vie for control and income.

Devil’s claw harvesting was introduced through the MCA-N programme and the conservancy received intensive support from IRDNC from 2011 to 2014. Despite the skills acquired by the conservancy management, they were unable to engage effectively with buyers and still perceived themselves as dependent on IRDNC. Staff were challenged by inadequate support from the conservancy management, communication with the buyers and accountability from the harvesters.

The outcomes of devil’s claw harvesting in Balyerwa Conservancy were positive and negative for both harvesters and the resource. When collective harvesting and trade of devil’s claw was first introduced in Balyerwa, community members were motivated by the desire to earn cash-in-hand income. Initially it was perceived as a satisfactory alternative livelihood as expectations for income were first met. Over time, the harvesters’ lack of autonomy left them subject to poor performance of the management committee in obtaining permits and managing quotas, undesired changes in the buyer and unpredictable pricing from the buyer. Presently, devil’s claw harvesting is only deemed satisfactory under certain conditions and livelihoods have not been significantly improved. However, it remains the primary source of income for most harvesters who have secure access to the resource within the conservancy boundaries.

Lastly, MET was not visibly active in supporting devil’s claw monitoring and regulation. Sustainability varied from year to year but in the absence of MET and IRDNC support to manage quotas, unsustainable harvesting emerged.

The following chapter examines the local governance of devil’s claw in Lubuta Community Forest.
7. LUBUTA COMMUNITY FOREST

7.1 Introduction
Following on from Balyerwa Conservancy, this chapter describes the second case study, Lubuta Community Forest. The chapter starts with an introduction to the community forest including its history, management and current status. Next, the institutions that govern the community forest are described, followed by an investigation of devil’s claw harvesting under this governance arrangement. The chapter concludes with the outcomes for harvesters and the resource in Lubuta Community Forest.

7.2 Background to Lubuta Community Forest
Lubuta Community Forest, gazetted in 2006, is one of seven registered community forests in the Zambezi Region. It is a communal land area covering 171 km² located north of Balyerwa Conservancy. It is bordered to the west by Sachona Community Forest, to the east by Masida Community Forest, to the north by the Zambezi State Forest and to the south by Mudumu National Park. Its boundaries also overlap with Mashi and Sobbe Conservancies (Figure 21). It is characterised by Zambezian *Baikiaea* woodlands which have deep, nutrient-poor Kalahari sands that can support forest and woodland vegetation but are ill-suited to agriculture. The climate is hot and semi-arid with approximately 550 to 600 mm rainfall per annum which falls in the summer months from November to April (Mendelsohn *et al.* 2002). Residents depend on the forest resources for building materials, grazing, firewood and traditional medicine (IRDNC & NACSO 2016b). In a focus group conducted with 32 harvesters, only three people did not use devil’s claw themselves (Focus Group #9, Lubuta CF, 19th June 2015). While devil’s claw is used as a traditional medicine it does not hold significant socio-cultural value and there were no customary rules pertaining to its use (Interviews #34 – 47, Lubuta CF, 2015). The forest resources are protected both by statutory and customary law, with the latter dictating domestic use.

Lubuta Community Forest residents are predominantly Mafwe people. Sifwe is the main language spoken as well as Thimbukushu, Silozi and English. Unlike Balyerwa Conservancy where membership is determined by by-laws, all residents within the formal boundaries of Lubuta Community Forest are automatically members. The community forest falls under the jurisdiction of the Mafwe Traditional Authority and includes a single *sub-khuta* or customary area. Conservancies often include multiple neighbouring customary areas as the management of wildlife requires a wider geographical scale whereas community forests are generally a single customary area for the protection of forest resources for that community (Jakubaschk *et al.* 2004). For example, Mashi Conservancy includes
Lubuta, Sachona, Lizauli and Ngonga sub-khutas but each of these areas has registered or has applied to register as separate community forests. As explained by the Directorate of Forestry (DoF), “People have a clear perception, ‘These are our forests.’ And they don’t want anybody else from outside [neighbouring sub-khutas] to manage them on their behalf” (Interview #71, DoF Windhoek, 12th February 2016). Mosimane and Silva (2014) highlighted how boundaries of conservancies and community forests illustrate the contest for power and recognition of self-identity within communities and the various traditional authorities in the Zambezi Region.


Lubuta has no large-scale agriculture or development but as a community forest has legal rights to commercially extract forest resources with the necessary permits from DoF. Since being registered in 2006, the community forest has sold some timber however, currently no timber extraction is permitted by DoF. Beekeeping was initiated as a community forest project but was unsuccessful due to lack of support and drought. Enterprise development from plant resources in community forests has been constrained by poor institutional support from DoF which lacks capacity and resources. This is attributed to community forestry being implemented as a series of donor-driven projects with limited institutionalisation in government (Interview #64, DoF Katima Mulilo, 1st October 2015).

Like Balyerwa Conservancy, most harvesters were introduced to devil’s claw harvesting as a cash-in-hand enterprise by IRDNC in 2011 as part of the Millennium Challenge Account-Namibia (MCA-N) programme. Prior to this a few people were harvesting and selling devil’s claw independently having heard of the commercial value of devil’s claw through the project that was implemented in nearby Bwabwata National Park in 2007. Devil’s claw harvesting is regulated by the Ministry of Environment and Tourism (MET) but is formally managed by the community forest management committee. All devil’s claw is sold to a single buyer under contract. Harvester numbers and income vary from year to year, ranging from 48 harvesters earning a total of N$65 765 (US$5 059) in 2011 to 128 harvesters earning a total of N$605 720 (US$46 594) in 2017. Average income per harvester per year ranges from N$1 291 (US$99) to N$4 732 (US$364) (NRI 2012a; Data provided by IRDNC for 2017). Unlike Balyerwa Conservancy where harvesters access devil’s claw within the conservancy boundaries, harvesters in Lubuta go to the State Forest to harvest as there is no locally abundant devil’s claw (Figure 21).
Figure 21: Lubuta Community Forest (Map: NACSO)
According to residents, the historical customary area of Lubuta included parts of the State Forest and a section of Mudumu National Park (Focus Group #9, Lubuta CF, 19th June 2015; Interview #35, Lubuta CF, 31st August 2015).

Only timber and devil’s claw for commercial sale are regulated by statutory law with all other plant resources for domestic consumption accessed by members according to customary law. Members seek permission from their relevant headman or induna who determine the rules of access.

7.2.1 History of the area pre-community forest

To understand the current governance arrangement of the community forest and the social context of its members it is useful to look at the history of the area (see Chapter 4; Figure 25). From the establishment of the colonial outpost in the early 1900s up until 1992, the Mafwe Traditional Authority governed all land and communities from Bwabwata National Park to Katima Mulilo establishing their power in the region. In 1969, it was agreed by the Mafwe to cede a small portion of land in the east to the Masubia Traditional Authority as their territory was subject to recurring flooding, implying the greater authority of the Mafwe over the Masubia (Figure 22). In 1992, land was ceded by the government to the Mayeyi Traditional Authority, including Balyerwa Conservancy (Figure 23), and in 2004, to the Mashi Traditional Authority (Figure 24). This was contested by Chief Mamili of the Mafwe Traditional Authority and he still disregards the Mashi and Mayeyi Traditional Authorities (Hipondoka 2008; Kooper 2017).

The Lubuta community was governed by the Mafwe Traditional Authority until 2003 when together with three other sub-khutas, the Mashi Conservancy was formed. However, the Lubuta community wished to register as a community forest to secure its forest resources for that sub-khuta and initiated the process in 2004. This was done specifically to protect the forest resources – mainly timber and thatching grass – from misuse by outsiders. The decision was also spurred by the desire to improve the local economy through proactive management of the area (IRDNC & NACSO 2016b).
Figure 22: Area under the Mafwe Traditional Authority (The part in the east was given to the Masubia Traditional Authority in 1969; After Hipondoka 2008)

Figure 23: Area under the Mayeyi Traditional Authority (After Hipondoka 2008)
Figure 24: Area under the Mashi Traditional Authority (After Hipondoka 2008)

Figure 25: Timeline of Lubuta Community Forest

- 1600s – 1884: Domination of Mafwe by Lozis and Makololo Soths
- 1884: Establishment of German South West Africa; greater area renamed Caprivi Region
- 1909: Colonial outpost established in Caprivi Region
- 1919 – 1929: Administration under Bechuanaland Protectorate
- 1990: Independence of Namibia
- 1999: Caprivi Liberation Movement secessionist attack
- 2001: Forest Act
- 2004: Registration of Mashi Conservancy
- 2006: Registration of Lubuta Community Forest
- 2007 – 2011: Small-scale timber extraction and beekeeping
- 2011: Implementation of devil’s claw harvesting
7.2.2 Social context of community forest members

In the Zambezi Region, poverty continues to increase, and infrastructure, education and employment opportunities remain limited (NPC 2016). Lubuta Community Forest is a remote, rural area that is accessed via an untarred district road. Like Balyerwa Conservancy, people reside in traditional mud and thatch housing. The area has not been electrified and water is collected from communal water points in the two settlements. Kongola is the nearest town, 28 km away, and Katima Mulilo, the regional capital, is 104 km away. Not being situated on a main road, Lubuta Community Forest is further economically isolated with limited transport available to the commercial areas. As a community forest, there is no large-scale agriculture and infrastructure is limited to a primary school (Table 12).

Table 12: Summary of people and infrastructure of Lubuta Community Forest

<table>
<thead>
<tr>
<th>Majority population</th>
<th>Mafwe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Languages</td>
<td>Sifwe, Thimbukushu, SiLozi and English</td>
</tr>
<tr>
<td>Education</td>
<td>Limited, predominantly primary school</td>
</tr>
<tr>
<td>Livelihoods dependent on natural resources</td>
<td>Livestock, crop farming, crafts, non-timber forest products, poles and firewood</td>
</tr>
<tr>
<td>Formal employment</td>
<td>None</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Communal water points, one primary school</td>
</tr>
<tr>
<td>Access</td>
<td>Kongola – 28 km; Katima Mulilo – 104 km</td>
</tr>
</tbody>
</table>

Subsistence farming and livestock rearing are practiced with other livelihood strategies including piecework (temporary work), the opportunistic selling of poles, thatching grass and firewood, income from agriculture and devil’s claw harvesting (Interviews #34 – 47, Lubuta CF, 2015). Other off-farm sources of income include government pensions, social grants and remittances. As a communal area, residents may obtain a customary land right of 20 hectares or less for personal use.

Formal education is limited. Of the 32 harvesters that participated in a focus group, only four had been educated to Grade 10 (Focus Group #9, Lubuta CF, 19th June 2015). The six management committee members had Grade 10 to Grade 12 (Focus Group #8, Lubuta CF, 19th June 2015). At the time of the
research, none of the 14 interviewees were formally employed and all earned less than N$1 000 (US$77) per month.

Despite the community’s desire to commercialise additional forest resources, to date this had not been successfully actualised. This was largely due to the poor support for community forests both from government and local non-governmental organisations (NGOs). Lack of resources for support to community forests within DoF was hindering progress with regional staff limited to only one dedicated community forest support person and the community forestry project manager for the Zambezi Region (Interview #64, DoF Katima Mulilo, 1st October 2015). Further, financial resources had not been put into the research and development of income generating activities and there were no local NGOs dedicated to supporting community forests in the same way that NGOs had supported conservancies. As articulated by the community forestry project manager, “You had no NGO following up, IRDNC and WWF and NNF were all doing conservancies. I am not sure if anyone did community forests” (Interview #64, DoF Katima Mulilo, 1st October 2015).

At the time of the research Phase II of the Community Forestry Namibia (CFN) project (see Chapter 4) was underway. While it had been recognised that most community forests were struggling to generate income a favourable solution was integration with the conservancies to co-finance activities. “One of the strategies is that we try by all means wherever possible to integrate community forests as far as possible with the conservancies. That conservancies co-finance activities for the forest, for the benefit of the forest and to protect the ecosystem” (Interview #74, DoF Windhoek, 12th February 2016). However, Mashi Conservancy was unwilling to collaborate with Lubuta Community Forest in any way with a view of the community forest as a burden. According to the chairman of Lubuta, “We have had a lot of meetings with Mashi Conservancy, the last one was with DoF but Mashi will not take that responsibility. They are saying that the community forest just has to grow on their own” (Lubuta chairman, pers. comm., 3rd September 2015).

This was to the frustration of the community forest who believed a good local market existed for construction poles and non-timber forest products (NTFPs) such as thatching grass. According to the chairman, “There is a lot of timber, wood and grass in Lubuta and there is a market for those things, especially in Ovamboland as all their forests have been cut down. There are no resources there to build with, we could capture the local market. Even if we had a small amount of funds to get started, we could go and market ourselves there” (Lubuta chairman, pers. comm., 3rd September 2015). Further, the community forest envisioned sustainable extraction. “If we are given a quota based on an annual inventory like the conservancies and MET do with wildlife, so we know the right quota. But DoF is not
interested. If DoF was serious, there is a lot of potential, the forests are even richer than conservancies” (Lubuta chairman, pers. comm., 3rd September 2015).

The existence of local markets for NTFPs was reiterated by a senior regional MET staff member who stated, “Markets can be created. Those who know the medicinal properties of certain trees can create muti [medicine] shops and sell. In summer we have Cleome, wild spinach. I have seen people come from the north for Aloe flowers. All of those have value. Where there is demand there is supply and a price. We need to maximise the resources that are in abundant supply. That way we can enhance understanding and value of the resources” (Interview #32, MET Katima Mulilo, 28th August 2015).

However, according to a staff member at the National Botanical Research Institute (NBRI), motivation and innovation for CBNRM had dwindled. “I don’t think we’re moving very much at all since the early days post-independence when we were quite dynamic, and we did move quite quickly on CBNRM matters. My impression nowadays is that it’s all kind of stagnating, there’s a lot of good ideas still, a lot of people working hard but essentially it’s running out of traction” (Interview #71, NBRI, 15th October 2015).

As a result, benefits in conservancies and community forests are starkly contrasted. For example, in Mashi Conservancy, where income is generated from hunting and tourism concessions facilitated by MET, the conservancy earned nearly N$5 million (US$384 615) per annum (IRDNC & NACSO 2016b). In Lubuta Community Forest where there was no facilitation by DoF of any commercial extraction of plant resources, income was limited to that from devil’s claw which provided at most N$143 460 (US$11 035) (Data provided by IRDNC). To-date other benefits included donor support in the form of training, infrastructure and equipment, logistical and technical support from IRDNC, and cash-in-hand income for devil’s claw harvesters.

7.2.3 Management structure, procedures and membership of the community forest

The boundary of Lubuta Community Forest was delineated in consultation with the Mafwe Traditional Authority as required by the legislation. The community forest has a constitution, benefit distribution plan, management plan and forest inventory as required by DoF. All residents of the community forest are automatically members. Outsiders wanting to settle in the community forest must first seek the permission of the Lubuta sub-khuta, and the Mafwe Traditional Authority.

The legislation stipulates that community forests are required to have a management committee that is representative of the community. Lubuta has a management committee of six people who are responsible for both the governance and day-to-day operations of the community forest. At the time of the study, the treasurer and secretary said they were not working for the community forest and did not want to participate in the research as they did not receive any renumeration for their work. No
committee members received salaries or allowances as there was insufficient community forest income to do so. The four active members included the chairman, traditional authority representative, honorary forester and buying point manager (Figure 26). The management committee did not view themselves as the main decision-making authority but as responsible for executing the decisions made by the traditional authority. As explained by a committee member, “The khuta [traditional authority] and sub-khuta [headmen] advise the management committee as to what to do,” (Interview #43, Lubuta CF, 3rd September 2015) while another committee member stated, “The management committee is just here to implement the projects that the traditional authority decide on,” (Interview #34a, Lubuta CF, 31st August 2018). According to the legislation the term of office for committee members is three years but they may be re-elected. Election is done in a customary manner, “together with the community and the sub-khuta [headmen] except the traditional authority representative which is chosen by the traditional authority” (Focus Group #8, Lubuta CF, 19th June 2015).

While the management committee was in place to manage the commercial use of plant resources, personal use was according to customary law with the rules of access determined by the village headmen.

7.2.4 Relationship with DoF

As described in Chapter 6, MET is the institution tasked with regulating the harvesting of devil’s claw through the issuing of permits and monitoring. However, as a community forest, it is DoF that oversees natural resource management in Lubuta, and the community forest has to adhere to the Forest Act of 2001, Forest Amendment Act of 2005 and Forest Regulations of 2015. While DoF did not issue devil’s claw permits, Lubuta Community Forest did require the permission of DoF to harvest in the neighbouring State Forest, where devil’s claw was accessed. As stated by the buying point manager (Interview #43, Lubuta CF, 3rd September 2015), “DoF makes decisions about where people are harvesting, MET only issues the permits”. And the expectation of the management committee was that DoF should also be responsible for monitoring as the State Forest was under their jurisdiction.
DoF’s continued lack of support has resulted in a weak relationship with Lubuta Community Forest. As expressed by the chairman, “DoF and MET should put in more effort. DoF is always having some of their own reasons, only sometimes do they come monitor, they give other reasons for not coming even though they know there is no transport for monitoring here” (Lubuta chairman, pers. comm., 3rd September 2015). According to a regional staff member at DoF this was due to limited capacity, “DoF would not manage without the NGOs” (Interview #33, DoF Katima Mulilo, 28th August 2015). While the community forestry project manager elaborated, “The staff here [DoF] don’t actually know what to do. For example, one of my counterpart’s job descriptions is to broadly promote community forestry but understandably she doesn’t know what that means. There should be guidelines to say you should be registering community forests, here are the steps we have, the milestones. But community forestry hasn’t been institutionalised within forestry and there has been very little that I can see of the community forestry programme in Zambezi” (Interview #64, DoF Katima Mulilo, 1st October 2015).

At the time of the research the management committee had requested funds from Phase II of the CFN project. According to the management committee, “No funds are going directly to the community forest, DoF has asked for a list of priorities but up until now there has been no feedback” (Focus Group #8, Lubuta CF, 19th June 2015). The lack of funds going directly to Lubuta Community Forest was explained by DoF as bureaucracy at a national level. “To get the funds really at the place is more stringent now. To fund something there are fixed lines above which we have to tender which might be more difficult when we want to include the local people on the ground” (Interview #71, DoF Windhoek, 12th February 2016).

7.2.5 Relationship with IRDNC

Prior to 2011, when devil’s claw harvesting as an economic opportunity was initiated, Lubuta Community Forest did not have a strong relationship with IRDNC as a result of the NGOs focus on conservancies. From 2011 to 2016, the same two key individuals that provided support to Balyerwa Conservancy, supported the community forest in their devil’s claw harvesting activities. Support was streamlined across all the conservancies and community forests such that Lubuta Community Forest received the same training, guidance and management support as Balyerwa Conservancy. Similarly, Lubuta Community Forest was also dependent on IRDNC for access to external markets and considered IRDNC the ‘middle man’ (Interview #43, Lubuta CF, 3rd September 2015). According to the management committee they considered themselves, “technically capable, except for accessing buyers” (Focus Group #8, Lubuta CF, 19th June 2015).

In 2015, the chairman felt that IRDNC’s support had been consistent and that the NGO had managed their expectations regarding institutional support. “If IRDNC are called they will come immediately to
discuss that problem. And if they can’t, or they don’t have an answer they will direct you to someone who might have an answer. Their support has been consistent. What is good about them is that when things change they tell us, ‘We can offer this and this,’ so we cannot expect things that are from their reach” (Lubuta chairman, pers. comm., 3rd September 2015).

Since 2017, while IRDNC still facilitated the signing of contracts with the buyers, lack of funding has resulted in IRDNC not being able to have a dedicated person supporting devil’s claw activities in the Zambezi Region. The resulting implications for sustainability are discussed below.

7.2.6 Traditional authorities and sub-khutas

The Mafwe Traditional Authority has its seat in Chinchimane with Lubuta as one of its sub-khutas. Other conservancies under the Mafwe Traditional Authority include Bamunu and two ungazetted areas, Mahachani and Siluka. Beyond giving permission for the sub-khuta to be registered as a community forest and for Lubuta to commercially harvest devil’s claw, the traditional authority did not play a role in the management of the community forest. When asked, a member of the Mafwe Traditional Authority simply stated, “We don’t know too much about devil’s claw,” (Focus Group #14, Mafwe TA member, 8th October 2015) while the view of one management committee member of the traditional authority was that, “There is a lack of awareness of the community forest so they do not embrace all things required” (Interview #35, Lubuta CF, 31st August 2015). However, the customary allocation of land for settlement, farming and grazing remained the responsibility of the traditional authority. The representative on the management committee reported to the traditional authority and while the sub-khuta was aware of devil’s claw harvesting, they also did not play a direct role in managing the resource or its harvesting and trade. Nine of the ten harvesters responded that the sub-khuta did nothing with only one of the interviewed harvesters stating they advised people. However, the sub-khuta did receive a portion of the community forest’s income from devil’s claw. Figure 27 illustrates the relationship between the traditional authority, sub-khuta, community forest and the ministries.
7.3 Devil’s claw harvesting in Lubuta Community Forest

7.3.1 History of devil’s claw harvesting

“Before 2011, there was only a trace of people harvesting and selling and the price was only N$5 to N$8 [US$0.38 to US$0.62], not negotiated. Most people didn’t know of the market value of devil’s claw” (Focus Group #8, Lubuta CF, 19th June 2015). In 2010, Lubuta was identified by IRDNC as a target community forest for the INP Activity according to the same criteria as Balyerwa Conservancy (NRI 2010b, c). Given Lubuta had no other source of income the management committee and members were eager to participate, which was supported by the sub-khuta and traditional authority, as it did not conflict with other livelihoods or daily practices of traditional use of resources.

While Lubuta had extracted some commercial timber in the past, all other forest resources were accessed and managed according to customary systems determined by the sub-khuta. Thus, IRDNC introduced formal systems for harvester training and registration, monitoring and record-keeping as set out in the business and resource management plans co-developed with the community forest (see Chapter 2). As a donor-driven project, IRDNC’s support and the continued harvesting of devil’s claw during the INP Activity was dependent on Lubuta following these formal procedures. However, external procedures were not new to the management committee as the registration of the community forest had required the fulfilment of ten prescribed milestones including a forest inventory, forest management plan and constitution (DoF 2005; DoF 2012).
From 2011 to 2014, Lubuta received the same intensive financial, technical and logistical support as Balyerwa Conservancy. All management committee members agreed to assist with the monitoring of devil’s claw and a buying point manager was assigned to manage the weighing and maintain the sales register. A single buyer was contracted for the period 2011 to 2013, with all target conservancies and community forests in the Zambezi Region selling to the same buyer, namely Buyer Red. Processes for obtaining the permits, making the harvester cards, sourcing and purchasing equipment, coordinating meetings with the buyer and monitoring were as for Balyerwa Conservancy. With the end of MCA-N in September 2014 IRDNC’s support largely ceded, however they still provided some support until 2017 when lack of funding prevented specific support for devil’s claw. While Lubuta Community Forest had faced some challenges including drought and price fluctuations the management committee continued to follow the procedures introduced by IRDNC including harvester training and registration and monitoring. The management committee did acknowledge their need for support from IRDNC which was re-iterated by IRDNC, “I think there’s going to need to be light-touch support particularly with the contract negotiations. So, I see some support there and some monitoring, but I really hope that the basics don’t need to be managed too much” (Interview #69, IRDNC, 14th October 2015).

7.3.2 Harvester numbers and income

Despite streamlined implementation of the INP Activity, devil’s claw harvesting in Lubuta Community Forest and Balyerwa Conservancy has had different outcomes for harvesters and the resource. This is due to institutional differences and the availability of the resource. However, like Balyerwa Conservancy, harvesting has been characterised by major fluctuations in harvester numbers and income (Figure 28; Table 13).

In 2011, 48 harvesters earned a total of N$65 765 (US$5 059) from 3 671 kg of dry devil’s claw. At N$18 (US$1.38) per kilogram, each harvester earned an average of N$1 370 (US$105) (NRI 2012a). The following year there was a substantial increase in the number of harvesters to 82 and the amount harvested. In total, 11 798 kg were harvested with each harvester earning an average of N$2 767 (US$213) (NRI 2013a), just more than double the previous year (Table 13). While a quota of 8 000 kg had been agreed upon by IRDNC and the buyer, Buyer Red bought the additional 3 798 kg.
In 2013, MET proposed a moratorium on harvesting in Zambezi Region for three years as they had sustainability concerns. The proposed moratorium was based on two internal MET reports resulting from regional MET staff in the region reporting unsustainable harvesting practices. However, these reports were not quantified or supported by any structured monitoring data. IRDNC used the monitoring results they had collected to highlight that in some areas there were very good harvesting practices and in others poorer practices. However, there was an overall improvement in sustainable harvesting. IRDNC motivated for finding alternative solutions and a moratorium only as a last resort (NRI 2013a). While MET decided against the ban, the uncertainty around the moratorium resulted in the harvesting only starting in June of 2013, rather than April. As a result, the amount harvested was just over half of the previous year and the average income per harvester was significantly less at N$1 676 (US$129) for the year (NRI 2013b; NRI 2014).

Figure 28: Fluctuations in average harvester income (N$) in Lubuta Community Forest from 2011 – 2017 with annual number of harvesters (Data: IRDNC and NRI)
Table 13: Summary of harvesting in Lubuta Community Forest from 2011 – 2017 (Data: IRDNC and NRI)

<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyer</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
<td>Yellow</td>
<td>Yellow</td>
<td>Yellow</td>
<td>Yellow</td>
</tr>
<tr>
<td>IRDNC support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Limited</td>
<td>Limited</td>
<td>No</td>
</tr>
<tr>
<td>No. of harvesters</td>
<td>48</td>
<td>82</td>
<td>80</td>
<td>123</td>
<td>26</td>
<td>86</td>
<td>128</td>
</tr>
<tr>
<td>Quota (kg)</td>
<td>-</td>
<td>8 000</td>
<td>8 000</td>
<td>8 000</td>
<td>8 000</td>
<td>8 000</td>
<td>8 000</td>
</tr>
<tr>
<td>Amount harvested (kg)</td>
<td>3 671</td>
<td>11 798</td>
<td>6 565</td>
<td>9 137</td>
<td>1 343</td>
<td>5 470</td>
<td>15 940</td>
</tr>
<tr>
<td>Average amount harvested (kg)</td>
<td>76</td>
<td>144</td>
<td>82</td>
<td>74</td>
<td>52</td>
<td>64</td>
<td>125</td>
</tr>
<tr>
<td>Price/kg (N$)</td>
<td>18</td>
<td>17 (Aug)</td>
<td>18</td>
<td>29</td>
<td>25</td>
<td>29</td>
<td>38</td>
</tr>
<tr>
<td>Total harvester income (N$)</td>
<td>65 765</td>
<td>226 901</td>
<td>134 069</td>
<td>264 982</td>
<td>33 568</td>
<td>169 576</td>
<td>605 720</td>
</tr>
<tr>
<td>Average harvester income (N$)</td>
<td>1 370</td>
<td>2 767</td>
<td>1 676</td>
<td>2 154</td>
<td>1 291</td>
<td>1 972</td>
<td>4 732</td>
</tr>
<tr>
<td>Management fee/kg (N$)</td>
<td>3</td>
<td>2 (Aug)</td>
<td>4</td>
<td>4</td>
<td>3.50</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Total management fee (N$)</td>
<td>2 476</td>
<td>23 596</td>
<td>26 260</td>
<td>36 548</td>
<td>4 701</td>
<td>17 803</td>
<td>143 460</td>
</tr>
</tbody>
</table>

The sales contract with Buyer Red concluded at the end of 2013. As described in Chapter 6, a tender was put out by IRDNC on behalf of the conservancies and community forests. Lubuta Community Forest opted for Buyer Yellow with his significantly higher price of N$29 (US$2.23) per kilogram. In 2014, this resulted in an increase in harvester numbers to 123. However, Buyer Yellow was explicit that they would not buy more than the quota and once the quota was reached after the second buying event, sales concluded for the year. The price increase meant that despite a higher number of harvesters, average income was N$2 154 (US$166). By 2015, a persistent drought hindered harvesting and the price was lowered to N$25 (US$1.92) per kilogram (Figure 29). Dry conditions made the soil very hard and it was difficult to find the plants. Further, due to the limited rainfall, the tubers on
previously harvested plants were found to be quite small. This in combination with stricter management of the quota left harvesters disinterested and demotivated. Only 26 harvesters were active in that year with a low average income of N$1 291 (US$99) from 1 343 kg.

By 2016, the drought had eased, and a better price was offered. Again, the number of harvesters increased to over 80 and average earnings were N$1 972 (US$152) per harvester for the season with offtake within the set quota. In the most recent year of harvesting, a record price of N$38 (US$2.92) per kilogram was offered which resulted in the highest number of harvesters and a huge offtake of 15 940 kg, nearly double the quota (Figure 30). According to IRDNC the increased price was because the two buyers were competing for devil’s claw from Zambezi. Due to lack of funding, IRDNC did not have a dedicated person monitoring the devil’s claw on a monthly basis. The buyers bought everything the conservancies and community forests delivered unlike previous years when Buyer Yellow stopped buying when the quota was reached (IRDNC staff member, pers. comm., 10th April 2018). Thus, with no management by IRDNC or the buyer, the quotas were disregarded by the management committee and harvesters. In summary, harvester numbers significantly increased in 2014 and 2017 when higher prices were offered and adherence to the quota by the community forest was dependent on the buyer enforcing the quota.

Figure 29: Fluctuations in harvester numbers in Lubuta Community Forest from 2011 – 2017 with annual price (N$) per kilogram of devil’s claw (Data: IRDNC and NRI)
Figure 30: Annual offtake of devil’s claw in Lubuta Community Forest from 2011 – 2017 in relation to the annual quota (Data: IRDNC and NRI)

7.4 Devil’s claw governance in Lubuta Community Forest

The governance of devil’s claw in Lubuta Community Forest has been shaped by the regulations of MET, the influence of IRDNC, the buyers and DoF, and the resources available to the management committee and harvesters. For harvesters, these resources were access to the State Forest, equipment and access to a buyer. For the management committee to maintain the commercial harvesting of devil’s claw, they required capital, infrastructure and knowledge. Although benefits were realised with the current governance arrangement, both sets of actors were constrained by a lack of power and autonomy.

7.4.1 Perceptions and challenges of the management committee

The management committee of Lubuta Community Forest were more educated than most of the members with all committee members having at least Grade 10 (Focus Group #8, Lubuta CF, 19th June 2015). The committee was of the opinion they had the general skills to run the community forest and that when it came to devil’s claw, “Everything is done well, we have knowledge of where the resources are, it is good quality, we take care of the harvesters and the harvesting areas are maintained” (Interview #35, Lubuta CF, 31st August 2015). At the time of the research, permits were obtained timeously, and monitoring was undertaken using the forms provided by IRDNC. The management committee distributed equipment to harvesters and payments to the harvesters were made as
received from the buyer. The quality of the devil’s claw was consistently high, and the report back was completed and given to IRDNC and DoF at the close of the season (pers. obs. June to October 2015).

However, one of the greatest challenges facing the committee was the lack of income. While the management fee had been used to buy equipment, “Every harvester gets, even if it’s one bag or 1 m of shade net,” (Interview #43, Lubuta CF, 3rd September 2015) the management committee were feeling despondent that they received no income for their role. One committee member stated, “I want to leave as there is no pay, there is no one who can work without eating,” (Interview #43, Lubuta CF, 3rd September 2015) while another remarked that managing devil’s claw was, “hard work for no pay” (Interview #35, Lubuta CF, 31st August 2015). The lack of income had resulted in two committee members no longer actively participating. Their lack of commitment was causing dissension in the committee and the other members wanted the sub-khuta to fire those not working. Apparently one committee member had demanded the management fee to be paid to him whilst another member refused to come to any meetings but also refused to leave the committee. As the management committee did not interact directly with the traditional authority, it was only the sub-khuta that could assist with this matter that was unresolved at the time of the research (Interview #43, Lubuta CF, 3rd September 2015). During a devil’s claw buying event at the community forest one management committee informally remarked, “The community forest just brings problems, and no money” (MC member, pers. comm., 31st August 2015).

Lack of capital also impacted negatively on harvesters during the drought when the management committee was unable to provide water for harvesters camping in the harvesting area in the State Forest. While the management committee had used the management fee to transport water to the harvesting area they were only able to do this once. As a committee member remarked, “Water is a problem, we need a borehole there” (Interview #37, Lubuta CF, 1st September 2015). The lack of water meant harvesting reached an all-time low and most harvesters did not harvest in 2015.

The management committee was also limited by insufficient capital to pay for transport to monitor the harvesting areas. While monitoring before and after the harvesting season was done in collaboration with IRDNC, MET and DoF, in-season monitoring was undertaken by the management committee themselves. They sought to monitor the harvesting areas twice a month however this was very difficult to actualise, “Food, water and transport are limiting monitoring [of devil’s claw],” (Lubuta chairman, pers. comm., 3rd September 2015). The management committee felt it was the responsibility of DoF, not IRDNC or MET, to provide support for monitoring devil’s claw with the view that it was, “in line with their duties,” (Interview #35, Lubuta CF, 31st August 2015) and, “DoF could make things different, they need to assist forests the way conservancies have been helped” (Interview
However, as highlighted earlier community forestry in DoF was reliant on donor-funds and the support of NGOs. Further, DoF believed MET should be supporting monitoring activities as they issued permits. According to a DoF staff member, “They [MET] give the harvesters permits but are not assisting in those areas. Harvesters should be followed up on” (Interview #33, DoF Katima Mulilo, 28th August 2015). While according to a staff member of IRDNC, the management committee needed to be more proactive in seeking assistance. “There is always more that you can do. As long as you are proactive and active to do things on your own. There are many donors, if one door is closed and the other one is not properly open then you can always knock on another door. There are many, many stakeholders that could also assist them” (Interview #66, IRDNC, 5th October 2015).

For sustainability to be enforced the management committee also wanted the sub-khuta to take a more active role by imposing fines on guilty harvesters as per the by-laws. According to a committee member, “We cannot impose fines it has to come from the sub-khuta, but they don’t do anything perhaps there is a lack of decision-making” (Interview #37, Lubuta CF, 1st September 2015). However, according to a member of the traditional authority it was the jurisdiction of MET, “to protect the harvesting areas” (Interview #35, Lubuta CF, 31st August 2015).

Besides capital, the greatest limitation to the management committee was knowledge of the market and power in negotiating the price with the buyer. It was acknowledged by the management committee that they could not yet operate entirely on their own as they were still dependent on IRDNC for access to buyers. The management committee believed that in practice IRDNC chose the buyer and that there was no negotiation of the price with the buyer. “We cannot argue about the price, the buyers inform us, and we communicate it to the harvesters,” explained the buying point manager (Interview #43, Lubuta CF, 3rd September 2015).

At the end of the first contract with Buyer Red, Lubuta had decided to change buyers as, “Buyer Yellow offered a good price” (Interview #35, Lubuta CF, 31st August 2015). While Buyer Yellow was preferred in terms of the price offered in the first year there were ill-feelings given that there had been a significant decrease in the price from N$29 in 2014 to N$25 in 2015. They felt communication around this had been poor. They were told, “The dollar and rand have dropped,” without further explanation (Interview #34A, Lubuta CF, 31st August 2015). “When we first heard of Buyer Yellow coming with a higher price, his own truck and promises to do this and that he sold himself well. But in the end he definitely disappointed us when he dropped way down to N$25. If at least he dropped to N$27 but N$4 is a big drop. The management fee also dropped by N$0.50. We had to come back to the harvesters and tell them the situation. They said just take what he is asking. It is not that we agree but there is
nothing we can do. Just tell him to give us what he wants to give us” (Lubuta chairman, pers. comm., 3rd September 2015).

According to IRDNC they had prepared the management committee for the exchange rate adjustment. “We really explained it well, we held preparation meetings because I knew what was coming and people were really upset that the price had gone down. And what Buyer Yellow was saying was that it hasn’t gone down, I’m just adjusting for the exchange rate. People were terribly unhappy” (Interview #69, IRDNC, 14th October 2015). IRDNC noted that this was the only reason for the decrease in the price. “It was made clear in those meetings that it was only about the exchange rate. For those that have access to or have access to economics they can check if it’s really true” (Interview #66, IRDNC, 5th October 2015). However, IRDNC did articulate that it was difficult to access information about the market. “I don’t know what it is we have to do, maybe if we get more access to information on the market which is also very difficult at this moment in time. We can’t even get information on where the buyers are selling their products. The exchange rate, how does an ordinary harvester have an influence on that?” (Interview #66, IRDNC, 5th October 2015). This was re-iterated by one of the MCA-N project staff who had the opinion that the price should have increased due to the lower production levels from the drought. However, stockpiling by exporters was more likely influencing the price in addition to the exchange rate. “That’s the problem with these fluctuating prices and it’s really difficult to explain it to people how it operates. Most of them [the buyers] don’t trust each other and if one of them, like one of them did, try to stockpile they are going to be very cagey. For whatever its worth, it’s a bad year” (Interview #68, MCA-N, 13th October 2015). This was supported by the price paid in Euro to exporters being fairly consistent, yet the very inconsistent pricing offered to harvesters from those various exporters. “The price paid in Euro does not fluctuate that much. It hardly fluctuates actually. So, I don’t understand where this price fluctuation really comes from. Some of it has to do with exchange rate, sure, and to do with how the Namibian exporters operate. I wouldn’t say it’s always that transparent” (Interview #68, MCA-N, 13th October 2015).

The committee members did not consider the negotiation of the price to be fair nor did they consider themselves to have any power even though they felt responsible for ensuring a good price. As expressed by the chairman, “There are no alternatives, so we took the price as we didn’t have an option” (Interview #34A, Lubuta CF, 31st August 2015). This was re-iterated by another committee member who remarked, “We plead with the buyer, but the buyers have the power. Harvesters get a little, but the price is not in relation to the labour and projects like this don’t help people get out of poverty” (Interview #35, Lubuta CF, 31st August 2015). They had a clear awareness of their position at the bottom of the value chain and believed there was an unfair assumption of community forest members as, “people on the ground that need little because we are working in a rural environment,
but we need the same amount’’. This was tied to a belief that the current system of common property meant that, “people can’t use the land commercially so we can’t survive, the villages are being kept in poverty’’ (Interview #35, Lubuta CF, 31st August 2015).

In summary, the management committee members were granted authoritative resources through registration as a community forest. This enabled the management committee to manage the harvesting of devil’s claw such that harvesters had access to the resource through the acquisition of permits and equipment. The management committee used their allocative resources to assist harvesters, however benefits were limited by the management committee still lacking knowledge and capacity to fully engage with the market. The management committee and harvesters had no power in the negotiation of the price and the buyers withheld information regarding the market.

7.4.2 Harvester access to devil’s claw

Ten harvesters were interviewed from Lubuta Community Forest of whom six were women. They shared common ethnicity, were bound by kinship and had all lived in the village for over ten years. All of them were unemployed and harvested devil’s claw in conjunction with temporary work or selling of farm produce to earn income which amounted to less than N$1 000 (US$77) per month. Other sources of income included remittances and social grants. Employment opportunities were limited both by geographical isolation and low human capacities. Lack of formal education characterises most communities in the Zambezi Region as described earlier.

The harvesters of Lubuta Community Forest did not have access to devil’s claw in the boundaries of the community forest as it was not available. Therefore, harvesters were reliant on access to the State Forest approximately 30 km away. Prior to 2014, DoF was unaware of harvesters accessing the State Forest and it was only MET that granted permission to access this area. Since 2015, the community forest has been required to state on their permit application their intention to access the State Forest before the harvesting permit is issued by MET (Interview #37, Lubuta CF, 1st September 2015).

The Zambezi State Forest was also accessed by neighbouring Kwandu Conservancy and Community Forest, and Masida Community Forest. However, Kwandu’s access was contested based on historical customary boundaries. According to the management committee some of the land included in the State Forest, and now registered as part of Kwandu, was originally land under the Lubuta induna, and now it is registered as Kwandu Community Forest, even though it is in the State Forest. Before the government declared the State Forest those areas belonged to the relevant indunas [headmen]. When Kwandu Community Forest was gazetted, the
The person signing was not aware of the induna [headmen] areas” (Focus Group #8, Lubuta CF, 19th June 2015). According to the chairman, “We were stronger under one traditional authority. Now access to resources has been limited, for example, being able to camp with our cattle by the river in times of drought or harvest in other areas. Now it has been politicised and is according to areas of jurisdiction” (Lubuta chairman, pers. comm., 31st August 2015). Boundaries had also been contested with Sobbe Conservancy. According to the management committee, when Sobbe Conservancy was registered in 2006 they claimed land from Lubuta. “Sobbe took land from Lubuta which resulted in an argument in the traditional authority. Mediators from IRDNC and MET were called in, but it is still pending” (Focus Group #8, Lubuta CF, 19th June 2015).

The residents of three unregistered areas – Makanga, Sachinga and Liselo – also accessed the State Forest but had not received the same training or support. In 2014, when joint monitoring was undertaken in the State Forest by IRDNC, DoF, MET and community members it was found that most harvesting holes were not filled and there was presence of dead tap root indicating whole plants had been destroyed (Murphy 2014). It was recommended by IRDNC that DoF provide training to these unregistered groups and improve monitoring to ensure sustainability for all harvester groups.

However, the State Forest at large is at risk of exploitation not only by harvesters but also illegal logging. This is complicated by the legal issue that on paper the State Forest did not exist as there had been no explicit proclamation by issuing of a government gazette since the Forest Act was passed in 2001. According to the community forestry project manager, “People don’t know when the State Forest was declared as there is no documentation. There are various stories, one is the document may have been destroyed by the military. There have been some archival searches, but they can’t find the documentation for the proclamation of the State Forest. The forestry council has pushed that something gets done about the State Forest and apparently the Director wants to get it re-gazetted. But a co-management option with MET would probably work a lot better” (Interview #64, DoF Katima Mulilo, 1st October 2015). Thus, unlike the harvesters of Balyerwa Conservancy, the harvesters of Lubuta Community Forest did not have protected rights of access to the resource and faced competition from other communities.

Given the distance of the State Forest from Lubuta, harvesters were required to set up harvesting camps for the season and water was limited to that available in pans following the rainy season from November to April. As described, by 2015 limited rain in the previous two years had resulted in there being no water available for the harvesters which rendered harvesting impossible for most. “I am not harvesting in 2015 because of water” (Interview #45, Lubuta CF, 3rd September 2015). While the harvesters felt it was the responsibility of the management committee to provide water, the management committee suffered lack of income.
Access was also constrained by a lack of economic resources as harvesters required transport to reach the State Forest, and more importantly, “need transport for the devil’s claw back to the village” (Interview #44, Lubuta CF, 3rd September 2015). From 2011 to 2016, the average income per harvester for the season was just less than N$2 000 (US$154) (Table 13). With such a constraint on income, the cost of transport was considerable and together with limited equipment further limited their ability to harvest a more profitable amount. One harvester remarked, “We don’t get enough bags to put the devil’s claw in and the shade net is too small [for drying the devil’s claw]” (Interview #44, Lubuta CF, 3rd September 2015).

### 7.4.3 Harvester benefits from devil’s claw

While physical access to the resource determined whether harvesters would benefit or not in any given year, the price and the quota determined to what extent a harvester could benefit. These three factors combined for harvesters to assess whether harvesting was a viable activity or not. “There is no water, the devil’s claw is now very far, and the price is too low” (Interview #42, Lubuta CF, 3rd September 2015). Of the 10 harvesters interviewed, eight harvesters used the income from devil’s claw to supplement other sources of self-generated income while two harvesters were dependent on the income from devil’s claw harvesting alone. All harvesters expressed that income from devil’s claw was very important. The total income (self-generated income, remittances and social grants) acquired per harvester per annum ranged from approximately N$5 000 (US$385) to N$12 000 (US$923) in any given year. In years of lower income, income from devil’s claw accounted for between 26% and 95% of total income acquired. In years of higher income, devil’s claw income accounted for between 11% and 39% of total income acquired (Interviews #36; 38 – 42; 44 – 47, Lubuta CF, 2015).

### Management of the quota

Each year the community forest is allocated a maximum quota which is stipulated in their contract with the buyer. The quota is both to ensure sustainable harvesting and to meet the needs of the buyer. In 2012, the harvesters went over the quota by over 3 000 kg, however the buyer at the time bought the additional devil’s claw. The late start to the season in 2013 resulted in the community forest harvesting less than the quota (Figure 30). However, IRDNC had concerns that the conservancies and community forests were identifying Buyer Red as, “the buyer that breaks the rules,” (IRDNC staff member, pers. comm., 8th June 2015) as he bought the extra bags that were over the quota and IRDNC encouraged the conservancies and community forests to rather sign with Buyer Yellow.

In 2014, Buyer Yellow offered a higher price and so Lubuta Community Forest signed the new contract with him. Buyer Yellow had stipulated that he would not buy more than the allocated quota of 8 000 kg. However, the management committee had not kept a running tally of the devil’s claw harvested.
and as such, when it came to the second buying point, it was found the harvesters had already exceeded the quota. The buyer bought a total of 9,137 kg but there was still excess devil’s claw available. The rules of the contract stipulated that harvesters may only sell to the buyer stated in the contract. However, given it had already been harvested, the heavy labour and time expenditure of the harvesting, and the desperate need for income, the harvesters independently sold their excess devil’s claw to passing buyers despite the lower price. This is not to say that harvesters were inclined to breaking the rules but rather that the harvesters were aggrieved by the buyer’s stance and needed to find an alternative livelihood strategy. As a harvester explained, “It takes two to three weeks to harvest one bag. We sold the extra devil’s claw to passing buyers for N$7 per kilogram, others got more. We don’t know why the buyer didn’t buy the extra devil’s claw” (Interview #40, Lubuta CF, 2nd September 2015). Given they had previously been able to sell all their devil’s claw to the contract buyer, these new rules were not understood.

In 2015, to manage the quota better, the management committee imposed a two-bag restriction on harvesters. In response, “Most people are not harvesting because two bags are too little,” explained a harvester (Interview #36, Lubuta CF, 1st September 2015). “I am not happy as I can’t get anything with two bags and such a low price” (Interview #44, Lubuta CF, 3rd September 2015). This was reiterated by the buying point manager who remarked, “People rely on devil’s claw so now people are very restricted by the two-bag allowance” (Interview #43, Lubuta CF, 3rd September 2015).

Further bending of rules to meet needs was observed in 2015. The buying contract included adherence to traceability practices, that is each harvester’s devil’s claw had to be in its own bag labelled with the name of the community forest and the harvester’s number. Thus, in the event of quality issues the buyer could trace back to the source. However, the difficult harvesting that year resulted in many harvesters not having full bags of devil’s claw. As the community forest only had a limited number of clean bags in which to sell the devil’s claw, they could not put each harvester’s devil’s claw in a separate bag. Instead each harvester weighed their devil’s claw and then the devil’s claw was combined to full bags and labelled with a single harvester’s number. The twelve harvesters together had harvested 402 kg, which at N$25 (US$1.92) per kilogram would only amount to an average of N$837 (US$64) per person. Thus, the selling of the devil’s claw in separate bags was costly with no guarantee of income the following year (pers. obs. Lubuta CF buying event, 31st August 2015).

**Changing buyers and price fluctuations: perceptions of the harvesters**

In 2014, the management committee selected Buyer Yellow as the buyer for the next three-year contract as he had offered a better price. The following year he dropped the price by N$4 (US$0.31) with no personal visit to the community forest to give an explanation to the harvesters themselves.
Thus, from the perspective of the harvesters not only had the buyer left harvesters with excess devil’s claw at the end of 2014, but he had now also significantly reduced the price.

Of the ten harvesters interviewed, nine did not know who the new buyer was and reasons given for why the buyer had changed fell into three categories: “I don’t know” (Interview #41, Lubuta CF, 2nd September 2015); “The old buyer is not buying anymore” (Interview #38, Lubuta CF, 2nd September 2015); and, “The buyer has changed because the previous buyer doesn’t have any money” (Interview #42, Lubuta CF, 2nd September 2015). This indicated that the motivation for changing buyers had not been clearly communicated between the management committee and the harvesters.

Similarly, the decrease in price was not understood by the harvesters with multiple views including: “I don’t know why the price is low,” (Interview #45, Lubuta CF, 3rd September 2015); “The buyer saw that the devil’s claw is decreasing so by lowering the price less people will harvest,” (Interview #44, Lubuta CF, 3rd September 2015); “Because of poor quality,” (Interview #38, Lubuta CF, 2nd September 2015); and, “The price is low because harvesters are not closing the holes” (Interview #42, Lubuta CF, 2nd September 2015). While it was understood by the management committee that the new price was related to the exchange rate, this was either not communicated or not understood by the harvesters themselves. The management committee felt that Buyer Yellow should directly communicate with the harvesters to assist with this. “Buyer Red communication-wise was perfect. He would come himself if things were not in line, he would come to the harvesters and inform them himself and have a direct talk with the harvesters telling them why, getting the reasons from them as well. I haven’t seen much of this with Buyer Yellow” (Lubuta chairman, pers. comm., 3rd September 2015).

For many harvesters the selling of devil’s claw was not a desirable livelihood but the only source of income available and therefore they would harvest if they could. As remarked by a harvester, “It did not favour us this year but if it rains, I will harvest again next year” (Interview #36, Lubuta CF, 1st June 2015). But if conditions prove too difficult, as they did in 2015, harvesting was abandoned, “It is too hard to dig and get nothing in the end when you have to consider transport from the bush to the weighing point, the danger from wildlife, no medicine if someone gets sick in the bush and no water” (Interview #46, Lubuta CF, 3rd September 2015). “It is just a loss this year, I can’t support my family” (Interview #39, Lubuta CF, 2nd September 2015).

7.5 Outcomes for the environment and the resource

Post-harvest impact assessments were undertaken at the end of each season to determine the sustainability of the harvesting technique. The monitoring used a standardised method and form as included in the devil’s claw resource management plan for the community forest during the INP Activity (NRI 2013a). For devil’s claw to regrow the holes dug to harvest the tubers must be refilled
and the tap root should not be damaged. Harvesting is considered sustainable if 85% or more holes are covered, if the taproot is undisturbed determined by regrowth, and if there is evidence of plants that have not been harvested (Tjiteere 2017). When post-harvest impact assessments were first carried out at the end of the 2012 harvesting season, only 56% of holes were closed (Figure 31; NRI 2013a). From these results it was observed that harvesting in the Zambezi Region was less sustainable than in other parts of the country but still represented an improvement in harvesting practices. MET threatened to place a moratorium on harvesting in 2013 for three years. However, this did not materialise and harvesting continued.

Again, at the end of the 2013 season a post-harvest impact assessment was undertaken collaboratively with the community forest, IRDNC and MET. Results were worse with 27% of holes found closed, however there was good indication of regrowth both in open and closed holes (Figure 31). While the number of harvesters was stable over the two years and the price did not change significantly, the increase in unsustainable harvesting practices could be attributed to harvesters trying to harvest as much as possible as the season had been greatly shortened. “It’s negligence, they are hurryng to get enough,” was the view of a management committee member (Interview #35, Lubuta CF, 31st August 2015). In 2014, the results showed great improvement with 64% of holes monitored closed (Murphy 2014), 55% in 2015, and further improvement in 2016 with 72% of holes closed (Figure 31; Tjiteere 2017). These results indicate that sustainable harvesting practices could be influenced by the price. In 2014 and 2016 when better prices were offered, the monitoring results were better. Also, in those years income from the management fee was higher thus enabling more monitoring activities (Table 13).

While these results showed positive improvement in sustainable harvesting techniques, the harvesters expressed that the amount of devil’s claw available had decreased, “There are many holes,” (Interview #45, Lubuta CF, 3rd September 2015) and, “We are walking further than before” (Interview #44, Lubuta CF, 3rd September 2015). In addition, as the State Forest was also being accessed by harvester groups outside of the community forest it was very difficult to ensure sustainability without additional support from DoF and MET. When asked why there were unsustainable practices one harvester explained, “There are untrained harvesters that think there are big tubers under the tap root,” (Interview #44, Lubuta CF, 3rd September 2015), while another said, “There are untrained harvesters from Zambia and also there are others who get untrained people to harvest for them” (Interview #45, Lubuta CF, 3rd September 2015). This was reflected in the post-harvest impact assessment in 2014 when, for the first time, areas being harvested by non-IRDNC
supported harvesters were assessed. In one area of the State Forest it was found that 88% of the holes had been left open (Murphy 2014).

The management committee and harvesters both agreed that permitting regulated by MET was necessary, and the management committee felt it was their responsibility to ensure the Lubuta harvesters conformed to the permit regulations. However only harvesters registered with Lubuta Community Forest could be disciplined by the management committee. If not registered the management committee could only report the harvester to DoF or MET. And one member of the management committee felt, “People fear the government but not the community forest, people won’t be disciplined within the community” (Interview #37, Lubuta CF, 1st September 2015). Yet, according to MET if a harvester was registered there were no repercussions for unsustainable harvesting. “A registered harvester is warned if harvesting unsustainably” (Interview #65, MET Katima Mulilo, 2nd October 2015).

In terms of sustainability it could be argued that devil’s claw cannot be overharvested due to the natural rainfall cycles. That is, recurring drought limited the amount of devil’s claw that could be harvested as it was difficult to locate without aboveground growth. This was observed in 2015 when significantly fewer people were harvesting in all case studies due to the drought. However, at the time of the research in 2015, some members of the management committee felt harvesting should not
continue because, “There are new plants that should be left for two to three years” (Interview #43, Lubuta CF, 3rd September 2015). The chairman had the opinion, “MET should put a moratorium on harvesting in 2018 just for rehabilitation, for three years” (pers. comm., Lubuta CF, 3rd September). All committee members agreed the number of plants had decreased. IRDNC did not believe sustainability to be an issue. According to a staff member, “Absolutely no sustainability concerns. Absolutely not. It bounces back, it’s a disturbed area plant and there are huge areas where it is protected in the national parks, on the commercial farmland” (Interview #69, IRDNC, 14th October 2015). This contrasted with MET who did consider sustainability and the limited monitoring in the Zambezi Region to be an issue. “You have people coming here to get permits, but we don’t follow up. Follow-ups are only done once a year maybe twice a year. And then when we get there, we don’t even find harvesters all we find is the holes left uncovered and you don’t even know the person that was digging there” (Interview #65, MET Katima Mulilo, 2nd October 2015).

In 2017, the price offered was a record high of N$38 (US$2.92) per kilogram of dry material. The price had been escalated by the two exporters vying for the devil’s claw from Zambezi Region. Low production in previous years had also likely contributed to an increase in demand and price from Germany. By the end of the season, the Lubuta harvesters alone had sold 15,940 kg, nearly double the quota, to the buyer. Unlike previous years there were no dedicated staff from IRDNC monitoring devil’s claw due to funding constraints. Further the buyers did not adhere to the quotas which meant the management committee and harvesters abandoned the quota (IRDNC staff member, pers. comm., 10th April 2018). Both IRDNC and MET suspected that some of the devil’s claw was being harvested in Zambia and being sold in Namibia. Data showed 60 kg bags which according to IRDNC, “are not the standard bags issued in Namibia and are probably from Zambia” (IRDNC staff member, pers. comm., 10th April 2018). MET remarked, “It is not controlled in Zambia or Angola, the borders are open” (Interview #32, MET Katima Mulilo, 28th August 2015). Thus, the sustainability of such large-scale extraction without effective monitoring by DoF and MET is questionable.

7.6 Conclusion

Lubuta Community Forest is a communal area that is formally registered as a community forest and is governed by a management committee, together with the sub-khuta. They have been recipients of intensive support for devil’s claw harvesting from IRDNC through the MCA-N programme. However, as devil’s claw is their only enterprise the management committee has limited economic resources to support harvesting activities and they do not receive any renumeration for their work. Further, despite the training provided by IRDNC, the management committee still lacks the capacity to effectively access the market and negotiate with buyers. Thus, despite their education the committee still feels
disempowered and views themselves as dependent on IRDNC which has re-iterated their inability to change circumstances.

Devil’s claw harvesting has resulted in income benefits for harvesters and for many harvesters is their sole source of income. The harvesters of Lubuta are challenged by their lack of access to devil’s claw within the boundaries of the community forest. Harvesting areas are located in the State Forest where harvesters are constrained by lack of food, water and transport. Also, competition and unsustainable harvesting by other harvester groups in the State Forest threatens their access.

Lubuta Community Forest has adopted permitting regulations, produces high-quality devil’s claw and undertakes monitoring. However, the harvesters have no autonomy with respect to the price and the buyer and are subject to price fluctuations and quotas they have no control over and do not understand. It could be argued that this lack of autonomy and the belief that there are no other alternatives for income results in sustainable harvesting practices not being fully adopted.

Finally, the adoption of community forest requirements by Lubuta community members was based on the assumption there would be support from DoF to improve livelihood opportunities. The ineffectiveness of DoF to provide support could result in a collapse of the community forest which would negatively impact the collective harvesting of devil’s claw. While integration with conservancies would alleviate this pressure, the community forest is considered a burden and no collaboration is in place.

The next chapter presents the third and final case study site, the Sachinga community.
8. THE SACHINGA COMMUNITY

8.1 Introduction

Chapters 6 and 7 looked at the governance arrangements for devil’s claw in a conservancy and a community forest, respectively. This chapter presents the last case study which is neither a conservancy nor a community forest and thus yields interesting information about access to and benefits from devil’s claw in the absence of a formal co-management institution. Therefore, the three case studies enable a comparative analysis of the different governance arrangements for devil’s claw in the communal areas. The chapter starts with a brief introduction to the community followed by a description of the institutions that govern devil’s claw harvesting in Sachinga. Lastly, an examination of the outcomes for harvesters and the resource.

8.2 Background to the Sachinga community

Sachinga is situated on the B8 national road 40 km south-west of Katima Mulilo (Figure 32). It is a communal area comprised of approximately 400 households and falls under the jurisdiction of the Mafwe Traditional Authority, which has its seat in Chinchimane (Focus Group #11, Sachinga sub-khuta, 22nd June 2015). Residents of Sachinga are predominantly Mafwe and the main languages spoken are Sifwe, SiLozi and English. Members of the Sachinga community practice subsistence agriculture, raise livestock, sell devil’s claw and also seek off-farm economic activities. Remittances, social grants and government pensions also contribute to income (Interviews #53 – 63, Sachinga, September 2015; Table 14). Like Balyerwa Conservancy and Lubuta Community Forest, the area is characterised by Kalahari woodland and there is no large-scale agriculture or development. People reside in traditional mud and thatch housing, the area is partly electrified and water is collected from communal water points. Residents use resources from the forest for building materials, firewood, traditional medicine, supplementary food and grazing. The impaired development of the Zambezi Region due to politics and violence is described in the previous chapters and the residents of Sachinga are subject to the same challenges of being located in a rural area with few formal employment opportunities. However, the residents have greater access to a market with the regional capital of Katima Mulilo located 40 km away.

According to the secretary of one of the senior headmen – who was also the would-be chairman of the community forest – there were approximately 45 active harvesters in the community in 2015. Twenty harvesters participated in a focus group and ten were later interviewed. Two sub-khuta members, the secretary and one of the senior headmen participated in a focus group, and one of the area headmen was interviewed.
Figure 32: The location of Sachinga (Map: NACSO)
Some residents of Sachinga had been selling devil’s claw for over 15 years while others had only started selling in the previous year. Of 20 harvesters that participated in the focus group half did not use devil’s claw as a traditional medicine and devil’s claw was not considered a high-value traditional medicine. The harvesters learnt about the selling of devil’s claw in several ways. These included by seeing other people digging, talking to a buyer, through neighbouring community forests and from the area headmen (Focus Group #10, Sachinga, 20th June 2015). Devil’s claw was not abundantly available within Sachinga, so harvesters went to two government-controlled areas to harvest devil’s claw, the Zambezi State Forest and the Kopano Quarantine Camp. They also accessed Mazoba, an area within the neighbouring Bamunu Conservancy (Figure 32).

Of the 20 harvesters in the focus group, none were employed but two received a government pension. Average income was less than N$1 000 (US$77) per month and no other forest products were being sold. Formal education among the harvesters was limited with 13 of 20 harvesters having Grade 7 or less and no harvesters having higher than Grade 10 (Focus Group #10, Sachinga, 20th June 2015). Of the three sub-khuta members that participated, one had Grade 12 while two had no formal education.

Sachinga differed in that it was not registered as a conservancy or community forest. The community have wanted to register as a community forest since 2008 and want to institute collective harvesting and trade of devil’s claw. However, Sachinga faced two challenges, namely, a boundary dispute over available resources and lack of support from the Directorate of Forestry (DoF). Community forestry in Namibia has been implemented as a series of donor-funded projects. DoF lacks the capacity and resources to assist communities to complete the application process and Sachinga missed the first phase of the project which focused on getting community forests registered. Thus, the community remains under the governance of the traditional authority and sub-khuta with no formal boundary, management committee or legal rights to wildlife and/or plant resources for commercial extraction. Access to plant resources for domestic use is governed according to customary law. However, as per the devil’s claw policy, individuals may harvest devil’s claw to sell with the permission of the relevant headman or traditional authority. As such devil’s claw harvesting was undertaken by some residents but unlike Balyerwa Conservancy and Lubuta Community Forest where harvesters were organised by their management committees, harvesting in Sachinga was done independently. Further, as an unregistered area Sachinga did not receive any support from Integrated Rural Development and Nature Conservation (IRDNC) in the implementation of devil’s claw harvesting or other natural resource management activities. Therefore, devil’s claw harvesting in Sachinga had not been subject to the same protocols for training, monitoring and sales as Balyerwa Conservancy and Lubuta Community Forest.
Table 14: Summary of people and infrastructure in Sachinga

<table>
<thead>
<tr>
<th>Majority population</th>
<th>Mafwe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Languages</td>
<td>Sifwe, SiLozi and English</td>
</tr>
<tr>
<td>Harvesters</td>
<td>~45</td>
</tr>
<tr>
<td>Education</td>
<td>Limited, predominantly primary school</td>
</tr>
<tr>
<td>Livelihoods dependent on natural resources</td>
<td>Livestock, crop farming, devil’s claw harvesting</td>
</tr>
<tr>
<td>Formal employment</td>
<td>None</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Communal water points, Sachinga Combined School</td>
</tr>
<tr>
<td>Access</td>
<td>Katima Mulilo – 40 km</td>
</tr>
</tbody>
</table>

8.3 Traditional governance and community forestry

Like other communities in the Zambesi Region, Sachinga has a desire for self-determination and would like to register as a community forest. The formal registration of the area as a community forest is perceived by the residents to enable better protection of their forest resources from neighbouring communities. As expressed by the would-be chairman of the community forest, “To manage the resources around us, for our children to have access to resources. If not registered, anyone can use the resources” (Focus Group #11, Sachinga sub-khuta, 22nd June 2015). This was re-iterated by a senior headman of the sub-khuta who remarked, “Right now there is no control, everyone is doing what they want, outsiders are harvesting our forest resources” (Focus Group #11, Sachinga sub-khuta, 22nd June 2015). Also, the residents of Sachinga viewed community forests as an opportunity to acquire increased support from government and non-governmental organisations (NGOs) for enterprise development without which progress is limited.

There are several neighbouring sub-kutas under the jurisdiction of the traditional authority each with members chosen by the relevant community that sit on the traditional authority to represent their sub-khuta (Interview #57, Sachinga sub-khuta, 30th September 2015). The headmen of Sachinga are in conflict with the neighbouring headmen of Ibito and Kaenda who claim the land as their own. The chairman elaborated, “The problem is those people [Ibito and Kaenda] want to rob us of our piece of land. Other areas don’t have kiaat and false mopane so they don’t want to give protection rights as they will lose utilisation rights” (Focus Group #11, Sachinga sub-khuta, 22nd June 2015).
With the registration of a community forest, traditional boundaries are formalised and only those communities living within those boundaries may access forest resources in that area. The refusal of certain traditional authority members to give permission for Sachinga to register as a community forest is an articulation of traditional leadership and power over land whereby access to forest resources is determined by the traditional leaders and not the formalised borders. A Sachinga area headman expressed, “Kaenda, Ibito and Sachinga cannot agree on the boundaries. These are traditional boundaries but the new khuta [traditional authority] is saying no. There is an issue around resources that Sachinga has but other areas don’t so they are arguing that Sachinga will benefit and have money but not them” (Focus group #11, Sachinga sub-khuta, 22nd June 2015).

In addition, misunderstanding of the legislation has led some traditional authority members to believe that traditional use of forest resources would not be permitted under these new co-management institutions. “There are some indunas [headmen] they have got the mentality that being a community forest everybody will have to buy, even firewood. When you cut or harvest and use yourself you don’t pay, but when it comes to business and you want to sell then you must pay” (Sachinga chairman, pers. comm., 1st October 2015). Both the chairman and area headman expressed that they wanted to do joint awareness-raising with DoF to educate the traditional authorities about the benefits of community forestry (Focus group #11, Sachinga sub-khuta, 22nd June 2015).

Regional DoF’s perspective was, “There is misunderstanding by the khuta [traditional authority] of what community forestry is. Is there any way to change that? The problem is I can’t do it, and I can’t get any staff members sufficiently motivated to do anything. It is a symptom of community forestry being a donor-driven, project-driven story” (Interview #64, DoF Katima Mulilo, 1st October 2015). When asked who should mediate conflicts or what help could be given to the Sachinga community, another regional staff member of the Ministry of Environment and Tourism (MET) responded, “Nothing, there is no intervention by MET or DoF as fingers will be pointed, only information can be given. It’s difficult to say who should be assisting communities who are not registered to benefit in the same way” (Interview #65, MET Katima Mulilo, 2nd October 2015). According to central government, on whether DoF would intervene to help the community the response was, “We will not do anything against the traditional authority, we will not say the forest belongs to these people, we will never do that” (Interview #74, DoF Windhoek, 12th February 2016). The implication is that while there is enabling legislation for the communities to obtain legal rights over their forest resources, DoF positions the traditional authority as more powerful than the State. As a result, these resistant members of the traditional authority flex their authoritative legitimacy. As expressed by the area headman, “We are struggling with the members of the khuta [traditional authority]. They want to take
our land and that is where the dispute comes. Even within the khuta [traditional authority] there are disagreements” (Interview #57, Sachinga sub-khuta, 30th September 2015).

This articulation negatively impacted the harvesters of Sachinga who believed the traditional authorities were not acting in their best interests by preventing the registration. “I don’t know why conservancies are supported and not us. In conservancies the management committee chooses the buyer but here it is not organised, the induna [headman] cannot organise a buyer so we get a bad price and no bonus, some of the conservancies get bonuses from the buyer” (Interview #61, Sachinga, 30th September 2015). Another harvester’s opinion was, “Gazetting of the community forest is problematic. If we could be gazetted then we could run things in a proper way. If gazetted, people could buy here as there would be a board that could arrange everything. Maybe our top leaders don’t know the benefit of community forests, but if they knew then we would have access to the market, they think that if we become a community forest then they will not be able to cut trees but it’s not like that” (Interview #63, Sachinga, 1st October 2015).

8.4 Governance of devil’s claw harvesting in Sachinga

Devil’s claw in Sachinga was governed by three institutions – MET, DoF and the sub-khuta. Under the current governance arrangement, the harvesters were constrained by an inability to access government or NGO support and were subject to exploitation by their headmen and the buyers. MET’s role did not go beyond the issuing of permits. While the harvesters accessed land under the jurisdiction of DoF, there was no active management or support from DoF.

8.4.1 Relationship with DoF

As described in Chapter 4, community forestry has always been a donor-driven project. During Phase I of the Community Forestry Namibia (CFN) project, the residents of Sachinga were introduced to community forestry and expressed interest in registering. However, in 2008 at the end of Phase I, the appointed project staff left and despite the four-year duration of the project, community forestry was not institutionalised in DoF, and DoF did not have the capacity or resources to assist Sachinga. Thus between 2008 and 2013 the community did not receive any support and were unable to complete their application.

Phase II was initiated in December 2013, and at the beginning of 2014 the newly appointed Zambezi community forestry project manager at DoF inherited the files of the emerging community forests, which included Sachinga. In May 2014, an evaluation of the status quo of each community forest was undertaken with the project manager visiting each one and speaking to them about what they needed and how far they were. Emerging community forests that were nearly finished with their application
could possibly obtain funding from Phase II however, according to DoF Windhoek the focus of Phase II was, “not so much to get new community forests gazetted, it is more to consolidate a bit” (Interview #74, DoF Windhoek, 12th February 2016). Thus, due to the fact they were not very far with their application, Sachinga was not targeted as a high-priority emerging community forest.

While the ongoing conflict over the boundary was one aspect hindering their application, Sachinga also did not have the technical skills to fulfil the other application milestones. The milestones are part of a toolbox that was developed in Phase I to be used by DoF in the registration of a community forest. There are ten requirements including a forest inventory and integrated forest management plan which were informed by commercial forestry practices in Germany (Figure 33). The intention was for DoF to use the milestones as a blueprint to continue to implement community forestry following the end of Phase I. Instead the milestones became a prerequisite for registration and the onus fell on communities to complete the milestones themselves. According to the regional community forest project manager at DoF, “There are milestones and there is a ‘toolbox’ but we still haven’t got a hard copy that’s not black and white. Just physically it’s difficult to get these toolboxes, and in a way the milestones are millstones, they are very onerous. The milestones have been a stumbling block in the past and we still haven’t got around needing to have a highly technical plant inventory. If you read the legislation you don’t need a plant inventory, it is not there in the legislation. That was something that came with the project. I am not saying that inventories are wrong but that they’ve been the bottleneck to get these community forests registered” (Interview #64, DoF Katima Mulilo, 1st October 2015). Thus, in 2014 it was decided that Sachinga would not receive support to be gazetted.

However, the project manager had also done an analysis of MET’s devil’s claw permit data to determine if harvesting was taking place in the State Forest. “Last year [2014] I took MET’s permit data which they don’t even analyse and we analysed it and we found Sachinga had a lot of harvesters. When we did the devil’s claw monitoring last year with MET and IRDNC we targeted the areas that had a lot of harvesters and we found they were harvesting slap bang in the middle of the State Forest” (Interview #64, DoF Katima Mulilo, 1st October 2015). The regional office of DoF was concerned about the sustainability of the resource and the harvesters burning the State Forest during the dry season to aid visibility when searching for devil’s claw (Interview #33, DoF Katima Mulilo, 28th August 2015). Also, DoF was aware of the support that had been provided by IRDNC to other harvester communities through the MCA-N INP Activity, and the low prices the Sachinga harvesters were receiving.
AN OVERVIEW OF COMMUNITY FORESTRY MILESTONES

Milestone 1
Application for Community Forestry Support
To confirm the interests of the community and to estimate resource use potentials

Milestone 2
Institutional Cooperation
To identify relevant Government and Non-Government stakeholders and to agree on areas of cooperation

Milestone 3
Information and Awareness
To inform on benefits, legal and technical requirements of community forestry.
To identify village group representatives

Milestone 4
Community Forest Boundary
To agree upon, demarcate and map community forest boundary

Milestone 5
(Forest) Management Body
To elect/approve forest management body (FMB) and to ensure that FMB members have a clear understanding of their roles and responsibilities

Milestone 6
Constitution and Benefit Distribution Plan
To develop a community forest constitution and a general benefit distribution plan

Milestone 7
Participatory Rural Appraisal (PRA)
Collect socio-economic data and resource use preferences relevant for the design of the forest management plan

Milestone 8
Community Forestry Inventory
To assess forest resources according to local preferences and resource potential as input for forest management planning

Milestone 9
Integrated Forest Management Plan
To agree upon and describe forest management options and use regulations under consideration of other land use objectives such as agriculture and wildlife management

Milestone 10
Community Forest Agreement and Gazetting
To submit all required documents for the declaration of a Community Forest to the Minister of the Ministry of Agriculture, Water and Forestry (MAWF)

Figure 33: Milestones to register as a community forest (DoF 2012:vi)
“So that is why they [Sachinga] were targeted for some equipment and training. Twenty-five harvesters were provided with equipment and I managed to get two officers to do some basic training. It was just one day, not ideal but better than nothing” (Interview #64, DoF Katima Mulilo, 1st October 2015). Thus in 2015, a DoF officer went to Sachinga to conduct the training and the 25 harvesters to receive the equipment were chosen by the chairman based on them being the most ‘serious’ harvesters at the time (Focus Group #10, Sachinga, 20th June 2015). While the remaining harvesters could attend the training, they did not receive any equipment (pers. obs. Sachinga, 20th June 2015).

Following DoF’s involvement in 2014 and 2015 the harvesters felt support for their harvesting should be provided by DoF. “It is difficult to get water and food in the harvesting areas, we need support for this from DoF,” stated a Sachinga harvester (Interview #62, Sachinga, 30th September 2015). Another harvester expressed a similar view, “There is no transport, no food. We are requesting DoF to give us something at the start of harvesting devil’s claw. It’s very difficult, we need to get power and energy before we start digging” (Interview #54, Sachinga, 29th September 2015). But according to regional DoF staff getting support for community forestry was extremely difficult due to the bureaucracy in Windhoek, even for registered community forests. “I am quite frustrated because I write proposals that don’t get approved. This is a government project; my job is to get resources from the project to the forestry staff. Everything that gets done has to be approved by the Deputy-Director or Director of Forestry in Windhoek. I asked for funding to get community forests like Sachinga registered and the Deputy-Director said her staff must do that but then they don’t follow up. I don’t know what they’re going to do with the money at the end. Buy vehicles or something” (Interview #64, DoF Katima Mulilo, 1st October 2015).

At the time of the research, while DoF would continue to monitor the State Forest there were no further plans for DoF to train harvesters, provide equipment, or assist with registration. According to DoF Windhoek, the allocation of funds was subject to strict guidelines. “Now we have a tighter log-frame of what we are supposed to do, and we are not supposed to step outside of our log-frame. To directly fund the target group, it is a longer process, you have to motivate” (Interview #74, DoF Windhoek, 12th February 2016). Thus, the Sachinga community had missed the ‘funding boat’ and irrespective of the legislation remained under the governance of the traditional authority and unable to legally protect their forest resources.

8.4.2 Access to devil’s claw by harvesters

Access to forest resources was governed by the sub-khuta. In relation to the governance of devil’s claw, the area headmen determined access as no permit could be issued without their signature. When asked who made decisions around how forest resources were used, one area headman stated
“The khuta [traditional authority] has the power, they are the umbrella. Even MET has no power here, even DoF has no power here, the khuta [traditional authority] has the power because only after a person is allowed to have a letter of permission, can he then go to MET.” (Interview #57, Sachinga sub-khuta, 30th September 2015). This was re-iterated by other members of the sub-khuta.

Permit regulations for the harvesting of devil’s claw in communal areas require individual harvesters to obtain the permission of the relevant traditional authorities or headmen. Unlike Balyerwa Conservancy and Lubuta Community Forest where the management committee arranged a single permit for each harvester group, harvesters in Sachinga applied for individual permits which cost N$50 (US$4) each paid to MET. All harvesters interviewed explained that they were also required to pay an additional fee of N$50 to N$100 (US$4 to US$8) to their area headmen to obtain letters of permission for their devil’s claw permit application. Similarly, the headmen imposed self-determined fines on the harvesters for supposed unsustainable harvesting. According to the chairman, he monitored the harvesting areas and reported to the area headmen who could then use their discretion to impose fines or confiscate the permit and/or devil’s claw at will (Focus Group #10, Sachinga, 20th June 2015). Thus, the headmen have used these regulations, and their power, to create their own economically beneficial rules of access and enforcement. Therefore, the harvesters of Sachinga not only face barriers to registering as a community forest but their access to devil’s claw is also determined by their traditional leaders who exploit them.

By formalising traditional authorities, the government has ensured their institutional influence in the communal areas. As one harvester framed it, “The government can’t be in all the villages, so they assigned the traditional authorities to be the eyes and ears of the government” (Interview #59, Sachinga, 30th September 2015). And according to the chairman, “They [traditional authority] make by-laws that reinforce the government laws” (Focus Group #11, Sachinga sub-khuta, 22nd June 2015).

Traditionally, these leaders regulated access to forest resources according to social norms around informal boundaries of land between neighbouring leaders. With the commercialisation and formal regulation of devil’s claw, these norms have been altered and access is now determined with payment. While the sub-khuta had no knowledge of the buyers, where to sell devil’s claw and did not play a role in its management one of the headmen expressed that, “Harvesters should bring all the devil’s claw to the sub-khuta and we can look after the buyer” (Focus Group #11, Sachinga sub-khuta, 22nd June 2015). While this was not the case at the time of the research, the risk to harvesters with the advent of access and benefit-sharing (ABS) legislation is that the government may again draw on the traditional authorities as ‘representatives of the community’ in benefit-sharing agreements – with possible exploitation of harvesters.
Sachinga harvesters went to two government-controlled areas to harvest devil’s claw: the Zambezi State Forest and the Kopano Quarantine Camp. As described, prior to 2014 DoF was unaware of any harvesting in the State Forest and harvesters only required the permission of the headmen and the MET permit to access the area. To better control and monitor the State Forest, harvesters must now state on their permit application they wish to harvest in the State Forest (Murphy 2014). The State Forest is however, essentially an open-access area as anybody can apply for a permit to harvest there. As the community forestry project manager explained, “Officially no one is allowed to harvest in the State Forest, but everyone does. We got the permit officer at MET to ask them and then write State Forest on the permit so we know. But then of course no one did any monitoring in the State Forest except for that week in July [in 2015]. You can harvest with permission, but what those exact regulations are I am not sure” (Interview #64, DoF Katima Mulilo, 1st October 2015). The Kopano Quarantine Camp was also free for harvesters to access as long as they had a permit. According to the officer stationed there, “When people come inside we check their permits and then record it in the book” (KQC officer, pers. comm., 1st October 2015). As already highlighted in Chapter 7, with multiple harvester groups from different areas camping in the State Forest and quarantine camp, accountability for sustainable harvesting is near impossible to implement with limited resources. Further, while these areas did originally fall within customary boundaries the appropriation of the land by DoF as a State Forest has rendered these informal boundaries powerless.

The harvesters of Sachinga faced the same challenges as Lubuta Community Forest with respect to camping in the harvesting areas namely, the lack of food, water and the cost of transport. One harvester who was not harvesting said, “I am not harvesting in 2015 as there is no food or water or transport. We have no support for food or water. We are carrying water on our shoulders. If it is possible we need to get a company to support us” (Interview #56, Sachinga, 29th September 2015). Other harvesters noted that fewer people were harvesting in 2015 with reasons given including: “There is less devil’s claw available and too many people know about it,” (Interview #61, Sachinga, 30th September 2015); “The price is too low,” (Interview #56, Sachinga, 29th September 2015); and, “There is not enough food to do the labour” (Interview #60, Sachinga, 30th September 2015).

Despite these limitations, harvesting volumes were not limited as no quota was in place. In Balyerwa Conservancy and Lubuta Community Forest, quotas were stipulated in the sales agreements. The management committees also tried to enforce individual quotas of 100 kg per harvester which greatly impacted on the ability of harvesters to benefit in 2014 and 2015. Of the ten harvesters interviewed in Sachinga, six indicated that other family members had helped them to harvest. The MET permit data for 2015 showed 18 permits had been issued to Sachinga with a total of 111 harvesters listed on the permits, indicating that one permit was acquired per household. In 2014, 11 permits were issued
but the number of harvesters per permit were not recorded (Data supplied by MET Katima Mulilo, September 2015). The Sachinga harvesters also had the advantage of being able to acquire the permit right at the start of the season in April as they were not reliant on a management committee. However, the costs to the harvesters were greater with the payment to the headmen, MET and transport to the permit office in Katima Mulilo (Interviews #53 – 63, Sachinga, September 2015). While 25 harvesters received some equipment from DoF in 2015, there were also harvesters that did not. Thus, equipment was an additional cost for Sachinga harvesters.

8.4.3 Benefits to harvesters from devil’s claw

All harvesters were reliant on passing buyers for the sale of devil’s claw. These were middlemen who went on to sell the devil’s claw to exporters. To profit from the trade the middlemen offered substantially lower prices to the harvesters. A key focus of the Millennium Challenge Account-Namibia (MCA-N) activity in Balyerwa Conservancy and Lubuta Community Forest was to eliminate middlemen and for harvesters to sell directly to the exporters ensuring a better price. This aspect of the project was successful. In Sachinga, the devil’s claw was either weighed by the buyer and paid per kilogram or a price was offered per bag. In 2015, harvesters sold devil’s claw to seven different buyers with prices ranging from N$10 to N$16 (US$0.77 to US$1.23) per kilogram or N$400 to N$500 (US$31 to US$38) for a 50 kg bag. All harvesters felt they had no choice but to accept what buyers offered them and articulated, “The buyer refuses to negotiate” (Interview #53, Sachinga, 29th September 2015). “The poverty is too much but we are not able to negotiate with the buyer” (Interview #54, Sachinga, 29th September 2015). Re-iterated by another harvester, “The buyers will go elsewhere if we don’t accept their price” (Interview #53, Sachinga, 29th September 2015). As harvesters sold on an ongoing basis during the season and no sales records were kept it was difficult to ascertain the exact earnings of the harvesters. However, Table 15 & Table 16 give approximate earnings based on the reported amount of devil’s claw sold during 2014 and 2015 at N$12 (US$0.92) per kilogram. Based on this information, average annual income per harvester is estimated at N$3 297 (US$254) in 2014, and N$2 320 (US$178) in 2015. The harvesters indicated that income was less in 2015 as the drought had made harvesting very difficult. These results show that while Sachinga harvesters earned equivalent amounts to harvesters in Balyerwa Conservancy and Lubuta Community Forest, they worked substantially harder to do so. Devil’s claw harvesting was the only income-generating activity that harvesters participated in and all harvesters emphasised the importance of the income from devil’s claw. The total income (income, remittances and social grants) acquired per harvester per annum ranged from approximately N$5 000 (US$385) to N$10 000 (US$769) in any given year. Income from devil’s claw accounted for between 23% and 66% of the total income acquired (Interviews #53 – 63, Sachinga, September 2015).
Table 15: Approximate earnings of 20 harvesters in Sachinga in 2014 (Focus Group #10, Sachinga, 20\textsuperscript{th} June 2015)

<table>
<thead>
<tr>
<th>Focus Group #10 harvester no.</th>
<th>Total harvested (kg)</th>
<th>Total income (N$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10a</td>
<td>100</td>
<td>1 200</td>
</tr>
<tr>
<td>10b</td>
<td>440</td>
<td>5 280</td>
</tr>
<tr>
<td>10c</td>
<td>140</td>
<td>1 680</td>
</tr>
<tr>
<td>10d</td>
<td>140</td>
<td>1 680</td>
</tr>
<tr>
<td>10e</td>
<td>100</td>
<td>1 200</td>
</tr>
<tr>
<td>10f</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>10g</td>
<td>100</td>
<td>1 200</td>
</tr>
<tr>
<td>10h</td>
<td>400</td>
<td>4 800</td>
</tr>
<tr>
<td>10i</td>
<td>100</td>
<td>1 200</td>
</tr>
<tr>
<td>10j</td>
<td>100</td>
<td>1 200</td>
</tr>
<tr>
<td>10k</td>
<td>140</td>
<td>1 680</td>
</tr>
<tr>
<td>10l</td>
<td>100</td>
<td>1 200</td>
</tr>
<tr>
<td>10m</td>
<td>800</td>
<td>9 600</td>
</tr>
<tr>
<td>10n</td>
<td>100</td>
<td>1 200</td>
</tr>
<tr>
<td>10o</td>
<td>80</td>
<td>960</td>
</tr>
<tr>
<td>10p</td>
<td>160</td>
<td>1 920</td>
</tr>
<tr>
<td>10q</td>
<td>40</td>
<td>480</td>
</tr>
<tr>
<td>10r</td>
<td>800</td>
<td>9 600</td>
</tr>
<tr>
<td>10s</td>
<td>980</td>
<td>11 760</td>
</tr>
<tr>
<td>10t</td>
<td>400</td>
<td>4 800</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5 220</td>
<td>62 640</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>274</td>
<td>3 297</td>
</tr>
</tbody>
</table>
Table 16: Approximate earnings of ten harvesters in Sachinga in 2015 (Interviews #53 – 63, Sachinga, September 2015)

<table>
<thead>
<tr>
<th>Interview no.</th>
<th>Total harvested (kg)</th>
<th>Total income (N$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>53</td>
<td>40</td>
<td>480</td>
</tr>
<tr>
<td>54</td>
<td>300</td>
<td>3 600</td>
</tr>
<tr>
<td>55</td>
<td>80</td>
<td>960</td>
</tr>
<tr>
<td>56</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>58</td>
<td>200</td>
<td>2 400</td>
</tr>
<tr>
<td>59</td>
<td>160</td>
<td>1 920</td>
</tr>
<tr>
<td>60</td>
<td>100</td>
<td>1 200</td>
</tr>
<tr>
<td>61</td>
<td>60</td>
<td>720</td>
</tr>
<tr>
<td>62</td>
<td>600</td>
<td>7 200</td>
</tr>
<tr>
<td>63</td>
<td>200</td>
<td>2 400</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1 740</strong></td>
<td><strong>20 880</strong></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>193</strong></td>
<td><strong>2 320</strong></td>
</tr>
</tbody>
</table>

As the harvesters were not exposed to the higher prices the conservancies and community forests obtained, their desired price was much lower ranging, from N$20 to N$25 (US$1.54 to US$1.92) per kilogram. However, they were aware that the conservancies and community forests had a single buyer and were earning more from harvesting less. In 2015 at the training with DoF, the harvesters asked why they couldn’t take their bags to Sobbe Conservancy/Masida Community Forest as they had a buyer there with a good price. DoF’s response was, “We can’t as it doesn’t work like that” (Focus Group #11, Sachinga sub-khuta, 20th June 2015).

While the harvesters felt DoF should provide support in the way of food, water and transport, six of the ten harvesters felt it was the responsibility of MET to ensure a better price. All ten harvesters agreed that MET should institute a minimum price for devil’s claw that all buyers must adhere to. One harvester expressed, “They must help us because harvesters are being robbed,” (Interview #53, Sachinga sub-khuta, 29th September 2015) while another stated, “The government should set the price or find a good buyer for us. All prices should be the same for all buyers” (Interview #60, Sachinga sub-khuta, 30th September 2015). Both regional offices of MET and DoF agreed that the government should
help prevent the exploitation of harvesters. DoF believed a minimum price of N$27 to N$29 (US$2.08 to US$2.23) should be instituted (Interview #33, DoF Katima Mulilo, 28th August 2015), while MET expressed that the government should, “guide the price not set a minimum price, facilitate with government and buyers” (Interview #31, MET Katima Mulilo, 28th August 2015). Given MET already regulated traders DoF believed further regulation with the addition of a minimum price was achievable (Interview #33, DoF Katima Mulilo, 28th August 2015).

The chairman believed if he could get the harvesters to group together and sell their devil’s claw to one buyer that they could negotiate for a better price. “Next year I’ll try and take some of the harvesters to Lubuta and Sachona where there are community forests so we can be educated by those people, they can give us the knowledge and they will tell the harvesters the importance of grouping together, they will tell them that if you do what you want on your own, you lose” (Sachinga chairman, pers. comm., 1st October 2015). Harvesters agreed that they would be happy for the chairman to take on this responsibility, but only with a guaranteed buyer and higher price (Focus Group #10, Sachinga, 20th June 2015).

8.4.4 Impact on the environment and the resource

According to the harvesters there were some people that were not harvesting sustainably. The main reason was because they were not trained. “They just don’t know the correct method,” said one harvester (Interview #56, Sachinga, 29th September 2015) while another suggested that, “Harvesters want to get as much as possible so they harvest the tap root” (Interview #60, Sachinga, 30th September 2015). According to the chairman the status of devil’s claw was that, “The number of plants could increase if managed but currently the number is decreasing” (Sachinga chairman, pers. comm., 1st October 2015). The harvesters had mixed opinions with five people stating harvesting was sustainable in the long-term, three thinking it could maybe be sustainable and two people stating it was not sustainable. Six harvesters felt there were new plants growing but they were still young, while four harvesters felt there were fewer plants due to “no rain,” (Interview #60, Sachinga, 30th September 2015), “too many harvesters,” (Interview #61, Sachinga, 30th September 2015) and, “the way we are harvesting” (Interview #58, Sachinga, 30th September 2015).

Following the discovery of the extensive harvesting in the State Forest, the community forestry project manager organised a post-harvest impact assessment undertaken at the end of 2014 jointly with MET, DoF, IRDNC and the chairman. The assessment showed that most holes that had been dug were not being refilled and the presence of dead tap root confirmed that plants were not recovering after being harvested. This was due to the holes not being refilled and/or the tap root being damaged during harvesting. However, the holes were not very deep which showed that many of the plants had not
been harvested before (Murphy 2014). In-season monitoring undertaken by DoF and some community members in 2015 displayed similar results with 87% of 170 monitored holes left open, 55 plants (32%) with regrowth versus 115 (68%) with no regrowth, and only four unharvested or new plants. In comparison, the results from Lubuta’s harvesting area in the State Forest showed 45% of 85 monitored holes were left open, 35 plants (44%) with regrowth versus 50 (56%) with no growth, and 91 unharvested or new plants (Data provided by DoF Katima Mulilo, July 2015). Therefore, whilst both communities were harvesting in the State Forest, the Lubuta harvesters had better harvesting practices as they left more plants unharvested and refilled more holes. Given monitoring of Lubuta harvesters was also limited, these results indicate the extensive training of the harvesters, the implementation of quotas and the organisation of the harvesters by the community forest had improved sustainability.

The monitoring undertaken in 2014 and 2015 also showed that harvesters from unregistered areas were burning the harvesting areas to find the plants more easily. On a field visit to the Kopano Quarantine Area this was confirmed. According to the chairman it was harvesters from the neighbouring community of Bito that had started the fire in the quarantine area that year, despite the risk to the cattle being held there. Records at the quarantine camp showed harvesters being recorded only in 2013 and the quarantine officer said that only one person had entered in 2015. However, during the field visit a harvester camp with seven harvesters was found (Field notes, Kopano Quarantine Camp, 1st October 2015). The quarantine officer was concerned about the impact of the harvesting saying, “Last year we found that people were not closing the holes. People are just digging, harvesting and then they move on… Last year and this year people have been burning. The problem is one person has a permit for ten or 15 people” (KPC officer, pers. comm., 1st October 2015). The community forestry project manager agreed that fire was a management issue and felt the NGOs needed to put resources into community forestry. “Devil’s claw keeps on coming up because of people burning the veld to find the plants. But we have no one to take that up, someone who can actually work with groups on the ground to coordinate the burning of the harvesting areas in April or May as devil’s claw has been identified as a culprit for these late season fires. Why they can’t put some money into this – WWF has completely ignored community forests, even IRDNC has pretty much ignored them” (Interview #64, DoF Katima Mulilo, 1st October 2015). According to IRDNC, “It should be DoF through the community forest legislation [that helps unregistered areas]” (Interview #69, IRDNC, 14th October 2015). However, IRDNC did also articulate at a forestry workshop that year that, “IRDNC has had a strong focus on wildlife at the expense of other resources, it has not been holistic, but there is now intention” (IRDNC staff member, Regional Timber Workshop, Windhoek, 3rd August 2015).
Institutional confusion between MET and DoF was highlighted at a Zambezi regional fire coordination meeting where the issue was raised that MET handled permits for devil’s claw harvesting but DoF was responsible for implementing early burning. The separation of the two institutions was problematic as, “each only looks after its respective resources”. Further while MET thought, “the law must be enforced,” DoF held the view that, “people are burning because they are hungry so they don’t care, we need to identify the reasons why people burn in different areas to take ownership” (Zambezi Regional Fire Coordination Meeting, Katima Mulilo, 23rd June 2015).

The legal entanglement of MET and DoF was also apparent as it related to monitoring, permitting and ensuring sustainability. Regional staff at DoF and MET both expressed that devil’s claw should be the jurisdiction of DoF. Further, according to a senior MET warden, “The separation of DoF from MET is an awkward situation and personally I feel that this is a misrepresentation of DoF. It should be under the same system” (Interview #32, MET Katima Mulilo, 28th August 2015). A MET permit officer had the opinion, “I thought it was supposed to be with Forestry but MET has been given the responsibility. DoF does report on what is happening in State Forest but the ministries are not always working together. We only share reports, we are not sharing responsibilities but working in isolation” (Interview #31, MET Katima Mulilo, 28th August 2015). Further MET acknowledged that the implementation of the current permit system was ineffective and monitoring largely absent. According to the permit officer monitoring took place, “Sometimes once, sometimes not at all” (Interview #31, MET Katima Mulilo, 28th August 2015). This was re-iterated by the senior warden who stated, “There are some rangers that are monitoring but we are not doing much besides just issuing permits. We are not on the ground enforcing and controlling harvesters. This is not done. Attention is given to wildlife crime and not devil’s claw” (Interview #32, MET Katima Mulilo, 28th August 2015). DoF was frustrated that MET issued permits for the State Forest yet didn’t assist with monitoring. “It isn’t good as they give the harvesters permits but are not assisting in those areas. Harvesters are not followed up on” (Interview #33, DoF Katima Mulilo, 28th August 2015).

Lastly, permit and harvesting data given back to MET by harvesters at the end of each season were not translated into meaningful information. For the MET senior warden this was a critical aspect to ensuring sustainability that was not undertaken. “The data are not analysed. It is still a weak system. Unless there is sound, clear research done on devil’s claw abundance in Zambezi and it is mapped correctly, only then can we say we are monitoring and managing okay. Without doing research to understand the densities where devil’s claw occurs in the region that can sustain the market for more than ten years, then I am not convinced”. At the time of the research devil’s claw harvesting was not deemed to be sustainable in the long-term and MET felt the resource would benefit from a recovery period of three to five years (Interview #32, MET Katima Mulilo, 28th August 2015).
The community forestry project officer was concerned that there would be lack of continuity in monitoring. “I think we can do it now with the forestry project as I am looking out for it but once the project ends it will be back to business-as-usual, because that’s the easiest” (Interview #64, DoF Katima Mulilo, 1st October 2015).

8.5 Conclusion

Sachinga is a communal area that is still governed by the Mafwe Traditional Authority and sub-khuta. While the residents would like to register as a community forest to protect their resources and harness support from NGOs, they have not been able to do so. This is due to land and forest resource conflict between the traditional authority members, and lack of technical capacity to fulfil the onerous application requirements which were developed by Northern development agencies and informed by European science on commercial forestry. Sachinga has been refused support by DoF, the institution tasked with supporting community forestry, both because government will not confront traditional authorities and because DoF lacks the resources and capacity to assist Sachinga. The latter is a result of community forestry being implemented as a series of donor-funded projects with insufficient capacity-building and institutionalisation in DoF.

Harvesters were subject to exploitation by the headmen who demanded payment for access to devil’s claw based on their traditional role as governors of the land. This has implications for the harvesters in light of the new access and benefit-sharing legislation which includes biotrade. Harvesters in unregistered areas like Sachinga have been excluded by NGOs, and as such have not benefitted from the management support and single buyer contracts of conservancies and community forests. Thus, harvesters have extracted more of the resource to earn the equivalent amount as harvesters in neighbouring conservancies and community forests.

As a result, the devil’s claw resource in Sachinga can be assessed to be at greater risk compounded by the plant not being considered a high-value traditional medicine. Sustainability is an issue with limited training given to the harvesters and minimal monitoring of harvesting activities. Effective monitoring and support by DoF and MET has been hindered by institutional entanglement with each institution holding the other responsible.

The next chapter relates the findings of Chapters 6, 7 and 8 to the theoretical perspectives in Chapter 2.
9. DISCUSSION

9.1 Introduction
The previous chapters presented empirical evidence to describe the different governance arrangements and outcomes for devil’s claw harvesting in three areas of the Zambezi Region. This chapter begins with a comparative synthesis of those study sites describing the similarities and differences between them. Local governance of devil’s claw is then characterised with a focus on institutional theory and processes of institutional bricolage. This is followed by an examination of the livelihood and sustainability outcomes with a discussion on the influence of the broader historical and political-economic contexts. These outcomes are then interrogated through an analysis of power at the local, national and global levels. The chapter concludes with the argument that for social-ecological benefits to be actualised in non-timber forest product (NTFP) commercialisation differentials in power must be addressed. A reframing of the dominant narratives is required that focuses less on alleviating vulnerabilities and more on enhancing economic freedom and creating opportunity spaces.

9.2 A comparative synthesis of the case studies

9.2.1 Overview
Lubuta Community Forest and Sachinga are of the Mafwe ethnic community under the leadership of the Mafwe Traditional Authority. Balyerwa Conservancy is of the WaYeyi ethnic community under the leadership of the Mayeyi Traditional Authority. These traditional authorities have contested customary boundaries and political power, but all fall within the same administrative region and have similar practices of customary land allocation. The communities of all three areas are inherently dependent on natural resources for livelihoods centred around subsistence agriculture, pastoralism, hunting, tourism and NTFPs. However, Balyerwa is situated on the Kwando River and neighbours a national park with access to a richer set of natural resources than Lubuta or Sachinga which are situated inland but have access to the State Forest. The socio-economic context of the areas is similar with low levels of formal education, limited formal employment, widespread poverty and limited access to technology and capital arising largely from a shared history under colonialism, apartheid and post-independence political and economic ostracisation. However, Lubuta is more economically isolated than Balyerwa or Sachinga not being located on a main road. Thus, despite the relatively small distances between these areas the social context is heterogenous and complex.

Ecologically, the case studies fall within the same Zambezian *Baikiaea* woodlands ecoregion defined by a hot, semi-arid climate and deep, nutrient-poor Kalahari sands that can support forest and
woodland vegetation, and thus NTFPs, but are ill-suited to agriculture. Frequent fires, illegal logging and clearing for settlement and agriculture transform the landscape creating a mosaic of land-uses. As a species, devil’s claw is patchily distributed, difficult to cultivate and susceptible to drought. While it is abundant in Namibia, due to its economic value and being wild harvested it has been deemed to require regulation and management.

The three case studies of Balyerwa Conservancy, Lubuta Community Forest and the Sachinga community show that devil’s claw governance has been in part determined by a variety of institutions with a range of external and local rules, regulations and practices. At the local level, all three areas are governed first and foremost by traditional authorities and headmen who have considerable power and legitimacy amongst communities. In addition, new designed institutions for co-management of natural resources have emerged over the past 12 years – the conservancies and community forests – informed by government and non-governmental organisations (NGOs). As a protected species, devil’s claw is formally regulated by the Ministry of Environment and Tourism (MET), who also oversees conservancies, while the Directorate of Forestry (DoF) oversees community forestry. A local NGO, Integrated Rural Development and Nature Conservation (IRDNC), implemented devil’s claw harvesting in conservancies and community forests and remains an influential institution. At the national and global scale, exporters control the local market and while foreign buyers control demand and pricing.

Balyerwa Conservancy is characterised by statutory geographical boundaries; that is, customary boundaries have been crystallised by law in the registration of the conservancy. The conservancy also has a management committee and a suite of staff that implement the management of natural resources, including the collective harvesting of devil’s claw by conservancy members. Commercial harvesting of devil’s claw was introduced and initially facilitated by IRDNC and followed set procedures as determined by IRDNC and implemented together with the management committee and staff. These procedures included harvester training and registration, group permits, a formal sales contract with a single buyer, centralised buying events, quota setting and monitoring. As a conservancy, Balyerwa generates substantial income from tourism and hunting which enables management committee and staff members to receive renumeration. Balyerwa has also received significant external institutional support for more than a decade from MET, IRDNC and other NGOs.

Lubuta Community Forest also has formal geographical boundaries and a management committee which oversees collective devil’s claw harvesting. Similarly, harvesting was introduced and initially facilitated by IRDNC following the same set procedures designed and implemented by the NGO. As a community forest, Lubuta is limited to income from forest products of which only devil’s claw has been successfully commercialised. The community forest has received little institutional support.
beyond that provided for devil’s claw and the management committee has worked on a voluntary basis.

Sachinga is neither a conservancy nor a community forest and has been unable to render support for its registration. As an area only under traditional governance there was no formal management committee at the time of the research and devil’s claw harvesting was undertaken independently by community members. Harvesters in Balyerwa Conservancy and Lubuta Community Forest sold their devil’s claw to a single exporter at a pre-agreed price with set quotas, while harvesters in Sachinga sold their devil’s claw to a variety of passing buyers who offered much lower variable prices. In Balyerwa, harvesters only had access to devil’s claw within the boundary of the conservancy, whereas harvesters from Lubuta and Sachinga accessed devil’s claw in the neighbouring State Forest. Sachinga harvesters also had access to a government quarantine camp. Table 17 provides a summary of these main characteristics.

Table 17: Summary of the main characteristics of the three case study sites

<table>
<thead>
<tr>
<th>Case study site</th>
<th>Co-management institution with statutory boundaries</th>
<th>External support from government and NGOs</th>
<th>Collective harvesting of devil’s claw with single buyer</th>
<th>Location of harvesting areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balyerwa Conservancy</td>
<td>Yes</td>
<td>Strong</td>
<td>Yes</td>
<td>Within conservancy</td>
</tr>
<tr>
<td>Lubuta Community Forest</td>
<td>Yes</td>
<td>Limited</td>
<td>Yes</td>
<td>State Forest</td>
</tr>
<tr>
<td>Sachinga</td>
<td>No</td>
<td>Little to none</td>
<td>No</td>
<td>State Forest Kopano Quarantine Camp</td>
</tr>
</tbody>
</table>

9.2.2 Governance arrangements of the three study sites

Balyerwa Conservancy

The governance arrangement of Balyerwa Conservancy included five formal institutions determining the management and use of natural resources. These were the traditional authority, sub-khutas, conservancy management committee and staff, IRDNC and MET. Governance of devil’s claw was determined both by external rules and regulations set out by IRDNC and MET, as well as by customary practices. Customary rules determined disciplinary action for unsustainable harvesting practices and access to harvester areas according to customary boundaries. The headmen situated in the
conservancy were supportive of devil’s claw harvesting but did not play an active role in its management. The traditional authority was the historical governor of the land and community. While it did not play an active role in the management of devil’s claw specifically, it was a powerful, vocal institution that flexed its authority in the conservancy with implications for harvesters.

The MET oversaw Balyerwa Conservancy but their role in the governance of devil’s claw was limited to the issuing of harvester permits and occasional collaborative monitoring with the conservancy and IRDNC. Their long association with the conservancy and involvement in wildlife management did render them as influential external actors, however the regional office of MET placed little importance on devil’s claw and as such MET was a passive actor in devil’s claw governance.

The major external player was IRDNC, the local NGO who implemented commercial harvesting activities as a donor-driven project. IRDNC’s influence was the result of more than a decade of institutional, technical and financial support to the conservancy. While Balyerwa Conservancy remained dependent on IRDNC for access to buyers and negotiating sales contracts, and IRDNC was extremely influential in the conservancy, not all of IRDNC’s recommended practices were adopted by the conservancy.

With the emergence of co-management through the conservancy, the management committee of the conservancy became the new institution brokering cultural norms and legal rights, vying for equal power with the traditional authority and seeking economic empowerment. They represent a more modern chieftaincy whose position is in part customary and in part statutory, elected based on cultural norms, education and introduced democratic processes. This new institution is not subject to the same rules of kinship and tradition as the traditional authority and therefore represents an opportunity for community members to assert new identities, livelihood opportunities and power rooted in more Western, capitalist approaches. While the management committee is the interface between IRDNC, the traditional authority and the community they nonetheless remain bound to processes of traditional decision-making and leadership under the hand of the traditional authority. The management committee did not consider devil’s claw harvesting to be as valuable as hunting or tourism as income from devil’s claw to the conservancy was far less than these more lucrative activities, and as such its management was not given the same priority. The plant resource monitors who were tasked with the day-to-day management of the harvesters, and who were also women, considered their work and positions to be less valued and supported by the management committee than other staff members.

The governance of devil’s claw was influenced by all five of these formal institutions and the collage of external and customary rules and regulations that underpinned them. The harvesters themselves
had no decision-making power in formal processes but harnessed their own autonomy in the selective adoption, adaption or rejection of harvesting rules.

*Lubuta Community Forest*

Lubuta Community Forest was also characterised by external and local institutions, rules and regulations but was more cohesive in its governance as a standalone customary area with a single set of headmen. The traditional authority and headmen were far less obtrusive in the community forest with no apparent struggles for power as the community forest has resulted in far fewer opportunities and benefits than the neighbouring conservancies. Also, awareness of community forests by traditional authorities is far less than that of conservancies. There were no customary laws dictating access to and use of devil’s claw and the traditional authority and headmen played no active role in the governance of devil’s claw with harvesters accessing areas that were beyond the boundaries of the community forest in State land.

Like Balyerwa Conservancy, the management committee is a new institution that is a hybrid of customary and statutory practices. While they too desired new identities and livelihood opportunities through the community forest, unlike Balyerwa the management committee of Lubuta was far less empowered financially and received significantly less institutional support. Nonetheless, they sought to serve the best interests of the harvesters despite their disadvantaged position. There were no staff in Lubuta Community Forest thus the management committee was the interface between IRDNC and the harvesters, the decision-maker for devil’s claw and the day-to-day manager of harvesting processes.

The MET’s role was limited to issuing harvester permits and their presence was entirely absent in the community forest. DoF, the supporting government institution for community forests, lacked resources and capacity and as such, was passive in its role in Lubuta Community Forest which viewed DoF as disinterested and ineffective.

IRDNC, who implemented devil’s claw harvesting, was the only external actor that significantly impacted on the community forest. The management committee largely adopted IRDNC’s protocols, motivated by devil’s claw being Lubuta’s only source of income from forest resources. The management committee remained dependent on IRDNC for access to the market.

Lubuta Community Forest also fell within the boundaries of two conservancies, Mashi and Sobbe. While the community forest wanted to collaborate with Mashi Conservancy in its activities this was contested by the conservancy who deemed the community forest to be a burden with little financial contribution to make.
Like Balyerwa Conservancy, the harvesters of Lubuta Community Forest had little autonomy in decision-making regarding the formal processes for harvesting. Harvesting however was voluntary and harvesters shaped the rules accordingly to their needs.

**The Sachinga Community**

The governance arrangement for devil’s claw in Sachinga was very different from the other two case study sites. Sachinga is a customary area with contested boundaries and no formalised co-management institution for natural resource management. An ongoing boundary dispute within the traditional authority related to the availability of forest resources in neighbouring areas prevented the Sachinga community from registering as a community forest. Lack of institutional capacity to complete the burdensome forestry application process also hindered registration. In this regard, DoF refused to assist the community as Sachinga was not considered a priority community forest and community forestry resources had been applied elsewhere.

Without any formal arrangements, devil’s claw harvesting was an ad-hoc activity undertaken independently by harvesters without any set protocols or support beyond the acquisition of harvester permits from MET. There were no customary regulations specific to the harvesting of devil’s claw, but headmen did determine access to the resource as their permission was required on the permit application as the governors of the community. This was irrespective of devil’s claw being harvested in State areas. Harvesters were required to pay the headmen unofficial fees to obtain their permission. MET and DoF were passive in their management of these State areas and MET, DoF and IRDNC were absent in their support to Sachinga with only DoF having provided once-off support to harvesters.

Harvesters sold their devil’s claw to passing buyers who offered various prices and harvesters had no autonomy in negotiating the price. An individual in the community championed for harvesters to harvest and sell their devil’s claw more collaboratively in the fashion of the conservancies and community forests, however harvesters were reluctant to do so without a formal institution in place.

**9.3 Characterising local governance**

The three study sites clearly illustrate the varying governance arrangements with a range of bureaucratic and socially-embedded institutions. Governance here cannot be neatly defined as hierarchical, self- or collaborative but is an evolving fusion of statutory, traditional and co-management systems. This is in accordance with Ndeinoma and Wiersum (2017) who assessed the governance arrangements for several notable NTFPs from Namibia traded on the international market including *Sclerocarya birrea* (marula), *Commiphora wildii*, *Ximenia Americana* and *X. caffea* (sour plum), *Citrullus lanatus* (Kalahari melon) and devil’s claw. They use the term ‘network governance’ to
describe governance of formally protected species characterised by different degrees of public and private actor involvement, and the use of legally binding regulations, standards and procedures, as well as customary rules, norms and beliefs. They emphasise the use of network governance rather than co-governance which may be interpreted as collaborative governance as defined by Kooiman and Jentoft (2007,) and obscure inequalities of resources and power. This section critically examines these emerging local governance arrangements, relating them to theoretical insights from adaptive governance and critical institutionalism.

9.3.1 A complex social-ecological system

Social-ecological systems theory frames relationships between human and ecological components as part of a complex system with multi-scale feedbacks and dependencies (Berkes & Folke 1998). Wiersum et al. (2014) explicitly state the increasingly complex and cross-scale nature of NTFP governance. Thus, social-ecological systems theory is useful as a starting point for framing the cross-scalar elements that interact to shape devil’s claw governance. The identification of these elements was in part drawn from political ecology with a lens to highlighting what broader ecological and political-economic processes may be determining power relations and governance outcomes such as the uncertainty of ecological systems or dominant discourses.

In this study the social components that were most influential in determining governance outcomes included ethnic affiliation, information, knowledge, access to financial capital and available livelihoods. Important environmental components were the ecology and distribution of devil’s claw, fire, rainfall and the broader mosaic of land use including agriculture, pastoralism and conservation. Informed by critical institutionalism, this study differentiated mechanisms integrating these components at a local level as ‘conscious’ or ‘unconscious’. Conscious mechanisms refer to those embodied in identifiable, structured institutions and included management practices, harvesting regulations, resource use, land boundaries, policy and legislation, customary law and property rights. Unconscious mechanisms refer to those mechanisms shaping behaviour on a sub-conscious level and included daily practices, social norms, discourses and narratives. These conscious and unconscious mechanisms operate within the broader institutional framework including the State, traditional authorities, co-management and non-governmental. At a global scale, the market, public finance and international treaties were of significant influence in shaping governance. While beyond the scope of this study, climate change as a global environmental process also requires consideration as a key influence (Figure 34). By situating the components and mechanisms into a social-ecological framework, linkages can be drawn between governance processes and outcomes.
Coupled with social-ecological systems theory is adaptive governance, the avenue of theory and practice concerned with creating conditions that will promote the sustainability and resilience of social-ecological systems. As it relates to devil’s claw, the objective of adaptive governance is to foster governance arrangements and processes that best meet rural development and conservation objectives and can respond to change as required. Therefore, it is illuminating to examine these local governance arrangements in relation to adaptive governance theory to determine to what extent conditions for adaptive governance can be created within the current institutional framework and political-economic system.

**Figure 34: Social-ecological system for governance of devil’s claw**

### 9.3.2 Institutional multiplicity

Central to adaptive governance is the need to foster governance arrangements for social-ecological systems that are resilient to change and uncertainty and can deal with complexity (Dietz et al. 2003; Folke et al. 2005). Many have suggested this be achieved through multiple cross-scalar institutions that are flexible and adaptive, and networks of actors that promote social learning and change (Folke
et al. 2005; Berkes 2007; Armitage et al. 2009; Nunan 2010). These cross-scalar institutions should be nested in different levels of society, diverse and allow for experimentation and learning.

In mainstream institutional theory institutions can be designed for purpose and include the norms, rules, policies and laws that can shape human behaviour and incentivise for collective action (Folke et al. 2005; Berkes 2007). Policy approaches see institutions as mechanisms for furthering ‘good governance’ of natural resources at the local level. Well-designed local institutions are thought to play a key role in regulating property rights, preventing overexploitation of resources, promoting sound management and creating sustainable livelihoods (Ostrom 1990). This is supported by the belief that communities have an advantage in resource management, being able to draw on their local knowledge of resources, environmental conditions and technology. By creating spaces for communities to be involved in decision-making, powerlessness and poverty can be mitigated through management activities which generate economic benefits (Wiersum 1997a, b). However, the weakness of Ostrom’s theory is that it generally only concerns small, localised communities with minimal historical disruption and an underlying assumption is that they are strongly motivated to try to solve common problems to enhance their own productivity over time. Ostrom (1990) differentiates between de jure and de facto rules but does not address irrational behaviour.

More recently, some scholars have shifted away from these dominant institutional narratives towards critical institutionalism which views natural resource governance systems as socially constructed. Here attention is drawn away from the design of institutions and their designation as formal and informal to the evolution of institutions and their understanding as ‘bureaucratic’ and ‘socially-embedded’ (Cleaver 2001, 2002, 2012; De Koning 2011).

Co-management institutions

In Namibia, co-management seeks to generate economic benefits through conservation and promotes the development of local institutions, supported by national institutions to contribute to meeting national conservation and development goals within the realm of social-ecological sustainability (MET 2013). Thus, the focus is on the effective management of common pool resources through decentralisation. According to Bollig (2016), in the development of the co-management framework it was implied by government that natural resources in communal areas were effectively open access. Further that prior to the implementation of co-management these resources were not regulated other than by the State and were at risk of a ‘tragedy of the commons’ scenario (Hardin 1968). It was also implied by government that traditional natural resource management was inadequate for the commercialisation of natural resources which is deemed necessary to incentivise for sustainable use, that is ‘conservation by commercialisation’ (Arnold & Ruiz-Pérez 2001; Bollig 2016). Therefore, new
technocratic institutions were designed by the government and NGOs to be developed at the local level for the co-management of common pool resources, namely conservancies and community forests. These institutions emphasise modern democratic governance and following Kooiman and Bavinck (2005) fall under the banner of co-governance, that is governing with the State.

Traditional institutions

However, these new institutions have been introduced into a landscape of pre-existing institutions for traditional governance of communal land and rural communities. Rooted in pre-colonial legitimacy and originally self-governing, traditional institutions have become uniquely situated as hybrids of hierarchical, self and co-governance as a result of colonial, apartheid and post-independence interventions. In the case study areas, traditional authorities and customary law have been recognised by the State and legitimised by statutory law since colonial times (see Chapter 4 and Section 9.4.2). This has firmly established the khuta or traditional authorities as an element of State or hierarchical governance (Kooiman 2003). However, the particulars of customary law and traditional courts are determined by the traditional authorities themselves alluding to their self-governance, while the allocation and designation of communal land is undertaken collaboratively with the State. Therefore, while the traditional authority is self-governing and socially-embedded, it is also bureaucratic as traditional institutions have become formalised as part of government, governance and development (Cleaver 2012).

Mamdani (1996) refers to the strategy used by colonial states to maintain central government control over communal lands through traditional authorities as bifurcation. Bifurcation is viewed to perpetuate in post-independence southern Africa through the re-appropriation of traditional authorities by the State thereby promoting governance antithetical to democracy (Ntsebeza 2002, 2005). As observed in the case study sites, traditional authorities owe their position to lineage, inheritance and patronage and are rooted in colonialism and post-colonial neo-patrimonialism (Hyden 2006). They are hierarchical and patriarchal, largely exclude women and maintain biases to the exclusion and oppression of less powerful individuals or communities. While the traditional authorities are mandated with governing their communities and maintaining law and order, the case studies showed the traditional authority to be authoritarian and self-serving. The sub-khuta or village headmen was observed to be a more appropriate, effective and accessible institution for local governance. While the traditional authority is often far-removed from community members, both geographically and socially, relationships between community members and village headmen are rooted in kinship and exhibit reciprocity, trust and self-enforcement with problems resolved through dialogue. However, the traditional authorities have political and cultural legitimacy, are deeply rooted in the case study communities, and are resilient in the face of co-management maintaining their
position as the governors of the land. This political and cultural legitimacy reinforces the unproductive and self-perpetuating narrative of these communities as ‘traditional’. With reference to unsuccessful local institutions Ostrom (1990:21) states that some communities, “do not have the autonomy to change their own institutional structures and are prevented from making constructive changes by external authorities who are indifferent to the perversities of the commons dilemma, or may even stand to gain from it”. In the case studies, as non-resource users the traditional authorities can be considered external institutions. As alluded to by Ray (2003) and Nuesiri (2014), irrespective of whether traditional authorities are despotic, their power in post-independent states is growing and they are central to rural governance in Africa. Given the interaction of State, traditional and co-management institutions at the local level a bifurcated analysis pays inadequate attention to understanding how processes of transformation are occurring within a context of institutional multiplicity.

9.3.3 Institutional design

In the case study areas, the emerging institutional arrangements were a fusion of the new co-management institutions designed according to decentralisation principles and neo-liberal economics, traditional institutions that had long been bureaucratised, and socially-embedded local institutions steeped in customary law and practices. In Sachinga, traditional institutions largely governed natural resources and the governance arrangement for devil’s claw was not subject to the deliberate normative prescriptions applied in Balyerwa and Lubuta to achieve adaptive governance through co-management. Therefore, the three study sites provide a valuable comparative analysis of Ostrom’s (1990) design principles for effective common property governance (Table 18).

The first principle refers to the need for clearly defined boundaries of who can use the resource and the boundaries of the common pool resource (CPR). Thus, the first principle is closely tied to property rights as the right to access and benefit from resources, in this case devil’s claw. Also, the contrast between ‘common-property’ and ‘open-access’ systems in relation to the boundaries of the resource system. In Balyerwa Conservancy, who could use the resource was clearly defined by conservancy membership, the registration of harvesters and harvesting permits. In addition, the formal geographical boundary of the conservancy served as the boundary of the resource system ensuring exclusive access, that is, a common-property system. In Lubuta Community Forest, who could use devil’s claw was similarly defined by community forest membership, the registration of harvesters and harvesting permits. However, as the harvesters were accessing the State Forest the boundaries of the resource system were not defined and access was open. In Sachinga, who could use the resource was defined by harvesting permits, but the resource system was open access. Thus, harvesters in Lubuta and Sachinga were not able to exclude ‘outsiders’ from harvesting devil’s claw. While the concept of
boundaries is often closely linked to geographical boundaries and is a spatial dimension, it also concerns jurisdictional boundaries. Importantly, in all three case studies who could use the resource was not determined by the resource users themselves but first and foremost by the State through a permitting system. That is, property rights remained with the State and with that, the perception by harvesters that the State was ultimately responsible for management of the resource. As a result, productive activity was disincentivised and the discount rate pushed towards 100%, most evident in Sachinga where property rights were weakest.

Ostrom’s (1990) second principle refers to congruence between the rules governing appropriation and provision, and local conditions. In the case studies the harvesting of devil’s claw was regulated by rules specifying when, where, how and how much to harvest. Rules regarding when to harvest were determined by the State and were ‘good-fitting’ in that they were appropriate for the ecological considerations of devil’s claw, similarly for how to harvest. However, rules governing where or how much to harvest were not adapted to the local conditions of each site, were not based on local knowledge and/or scientific data, were generalised and determined by external actors. The arbitrary nature and application of these rules did not incentivise self-regulation and enforcement. Instead, responsibility for management of the resource was viewed by the harvesters to be that of the State.

The third principle states that those affected by the rules should participate in making the rules. It is argued that by having the authority to make the rules, the individuals who interact with one another and the resource system can modify the rules over time to better adapt them (Ostrom 1990). This is akin to the feedback loops of learning and knowledge exchange in adaptive governance (Folke et al. 2005). Balyerwa Conservancy and Lubuta Community Forest were represented within their supporting government institutions, MET and DoF, through management complexes at broader geographical scales. To this end, in Balyerwa Conservancy and Lubuta Community Forest responsibility for management of devil’s claw resources was expanded to the relevant management committees. In these sites, external rules such as quotas and the use of harvester cards were introduced by IRDNC while the national policy set out rules for permits and sustainable harvesting. To some extent, the conservancy and community forest determined the rules of resource management, for example the handling of harvesting quotas and disciplinary processes for unsustainable harvesting. However, in the co-management structures of Balyerwa Conservancy and Lubuta Community Forest governance was representative, not participatory. Representation was enabled through the creation of the management committees and responsibility for management was given to the management committees. However, this was not matched by an equal transfer in authority to the management committees, or more importantly in the case of devil’s claw, to the harvesters themselves. In the case studies, the harvesters neither decided who could access the resource, nor determined the rules for
that resource with all rules determined externally by the State, NGOs, the buyer, the traditional authorities, headmen and management committees. As articulated by Murombedzi (1991) as ‘centralisation at the local level’, co-management in its current conceptualisation in Namibia creates nodes of top-down NGO and State driven governance or mini natural resource agencies, overburdened with layers of bureaucracy and with no room for manoeuvre. The result was the bending or rejection of rules in response to local needs and conditions (Cleaver 2012). This is discussed further below.

Monitoring methods for monitoring and evaluation of devil’s claw were introduced by IRDNC in Balyerwa Conservancy and Lubuta Community Forest. During the project, collaboration among IRDNC, MET, DoF, conservancies and community forests enabled collective monitoring. However, in Balyerwa there was declining uptake of these procedures as NGO-support waned as they had not been locally developed and cohesion was limited between the local actors responsible for monitoring and evaluation. These procedures were adopted in Lubuta Community Forest but a lack of incentives for those undertaking the monitoring threatened their continued use. While the technocratic processes were designed to be undertaken by the resource monitors and/or management committees and thus were deemed to be ‘participatory’ the monitoring methods did not include the harvesters nor did the harvesters have access to the information from the monitoring. In Namibia, Ndeinoma (2018) acknowledges the mixed results of managing NTFPs through co-management institutions. Ostrom’s (1990) fourth principle works on monitoring as a by-product of the resource users own strong motivations to use their resource units to their maximum potential and resource users who undertake monitoring activities obtain valuable information for themselves that can improve their strategic decisions regarding the resource. In the case studies, the harvesters were not given the opportunity to determine the rules of use, nor the methods of monitoring, again disincentivising productive concern. In addition, the monitoring methods that were put in place were costly, as articulated by the resource monitors. Rules devised by the resource users themselves can reduce the costs of monitoring by being locally appropriate and resource users learn from experience to design enforceable rather than unenforceable rules. While graduated systems for the violation of rules were in place in all three study sites, without effective monitoring these were not enforced and with the sanctions not devised by the harvesters themselves, enforcement was low.

The sixth principle, rapid access to low-cost local arenas to resolve conflicts, was a key failure in Balyerwa Conservancy and Sachinga that left harvesters further disempowered. In Balyerwa Conservancy, when the harvesters came into conflict with the buyer, there was no mechanism for them to resolve the conflict and the institution they believed would assist with conflict resolution was not willing to do so. Lacking information, this placed harvesters in a vulnerable position not wanting
to further jeopardise livelihoods. Similarly, in Sachinga, there was no support to resolve the ongoing conflict within the traditional authority that was preventing the registration of the community forest as NGOs and the State were not willing to challenge the traditional authorities.

In the case studies, the opposite of the seventh principle being true could be viewed to underpin the challenges in the governance of devil’s claw. That is, the case studies showed that external governmental authorities challenged the rights of resource users to devise their own institutions. As discussed above, the current framework for co-management does not devolve authority over decision-making to the resource users themselves, with property rights limited to representation and utilisation but not participation. Similarly, the traditional authorities maintain their decision-making authority over the communities, reinforced by the State. Resource users were thus subject to insufficient power and inappropriate institutional choice (Ribot 2003; Ubink 2008).

The final principle speaks of nested tiers of responsibility for governing the commons from local level upwards. This principle is said to apply to situations in which the common pool resource is situated in a broader system. With current trends in localisation-globalisation local communities are increasingly situated in global governance frameworks. This is true for the case study with international treaties determining trading rights and global markets shaping demand. At the local level institutions were to some extent cross-scalar and nested, had diverse networks of actors and brought together different forms of knowledge, all deemed characteristics of adaptive governance (Chaffin et al. 2014; Karpouzoglou et al. 2016; Sharma-Wallace et al. 2018). In all three case study sites, the traditional institutions were nested in each other through representation. For example, the management committees had representatives from the traditional authority and headmen from the sub-khutas. And each of the sub-khutas had representatives at their respective traditional authority thereby creating links to broader governance systems. Ball and Brancalion (2016) highlight the role of NGOs as capacitors that can strengthen harvester access to necessary capital, technology, markets, knowledge and develop vertical linkages. The Namibian Association of CBNRM Support Organisations (NACSO), an umbrella organisation, linked the conservancy and community forest to the government-mandated, multi-stakeholder Indigenous Plant Task Team (IPTT) and to all supporting organisations for CBNRM in Namibia. This included IRDNC which enabled the implementation of the Millennium Challenge Account-Namibia (MCA-N) Project Activity. IRDNC’s intervention enabled these co-management institutions to better engage with the local market, improve quality of the product and obtain better pricing thereby reducing exploitation and improving benefits. Further, harvesters in co-management institutions benefitted from information, knowledge-sharing and infrastructure regarding product processing and quality. In the absence of co-management institutions, harvesters incurred higher costs in obtaining permits, benefitted less and were more vulnerable to exploitation.
Collaborative harvesting in Balyerwa Conservancy and Lubuta Community Forest also facilitated improved compliance to harvesting regulations, including better harvesting practices, some monitoring, annual feedback to MET and registration of all harvesters.

However, representation does not equate to participation. In evaluating at what scale local institutions should operate and rights be devolved to, and how best to achieve ‘nested institutions’ the study revealed several insights. The first is that benefits were greater where rights were stronger and boundaries clearer. Second, small communities worked better than bigger communities. This was observed in Lubuta Community Forest where collective action was strongest compared to the fragmented and conflicted management of Balyerwa Conservancy. However, in Sachinga which was also a small community there was no shift towards self-organisation. This could be attributed to the absence of any decision-making rights over the resource. Third, under the current governance framework for devil’s claw the transaction costs, including monitoring and enforcement through the State and management committees, outweigh the benefits. The low value of the resource calls for a far simpler regulatory framework that removes unnecessary and inefficient bureaucratic layers by re-evaluating the social and ecological scale at which natural resource management would work best. The devolution of authority to resource users to determine the rules of use, monitoring and enforcement would facilitate experimentation and learning, reduce costs and increase participation. These observations are supported by Murphree’s (2000) notion of jurisdictional parsimony, or matching management requirements to jurisdictions no larger than necessary. To address localisation-globalisation, responsibility should be scaled-up as required to match ecological and functional scale. In the case study, this would diffuse the decision-making power of the traditional authorities and address the ineffectiveness of the State in communal areas whilst maintaining a role for these institutions.

Using Lubuta Community Forest as an example, rights to determine the rules of use of devil’s claw would be devolved to the community forest with accompanying spatial boundaries for an exclusive harvesting area. This would shift the current harvesting area in the State Forest from an open-access scenario to a common-property system. Rules of use, including the allocation of harvesting quotas to individuals or households and responsibility for monitoring and enforcement, would be negotiated by the harvesters themselves facilitated by the management committee. Given the much broader ecological scale of devil’s claw, either harvesters or management committee members would be delegated to inform devil’s claw decision-making at a regional scale. The current State and traditional authority decision-making power would be democratised by the inclusion of the delegated community members for participatory rule-making in a truly collaborative forum at the regional level.
Table 18: Ostrom’s design principles and corresponding attributes of the study sites (After Ostrom 1990)

<table>
<thead>
<tr>
<th>Ostrom’s (1990) design principles</th>
<th>Balyerwa Conservancy</th>
<th>Lubuta Community Forest</th>
<th>Sachinga</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Clearly defined boundaries</td>
<td>Yes, but no property rights</td>
<td>Clearly defined boundaries of use but open-access system; no property rights</td>
<td>Clearly defined boundaries of use but open-access system; no property rights</td>
</tr>
<tr>
<td>3) Collective-choice arrangements</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>4) Monitoring by resource users</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>5) Graduated sanctions</td>
<td>Disciplinary action according to conservancy by-laws, customary and statutory systems depending on degree of offence</td>
<td>Disciplinary action according to community forest by-laws, customary and statutory systems depending on degree of offence</td>
<td>Disciplinary action according to statutory system</td>
</tr>
<tr>
<td>6) Conflict resolution mechanisms</td>
<td>No – expensive and inaccessible</td>
<td>No – expensive and inaccessible</td>
<td>No – expensive and inaccessible</td>
</tr>
<tr>
<td>7) Minimal recognition of rights to organise</td>
<td>Challenged by State and traditional authority</td>
<td>Challenged by State</td>
<td>Challenged by State and traditional authority</td>
</tr>
<tr>
<td>8) Nested tiers of responsibility for governing the commons from local level upwards</td>
<td>Conservancy nested in broader governance systems with traditional authorities, government, supporting organisations, private sector and donor agencies; representation but no participation</td>
<td>Community forest nested in broader governance systems with traditional authorities, government, supporting organisations, private sector and donor agencies; representation but no participation</td>
<td>Community under traditional authority nested in government; representation but no participation</td>
</tr>
</tbody>
</table>

Similarly, decision-making at the regional scale would be upscaled to the national level by the delegation of members from the regional collaborative forum to a national collaborative forum which would include the Devil’s Claw Working Group, Indigenous Plant Task Team and other relevant
stakeholders. In this way, decision-making could be informed by the experiences and learning of the harvesters themselves, locally appropriate and balances power in an accountable, bottom-up process of democratisation where legal pluralism is prevalent. Science, policy and decision-making could be integrated into a system that seeks to assume and manage for change as opposed to against it (Gunderson & Light 2006) and the need for networks of actors that promote shared responsibility, learning, co-production of knowledge and change could be addressed (Berkes 2007; Armitage et al. 2008).

Ndoinoma (2018) highlights that in Namibia an institutionally clearly delineated NTFP sector does not exist but rather a complex network of institutional arrangements for specific NTFPs, in this case, devil’s claw. The results of this study support the notion that local institutions can contribute to improved benefits and natural resource management as was observed in Balyerwa Conservancy and Lubuta Community Forest. However, efficacy was limited by poor design and limited understanding of function and process (Carlsson & Berkes 2005). As argued by Franks and Cleaver (2007) successful governance outcomes are not determined by representation alone but must extend to participation and accountability.

Béné and Neiland (2006) caution that by assuming that co-management is more equitable by nature the social dimensions of co-management are overlooked and the question of whether co-management effectively results in positive impacts for poverty alleviation may not be adequately addressed. Jentoft (2007) warns that co-management does not necessarily eliminate power games or challenge existing power structures and suggests that power should be further questioned. Nunan (2010) concludes in her research on fisheries co-management that more understanding is needed of whether and how co-management challenges established patterns and relationships of power, and the extent and nature of power sharing between stakeholder groups and the different co-management structures.

Power then is suggested as a fundamental aspect of co-management and governance that influences its ability to achieve the desired social and ecological outcomes. To this end, Karpouzoglou et al. (2016) suggest theoretical multiplicity to help address areas of governance scholarship that require further investigation. Such aspects include power and politics, inclusion and equity. Using institutional bricolage, the following section examines agency and power within these local governance arrangements that determine participation and access.

9.3.4 Processes of institutional bricolage

Critical institutionalism places the nature of human action, power dynamics and outcomes for social justice at its centre (Cleaver & De Koning 2015). It views natural resource governance systems as
socially constructed and seeks to understand how they are enacted and how things change with often unpredictable outcomes. As suggested by Cleaver and Whaley (2018), the application of a critical institutional lens can provide insight into the interplay between structure and agency. It also alludes to dominant power relations while highlighting the adaptability and resourcefulness of social life. Chaffin et al. (2014) in their review of adaptive governance specifically point to the need for an explicit analysis of power and politics. And Armitage et al. (2009:98) in their review of adaptive co-management state, “It is therefore necessary to examine the many sources and manifestations of power, how it emerges and persists (through control, resistance, and solidarity), and its influence – good and bad – on collaboration and learning. Different social entities continuously exert their power (e.g. through the use or misuse of information). Power is therefore linked to deliberation, learning (e.g. who defines what type of learning), the choice of indicators for measuring outcomes, and the sharing of risk – all key components of adaptive co-management”.

A key component of critical institutionalism is shedding light on how institutions evolve and explaining the processes of institutional formation and variability of outcomes. The ad-hoc conscious and unconscious reshaping of institutions by actors is elaborated by Cleaver (2001, 2002, 2012) as institutional bricolage. She interrogates the notion of crafting of institutions whereby institutions for natural resource management can be effectively designed for optimum use and collective action based on a set of principles (Ostrom 1990, 1994; Agrawal 2001). Instead she argues that the socially-embedded nature of institutions results in an ad-hoc process of bricolage as formal and informal, traditional and modern institutions integrate. The agency and identities of individuals is also highlighted by Cleaver (2001, 2002, 2012) as critical in shaping institutions. These ‘bricoleurs’ apply their knowledge, power and agency in respect of social relations, collective action and resource management in varying modes.

De Koning (2011) went further to track three processes of institutional bricolage adopted by local actors in response to new introduced arrangements, namely aggregation, alteration and articulation. These can be likened to the adoption, adaption or rejection of different institutions in response to the social norms, cultural beliefs and circumstances of the actors.

With the changes to Namibia’s policy and legislation for co-management of natural resources in communal areas, the institutional dimensions of devil’s claw governance have become increasingly complex with several institutions interacting at multiple levels. As described these institutional mechanisms are conscious characterised by formalised rules, regulations and organisational structure and unconscious constructed on culture, kinship, traditions, community norms and values, and daily practices. These institutions are neither mutually exclusive nor static in their processes. Thus, an
analysis of institutional bricolage in the case study is useful for illuminating constraints to adaptive governance of NTFPs in relation to power and human agency at the local level.

**Articulation: asserting traditional identities**

The traditional authorities of Zambezi Region have evolved from their roots as customary institutions based on culture, kinship and tradition in pre-colonial times to formalised, statutory institutions that can be described as bureaucratic. However, beneath the bureaucracy of organisational structure, rules and legal rights there remains an intricate web of social norms and cultural beliefs. The traditional authorities have legitimacy that renders them as powerful local agents. In relation to institutions Scott (2001) describes three types of legitimacy namely, authoritative, moral and cultural legitimacy.

Authoritative legitimacy refers to the conforming of rules, in this case the legal power of the traditional authorities to enforce customary law as granted to them by the legislation. The traditional authorities also possess moral legitimacy, that is, according to the social norms of the communities the traditional authorities have been and continue to be taken-for-granted, socially-accepted community leaders, law enforcers and governors of communal land. Their cultural legitimacy refers to their power based on a common framework, or ethnic community affiliation. This three-fold legitimacy makes the traditional authorities bricoleurs that can influence their entire communities. They possess social resources that they harness to adopt or reject other institutions and can be considered as powerful, if not more powerful, than government and NGOs. While the government and NGOs use the agency of the traditional authorities to motivate for the adoption of government and NGO constructs by local communities, the traditional authorities can also reject or manipulate those constructs to maintain their authority and/or benefit themselves. Therefore, it is simplistic to categorise the traditional authorities as being co-opted by the State.

In line with development and natural resource management theory at the time, an institutionalist approach was taken by the government and local NGOs in developing the co-management framework for Namibia (Jones 1998). Collective action for the sustainable management and use of natural resources for the benefit of the community was assumed in the design of the formal co-management institutions. This was because these new institutions would be embedded in existing culture and tradition. This embeddedness was to be achieved by acknowledging the role of the traditional authorities as the governors of the land and the creation of management committees that were representative of the community and would on behalf of the community enable the members to derive benefits from natural resources, including NTFPs. The requirement of a constitution was intended to ensure the inclusion of democracy, in line with the newly democratic government, while fixed geographical boundaries would serve to formalise customary boundaries negotiated by the
traditional authorities, headmen and communities. The continued recognition of the traditional authorities post-independence similarly sought to embed existing cultural practices by legally designating the traditional authorities as the leaders of communities residing on communal land with positions elected as per customary law but within a prescribed structure. As highlighted by Cleaver (2001) such a normative, functionalist approach assumes the productive and distributional concerns of the actors in the designed institutions. Also, it assumes that the actors would consciously and knowingly use their cultural and social positions to maximise resource management. Yet, as the case studies show, there are limitations to the success of these designed institutions because they reproduce existing inequalities in power, knowledge and wealth; shape new struggles for power, identity and land; and limit livelihood capabilities.

This was illustrated in Balyerwa Conservancy where the Mayeyi Traditional Authority strongly asserted its cultural identity and power and rejected external rules. It did so by demanding that commercial ventures in the conservancy could only be decided in consultation with the traditional authority, by attempting to usurp conservancy procedures based on ‘traditional decision-making’ and forcing the payment of concession fees. This institutional process of articulation, the rejection of introduced institutions as unacceptable, irrelevant or socially inappropriate, resulted in friction with the conservancy which was detrimental to harvesters who lost NGO support and suffered reduced income. In the design of the co-management institutions deliberate efforts were made to nest the new institutions in the existing traditional institutions to enhance collaboration. However insufficient consideration was given to associated threats to power, cultural identity and land. Cleaver (2004), anticipating such scenarios, heeds caution to participation based on idealistic notions of agency and rose-tinted ideas about institutions. In this case, representation did not equate to participation.

Articulation: resisting new institutions

Articulation can be described as the asserting of traditional rules, norms, beliefs and identities that ranges from outright rejection of other external institutions to selective adherence to different institutional features as a form of resistance (De Koning 2011). In Sachinga, the refusal of the neighbouring headmen to give permission for Sachinga to register as a community forest is an articulation of local institutions of land governance whereby access to forest resources is determined by the headmen and not by formalised borders. With the registration of a community forest, traditional boundaries are formalised and only those communities living within those boundaries may access forest resources in that area. In addition, misunderstanding of the legislation led traditional authority members to believe that domestic use of forest resources would not be permitted under these new bureaucratic institutions. Given that the legislation required the traditional authority to authorise the community forest, these members were flexing their authoritative legitimacy in
resistance to the new institutions, the perceived loss of power and the threat of new rules of access to forest resources. In Sachinga, the headmen also used their legitimacy to exploit harvesters by expropriating ‘fees’ for their permission on permit applications.

**Aggregation: adapting social norms and customary practices**

In contrast, the headmen of Balyerwa were more inclined to the institutional process of aggregation. Aggregation relates to the integration of introduced rules, regulations and procedures with different types of socio-cultural elements. This process entails mixing the traditional with the modern to create a more practical, useful, institutional framework (De Koning 2011). In Balyerwa, the headmen used their cultural roles as advisors to promote sustainable harvesting practices. The introduced practices of reporting and monitoring, as per permit requirements and IRDNC’s protocols, were accepted by the headmen who now viewed the conservancy as responsible for natural resource management whilst maintaining their embedded practices and cultural identity as advisors. Unlike Sachinga where the headmen used reports of unsustainable harvesting for personal financial gain, in Balyerwa unsustainable harvesting was relayed by the sub-khuta to the conservancy such that monitoring could be informed.

In Balyerwa, aggregation was also largely observed in the management of devil’s claw by the management committee. According to customary practices, the headmen of the community give permission for the harvesting of natural resources. But in accordance with the requirements of IRDNC, the conservancy agreed to the development and use of a resource management plan that set out rules for the harvesting and trade of devil’s claw. In implementing the resource management plan the management committee determined the rules of access as they would for any other plant resource according to customary areas. Harvesters were organised according to these areas and informal rules limited harvesters to their areas. Similarly, in the event of a harvester not harvesting correctly the management committee determined the course of action according to socially-embedded customary practices that included fines or simply warning. The moral legitimacy of the management committee ensured that harvesters did not question decisions around when or where they were permitted to harvest even though the implementation of these rules and regulations were externally imposed. Similarly, monitoring of devil’s claw was readily adopted as the conservancy had already adopted formal monitoring as a practice for wildlife. The aggregation of the resource management plan and permit regulations with local rules and practices was beneficial to MET who lacked the resources to undertake these processes themselves and helped limit unsustainable harvesting.

Lubuta’s adoption and adherence to the external rules for the harvesting and trade of devil’s claw was motivated by the desire for income. As a community forest with no other enterprises, the harvesting and trade of devil’s claw was the only source of income for community members.
Management was undertaken as prescribed by IRDNC and following permit requirements. The management committee sought to manage unsustainable harvesting by drawing on the sub-khutas to fine or suspend those harvesters.

*Alteration: harnessing human agency*

According to Cleaver (2001:29), “*Less consciously, the use and adaptation of pre-existing customs and practices confers new arrangements with the legitimacy of ‘tradition’, with a sense that this is part of a generally accepted ‘right way of doing things’*”. The research showed the sub-khuta to be a formal, local institution with headmen chosen according to the same socially-embedded traditions of kinship and character as the traditional authorities. They lack the authoritative legitimacy of the traditional authorities, in that they are not legally recognised, but remain influential through their moral (socially-embedded and acceptable) and cultural (ethnic) legitimacy.

The government ensured their own institutional influence in the communal areas through the traditional authorities and sub-khutas. For example, permit regulations for the harvesting of devil’s claw in communal areas required individual harvesters to obtain the permission of the relevant headmen. Traditionally, these headmen governed access to forest resources according to social norms around informal boundaries of land between neighbouring areas. With the commercialisation and formal regulation of NTFPs, these norms have been altered and access is now regulated according to a hybridised set of rules. In Sachinga, the headmen used the devil’s claw regulations, and their moral legitimacy, to create their own economically beneficial rules of access and imposed self-determined fines on the harvesters for supposedly unsustainable harvesting. These adapted configurations of rules, practices, norms and relationships were attributed meaning and authority as they were based on socially-embedded institutions. Charging for access and the issuing of fines was not stipulated in the devil’s claw policy but by altering government regulations the headmen created livelihood strategies for themselves that were embedded in daily practice. This is akin to the ‘leakage of meaning’ in critical institutionalism whereby meaning is leaked or borrowed from one domain to another highlighting the influence of global and national processes in local governance (Douglas 1987; Cleaver & De Koning 2015).

Alteration, where designed institutions are adjusted to better suit livelihood practices, was also observed in Balyerwa Conservancy. There the management committee used income unscrupulously that was intended to support the harvesters and management practices. A basic business plan was developed by the conservancy in collaboration with IRDNC in which the management committee agreed to budget the management fee for the purchasing of equipment for harvesters and other costs related to devil’s claw such as permits and monitoring. However, this practice was not adopted which
left the resource monitors unsupported in their monitoring activities and the harvesters with limited access to equipment. This alteration of rules by the management committee was possible due to the management committee’s authoritative resources of official position, knowledge and social relations which they used to their advantage. The same moral legitimacy that enabled the management committee to enforce rules for harvesting, enabled them to take advantage of the management fee.

In adaptive governance there is a vital role for community representatives shaping the institutions, mediating the social and cultural norms, producing and interpreting rules and enforcing sanctions. These powerful actors are supposedly champions of transformation and in them are invested the collective resources of institutional trust and the common good. Cleaver (2001) argues against the emphasis on the productive concern of these community representatives as the new institutions can simply reproduce existing patterns of inequity and may shape or reinforce other differences, as seen in Balyerwa Conservancy and the Sachinga community. Adaptive governance implicitly assumes bounded rational actors that strategically exercise agency (Cleaver & Whaley 2018) however in practice agency is not always affected to the common good.

Human agency was also asserted by harvesters, reflecting resistance to unfavourable conditions and a response to livelihood needs. When collective harvesting and trade of devil’s claw was first introduced in Balyerwa Conservancy, harvesters were motivated by the desire to earn cash-in-hand income given benefits from the conservancy income were limited. This spurred the aggregation of the introduced rules for sustainable harvesting and trade as expectations for income were first met. Over time, with the inequitable behaviour of the management committee, significant fluctuations in price, complaints from the buyer around quality, and the challenges of the drought harvesters shifted from aggregation to alteration, bending and rejecting certain rules. The result was a decrease in sustainable harvesting practices and the selling of their devil’s claw in the local market in contravention of the sales contract. The resource monitors also started bending the rules to try increase income to harvesters by fraudulently entering data in the sales book.

In Lubuta, the adoption of community forest requirements and the integration of IRDNC’s protocols, the government’s regulations and the buyer’s rules was also based on the assumption there would be improved livelihood opportunities. However, the income received by the harvesters was not in line with the management committee’s norms of a satisfactory or desirable income. And the absence of an income for the management committee themselves was demoralising and resulted in dissension between members and a shifting in processes from aggregation to alteration. The management committee and harvesters used their agency to sell their excess devil’s claw to passing buyers in resistance to the imposition of quotas. This illustrates the fluid and dynamic nature of institutional
processes in response to everyday challenges (Cleaver & De Koning 2015) and “a messier process of piecing together shaped by individuals acting within the bounds of circumstantial constraint” (Cleaver 2002:15). Ingram et al. (2015) refer to ‘a fine mess’ in their assessment of forest governance in Cameroon where actors creatively used what capital was available to them and remoulded governance arrangements to meet their objectives, circumstances and livelihoods.

These processes shed light on the more nuanced socially-embedded institutions and their interaction with the structural, conscious institutions and highlight how power and agency are influencing governance at the local level. The following section examines the livelihood and sustainability outcomes and relates these outcomes to theoretical debates from political ecology. The novelty in using a political ecology approach to develop adaptive governance theory is to further examine the conscious and unconscious mechanisms in relation to history and the broader political-economic framework

9.4 Livelihood and sustainability outcomes

The harvesters in all case studies articulated a lack of autonomy with respect to the market. This was irrespective of co-management institutions being in place, or support from government and NGOs.

Livelihood outcomes in Balyerwa Conservancy and Lubuta Community Forest fluctuated year to year since the implementation of collective devil’s claw harvesting in 2011. In Balyerwa Conservancy average income per harvester ranged from N$949 (US$73) to N$6 000 (US$462) per annum, with an equally wide range of harvester numbers from 34 to 161 in any given year. Price per kilogram of dried, sliced devil’s claw ranged from N$18 (US$1.38) to N$34 (US$2.62) (Table 19). All harvesters sold their devil’s claw through the conservancy to a single exporter under three-year contracts with annual price reviews. This process was facilitated by IRDNC.

In Lubuta Community Forest average incomes per harvester ranged from N$1 291 (US$99) to N$4 732 (US$364) per annum, with harvester numbers equally inconsistent ranging from 26 to 128 between 2011 and 2017. Prices per kilogram of dried, sliced devil’s claw ranged from N$18 (US$1.38) to N$38 (US$3.17) (Table 19). Lubuta harvesters also sold to a single exporter through the community forest and facilitated by IRDNC. The two exporters that operated in Balyerwa and Lubuta were also the two dominant exporters of devil’s claw from Namibia. This direct link between harvesters and exporters was purposefully forged by IRDNC to improve traceability and benefits to harvesters. As a result, these harvesters received significantly higher prices than those harvesters not supported by IRDNC and were guaranteed the buying of a stipulated quota. Nonetheless harvesters remained vulnerable as
exporters controlled the local market and thus dictated pricing. Mismanagement of the quota by the management committees also resulted in fewer benefits for some harvesters.

Sachinga represented a less favourable livelihood scenario due largely to the fact that harvesters were not supported to access a reputable buyer. Thus, harvesters in this area sold to a number of local buyers that offered lower prices ranging from N$10 (US$0.80) to N$16 (US$1.23) per kilogram of dried, sliced devil’s claw or alternatively, N$100 (US$8) per bag (approximately 8 to 10 kg) resulting in an average income per harvester of N$966 (US$74) per annum. These local buyers were middlemen that went on to sell to exporters and therefore offered poorer prices than those offered by the exporters directly.

The income from devil’s claw relative to the total income acquired by a harvester in any given year was found to be extremely variable. This was the result of both the income generated from devil’s claw harvesting and other sources of income being volatile. However, the perceived value by harvesters of the income from devil’s claw was extremely high. As revealed by the case studies, the harvesting of devil’s claw was not a last-resort strategy but an additional livelihood strategy. However, neither the stand-alone income from devil’s claw harvesting nor the income combined with other sources of income was sufficient to be economically transformative, poverty was not alleviated and no degree of professionalisation was observed. In Balyerwa, members formally employed by the conservancy and receiving regular income did not harvest devil’s claw. This was because the income from devil’s claw was not deemed to be congruent to the value of the labour. The case studies show that within the current institutional framework the harvesting of devil’s claw is economically inefficient. That is, the exchange and transaction costs are higher than the gains from the trade thus incentivising unproductive rather than productive activity (North 1990). The overharvesting of devil’s claw is indicative of this.

Non-timber forest products as a ‘poverty trap’ is widely debated in the literature with some scholars dismissing NTFPs as being unable to be economically transformative (Belcher et al. 2005; Ros-Tonen 2012). The results from this study could be taken to reflect this view. However, doing so would fail to contribute to understanding the complexity of constraints that underpin the inability of NTFPs to be economically transformative. As argued by Ostrom (1990:21), “as long as analysts presume that individuals cannot change situations themselves, they do not ask what internal or external variables can enhance or impede the efforts of communities of individuals to deal creatively and constructively with perverse problems”. According to North (1990) how well institutions solve the problems of coordination and production is determined by the motivation of the players, the complexity of the environment, and the information the actors receive and the way they process that information.
Further, where the price to individuals of being able to express their own values and interests is low, they will greatly influence the choices made; but where the price for expressing one’s own ideology, or norms, or preferences, is very high they will account much less for the choices made. As discussed in Section 9.3.4, within the current institutional framework the information the harvesters and the community members managing devil’s claw receive is severely incomplete and the economic environment in which they are operating very complex. Also, the price to harvesters of being able to express their own values and interests is extremely low thus motivation for productive activity is low. Lastly, if incremental change comes from the perceptions of the actors that they could do better by altering the existing institutional framework at some margin, it is necessary to examine the perceptions of those actors and the pre-existing mental constructs through which they understand the environment and solve the problems they confront (North 1990). These mental constructs and the system that perpetuates them, rather than the NTFPs themselves, may be the cause of persistently inefficient paths. The following section examines this with a political ecology lens.

Table 19: Summary of livelihood outcomes from devil’s claw harvesting in the three case study sites

<table>
<thead>
<tr>
<th>Case study site</th>
<th>Lowest average income per harvester per year</th>
<th>Highest average income per harvester per year</th>
<th>Average price of devil’s claw per kilogram dried product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balyerwa Conservancy</td>
<td>N$949</td>
<td>N$6 000</td>
<td>N$18-34</td>
</tr>
<tr>
<td>Lubuta Community Forest</td>
<td>N$1 291</td>
<td>N$4 732</td>
<td>N$18-38</td>
</tr>
<tr>
<td>Sachinga</td>
<td>-</td>
<td>N$966*</td>
<td>N$10-16</td>
</tr>
</tbody>
</table>

* No inter-year income data were available, figure based on income from harvesting in 2015

Sustainability varied across the three sites with Lubuta harvesters showing the most sustainable harvesting practices and Sachinga harvesters the least. However, none of the cases promised sustainability in the long-term and the resource was considered by many to be decreasing in availability. Devil’s claw is susceptible to drought and its recovery post-harvesting is dependent on sufficient rainfall. Also, rainfall is necessary for the above-ground growth which enables harvesters to locate the plant. Burning to aid visibility was common in the State areas.

Formal monitoring procedures and quotas were implemented by IRDNC in Balyerwa Conservancy and Lubuta Community Forest with some success. Resource monitors in Balyerwa were hindered by a lack of transport to the harvesting areas and were not supported in their monitoring activities by the conservancy. In Lubuta, the harvesting areas were in the State Forest. This was a considerable distance from the community forest with no transport readily available and necessitating monitors to camp out.
for several days. Uptake of the use of IRDNC-designed monitoring forms was mixed and data were not meaningfully translated into management practices by MET. Initially IRDNC facilitated collaborative monitoring with MET but without financial resources and encouragement from IRDNC this had not continued as devil’s claw was considered less of a priority than wildlife.

Both in Balyerwa Conservancy and Lubuta Community Forest harvesting quotas were not well managed and in recent years buyers have unscrupulously been buying over and above quotas thus encouraging unsustainable practices. The State Forest and quarantine camp, accessed by many harvesters from multiple communities, were under the jurisdiction of DoF but no regular monitoring or management of the harvesters or resource was undertaken.

In summary, devil’s claw did bring economic benefits and was the main source of income for many harvesters. However, income was insufficient to be economically transformative and as a livelihood it lacked resilience as harvesters were susceptible to changes in the global market, a monopolised local market and vulnerable to drought. Further, harvesters were dependent on others for access to permits and buyers. Devil’s claw harvesting was not considered a desirable livelihood and sustainability was questionable with ineffective regulation, limited monitoring and competition for the resource.

To understand the complexities of NTFP governance and the resulting outcomes for livelihoods and the environment, Ros-Tonen (2012) suggests the need to step-back from the local context and situate NTFPs in their broader context using a political ecology framework. To enable understanding of the power dynamics and outcomes of local governance of devil’s claw, the next section considers the contextual history, political-economic conditions, ecological limitations and dominant discourses that frame the case study.

9.4.1 Dominant discourses underpinning rural governance in Namibia

The development of co-management policy and legislation in Namibia was born of a narrative of social-ecological crisis. The communal areas – home to 1.1 million people – were characterised by significant declines in wildlife and forests being cleared, challenges to statutory enforcement, the erosion of traditional systems of natural resource management, population growth and poverty (Jones 1998). At the time, new thinking on collective action for the commons was emerging informed by Ostrom (1990). Conservancies and community forests were purposefully and externally designed to enable co-management of natural resources informed by commons theory (Jones 1998). The ensuing policy resonated with conservation, poverty alleviation and decentralisation objectives. Thus, it could be marketed politically as a three-fold conservation-rural development-democratisation programme. This was important at a time when the international community was introducing constraints to the economies of developing nations through various United Nations’ conventions and promoting an
agenda of sustainable development (Sullivan 2000). Namibia’s overarching Green Plan (Brown 1992) had also committed to sustainable development. Co-management was intended to serve to institutionalise this goal and open doors to funding from major international donors as seen delivered in the United States Agency for International Development (USAID)-funded Living in a Finite Environment Programme. Thus, there was political buy-in by Namibia to implement ‘sustainable development’ by commoditising natural resources. While there was devolution in rights to utilise natural resources, this was not accompanied by reform to land tenure in communal areas in line with new institutionalism contesting private property rights as necessary for sustainable management of natural resources. That is, well-designed local institutions with a diversity of rights rather than private property rights could shape human behaviour and incentivise for collective action (Ostrom 1990; Agrawal 2001).

The implementation of collective devil’s claw harvesting in Balyerwa Conservancy and Lubuta Community Forest was a US-led development intervention facilitated through IRDNC. In line with international development and conservation paradigms of the late 1990s and early 2000s, the NTFP sector was identified by MCA-N as a sector that could reduce poverty through economic growth, the mandate of the Millennium Challenge Corporation funding the project. Devil’s claw was selected as a target product based on the existing international market, its widespread distribution and the experience already gained from an ongoing devil’s claw project. Communities were chosen according to organisational criteria. Indicators were set that focused on production, that is the increase in the number of people involved in the NTFP sector, increase in income and training events. Lastly, the national policy for devil’s claw was formalised as required by MCA-N due to its listing as a protected species under Namibian law. Thus, political decisions were made at a national level concerning who, what, where and how. These political decisions at the national level for policy, legislation and development interventions were motivated by access to donor funds underpinned by dominant discourses in the international arena including sustainable development, conservation by commercialisation, poverty alleviation through economic growth and co-management. The following section examines the role of history in shaping devil’s claw governance in Namibia.

9.4.2 Historical context

In political ecology, attention is given to understanding how historical processes shape contemporary environmental and development issues. In the context of devil’s claw two notable historical processes underlie contemporary local governance of devil’s claw. These include the formal recognition of traditional authorities by the colonial and post-colonial states and the appropriation of traditional knowledge during colonialism and subsequent market dominance by the global North.
Territorialisation of the communal lands

As this research demonstrates, land and resources are strongly contested by neighbouring traditional authorities and headmen in the Zambezi Region. Clashes and subjugation amongst the ethnic communities in this region characterised the pre-colonial era (Kangumu 2008). Pre-colonial ethnic community conflicts over land can be viewed as processes of territoriarity, defined as, “attempts by an individual or group to affect, influence, or control people, phenomena, and relationships by delimiting and asserting control over a geographic area” (Sack 1986:19). Territoriality is a social strategy that creates socially-constructed spaces characterised by historical and cultural origins.

Contemporary claims to communities and territories can be traced back to the designation of traditional authorities as the administrators of communal land by the German colonialists. This was reinforced by the apparatus of the apartheid government which maintained the ethnic community territories established by the Germans (Zeller 2000). Under this regime, accessible and co-operative chiefs were given preference and assigned vast tracts of land to govern over others, most notably in this research, the Mafwe Traditional Authority. Thus, with the arrival of the colonialists, ethnic community territoriality was disrupted and the State initiated territorialisation. State authorities determined who should reign over what territory whilst at the same time instituting limitations on natural resource use within those territories. Drawing on Mamdani’s (1996) thesis, this bifurcation in the African colony states enabled territorialisation of the communal lands by the State. By partially integrating the traditional authorities into the State, the government’s differentiated policies for natural resource use by ‘citizens’ and ‘subjects’ could be enforced by the traditional authorities themselves. Territorialisation was also actualised through forced eviction of people from land declared as protected areas, including members of Balyerwa Conservancy from Mudumu National Park and members of Lubuta Community Forest from the State Forest.

Post-independence legislation maintained the administrative function of the traditional authorities in communal areas but sought to ensure all ethnic communities could establish a traditional authority and have access to land (see Chapter 4). Those previously territorialised by State-empowered traditional authorities have since asserted their cultural identity and broken away from the Mafwe to form their own traditional authorities, including the Mayeyi Traditional Authority. As a result, conflict over the traditional commons and boundaries of ethnic community areas has emerged with the colonial designations used to support claims by the Mafwe (Hipondoka 2008). In agreement with the findings of Bollig (2016) boundary-making for conservancies and community forests further formalises and legitimises claims of traditional boundaries through statutory geographical bounding. It prevents ‘outsiders’ from accessing grazing and other valuable resources and re-legitimises traditional leadership and governance.
Processes of territorialisation were observed in the State Forest where the Lubuta community had historically lost a customary area when the State Forest was declared. With the advent of co-management, the nearby Kwandu Conservancy laid claim to the same customary area when registering as a community forest. The area was successfully included as part of the Kwandu Community Forest thereby formally excluding the Lubuta community from harvesting devil’s claw there.

In both Balyerwa Conservancy and Sachinga, traditional decision-making was re-legitimised despite the legislative authority of the co-management institutions to autonomously make decisions relating to the management and use of natural resources. In Balyerwa Conservancy, claims to traditional decision-making and demands for benefits were spurred by increasing conservancy income from commercial activities. The traditional authority’s conflict with the conservancy resulted in the withdrawal of support from IRDNC thereby negatively impacting the management of the conservancy, including that for devil’s claw. In Sachinga, conflict over areas with valuable forest resources within the Mafwe Traditional Authority inhibited registration as a community forest which prevented harvesters from harnessing any government or NGO support.

In addition to territorialisation of local communities by traditional authorities, it remains that co-management ensures the continued territorialisation of the communal lands by the State under the banner of neo-liberal conservation. This finding supports those of Ros-Tonen and Wiersum (2005) that while NTFPs are important to rural livelihoods this is because few economic alternatives were available. The harvesting of devil’s claw was not deemed a desirable livelihood but a necessary one as captured in a statement by a Balyerwa harvester, “We live in poverty.” Ros-Tonen and Wiersum (2005) also highlighted the limited income potential from NTFPs due to seasonality and the low densities in which NTFPs occur. Ros-Tonen (2012) explored NTFP extraction as part of a productive bricolage process and concluded that NTFP extraction holds limited potential for poverty alleviation. This she argued was because productive bricolage, the flexible and changing combination of various livelihood options and its associated impacts on the landscape, is an indication of economic precariousness.

**From colonialism to neo-liberalism**

(Limited) benefits from devil’s claw are inherently linked to its history of appropriation. From the outset, the traditional knowledge of the medicinal value of devil’s claw was appropriated from the San by colonialists and methods for extraction were retained in the global North (see Chapter 5). The filing of numerous patents in the 1990s resulted in a significant increase in trade to patent-holding countries, especially Germany. Contemporary trade is still monopolised by a small group of
international companies and is characterised by extremely low levels of value-addition by harvesters or within Namibia at all, and no investment in supply areas. While no patents have been filed in Namibia thereby allowing for the legal application of extraction processes and compositions in-country, the extent of the patent coverage for the major markets for devil’s claw would make such production commercially unviable (Wynberg et al. 2009) and in-country primary processing has been met with resistance from European companies (CRIA SA-DC 2002). Lombard (2003) highlights that an extraction facility for a single resource carries major risks and is unlikely to be economically feasible in Namibia without sufficient quantities of other marketable botanicals.

At the local level, the research showed that the international market for devil’s claw was undesirable in that demand was unpredictable, pricing was subject to change, and power remained vested with the buyers with no opportunity for value-addition. Harvesters felt disempowered by their lack of autonomy, the lack of transparency in the trading process and lack of knowledge of value-addition and marketable products. Discrepancies in the value chain between the value of devil’s claw sold by the harvesters and the value of devil’s claw sold in Europe were articulated. Germany was Namibia’s coloniser, the appropriators of traditional knowledge and today remain a dominant market force. The enforcing by the State and NGOs of the conservation of natural resources by local communities living in poverty whilst promulgating their extraction for international consumers in the developed world could be argued as inherently contradictory and reinforcing neo-colonial oppression (Bollig 2016). In conservancies this double-standard was re-iterated by the emphasis to conserve wildlife, only for it to be hunted by a client who comes from abroad. This exemplifies how contemporary cultures are marked by the tension between the official end of direct colonial rule and its presence and regeneration through hegemonising neo-colonialism within the global North and toward the global South, often channelled through the State (Shohat 1992).

When products become commercialised and highly profitable, few material benefits trickle down to the primary producer (Dove 1993, 1995). Or as captured by the chairman of Lubuta, “Projects like this don’t help people get out of poverty”. However, inadequate attention is given to explaining how commercialisation of NTFPs is not only indicative of, but reinforces economic precariousness under the current neo-liberal ‘conservation by commercialisation’ paradigm. This research demonstrates that benefits were subject to market competition and production costs which reduced income from devil’s claw to that of a safety net. Incentives for investment in value-addition were limited and due to the variable environmental conditions including seasonality, uneven distribution and drought, harvesters were limited in how much they were able to produce. The market as a dominant driver of harvesting patterns was visible in any given year as the amount of devil’s claw harvested increased or decreased in accordance with the price. The buyer’s adherence to quotas, or lack thereof, also shaped
extraction. In Lubuta Community Forest and Sachinga the distribution of devil’s claw required harvesters to increase their harvesting area over a greater distance. This resulted in the income received for harvesting insufficiently covering the cost of the labour required to harvest devil’s claw, a finding that is in line with those of Cunningham (2001) and Southgate et al. (1996). In assessing local governance, it seems critical then to consider this broader economic context in determining livelihood and environmental outcomes.

9.5 Examining power in governance

Béné and Neiland (2006:10) state that, “Governance is about politics and the way power is distributed between different actors within society. It is about how people share decision-making and how this affects their abilities to empower themselves and others... Governance is about sharing responsibility and power; it is about setting the policy agenda and objectives and about the processes of implementing management actions. Management is about action, governance is about politics”. In the case study areas poverty had been mitigated but not alleviated. Ribot and Peluso (2003:153) define access as, “the ability to derive benefits from things,” where ability is akin to the power to configure access. The research showed that despite new participatory institutional designs power had not been re-distributed and the ability of harvesters to empower themselves had not been enhanced. This is because co-management remains situated in closed spaces of power at the local, national and global levels (see Chapter 2 for Gaventa’s (2006) ‘power cube”).

9.5.1 Local spaces of power

At the local level, power remains vested with the traditional authorities and is legitimised by invisible, hidden and visible forms (Lukes 1974). Visible power is in the legal designation of the traditional authorities by the State as the decision-makers in communal areas. This includes the negotiating of conservancy and community forest boundaries, the signing of permit applications, the allocation of customary land rights and the approval of new commercial ventures in conservancies and community forests.

The embedding of the traditional authority in the co-management framework limits the operating space of the co-management institutions and community members as the visible power given to the traditional authorities by the State reinforces their invisible power. That is the ideology of their role as the ‘traditional decision-makers’ is supported by a dominant discourse of traditional governance upheld in the constitution and legislative framework.

Articulation by the traditional authorities to the State and their communities ensures their hidden power in setting the agenda and maintaining the governance of communal areas and benefits under
their control. This was most visible in Balyerwa Conservancy and Sachinga. This was also reported in research on *Pelargonium sidoides* in South Africa (Van Niekerk & Wynberg 2012; Wynberg & Van Niekerk 2014; Wynberg et al. 2015) where exploitation by traditional authorities was observed through new access and benefit-sharing (ABS) legislation that had led to permitting and benefit-sharing agreements being routed via the traditional authorities who historically had no role in *Pelargonium* management or trade. Similarly, Morris (2012) highlighted the problematic role of the Rharhabe chiefs, also in South Africa, in usurping benefits and exacerbating socio-economic exclusion in *Umckaloabo* trade through lucrative ABS agreements intended to protect harvester communities.

The perception of traditional authorities as the defenders of customary practices and protectors of their communities should be heeded and the reinforcing of their power with statutory provisions reconsidered. In this case, the current governance arrangement is polarising and runs the risk of strengthening colonial constructs of traditional, rather than diffusing power in new invited spaces of modern rural governance.

Governance arrangements including legislative frameworks and institutional structures, often determine the level(s) in which spaces are created (Gaventa 2005, 2006). The study made explicit the non-democratic and unaccountable nature of the traditional authorities and yet, power over natural resources is often devolved to such institutions as articulated by Ribot (2003). Political ecology looks beyond the local context to the broader politics and economics, and views ecological systems as power-laden where human rights injustices can be wrought by the transfer of inappropriate ideas concerning the environment (Stott & Sullivan 2000; Robbins 2012). With this argument closed spaces of power at the local level are shaped by the policy agenda, objectives and discourses of the State and international regime.

### 9.5.2 National spaces of power

**Statutory regulation of natural resources**

Harvesting of devil’s claw is formally regulated by a national policy. However, the research revealed the formalisation of the devil’s claw national policy did not result in significant improvements in sustainability. On the contrary it possibly inhibited the power of the local management institutions to manage the resource themselves. For example, in Lubuta Community Forest it was expressed by the management committee that no harvesting should take place for three years to allow recovery of the plants. However, as the permit-issuing authority it was deemed MET’s responsibility to issue a moratorium. The MET had been advised by IRDNC against issuing moratoriums without sound monitoring data yet MET lacked the capacity to undertake the necessary evaluation. Similarly, on the recommendation of the management committee, headmen in Lubuta could issue fines or suspend
harvesters not following sustainable practices based on customary law. However, as a government-regulated resource the headmen expressed it was no longer their jurisdiction to do so.

It was articulated by the chairman of Lubuta Community Forest, that the State Forest accessed by harvesters was once a customary area protected under customary law but increasingly access to resources had been politicised leading to an erosion of customary law, competition over land and resources and boundary disputes. Robbins (2004:151) refers to the ‘disintegration of the moral economy’ where traditional management systems are disrupted by the imposition of conservation regimes, often leading to diminishing accountability in natural resource regulation and violation of traditional resource constraints.

Permitting was intended to be used for adaptive management of devil’s claw. However, MET and DoF were at odds as to who should monitor the State Forest; both lacked the resources and willingness to do so, and MET failed to translate the harvesting data from permits into meaningful knowledge at either the regional or national level. This resonates with Sunderland et al. (2010) who found in Cameroon and Nigeria that government institutions lacked adequately trained staff and infrastructure to implement formal forestry legislation and confusion existed as to which institutions were responsible for regulating NTFPs and how. In Zimbabwe, Kozanayi et al. (2014) described the coexistence of customary and statutory systems that govern the use and management of baobab (Adansonia digitata), illustrating the failure of statutory regulations and the ability of local institutions to better manage harvesting and trade. While in Cameroon, a complex regulatory framework, limited organisation and capacity of the government, open-access tenure, and a breakdown in customary control led to widespread overharvesting of Prunus africana (Ingram 2014).

Findings of this research indicate that regulations based on needing to ‘protect’ the resource did not pay adequate consideration to the status or ecology of devil’s claw and the nature of harvesting. As seen in all case studies, there was a significant decrease in the number of harvesters in drought years as the plant became too difficult to locate without aboveground foliage. For Lubuta and Sachinga harvesters, this was compounded by the limited availability of water for harvesters to camp out in harvesting areas situated far from where they resided. In Balyerwa Conservancy, many harvesters stopped harvesting in response to the devil’s claw not having regrown sufficiently and having to walk too far to reach unharvested plants. Sullivan (2000) highlights the importance of the dynamic and unpredictable nature of ecology in interrogating assumptions of degradation from harvesting and fire in rural landscapes.

Devil’s claw was neither an ecologically valuable nor threatened species with its widespread distribution and preference for disturbed soils. Yet, as articulated by an IRDNC staff member, devil’s
claw had been subject to deliberation for CITES listing in the 1990s in response to, “*noises about sustainability,*” and more recently, formal regulation instituted through the demands of MCA-N as, “*a condition precedent.*” Atkinson (1991) argues against this uncritical acceptance of degradation narratives and the hegemonic impacts of the North on developing country contexts. However, such hegemony is made possible by the political motivation at national level to obtain development funding (see Section 9.4.1).

As an alternative to State control, Wynberg and Laird (2007) emphasised the role of customary laws in their research on *Sclerocarya birrea* subsp. *caffra* in Namibia and South Africa which found customary laws often provide a more nuanced approach to regulation as they integrate local socio-cultural, ecological and economic conditions. They support a ‘less is more’ approach where land tenure, resource rights and customary practices are strong, and local capacity exists to manage the resource adequately in the face of commercial pressure with minimal State intervention. This suggests that a greater emphasis should be placed on local institutions to implement self-regulating systems of management where statutory command-and-control regimes are ineffective, that is opening spaces of power at the local level.

**Discourses of biodiversity conservation and sustainable development**

The devil’s claw case study described is one example of a national surge of interest in commercial NTFPs to maintain and incentivise the conservation of communal lands. However, the contribution of commercial NTFPs to conservation goals overall has been widely debated. Studies point to a lack of clearly defined access rights and the breakdown of customary controls under State ownership which leads to an open-access situation and resource depletion (Neumann & Hirsch 2000; Arnold & Ruiz-Pérez 2001; Ros-Tonen & Wiersum 2005). Kusters *et al.* (2006) examined the environmental value of the NTFP land use system, and the extent to which the product influences peoples’ land use decisions. Unsurprisingly, the environmental value of the wild harvested NTFP land use system was considered to perform environmental functions better than the likely alternative of agriculture. However, in 40% of cases it was found that commercial extraction led to a depletion of the resource at population level, with cases in which households had specialised in extraction from the wild having the most negative mean outcome. Generally, where the product was wild harvested the harvesters did not have control over the land use and/or the product was not valuable enough to influence the land-use choice.

In examining livelihood frameworks for NTFPs, power and politics need to be accounted for (Scoones 2009). Rural governance in its current framework in Namibia maintains coercive environmental control by government with direct implications for poverty alleviation from NTFPs. The objective of conservancies and community forests is to prioritise livelihoods that limit conversion of the landscape
with an emphasis on increasing wildlife, limiting expansion of agriculture and maintaining ‘traditional’ subsistence livelihoods under the guise of sustainable development. This could be interpreted as continued territorialisation of communal lands by the State through neo-liberal conservation. Belcher et al. (2005) did a comparative assessment of NTFP production and found that the progression from wild harvesting to specialised cultivation was favoured by secure private land rights and led to more stable production systems and higher incomes. Similarly, Kusters et al. (2006) found that NTFP production is economically more feasible in anthropogenic forests where product density can be manipulated thus resulting in better livelihood outcomes. Yet in Namibia, NTFPs as a sustainable development intervention are concerned with maintaining the status quo of ‘natural’ forests, a tool for biodiversity conservation that protects and prevents modification of the landscape. While devil’s claw offers another component to the productive bricolage process, all livelihood opportunities in communal areas are inherently limited to those aligned with ‘conservation’ or ‘traditional’ agrarian systems with only partial entitlements given back to the community through conservancies and community forests.

Therefore, there is an inherent conflict of interest between enabling poverty alleviation from NTFPs, which requires diversified production systems such as anthropogenic forests, and the political motivation to maintain ‘natural’ landscapes. The MET also emphasised the need to ‘control’ people with respect to burning reflecting the continued coercive land control established by the colonial authorities based on ideas of ‘natural environments’. This ignores the fundamental role that fire plays in the shaping of people’s livelihoods and the landscape to stimulate grazing for cattle, control ticks and locate devil’s claw. As captured by Robbins (2004:157), “Though a target for control and elimination by governments and environmentalists, anthropogenic fire is a building block of land management for hundreds of millions of subsistence producers around the world”.

Given that the scope for poverty alleviation from wild harvested NTFPs is limited (Ros-Tonen & Wiersum 2005) the State is inadvertently maintaining rural poverty in favour of conservation objectives or using the excuse of conservation to manage an impoverished rural population without having to meaningfully effect their socio-economic transformation. These discourses of conservation and sustainable development are the hidden forms of power at the national level shaping rural governance in which communities have limited economic opportunities. These hidden forms of power become the invisible forms of power that entrench the psychologies of rural communities as ‘traditional’ thereby perpetuating the acceptance of inequality.
Holding of property rights by the State

Visible power is articulated through property rights that limit residents in communal areas to customary land rights. According to Murphree (1995) strong property rights for collective communal units over the land itself are required for the long-term sustainability of co-management. Mendelsohn *et al.* (2012) conclude that tenure systems in communal areas provide fewer economic opportunities for residents as incentives for investment are limited, land as a financial instrument is not enabled, and land and resources are appropriated by the State and traditional authorities.

This research revealed that the limited agricultural productivity of the land and drought necessitated off-farm income generation and a diverse livelihood strategy. Yet land rights were not suitable for use as financial instruments to gain capital and were restricted to customary land rights which only allowed for subsistence agriculture. As expressed in Lubuta Community Forest, “People can’t use the land commercially, the villages are being kept in poverty”. Neumann & Hirsch (2000:18) point out, “Tenure questions are indisputably bound to management practices and institutions, but they are also bound to state political and legal systems, to ethnic and class relations, and to issues of social and economic justice”. In this sense conservation by control and colonial legacies of development, backed by apolitical population pressure and degradation narratives, persist in contemporary conservation, leading to both inequity and failure (Robbins 2004). Borrowing the term from Goodland (1982:21) ‘enforced primitivism’ can be related here to the conditions placed on local communities in communal areas and the appropriateness of their knowledge about the environment. Thus, even as the co-management model developed to address the failures of State conservation, conservation represents control, largely because the overall model of development does as well (Robbins 2004). In research on conservancies in north-western Namibia, Bollig (2016) also raised the lack of autonomy of communities to control resources and the holding of property rights with the State. As aptly stated in Lubuta Community Forest, “People rely on devil’s claw because there are no other alternatives”. This is supported by Belcher *et al.* (2005) who found that people specialise in natural production systems, like devil’s claw, because the alternatives are so limited.

9.5.3 Global spaces of power

Community forests have largely been funded by the development agencies of Europe. As a result, these agencies have exercised power in structuring how and for what funds are used (see Section 9.4.1). The guidelines and milestones for registration and implementation of community forestry in Namibia were developed using technocratic science from the global North informed by development agencies from Finland and Germany and were based on commercial extraction of timber. Discourses of deforestation, biodiversity conservation, climate change and sustainable development provided the
impetus for community forestry channelled through public international funding institutions. However, the government institution mandated to operationalise community forestry, DoF, lacked the capacity and resources to do so and community forestry stopped short when the development projects came to an end rendering social reforms to forestry ineffectual.

In Sachinga this resulted in not being able to register as a community forest due to the onerous and locally inappropriate milestones developed by German development agencies that were required to complete the application. This undermined the desire of the community to have legal protection of their forest resources from outsiders. As observed in Cameroon, forestry law and community forests are well-intentioned, but their development was by the donor community without meaningful consultation with people using the forests. Therefore, implementation is poorly-adapted to local needs and conditions (Laird et al. 2010b).

During the MCA-N INP Activity, IRDNC used organisational criteria for the selection of target sites that were most likely to meet indicator targets, thus eliminating Sachinga from receiving support. Sachinga’s exclusion resulted in additional pressure on the resource from poorer pricing necessitating harvesting of greater quantities and unsustainable harvesting practices. The latter arose because harvesters lacked the knowledge of sustainable harvesting of devil’s claw on a commercial scale. More importantly, the harvesters of Sachinga were further marginalised as they received substantially less income and were exploited by buyers and headmen. Ros-Tonen (2000) refers to the dependency of NTFP producers on intermediaries and the risk of exploitative production and trading relations. Ball and Brancalion (2016) in their study on governance challenges for commercial exploitation of juçara pulp, state that the secondary effects of NTFP projects on social and environmental systems can be overlooked by not placing these projects in their wider social and environmental contexts.

Balyerwa Conservancy and Lubuta Community Forest did however benefit from the MCA-N project and the support provided by IRDNC. The role of NGOs as capacitators to assist communities access markets and resources is discussed by Ball and Brancalion (2016). However, as highlighted in this study, this is limited to the expansion phase of NTFP production as the social, economic and political marginalisation of producers hinders their ability to benefit from commercialisation and marketing (Brondizio 2008; Ball & Brancalion 2016). This was observed in Balyerwa Conservancy and Lubuta Community Forest where the management committees remained dependent on IRDNC for access to the exporters and negotiating contracts while value-addition was not included in project implementation. The maintenance of producers in these gathering roles is a mechanism for reinforcing economic and ecological exclusion which Escobar (1996:50) refers to as ‘ecocracy’ in which the global
North is able to maintain dominance of the developing South through the normalising environment-development discourse of ‘sustainable development’.

Market domination by the global North is reflective of a global closed space of power with no door open for participation. Further, while the market is a seemingly visible form of power, it is invisible in that it perpetuates the acceptance by rural communities in the global South of their inferiority and poverty. This was explicit in harvesters speaking of their “poverty” and their experiences of feeling “disrespected”, “robbed” and, “unable to support my family” in relation to devil’s claw. This demoralising neo-colonialism eliminates agency to claim power and perpetuates injustice.

The research illustrates the perpetuation of closed spaces of power at multiple levels thereby eliminating the opportunity for transformative change in NTFP governance. In response, local actors use their agency to manoeuvre within these closed spaces with processes of alteration which in turn drives unsustainable harvesting and exacerbates unequal relations of power. These are political and economic conditions that force people into environmental degradation in the absence of other alternatives.

9.6 A conceptual framework for NTFP governance

Social-ecological systems theory has provided a useful starting point for framing the components and mechanisms linked to devil’s claw governance. These included the social and ecological components, the mechanisms integrating these components and the institutions that facilitate them, with global environmental processes, politics and economics encompassing these components, mechanisms and institutions. However, this framework was not explicit in its consideration of scale and dimensions of power, process and human agency. To advance a framework for conceptualising governance processes and outcomes, this research used the notion of ‘spaces of power’ to illuminate how history, politics and economics influence the livelihood choices people have which in turn influences environmental outcomes. It is within these spaces of power that governance operates, and actors use their agency to manoeuvre within these spaces to devise livelihood strategies. Figure 35 provides a conceptual framework to highlight how spaces of power are nested within each other and addresses the conscious and unconscious institutional constraints hindering adaptive governance of NTFPs.

Within each space are institutions and mechanisms which represent different forms of power – invisible, visible and hidden – that shape governance processes. The framework also highlights that governance is shaped by bureaucratic and socially-embedded institutions and practices. Lastly the framework does not view ecological processes as benign; nature has agency and density-independent factors also play a significant role in determining environmental outcomes.
9.7 Conclusion

Non-timber forest products are situated in complex and dynamic social-ecological systems that are shaped by multiple factors. Governance can take many forms and different arrangements yield different results that are context specific. The results have shown that adaptive governance and its managerial counterpart, co-management, require the need for local institutions to be included in governance processes. Representation improves access to a range of resources and enables
collaboration between actors including government, NGOs, the private sector and local communities and can therefore improve benefits from natural resources for local communities. However, it was found that power remains vested with the State and traditional institutions and institutional complexity at the local level hinders the ability of people to benefit.

Effective governance, that is the ability of harvesters to benefit from NTFPs, was challenged by operating in closed spaces of power at the local, national and global level. In response to closed spaces human agency is used by local actors to craft livelihood strategies and resist undesirable rules in adverse conditions. Institutional bricolage is useful for illuminating these processes at the local level and highlighting the evolving fusion of bureaucratic and socially-embedded institutions arising from the interaction of statutory, customary and co-management systems. However, bricolage does not shed light on the broader political forces that are setting the policy objectives that shape these governance arrangements. Here political ecology and understandings of power are used to illustrate the structural and socially-embedded constraints and the conscious and unconscious mechanisms that determine people’s choices regarding land and natural resource use.

Sunderland et al. (2011) in assessing NTFP commercialisation and conservation state that a major assumption that needs to be questioned is related to the ‘real’ value of NTFPs to local communities, and whether such value is reflected in the sustainable management of natural resources. Recently, scholars have become disillusioned with NTFPs as mechanisms for poverty alleviation (Ros-Tonen 2012). An important observation was made by Demmer and Overman (2001) that as households gradually integrate into the market and the cash economy, less time is spent on forest-related activities. However, the decrease in time spent on forest-related activities was not associated with a decrease in the consumption of forest products as these were now bought and not self-harvested. This could be attributed to the inherent social-cultural-spiritual value of forest products (Cocks & Wiersum 2003). Belcher et al. (2005) highlight that a household’s integration into the cash economy will both influence and be influenced by the way they use forests and other resources and that NTFP production is one among several income sources. The implication is that poverty alleviation might better be achieved where NTFPs are used as a starting point in a broader, diversified economic strategy to explore development options rather than as a livelihood end in themselves. In integrating a sustainability-oriented strategy that considers human wellbeing, society and nature, Lienert and Burger (2015:20) suggest, “developing livelihood strategies that increase people’s opportunity spaces rather than focusing only on those that compensate for missing capabilities or enable people to cope with shocks and vulnerability”. Wiersum (1999) speaks of human creativity in the purposeful modification of landscapes by people to safeguard the availability of valuable forest resources and the resulting mosaic of agroforestry and natural forest. Belcher et al. (2005) discuss the rewards from
NTFP production systems where producers can stimulate higher productivity from investment in management where secure tenure exists. Therefore, in contrast to attempting to protect the status quo of forests, biodiversity could perhaps be better conserved through the sustainable use of resources in diverse, multi-functional landscapes (Sunderland et al. 2011)

This research revealed that devil’s claw did not hold significant cultural or spiritual value in the case study communities and did not have enough economic value for it to be sustainably managed. However, devil’s claw was just one of many NTFPs used for subsistence and income-producing livelihoods. Cocks et al. (2011) elaborate the spiritual, cultural and religious assets of forests beyond their productive ability. And yet neo-liberal concepts of NTFP commercialisation often undermine this intrinsic value of nature and the wellbeing attained from it. This suggests that it is necessary to transform the current development approach of promoting the extraction of natural resources for global markets. Holmes and Cavanagh (2016) highlight the possibility of new opportunities for local communities to contest and reshape conservation projects. In this regard, NTFPs in combination with other natural resources and agroecology, should be used to develop more diverse production systems that stimulate markets within localities, rather than external to, and draw on existing cultural practices and preferences, thus shaping landscapes in more equitable ways and challenging perceptions of NTFPs merely as safety nets. Here market integration seeks to embrace customary practices of natural resource use and management, and the cultural and spiritual value of forests and customary rights become central to NTFP governance frameworks rather than just livelihoods and conservation. This would entail a shift away from modes of production for profit (monetary value) to modes of production for social-ecological wellbeing (monetary and non-monetary value). However, for this to be achieved decision-making power needs to be redistributed and spaces of opportunity opened up by vesting ownership of land and natural resources with resource users through individual and group tenure and enabling not limiting creativity in the development of agroforestry mosaics.
10. CONCLUSIONS

10.1 Introduction

The contemporary governance of natural resources is concerned with developing governance arrangements that meet the needs of society, are equitable and within the realm of ecological sustainability. A central requirement is that such arrangements can respond to the unpredictable dynamism inherent in social-ecological systems. Non-timber forest products (NTFPs) have attracted increasing attention from policymakers and development practitioners as they are essential to rural subsistence livelihoods across the world but also possess potential to meet sustainable development objectives through their commercialisation. However, despite efforts at establishing extractive systems of NTFPs to foster conservation and alleviate poverty, insufficient evidence has been gathered to verify this assertion (Neumann & Hirsch 2000; Arnold & Ruiz-Pérez 2001; Ros-Tonen & Wiersum 2005; Kusters et al. 2006; Ingram 2014). In assessing challenges to NTFP governance, scholars point to the increasing complexity of governance systems, the need to understand the contextual details and processes that drive governance, and an analysis that goes beyond the local level to consider the broader drivers of livelihood and sustainability outcomes (Ros-Tonen 2012; Wiersum et al. 2014; Cleaver & Whaley 2018). This research sought to address a theoretical gap in using a political ecology framework to understand local governance arrangements and processes and the causal power relations and conditions that drive livelihood and sustainability outcomes.

Devil’s claw is a medicinal root that was commercialised in the 1950s and remains popular as a natural medicine to treat rheumatism and arthritis. It is predominantly harvested and exported from Namibia where it underwent rapid expansion in harvesting and trade as a development intervention from 2011 to 2014. While devil’s claw is widely used by rural communities in Namibia, and in particular by indigenous San, it does not hold significant cultural-spiritual significance amongst the Bantu ethnic communities of the Zambezi Region and its access is not regulated by customary law. However, as a protected species it is subject to statutory regulation which in the communal areas is channelled through co-management and traditional institutions. The harvesting and trade of devil’s claw is therefore situated in complex local governance arrangements of statutory, traditional and co-management systems.

Using devil’s claw as a case study the research sought to examine the interplay of local governance and the spaces of power created by the broader context that shape local governance processes and the resulting outcomes for livelihoods and sustainability.
To achieve this aim the research had the following objectives:

i. To identify and characterise the various local governance arrangements for devil’s claw harvesting;

ii. To examine the institutional processes within these governance arrangements that shape governance outcomes;

iii. To determine linkages between those processes and imbalances in power created by the broader historical and political-economic contexts;

iv. To evaluate outcomes for livelihoods and sustainability;

v. To develop a conceptual framework that addresses the structural and socially-embedded institutional constraints hindering adaptive governance of NTFPs and which offers an operational solution to balance power in a bottom-up process of democratisation where legal pluralism is prevalent.

Drawing on theoretical perspectives from adaptive governance, critical institutionalism and political ecology this thesis applied a theoretical multiplicity perspective on NTFP governance. The research used a case study approach with elements of grounded theory adopted. Three case study sites were selected in the Zambezi Region, Namibia. These were Balyerwa Conservancy, Lubuta Community Forest and the Sachinga community each with varying governance arrangements. A range of qualitative data were collected using a combination of questionnaires, focus group discussions, interviews, participant observation and documentary evidence. Data were thematically coded and triangulated to support the iterative elaboration of theory.

10.2 Characterising local governance of devil’s claw

The research showed that devil’s claw is situated in complex multi-level governance arrangements that are evolving fusions of statutory, customary and co-management systems influenced by the State, non-governmental organisations (NGOs), traditional and co-management institutions, the market and ecological conditions. These governance arrangements are characterised by institutional multiplicity with co-management institutions embedded into traditional and local institutions and informed by customary and external practices and legal pluralism. The research showed these local institutions to be dominant in the governance of devil’s claw while statutory institutions assumed passive roles. The research also highlighted the influential role of NGOs in shaping governance processes.

Results from the study highlight that decentralisation efforts embodied in the co-management framework have focused on institutional design and legislative reform that has improved
representation of local communities in statutory natural resource governance. This offered opportunities for local communities to broaden their networks and be nested across scales that include government, NGOs and the private sector. For those communities engaged in co-management, benefits from devil’s claw were greater. This was due to co-management institutions being able to harness government and NGO support which enhanced knowledge of the market, enabled more equitable trade agreements, improved harvesting practices and primary processing, and simplified permitting procedures. In this regard, normative prescriptions including the nesting of institutions, the broadening of networks and combining multiple forms of knowledge, improved the scope for adaptive governance of devil’s claw. However, there were discrepancies in benefits between conservancies and community forests, with the latter greatly hindered by poor institutional support from government and NGOs and complex, inappropriate procedures for community forest registration and implementation. This was due to European development agencies informing the design and implementation of community forestry in Namibia.

The aim of the State and NGOs in the design of co-management was to incentivise the sustainable management of natural resources through the provision of economic benefits. The devolution of responsibility rewarded with financial gains, and the embedding of the co-management institutions in traditional institutions was believed to be sufficient to incentivise rational behaviour and productive collective action. Thus, the design of co-management by the State and NGOs did not heed the need for responsibility and authority to be devolved to local institutions. While co-management increased representation of local communities and devolved responsibility for management, it failed to restructure power between the State, NGOs and local communities. This maintained the communities’ position of limited participation and access in governing natural resources and disincentivised learning and productive concern.

Co-management institutions operate in a broader landscape of traditional institutions which has given rise to legal pluralism and a complex combination of statutory, traditional and customary governance. Traditional authorities are formally embedded in the State but are largely self-governing and are perceived by their communities and perceive themselves as the legitimate rulers and decision-makers of the communal areas. With the emergence of co-management, conservancies have become the new institution brokering cultural norms and legal rights, vying for equal power with the traditional authority and seeking economic empowerment. However, these new co-management institutions retain elements of customary governance amalgamated with Western democratic capitalism. Another local institution also emerges amongst the bureaucracy of the co-management and traditional institutions; the sub-khutas or headmen, who are responsible for upholding customary roles and practices within villages. All these institutions are not mutually exclusive, and their dynamic
transformation, creation and combination is akin to alchemy, trans-mutating to better suit local conditions and livelihood strategies. The results of this research affirm that governance is continually hybridising; a key observation is that dichotomised descriptions of governance as customary or statutory do not capture the complexity of these evolving fusions of governance at the local level. In addition, where a multiplicity of institutions exists at the local level the role of the State is diminished. Decentralisation in its current conceptualisation purposefully reduces the role of the State by transferring responsibility to co-management institutions, however decision-making authority is maintained by the State.

10.3 Institutional processes within local governance

The research showed that actors at the local level adopted, adapted or rejected rules, practices and processes for governance of devil’s claw as a means to assert identity, devise livelihood strategies and resist unfavourable conditions. It is this human agency that enables rural communities to take advantage of opportunities as they arise, respond to shocks and craft livelihoods in a process of productive bricolage – even in closed spaces of power.

The introduction of co-management institutions in the rural governance landscape has resulted in new struggles for power and benefits. On the one hand the registration of conservancies and community forests legitimises the territories of traditional authorities. However, benefits accrued from the commercialisation of natural resources are managed by the conservancies and community forests, not by the traditional authorities. As a result, the traditional authorities use their legitimacy to articulate their role in decision-making which in turn constrains the autonomy of conservancies and community forests. In addition, the potential for benefits from the commercialisation of natural resources results in conflicts of territoriality between the traditional authorities. These dynamics highlight the interplay between structure and agency and allude to the dominant power relations that exist. A key conclusion is that even with careful consideration by the State and NGOs to embed co-management in existing local institutions and acknowledge those institutions, social dimensions of power can be overlooked; this in turn leads to a failure in the redistribution of access rights and benefits.

Customary laws and practices specific to devil’s claw did not exist in the case study sites. Nonetheless, with commercial harvesting of devil’s claw, broader customary roles and practices relating to natural resource management were aggregated with formal management procedures. These were used by the management committees of Balyerwa Conservancy and Lubuta Community Forest to manage access to harvesting areas and implement disciplinary procedures for unsustainable harvesting and
monitoring. This highlights that co-management can be an effective platform for integrating customary practices and technocratic procedures.

However, irrespective of the governance arrangement, unsustainable harvesting practices were observed. Unsustainable harvesting was most acute in the open-access State areas used by multiple communities where customary governance was eroded. The State had limited resources to monitor these areas and enforcement was weak. Where co-management institutions were in place, the State relinquished their responsibility and viewed the co-management institutions as responsible for managing harvesting in their own areas. The statutory regulation of devil’s claw undermined the effectiveness of the co-management institutions to enforce sustainability as enforcement was viewed to lie with the State. In Sachinga, statutory regulation also enabled the exploitation of harvesters by headmen using their legitimacy to gather fees for granting land access on permit applications. A process of alteration – the bending and non-compliance to statutory or customary rules – this shows the use of ‘tradition’ in adapting pre-existing customs as to craft livelihoods embedded in daily practices.

Regulation of devil’s claw by the State was motivated by ecological concerns of unsustainable harvesting on the basis of its growing trade, driven largely by the global North. However, the research showed that statutory regulation did not prevent unsustainable harvesting as government institutions lacked the capacity and resources for monitoring and enforcement and did not analyse the permit data that could be used for adaptive management of the resource. Instead, market forces and climate variability played a much greater role in shaping harvesting. State regulation through traditional permitting systems pays inadequate attention to the variety of institutions and practices at the local level, such as kinship ties at the village level and customary rules for accessing natural resources, that better manage the resource where there is secure tenure through closed geographical boundaries and property rights. For example, a shift to collective action was observed in Lubuta Community Forest with increased rights and management at the scale at which community trust existed. In addition, formalisation of the NTFP trade had unintended consequences that resulted in further marginalisation of the poor. This was evidenced by extortion of fees by traditional authorities in Sachinga.

Alteration was also observed amongst harvesters and conservancy management committee and staff members. Harvesters resisted unfavourable harvesting and trade restrictions and used their agency to find alternative means of securing their income from devil’s claw. Staff members sought to increase harvester income through the fraudulent entering of data. And the management committee members took advantage of their authoritative and cultural legitimacy in using funds inappropriately that were intended for supporting harvesting activities on conservancy running costs. This affirms that agency is
not always affected to the common good. It could be concluded that the rational choice of these community representatives for the collective good is over-emphasised in adaptive governance and greater attention should be given to both the structural and socially-embedded institutional constraints. However, processes of aggregation – the integration of introduced rules, regulations and procedures with different types of socio-cultural elements – indicate that transformation towards the common good is possible. These processes of alteration are indicative of the ability of local communities to adapt in response to livelihood needs. A central conclusion is that alteration is a strategy to cope with economic precariousness that is inflicted by broader political-economic conditions.

10.4 The historical and political-economic contexts and spaces of power

An objective of the research was to examine the power struggles and agency observed in local governance processes in relation to broader historical and political-economic contexts and to determine linkages between them. The research showed the historical context to be critical in shaping contemporary local governance. The interaction of statutory and customary governance goes back to the colonial era and current power struggles over access to land and resources between communities are reflective of historical processes. Further the power of traditional authorities over rural communities has been repeatedly reinforced and legitimised by the State over two centuries thereby strengthening historical ideologies of ‘tradition’ that continue to shape access to resources and benefits. Traditional authorities are demanding that their historical role as decision-makers is upheld by co-management institutions and this can result in a conflict of interest. Traditional authorities are resilient and strong in rural governance and their character as legally-recognised and socially-embedded entities puts them in a strategic position that is neither subservient to the State nor altruistic to their communities. The role of traditional authorities in rural governance in southern Africa cannot be underestimated and their resilience is testament to their agency. A critical challenge lies in dismantling the long-held and unequivocal power of traditional authorities to make space for transformative change whilst maintaining the values of customary practices and law in the decentralisation and democratisation of natural resource governance. The objective then is not to eliminate statutory governance in favour of customary governance, nor denounce traditional authorities in favour of co-management institutions, but to diffuse power in brokering new invited spaces of modern rural governance. The value of the resource calls for a far simpler regulatory framework that removes unnecessary and inefficient bureaucratic layers by re-evaluating the social and ecological scale at which natural resource management would work best. The devolution of authority to resource users to determine the rules of use, monitoring and enforcement would facilitate experimentation and learning, reduce costs and increase participation. Responsibility should
be scaled-up as required to match ecological and functional scale thereby diffusing the decision-making power of the traditional authorities and addressing the ineffectiveness of the State in communal areas whilst maintaining a role for these institutions.

At the national level, the research showed that discourses of ‘traditional’, ‘sustainable development’ and ‘conservation-by-commercialisation’ shaped contemporary rural governance. These discourses play out in determining the livelihoods available to rural communities which are limited to regulated extraction of certain natural resources for commercial gain most notably wildlife, and subsistence agriculture and pastoralism. The political motivation to maintain ‘natural’ landscapes has been reinforced by the continued allocation of funds by international donors for conservation efforts. The harvesting and trade of devil’s claw in the Zambezi Region was largely the result of such international funding. However, the research shows that the harvesting of devil’s claw by communities was adopted simply because there were no other alternatives. Important questions thus need to be asked about the reinforcing of mechanisms that disincentivise productive concern and the extent to which NTFPs can alleviate poverty when economic possibilities are limited by broader political motivations.

10.5 Livelihood outcomes and economic considerations

The research showed that the harvesting of devil’s claw was a primary source of income for harvesters and filled a critical income gap in the absence of other employment opportunities. The harvesting of devil’s claw added to a suite of livelihood activities including farming, the selling of other forest products and goods, odd jobs and remittances. However, it was also most often the only source of income. Devil’s claw was harvested during the dry winter months thereby providing a safety net if agricultural production was insufficient in the previous season. This was the case at the onset of a drought during the research, however the persistence of the drought rendered even the harvesting of devil’s claw difficult.

The powerlessness of local communities in negotiating the terms of trade and pricing was explicit. Income from devil’s claw was not economically transformative and harvesters were not able to re-invest their income or grow wealth. All devil’s claw was bought by external buyers for export and there was no local market. In addition, there was no value-addition at the local level with all devil’s claw bought and exported as raw material in the form of dried slices. For most harvesters, it was a new source of income that had been introduced as a development intervention. The results suggest that as a livelihood option the harvesting of devil’s claw was undesirable, lacked resilience and was subject to unpredictable market trends and climate variability, but was pursued in the absence of other alternatives. As an NTFP with an extractive linear mode of production and value-addition in the global
North it can be concluded that in its current form of commercialisation devil’s claw holds limited potential to stimulate local or national economies despite its high-value on the international market.

Devil’s claw did not hold significant cultural-spiritual value for the case study communities and its economic value did not ensure its protection. While this can in part be attributed to the economic value being insufficient at the local level, it also alludes to the flaw of the ‘conservation by commercialisation’ paradigm in only emphasising the economic value of natural resources and not the intrinsic value and non-monetary wellbeing attained from nature. This finding affirms the need for an alternative economic logic to be examined that incorporates NTFPs into diverse agroforestry production systems that stimulate markets within rather than external to localities and draws on existing cultural practices and preferences to shape landscapes and economies in more holistic, equitable ways. In this way dominant narratives of the rural as ‘poor’ and ‘underdeveloped’ can be reframed.

10.6 Recommendations for policymakers

The advancement of community forestry in Namibia is severely hindered by inappropriate and burdensome steps for registration and implementation. This is exacerbated by the poor institutional capacity of the Directorate of Forestry (DoF) to support community forestry in their activities. It is strongly recommended that the community forestry guidelines be reviewed and adapted to better suit local needs and conditions. It is also necessary for the Ministry of Environment and Tourism (MET), Ministry of Agriculture, Water and Forestry (MAWF) and Ministry of Land Reform to enhance inter-ministerial collaboration and knowledge exchange for improved integration of natural resource management in conservancies and community forests.

While co-management has enabled income generation from wildlife and NTFPs, conservancies and community forests would benefit from a more flexible and open-minded approach to land-use, land tenure and livelihood diversification. The linear extraction of natural resources such as wildlife and devil’s claw are useful starting points to generate income, but these activities do not enable economic transformation at the household level. It is suggested that greater emphasis is placed on developing livelihood strategies that do not focus on income alone but are centred on local preferences and needs to stimulate local markets and multifunctional agroforestry landscapes. A need exists for participatory action research to assess local preferences, needs and existing assets, identify opportunities with existing customary systems of management and local institutions, and develop local and regional markets.
The policy for communal land reform should be reviewed to enable the devolution of land ownership to collective communal units where co-management is in place. This would enable more equitable economic opportunities and increase incentives for investment in stable production systems.

Market transparency in devil’s claw trade is limited. However, the research showed that the market can regulate harvesting more efficiently than statutory regulation. Due to the weakness of statutory systems the efficacy of State interventions should be re-assessed. It is suggested that the Devil’s Claw Working Group (DCWG) extend its membership to include primary producers and the private sector to diffuse differentials in decision-making power and enhance market transparency.

The current framework for co-management and rural governance overemphasises the decision-making power and role of traditional authorities in communal areas. Local communities would benefit from more democratic forums for decision-making that promote collaboration between the State, traditional and co-management institutions, NGOs and the private sector. Caution should be heeded in the development of access and benefit-sharing policy in nominating the traditional authorities as representatives of local communities.
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Appendix I: Harvester questionnaire

Interview #:______________________  Interview Category: HARVESTER

Interviewee: _____________________  Cons./CF: ____________________________

Date: ___________________________  Village:______________________________

Start time: ______________________  End time: ____________________________

Demographic questions

1. How old are you?  18-25  26-35  36-45  46-55  56-65  >65
2. Gender?    M    F
3. What is your level of education? None  <Grade 7  Grade 7  <Grade 10  Grade 10  <Grade 12  Grade 12  Certificate  Diploma  Degree
4. Are you employed? Yes Sometimes Rarely No
5. If yes, what type of work? ________________________________________________
6. Is devil’s claw your main source of income? Yes Sometimes Rarely No
7. What are your other sources of income? __________________________________________
8. Do you farm? Yes No
9. If yes, what? _________________________________________________________________
10. Besides devil’s claw, are there any other important natural resources that you harvest? Yes No
11. If yes, what? _________________________________________________________________
12. How much do you earn per month? <N$1000  N$1-2000  N$2-5 000  N$5-10 000  N$10-15 000  N$15 000
13. How many people do you support financially? 1  2  3  4  5  6  7  8  9  10  >10
14. How long have you been living in this village? ________________________________
15. Are your parents from this area?    Mother    Father    Both    Neither
16. What ethnic community do you identify with? WaYeyi  Mafwe  Mbukushu  Khwe  Lozi  Mashi  Masubia Other: _________

General governance questions

17. Please describe the role of the traditional authorities in the community.

___________________________________________________________________________________

___________________________________________________________________________________

18. Please describe the role of the sub-khutas in the community.

___________________________________________________________________________________

___________________________________________________________________________________
19. Please describe the role of the conservancy/community forest management committee in the community.

___________________________________________________________________________________
___________________________________________________________________________________

20. Are the members of the traditional authority related to each other by kinship?
All Some None

21. Please explain further.

___________________________________________________________________________________
___________________________________________________________________________________

22. Are the members of the sub-khuta related to each other by kinship? All Some None

23. Please explain further.

___________________________________________________________________________________
___________________________________________________________________________________

24. How are the members of the traditional authority chosen?

___________________________________________________________________________________
___________________________________________________________________________________

25. How are the members of the sub-khuta chosen?

___________________________________________________________________________________
___________________________________________________________________________________

26. How are the members of the conservancy/community forest management committee chosen?

___________________________________________________________________________________
___________________________________________________________________________________

27. Please describe the relationship between the conservancy/community forest and the traditional authority.

___________________________________________________________________________________
___________________________________________________________________________________

28. Please describe the relationship between the conservancy/community forest and the sub-khutas.

___________________________________________________________________________________
___________________________________________________________________________________

29. Please describe the relationship between the traditional authority and the sub-khutas.

___________________________________________________________________________________
___________________________________________________________________________________

30. Please describe the decision-making process in the community for new enterprises in the conservancy/community forest.

___________________________________________________________________________________
___________________________________________________________________________________

___________________________________________________________________________________

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31. The traditional authority has more decision-making power than the conservancy/community forest management committee. Disagree 1 2 3 4 5 Agree.

32. The sub-khutas have more decision-making power than the conservancy/community forest management committee. Disagree 1 2 3 4 5 Agree.

33. The traditional authority are good, honest and fair leaders. Disagree 1 2 3 4 5 Agree

34. The sub-khutas are good, honest and fair leaders. Disagree 1 2 3 4 5 Agree

35. The management committee are good, honest and fair leaders. Disagree 1 2 3 4 5 Agree

36. The management committee have the necessary skills to run the conservancy well.
   Disagree 1 2 3 4 5 Agree

37. The staff have the necessary skills to do their jobs well. Disagree 1 2 3 4 5 Agree

38. Conservancy members can take action against the management committee for poor performance.
   Disagree 1 2 3 4 5 Agree

Devil’s claw harvesting and sustainability questions

39. Do you use devil’s claw yourself as a medicine? Yes No

40. If yes, what for? ________________________________________________________________

41. Are there any traditional rules for harvesting devil’s claw? Yes No Don’t know

42. If yes, please explain further.
   ________________________________________________________________
   ________________________________________________________________

43. Do people obey the traditional rules? Never Sometimes Often Always

44. How long have you been selling devil’s claw? <1 1-2 2-3 3-4 4-5 5-6 6-7 >7

45. Who first told you about selling devil’s claw? __________________________________________

46. Where do you mainly harvest devil’s claw?
   ________________________________________________________________

47. Who gives you permission to harvest there?
   MET ________________________________________________________________
   DoF ________________________________________________________________
   TA ________________________________________________________________
   Sub-khutas __________________________________________________________
   Management committee ________________________________________________
   Staff ________________________________________________________________
   IRDNC ______________________________________________________________
   Buyer ______________________________________________________________
   No-one _____________________________________________________________
   Other (please specify) ________________________________________________

48. Do you pay to get permission to harvest there? Yes No

49. Is there anywhere else you would like to harvest devil’s claw? ________________________
50. If yes, what is the reason for not harvesting there? __________________________________

51. Has the amount of devil’s claw you sell increased, decreased or stayed the same?
   Increased Decreased Stayed the same

52. Why? ______________________________________________________________________

53. Has the number of harvesters increased, decreased or stayed the same?
   Increased Decreased Stayed the same

54. Why? ______________________________________________________________________

55. Who sets the rules for how much you can harvest and sell? (Please rank in order)
   MET ______________________________
   DoF ______________________________
   TA ______________________________
   Sub-khutas _________________________
   Management committee _____________
   Staff ______________________________
   IRDNC ____________________________
   Buyer _____________________________
   No-one ____________________________
   Other (please specify) ________________

56. How do they determine how much you can harvest and sell?
   ___________________________________________________________________________

57. These rules are fair. Disagree 1 2 3 4 5 Agree

58. Please explain further. _________________________________________________________

59. How many kilograms of devil’s claw would you like to harvest and sell?
   ___________________________________________________________________________

60. Who enforces the rules for how much you can harvest and sell? (Please rank in order)
   MET ______________________________
   DoF ______________________________
   TA ______________________________
   Sub-khutas _________________________
   Management committee _____________
   Staff ______________________________
   IRDNC ____________________________
   Buyer _____________________________
   No-one ____________________________
   Other (please specify) ________________

61. Do you harvest together with family/friends? Never Sometimes Often Always

62. Is there competition between harvesters over plants? Never Sometimes Often All the time

63. Do you enjoy harvesting? Not at all 1 2 3 4 5 Very much
64. Why or why not? _____________________________________________________________
65. How easy or difficult is it to find devil’s claw? Easy 1 2 3 4 5 Difficult
66. Compared to when you first started harvesting devil’s claw, is it easier, more difficult or the same to find devil’s claw? Easier More difficult Same
67. How easy or difficult is it to harvest devil’s claw? Easy 1 2 3 4 5 Difficult
68. What makes it difficult?
   Fewer plants ______
   Smaller tubers ______
   More people harvesting now ______
   Lack of transport ______
   Labour intensive ______
   Drought ______
   Lack of equipment ______
   Other (Please specify) ______
69. When you go harvesting, is the number of open holes you find – none, few, many?
   None Few Many
70. Compared to when you first started harvesting devil’s claw, are there more, less, or the same number of open holes? More Less Same
71. Who sets the rules for how to harvest?
   MET __________________________
   DoF __________________________
   TA __________________________
   Sub-khutas ______________________
   Management committee __________
   Staff __________________________
   IRDNC __________________________
   Buyer __________________________
   No-one __________________________
   Other (please specify) __________
72. Do people obey these rules? Never Sometimes Often Always
73. Who enforces the rules for how to harvest?
   MET __________________________
   DoF __________________________
   TA __________________________
   Sub-khutas ______________________
   Management committee __________
   Staff __________________________
   IRDNC __________________________
74. Are the rules enforced? Never Sometimes Often Always

75. How are the rules enforced?
   Warning _______
   Suspension _______
   Confiscation _______
   Fine _______
   Arrest _______
   Other (please specify) _______

76. Why do you think some harvesters do not obey the rules?
___________________________________________________________________________

77. If you found someone not obeying the rules, what would you do?
___________________________________________________________________________

78. In your opinion are permits necessary to ensure harvesting in the long-term?
   Yes No Don’t know

79. Is harvesting in this area sustainable in the long term? Yes No Don’t know

Devil’s claw governance questions

80. Who trains you in harvesting methods?
   MET ____________________________
   DoF ____________________________
   TA ____________________________
   Sub-khutas _______________________
   Management committee ___________
   Staff __________________________
   IRDNC __________________________
   Buyer __________________________
   No-one __________________________
   Other (please specify) ____________

81. Who applies for your harvesting permit from MET?
   TA ____________________________
   Sub-khutas _______________________
   Management committee ___________
   Staff __________________________
   IRDNC __________________________
   Buyer __________________________

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Yourself

No-one

Other (please specify)

82. How much do you pay for your permit?

83. Which month did you get your permit in 2015?

84. Which month did you get your permit in 2014?

85. Who provides you with equipment?
   MET
   DoF
   TA
   Sub-khutas
   Management committee
   Staff
   IRDNC
   Buyer
   No-one
   Other (please specify)

86. What equipment did you receive in 2015? Shade net Bags (___) Knife Other: _____________

87. What equipment did you receive in 2014? Shade net Bags (___) Knife Other: _____________

88. Are you provided with any transport? Never Sometimes Often Always

89. Who monitors harvesting in your area?
   MET
   DoF
   TA
   Sub-khutas
   Management committee
   Staff
   IRDNC
   Buyer
   No-one
   Other (please specify)

Buyer and price negotiation questions

90. Please describe your relationship with the buyer(s).

____________________________________________________________________________________
____________________________________________________________________________________

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91. Please describe how you negotiate a price with the buyer(s).

______________________________________________________________________________________

92. The negotiation of the price is fair. Disagree 1 2 3 4 5 Agree
93. Please describe how you receive payment from the buyer.

______________________________________________________________________________________

94. Are your expectations for income from devil’s claw being met?
   Never Sometimes Often Always
95. How much did you expect to earn in a season? ________________________________
96. How much would you like to earn per kilogram from devil’s claw? ________________
97. What is the lowest price per kilogram that you would accept? ________________
98. How much do you think the buyer sells devil’s claw to Germany for (per kilogram)?
99. How much do you think devil’s claw sells for in Europe (per kilogram)? ____________
100. Who should ensure the harvesters get a fair price? _____________________________
101. Should the government set a minimum price for devil’s claw? Yes No Don’t know
102. Why or why not?

______________________________________________________________________________________

103. If yes, what minimum price?
104. Do you know what the devil’s claw management fee is? Yes No
105. If yes, what is the devil’s claw management fee used for?

______________________________________________________________________________________

106. In your opinion, what should the devil’s claw management fee be used for?

______________________________________________________________________________________

NGO/Service provider questions

107. The conservancy/community forest is dependent on NGOs for the harvesting of selling of devil’s claw.
   Disagree 1 2 3 4 5 Agree

Comments

______________________________________________________________________________________

______________________________________________________________________________________

______________________________________________________________________________________

______________________________________________________________________________________

Thank you for your time in answering this questionnaire. It is much appreciated!
Appendix II: Example interview guide

Interview #: __________________________

Interviewee: __________________________

Organisation: __________________________

Date: __________________________

Location: __________________________

Start time: __________________________

End time: __________________________

Introduction

This interview is being conducted as part of PhD research at the University of Cape Town. The research is examining the governance of devil’s claw in the Zambezi Region with a special emphasis on the interaction of statutory, traditional and co-management systems. Please take time to read through and sign the prior informed consent form which sets out confidentiality. If at any time you wish to withdraw from the interview, please feel free to do so. This research project has been reviewed and approved by the Ministry of Environment and Tourism Namibia, and a research permit and visa have been acquired.

1. Please explain your role in the development of the national devil’s claw policy.
2. What do you think is the general opinion of the current permit structure for devil’s claw?
3. What is your opinion of the current permit structure for devil’s claw?
4. Who plays a role in implementing the current permit structure for devil’s claw?
5. Please explain further.
6. Who plays a role in enforcing the current permit structure for devil’s claw?
7. Please explain further.
8. What significantly influences the sustainability of devil’s claw harvesting?
9. What is your opinion of sustainability around devil’s claw harvesting?
10. For those communities seeking to be registered as conservancies, is there any institution to assist them with completing their applications?
11. What is the capacity of that institution to support conservancies?
12. What resources are available for that institution to support conservancies?
13. For those communities seeking to be registered as community forests, is there any institution to assist them with completing their applications?
14. What is the capacity of that institution to support community forestry?
15. What resources are available for that institution to support community forestry?
16. For those communities where there are boundary disputes between traditional authorities, is there any institution to assist them with mediation?
17. What do you think is the general opinion of the outcome of the MCA-N programme for devil’s claw in the Zambezi Region?
18. What is your opinion of the outcome of the MCA-N programme for devil’s claw in the Zambezi Region?
19. What is the capacity of conservancies and community forests in the Zambezi Region to harvest devil’s claw independently?
20. What do you think is the general opinion of the traditional authorities in the Zambezi Region around conservancies and community forests?
21. What is your opinion of the traditional authorities in the Zambezi Region around conservancies and community forests?
22. What do you think is the general opinion of the traditional authorities in the Zambezi Region around financial benefits from natural resources?
23. What is your opinion of the traditional authorities in the Zambezi Region around benefits from natural resources?
24. Do you have any further comments or feedback?

Thank you for your participation in this interview, it is greatly appreciated.
Appendix III: Letters of support

Directorate Scientific Services
Ministry of Environment and Tourism
Private Bag 13306
Windhoek
27th May 2014

To: Director of Scientific Services

Integrated Rural Development and Nature Conservation (IRDNC) has long provided support to the CBNRM programme in Zambezi Region. One of the key activities of IRDNC has been the development of sustainable enterprises from natural resources to provide income opportunities to communities. Harpogophyllum spp. (devil’s claw) is one of the resources included as it provides valuable income to many people and can be sustainably harvested.

Jessica-Jane Lavelle has liaised with IRDNC with regards to her proposed research on devil’s claw in the Zambezi Region. IRDNC fully supports the intended research titled, “Towards sustainability and equitable benefit sharing: a case study on Harpogophyllum spp. (devil’s claw) in Namibia, Zambia and Angola” and believes the research will contribute further to ensuring long-term sustainable trade in devil’s claw in Namibia.

IRDNC would like to provide advice and assistance to Jessica-Jane Lavelle with community consultation and observation of devil’s claw procedures amongst communities in the Zambezi Region.

IRDNC hopes her application will be successful and looks forward to the publications of the research. Please do not hesitate to contact me should you require any further information.

Kind regards

Signature Removed

Karine Nuulimba
Co-director
IRDNC
Dear Mr. Timoteus Lita Matheus

The Namibia Nature Foundation (NNF) has been working with gazetted and emerging community conservancies and forests in the Kavango Region since 2010. NNF seeks to help sustainably improve all aspects of *Harpagophyllum* spp. (devil’s claw) harvesting, with a view to increasing income to producers and ensuring long term sustainability of the resource.

Jessica-Jane Lavelle has liaised with NNF with regards to her proposed research on devil’s claw in the Kavango Region. NNF fully supports the intended research titled, "Towards sustainability and equitable benefit sharing: a case study on *Harpagophyllum* spp. (devil’s claw) in Namibia, Zambia and Angola" and believes the research will make a significant and positive contribution to further improving income opportunities and the sustainability of devil’s claw in Namibia.

NNF is willing to provide advice and assistance to Jessica-Jane Lavelle with community consultation and observation of devil’s claw procedures amongst communities in the Kavango Region.

NNF hopes that you will consider this research application favourably and looks forward to the outcome of the intended research.

Please do not hesitate to contact me should you require any further information.

Kind regards,

Signature Removed

Angus Middleton
Executive Director
Namibia Nature Foundation
Appendix IV: Research permits

MINISTRY OF ENVIRONMENT AND TOURISM

RESEARCH/COLLECTING PERMIT

Permit Number 1947/2014
Valid from 1 October 2014 to 30 September 2015

Permission is hereby granted in terms of the Nature Conservation Ordinance 1975 (Ord. 4 of 1975) to:

Name: J-J Lavelle
Address: 13 Durham Street
Claremont
Cape Town
South Africa
Coworkers: E. Tsiteere and F. Mpofu

To conduct a study on towards sustainability and equitable benefit sharing: a case study on Harpagophytum spp. (devil’s claw) in Namibia and Zambia at Kavango and Zambesi regions, subject to attached conditions.

Signature Removed

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MINISTRY OF ENVIRONMENT AND TOURISM

RESEARCH/COLLECTING PERMIT

Permit Number 2128/2016
Valid from 26 February 2016 to 31 January 2017

Permission is hereby granted in terms of the Nature Conservation Ordinance 1975 (Ord. 4 of 1975) to:

Name: J-J Lavelle
Address: 13 Durham Street
          Claremont
          Cape Town
          South Africa
Coworkers: E. Tsiiteere and F. Mpofu.

To conduct a study on towards sustainability and equitable benefit sharing: a case study on Harpephyton spp. (devil’s claw) in Namibia and Zambisa at Kavango East, Kavango West and Zambezi regions excluding protected areas, subject to attached conditions.

IMPORTANT: This permit is not valid if altered in any way.

Signature Removed

Authorising Officer

IMPORTANT
This permit is subject to the provisions of the Nature Conservation Ordinance, 1975 (Ordinance 4 of 1975) and the regulations promulgated thereunder, and the holder is subject to all such conditions and regulations.

Enquiries: Conservation Scientist, email imatheus@net.na
Private Bag 13306, Windhoek, Namibia
MINISTRY OF ENVIRONMENT AND TOURISM

RESEARCH/COLLECTING PERMIT

Permit Number 2296/2017
Valid from 24 August 2017 to 31 July 2018

Permission is hereby granted in terms of the Nature Conservation Ordinance 1975 (Ord. 4 of 1975) to:

Name: J.J Lavelle
Address: 13 Durham Street
Claremont
Cape Town
South Africa
Coworkers: Eben Tjiteere

The interplay between local governance and access to and benefits from non-timber forest products: A case study on *Harpagophytum spp.* (devil’s claw) in Namibia at Windhoek and Zambezi region including Balyerwa Conservancy excluding protected areas, subject to attached conditions.

IMPORTANT: This permit is not valid if altered in any way.

Signature Removed

Authorising Officer

MINISTRY OF ENVIRONMENT
AND TOURISM
REPUBLIC OF NAMIBIA

28 AUG 2017

WINDHOEK
Private Bag 13300, Windhoek
Tel. 3842111 - Fax. 253551

IMPORTANT
This permit is subject to the provisions of the Nature Conservation Ordinance, 1975 (Ordinance 4 of 1975) and the regulations promulgated hereunder, and the holder is subject to all such conditions and regulations.

Enquiries: Conservation Scientist, email: lia.matheus@net.gov.na
Private Bag 13300, Windhoek, Namibia
RESEARCH/COLLECTING PERMIT CONDITIONS

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1. You must report to the Regional Office of the Ministry of Environment and Tourism prior to arrival in fieldwork area, and must be shown your permit.

2. You are to seek permission from community authorities and conservancy must be obtained prior to field work.

3. You and/or the supervisor(s) are required to provide feedback of your findings to the communities where the study was conducted. The Ministry of Environment and Tourism is to be informed of such events to enable participation from its staff. An email should be sent to hndengegejeho@met.na and cc hndengegejeho@gmail.com.

4. You or your Supervisor(s) are expected to provide the Ministry of Environment and Tourism a copy of the research work.

5. The permission of the land owner is required to work/collect on private lands.

6. The permission of the concession holder is required to work/collect in concession areas.

7. No commercial filming will be permitted without prior approval by the Ministry of Environment and Tourism.

8. Duplicates of publications and/or final report should be made available to MET Resource Centre.

9. No palaeontological and/or archaeological samples may be taken without a permit from the National Heritage Council.

10. The specimens and their derivatives may be used for the purposes of this study only and may not be patented, commercialised, donated or sold to a third party without the written consent of the Ministry of Environment and Tourism.

11. All results (raw materials) or technology derived directly or indirectly from this research must be made available free of charge without reservations to the Ministry of Environment and Tourism.

12. Please submit a report on the work conducted under this permit to this office not later than one month after the expiry of this permit as well as to regional office where you have reported.

13. Habitat destructive collecting methods must not to be used.

14. All field teams must be in possession of the permit and permit copy must accompany the transport of specimens.

15. It is your responsibility to make the necessary contacts and arrangements as specified above.
Appendix V: Research visas
Permission is hereby granted to:
Surname: Lavellle
First Names: Jessica - Jane
Maiden Surname (if any): 

Holder of the following passport:
(a) Number: A 04095012
(b) Issuing authority: RSA
(c) Place of issue: RSA
(d) Date of issue: 21.02.2014
(e) Date of expiry: 23.02.2024

Permission is hereby granted to proceed to the Republic of Namibia subject to the following conditions:
1. Number of visa: V 8545 /2015
2. Date of issue: 23.01.2015
3. Date of expiry: 23.07.2015
4. Type of visa: Transit [ ] Single [ ] Multiple [X]
5. Further conditions
   (a) Holder has to comply with entry conditions at port of entry
   (b) 
6. Remarks: Work visa: Namibia Nature Foundation - only -

The holder of this visa has to submit it to the immigration officer at the port of entry when applying for entry into Namibia and has to:
(a) surrender this visa to the immigration officer in exchange for a visa to be stamped in his or her passport; or
(b) retain the visa.

Visa fee paid: N$ 470.00

Signature Removed

MINISTRY OF HOME AFFAIRS AND IMMIGRATION
WINDHOEK

This document is not valid unless the photograph of the holder of this visa has been affixed to the visa or waived and has been stamped with the official stamp of the issuing office.
REPUBLIC OF NAMIBIA

MINISTRY OF HOME AFFAIRS

DEPARTMENT OF CIVIC AFFAIRS
IMMIGRATION CONTROL ACT, 1993
VISA FOR THE REPUBLIC OF NAMIBIA
(Section 12 / Regulation 11)

Permission is hereby granted to:
Surname: LA MANNE
First Names: DE WITZ
Maiden Surname (if any):

Holder of the following passport:
(a) Number: H0405012
(b) Issuing authority: RSA
(c) Place of issue: RSA
(d) Date of issue: 11.05.2014
(e) Date of expiry: 13.05.2024

To proceed to the Republic of Namibia subject to the following conditions:
1. Number of visa: W 16798 2014
2. Date of issue: 22.11.2014
3. Date of expiry: 20.11.2015
4. Type of visa: Multiple

5. Further conditions
(a) Holder has to comply with entry conditions at port of entry
(b) To report by 30 December 2014

6. Remarks: WORK PROGRESS NAMIBIA ONLY

The holder of this visa has to submit it to the Immigration Officer at the port of entry when applying for entry into Namibia and has to:
(aa) surrender this visa to the Immigration Officer in exchange for a visa to be stamped in his or her passport; or
(bb) retain the visa.

Visa fee paid: NR 10.

MINISTRY OF HOME AFFAIRS AND IMMIGRATION
WINDHOEK

This document is not valid unless the photograph of the holder of this visa has been affixed to the visa or
waived and has been stamped with the official stamp of the issuing office.

Signature Removed

[Photograph of holder]

22 Nov 2014