

# **The Governance of Indigenous Natural Products in Namibia:**

## ***Nature, diversity and dynamics***



**Albertina Ndeinoma**

## PROPOSITIONS

1. Successful implementation of development policies for Non-Timber Forest Products (NTFPs) requires flexible and species-specific approaches.  
(this thesis)
2. During the implementation of natural resource policies, the variety of local actors involved will result in bricolage processes and thus unforeseen outcomes.  
(this thesis).
3. Most solutions to environmental problems are not ethical.
4. To understand people's actions toward the environment, political sciences (on 'power structures') can explain much more than psychology (on 'individual motivation').
5. A doctoral degree does not provide you with answers to the problem studied, it only adds more complexity.
6. Research that focuses too much on conceptual debates falls short in addressing urgent societal challenges.

Propositions belonging to the thesis titled:

**The governance of indigenous natural products in Namibia: Nature, diversity and dynamics.**

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The governance of indigenous natural products in Namibia:

*Nature, diversity and dynamics*

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Albertina Ndeinoma

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I then started searching for a university that could offer me more knowledge in this area, in order to improve my lectures. During this time, the new book by Laird and colleagues had just been published, titled '*Wild Product governance: finding policies that work for NTFPs*'. This book inspired my choice of topic. I chose NTFP as a lens through which I could gain deeper knowledge and understanding of policy theories and processes. The beginning of my '*dream come true*' started when I was admitted by the Forest and Nature Conservation Policy Group (FNP) of Wageningen University and Research. Freerk Wiersum, who is one of the Associate professor in the chair group suggested and facilitated my application for funding from the Netherlands Fellowship Programmes (NFP). I'm therefore first and foremost grateful to NFP for granting me the financial means to fulfil my academic desires.

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## **Abbreviations and acronyms**

|            |   |
|------------|---|
| BSI        | Body Shop International   |
| CBD        | Convention on Biological Diversity  |
| CBNRM      | Community-Based Natural Resource Management   |
| CBO        | Community-based Organisation  |
| CF         | Community Forests   |
| CITES      | Convention on International Trade in Endangered Species of Wild<br>Fauna and Flora                |
| COP        | Conference of Parties   |
| CPR        | Common Property Resources   |
| CRIAA-SADC | Centre for Research Information Action in Africa – Southern<br>African Development and Consulting |
| CSIR       | Council for Scientific and Industrial Research  |
| DCWG       | Devil’s Claw Working Group  |
| EWC        | Eudafano Women Cooperative  |
| FAO        | Food Agriculture Organization   |
| FMC        | Forest Management Committee   |
| GACP       | Good Agriculture and Collection Practices   |
| GIZ        | German Development Cooperation  |
| GRN        | Government of the Republic of Namibia   |
| IBPC       | Interim Bio Prospecting Committee   |
| IFTT       | Indigenous Fruit Task Team  |
| INP        | Indigenous Natural Products   |
| IPTT       | Indigenous Plants task Team   |
| IRDNC      | Integrated Rural Development and Nature Conservation  |
| KC-INP     | Kunene Conservancies with Indigenous Natural Products   |
| MAWF       | Ministry of Agriculture Water and Forestry  |
| MCA        | Millennium Challenge Account  |

|         |  |
|---------|--|
| MET     | Ministry of Environment and Tourism                      |
| MITSMED | Ministry of Trade, Industrialisation and SME Development |
| MTI     | Ministry of Trade and Industry                           |
| NGO     | Non-Governmental Organisations                           |
| NNF     | Namibia Nature Foundation                                |
| NNFU    | Namibia National Farmers Union                           |
| NTFP    | Non-timber Forest Products                               |
| PPO     | Producer Processor Organization                          |
| SADC    | Southern African Development Community                   |
| SHDC    | Sustainably Harvested Devil's Claw                       |
| SME     | Small and Medium Enterprise                              |
| TRAFFIC | Trade Record Analysis of Flora and Fauna in Commerce     |
| UNCCD   | United Nations Convention to Combat Desertification      |

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# **CHAPTER 1**

## **General Introduction**

## 1.1 Introduction

Non-Timber Forest Products (NTFPs) are harvested in many countries for subsistence purposes as well as for trade. These products provide a livelihood to households when used for subsistence or sale; they also generate significant revenue for companies and governments. Estimating the value and volume of NTFPs is difficult, both because most NTFPs are used for subsistence purposes and records are therefore lacking, and because products that are traded internationally fall under different product categorisation codes. Despite this, many studies have emphasised the importance of NTFPs for providing rural communities with basic resources and income (Ros-Tonen and Wiersum, 2005; Shackleton and Shackleton, 2004), while other studies emphasise the important role of NTFPs in international trade. According to Igba (1995), the total world trade value for NTFPs was estimated by UNCTAD at US \$11 billion of which rattan contributes more than 50%. In Southern Africa, the market value of medicinal herbs was estimated to range from US \$75-150 million per annum in the early 21<sup>st</sup> century (Mander and Le Breton, 2006).

Over the past four decades, commercial demand for NTFPs for use in pharmaceuticals, cosmetics, food and herbal medicine has increased. On the one hand, there has been growing interest in their possible role as a bio-resource, but on the other, the rise in commercial demand has created fears of over-exploitation and a lack of equitable benefits sharing with communities. This recent interest contrast with earlier views of NTFPs being regarded as minor forest products. This resulted in a general lack of policies with respect to the development of NTFPs in many countries (Laird et al., 2010a; Laird et al., 2011). In cases where policies and regulations to control harvesting and trade of NTFPs do exist, they are often annexed either to land reform policies or to policies concerning timber production (Cronkleton and Pacheco, 2010; Kluppel et al., 2010). Within this policy context, NTFP harvesters and users at local levels are often poorly represented in the policy development process (Laird et al., 2010a; Laird et al., 2011), resulting in various unintended consequences, such as the overloading of NTFP collectors with regulations or even the criminalisation of collectors (Granich et al., 2010; Shackleton, 2010a; Wynberg and van Niekerk, 2014).

As a result of the increasing recognition of the development potential of NTFPs, countries are now faced with the challenge of developing a comprehensive NTFP policy that is cognisant of the characteristics and diversity of different NTFPs. The complex nature of NTFPs is captured not only in different categories of products, ranging from subsistence products to internationally-traded commodities, but also in the diversity of stakeholders involved. In view of such complexities, the notion of NTFP governance or wild product governance was recently introduced to help address the complex issues facing NTFP policy-making (Laird et al., 2010a; Ros-Tonen and Kusters, 2011; Wiersum et al., 2014). NTFP governance can be considered to refer to a specific field in forest governance and environmental governance (Arts and Visseren-Hamakers, 2012; Lemos and Agrawal, 2006). In conformity with the concept of forest governance, NTFP governance encompasses the many ways in which public and private actors from the state, market and/or civil society coordinate public issues at multiple scales, autonomously or in mutual interaction (Arts and Visseren-Hamakers, 2012).

The concept of NTFP governance forms the central focus of this thesis. The general aim of the thesis is to gain a better understanding of the nature, diversity and dynamics of governance arrangements for NTFPs. The scientific objective of the study is to help improve understanding of the complex institutional arrangements for NTFP development and the different ways in

which formal regulations are applied. This study is based on an analysis of attempts in Namibia to develop policies that stimulate the development of NTFPs or of indigenous natural products (INPs), as they are frequently called.

In this introductory chapter, the concepts of NTFPs and NTFP governance are further explained. The chapter then summarises the situation with respect to NTFP production in Namibia and identifies major issues requiring attention to better understand the nature of NTFP governance systems. After describing the problems to be analysed, the chapter outlines the research questions and specifies the theoretical foundation and the research design.

## **1.2 Non-Timber Forest Products in the global context**

Non-Timber Forest Products include plant- and animal-based products that are found either in 'indigenous forests' or in any other form of land-use system, such as secondary forests or agricultural land (Neumann, 1996). It has gradually been recognised that the concept of NTFP is a generic one Belcher et al. (2005) and that there exists a large variety of products derived from animals, plants or fungi. Furthermore, there is a wide range of NTFP production systems including the collection of products from the wild, domestication in agroforestry systems, enrichment planting in the wild and cultivation on an intensive commercial scale (Ros-Tonen and Wiersum, 2005; Shackleton et al., 2011a). Again, the market systems for NTFPs range from domestic to international value chains which are either producer or buyer-driven (Ingram et al., 2012; Te Velde et al., 2006).

As a consequence of these diversity, NTFPs often play multiple roles through time from a subsistence product to a safety net service to a product for income generation (Shackleton et al., 2011a). According to Peters et al. (1989), experiences in Amazonian forests demonstrate that the production of NTFPs can provide high net revenues with minimal forest degradation, therefore presenting a suitable way of integrating the objectives of income generation and forest conservation. This idea mirrors several calls for change toward sustainable use of biodiversity for the benefit of local communities (See, for example. Arnold and Ruiz Pérez, 1998; Arnold and Ruiz Pérez, 2001; Ros-Tonen and Wiersum, 2005; Wollenberg and Ingles, 1998). These dual objectives are also reflected in many international texts, specifically the Convention on Biological Diversity (CBD) and the Millennium Development Goals. The CBD encourages incentives and mechanisms for biodiversity conservation and equitable sharing of benefits. In the context of NTFP commercialisation trends in tropical forest regions, the notion that NTFPs serve the dual objectives of forest conservation and poverty alleviation has increased interest in developing NTFPs as a forest resource and has been well received by advocates of NTFP commercialisation (Nepstad and Schwartzman, 1992; Neumann and Hirsch, 2000).

However, recent studies acknowledge that, due to the great diversity in NTFP production and use, its potential in contributing to multiple objectives varies across products (Sills et al., 2011). Considering the diverse nature of NTFPs, ranging from wild products collected in natural forests to domesticated products produced in farming systems, the policies and governance systems are fragmented and often influenced by other policy domains. These not only include policies on biodiversity conservation and NTFP income distribution, but also policies on such diverse issues as product quality and safety, land tenure, intellectual property rights and labour issues (Laird et al., 2011). Furthermore, the NTFP literature reveals that there is a dilemma as to whether an integrated or species-specific approach should be undertaken in governing NTFP resources (Laird et al., 2011). A recent systematic analysis of governance arrangements for

different NTFPs, which included case studies from a range of countries, reveals a number of factors, which influence the complexity of NTFP governance systems (Laird et al., 2010e). In order to better understand this complexity, there is a need for more country-specific studies on key issues that are relevant to NTFP governance. This thesis contributes towards this goal.

In assessing the different governance arrangements for NTFPs, two issues are of special relevance, and both will be considered in depth in this thesis. The first issue concerns institutional dynamics and the second the complex array of products, actors and objectives involved in governance. In the first place, it is important to note that governance constitutes a system of rules (institutions) that are developed and implemented with participation of both public and private actors (Treib et al., 2007). Since most NTFPs are collected from communal areas, where they are accessed as common-pool resources, institutions and mechanisms are required to address collective action problems regarding the use of resources. Institutions may be formal or informal and they aim to enable or constraint individuals in taking actions that are socially acceptable, for example, concerning sustainable harvesting of NTFPs and participatory decision-making.

NTFP institutions are often developed in an ad hoc fashion and they change continuously in response to social and environmental signals (Laird et al., 2010a). An example of such institutional dynamics is the fluctuation in market arrangements. The market development of some NTFPs is characterised by boom and bust cycles, starting with expansion, followed by stagnation and then decline (Homma and Schwartzman, 1992). In Southern Africa, such developmental phases have generated different policy responses for *Hoodia gordonii*, a succulent species used to suppress hunger (Wynberg, 2010). Already in 2002, *Hoodia* spp. were declared a protected species under the nature conservation legislations of Namibia, Botswana and South Africa (Wynberg, 2010). As demand further increased, all *Hoodia* spp. were also listed under Appendix II of the Convention on International Trade in Endangered Species of Fauna and Flora (CITES) in 2004.

This form of reactive and iterative policy process focusing on a specific species is beneficial in addressing the multi-faceted issues of NTFP development, such as the goal of curbing unsustainable harvesting practices associated with increased NTFP demand, and issues of product quality (Wynberg, 2010). In order to better understand such NTFP policy development, it is necessary that this process is conceptualised as ‘a varied and dynamic process of institutional change’ (Laird et al., 2011; Wynberg, 2010).

A second issue requiring attention in assessing NTFP governance systems is the multiple products, actors and objectives involved in the governance of NTFPs. This complexity often results in separate sets of regulations about NTFP production and marketing which are used in different market segments. Recent studies on NTFPs increasingly acknowledge the complexity of NTFP governance systems (Laird et al., 2011). Given this complexity, it has become increasingly difficult to address NTFP challenges within a sectoral approach that is based on the traditional differentiation of natural resource sectors, such as forestry, agriculture and wildlife. The reality of NTFP production does not easily fit into this sectoral differentiation. Consequently, NTFP management and decision-making has gradually moved toward a multi-stakeholder and multi-disciplinary approach (Laird et al., 2010a; Ros-Tonen and Kusters, 2011). The involvement of multiple stakeholders is often necessitated by the different roles that stakeholders play in the various activities along the NTFP value chain, from production to consumption. The collaboration among a wide range of stakeholders requires the development of

policy networks that focus on relations between state and society and on mobilising scarce resources that are often dispersed among public, civil and private actors (Schneider, 1992).

The stimulation of such networks for improving interactions among stakeholders often has implications for policy outcomes. A good case in point is that, whereas harvesters and manufacturers of NTFPs are often not consulted when management decisions on NTFPs are made, their inclusion in the development of NTFP policies has, in several instances, resulted in new outcomes, including greater community control (Laird et al., 2010e). Some NTFP value chains are characterised by relationships in which harvesters and producers have limited bargaining power to negotiate key terms of the value chain, such as product pricing and value chain upgrading. In order to be more effective, NTFP development policies need to address such social issues rather than negate them. These examples demonstrate a need to conceptualise the process of NTFP development as ‘a change in a complex governance system’ (Cole and Bennet, 2007; Te Velde et al., 2006).

### 1.3 NTFP in Namibia

This study specifically focuses on analysing the policy process in Namibia concerning NTFPs or what are locally called Indigenous Natural Products (INPs). After independence in 1990, political changes in Namibia provided the context for legal reforms that aimed at redressing the unsustainable use and unequal distribution of benefits from natural resources. The ‘Namibia Vision 2030’ policy document specifically advocated that natural capital in Namibia, including forest based resources, be utilised in a participatory and sustainable manner, in order to maintain the country’s social, economic and ecological well-being. (Government of the Republic of Namibia, 2004). This document, which provides the roadmap for development in Namibia, aims to support rural livelihoods, environmental stability and socio-economic development. Influenced by this roadmap, natural resource policies in Namibia have been redirected from their earlier centralised approach to a participatory one, which encouraged the devolution of responsibility for resource management to local levels.

Within this new development vision, one thing that policy makers have to grapple with is the sustainable commercialisation of indigenous natural products. The demand for several indigenous natural products has increased recently; for example, export of devil’s claw (*Harpagophytum* species) from Namibia, increased from 96 tonnes in 1992 to 510 tonnes in 2013 (Cole, 2014a). Similarly, the demand for *Hoodia* species in Namibia has increased, especially after the South Africa-based Council for Scientific and Industrial Research (CSIR) embarked on clinical trials and scientific research on the species (Wynberg and Chennells, 2009). The increasing commercial demand for INPs have raised concerns over resource depletion and the limited contribution of these products to community livelihood (Steward and Cole, 2005; Wynberg and Chennells, 2009).

Despite the increasing demand for INPs and the recent trend towards formalisation of INP production systems, access to most INPs in Namibia is still controlled through customary norms of traditional authorities (Wynberg and Laird, 2007a). Customary norms are prevalent with products that are harvested through relatively non-destructive methods, such as marula fruits and *Ximenia* nuts, as well as products that are traded in informal markets, for example mopane worms and *Strychnos* fruits. This situation where the traditional authorities and state actors are involved in facilitating access and production of INPs, illustrate the need to adopt and strengthen a participatory approach to natural resource



management in order to provide access, management and trade of INPs. In order to stimulate participatory policy processes, Namibia has gradually established multi-stakeholder governance bodies through which decision-making and implementation are steered. Through the Indigenous Plant Task Team (IPTT), the central governance body for directing INP activities, the government of Namibia has been exploring different development models for sustainable production and commercialisation of INPs (Bennet, 2014; Schreckenberg, 2003, p. 43). The discussions within IPTT have especially been focused on the initiation and evaluation of pilot projects and the implementation of INP development policies by stakeholders across sectors.

In view of the country's varied sets of INPs, INP development policy and multi-stakeholder participation, Namibia offers a very good setting for the in-depth study of the complex and dynamic nature of NTFP governance systems.

#### **1.4 Problem statement and research objectives**

The Namibian interest in promoting sustainable commercialisation of INPs as a means to both resource conservation and livelihood improvement echoes international concerns and objectives regarding NTFP development. However, the Namibian experience indicates that the implementation of such general development objectives is confronted by various challenges. These are related to the fact that INPs in Namibia vary in two key respects. Firstly, products are collected from different ecological environments and land tenure systems, and they therefore require different access arrangements. Secondly, the different indigenous species are used for different end products, involving stakeholders in various sectors and marketed in different value chains. These differences mean that diverse institutional arrangements are required to control access to these resources and their associated markets.

In Namibia, IPTT was established as a coordinating governance body for all INP activities, particularly pilot projects. These activities include: cultivation of indigenous species, product processing and quality control, product development and marketing, establishment of user groups and building their capacity in terms of business and marketing skills. Lessons have been learned during the period of pilot studies, especially regarding the different value chain models through which INPs are currently traded in Namibia (Bennett, 2010). However, activities often took place in the absence of clear rules to guide interactions and relations among multiple stakeholders. Moreover, challenges were experienced regarding product pricing for different value chain models.

Various value chain models exist in Namibia (Bennett, 2010). Some are characterised by exploitative prices and minimal value addition; others have followed a cooperative model through which fair prices are negotiated for harvesters, particularly through product certification. Some of these value chains are led by donor-funded NGOs, while others are led by middle men, traders and private companies who source private funds to cover their overheads (Bennett, 2010). Uncertainties exist regarding which value chain model most needs to be promoted in Namibia and which will most benefit from explorative studies and pilot projects on product development and marketing. Whereas an NGO-led value chain might benefit harvesters, the initiative may not be sustainable, because NGO projects often come to an end after a certain period. At the same time, a value chain led by a private company may offer a lower price to the harvester, but it may be sustainable over time, and

with government support, it may even foster value-added products. To date, no studies in Namibia have attempted to analyse the relations between different stakeholders within value chains, nor within the different coordinating governance bodies like IPTT, to better understand how these relations influence the INP policy process in the country.

Besides focusing on networks that are involved in shaping INP policy-making, there is also a need to understand the different institutional configurations that emerge from these actor relations. Given the diverse nature of INPs, arrangements for accessing these resources in various tenure systems and for accessing their segmented markets are far from uniform. Access to some indigenous species, such as devil's claw and *Hoodia* spp. is regulated through formal policies. These policies are formulated within the Ministry of Environment and Tourism, in which the focus is largely on wildlife, tourism and environmental management. However, the use and trade of INPs is also influenced by various policies from other ministries, on, for example, community development, small business development and product value addition. This complex setting is subject to a lack of harmonisation among different sectors and different interests. In addition, implementation of regulations for INPs influences multiple actors who operate at different scales — local, national, regional or international (Dickson, 2008; Wynberg, 2010). The nature and characteristics of this complex institutional setting have not been systematically analysed in order to identify patterns guiding INP governance in Namibia.

INP policy development in Namibia has also been influenced by different ideas and perspectives. For example, the discourse on NTFP commercialisation, which promotes NTFPs over timber production in order to contribute to both biodiversity conservation and poverty alleviation, has had a major impact on the strategic development plan for INPs in Namibia. In addition, deliberations regarding INP trade in Namibia have often drawn on ideas of benefit sharing and intellectual property rights. Policies for INPs in Namibia are also developed in the context of international environmental regimes, such as the Convention on Biological Diversity (CBD) and the Convention on International Trade in Endangered Species of Fauna and Flora (CITES), both ratified by Namibia, and both encouraging biodiversity conservation and sustainable use of biological resources. Moreover, Namibia Vision 2030 has been highly influential in establishing that management of forest-based resources needs to depart from a centralised state-led approach and move toward a participatory approach, which encourages community-based natural resource management (CBNRM). In line with this aspiration, INP policy in Namibia has recently been integrated into CBNRM programmes, with the aim of regulating access to INPs and facilitating sustainable harvesting and management.

In response to these new ideas and perspectives, the few already-existing, species-specific policies, such as the devil's claw policy, have recently undergone several changes. Despite this, no studies exist that analyse how new ideas have influenced INP policy development in Namibia. Furthermore, the performance of the emerging CBNRM programmes in providing for access to, and sustainable harvesting of, INPs have not been evaluated.

Given all considerations above — the diversity of INPs, the diversity of stakeholders, the institutional dynamics of policy development at various levels, and the changes in perspectives and governance processes — the general objective of this study is to analyse the nature, diversity, dynamics and/or performance of policy networks, governance arrangements and discourses related to a selection of different categories of INPs in Namibia. Later in this

chapter, after the theoretical section, these objectives will be elaborated in a number of research questions.

## **1.5 Significance of the study**

The significance of this thesis is twofold. Firstly, the thesis is innovative because it positioning NTFP studies within the broader forest governance literature. This thesis also contributes to scientific knowledge on the complex nature of INP governance systems and the various dimensions and processes that are involved in developing NTFP policies. Most studies on NTFP governance are based on an institutional analysis emphasising the government policies and informal customary rules involved. This study enlarges this approach by combining it with an analysis of institutional developmental processes, specifically focusing on institutional changes influenced by bricolage, performance, policy networks and discourses. These analytical methods are used to assess the transformation and performance of INP policies in Namibia. A combination of analytical approaches will provide a better understanding of the substance of INP governance, of its evolution and of the actual performance of the resulting governance arrangements.

Secondly, the thesis makes a societal contribution by providing recommendations for policy-making. There are only a few studies in Namibia that analyse governance arrangements for INPs. Most are either grant reports on day-to-day activities (Cole, 2014b; Schreckenberg, 2003) or publications on the ecology of indigenous species (Lisao et al., 2017; Steward and Cole, 2005; Thomas, 2013). These studies often focus on a single INP and disregard the different types of INPs in Namibia. The different types range from products used for subsistence to informally or formally traded products and (semi-) processed export products, which are produced in different management systems. Examples include wild harvesting in community forestry and conservancies, harvesting in agroforestry systems and harvesting in commercial plantations. By exploring all of these differences, the current study therefore has a great potential to produce a better understanding of the complex nature of governance systems for different types of INPs. Moreover, it promises to contribute to the development of an appropriate mix of institutional mechanisms and policy instruments that will ensure that INP production supports both sustainability and local livelihoods. The thesis will be valuable for guiding future INP policy and development in Namibia.

## **1.6 Theoretical approach**

### **1.6.1 From government to governance**

In order to understand the nature, diversity and dynamics of INP development policy in Namibia, this thesis takes the concept of ‘governance’ as its point of departure. The concept of governance emerged in political science literature nearly three decades ago, reflecting changes in policy processes. The traditional approach, which had been centred on top-down, command and control, state-centric authority, changed to allow new multi-actor and multilevel approaches (Arts and Visseren-Hamakers, 2012; Van Kersbergen and van Waarden, 2004). Governance has thus been defined as ‘the many ways in which public and private actors from the state, market and/or civil society coordinate public issues at multiple scales, autonomously or in mutual

interaction' (Arts and Visseren-Hamakers, 2012). The concept reflects the changing relations between state, market and society in coordinating policy domains that concern public interests (Arnouts et al., 2010; Rhodes and Marsch, 1992). There exist different modes of governance, each characterised by a specific combination of mechanisms and processes for decision-making and implementation. Furthermore, each mode has different ways through which multiple actors interact to influence desired actions and outcomes (Lemos and Agrawal, 2006; Treib et al., 2007).

As a result of its growing popularity, the governance concept has been applied in various fields and has been conceptualised differently based on various dimensions (Pierre, 2000; Treib et al., 2007; Van Kersbergen and van Waarden, 2004). This diversity of approaches towards governance is reflected in the NTFP literature as well (Laird et al., 2010a; Ros-Tonen and Kusters, 2011; Wiersum et al., 2013). Although considerable literature has recently emerged around the concept of NTFP or wild product governance Laird et. al. (2010e), there is still a dearth of research that executes a systematic analysis of the complexity and dynamics of NTFP governance in specific countries.

In order to contribute to the scientific literature on NTFP governance, this thesis focuses on a series of INP case products in Namibia. These case products differ in terms of production system, land tenure system and market arrangements, therefore representing a diversity of governance arrangements.

### **1.6.2 The conceptual framework of the study and research questions**

This thesis acknowledges that governance is not a theory in itself but brings together a variety of families of theories. The thesis draws on Treib et al. (2007) who conceive of governance in three dimensions: (1) the *relationships* between public and private actors in the policy process (*politics*); (2) the system of *rules* (institutions) which shape the actions of social actors (*polity*); and (3) the nature of policy *instruments* used in steering policy implementation (*policy*). In addition, these three dimensions are characterised by shifts and changes (Arnouts et al., 2010; Arts and Buizer, 2009).

Generally, the thesis seeks to understand how these three dimensions play out in policy changes in the NTFP policy domain. The changes in policies, politics and polity come about as a result of changing human behaviours and changing institutional arrangements, which may lead to new policy outcomes. These changes are determined by actors' interests, rational calculations, social norms, as well as by new knowledge and ideas, which are constantly generated and provide interpretations of and meaning to the world (Arts and Buizer, 2009). According to Hajer, (1995) and others, new knowledge and new ideas are to be conceptualised as discourses. This dimension of discourse is, however, not always addressed within the governance literature. This thesis examines discourses to help further understand the influence of emerging ideas on INP policies.

Besides providing a discursive perspective, this thesis also analyses INP governance in terms of both actors' relations and institutional arrangements. The analysis of actors' relations is based on a policy network framework. This framework provides a scientific basis for understanding the contribution of public and private actors to the development of INP policies. According to Börzel (1998), policy network analysis considers the structure and process through which policies are organised. For this thesis, different governance bodies and their relations, through which decision-making and implementation are organised, have been identified. Through this policy network analysis, the influence of actor interactions on policy outcomes is

explained by examining power relations among different categories of actors (Rhodes, 2006; Rhodes and Marsch, 1992). Next, the analysis of institutional arrangements focuses on three theoretical constructs, namely: governance arrangements, which concerns the architecture of a specific policy domain; institutional performance, or how formally designed institutions perform in practice; and institutional bricolage concerning how local actors change/adapt to newly introduced institutions.

In chapter 2 of this thesis, a policy network analysis is used, whereas in chapter 3 an actor-oriented institutional analysis is applied. This is done to characterise the different governance arrangements, including actor constellations and institutional configurations, that exist in Namibia for accessing INP resources and markets. These two chapters take a comprehensive view of the entire NTFP sector in Namibia. Whereas chapter 2 and 3 employ a rather static perspective of existing institutional arrangements and structures, chapters 4 and 5 offer a more dynamic picture, emphasising process, change and generation of knowledge and meaning. In these chapters, institutional development processes and their influence on INP policy outcomes are analysed, while taking a case study approach. In chapter 4, the concepts of institutional bricolage and performance are used to understand the performance of the recently introduced community-based institutions to natural resource management. This chapter examines the process through which community-based institutions are adapted and realigned to fit the context of specific INPs and the ecological regions in which they are located. Chapter 5 then applies discourse analysis to understand the discursive processes through which INP policies have changed. For this chapter, devil's claw (*Harpagophytum* spp) serves as a case study to analyse how the discourses surrounding NTFP commercialisation, biodiversity conservation and poverty alleviation have shaped the National Policy on Utilisation of Devil's Claw in Namibia.

On the basis of the conceptual considerations above, the thesis address the following research questions:

- 1) To what extent has multi-actor governance influenced INP policy development in Namibia?
- 2) Which governance arrangements have emerged for accessing INP resources and markets in Namibia?
- 3) To what extent do local INP governance practices follow the formal arrangements for Community-Based Natural Resource Management (CBNRM)?
- 4) How have different international discourses influenced decision-making and institutional practices in the devil's claw sector in Namibia?

## **1.7 Research design**

This thesis is based on a qualitative research design, including case studies. Qualitative research was chosen because the study is aimed at gaining in-depth knowledge about the differences between INPs and the issues and activities that are governed in the INP sector. The qualitative research was based on two phases of study.

The qualitative research was initially designed in two phases. The first phase largely involved the use of focus group meetings with harvesters and traditional leaders, while phase 2 used open-ended interviews with NGOs, government officials and other key INP stakeholders. During each phase of data collection, participant observation and document analysis was carried out continuously to supplement information obtained from focus groups and interviews.

The initial phase consisted of an inventory of the main governance characteristics of the INP sector. For this purpose, an explorative study on the nature of INP governance was carried

out. Focus group discussions were used as an explorative tool to understand diversity within INPs. These discussions formed the basis for developing a standardised questionnaire that guided the open-ended interviews of phase 2. A detailed explanation of interviews, focus groups and participant observation will follow in section 1.7.3.

The focus group meetings revealed the prominence and complex nature of some specific products, specifically devil's claw (*Harpagophytum* spp.). Thereafter, a decision was made to employ a case study approach as well. Case studies promise insight into the dynamics and performance of specific INP policies. In response to the identification of promising cases, it was decided to carry out both a single and a multiple case study (Yin, 2009a). The single case study in chapter 5 focuses on devil's claw. This case was selected because of the prominent role of this species in the national policy development process, and because it reflects the role of international actors and ideas in the development of specific INP policies at the domestic level. The multiple case study focused on a second important issue of community-based natural resource management (CBNRM), regarding the way in which CBNRM impact on INP policy development in Namibia. This was studied by considering three products including devil's claw (*Harpagophytum* spp.), *Commiphora wildii* and mopane worms (*Imbrasia belina*).

### **1.7.1 Selection of case products**

In order to study the complexity of the INP governance system, in chapter 2 and 3 seven indigenous species were purposively selected to cover a range of products with different characteristics, in terms of production systems (wild, domesticated or cultivated) and value chain market structure (table 1.1). The selection also took into consideration the geographical location of the products, as well as the land tenure systems under which products are managed. The species selected were: *Harpagophytum* spp. (devil's claw), *Sclerocarya birrea* (marula), *Strychnos* spp. (monkey orange), *Commiphora* spp., *Ximenia* spp. (sour plum), *Imbrasia belina* (mopane worms) and *Citrullus lanatus* (Kalahari melons).

Table 1.1 The characteristics of indigenous species selected for the study

| Species  | Market structure  | Production system  | Biology and phenology   |
|--|---|--|---|
| <i>Harpagophytum procumbens</i> and <i>H. zeyheri</i> (devil's claw) | International market<br><br>Trade through a community based organization or middlemen<br><br>Buyer driven value chain (Cole and Bennet, 2007) | Large populations gathered in the wild in open access areas, conservancies and community forests<br><br>Also collected in commercial farms where it grows as a weed. | Perennial herb growing as a vine creeper on the ground.<br><br>Taproot and secondary root tubers are harvested.                   |
| <i>Sclerocarya birrea</i> (marula)                                   | International market<br><br>Trade through a producer association and a cooperative<br><br>Buyer driven value chain                            | Mainly domesticated in farming units   | A tree bears fruits, which are shed seasonally when ripe  |
| <i>Strychnos cocculoides</i> and <i>S. spinosa</i> (monkey orange)   | Only domestic market,<br><br>No producer association or trade cooperative. Product sold in raw form as fruits                                 | Mainly domesticated in farming units<br><br>Few products collected in community forests and open accessed forests.   | A tree bear fruits. Ripe fruits fall on the ground, but sometimes they are harvested before ripe in order to lengthen shelf life. |
| <i>Commiphora wildii</i> and <i>C. virgata</i>                       | International market<br><br>Trade through a community based organization<br><br>Relational value chain  | Large populations located and gathered in the wild in communal conservancies   | A shrub that excretes resin during the hot season   |



|   |   |   |  |
|---|---|---|--|
| Ximenia<br>americana, and<br>X. caffra<br>(sour plum) | International<br>market   | Large populations are<br>gathered in the wild in<br>open accessed<br>woodlands                | The shrub sheds fruits when<br>ripe  |
|   | Trade through a<br>producer<br>association and a<br>cooperative |   |  |
|   | Buyer driven<br>value chain                                     |   |  |
| Imbrasia belina<br>(mopane worms)                     | Only domestic<br>market   | Large populations<br>gathered in the wild in<br>open accessed<br>woodlands                    | Adult worms are harvested,<br>often indiscriminately,<br>leaving no pupae for<br>regeneration                |
|   | No cooperative or<br>producer<br>association                    |   |  |
|   | Sold in raw form<br>as fruits                                   |   |  |
| <i>Citrullus lanatus</i><br>(Kalahari melon)          | International<br>market   | Mostly growing through<br>seed dispersal by<br>domestic animals.                              | Annual melon usually grown<br>as feed for domestic animals.<br>Increasingly also used for oil<br>production. |
|   | Trade through a<br>producer<br>association and a<br>cooperative | Increasingly<br>purposefully planted or<br>cultivated in farming<br>units for oil production. |  |
|   | Buyer driven<br>value chain                                     |   |  |

### 1.7.2 Selection of study sites

The data were collected in Namibia, from nine political regions, where the indigenous natural products are found (figure 1). The regions were selected based on NTFP abundance, geographical representation and existence of either formal or informal institutions for organising and regulating the use of INPs.

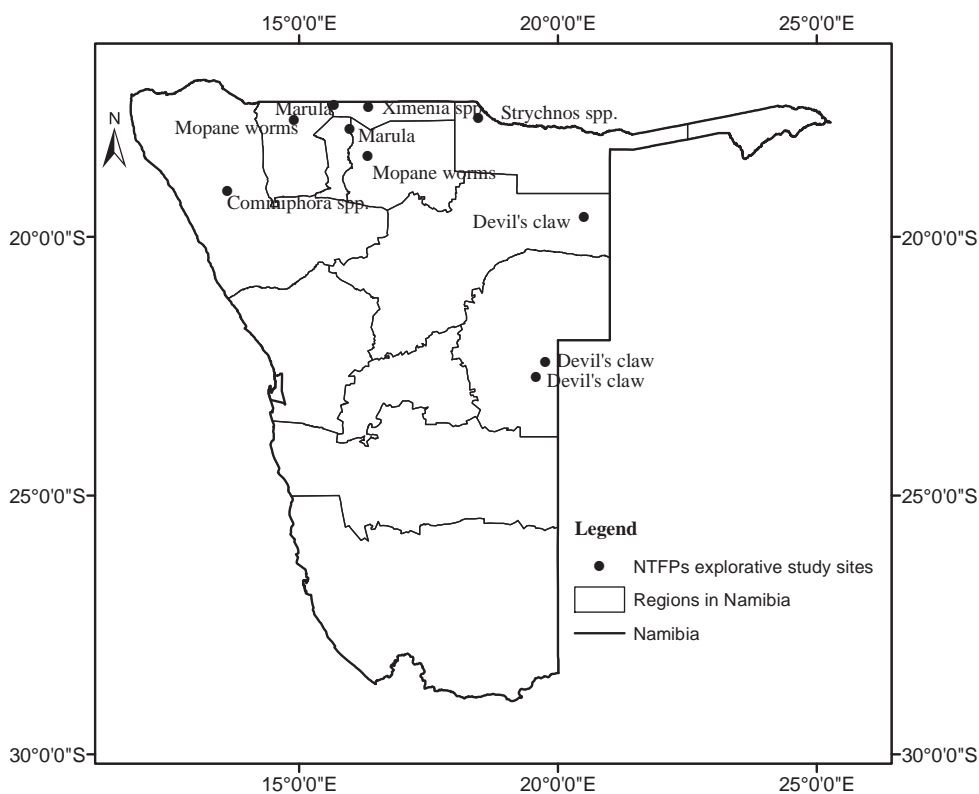


Figure 1.1 Location of study communities in Namibia

### 1.7.3 Data collection methods

Data were collected in two phases. The first phase was explorative in nature. During this phase, data were collected mainly by means of *focus group discussions* with stakeholders on the ground; for example, harvesters and representatives of community-based organisations, such as resource management committees in communal conservancies and community forests, as well as traditional authorities. This study focused on harvesters who were organised into user groups. Stakeholders were thus drawn from producer associations or primary processor organisations (PPOs), as profiled by the Millennium Challenge Account-Namibia (MCA-N) for indigenous natural products (MCA-N, 2010). Since *Strychnos* spp. and mopane worms are not listed under the MCA-N profile of PPO, the communities for these species were identified under the guidance of the Directorate of Forestry in Kavango West Region (for *Strychnos* species), and the Uukwaluudhi Traditional Authority in the Omusati Region (for mopane worms).

In total 38 focus group meetings were held. These group discussions provided the basis for three empirical chapters — the findings of chapters 3, 4 and 5 are based on, among other sources, 19, 13 and 6 focus groups, respectively. Given complexities in the field, the number of people in each focus group varied substantially, ranging from 2 to 12. The information acquired during this first phase of data collection served as the foundation for open-ended questionnaires for the case studies. Focus groups allowed a larger part of the country to be covered and discussions provided a general understanding of how views regarding INP governance in Namibia converged and diverged.

In order to allow the researcher to study what participants actually do on a day-to-day basis, each focus group discussion was planned to coincide with a specific INP-related activity, such as harvesting, semi-processing, resource assessment and monitoring and trading. Pre-designed focus group questions were used to guide the discussions. These questions adopted categories of NTFP concepts from (Belcher and Ruiz-Perez, 2001). These NTFP concepts covered the functions in the NTFP value chain from production to consumption, including production areas, production systems and processing techniques, as well as the trade and market structures from downstream to upstream level of the value chain within Namibia.

The second in-depth phase of this study was based on the *interview* method, whereby a questionnaire with open-ended questions Silverman (2010, p. 110) was used as an instrument for data collection. A total of 51 individuals were interviewed. The interviews provided much more detailed information than focus group on INP governance at various levels. Interviewees mainly consisted of key informants, such as government officials, NGOs officials, representatives from research institutes and academic institutions, traditional authorities, traders and exporters. Table 1.2 shows the distribution of different categories of stakeholders who were interviewed for this study. The table also shows the contribution of these stakeholders to each of the four empirical chapters of this dissertation.

Table 1.2 Distribution of respondent categories for semi-structured interviews

| Respondent category                                      | Interviews |           |           |           |
|--|------------|-----------|-----------|-----------|
|  | Chapter 2  | Chapter 3 | Chapter 4 | Chapter 5 |
| Public actors  |            |           |           |           |
| <i>Government and research institutions</i>              | 23         | 23        | 11        | 13        |
| NGOs   |            |           |           |           |
| <i>CRIAA-SADC; NNF; IRDNC</i>                            | 6          | 7         | 7         | 5         |
| International projects                                   | 5          | 5         | 5         | 5         |
| Private actors   |            |           |           |           |
| <i>traders, trade cooperatives</i>                       | 6          | 5         | 3         | 2         |
| Community-Based Organisations                            |            |           |           |           |
| <i>PPOs, Trusts, harvesters, traditional authorities</i> | 3          | 11        | 9         | 1         |
| <b>Total</b>   | <b>50</b>  | <b>47</b> | <b>35</b> | <b>26</b> |

The main interview questionnaire was structured in different sections, each guided by a conceptual framework. This framework is an integral part of the policy arrangement approach (Arts et al., 2006), which emphasises the need to analyse institutions (rules of the game), actors and their coalitions, policy discourses and programmes and the division of resources and power in a policy domain. The different sections of the questionnaire applied to the different empirical chapters of the thesis. Interviews were recorded and transcribed to aid data analysis at a later stage.

In addition to focus group discussions and interviews, other methods of data collection, such as content analysis, participatory observation in workshops and direct field observations were used. These methods were employed mainly to validate information (through triangulation) obtained from focus group discussions and interviews. Content analysis was undertaken of conference proceedings, IPTT documents and reports from the MCA-N project. The aim of this analysis was to establish categories of policy concepts, before field data collection commenced.

The author also participated in the Biotrade conference that took place in 2012 and in the Conference of Parties to the United Nations Convention to Combat Desertification (UNCCD) in 2013. The discussions and documents that were part of these conferences, provided access to international discourses that potentially shape INP policy development in Namibia. The UNCCD was comprised of INP topics on various side events, whereas the Biotrade conference specifically focused on INP issues.

## 1.8 Data analysis

Data were analysed by following an iterative process, which included both inductive and deductive reasoning. This was carried out by analysing the empirical results to establish initial conclusions, and then comparing these with established theoretical frameworks, inspired by grounded theory (Silverman, 2014). This process involved the development of categories of

concepts by means of thematic content analysis. The latter analysis was iterative in nature, continuously carried out before and after data collection.

As mentioned above, categories of NTFP concepts as in Belcher and Ruiz-Perez (2001) were adopted to guide focus group discussions. These categories mainly correspond to the different functions performed along the NTFP value chain, including production/harvesting, semi-processing and manufacturing and marketing. Afterwards, a combination of results from focus groups and concepts from specific social theories were used to construct open-ended questions for the questionnaire. Three families of social theories, as classified in Arts (2012), were used to guide the different theoretical frameworks for each chapter. These families of social theories include: institutional policy analysis, policy network analysis and critical policy analysis, the latter particularly referring to discourse analysis.

At each stage a computer software programme, Atlas ti.7, was used to develop categories of NTFP concepts. An iterative comparison of pre-existing categories and those categories that were developed based on focus group and interview texts was further executed to determine how these concepts could be grounded in specific social theories. This iterative movement from pre-existing categories to themes emerging from interviews and focus groups to social sciences concepts, and back, aided answering the research questions in each chapter.

In order to ensure validity and reliability of data collected by focus group discussions, focus groups were facilitated in a similar fashion and categories were similarly explained to all participants in each group (Morgan and Krueger, 1993; Yin, 2009b). Ethical clearance was also obtained from the relevant authorities. This mainly included traditional authorities and government departments.

## **1.9 Organisation of the thesis**

This thesis consist of six chapters. This first chapter has provided general information on INPs and INP governance at the global level and in Namibia specifically. It has outlined the theoretical perspectives underpinning the analysis of data and presented the problem statement, research methods, research objectives and research questions for the entire dissertation. The following chapters (2 to 5) consist of empirical papers in which the several research questions are answered. Each of these empirical chapters is presented as a stand-alone article. Chapters 2 and 3 have both been previously published in the journals *Environmental Management* and *Forest, Trees and Livelihood*, respectively.

Finally, Chapter 6 presents a synthesis of the dissertation and places the different empirical chapters in the broader context of NTFP and forest policy studies. In this concluding chapter, both the methodology and theoretical perspectives used in the dissertation are reflected upon. Furthermore, Chapter 6 presents recommendations for policy-making and for future research on NTFPs in general and on INP governance in Namibia.



## **CHAPTER 2**

### **The governance of Indigenous Natural Products in Namibia: a policy network analysis**

This chapter has been published as:

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## **Abstract**

At the end of the 20th century, optimism existed that non-timber forest products (NTFPs) can form an integral part in conservation and development strategies. However, there is limited knowledge on how the different stakeholders could relate to the state or to each other in promoting commercialisation of NTFPs. Applying the policy network as an analytical framework, we investigated the structural patterns of actor relations in the governance structure of indigenous natural products (INPs) in Namibia, to understand the implications of such relations on INP policy process. The findings indicate that the INP policy network in Namibia is multi-dimensional, consisting of the Indigenous Plant Task Team — the key governance structure for resource mobilisation and information sharing; and functional relations which serve specific roles in the INP value chain. The existing relations have facilitated policy development particularly for heavily regulated species, such as devil's claw; but for other species, only incremental changes are observed in terms of small scale processing facilities for value addition and exclusive purchase agreements for sustainable sourcing of INPs. Participation of primary producers, private actors and quality standardisation bodies is limited in INPs governance structure, which narrow the scope of information sharing. Consequently, despite that IPTT has fostered publicly funded explorative pilot projects, ranging from production to marketing of INPs, there are no clear guidelines how these projects results can be transformed to private entities for possible commercialisation. Further collaboration and information sharing is needed to guide public sector relations with private entities and cooperatives.

**Keywords:** Indigenous natural products, Policy network, Non-timber forest products, Actor relations, Governance structure, and Sustainable commercialisation

## 2.1 Introduction

At the end of the 20<sup>th</sup> century optimism existed that non-timber forest products (NTFP) could contribute toward combined goals of conservation and development (Belcher et al., 2005; Kusters et al., 2006). These studies concluded that in order to achieve these combined goals, a focus on multi-stakeholder governance is required to foster a multi-disciplinary engagement and inter-sectoral policies integration (Arnold and Ruiz Pérez, 2001). The governance of NTFPs involves diverse issues including resource management and marketing systems, which are often directed at specific species. This is reflected in a great diversity in institutions for both access to NTFP resources and markets (Laird et al., 2010e; Ros-Tonen and Kusters, 2011; Wiersum et al., 2014).

The complexity of NTFP governance is well reflected in Namibia. The promotion of NTFPs — in Namibia locally known as indigenous natural products (INPs) — involves actors from the state, NGOs, private sectors and local communities. Initially, isolated stakeholders conducted commercialization trials of promising indigenous species such as devil's claw (*Harpagophytum* spp.), marula (*Sclerocarya birrea*), Kalahari melon (*Citrullus lanatus*) and silk from the African moth (*Gonometa postica*) — also known as Kalahari wild silk (Ministry of Agriculture Water and Rural Development, 2003). Through these pilot projects, specific governance arrangements were developed for the different species. For instance, in 1999 a decision was made to establish a Devil's Claw Working Group (DCWG) as a forum for developing policies to regulate harvest and trade for devil's claw. The DCWG also served as focal point for international consultations, specifically the proposals to list devil's claw under the Convention on International Trade of Wild Fauna and Flora (CITES).

In order to further coordinate the different types INPs, Namibia also established in 2000 the Indigenous Plant Task Team (IPTT) — a multi-stakeholder forum with representatives from the government and non-government entities for coordinating the implementation of the action strategy for all indigenous natural products (Du Plessis, 2007a). The implementation of the IPTT action strategies and plans took a new governance approach, which encourages stakeholder's participation in pilot scale projects for sustainable commercialization of potential products. In fulfilling its commercialisation roles, the IPTT also engages in the provision of access to genetic resources from indigenous plants, thereby contributing to the national debate on access and benefit sharing, which is provided under the Convention on Biological Diversity (CBD). In 2007 an interim-bio prospecting committee (IBPC) was established to strengthen attention to issues of access and benefit sharing in the use of genetic resources.

Gradually a complex governance structure has emerged composed of several multi-stakeholder governance bodies for policymaking, implementation and information exchange. Namibia has been commented for establishing the IPTT, a multi-stakeholder body through which INP activities are coordinated (Laird et al., 2010e).

However, the relationship between the stakeholders in these different governance bodies has not been systematically assessed to understand interactive relations between the different actors and the influence of these relations on INP policy outcomes. Specifically, the IPTT has over the years failed to establish an enterprise ownership model through which business opportunities generated with public funds can be transferred to the private entities. Also, the roles and functions of the IPTT have been too broad, including both pilot processing; technology development; product research and development as well as marketing and promotion.

Differentiation of activities can be guided by a clear understanding of relational patterns in governance structures.

This paper analyses the structure of the policy network and the interactions between stakeholders in the Namibian INP policy sector by (i) identifying the different *governance bodies* that emerged in Namibia to coordinate the governance of INPs, (ii) assessing the *structural relations* among the different actors in the INP sector, and (iii) analyzing the implications of these structural relations of INP governance on the policy process. This analysis will provide an understanding on the structural arrangements through which collective actions for INP management and policies have emerged and the roles of different actor groups in the different governance bodies. Furthermore, it will consider how interactions between different groups of INP actors and different components of the governance structure influence the policy outcomes. The following research questions will be addressed:

1. Which formal bodies for INP governance have been established in Namibia and what are their structural relations in terms of stakeholder representation?
2. What functional relations exist between the stakeholders represented in the various governance bodies?
3. How have the lessons learned from the various activities in the multi-dimensional governance structure influenced INP policy development?

Following this introductory section we give a brief background of the policy network approach which is used in the paper to analyze structural and functional patterns of the INP governance network. We then present the method that was followed to collect and analyze the data for this paper. Afterwards, the research questions are addressed in sections 4, 5 and 6 respectively. The last section 7 discusses the implications of INP governance structure on the INP policy development and implementation in Namibia.

## 2.2 Theoretical Framework

The institutional structures for environmental governance have recently changed from government to governance (Lemos and Agrawal, 2006; Rhodes, 1997; Young, 2009). These changes are a result of increasing societal differentiation in terms of specialization in functional roles and dispersion of resources among public, civil and private actors (Schneider, 1992). One major tool to analyze the structure of governance and to understand the role of these structures in the policy process and outcome is the policy network analysis approach (Marin et al., 1991; Rhodes and Marsch, 1992). There are two different but closely entwined approaches to policy network analysis in the literature (Börzel, 1998).

The structural approach focuses on a policy network as a social structure through which governance is conducted (Marin et al., 1991; Schneider, 1992; Torfing, 2005). It considers a policy network as a specific arrangement in which multiple actors are represented to participate in the process of decision-making and implementation. The policy network is regarded as a non-hierarchical public-private structure through which resources and technical knowledge is shared between autonomous but inter-dependent actors (Marin et al., 1991; Schneider, 1992). This public-private governance network is composed of public actors, private firms, interest organisations (e.g. user group associations, small-scale farmers, trade associations etc.). In this arrangement, policies do not emerge from concerted and programmed actions at government level, but rather from interactions between these actors (Kenis and Schneider, 1999). Thus, in the structural approach, a policy network is conceptualized as a device to enable resource

mobilization, as well as sharing specialised technical information and knowledge relevant for decision-making (Marin et al., 1991; Schneider, 1992; Torfing, 2005). This perspective does not only focus on the factors leading to joint policymaking, but more importantly considers the structures and processes through which joint policy is organized (Börzel, 1998).

The structural approach to policy network analysis has been criticized at several points. In the first place, it has been argued that policy network analysis tends to focus too much on the interactive processes and related institutions, while neglecting the substantive aspect of the specific problem in specific policy domains (Koppenjan and Klijn, 2004). Consequently, in addition to analyzing the structural relations in the INP governance network, we also assess the substantive issues involved and the functional relations between the various actors.

Another criticism is that the structural policy network does not explain clearly how interactions between actors in the policy network influence policy process and outcomes (Börzel, 1998; Dowding, 1995) or to capture the changes that characterize the interactions in the policy process (Dowding, 1995; Klijn and Koppenjan, 2000). To address these issues, some studies on policy network analysis therefore focus specifically on interest intermediation, examining power relations between the state and the industry, or between the different levels of the state at, for instance, the national and local level (Rhodes, 2006; Rhodes and Marsch, 1992). This approach gives specific attention to analyzing the distinctive but inter-dependent interests that are represented in the policy network (Börzel, 1998). For example, the policy network may be dominated by economic interests, professional interests or government interests. Whereas the economic and professional interests may be focused on specific economic sectors, the government interest ideally serves the interest of the entire society (Marsh and Rhodes, 1992).

This paper uses a combination of policy network dimensions to analyze the complexity of the INP governance network in Namibia. It is primarily based on the structural approach, but adds elements of the interest intermediation approach such as network functions to identify substantive issues and functional relations in the policy network. We also assess how the structural and functional relationships impact on the policy process and outcomes. In making this assessment, we acknowledge that the influence of a policy network on policy outcomes cannot be directly observed and explained as there may be other causal mechanisms which contribute to policy outcomes. Consequently, we use the policy network as an analytical device to understand the actors' contributions to the governance process and the pattern of relational linkages between the actors (Parson, 2010). This approach assumes that there is a dialectic relationship between the policy network as a structure (governance network) and the properties of this structure, i.e. the actors (Toke and Marsh, 2003).

Figure 2.1 presents the different dimensions of the policy network that exists for INP governance in Namibia. On the one hand, the conceptual framework shows a social structure through which decisions are made with participation of interest groups and the state actors. The decisions are either developed into a new policy or new operational activities. On the other hand, the figure also illustrates other dimensions of the INP policy network, such as the type of actors and the functions of different sub-groups of actors.

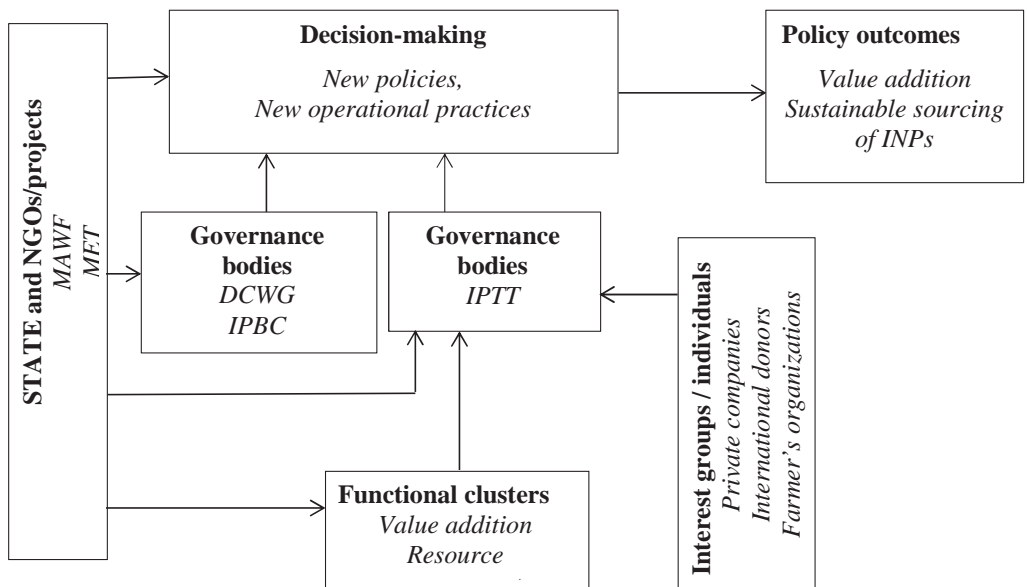


Figure 2.1 The policy network for the governance of INPs in Namibia

Through interaction, actors share knowledge and resources and develop a sense of shared understanding and responsibility toward solving complex environmental problems in line with policy objectives. By analyzing a governance network one can understand how relational structures function and how they shape or influence the policy process and policy outcomes.

## 2.3 Research Methods

This study was carried out within the framework of a larger comparative case study on diverse governance arrangements for INPs in Namibia. Data was collected in communal areas of Namibia. Given the spatially distributed nature of INPs in communal areas of Namibia, interviewees were pooled from eight political regions where different types of INPs are harvested, including the Omusati, Oshikoto, Ohangwena, Kunene, Oshana, Kavango West and East, Otjozondjupa and Omaheke (figure 2). About 55% of the Namibian population live in these regions (National Planning Commission, 2012, p. 42). Communal areas are predominantly rural with high dependence on subsistence farming and natural resources. Communal land is formally state-owned and the occupants use and manage resources in these areas either “privately” (especially within cultivated farm lands) or communally in range lands, communal conservancies and community forests (Mendelsohn et al., 2012). Depending on whether INPs are domesticated on cultivated farm lands, or collected in different types of communal areas, local people have different levels of control (rights) toward the different types of resources (Ndeinoma and Wiersum, 2016).

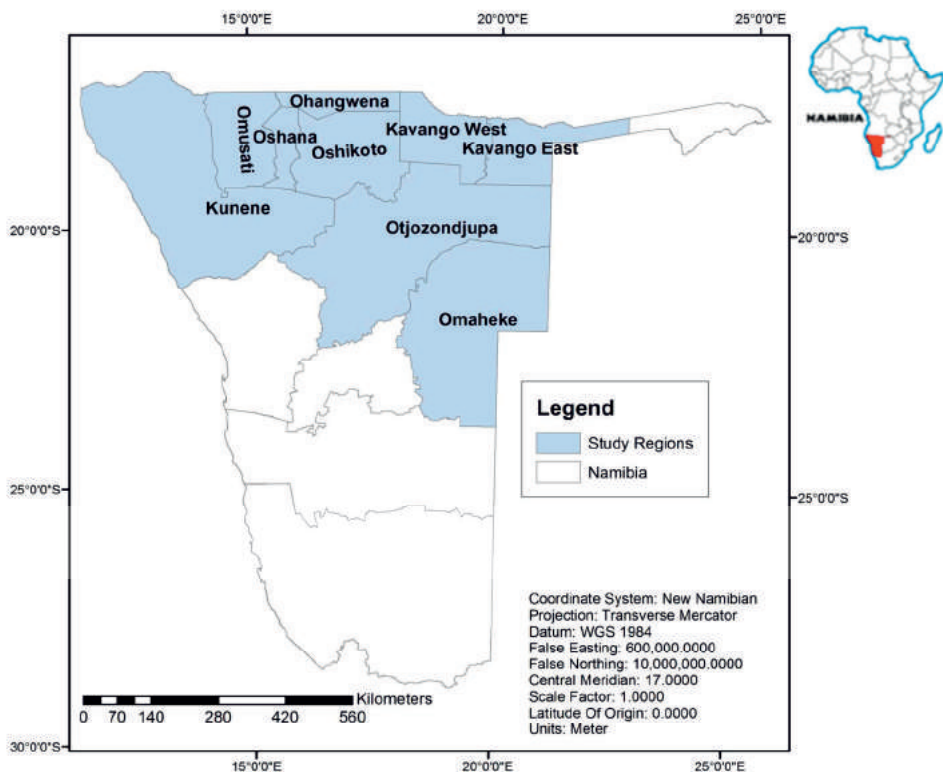


Figure 2.2 Namibia map showing administrative regions covered for data collection

Data on the governance structure for the INPs was collected by means of open-ended interviews and analysis of official proceedings (Silverman, 2014). A questionnaire was used as an instrument for data collection during interviews. In order to determine structural relations among INP actors, the questionnaire had a list of INP stakeholders, and respondents were asked to select from the list the actors with whom they collaborated either formally or informally. This information, which indicates ties between actors and organisations, was used to establish a governance structural configuration (figure 2.3). Furthermore, in an attempt to assess the power relations between different INP actors, respondents were asked to identify central actors in performing different categories of functions relevant in the INP value chain.

Key informants in the INP sector were interviewed, including government officials, traditional leaders, traders, entrepreneurs, NGOs and community-based organisations. A total of 50 key informants in the INP sector were interviewed (table 2.1). The participants were purposefully selected on the basis of three key criteria, i.e. involvement with the development of different INP species, membership to one or more INP governance bodies, and employment with either government, civil society or private sector. The selection also took into account the representation of different ecological regions where different types of INPs are located.

Table 2.1 Categories of stakeholders (respondents)

| Category of interviewee  | Number of interviewees |
|--|------------------------|
| <i>Government:</i> MET, MAWF, MIT-SMED (formerly known as MTI), NSI,   | 18                     |
| <i>Civil society:</i> (NGOs): CRIAA-SADC, IRDNC, NACSO and NNF   | 5                      |
| <i>International Development Agencies:</i> MCA-N-INP, GIZ  | 5                      |
| <i>Research institutes:</i> UNAM, NUST   | 2                      |
| <i>Private sector:</i> Ecoso dynamics, Oontanga oils Producers, TTC, EWC, KC-INP-trust, Gamagu cc, Neema Cosmetics | 9                      |
| <i>Traditional leaders and community-based organisations (CBOs)<sup>1</sup>:</i>                                   | 13                     |
| Total number of respondents  | 50                     |

Actor's acronyms

CBO: Community-based Organizations; CCC: Communal conservancy committee; CFC: Community Forest Committee; CRIAA-SADC: Centre for Research Information Action in Africa – Southern African Development and Consulting; EWC: Eudafano Women Cooperative; GIZ: German Development Cooperation; IRDNC: Integrated rural development and nature conservation; KC-INP: Kunene Conservancy-Indigenous natural product trust; MAWF: Ministry of Agriculture, Water and Forestry; MCA-N-INP: Millennium Challenge Account – Namibia –Indigenous Natural Product; MET: Ministry of Environment and Tourism; MIT: Ministry of Trade and Industry; MITS-MED: Ministry of Industrialization, Trade and SME development; NACSO: Namibian Association of Community Based Natural Resource Management; NGOs: Non-governmental Organizations; NNF: Namibia nature foundation; NSI: Namibia Standard Institute; SHDC: Sustainable Harvesting Devil's Claw; TTC: Tulongeni Twahangana Cooperative; UNAM: University of Namibia.

A visual representation of the governance network relations was established by means of *Gephi*, a social network analysis computer program. This program detects actors with frequent interactions (focusing on similar functions) and clusters them in sub-groups of dense connections. The identified functions for governance of INPs include resource management and assessment; value addition, product quality and standardisation; and institutional capacity building. In order to validate these functional relations, an in-depth analysis of official documents such as workshop proceedings, policy documents and official proceedings for

<sup>1</sup> Members of CBOs often include members of the traditional authority

different governance bodies was carried out to analyze the different collaborations and types of activities identified during interviews.

## **2.4 Formal governance bodies for INPs in Namibia**

### **2.4.1 Development of a Network of Specialized Governance Bodies**

At the end of the 20<sup>th</sup> century, Namibia recognized the need to develop new strategies for coordinating INP commercialization by different stakeholders. In relation to the various policy issues, a number of special governance bodies for coordinating different INP activities were subsequently formed.

The first specialized governance body that was established was the Devil's Claw Working Group (DCWG). This governance body was established in 1999 in response to issues of over-utilization and unsustainable harvesting methods of devil's claw. This tuberous plant is one of the major commercial INPs in Namibia and is used as an ingredient in pharmaceutical products, veterinary medicine and herbal tea. In order to encourage sustainable harvesting and trade of this species, the Ministry of Environment and Tourism (MET) organized a national devil's claw stakeholder's workshop in 1999 that was attended by a wide range of stakeholders including harvesters, traders, non-governmental organisations (NGOs) and government officials (Ministry of Environment and Tourism, 1999). A range of issues were discussed, mainly drawing lessons from the pilot project on Sustainably Harvested Devil's Claw (SHDC). As a result of this multi-stakeholder workshop, the DCWG was established, with a mandate to coordinate sustainable utilization, monitor trade and develop policies for devil's claw. Initially the aim was to have representation from relevant ministries, research institutes, NGOs, harvesters and exporters. However, official proceedings of this working group show that no representatives of traders or harvesters have been attending meetings of this multi-stakeholder forum.

The DCWG was established at an opportune time to address both national and international issues. Just after the formation of the DCWG in 1999, a proposal to list devil's claw under Appendix II of CITES was tabled at the CITES Conference of Parties (COP 11) in 2000. This proposal suggested that the trade of all *Harpagophytum* species needs to be regulated through an international instrument in order to curb potential unsustainable use. The DCWG thus played a major role in coordinating range states (countries in which devil's claw is located) including Botswana, South Africa and Namibia to respond to the proposal to regulate devil's claw trade under CITES regulations.

The attention for INP development in Namibia did not only focus on sustainable practices for devil's claw use. During the period between 1982 and 1999 interests also emerged for developmental options for other indigenous products. For instance, since 1992 a private enterprise Oontanga Oils Producer pioneered the commercialization of cosmetic oil from Kalahari melon (*Citrullus lanatus*). Gradually the value of INP products traditionally used by local communities got recognized, including oil for cosmetic products (mainly from *Ximenia americana* and *Sclerocarya birrea*) and essential oils (from *Commiphora wildii*), which are used as fragrance for ointments (Nott and Curtis, 2006). Consequently, it was deemed relevant to establish a multi-stakeholder governance body to coordinate the implementation of different INP development activities.



Initially attention focused mainly on fruit trees and in 2000 an Indigenous Fruit Task Team (IFTT) was formed under the Ministry of Agriculture Water and Forestry (Du Plessis, 2001; Schreckenberger, 2003). The focus of this task team was subsequently widened to include all useful indigenous plants and name was changed accordingly to Indigenous Plant Task Team (IPTT). Apart from fruits, herbs, resin and nuts, interest was also shown in the commercialization of indigenous green leafy vegetables as a source of household nutrition. The IPTT became the central node for INP governance. The mandate of the IPTT is to coordinate sustainable commercialization of INPs in Namibia. Under the aegis of the commercialization action plan, much attention was given to developing a variety of pilot projects on propagation and domestication, chemical and nutrient analysis, development of technology and processing methods and marketing initiatives.

In fulfilling its commercialization roles, the IPTT often handle cases through which access to genetic resources of indigenous plants is arranged either to universities and research institutes or private entities. The way in which the IPTT dealt with these cases, contributed immensely to the national debate on access and benefit sharing, which was fueled by the Convention on Biological Diversity (CBD). Namibia had ratified the CBD in 1997 — an international agreement, which requires that each contracting party creates conditions that facilitate access to genetic resources and its associated traditional knowledge.

Thus, in 2007, an Interim Bio-prospecting Committee (IBPC) was established in Namibia to regulate access to genetic resources in the country. In fulfilling this international obligation of the CBD, the IBPC was established under the Directorate of Environmental Affairs of the Ministry of Environment and Tourism to serve as the competent national authority to facilitate access and benefit arising from the use of genetic resources. The CBD acknowledges that genetic resources and the associated indigenous knowledge can generate products of commercial value. When such products are accessed through mutually agreed terms and prior informed consent, the local and indigenous communities can benefit from the use of their knowledge, practices and innovations (Chennells, 2009; Dutfield, 2006). Within the context of the CBD, specific initiatives for access and benefit sharing were developed in Namibia for commercially promising INPs such as myrrh oil (*Commiphora* spp.), hoodia (*Hoodia gordonii*) (Wynberg, 2004b) and marula (*Sclerocarya birrea*) (Ministry of Environment and Tourism, 2010).

#### **2.4.2 Substantive focus of the different INP governance bodies**

Due to the differences in their contextual background, the substantive focus of the three governance bodies varies. Whereas the DCWG focuses on developing the production and use of one specific species, i.e. devil's claw (*Harpagophytum procumbens*), the IPTT focuses on a group of species. The IBPC does not focus on specific species, but on a specific policy issue, namely access and benefit sharing from the use of genetic resources. Also the mandates of the three governance bodies varies (table 2.2). Whereas the IPTT was established to coordinate and facilitate exchange of knowledge, the DCWG and IBPC mainly focus on agenda setting and decision-making on specific policy issues.

Table 2.2 Mandates and representation in the INP governance bodies in Namibia

| <b>Governance bodies</b>                   | <b>IPTT</b>   | <b>DCWG</b>  | <b>IBPC</b>   |
|--|---|--|---|
| <b><i>Policy mandate</i></b>               | Sustainable commercialization of all INPs in Namibia<br><br>Exchange of resources and knowledge | Development of harmonized policies regarding the production and trade of devil's claw<br><br>Establish mechanisms for sustainable utilization and trade monitoring | Provision of access to genetic resources as well as regulation and facilitation of bioprospecting activities in Namibia |
| <b><i>Coordinating Ministry</i></b>        | Ministry of Agriculture Water and Forestry.- Directorate of Research and Training               | Ministry of Environment and Tourism - Directorate of Natural Resource Management   | Ministry of Environment and Tourism - Directorate of Environmental Affairs  |
| <b><i>Actor representation</i></b>         |   |  |   |
| <b><i>Public sector:</i></b>               | MAWF, MET, MTI, MoE, NAB  | MAWF, MET and MTI  | MAWF-NBRI, MET, MTI MoE-DRST, UNAM, MFMR-DRM, MSS, and the OAJ-DLA.   |
| <b><i>Civil society organisations:</i></b> | CRIAA-SADC, NACSO, NNFU, NAU, OOP CBOs, e.g. Ben Hur, Komeho Namibia, TTC, EWC, etc.            | CRIAA-SADC, and IRDNC  | Invited when necessary  |
| <b><i>Private sector:</i></b>              | Participate as guest or observers   | Primary producers and private sectors not represented  | Invited when necessary  |

Among the three governance bodies, the IPTT plays the major role in INP development. The IPTT is mainly a multi-stakeholder platform for sharing resources and knowledge. Interviews showed that policymaking has not been one of the key roles for the IPTT. As a result of its robust

membership, the IPTT has served as a catalyst for linkages between government and industry or government and interest groups such as rural producers, research entities and civil organisations. The IPTT members coordinate the implementation of the national INP action strategy. Based on this strategy, priority species for development are identified. Depending on the stage of product development and market trends, the IPTT identifies support measures for these priority species through an “adaptive pipeline approach”. In this approach, each product is given a different support. For instance, the products with emerging commercial potential are prioritized for research and development funding, while for those that already are being commercialized in self-sustaining value chains, such as marula oil, priority is given to developing stable commercial partnerships to maintain secure access to markets. Through its adaptive pipeline approach, the IPTT has played a significant role in product development and market research for several INPs, notably marula oil, Kalahari melon seeds and oil from the seed kernels of *Ximenia americana*.

In contrast to the IPTT, which focuses on several INPs, the DCWG deals only with devil’s claw. The DCWG serves as a platform through which knowledge on sustainable utilization and trade for this main Namibian commercial INP is shared. The DCWG also played a significant role in reviewing the national policies on the utilization of devil’s claw in Namibia and in harmonizing devil’s claw policies within the Southern Africa region by establishing a similar working group at regional level. At regional level, the working group was instrumental in the exchange of information and joint learning between South Africa, Botswana and Namibia. This international collaboration mainly involves government ministries and research institutes and it provides for a wider scope of problem solution and adaptation through multi-level learning.

The IBPC was established with the specific aim of regulating, and facilitating bio-prospecting activities within Namibia. The IBPC is an interim body which represents the National Competent Authority on access and benefit sharing as required under the Nagoya Protocol of the CBD. Consequently, the jurisdictional status of IBPC is not only at national level but also at global level. At local level, the IBPC has played a major role in consultative workshops that preceded the development of the Bill on Access to Genetic Resources and its Associated Traditional Knowledge.

Unlike the IBPC that was established as an international obligation, the IPTT and DCWG arose from national initiatives. However, their scope became broader, with the IPTT becoming a member of Phytotrade Africa, which is an international trade association linking its members to the global market for natural products and pursuing new product development. The DCWG, in turn, has been replicated at the regional level through the creation of a Regional Devil’s Claw Working Group in 2002.

#### **2.4.3 Stakeholder’s representation in the governance bodies**

The history of the development of INP governance bodies is reflected in the configuration of the overall INP governance network. As illustrated in figure 2.3, the IPTT is the most important governance cluster with the greatest number of relations to other organisations, while the DCWG and IBPC have relatively fewer members. In addition to these specific INP governance bodies, other institutional structures also play an important role in facilitating collective decision-making and coordination of pilot projects for the commercialization of INPs in Namibia. One of the main nodal structures is the Centre for Research Information Action in Africa – Southern African Development and Consulting (CRIAASADC) — an instrumental NGO in INP development, which uses donor funds to provide INP services. This NGO also carries out consultancy work for the IPTT on issues related to INPs. In providing support to local communities, CRIAASADC

has also served as an interim benevolent intermediary trader — sourcing INPs from user group associations and re-selling these products for export at cost recovery price. These arrangements mainly formed part of the pilot projects for the promotion of indigenous fruits.

In addition to CRIAA-SADC the Ministry of Agriculture, Water and Forestry (MAWF) and the Ministry of Environment and Tourism (MET) serve as secretariat or chair to the three key governance bodies. The Directorate of Training and Research under the MAWF acts as the secretariat and chair to the IPTT, while the Directorates of Natural Resource Management and the Directorate of Environmental Affairs under MET serve as the secretariat for the DCWG and IBPC respectively.

The membership list demonstrates that the different governance bodies for INPs in Namibia are in principle relatively open to different interest groups of society. However, in practice the membership is limited either due to a lack of resources or due to the absence of a formal representative body. The public sector and civil society organisations are usually well represented, but the representation in the IPTT and DCWG forums of the private sector, community-based organisations (CBOs) and standardisation bodies is minimal. Both the interviews and official proceedings indicate that the membership to both the IPTT and DCWG is mainly dominated by actors from the public sector and civil society.

Nonetheless, several efforts have been made to include CBOs in these governance bodies, in order to obtain representation reflecting different commercialized species and different ecological regions. Such efforts were facing several difficulties. For instance, the IPTT started an initiative to organize local INP harvesters and primary processing organisations (PPOs) into “eco-satellite regional centers”, which could act as nodes for rural development. These centers were incorporated into the IPTT as observers to enrich the IPTT forum with ideas and experiences from the different ecological regions. However, over time, only a few of these regional centers actively participated in the IPTT forums. The continuity in communication and exchange of information with eco-satellite centers was difficult to maintain due to regular staff turnover and changes in leadership of these centers. Another challenge concerned the financial means to enable staff of these satellite centers to travel from distant regions to attend IPTT forums.

Similar challenges of limited stakeholder participation in the governance process were experienced in the DCWG. Despite the original commitments to include multiple stakeholders (Du Plessis, 1999, p. 26), the interviews and official proceedings indicate limited representation of primary producers, traders and exporters in the DCWG meetings. For traders and exporters, the absence of a formal trade association for devil’s claw has been a major stumbling block to gain trader representation in the DCWG. Recently (2014) a new initiative was undertaken to establish a Devil’s Claw Trade Association and this change is expected to provide an opportunity for traders and exporters to be represented in the DCWG. Traders could bring to the DCWG forum experiences of devil’s claw trade, including issues of product quality and price as well as trade quota, thereby providing feedback to devil’s claw policy formulation process.

The experience of the IBPC governance body regarding participation of local stakeholders is different. Unlike other governance bodies, the IBPC has systematically invited traditional leaders, regional councils and CBOs to the consultative workshops they held prior to decision-making. Between 2011 and 2012 extensive regional consultative workshops were conducted in order to incorporate the views and ideas of local level stakeholders into the development of the Bill on Access to Genetic Resources and its Associated Traditional Knowledge. However, the opinions of respondents on these consultative workshops vary. Some key informant remarked

that these workshops have created wrong and unintended expectations among some traditional communities. Some traditional authorities have started to demand access fees from bio-prospecting researchers before they grant access to their communities for bioprospecting.

This illustrates the difficulties involved in establishing local agreements on bio-prospecting and benefit sharing and the intricacies of developing proper arrangements for product commercialization. On the one hand, access to resources for research and innovation needs to be encouraged, but on the other hand safeguards are also needed to prevent biopiracy and maximize benefit sharing with local communities. It is critical to know where to strike the balance, such that the Bill does not frustrate research and innovation or provide loopholes to exploit local communities.

#### **2.4.4 Membership interaction between governance bodies**

The presence of the three major governance bodies is clearly visible in the overall structure of the INP governance network in the form of three key nodal points (figure 2.3). However, as illustrated by the network configuration, as the INP sector in Namibia is relatively small, the membership of the IPTT, DCWG and IBPC is often overlapping.



This overlap in membership results in different levels of reciprocal exchange of knowledge and feedback. The IPTT meetings explicitly serve as a formalized platform for reciprocal feedback and sharing of information. This role is reflected in the regular sharing of the progress of DCWG activities with IPTT members. Such exchange of information is less frequent in the case of the IBPC, resulting into a state which is described by some respondents as inactive or dysfunctional. When interviewed, most IBPC members indicated a need to have more regular meetings in order to stimulate the sharing of practical experiences among the IPTT and IBPC members. A formalized reciprocal feedback between the IPTT and IBPC would also be instrumental for re-aligning the institutional framework for access to genetic resources and intellectual property rights issues such as material transfer agreements, traditional knowledge protection, and farmer's rights. Several interviewees also expressed the view that the IPTT contributed significantly to the visibility of Namibia at global level, which has led to Namibia being nominated as the key negotiator of the Nagoya Protocol in Africa. Due to this visibility, international development agencies such as the Germany Society for International Cooperation (GIZ) and the Millennium Challenge Account (MCA) found the IPTT to be the best vehicle through which funding for INP activities can best be channeled.

## **2.5 Functional relations in the INP policy network**

### **2.5.1 Three functional clusters of policy development and implementation**

The INP policy network does not only illustrate the structural relations in terms of membership to the various specialized governance bodies, but also the functional relations between these actors. In figure 2.3 the functional relations can be distinguished around the nodal points showing organisations that coordinate the different governance bodies (network managers) including the MAWF-NBRI; MAWF-DART and MET-DRM. These clusters show the most frequently interacting organisations, which focus on specific functions such as value addition, capacity building and development, and resource management.

The three sub-groups of actors focus on the following key functions:

1. Product quality involving product research and development, standardisation and value addition;
2. Resource management and monitoring, including screening of useful botanical plants, propagation, cultivation, and domestication of indigenous species;
3. Institutional capacity building and development, which mainly involves training on harvesting techniques and good manufacturing practices for semi-processing procedures provided to harvesters and CBOs.

Cluster A consists of actors such as the EWC, PTA including CRIAA-SADC. These actors regularly interact with MAWF-DART (see figure 2.3), and they are mostly engaged with activities in the field of value addition, product quality and standardisation as well as product research and development. Within this cluster CRIAA-SADC has coordinated several pilot projects, often with financial support of international donor organisations. For instance, in order to stimulate the manufacturing of different marula products, attention focused on developing the extraction technology for pulp, juice and flavor. Also, laboratory tests were conducted with funds from GIZ (German Development Cooperation) to analyze fatty acid profiles, microbial



contaminants and acid values of marula oils in order to develop food oils as a new product. Consumer trials were also conducted for different products. For instance, in an effort to maximize benefits to local communities, a community market arrangement was established between the Eudafano Women Cooperative (EWC) and the Body Shop International (BSI). A preferential access to market was granted to the EWC to supply BSI with marula oil. Another example in the area of value addition includes a pilot program on organic certification for devil's claw under the Sustainably Harvested Devil's Claw (SHDC) project. This organic certification scheme was later replicated in communal conservancies in the Otjozonzupa Region. As a result of pilot certification, the proportion of organic devil's claw products that was exported from Namibia during the period of 2003-2006 was estimated to range between 0.5 to 1.5% (Cole and Bennet, 2007, p. 17).

Cluster B consists of a group of organisations centered around MAWF-NBRI and they are mainly involved in resource management, screening and monitoring. This cluster focuses on the creation of innovative systems for INP production. In developing new production systems, specific attention was given to INP propagation and cultivation, including domestication of indigenous species. The activities include surveys and screening of useful botanical plants; breeding and cultivation trials; as well as seed collection and nursery establishment. In implementing these activities, the MAWF-NBRI collaborated with various academic institutions and interest groups such as the Namibia National Farmers Union (NNFU) and the Hoodia Grower's Association of Namibia (HOOGAN). The DCWG commissioned the devil's claw cultivation project to CRIAA-SADC with co-funding from the MAWF and European Development Funds under the Namibia Agricultural Sector Support Program (NASSP). In addition, the National Botanical Research Institute conducted breeding trials for Kalahari melons to improve seed oil quantity and quality, with co-funding from the MAWF and GIZ. The Kalahari melon trials were conducted in collaboration with the different agricultural research stations across the country in order to compare the influence of ecological variations on the performance of the melon.

The function of Cluster C, which is centered around the three key support organisations CRIAA-SADC, NNF (Namibia Nature Foundation) and IRDNC (Integrated Rural Development and Nature Conservation) has mainly focused on capacity building and development. The support organisations specifically work at local levels where they organize harvesters in PPOs and train them in various relevant skills such as leadership and organisation management and basic business and marketing skills. The function of capacity building and development has largely been implemented by NGOs given the lack of capacity within government agencies. For instance, a project coordinated by the Millennium Challenge Account Namibia the indigenous natural product component of (MCA-N-INP) facilitated capacity building among INP harvesters. It is estimated that through the MCA-N-INP, about 9,000 registered INP harvesters have been trained in various skills including sustainable harvesting of devil's claw (MCA-N, 2011a, 2011b).

The network structure illustrates that pilot projects of INP commercialization have mainly been carried out by multiple organisations, each focusing on a specific function as illustrated in Clusters A, B and C. The focus of the functions of each cluster is often related to specific policy objectives. For instance, in response to the MET policy on biodiversity conservation, enrichment planting of indigenous plants in the wild is encouraged as a means to reduce harvesting pressure in wild areas that are closer to human resettlement. Similarly, the integration of INPs into



agricultural farming systems is promoted as a way to implement the agricultural policy on poverty alleviation and income generation.

### **2.5.2 Balancing the power between state and interest groups**

The discussions in the sections above demonstrate that the policy network for INPs in Namibia consists of different dimensions including governance bodies, actor representation, and functions of different governance clusters. Focusing on the IPTT as the *main governance structure/body*, its membership ranges from state, NGOs, societal interest groups (cooperatives, farmers union, producer associations etc.) and private entities. Such membership theoretically allows for balancing of power between the state and other stakeholders in decision-making. However, the Namibian experience illustrates that despite their common objective of promoting INPs, IPTT members have diverging interests and expectations, which lead to a certain degree of power imbalance in terms of deciding which course of action to undertake for the promotion of INPs. With support from NGOs, institutional arrangements have been established through which access to indigenous products is organised. These arrangements include trade cooperatives and exclusive purchase agreements that facilitate sustainable sourcing of raw materials. However, the IPTT undertakes limited efforts regarding support and incubation of INP-based enterprises. For instance, the interviews with private small and medium enterprises (SMEs) in the cosmetic sector revealed that the IPTT does not meet their expectations. As upcoming business entities, SMEs expect the IPTT to disseminate information on standard specifications for different products, processing techniques and product formulations in order to stimulate value addition to natural products.

More specifically, Namibia has no entity with the capacity to filter some of the cosmetic oils that are exported by Namibian SMEs. The SMEs willing to add value (oil filtering and refining) have to export crude oil through South Africa, where the crude oil is filtered. In addition, there are other services that are beyond the capacity of an upcoming SME. For example, the SMEs require support in terms of training to primary producers in order to supply quality materials, marketing and promotion of natural products, and research and development. The SMEs expect that the IPTT provides some of these services. On the contrary, most of the information generated through the IPTT has been regarded as confidential information which can only be shared with an envisaged private holding company, structured to benefit primary producers. The idea of such a company did not materialise due to various criticisms. Some stakeholders, especially private entities, perceived that the holding company would compete with existing individual private entities and that it would be the sole beneficiary of research and development and market research that the IPTT has produced or commissioned with public funds. Other stakeholders, such as the public sector, did not support the establishment of a private holding company due to suspicions related to the proposed shareholding formula.

In the beginning, the IPTT largely focused on undertaking explorative studies in order to understand the context of the INP sector. These studies included the screening of botanical plants and identification of useful plants; breeding and cultivation of indigenous plants with known commercial values; development of extraction and processing technologies; consumer trials; and pilot organic certification. The IPTT commissioned most of these studies to NGOs and other professional experts at the higher education institutions. Some of the organisations that carry out these activities e.g. NGOs and the University of Namibia are also members of the IPTT. Thus the IPTT itself transformed into what has been referred to as an implementation and administrative body Albertyn (2011) instead of a body that facilitates and coordinates activities. Also, the thrust

on information sharing that was one of the key aims of IPTT establishment gradually diminished. Most respondents highlighted that the roles and functions of the IPTT were ambiguously understood by both the general public and some IPTT members. In the opinions of some IPTT members, explorative studies that pioneered the different functions of the INP value chains have dominated the functions of the IPTT at the expense of tangible poverty alleviation activities. The explorative studies have been described as being too ambitious, stretching the IPTT into too many functions with limited financial and human resources. The key stakeholder — the Ministry of Agriculture Water and Forestry (MAWF) — also perceived that the outcomes generated by the dominance of explorative studies generate few tangible benefits to local communities that could contribute to poverty alleviation such as technical capacity empowerment, value addition and fair product prices.

The audit commission that was established to re-strategize and re-focus the functions of the IPTT in 2011, revealed how the MAWF — which can be regarded as the network manager of the IPTT — proposed a new direction for the IPTT. The audit report indicates that the IPTT needs to collect less data and conduct fewer explorative studies and focus more on empowering local level primary producers and infrastructure development to enable value addition. This implies that the interests of professionals and experts in explorative studies dominated the focus of IPTT activities at the detriment of other objectives such as support to SMEs and trade cooperatives. To some extent the DCWG and the IBPC, which are dominated by government actors, considered the needs and interests of different sectors of society. For example, the proceedings of the devil's claw workshop that was held in 2002 demonstrate how the government (MET), despite its interest in biodiversity conservation, eventually did not support the proposal to list devil's claw under Appendix II of CITES out of recognition of the interests of NGOs and harvesters in promoting devil's claw trade to support rural livelihoods.

## **2.6 Impact of the governance structure on policy learning processes**

The multidimensional policy network for INPs in Namibia has greatly facilitated a learning process in respect to both policy formulation and implementation. This involves interactions between different stakeholders engaged in both policy development and pilot project implementation.

### **2.6.1 Learning process for policy formulation**

An example of changes in the policy is demonstrated through the DCWG, which facilitated a learning process and policy formulation by tapping from experiences on devil's claw pilot projects. Initially, under the provisions of Schedule 9 of the Nature Conservation Ordinance (4 of 1975), a permit is required for harvesting (gathering), purchasing and trade of devil's claw. The harvesting permit was issued to individuals for a duration of one month and there was no clear control of harvesting localities and quota (Mothaping, 1999). Due to a lack of capacity to monitor resources and inspect the harvesting activities, the legal provisions of a harvesting permit was abandoned since 1986, leaving only the export permits in force (Hamunyela, 1999a). A re-assessment of the situation on devil's claw harvesting took place in 1999, stimulated by national concerns about overharvesting and unsustainable harvesting methods. Consequently, a draft policy to control harvesting and trade of devil's claw was developed, later culminating into

a National Policy on Utilization of Devil's Claw (*Harpagophytum* spp.) Products that was approved in 2010.

The initial policy was adapted to enable the traceability of devil's claw products, to monitor harvesting localities and quantities, and to extend the harvesting duration from one month to eight months (March to October). The new policy also made it possible for user group associations to acquire a collective group permit which enhances collective management and self-regulation at local level. These group permits are issued upon approval by a local authority or by the land owner where devil's claw will be harvested. Establishment of these exclusive access rights to collecting areas discourages the earlier open access to lands and enhance the organisation of harvesters in user group associations where they are trained in sustainable harvesting skills. Regulated access to devil's claw harvesting sites thus stimulates sustainable harvesting practices.

Under the new policy, the registered harvesters need to report the quantities harvested, stipulating locations where the resources were harvested. This information is passed to the buyer of devil's claw, who is required to document the purchase transaction (source and quantity of all purchased devil's claw). The development of new policy regulations was greatly stimulated by various efforts aimed at coordinating harvesting practices to develop sustainable harvesting techniques. The impact of these changes is demonstrated by an observed increase in the proportion of sustainably harvested devil's claw products from 48% in 2008 to 55% in 2011 (Moller, 2013, p. 26).

In addition to these policy changes at national level, the DCWG as a policy network has also influenced policy processes at regional and international level. Notably the experiences of the devil's claw policy review has significantly shaped discussions at the CITES Conference of Parties during the period between 2000 and 2007. During this period, the preferred strategy for devil's claw policy in Southern Africa was articulated. Between 2000 and 2007 discussions took place within CITES structures whether to regulate devil's claw harvesting under CITES Appendix II of endangered species — whose trade should be controlled in order to conserve the species. However, within Namibia the policy regarding devil's claw was not only drawing from CITES regulations, but was also guided by the provisions of the Nagoya Protocol of the CBD on traditional knowledge and benefit sharing (see also chapter 5).

Following these dynamics at national level, the DCWG advocated a self-regulation approach instead of CITES regulations in the Southern African producer countries (South Africa, Botswana). The self-regulation approach is focused on creating incentives for sustainable utilization and improvement of people's livelihoods. Specifically, this approach promotes development of benefit-sharing mechanisms to generate profit from indigenous knowledge (Dickson, 2008). Eventually, the Namibian experiences with the new policy practices for stimulating sustainable utilization of devil's claw were among the cases that were instrumental in influencing CITES' approach to international trade regulation of endangered species (Dickson, 2008). The earlier focus of CITES has been perceived as protectionist, with limited concern of economic development to improve rural livelihood. However, with the devil's claw case, suggestions were made to consider in-depth analysis and listing of impacts of listing decisions on the livelihood of the poor and to set out a course of action and funding mechanisms to address these impacts (Dickson, 2008).

Development agencies that fund INP activities in Namibia have also influenced the changes in devil's claw policy. Specifically, when the MCA-N project negotiated the terms of the project operation, it was initially agreed that INP development activities under the project will only

commence once the proposed domestic legislation on access to genetic resources and its associated traditional knowledge is approved by the parliament. This legislation was however delayed because the Nagoya Protocol on Access and Benefit Sharing was not yet approved. Later, the conditions for the MCA-N project on INPs were narrowed to other policy measures including granting a protection status to all *Harpagophytum* species in Namibia.

### **2.6.2 Learning processes for policy implementation**

Unlike the clearly visible changes in the content of the devil's claw policy, the changes on other INPs in Namibia mainly concern changing institutional practices, but not policy content. In particular, important changes are observed regarding value addition and product quality standardisation as a strategy for poverty alleviation. Lessons emerged from the industrial policy interventions, which are coordinated under the Ministry of Trade, Industrialization and SME Development formerly known as the Ministry of Trade and Industry (MTI). Since 1997, the MTI has embarked on a program to support and strengthen the capacity of SMEs by providing processing equipment, financial assistance and subsidized industrial business outlets in order to equip them with the necessary capacity for value addition to natural products. The idea of value addition is also evidenced by the upgrading of agricultural laboratories at the MAWF, established to develop skills in analyzing biochemical and chemical properties of agricultural and natural products. The idea of value addition is also reflected in the gradual emergence of small-scale processing facilities. In 2004 a small-scale marula factory was established for the extraction of marula crude oil and marula juice in the Oshana Region close to the source of marula nuts. In 2010 a small-scale distillation factory for the extraction of essential oil from *Commiphora* resin was also established in the Kunene Region where *Commiphora* resin is harvested. Plans are also underway to support the communities in the Ohangwena Region with the establishment of a processing facility for ximenia oil.

## **2.7 Discussion**

The aim of this paper was to assess the nature and complexity of the INP governance network in Namibia by analyzing the structural patterns of relations between actors and to explain how these structures influenced INP policy formulation and implementation. The findings indicate that the network is characterised by the presence of three specially created INP governance bodies, each having a specific policy mandate. The network structure also shows the presence of other forms of governance clusters, which are also central to INP governance as they focus on distinctive functions.

The findings show several critical issues that need further attention. A major issue concerns the dominance of representatives from the formal state bureaucracies, NGOs and academic/research institutes and the limited representation of locally based primary producers. According to Jordan and Schubert (1992), the policy network may restrict membership or maintain a high threshold of access. In a restricted policy network, the agenda for policy development is dominated by the interest groups that are represented in the network (Schneider, 1992). The IPTT as a policy network for INPs mirrors this form of a network with specific issues dominating agenda setting. As described in the results section, the IPTT functions have been dominated by explorative studies and botanical plant screening. Whereas this is a relevant

function for pioneering the commercialization of INPs, it has overwhelmed other functions such as exchange of information and empowerment of SMEs for value addition.

Although the establishment of the multi-stakeholder forum IPTT has been admired as an exceptional strategy in Southern Africa Laird et al. (2010e), the lack of representation of local actors brings with it a danger of overlooking the relevance of local level issues and constrains to policy implementation by restricting wider collective actions (Klijn and Koppenjan, 2000). To allow incorporation of issues on the ground, a well-balanced network which links local communities to the national decision makers is needed in order to minimize power imbalances, which is an inherent characteristic of policy networks (Marsh and Rhodes, 1992). According to Laird et al. (2010e) p. 347), participation of harvesters in the policy-making process is often limited by the lack of producer organisations, which serve as an institutional vehicle through which concerns of the harvesters can be channeled. In contrast, Namibia has embarked on the establishment of producer organisations, locally known as Primary Processing Organisations (PPOs). Limited representation is associated with a lack of resources to maintain linkages between PPOs on the ground and the IPTT forum.

To prevent such power imbalances, Klijn and Koppenjan (2000) suggest that it is necessary that public actors provide leadership in optimizing the conditions for interaction among actors. The assumptions are that public actors pursue interests of all members of society. The public actor can engage in active network management giving continuous attention to network constitution (bringing in new actors) and changes in the rules of interaction (Klijn and Koppenjan, 2000). The experiences with INP commercialization in Namibia support this crucial role of network management by public organisations such as the MAWF, MET or the then Ministry of Trade and Industry (MTI). The ban on the export of Kalahari melon seeds by MTI illustrates the relevance of such public leadership. Despite an established market for raw seeds, seed export was banned as an endeavor to promote value addition by small and medium manufacturing firms and to increase their competitiveness (Schreckenbergh, 2003).

However, our analysis also indicates that the actor constellations are shifting as project-related civil society organisations are taking on traditional government roles. This is specifically reflected in the dominant role of NGOs facilitating INP pilot projects in Namibia. Similar observations have been reported from the Congo Basin Ingram (2017) where most efforts to promote the production of non-timber forest products are spearheaded by development projects. This indicates that there is a need to give further attention to the provision of platforms that enable balancing stakeholder interests and power in such project-driven governance networks characterized by a variety of thematically oriented civil society organisations and private sector organisations.

Our analysis further reveals that power imbalances remain due to limited representation of harvesters in the IPTT and DCWG networks. This suggests that these networks could be further strengthened by improving its role as a platform for sharing knowledge and information between all relevant stakeholders (Albertyn, 2011). Further attention still needs to be given to organising discussion forums in which participants can share ideas and develop common views on the problem and associated solutions and goals (Schon and Rein, 1995). More interactions between the different stakeholders at local, national and even international level and between the different governance bodies would stimulate further collaboration and interaction between the variety of governance practices and contribute toward shared goals and mutual trust among all relevant groups of actors.

## 2.8 Conclusion

The establishment of the IPTT as a central governance body for INPs in Namibia has provided a well-articulated multi-stakeholder platform for resource mobilization and knowledge exchange. In combination with the activities of the DCWG, IBPC and other forms of governance clusters identified, the structure of the INP policy network influenced the execution of a series of activities in the fields of policy formulation and policy implementation.

Although this multi-dimensional governance structure has had a noticeable influence on the INP policy formulation and policy implementation processes, there is still a need for further improvement. In the first place, further attention is needed to actor constitution and rules of interaction. In order to allow discussions that yield policy feedback to a full array of issues of interest to a range of stakeholders, further widening of the participation of harvesters, CBOs and private companies is required. If necessary, the IPTT may also facilitate the establishment of separate entities such as the much-needed society of cosmetics industries that can provide necessary information to cosmetic SMEs. Specifically, the IPTT needs to pay attention to the functions of the value chain for different enterprises such as SMEs producing cosmetics, fragrance or herbal remedies in order to address issues of interest to particular INP enterprises.

Increased attention also needs to be given to policy adjustments based on the experiences of various explorative studies and pilot projects that have been conducted so far. This requires not only increased research and evaluation of pilot projects, but also the mobilization of specific development issues that are relevant to specific ecological regions or for the promotion of INPs. For example, policymakers need to find new directions after reaching a deadlock on the proposed ownership model for INP enterprises in Namibia.

Finally, our analysis illustrates that the complexities of INP governance can be analysed through a policy network lens. The policy network approach elucidated the diversity and complexity of INP actors, their different functions, and the needs of different enterprises and ecological regions.



## **CHAPTER 3**

### **Diversity of governance arrangements for indigenous natural products in communal areas of Namibia.**

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## **Abstract**

In several countries, it has been observed that the development of policies and regulations for non-timber forest products (NTFPs) rarely follows a systematic approach. This paper characterizes the diversity of governance arrangements for accessing and marketing indigenous natural products in communal areas of Namibia. Applying concepts from environmental governance, two main types of governance arrangements for accessing NTFPs are distinguished, i.e. community-level self-organised governance and network governance between the state and local communities. Application of the theory of global value chain governance reveals three main types for accessing NTFP markets. These are: (1) market value chains for coordinating access to informal domestic markets, captive value chains; (2) captive value chains; and (3) quasi-hierarchical value chains for accessing global markets. The arrangements for accessing resources and markets are further integrated into three main modes of NTFP governance in Namibia, i.e. network governance with high degree of state involvement; network governance with low degree of state involvement and active involvement of local communities and civil society; and a community based self-organised governance at local level with dominance of local authorities. Considering this differentiated governance approach there is scope for the development of an integrated policy framework that recognizes NTFPs based on the different governance arrangements.

**Keywords:** non-timber forest products; indigenous natural products; governance arrangements; actor constellation; institutional configurations; access to market; access to resources, network governance, community-based self-governance.

### 3.1 Introduction

During the last decades, many tropical countries have developed policies, laws and strategic actions that address management and trade of non-timber forest products (Laird et al., 2010e). In various countries, it has been observed that the main challenge facing decision-makers in developing policies for Non-Timber Forest Products (NTFPs) relates to the diversity of interests of stakeholders involved in the management, use and trade of these products (Laird et al., 2010e). This diversity reflects the multiple commercial, social and conservation objectives of using NTFPs (Laird et al., 2011). Due to this diversity, the governance of NTFPs is fragmented and often embedded in different sectors such as agriculture, forestry, wildlife and involving policies for industrial organisation and development. Considering the complex nature of governance arrangements for NTFPs, literature shows that there is a dilemma as to whether an integrated or species-specific approach should be undertaken in governing NTFP resources (Laird et al., 2011). In order to better understand this dilemma, there is a need to systematically characterise the governance arrangements for different types of NTFPs. Such characterisation can contribute to policy development by identifying issues that require further policy attention.

One of the countries in which NTFP development has received specific attention is Namibia. The government of Namibia has recently developed policies and regulations for what locally are called Indigenous Natural Products (INPs). The various policies and regulations in Namibia pay special attention to INPs with high commercial values (Cole, 2014c; Wynberg, 2010). The policies for promoting INP production are aimed not only at income generation and poverty alleviation, but also at biodiversity conservation, diversification of agricultural systems and their adaptation to climatic change (Du Plessis, 2007b). In order to implement these diverse objectives, the strategic action plan for INPs in Namibia draws upon policies in the forestry, wildlife and agricultural, sectors. Through the Indigenous Plant Task Team (IPTT), the government of Namibia explores different development models for sustainable production and commercialisation of INPs (Bennet, 2014; Schreckenberg, 2003, p. 43). These models are partly influenced by the notion of community-based natural resource management (CBNRM) and partly by the industrial policies of Namibia (National Planning Commission, 2008).

The paradigm toward CBNRM approach for sustainable resource management was introduced in Namibia following independence in 1990. The foundations of this approach were endorsed in the policy on Wildlife Management, Utilisation and Tourism in Communal Areas that was developed in 1995 and the Development Forest Policy for Namibia enacted in 2001. The CBNRM approach is aimed at devolving authority over and benefits derived from natural resources to local communities. The reform occurred at a time when empirical evidence from other countries emerged to support views that collective sustainable management of common property resources is possible (Murphree, 1993; Ostrom, 1990). To strengthen the participation of local communities, Namibia also enacted the Traditional Authority Act in 1995. This act empowers traditional authorities to cooperate with different organs of the central government in ensuring sustainable utilization of natural resources.

The Namibia Industrial Policy, which is anchored in the Vision 2030 for Namibia, calls for a change from a market structure based on production and export of raw materials to a diverse, competitive and resilient market structure, which offers value added and service-oriented products. To implement this policy, a programme on small business development has been established to provide incentives for manufacturing value added products within Namibia (Republic of Namibia, 2012b). Sustainable commercialisation of natural resources is one of the

prioritised sectors under this policy programme. Within the agricultural sector, the industrial policy is complemented by the Namibia Agricultural Policy of 1995 and 2015 which promotes cooperative development and agro-industrial investment for value added enterprises. The objectives of cooperative development and agro-industrial investment both encourage access to agricultural inputs, technology and expertise as well as access to markets for agricultural products. The small business and cooperative development strategies have thus provided an institutional context through which access to global INP markets could be established by upgrading the value chain and increasing the competitiveness of Namibian producers and SMEs.

As a result of these multiple development policies, the governance arrangements for INPs in Namibia are complex. This complexity reflects that NTFP governance is characterised by a variety of actors with specific interests in either access to resources or access to their markets (Wiersum et al., 2014). Although such complexity in governing NTFPs is common in most countries Laird et al. (2011), little attention has yet been given towards a systematic analysis of the different arrangements in governing these products. The aim of this paper is to characterise the diversity of governance arrangements for INP development in Namibia in relation to actor's constellations and institutional configurations. In doing so, it contributes to the discussion on whether a country such as Namibia requires a comprehensive policy framework for a wide range of indigenous species or a complex set of species-specific policies, which address different categories of NTFPs.

### **3.2 Conceptual framework and research questions**

The concept of governance emerged two decades ago in political science literature to reflect the changes in policy process from the traditional state-centric and top-down, command and control approach, towards a new multi-actor and multilevel approach (Arts and Visseren-Hamakers, 2012). Governance has thus been defined as 'the many ways in which public and private actors from the state, market and/or civil society coordinate public issues at multiple scales, autonomously or in mutual interaction' (Arts and Visseren-Hamakers, 2012). Different modes of governance exist, each characterised by a specific combination of mechanisms and processes for decision-making and implementation (Lemos and Agrawal, 2006). In each mode of governance, multiple actors interact to influence the desired actions and outcomes (Lemos and Agrawal, 2006; Treib et al., 2007).

In order to understand the different dimensions of modes of NTFP governance in Namibia, we used the concept of governance as identified in the general public policy science literature as the starting point. In this literature, governance is conceptualised in terms of (1) the relationship between private and public actors in the process of policy-making; (2) the system of rules (institutions) which shape the actions of social actors; and, (3) the nature of policy instruments used in steering the policy implementation process. Considering these three dimensions of governance, Treib et al. (2007) suggest a classification of modes of governance based on institutional properties, actor constellation and types of policy instruments. Alternatively, Arnouts et al. (2010) identified governance modes on the basis of policy content (discourse), and policy organisation (rules, actors and power). These authors illustrate that in analysing governance the policy domain, the actor constellations and the institutional properties need to be considered.

Regarding policy domain for NTFPs, two main policy dimensions can be distinguished. The first dimension focuses predominantly on stimulating sustainable utilisation by considering

issues such as land tenure and production systems as well as controlled harvesting systems (Pierce and Burgener, 2010). The second dimension focuses on the governance of NTFP trade and value chains (Te Velde et al., 2006). The second dimension considers the different ways through which product value chains may be coordinated in order to trade NTFPs in different market structures. Such coordination does not only involve local markets, but also regional and global markets (Gereffi et al., 2005; Te Velde et al., 2006).

The actor constellations in NTFP governance consist of a variety of actor network relations. Many studies stress the diversity in governing environmental resources in the form of either traditional state centric authority or alternative forms of governance, such as self-governance, co-governance or markets arrangements (Kooiman, 2008; Lemos and Agrawal, 2006; Treib et al., 2007). This distinction may not only refer to the type of actors involved, but also to their relations as reflected by associated terms, such as hierarchical governance, collaborative management, and self-governance by local communities and/or enterprises (Arnouts et al., 2010; Kooiman, 2008; Lemos and Agrawal, 2006; Treib et al., 2007). Also, in the value chain governance approach, NTFP governance may be categorized based on the type of actors involved and the actor relations in coordinating NTFP value chain. Coordinating access to a value chain depends on the producers and manufacturers ability to meet, and/or codify product specifications (Te Velde et al. 2006; Gereffi et al. 2005). In this context, a distinction is made between a captive (or hierarchical) value chain, a relational (or network) value chain and a market value chain (Gereffi et al., 2005; Humphrey and Schmitz, 2000; Te Velde et al., 2006). Although this categorization emphasizes the relationship between different actor categories, it also implies that there are different types of actor networks.

Regarding institutional configuration, a distinction is made between governance arrangements which are based on legally binding and rigid rules, such as product quality standards, or those that are based on soft and flexible rules, which allow local actors to adapt rules to local circumstances and interests (Treib, et al. 2007). External authorities enforce rigid and legally binding rules, such as product quality or manufacturing standards and procedures, while flexible rules are enforced at local level.

Using the above conceptual framework, the following research questions are addressed:

1. Which actor constellations and institutional configurations for accessing INP resources have emerged in Namibia?
2. Which actor constellations and institutional configurations for accessing INP markets have emerged in Namibia?
3. What main modes of governance are reflected in these dual governance arrangements?

### **3.3 Research design and methods**

#### **3.3.1 Selection of case products**

Seven indigenous species were purposively selected with the aim of covering a range of products with different characteristics, in terms of production systems (wild, domesticated or cultivated) and value chain market structure (table 1.1). The selection also took into consideration the geographical location of the products, as well as the land tenure systems under which the products are found. On the basis of these criteria the following species or groups of species were studied: *Harpagophytum* spp. (devil's claw), *Sclerocarya birrea* (marula), *Strychnos* spp. (monkey orange), *Commiphora* spp., *Ximenia* spp. (sour plum), *Imbrasia belina* (mopane worms) and *Citrullus lanatus* (Kalahari melons). Some of these species, notably devil's

claw, have received much policy attention and are subject to complex governance arrangements. Other species such as mopane worms are mostly governed by customary based informal governance arrangements.

### 3.3.2 Selection of study areas

The study focused specifically on the communal areas of Namibia. These areas were selected because they typically display a great diversity of institutional arrangements for accessing indigenous natural products and their markets. As detailed in the National Land Tenure Policy for Namibia, communal areas are characterised by both multiple forms of land tenure systems and different agro-ecological zones. Indigenous natural products derived from these ecological zones are characterised by different types of production systems, and they are used for different products involving a variety of value chains. Eight political regions were purposefully selected for their differences in terms of indigenous species presence and of nature of the user groups (formal or informal): Kavango west, Kunene, Ohangwena, Omusati, Oshikoto, Oshana, Omaheke and Otjozondjupa, (figure 3.1). The first six regions are located in the northern communal areas (NCAs) of Namibia, while Omaheke and Otjozondjupa are located in the central parts of Namibia.

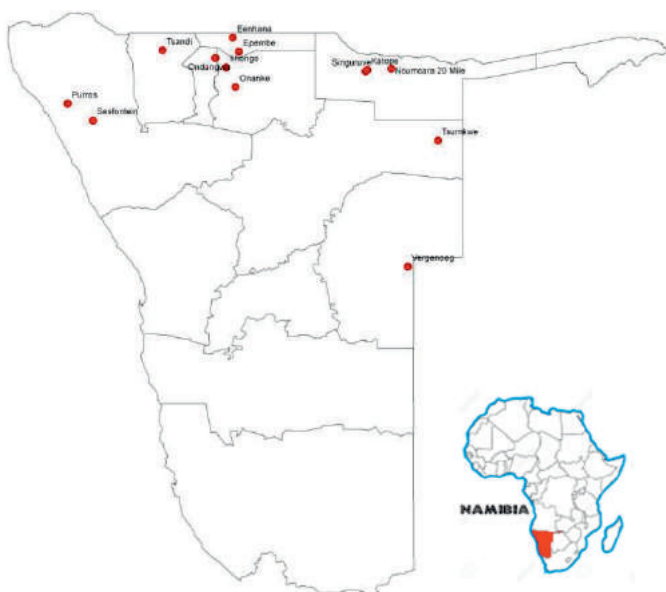


Figure 3.1 Location of study areas for the different kinds of INPs

Within each region, one to three study communities were selected; overall 12 communities were involved in the study. In order to obtain comprehensive data each product featured in at least two communities. Table 3.1 summarises the study regions, communities and their associated species and products.

Table 3.1 The selected study communities, Indigenous Natural Products (INPs) and their associated uses

|    | <b>Study communities</b>          | <b>INP species involved</b>                            | <b>Main INP products</b>                                  |
|----|-----------------------------------|--|---|
|    | <b>Kavango west region</b>        |  |   |
| 1  | Ncamukara community forest        | <i>Strychnos cocculoides</i> and <i>S. spinosa</i>     | Fruits: food, local brews                                 |
| 2  | Nkurenkuru (Katope and Singuluve) | <i>Harpagophytum procumbens</i> and <i>H. zeyheri</i>  | Roots: herbal medicine                                    |
|    |                                   | <i>Strychnos cocculoides</i> and <i>S. spinosa</i>     | Fruits: food, local brews                                 |
|    | <b>Kunene region</b>              |  |   |
| 3  | Puros conservancy                 | <i>Commiphora wildii</i> and <i>C. virgata</i>         | Resin: essential oils,                                    |
| 4  | Sesfontein conservancy            | <i>Commiphora wildii</i> and <i>C. virgata</i>         | Resin: essential oils, a cosmetic ingredient              |
|    | <b>Ohangwena region</b>           |  |   |
| 5  | Eenhana                           | <i>Ximenia americana</i> , and <i>X. caffra</i>        | Fruits: lipid oil, a cosmetic ingredient                  |
|    | <b>Omaheke region</b>             |  |   |
| 6  | Vergenoeg community               | <i>Harpagophytum procumbens</i> , <i>H. Zeyherii</i>   | Roots: herbal medicine                                    |
|    | <b>Omusati region</b>             |  |   |
| 7  | Tsandi / Uukwaluudhi community    | <i>Imbrasia belina</i>                                 | Food: source of protein                                   |
|    | <b>Oshikoto region</b>            |  |   |
| 8  | Epembe                            | <i>Ximenia americana</i> , and <i>X. caffra</i>        | Fruits: lipid oil, a cosmetic ingredient                  |
| 9  | Onanke                            | <i>Imbrasia belina</i>                                 | Food: source of protein                                   |
|    | <b>Oshana region</b>              |  |   |
| 10 | Iihongo association               | <i>Sclerocarya birrea</i> and <i>Citrullus lanatus</i> | Food: edible oil<br>Cosmetic: oil as cosmetic ingredients |
| 11 | Ondangwa                          | <i>Sclerocarya birrea</i> and <i>Citrullus lanatus</i> |   |

**Otjozondjupa  
region**

- 12 Nyae Nyae *Harpagophytum procumbens*, *H. Zeyherii* Roots: herbal medicine  
conservancy  
N#-a-Jaqua  
conservancies
- 

**3.3.3 Methods of data collection and analysis**

Four methods of data collection were used in order to allow for triangulation of information. Firstly, in order to provide an explorative view of each product, focus group meetings were held with primary producers who either gather INPs from the wild, or in their agricultural farming units. The producers were drawn from producer associations or primary processor organisations (PPOs) as profiled by the Millennium Challenge Account-Namibia (MCA-N) for indigenous natural products (MCA-N, 2010). Since *Strychnos* spp. and mopane worms are not listed under the MCA-N profile of PPO, study communities for these species were identified with guidance from the Directorate of Forestry in the Kavango west region (for *Strychnos* species), and the Uukwaluudhi Traditional Authority in the Omusati region (for mopane worms).

The focus group discussed the major characteristics of each product in terms of production areas, production systems, processing techniques and technologies, as well as trade and market structures from the downstream to upstream level of the value chain. In total, twelve focus group meetings were organised, the number of people in each group ranged from 2-12, and altogether, 69 people were involved. After the discussions, the main results were recorded in field notes.

Secondly, interviews were conducted with key informants who are involved in facilitating the INP activities of each study community. The 47 key informants (between one and six in each community) included traditional leaders, INP traders/exporters, government officials, officials of local non-governmental organisations (NGOs) and international development agencies, and members of community-based organisations e.g. resource management committees and traditional authorities. The interview used a semi-structured questionnaire to guide the discussion. Interview discussions focused on the different formal (policies and laws) and informal institutions applicable to INP management and trade. The interviews and some focus group meetings were recorded using an audiotape, transcribed and later analysed by coding different aspects of institutional arrangements with the aid of the computer programme Atlas ti.7.

The third method of data collection consisted of direct field observations of the actual practices involved in the management, use and trade of INPs. All study sites were visited during the period when either harvesting, monitoring and inspecting, processing, or trading of the selected INPs, took place.

The fourth method of data collection consisted of content analysis of policy documents. This method was used to provide an understanding of the formal institutional context of INPs in Namibia and to confirm the information from the focus group discussions, interviews with key informants and field observations.

### 3.4 Governance arrangements for accessing resources

When considering the variation in INP governance in Namibia many respondents made an initial distinction in respect to whether or not the species is legally protected to assure its sustainable utilization.

Most non-legally protected species (often characterised by non-destructive harvesting methods) are managed through a mode of self-governance that mainly operates at a local/community level and employs self and locally initiated rules and procedures. In this paper we adopt the name “community based self-organised governance” because the actors involved are mainly located at local level and not at distant levels e.g. government or markets. The legally protected species are usually accessed, managed and traded through a network form of governance. This network form of governance may constitute various hybrid forms (Lemos and Agrawal, 2006, p.311) often referred to as co-governance (Kooiman, 2008). The term co-governance is, however, somewhat ambiguous as it may be interpreted as involving collaborative governance. We thus hereafter use “network governance”, which is characterised by different degrees of public and private actor involvement, and by the use of legally binding regulations, standards and procedures, as well as customary rules, norms and beliefs.

#### 3.4.1 Community-based self-organised governance

Of the seven INP cases studied four involve non-protected species, i.e. *Commiphora* spp., *Ximenia* spp., mopane worms and Kalahari melon seeds. Depending on the specific nature of a species, and the land tenure in which the species is collected, there may still be several differences in respect to their precise governance arrangements. *Commiphora* resin is mainly collected from formally designated conservancies and community forests where a management committee authorises access to resources. Communal conservancies and community forests are new institutional structures emerging in communal areas, which grant local communities collective rights to wildlife and plant resources respectively. Although these institutional structures only provide rights to resources and not to land ownership, in some communities, they are perceived as a mean to secure communal land tenure (Bollig, 2013; Legal Assistance Centre, 2006). In communal conservancies, in the Kunene region, the harvesters of *Commiphora* resin are registered by the conservancy management committee (CMC) under a user group association. User group associations for resin harvesting have been locally initiated, and there is minimal involvement of the central government, through the general support of the CBNRM institutional programmes in these areas.

*Ximenia* spp. and mopane worms are mainly collected from ‘open access areas’ (commonage land). The production and management of *Ximenia* spp. and mopane worm is under the control of the traditional authority. There are some local forms of controlled harvesting for mopane worms, but none for *Ximenia* spp. of which harvest method is non-destructive. In addition, the communities of the Ohangwena and Oshikoto regions, where *Ximenia* is collected, are located in remote areas with limited road infrastructure, making access difficult to outsiders. These characteristics make strict control of *Ximenia* harvesting irrelevant.

The harvesting of mopane worms often involves collecting all mature worms, which threatens the sustainability of the production. Some communities, such as the Uukwaluudhi in the Omusati region, have thus established customary based harvesting permits, which specify conditions and methods for harvesting these worms. Woodland inspections are conducted by



community residents to ensure compliance with these customary rules and the traditional authority administers the revenue that is generated from the permit fees.

Although governing access to mopane and *Ximenia* does not involve government officials, the establishment and implementation of this self-organised INP governance received political support: For instance, the mopane worm management committee in the Uukwaluudhi traditional community reported that the customary-based permit system was discussed and approved by the central government.

Kalahari melon grows in farming units located in communal areas. It is characterised by yet another form of self-organised governance arrangements. As this INP is produced in farming units that are culturally perceived as private lands, exclusion of external harvester is relatively possible as compared to open access areas of communal lands. Individual farmers collect melons within their farm units and extract seeds, which they sell either to trade cooperatives or to small and medium-sized enterprises (SMEs) that further process and sell Kalahari melon oils to international markets.

### 3.4.2 Network governance

Whereas unprotected indigenous species tend to be regulated by a system of community-based self-organised governance, network governance is predominant for legally protected species. The three legally protected species, i.e. devil's claw, marula and *Strychnos* spp., are all accessed and managed with the involvement of both government officials and local people. However, these species are subject to a varied degree of involvement from public actors and distinct hybrids of network governance can be distinguished.

The level of intervention by public actors is high for devil's claw, which is considered as being subject to destructive harvesting. One key informant asserted during the interviews that "*the only, real issue regarding sustainability is mainly around devil's claw, because many of the other species we deal with*", such as marula, *Ximenia* or *Commiphora*, "*fall under a non-destructive harvesting method.*" Devil's claw is used in the manufacturing of herbal remedies, pharmaceutical products or veterinary medicine. The species is found in community forests, communal conservancies, private commercial farms, resettlement farms and open access areas. Its harvesting involves digging and removal of the secondary tuberous roots, which makes the species susceptible to destructive harvesting. The increasing commercial demand for devil's claw, especially in 1998 and 1999, coupled with unsustainable harvesting practices has made this species very vulnerable to overharvesting, and raised concerns from the international community regarding its over-utilisation (Hamunyela, 1999b, p. 10). As a result, the need for re-institution of the binding and mandatory permit system that was abandoned in 1986 was recognised. A formal harvesting permit, which regulates the harvesting, purchase and export of devil's claw tubers, was then re-introduced in 1999. The permit requires that devil's claw harvesters and traders are registered with the Ministry of Environment and Tourism (MET) and that they submit annual reports on the quantities of tubers harvested and sold respectively.

In addition, the Nature Conservation Amendment Act (Act No.5 of 1996) requires that devil's claw harvesting applications be approved by a local legitimate community-based organisation (CBO). This approval should be given at local level before MET issue the actual harvesting permit. A CBO may either be a traditional authority in open access areas, an elected management committee in communal conservancies and community forests, or a local trust (e.g. in Bwabwata National Park where there are people residing in the park). These legal requirements show a high degree of application of mandatory policy instruments. This form of

network governance is thus characterised by a dispersed locus of authority located at local, national, and international levels.

The regulation and public involvement for Marula and *Strychnos* products is more passive. Pending the finalisation of the regulations for the Forest Act No. 12 of 2001 these species are formally protected under the old Forest Act No. 72 of 1968 and Forest Ordinance of 1952. Notwithstanding these binding regulations, the species are characterised by a low degree of state intervention. The NTFP production from these trees is characterised by a non-destructive harvesting method because harvesters collect already fallen fruits. Moreover, many fruits are collected under trees that have been preserved or raised in farming units, where production is controlled by the individual farmers. Given these characteristics, the government regulations primarily relate to the control of cutting trees rather than to fruit harvesting. The involvement of the central government is thus very limited, although the governance arrangements for marula and *Strychnos* can formally be typified as network governance.

In conclusion, two main governance arrangements for accessing INP resources may be distinguished: self-organised governance and network governance with either a low or high degree of state involvement.

### **3.5 Governance arrangements for accessing INP markets**

Governance arrangements for accessing INP markets also show differences. The variation in these arrangements largely depends on the product demand in the market, as well as on the capacity of the INP supplier to meet product quality specifications demanded by different market segments. Moreover, these arrangements are also related to the 2001 Strategy and Action Plan for Promoting Indigenous Fruits in Namibia. Under this action strategy, the commercial viability of a particular product — function of its quality specifications and of the existing demand of the product — determines the type of investment support that a product receives from the government through the Indigenous Plant Task Team (IPTT). In this respect, two main types of markets can be distinguished, i.e. domestic and international. The domestic and international markets do not only differ in respect to their formality, but also in relation to the value chains involved. Whereas products sold on domestic markets mainly involve raw products, exported products are often subject to some form of semi-processing. These different INP value chains involve quite different actor constellations and institutional configurations, and the relations between suppliers and buyers may be governed or coordinated through either a market, a captive or quasi-hierarchical value chain.

#### **3.5.1 Market value chains for accessing informal domestic markets**

Out of the seven INPs covered in this study, mopane worms and *Strychnos* fruits are mainly sold on informal local markets across the country by primary producers. While *Strychnos* fruits are sold raw, mopane worms are processed with traditional methods such as drying or smoking under hot ash. There is no quality regulation for these INPs and their value chains are therefore not hierarchically regulated by either the state, or by any domestic lead firm.

### 3.5.2 Captive value chains for accessing international markets

In contrast to mopane worms and *Strychnos* fruits, the other INPs studied are often subject to some form of semi-processing. The case of devil's claw is a classic example of a captive value chain model (Cole and Bennet, 2007). Namibia supplies about 95% of the world's market for devil's claw products (Republic of Namibia, 2010a). However, the buyers are in a relatively powerful position in the value chain as they possess the technical skills and knowledge to further process the locally produced dried devil's claw slices to conform to the product specifications of manufacturing companies, which further process devil's claw into end-products, often for international markets.

Due to this high commercial demand, and to the threat of destructive harvesting practices, the devil's claw trade is strictly regulated and controlled, and the government, assisted by NGOs, is stimulating product standardisation e.g. through organic certification. In addition, importers (mainly in Europe) require Namibian exporters to comply with the European Pharmacopoeia (Ph. Eur.), which specifies the level of *harpagoside* content in devil's claw materials, and requires that devil's claw materials are sourced in line with the Good Agriculture and Collection Practices (GACP) for medicinal plants as formulated by the World Health Organization (WHO). These GACP standards were formulated following consumer concerns on the sustainability of plants that are harvested from the wild for herbal remedy industries.

Until 2014, the Namibian producers of devil's claw were not organised into a trade association, which meant they were unable to negotiate for a better price of the sliced devil's claw tubers. Value added products from devil's claw such as powdered and compacted capsules and devil's claw tea are produced in Namibia on a small scale level targeting domestic and regional markets. However, a stable international market for such value added products has not yet been secured, and most international importers still require that Namibian exporters supply devil's claw in its semi-processed form as sliced and dried tubers. Consequently, in terms of value addition, the processing companies outside Namibia have no incentive to provide external support and investment to the Namibian devil's claw primary industry. The relationship between the Namibian exporters of sliced devil's claw and the importers is therefore far from a mutual or interdependent relationship. There are thus no signs of a transition from the existing captive value chain of devil's claw to a network type of value chain.

### 3.5.3 Quasi-hierarchical value chains for accessing international markets

Other INPs that are manufactured and traded on formal markets are characterised by relational value chains. In these cases, there is an increasing cooperation between the public sector, NGOs and private sector for setting standards and assisting producer cooperatives in improving their technical know-how. Within these relational value chains, the power on standard setting and decision-making is often still concentrated amongst processing companies and external NGOs. Consequently, we characterise these arrangements as involving a quasi-hierarchical value chain arrangement.

These arrangements may take different forms. A first example involves marula oil, which is produced by the Eudafano Women Cooperative (EWC). This oil is mainly sold to Aldvia, a processing company that supplies Body Shop International (BSI) with cosmetic oil ready for formulations. This value chain is characterised by community fair trade arrangements between the EWC and the BSI in order to stimulate value addition and provide secure access to niche markets for marula (as well as Kalahari melon) oil. This arrangement was supported by various

national and international development organisations which provided both technical and financial support to EWC to gain access to markets that would otherwise be inaccessible.

A second example involves contractual agreements between CBOs and private companies to structure the price of *Commiphora* resin in line with the principles of access and benefit sharing as formulated in the Convention on Biological Diversity and the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization. A contractual agreement between the Kunene Conservancy INP trust (KC-INP) and the private company Afriplex was established to provide the KC-INP trust the right to sell *Commiphora* resin to Afriplex at a premium price that is 10% higher than the standard sale price for resin. The premium price involves remuneration to communities identified as owners of the traditional local knowledge that was used as the basis for resin commercialisation.

Other examples of creating new forms of collaboration between public and private actors in marketing INPs emerged under the Millennium Challenge Account-Namibia (MCA-N) and the Ministry of Industrialisation, Trade and SME Development (MITSMED). The MCA-N has established an innovation facility through which new technologies for value addition and new business options are explored. Within the framework of a special INP project under the MCA-N, an innovation fund was established to stimulate new public-private partnership projects for developing, testing, analysing and promoting different processing techniques for INPs. This innovation facility provides support to several INP based SMEs to obtain processing equipment, and to upgrade manufacturing skills.

Likewise, the programme of equipment aid scheme and the provisions of affordable business outlets and workshops under MITSMED has been commented by various respondents. The SMEs, especially in the cosmetic industry, indicated that the programme was useful in terms of developing the competitiveness of the national cosmetic oils industry.

### **3.6 Main modes of governance for INPs**

Our analysis illustrates the two-dimensional nature of INP governance with access to resources and access to markets being governed by a specific set of governance arrangements in the form of actor constellations and institutional configurations. The actor constellations for accessing resources can be characterised by two basic models of governance *sensu* Kooiman (2008), i.e. self-organised governance and network governance with either a low or high degree of state involvement. These arrangements can be further characterised by the institutional configuration of policy instruments used to select policy measures, the steering of policy implementation, and the organisation of relationships between private and public actors. The main characteristics for accessing the 7 INPs studied are summarised in table 3.2.

In addition, in respect of the governance arrangements for access to markets, three main types of actor constellations can be distinguished in the form of market, quasi-hierarchical and captive value chains. Arrangements to access markets mainly depend on the ability of INP suppliers to supply products according to market specifications, and/or to codify product specifications. The main characteristics for accessing markets of the 7 INPs studied are also summarised in table 3.2.

Table 3.2 Governance arrangements for access to indigenous species and their markets

| Mode of governance                               | Arrangements for access to resources   |       |  | Arrangements for access to markets   |   | Species involved  |
|--|--|-------|--|--|---|---|
|  | Type of constellation  | actor | Institutional configuration  | Type of constellation  | actor   | Institutional configuration   |
| <b>Network governance</b>                        | High degree of state involvement with dominance of public actors   |       | Access rules highly institutionalized by legal instruments.<br><br>Dispersed locus of authority at multiple levels | Captive value chain with domination of lead firms operating at international level   | International market specifications on quality and trade coupled with commercial marketing institutions                               | Mostly legally protected INPs produced for international markets, e.g. devil's claw                                   |
| <b>Network governance</b>                        | With low degree of state involvement and dominance of local authorities.<br><br>Active involvement of civil society and different market structures. |       | Legal instruments passively implemented and prevailing customary rules   | Relational value chain (quasi hierarchical) between producers and manufacturers, often involving non-governmental facilitators with selective state activities | Market institutions coupled with development programs of NGOs and the state in respect of SME and cooperatives development.           | Both protected and non-protected commercial species with industrial value, e.g. marula, Commiphora and Kalahari melon |
| <b>Community based self-organized governance</b> | At local level with dominance of traditional authorities, sometimes stimulated by indirect support from the state                                    |       | Flexible norms based on customary rules  | Informal market chain involving numerous producers and buyers  | Domestic marketing institutions with informal relations between buyers and suppliers<br><br>No lead firm in the value chain structure | Mainly unprotected species destined for informal domestic market, e.g. mopane worms, and Strychnos                    |

As illustrated in table 3.2 the governance arrangements for accessing resources and markets for specific species are often related in specific combinations. Consequently, three general modes of governance may be recognised. The network mode of governance with a high degree of state involvement combines a strongly legalized system for accessing resources with a captive value chain arrangement for accessing markets. This mode of governance is of special relevance to species that may be threatened by the method of harvesting and subject to strong conservation concerns. The network governance with a low degree of state involvement combines a relatively low level of state interest in regulating access to resources, with public-private partnership for provision of access to markets through a relational value chain arrangement. This mode of governance involves both protected and non-protected species with an established commercial value. Finally, the community-based self-organised governance mode involves informal traditional authority on accessing resources and domestic markets. This is the main mode of governance for locally collected and grown species which products are destined for informal domestic markets.

### 3.7 Discussion

Our study illustrates the relevance of considering NTFP governance as involving two interacting policy domains, i.e. policies related to accessing NTFPs in different land tenure and production systems, as well as policies related to access to NTFP markets. It also shows how the governance arrangements for each policy domain are characterised by specific combinations of actor constellations and institutional configurations.

Arrangements on access to resources are largely influenced by the legal position of species in respect of their conservation and sustainable utilization, and by the different categories of communal lands in which INPs are collected. Arrangements for accessing markets vary according to differences between domestic and international product demand, and to the relations between product suppliers and buyers.

Our analysis also illustrates how INP governance is often species and product specific. This demonstrates that a governance system does not only consist of a system of governance, but also of the object to be governed, i.e. the substantive component of governance (Kooiman, 2008). The study thus highlights the key importance of the concerns on sustainable use and conservation as well as on product value chain relations. These concerns impact significantly on the institutional framework for accessing a resource and further determine the development of production systems in different land tenure systems. The production systems range from wild collection in open access areas to domestication in privately managed farming areas (Homma and Schwartzman, 1992). These different levels of management intensity are related to the different institutional arrangements in respect to access to resources.

Results from this study show that the institutional constellations at local level may be significantly altered when commercially valuable species are threatened by unsustainable harvesting methods. In such cases, governments may introduce regulations to ensure sustainable production. Consequently, as illustrated by the devil's claw case, protected species that are characterised by wild gathering tend to be governed by network arrangements with extensive involvement of government officials. In contrast, there is little involvement of government officials for semi-domesticated species that are growing on farming units and not subject to destructive harvesting, such as marula and *Strychnos*, even though they are also formally protected species and may not be cut without permission. The access to these semi-

domesticated species is controlled largely at local level by networks involving traditional leaders and individual small-scale farmers. In this arrangement, land and resources are perceived as *defacto* private property, and government involvement is not necessary. Wynberg and Laird (2007b) analysed the governance arrangement for marula in detail and concluded that government interventions are not very useful, because the existing traditional and customary rules for this species are very strong.

Our study also highlights the differentiation between governance arrangements in respect of their marketing characteristics, especially in case of internationally traded products. The presence of international rules and regulations on product quality and control of threatened species requires active state involvement. Such state involvement is also needed to control value chain relations. The access to global value chains for most of the high value INPs from Namibia is mainly coordinated through either captive or quasi-hierarchical value chains. These types of value chains have been narrowed to practices involving community fair trade, certification and benefit sharing. Most INPs with medicinal and cosmetic value are exported from Namibia semi-processed with limited value chain upgrading and at relatively low product prices. To overcome these limitations, Namibia recently explored options for developing different forms of local investments to encourage value addition and competitiveness of the Namibia INP primary industry. These findings reflect the observations by Humphrey and Schmitz (2000) that since developing countries are often characterised by a lack of advanced technical capacity for engaging in upstream activities (e.g. product design and product definition), these countries tend to remain locked in less favourable captive or hierarchical value chains.

The global value chain literature suggests that value chain upgrading and competitiveness at a local level may be achieved through links with the external world, or by investments at a national level (Humphrey and Schmitz, 2000). Links with the external world allow local enterprises to take up new tasks from international lead firms, thereby allowing local enterprises to gain access to high demanding value chains. Our study shows that captive and quasi-hierarchical value chains in Namibia have limited options for product upgrading because it is not in the interest of importing firms to upgrade INPs within Namibia. This shows that an alternative for Namibia would be local level investment such as close inter-firm cooperation, active private-public partnership, as well as donor or government funded projects for building capacity for local SMEs. These options have also been identified in value chain literature (Humphrey and Schmitz, 2000; Schmitz and Nadvi, 1999).

The Namibian examples illustrate how network modes of governance with minimal state involvement may gradually be further adjusted by strengthening involvement of the state acting in cooperation with international development organisations. As a result, the focus in developing INPs has gradually widened from initiatives for improving access to resources to initiatives to stimulate cooperation and linkages between local processing enterprises and development organisations in order to improve producer access to high value markets. Such improved cooperation and joint actions also provide opportunities for suppliers to access specialised experts and innovative knowledge, as well as input and services (Schmitz and Nadvi, 1999).

Such new types of partnership relations and institutional configurations are still in their infancy in Namibia. Nonetheless, our study illustrates how a systematic analysis of the multi-dimensional nature of the modes of governance for NTFPs can assist in the identification of innovative governance models that involve new types of partnership relations for dealing with institutional problems, which may include enterprise development but also



producer representation, standardisation of product quality, contractual product supply, and market transparency.

### **3.8 Conclusion**

Our study illustrates the multiple dimensions of NTFP governance systems, and highlights the importance of considering both the two-dimensional nature of NTFP governance systems and its product specificity. Considering the complexity of governance arrangements, the Namibian INP policy should ideally be based on a differentiated and species-specific approach rather than a generic approach under the umbrella of either the forestry, agriculture or wildlife sectors. In fact, the Indigenous Plant Task Team (IPTT), which is a multi-stakeholder forum responsible for coordinating INP activities in Namibia, has adopted a ‘pipeline approach’ Cole (2014c) in which different products in the production and marketing chain are given a differentiated and flexible support for product development. This multi-dimensional and product specific development approach can further be strengthened by developing a systematic overview of the diversity in the modes of INP governance and related development options. In doing so, attention needs to not only be given to improving access to resources and their production, but also to local investment to build capacity of local SMEs for value chain upgrading. Furthermore, creation of new partnership relations for accessing sustainable markets need to be encouraged in order to improve competitiveness of local SMEs.



## **CHAPTER 4**

### **Performance of CBNRM institutions for governance of indigenous natural products in Namibia**

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## **Abstract**

This chapter analyzes the performance of different institutions that govern access to and harvesting and management of non-timber forest products (NTFPs). Three examples of NTFPs, or Indigenous Natural Products (INPs), as they are known in Namibia, were used as case studies. The study specifically analysed how Community-Based Natural Resource Management (CBNRM) institutions perform locally, and how they interplay with practices on the ground. These CBNRM institutions are based on formal policies and legislations that are established in communal areas to devolve use, management and exclusion rights of natural resources to local communities. The case studies revealed that with the gradual integration of INP activities into CBNRM institutions, the performance of these institutions in providing access to and use and management of INPs was characterised by: (1) the coexistence of formal and informal multipurpose institutions and (2) the adjustment of formal arrangements to local contexts of each product and each ecological region. Some products were accessed and harvested through organised procedures of formalised user group associations and with the application of sustainable practices, such as resource base assessment, post-harvest monitoring, and inspections. Other products are still acquired through open-access procedures, where sustainable management practices are hardly applied. These findings indicate the need to critically assess the performance of formal CBNRM institutions in terms of how they are selectively adopted to fit local contexts (congruency) and adapted in a process of re-alignment and improvisation of rules by local communities (bricolage).

**Keywords:** Institutional bricolage, performance, non-timber forest products, Community-based Natural Resource Management, institutions

## 4.1 Introduction

Since the 1990s the role and importance of non-timber forest products (NTFPs) have received considerable attention (Shackleton et al., 2011a). However, perspectives have gradually changed over time (Sills et al., 2011). Initial optimism over NTFP commercialisation's potential to serve both conservation and livelihood objectives waned as attention shifted to the complexities of NTFP governance, which renders conservation and livelihood outcomes more contingent on contextual circumstances (Arnold and Ruiz Pérez, 2001).

The developments of national policies for some indigenous natural products (INPs) in Namibia reflect this change in perspectives. These policies started with concerns about the threatened status of devil's claw (*Harpagophytum* spp. This medicinal herb found in Namibia, was listed as a protected species under Schedule 9 of the Nature Conservation Ordinance of 1975. Despite concerns about overharvesting, the proposal to list this species under Appendix II of the Convention on International Trade in Endangered Species (CITES) of Wild Fauna and Flora was rejected by range states (countries in which devil's claw is located), in order to protect the livelihoods of the rural poor harvesters of devil's claw (Dickson, 2008; Lombard and du Plessis, 2003). Following this decision, Namibia started to integrate most of the INP activities (access, sustainable use, and management) in communal conservancies and community forest programmes, both of which are protected areas in which local people have stewardship over natural resources (Cole and Bennet, 2007).

In these protected areas, natural resources are managed in collaboration with local stakeholders through what is commonly known as a Community-Based Natural Resource Management (CBNRM) approach. Several CBNRM institutions were established through legislations, policies and bylaws to guide implementation of the CBNRM approach. A number of institutional oriented studies have been conducted to analyse the impact of the CBNRM institutions in Namibia (Bolling and Schwieger, 2014; Jones and Weaver, 2009; Jones, 1999). These studies evaluated the formal institutions by looking at the impact on normative values and objectives. These values and objectives assume that actors will respond rationally to the incentives and logics created by newly-introduced institutions and in so doing they contribute to the effectiveness of these institutions (Ostrom, 1990). However, institutions include both formal and informal rules, norms and procedures that enable or constrain human actions, behaviour and interaction (North, 1990). Due to their complex nature at the local level, CBNRM institutions sometimes produce unexpected outcomes, such as strengthening traditional identities (Silva and Mosimane, 2014) or securing land rights (Sullivan, 2002). This shows how newly-introduced institutions interplay with people's daily lives at the local level, becoming entwined with historical roots, social norms and contextual circumstances relating to access and sustainable use of natural resources (Cleaver, 2000).

Considering that CBNRM institutions are often transformed at the local level, the focus of institutional policy studies should thus include an analysis of the way people interpret, value, act upon and reshape formal objectives. Such an approach focusing on the impact of, not only bureaucratic, but also locally-embedded institutions, considers how institutions are performed at the local level. Moreover, it also include adjusting institutions to local conditions through a processes of translation and bricolage (Arts and de Koning, 2017; De Koning and Cleaver, 2012; Faggin and Behagel, 2017).

Studies assessing how formal bureaucratic institutions interact with traditional socially-embedded institutions have already addressed forestry and water resources (de

Koning and Cleaver, 2012; Cleaver, 2002). However, few of these studies deal with NTFPs, despite the complexities and species-specific nature of these products. This chapter provides a comparative case study of three different INPs to assess how the multiple and overlapping institutions that influence access and sustainable use of INPs perform at the local level. This chapter analyses the different ways in which various INP actors respond to the new approaches, where access and harvesting of INPs is arranged within the framework of CBNRM institutions that were developed to improve sustainable use of forestry, wildlife, and tourism. The main focus of the chapter is therefore on the local practices that provide an explanation of how and why CBNRM institutions have evolved and adapted to the context of specific INPs and socially-embedded institutions.

The analysis in this chapter not only contributes to our understanding of how CBNRM institutions perform at the local level, but also presents applied knowledge relevant to future policymaking at the interface between NTFP commercialisation and conservation through community-based NTFP production. This study will also reveal that effective governance of INPs within CBNRM institutions requires awareness of social and cultural issues in addition to economic ones. Hence, all these issues need to be addressed by CBNRM institutions in order to align new local institutions with the social-cultural context in which they operate.

## **4.2 Theoretical framework**

Within the framework of stimulating NTFP production, much attention has been given to developing new policies for better regulation of access to, and management of resources (Laird et al., 2010). This process of policy development has been described as reactive and iterative (Laird et al., 2010a), responding to ecological, political, social and economic conditions (Neumann and Hirsch, 2000). This literature has also shown that NTFP policies and regulations, once translated into local practices, often result in unexpected and mixed outcomes, some of which are inconsistent with the original policy objectives (Laird et al., 2010a).

This trend is reflected in the results of the introduction of formal CBNRM institutions that provide access to indigenous natural product in Namibia. As elsewhere in the world, studies indicated that the CBNRM institutions have produced mixed results in Namibia (Bolling and Schwieger, 2014). Some studies showed that the Namibian CBNRM institutions were successful in increasing biodiversity in established community forests (Schusser, 2012), or increasing wildlife population in conservancies (Jones and Weaver, 2009). Other studies, however, reported that such CBNRM institutions were too segregated in that they were developed for each resource separately, such as water, wildlife, forest products and grazing (Bolling and Schwieger, 2014). These multiple CBNRM institutions were often implemented side by side in adjacent spatial areas, or even overlapping ones (Jakubaschl and Andreas, 2004). This segregated approach to natural resource management led to duplication of efforts by different support organisation, increased management costs, and created competition for support and resources at the local level (Jones, 2015). In order to overcome such problems, Namibia has continuously sought for ways to craft more integrated natural resource management systems, tailored to work at the community level (Jakubaschl and Andreas, 2004; Jones, 2015).

Unexpected outcomes and mixed results of CBNRM institutions signal the transformational and dynamic nature of the rules of the game that guide CBNRM institutions.

To capture such dynamic processes, which include ad hoc events and changing social relations, requires a specific analytical approach. In this study we use the concept of performance (Arts et al., 2014) and institutional bricolage (Cleaver, 2000; Douglas, 1986) to allow us to conceptualise the social relations that impact on the dynamic nature of institutions regarding the rules of the game (North, 1990). Performance in this context relates to what institutions 'do' on the ground, where local practices and customary norms exist. For example, community forests are one of the formal CBNRM institutions established to provide legal rights to local communities over INPs in terms of access, sustainable use and benefits. In assessing institutional performance, the scholar focuses on analysing whether the rules provided under community forests fit the local context (congruency), but also whether local actors follow or adapt these rules (bricolage) (Cleaver, 2002; Ostrom, 1990).

Institutional performance resonates with the concept of 'institutional bricolage' that was developed in the broader critical institutionalism perspective (De Koning and Cleaver, 2012). Institutional bricolage is a practice through which actors reshape or piece together the institutional arrangements at hand, based on their needs, interests, and expectations. Actors can, for example draw upon customary norms and formal law simultaneously in order to legitimise certain practices (Cleaver, 2002; Douglas, 1986). As a result, institutions often perform differently than expected and this can lead to unintended consequences.

Considering these local processes of institutional bricolage, the literature of critical institutionalism suggests a change from the rather universalistic and static view of robust rules of the game to an orientation that is dynamic, flexible, and locally adapted. This approach suggests that individual actors and communities do not simply follow newly introduced policies and legislations, but that they shape and reshape these formal institutions through three possible processes of bricolage. These processes are *articulation* (resisting bureaucratic rules, while strengthening local ones), *alteration* (adapting new rules to local circumstances), and *aggregation* (combining new and customary rules) (De Koning, 2014; De Koning and Benneker, 2013). In performing such practices of bricolage, local people not only relate to their own local institutions, but also exercise locally-situated agency (De Koning and Benneker, 2013).

This critical perspective on institutions draws on schools of thought in anthropology and sociology, which emphasise the interplay between actor and structure in shaping reality (Douglas, 1986; Giddens, 1984). According to Giddens (1984), social practices are self-producing and recursive structures, consisting of rules (institutions) and resources (power), brought into being by human agencies, that are simultaneously shaped by those same practices. However, (Douglas, 1986) emphasises that structures provide context and set limits for judgments concerning objective reality. These perspectives echo the complexity of institutions in terms of their multiple rules, their embeddedness in socio-historical and cultural contexts, as well as their dynamic and adaptive nature (Cleaver, 2000).

Drawing on the concept of 'institutional bricolage' (Cleaver, 2000, 2002) and on the notion of 'multiple practices of policy performance' (Arts et al., 2014; Arts and de Koning, 2017), this chapter will analyse the different ways in which relevant actors respond to INP rules on access and sustainable use in the context of Namibian CBNRM institutions, and how that has affected the performance of these rules. We focus on the practices of crafting local-level institutions that provide access and harvesting rights to INPs. In addition, we provide explanations why and how these institutions evolved and were adapted to the context of specific INPs and the socio-cultural histories of different localities. The following research questions are addressed:

1. Which institutional frameworks provide rules, norms and values for harvesting and management of INPs in communal areas of Namibia?
2. How do these institutional frameworks perform in practice, and to what extent were they locally adapted?
3. To what extent are INP practices on the ground congruent with those institutional frameworks?

## 4.3 Methodology

### 4.3.1 Selection of species

To illustrate how CBNRM institutions perform and are adapted to local practices, three indigenous species with different governance arrangements for access to resources (Ndeinoma and Wiersum, 2016) were purposively selected. These were devil's claw (*Harpagophytum* spp.), *Commiphora wildii* and mopane worms (*Imbrasia belina*). The three cases have different characteristics in terms of types of products extracted from them; ecological and geographic regions in which they are located; and their legal status (see sub-sections below). Notwithstanding these differences, development projects on these products are supported by several NGOs, which promote organised sustainable harvesting of these products through community-based management structures.

#### *Harpagophytum* species (devil's claw)

Devil's claw is a perennial herb and its secondary roots (tubers) are used as a herbal remedy or pharmaceutical constituent. There are two species of devil's claw in Namibia: *Harpagophytum procumbens* and *H. zeyherii*. These two species are legally protected in Namibia, therefore harvesting of its roots is strictly controlled through a permit system at the national level, and by landowners who authorise harvesting at the local level. As such, governance arrangements for devil's claw are characterised by network relationships between the state and local communities, with a high degree of state involvement in implementing legislation that governs CBNRM activities (Ndeinoma and Wiersum, 2016). Furthermore, since devil's claw is sold mostly to international markets, its products are subject to international regulations concerning good agricultural and collection practices as stipulated by the European pharmacopoeia. Moreover, although the proposal to list devil's claw under Appendix II of CITES was not adopted, conservation concerns over this species have been discussed on global platforms (Dickson, 2008; Setshogo, 2013).

#### *Commiphora wildii* (myrrh)

Myrrh is a common name used to refer to several species of the genus *Commiphora*, that produce aromatic resin used for various fragrances and for medicinal purposes. *Commiphora wildii* is one of the species in the myrrh family and it is mainly found in mountainous areas of the Kunene Region in Namibia. *C. wildii* grows as a shrub, reaching heights between 1-2.5m with laterally growing branches (Ridgway and Krugmann, 2010).

Most *C. wildii* species are enclosed in conservancies that were mainly established for wildlife and tourism activities. Several species of the genus *Commiphora* are present in the Kunene Region, some of which are said to be endemic or near-endemic (Nott, 2014).

The resin from *C. wildii* has long been used by the *Himba* women as an ingredient of their body lotion and is now also marketed as a fragrance in formal markets at both the domestic and international level. Unlike other *Commiphora* species, the production of resin from *C. wildii* requires no incision or injury to the tree, since resin is naturally excreted from the plant's stems in response to high temperatures. Consequently, resin harvesting from *C. wildii* does not threaten the plant and there are no statute regulations to prevent overharvesting of the species. The governance arrangement for access to *C. wildii* harvesting sites and markets is characterised by network relations between local community and civil society organisations. Since *C. wildii* is not a legally protected species, state involvement in the arrangements for accessing the species in communal areas is relatively low, compared to devil's claw (Ndeinoma and Wiersum, 2016). Yet national legislations on land and forest use, as well as on traditional authority are also locally valid.

### ***Mopane worms***

Mopane worms (*Imbrasia belina*) are the last larval stage of the mopane moth (*Gonimbrasia belina*). This larvae stage of the moth is edible and highly nutritious, therefore worms are collected by people for household consumption or for sale in informal domestic markets. Mopane worms are associated with the Mopane Woodlands, situated in Northern Namibia, where they forage on the leaves of mopane trees (*Colophospermum mopane*). Mopane worms are in some cases collected in formally designated conservancies. Nevertheless, the common arrangement for accessing mopane worms is characterised, due to local informal use, by community-based self-organisation under traditional authority (Ndeinoma and Wiersum, 2016). Nonetheless, the traditional authorities have complemented their customary rules with formal arrangements such as the permit system, locally-based management committees, and woodland inspections adopted from both national legislations on land and forest use and CBNRM institutions.

### **4.3.2 Selection of study areas**

Local communities that are engaged in organised harvesting of the selected case products were purposely identified, in order to understand the practices and institutions related to accessibility and management of the three INPs. These communities were selected because they represent different contextual circumstances in terms of existing INP resources, land tenure types, cultural traditions and historical trajectories affecting access and ownership of natural resources. These communities also offer good examples of the coexistence of socially-embedded (customary rules) and bureaucratic institutions (legislations, policies) for governing INPs. The number of communities selected for each species ranged between one and four. In these communities focus group discussions were conducted with harvesters. For devil's claw, which is one of the high-value products, four communities in three different regions were selected; i.e. Omaheke Region (Tsaka, Ben Hur and Vergenoeg resettlement farms), Otjozonzupa Region (Nyae Nyae conservancy) and Kavango West (Katope community forest). For mopane worms, focus group discussions were conducted in two communities located in two different regions: Oshikoto Region (Onanke communal area) and



Omusati Region (Uukwaluudhi conservancy/community forest). For *Commiphora* species, focus group meetings were held at Sesfontein conservancy in the Kunene Region.

#### **4.3.3 Data collection methods**

To understand practices and institutions of accessing, harvesting and management of INPs at the local level, focus group meetings were conducted in each of the selected communities. In total, eleven focus group meetings were conducted, mainly with harvesters of the selected products, the traditional authorities and representative management bodies at the local level. Participants in these focus groups ranged from one to four people. Most Mopane worm harvesters could easily be located at marketplaces; therefore mopane worm harvesters were frequently interviewed by means of individual, rather than focus group interviews.

To complement the information acquired from focus group meetings, individual interviews were also conducted with key informants. In total, 35 interviews were conducted. Out of these interviews, 31% of the interviewees were government officials, 25% were mopane worm harvesters, and 43% were representatives of non-governmental organisations, development agencies that both support or fund INP activities, and private companies that buy and sell INPs.

### **4.4 Two types of institutional arrangements for INPs**

#### **4.4.1 Formal arrangements**

Access to, and management of INPs in Namibia are officially regulated by several institutional arrangements that cross multiple levels of both administrative and spatial scales. These arrangements are strongly influenced by land tenure types. Firstly, the rights of local communities to natural resources have been assured through customary rights by respective traditional authorities. After independence, these customary rights were strengthened by the development of Communal Land Reform Act (No. 5 of 2002). Article 20 of this legislation grants the power to recognised traditional authorities to allocate customary rights to land and resources in communal areas. This legislation also provides for the establishment of Communal Land Boards, which among other powers, have the right to exercise control over the allocation and the cancellation of customary land rights by the Chiefs or the Traditional Authorities.

Secondly, locally-based management bodies (management committees) for communal conservancies and community forests were established to provide access to resources in these specific areas. The rights and responsibilities of these bodies were formulated in two different types of legislation that have been enacted by two ministries. Firstly, the Nature Conservation Amendment Act (No.5 of 1996) is coordinated by the Ministry of Environment and Tourism (MET). According to this Act, persons residing in communal areas may decide to declare this area a conservancy. Through this conservancy, the right to benefit from, and manage wildlife and tourism activities is granted to local people. Secondly, local rights to natural resources other than wildlife, such as timber, INPs and grazing are regulated under the Forest Act (No. 12 of 2001). This Act is coordinated under the Ministry of Agriculture, Water and Forestry (MAWF). It provides the legal mandate for the establishment of community forests (CF). Each CF is managed by a local Forest Management Committee (FMC), which is responsible for arranging accessibility and management of timber, INP and grazing. The legal

requirements for establishing both conservancies and community forests are in conformity with the design principles for common property resources (Nelson and Agrawal, 2008; Ostrom, 1990).

In addition to the Nature Conservation Amendment and Forest Acts, several institutional requirements at higher levels influencing INP production and management exist. At the regional level, communal land boards oversee the operation of traditional authorities in communal land allocation. Additionally, at the national level, ministries are responsible for controlling resource use and implementing regulations regarding permits for harvesting, trading and exporting protected species such as devil's claw.

#### **4.4.2 Coexistence of multiple local arrangements**

Since 1998 the number of CBNRM entities, such as communal conservancies and community forests, increased tremendously in Namibia (NACSO, 2015, p. 10). In general, community forests were established much later than communal conservancies. Whereas the first community forests were only established in 2006, under the auspices of the Forest Act of 2001, the first four communal conservancies were established already in 1998 (NACSO, 2015, p. 74). Consequently, some community forests, particularly in the Zambezi Region, were established within existing communal conservancies, creating entities with partly overlapping boundaries (Jakubaschl and Andreas, 2004).

The coexistence of these CBNRM institutions has caused incongruencies between the different institutional requirements for conservancies and community forests and their associated entities. Consequently, this has often caused fragmentation of natural resource management at the local level. However, since wildlife and forest resources are often located within similar geographic areas, an integrated approach to management of these resources is inevitable if comprehensive community-based natural resource management is to be achieved.

As reflected in the quotes below, the coexistence of multiple CBNRM institutions at the local level has been perceived as a source of conflicting decision-making and duplications of efforts in INP development:

*'We have the CBNRM policy for tourism and wildlife, the water policy for water points and community forestry policy for community forests that should give rights to grazing. So ... the community has to manage these resources ... dealing with these different ministries .... The policy is causing conflicts, because you have this ministry which comes and empowers this committee and that ministry coming and empowers that committee. For a support organisation to help them [communities] to bring all of that together on the ground sometimes can be difficult.'* (Respondent from a support organisation)

*'For me I think there was a loophole in the Nature Conservation Ordinance. The conservancy [referring to the Ordinance] should have included the rights to plants as well...when you start getting a conservancy and a community forest in one community [geographical area], it is too much for the community. It is an unnecessary duplication.'* (Respondent from a project implementing agency)

*'Sometimes there are problems, because...the community forest is only a part of the conservancies and you have two different management systems...this can be very conflictive actually...there are a bit of policies issues actually.'* (Respondent from a support organisation)

These quotes show that different CBNRM institutions are often implemented in parallel. When representative management bodies are not well integrated, there is a risk of duplication of efforts, especially regarding institutional capacity building, which is provided by NGOs and government officials at the local level. Also, the various locally-based organisations may take conflicting decisions and actions, which can undermine sustainable use of natural resources. As one interviewee put it, *'If you have got the water point committee and they are making a decision which goes against the community forestry committee, or you have a community forest committee making grazing decisions which are against the conservancy tourism activities, then that is a problem'*.

At the local level, it is increasingly recognised that an integrated approach to resource management is needed. Consequently, in areas where conservancies and community forests are integrated, local initiatives are gradually evolving into multi-purpose institutions. These institutions not only provide for legal rights to wildlife, tourism and INPs; but they also harmonise management bodies, management plans and legal constitutions in conservancies and community forests (Jakubaschl and Andreas, 2004; Jones, 2015). Due to their experimental nature, these local innovations are often assisted by external organisations such as NGOs and governmental officials.

The coexistence of multiple institutional arrangements for community-based natural resource management has variable impacts on the different kinds of INPs. The following sections will document how this has resulted in the actual performance of management practices for the three species selected for this study.

## **4.5 Institutional performance of CBNRM arrangements for three different indigenous natural products**

### **4.5.1 Performance of devil's claw institutions**

Devil's claw (*Harpagophytum* spp.) are legally protected species in Namibia and the governance arrangements for accessing and sustainable use of the two *Harpagophytum* species in Namibia are characterised by a multitude of institutions, including national and international policies and law, CBNRM institutions and customary rules. As a result, accessibility and management of devil's claw are highly influenced by these formal and informal institutions.

#### ***Provision of access to devil's claw***

Access to devil's claw in communal areas is provided, either through organised harvesting, or through an unorganised open access system. Organised harvesting takes place within the framework of formalised CBNRM institutions in localities that are under controlled management structures, such as communal conservancies, community forests, and sometimes in national parks and resettlement farms. These controlled management structures have designated geographic boundaries, registered members, and a representative management body. Devil's claw harvesters are organised under user group associations, often referred to as a 'Producer Processor Organisation' (PPO).

The representative management body, which makes decisions on behalf of all members, acquires a group harvest permit for devil's claw from MET. The names of registered devil's claw harvesters are recorded on the group harvest permit and each harvester

is issued a harvesting card. The group permit fee costs N \$50.00, which is equivalent to about US \$4.00 and paid by the management body on behalf of all PPO members.

Permission to harvest devil's claw is thus granted by these two documents; i.e. a copy of the group harvest permit and the harvesting card. Within this arrangement, harvesters follow bylaws provided by the CBNRM institutions and enforced by the representative management body at the local level. Through this locally-based management body only registered members are allowed to harvest devil's claw within the recognised boundaries of these management structures; hence non-members are excluded.

However, since devil's claw is also present and harvested in open-access areas, community members who are not registered with any management structure, can still harvest devil's claw through what is termed an 'unorganised harvesting system'. Harvesters operating under an 'unorganised system' must still obtain a harvesting permit from MET because devil's claw is a protected species. However, in this case, the traditional authority acts as the representative management body approving access to local resources. This approval is required so that the harvest permit can be issued by MET. Unlike organised harvesting, where group permits are used, permits that are endorsed through the traditional authority are often issued to individuals. By following customary rules, access to devil's claw may also be granted to people from external communities, who have entitlement to devil's claw resources through either kinship, or other cultural rights. Despite the establishment of formalised institutions for accessing devil's claw, it is difficult to completely abolish culturally-based institutions that have been used historically for accessing indigenous plants. Instead, these informal and socially embedded institutions remain relevant in society.

The actual performance of this array of institutional arrangements has resulted in two parallel sets of local access practices to devil's claw, covering both organised and unorganised harvesting.

### ***Practices of harvesting and sustainable use***

As the herbal medicines from devil's claw are derived from roots, the harvesting of devil's claw runs the risk of becoming destructive and threatening the survival of the species if conducted in an unsustainable manner. The increase in devil's claw harvesting in response to growing market demand has aroused concern regarding the survival of this species, both in Namibia and in consumer countries, specifically Germany. Much attention has therefore been given to developing sustainable harvest methods for devil's claw tubers. Research on devil's claw population dynamics by Strobach and Cole (2007), provided guidelines for sustainable harvesting methods and monitoring techniques in Namibia. This method involves the digging and removal of side tubers, which leave the tap-root intact to regenerate after the dug hole is filled back. It is also advised that only half of the side tubers be removed during the cycle of one harvesting season; the other half can be removed the following year. The plant is then left for 5 years to recover.

As devil's claw is largely located in communal areas, where it is traditionally managed as an open access resource, interviews with support organisations revealed that the application of the sustainable harvesting method is largely carried out within the context of an organised harvesting arrangement. Civil society organisations, which stimulate such arrangements, provide training to local people on management practices of sustainable harvesting methods. The training includes pre-harvesting resource surveys and post-harvest impact assessments. The pre-harvesting resource surveys determine sustainable harvesting quotas, while the post-

harvest monitoring assess whether the plants have regenerated after harvesting. Pre- and post-harvesting resource assessment is not mandatory; therefore it is mainly applied by harvesters who are externally assisted. Resource assessment is rarely practised in areas where devil's claw harvesting still operates under unorganised harvesting arrangements with minimal external assistance.

### ***Local integration of devil's claw in CBNRM institutions***

An integration of the devil's claw within the CBNRM institutions led to the emergence of multiple institutions at the local level to facilitate access, harvesting and sustainable use of devil's claw. This has not only led to gradual adjustment of institutional arrangements in each community, but also resulted in the coexistence of heterogeneous management practices for devil's claw.

In order to adjust and realign the institutional arrangements for accessing devil's claw, the devil's claw permit system was reviewed in 1999 in response to the concerns of harvesters and land owners. The new permit system requires that devil's claw harvesting be authorised at the local level by a landowner or by a representative management body, before MET issues a harvest permit at the national level.

However, the existence of multiple legitimate authorities at the local level often leads to incongruencies and mismatches in terms of norms, practices and procedures used by these different overlapping authorities, in providing access to, and management of INPs. Particularly, communal conservancies and community forests often overlap in one area where both bureaucratic and traditional authorities exercise power over resource allocation. This situation has inadvertently created conditions favourable to both unsustainable and illegal harvesting practices. Illegal harvesting was reported to be widespread in Bwabwata National Park in the Kavango East Region as well as in the Zambezi Region, for instance, where different authorities for resource management exist at the local level (MCA-N, 2013). In some study sites, the traditional authority is gradually incorporated within the new resource management bodies, to minimise bureaucratic processes involved when separately authorising access to devil's claw at the local level. This is an additional and gradual adjustment in the implementation of the reviewed permit system.

Despite the adjustment of institutional arrangements, the lack of capacity to conduct training and resource assessments by some authorising bodies, also led to heterogeneous management practices for devil's claw. The interviews with MET stakeholders revealed that although MET issued a harvest permit with illustrations on sustainable harvesting methods, the ministry did not necessarily provide prior training to harvesters due to lack of capacity. Such training, including pre- and post- resource assessments, is mainly conducted within organised harvesting arrangements, where NGOs provided support to communities.

Unlike with trade permits, for which MET mandates traders to demonstrate knowledge of devil's claw policy and sustainable management techniques before they are issued a trade permit, harvesters are not necessarily required to undergo a harvesting training or conduct pre- and post- harvesting resource assessment. Although training and resource assessments are believed to contribute toward achieving sustainable harvesting, these are not necessarily mandatory for the issuance of devil's claw harvest permits.

Under unorganised harvesting arrangements, harvest permits are therefore issued with limited knowledge of the devil's claw resource base, or of the impact that harvesting might have on the survival of the species. This is partly due to lack of capacity by relevant

authorities to conduct sufficient training and resource assessments, and partly due to the nature of devil's claw, which is distributed in patches, making it difficult to establish and represent its resource base with certainty.

However, at the local level, especially under organised harvesting systems, resource assessments are mandatory for granting locally-based permission (copy of group harvest permit and a harvesting card), which formally allows access to devil's claw. In enforcing such CBNRM-based practices, the management body in the Balyerwa conservancy in the Zambezi Region banned harvesting in 2013, in areas where the outcome of the post-harvesting assessment revealed unsustainable harvesting practices (Manyando and Muzwalicaba, 2013). This locally-based evaluation of institutional performance facilitated community-based sanctions, as opposed to the proposal by MET in 2012 to issue a blanket ban on devil's claw harvesting in the entire Zambezi Region.

In summary, through the combined actions of multiple institutions, two parallel arrangements for access to and management of devil's claw have emerged. Management practices for sustainable harvesting are particularly applied in areas with donor support, while these practices are limited in areas where traditional authorities govern. The results revealed that external rules newly introduced at the local level, in the form of government interventions, required regular adaptation in order to fit local contexts. Hence, a platform for consultation between local authorities and MET is continuously needed in order to harmonise interventions at national and local levels.

#### **4.5.2 Performance of institutions for *Commiphora* species**

Similar to devil's claw, the governance arrangement for accessing *C. wildii* is characterised by network relations between local community organisations and civil society organisations. However, since *C. wildii* is not a legally protected species, a relatively low degree of state involvement in the governance arrangements for the species exists, compared to devil's claw (Ndeinoma and Wiersum, 2016). Therefore, local CBNRM institutions (conservancies, community forests) and the traditional authority play an autonomous role in granting access, use and management rights to harvesters with no interventions at the national level.

##### ***Provision of access to resin harvesting through an integrated CBNRM institution***

Access to *C. wildii* in the Kunene Region is provided through conservancy management structures. In general, communal conservancies have no legal rights to control allocation of plant products. The local NGO, Integrated Rural Development and Nature Conservation (IRDNC) has therefore supported conservancies in the Kunene Region to become registered as community forests in order to also gain legal rights to plant products. As a result, harvesting of *Commiphora* resin is gradually being integrated into the existing conservancy structure for wildlife and tourism, thus creating one joint representative management body through which access to *Commiphora* resin is provided.

In 2004, with support from IRDNC, traditional resin harvesting communities were organised into formal user group associations. These associations consist of members of communal conservancies that have been harvesting *Commiphora* resin for many years, particularly for traditional uses. The management body registers all PPOs and individual



harvesters in each conservancy and provides them with harvesting cards. Only harvesters who are registered with the conservancy have the right to harvest resin from the conservancies/community forests. Each household is issued with one harvesting card and a minimal fee is paid for membership. The locally-based joint management committee solely facilitates access to *Commiphora* resins, without any involvement of a national ministry. Members of the traditional authorities are incorporated into the management committee of most conservancies/community forests. Therefore, the traditional authority is not sidelined by the new institutional arrangements.

Unregistered harvesters are not allowed to harvest resin in the conservancy and only local residents can be registered to do so. Unlike devil's claw, whereby raw materials are sourced through both organised and unorganised arrangements, for *Commiphora* spp., only resin that is harvested under an organised harvesting regime has been allowed to enter the pilot formal market chain through an established trust called Kunene Conservancy INP (KC-INP). The KC-INP is the legal owner of the Opuwo processing facility, which further processes the resin into essential oils. As a trust, KC-INP is expected to manage resources and the processing facility for the benefit of the conservancy members.

Whereas in the case of devil's claw, exclusion of outside harvesters is intended to prevent overharvesting and unsustainable harvesting methods, in the case of *Commiphora* resin, exclusion of outsiders from harvesting has been introduced because of a limited market demand. Each household receives a limited trade quota and harvesting has been suspended in some years in some conservancies, so that stockpiled resin could first be sold to pilot markets.

### ***Harvesting and management of C. wildii within the CBNRM institution***

Harvesting of *C. wildii* resin takes place from October to December, which are the hottest months of the year. The conservancy management body provides harvester bylaws that prescribe how resin harvesting should be conducted. These bylaws emphasise that no incision to the tree stem is necessary because the resin is excreted naturally from the tree. Members of conservancies that historically used resin for traditional purposes — who are regarded as legitimate owners of traditional knowledge — are the only ones allowed to sell through the KC-INP trust, where the price was negotiated to incorporate the access fee.

The bylaws allow both men and women to participate in resin harvesting but harvesting by children is prohibited. Harvesters need to be registered as members of the conservancy and should acquire a harvesting card. With assistance from IRDNC, harvester training is also provided on an annual basis.

In order to organise resin collection in remote areas, there are different buying points, each with a coordinator to facilitate the weighing and transportation of resin from different conservancies to Opuwo Processing Facility located in Opuwo town. These coordinators pay harvesters US \$5.8 (N\$75.00) per kilogram of resin. Of this amount 27% is used to cover transport costs and 7% goes to the conservancy as management fees. The actual income paid to a harvester is N \$50.00 (about US\$3.9). The KC-INP trust has established a revolving fund, which is used to buy resin from the communities to enable immediate payment to the harvesters.

### ***Performance of the CBNRM institution for Commiphora species***

Provision of access, harvesting, and management of *Commiphora* species in the Kunene Region is largely controlled at the local level. The CBNRM institutions that apply to harvesting of *Commiphora* resin, such as harvester bylaws, constitution and management plans, are often developed in consultation with local people, and they are, to a large extent aligned with local conditions.

However, incongruencies occur regarding formalised procedures for establishing community forests, which provide a legal framework for access to plant products in communal conservancies. In order to attain rights to plant products, communal conservancies need to be registered as community forests by reaching a series of milestones, as provided by the Community Forest Guidelines and the Toolbox for Community Forests in Namibia. These milestones include the development of an integrated forest management plan, which requires a costly and lengthy forest inventory. The national inventory manual suggests that variables, such as species composition, tree height, diameter classes and canopy cover should be measured during such an inventory exercise. Measuring these vegetation variables in the Kunene Region was found to be inappropriate, because timber is not the major income-generating activity in this region. On the contrary, establishment of community forests in this region was mainly motivated by the need to diversify income-generating activities (such as resin production) in communal conservancies and not for timber production as is the case in the Zambezi and the Otjozondjupa regions, for instance. Therefore, information on quantity and quality of INPs as well as assessment of the feasibility of different INPs enterprises — in line with the practices undertaken when establishing communal conservancies — is more relevant than conducting a traditional forest inventory assessment. The procedures for establishing community forests, which provide an institutional framework for accessing NTFPs was thus found to be incongruent with the practices of NTFP enterprises.

Regarding this issue, one of the interviewees, who supported communities to register as community forests, recounted that:

*‘...in Kunene Region...we don’t have big trees in the forest, but there are really valuable things like devil’s claw and Commiphora shrubs [for resin production] in the forest. You can’t do a resource assessment according to the method prescribed by community forestry [referring to Community Forestry Guidelines]. Because they are not 5m high trees...they are multi-stem bushes or they are devil’s claw plants [tubers] which are underground.’*

In order to realign the procedural requirements of the Community Forestry Guidelines with the practical needs in the Kunene Region, these pre-designed guidelines were adapted in consultation with the Directorate of Forestry, which ultimately approved the use of a modified resource assessment tool in the Kunene Region.

In integrating elements of community forests into communal conservancies in the Kunene Region, lessons were also taken from the Zambezi Region, where integration of community forests into communal conservancies was first attempted. Unlike in the Zambezi Region, the management committees of the two entities were merged into one joint management body in the Kunene Region. In addition, the constitution and management plans of the two entities were also harmonised. Although integration of communal conservancies and community forests is gradually becoming a norm in Namibia, the lengthy process of establishing community forests still remains one of the stumbling blocks to such a full integration.



In formalising CBNRM institutions, caution needs to be exercised so that inventory-based management of forest resources are conducted only when they are useful.

#### **4.5.3 Performance of institutions for Mopane worms**

In the two communities considered in this study, granting access and management rights to mopane worms is conducted by the local traditional authority. In doing this, some rules and practices are borrowed from both customary rules and CBNRM institutions. Furthermore, access procedures in the two study communities vary.

##### ***Providing access to mopane worms***

There are differences in the procedures used to access mopane worms in the two study sites. In the Oshikoto Region, mopane worms are regarded as an open access resource; therefore there exists no permit system for providing access. However, in the Uukwaluudhi traditional community, where a communal conservancy has also been established for wildlife conservation, an organised harvesting of mopane worms has been established by the traditional authority. The latter has created a mopane worm committee that builds upon similar institutional arrangements as those in community forests and communal conservancies. In this arrangement, mopane worm harvesting rights are granted to both residents and non-residents of the Uukwaluudhi traditional community. The interviews conducted in 2012 showed that local residents paid about US \$0.7 for mopane harvest permit fees, while non-residents paid US \$1.5. The permit is valid for the entire harvesting season and there is no limit to the harvesting quota.

The Uukwaluudhi traditional authority has also established a trust fund called *Omgulu gwombashe Gwomagungu*, in which revenue generated from permit fees is retained. In the focus group meeting, comprised of mopane worm committee members and the King of the Uukwaluudhi traditional authority, it was reported that the trust fund is used for satisfying general community needs, such as educational loans and medical expenses for deadly diseases, as well as financial support for families experiencing misfortunes, such as deaths or fire damage.

##### ***Harvesting and management of mopane worms***

Harvesting of mopane worms often tends to be unsustainable and destructive, because it is characterised by a non-selective harvesting of all mature worms. For this reason, the Uukwaluudhi traditional community in the Omusati Region established bylaws and a permit system to control access and harvesting activities. This harvest permits prescribe conditions to be followed when worms are harvested. For example, use of a selective harvesting method is encouraged, whereby only some worms are harvested and some are left to produce the next generation for the following season. The use of fire is also prohibited, because it can easily lead to wild forest fires and destruction of grazing areas. These bylaws have been formalised at the local level and are overseen by the traditional authority.

In each village forest guards were also nominated to issue harvest permits for mopane worms and monitor illegal harvesting in woodlands. Interviews with mopane worm committee members revealed that forest guards were not regularly paid from the trust fund;

therefore they sometimes did not transfer permit revenues to the trust fund. The meeting also reported that illegal harvesting of mopane worms regularly took place in the woodlands anyway, because inspection in these vast remote areas was difficult. Moreover, some community members did not agree with the idea of permit fees for harvesting mopane worms, therefore in protest they resorted to harvesting without harvest permits.

Although mopane worms are also harvested in the Kunene and Oshikoto regions, as well as in neighboring regions in Angola, organised harvesting that uses a permit system was only reported in Omusati Region. In the former regions, mopane worms are still managed as a de facto open access resource. However, in Angola the worms are accessed through kinship relations, or by means of informal trade between Angolan nationals and Namibians.

The traditional authority is not yet conducting resource assessments to determine the consequences of the permit system on mopane worm quantities; but respondents associated the fluctuations in worm quantities with rainfall patterns, rather than the harvesting practices. During heavy rainfall years, mopane woodlands get waterlogged, preventing worm pupation, thus negatively affecting worm populations for the following year.

In summary, it is relevant to further develop the mopane worm permit system by using revenue generated in permit fees to fund activities related to sustainable utilisation of the worm such as resource assessment in order to determine sustainable take-off levels.

#### ***Performance of traditional authorities for mopane worms.***

The performance of customary rules in providing access and management rights for mopane worms is characterised by interactions that mainly occur at the local level. Usually, no permit fee is paid to gain access to indigenous resources through customary rights. Therefore the introduction of permit fees in the Omusati Region initially encountered resistance, not only from local communities themselves, but also from the central government. Resistance to adoption of permit fees for mopane worms was based on the collectively-held understanding of access to INPs in indigenous communities, where resources have mainly been used for subsistence purposes.

However, demand for mopane worms has increased tremendously, drawing people from different parts of the country to camp out in the Uukwaluudhi mopane woodlands. The central government, taking its cue from the CBNRM approach, eventually supported the proposed organised harvesting of mopane worms through the permit fee administered by the traditional authority. This institutional structure was established in 1998, consisting of a traditional authority council, which serves as the overall management body at the local level. Later, a mopane worm committee was elected by the traditional authority to provide advice on issues related to mopane worms.

Unlike the arrangements in community forests and communal conservancies, where the constitution strictly defines membership and legal rights to resources, the mopane woodlands in Uukwaluudhi traditional communities allow both resident and non-resident people to harvest mopane worms. Also, due to porous borders between different traditional communities, access to these indigenous products has been perceived as being free and available to all, especially when used for subsistence purposes.

Arrangements for access to mopane worms in the Uukwaluudhi traditional communities have some elements similar to institutional arrangements for wildlife resources in communal conservancies. These elements include the existence of a traditional authority council that is similar to the management body; regular woodland inspectors akin to game

guards who operate in communal conservancies and harvesting bylaws. These harvesting bylaws, like constitutions in communal conservancies, establish conditions for harvesting mopane worms. However, traditional entitlements to resources, which provide access rights to both members and non-members of the community, have been maintained.

#### **4.6 Comparison of practices for access, harvesting and sustainable use of the three INPs**

Table 4.1 provides a summary of both the formal regulations regarding access, harvesting, and management as well as a summary of the performance in respect to realignment to local conditions and improvisation of rules. In general, the table illustrates that for each selected case product, the practices and mechanisms used to provide for access, harvesting, and management vary; they are informed either by customary or CBNRM institutions. These institutions are related to the broader formal regulations that exist for the sustainable use of natural resources at the national level. However, within the process of stimulating INP production, there exist several processes of bricolage in the form of realignment to local conditions and improvisation of rules. Such performance of the INP institutions results from two processes. On the one hand it results from different types of incongruencies stemming from incompatible regulations at multiple scales for different INPs, and on the other hand from the adjustment of institutional performance to location-specific conditions. Within the process of institutional bricolage, actors on the one hand improvise on the institutional arrangements as they see fit, leading in many cases to unexpected or sometimes undesirable outcomes. On the other hand, the different types of actors draw lessons from the incongruencies between the various institutions and improvise to construct a workable framework to provide for access procedures and harvesting methods and bylaws.

Table 4.1 Formal regulations and their performance for access, harvesting and management of selected INPs

|  | Devil's claw   | Commiphora spp.  | Mopane worms  |
|--|--|--|---|
| Formal regulations on access                                   | Harvest permit fee is N \$50.00 (about U\$4.00)  | Access is provided through an autonomous locally-based management body.                                  | Access procedures vary based on regions and traditional authorities.  |
|  | <i>Organised harvesting arrangements</i><br>Harvest within a legal geographic boundary   | Only registered harvesters with membership cards have rights to harvest                                  | Oshikoto Region characterised by open access  |
|  | Only registered harvester (members of PPO) have right to harvest with a group harvesting permit and a harvesting card                  | Annual membership fees applicable<br>Income due to harvester is US \$3.9 per kilogram of resin sold.     | Omusati Region, access regulated through a customary-based permit   |
|  | <i>Unorganised harvesting arrangement</i><br>Harvesting within a given traditional community<br>Access with individual harvest permits |  | Permit fees for residents US \$0.7, for non-residents US \$1.5  |
| Formal regulations: harvesting, sustainable use and management | Pre and post harvesting assessment   | On destructive harvesting method (resin naturally excreted)  | Selective harvesting method is used   |
|  | Harvesting 50% of side tubers, leave taproot intact.   | One harvester per household  | The use of fire in the forest is prohibited.  |
|  | One registered harvester per household, not harvest quota  | Priority for access to market provided only to owners of traditional knowledge i.e. Kunene Conservancies | Harvesting subject to permit fee  |
|  | Large geographical scale for wildlife and small scale for forest resources   | INP trust<br>Premium price inclusive of access rights  | Harvest season is opened by traditional leaders each year.<br>Inspection conducted by forest guards, but ineffectively. |

|  |  |   |   |  |
|--|--|---|---|--|
|  |  |   |   | Lack of capacity to inspect and guard vast remote woodlands encourages illegal harvesting. |
| Performance: re-alignment to local context | Re-alignment of permit system for harvesting to fit local context  | Incongruencies between procedures for establishing CBNRM institutions.  | Permit fees and exclusion are incongruent with traditional entitlement to indigenous products |  |
| Performance: improvisation of rules        | Multiple and overlapping authorities and opportunity for unsustainable harvesting and illegal practices                            | Forest inventory inappropriate for INP resources  | Re-alignment of mopane customary rules to fit access procedures in the CBNRM context          |  |
|  | Harvester training and resource assessment is mandatory only under organised harvesting system but not under unorganised systems.  | Milestones for establishing a community forestry is lengthy and an obstacle to achieving integrated resource management |   |  |
|  | At the local level, community-based sanctions are preferred as opposed to a blanket ban on harvesting issued at the national level |   |   |  |

## 4.7 Discussions

The results of the three case studies revealed that access and management of INPs is increasingly being integrated into existing locally-based managed areas, like communal conservancies and community forests. Given the integration of INPs into these legally defined management areas, ‘multi-purpose institutions’ are emerging at the local level, which enabled a more integrated resource management in the different types of legally-mandated local management areas. These local institutions did not just trickle down from the formally identified institutional arrangements at the central level, but rather were locally performed by selectively adopting the formal institutions to fit local contexts and by adapting these institutions in a process of re-alignment and improvisation of local rules.

Similar studies in the literature of institutional bricolage demonstrated that when new institutions emerged, they often adapted to serve multiple functions (Cleaver and De Koning, 2015; Verzijl and Dominguez, 2015). Generally formal CBNRM institutions were initially formed for one purpose only, for example providing access to wildlife, or to water, but in order to serve other natural resource functions they were subsequently often further adapted by piecing together different regulatory arrangements from different sources, such as habitual ways of doing things, traditional practices, as well as organisational arrangement invented or borrowed from elsewhere (Cleaver and De Koning, 2015) in adjacent sectors.

The outcomes of the three comparative case products revealed a similar process. They illustrated how multi-purpose regulatory arrangements, when entwined with authorities at different scales, resulted in a range of incongruences and trade-off in terms of norms, practices, and procedures for providing access to and management of INPs. These mismatches were prevalent not only when institutions at the national level are juxtaposed with these locally-based multipurpose institutions, but also when two different regulatory arrangements operated at the same level in one geographic area.

This study identified several examples of mismatches between different regulatory arrangements. For example, devil’s claw may be accessed by permits from a conservancy management committee through an organised harvesting system or by permission granted by the traditional authority, which has been dubbed ‘unorganised’ harvesting systems. These two systems are both facilitated by an authority at local level, but they are characterised by different management practices (see section 4.3). Whereas resource assessments are mandatory in organised harvesting of devil’s claw, the traditional authority lacks the capacity to enforce such practices.

Another example of the mismatch between the formal regulatory arrangements and local practices concerns the lack of congruence between formal management arrangements for one types of product and the actual products harvested. For *Commiphora* spp. mismatches are encountered regarding the formal forest inventory required to establish a community forest. The community forest is a CBNRM arrangement that provides legal access to forest products such as resin. This formal arrangement requires a formal forest inventory as a basis for sustainable forest management. However, this requirement is related to timber production and is not relevant for the production of *Commiphora* resin.

As a result of the location-specificity of harvesting arrangements between areas, differences in arrangements may also develop. A customary-based permit system for mopane worms, for example, was only established in Uukwaluudhi traditional authority in the Omusati Region, but not in the Onanke area in the Oshikoto Region where mopane worms are also harvested. Also, unlike in communal conservancies and community forests, where non-

members are excluded from harvesting products in these areas, for harvesting of mopane worms, both residents and non-residents are given access to mopane woodlands..

Our study also indicates disparities in cases where management practices for wildlife in communal conservancies were combined with community forest management in order to gain, not only legal access to wildlife, but also to INPs. Wildlife management requires a larger geographical scale to allow for wildlife movements. In contrast, forest resources including devil's claw and *Commiphora* resin are best managed at the micro-level, in order to foster self-monitoring and detect illegal harvesting at the local level.

Similar incongruencies regarding the lack of fit between the boundaries of communal conservancies and resource use by people within and outside these boundaries are reported in South Africa (Matose et al., 2006). Boundary demarcations, which are often established for administrative and political reasons, do not fit existing cultural affiliations of people to natural resources. Boundary demarcations were established to exclude outsiders and prevent free-riding of such locally protected areas. This approach is, however, in conflict with the traditional authority that promotes traditional entitlement to natural resources where resources are accessed based on either pastoralism, kinship or other social networks. The actions of these two independent authorities therefore produce varied outcomes regarding the exclusion of access to resources and the sustainable use of devil's claw.

These mismatches are a reflection of multiple sources of authority that characterise the process of institutional bricolage under which the CBNRM institutions were crafted (Cleaver, 2000). These observations resonates well with features of institutional bricolage that refers to institutions as multiscale, complex and entwined with everyday social life (Cleaver and De Koning, 2015). As such the formation of these institutions is dynamically shaped by human creative actions and the interactions between traditional and bureaucratic institutions. For devil's claw, for example, the traditional authority and the CBNRM management bodies both authorise harvesting of devil's claw at the local level. Thus, the results support findings in other research on natural resource management, emphasising the need to focus on complexities, uncertainties, and institutional dynamics (Cleaver and de Koning, 2015; van Laerhoven and Ostrom, 2007).

Literature on multi-level governance acknowledges that governance of forest resources is complex, due to multiple overlapping scales (Mwangi and Wardell, 2012). In Namibia specifically, complexities are emphasised in relation to constellations of power between authorities at different levels or among community members. According to De Vette et al. (2012), the success of the CBNRM approach in Namibia will depend on the extent to which the interests of different stakeholders at the local level overlap with those of the broader community. In this case, the interests of elite members of communal conservancies does not match those of the broader community, leading to reconfiguration and reshaping power constellations among different members of the community (De Vette et. al. 2012). Similarly, dynamic power struggles over resource management and benefit sharing can also arise between conservancy management committees and the traditional authority (Bolling and Schweger; Gargallo 2015).

The mismatches between the various institutional arrangements regarding different types of natural resources observed in this study present both challenges and opportunities for actors to negotiate and innovate new institutions, which best fit their prevailing resource and social system. The process of 'institutional bricolage' (de Koning 2011; 2014) and 'institutional naturalisation' (Douglas 1987), is necessary to allow newly introduced norms

and regulations to adapt to local circumstances and day-to-day practices (De Koning and Benneker, 2013).

In the case of *Commiphora* and devil's claw, incongruencies have provided an opportunity for the gradual integration of INPs' management activities into existing institutional arrangements for wildlife, tourism and rangeland management, thus providing room for learning and innovation. The gradual transformation of institutional frameworks for the governance of INP in organised user groups in Namibia needs to be flexible indeed.

Although this research was framed within the lenses of institutional performance and bricolage, the aspect of incongruences resonates well with the literature in participatory forest management, which underlines that some of the bureaucratic procedures, including standardised forest inventory, monitoring and management are often inappropriate in complex forests that provide multiple forest products (Green and Lund, 2015; Lund, 2015). These formal procedures of forest inventories and management plans are in most cases lengthy; therefore while they have often improved forest protection and biodiversity conservation, the goals of poverty alleviation and local empowerment are often not fully attained (Scheba and Mustalahti, 2015; Schusser, 2012).

## 4.8 Conclusions

This study has shown that access, harvesting, and management of INPs in Namibia is governed by complex multi-level and multi-purpose institutional arrangements, both customary and 'modern' in nature, which have been mutually adapted over time. Such complexity leads to mixed performance: bricolage practices, incongruencies, and trade-offs on the one hand, with for instance unauthorised access or illegal harvest as a consequence, but also to opportunities for learning and institutional innovation.

These findings suggest that existing CBNRM institutions need to be sufficiently flexible in order to address specific requirements of INPs, while not disadvantaging management requirements for related resources, such as wildlife, tourism and pasture. Resources that are interlinked with INPs therefore require a comprehensive management approach which acknowledges the need to locally adjust the often-disparate sets of sectoral institutional arrangements. The findings extend our knowledge of CBNRM institutions that usually takes a static approach and puts faith in robust institutions. The focus on local practices reveals mismatches between different CBNRM institutions, thus suggesting the need to continuously adapt and realign these institutions with customary practices and contextual circumstance. An incremental approach is therefore required to streamline procedures and to improve coherence in different policies that provide for access, harvesting and management of NTFPs.





## CHAPTER 5

### **Balancing biodiversity conservation and poverty alleviation in devil's claw (*Harpagophytum* spp.) policy in Namibia: A discourse analysis.**

This chapter is in the process of submission to the Journal of Environmental Policy and Planning as:

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## Abstract

Since the 1990s the contribution of non-timber forest products (NTFPs) to the objectives of biodiversity conservation and poverty alleviation received much international attention. Against this background, specific emphasis has been placed on developing sustainable commercialisation of devil's claw (*Harpagophytum* species) in Namibia. In this chapter, a discourse analysis is applied to examine how the different international perspectives on biodiversity conservation and poverty alleviation have shaped the development and transformation of the National Policy on Utilisation of Devil's Claw Products in Namibia. The chapter analyses the main contents of the international discourses on NTFP commercialisation, biodiversity conservation and poverty alleviation as spearheaded by conservation agreements and organisations such as CBD, CITES and TRAFFIC, and on how these discourses were articulated at the national level in specific storylines that are supported by different discourse coalitions. Two national discourses are identified. The first focuses on sustainable utilisation and management. It includes storylines on regulation of wild harvest, incentives for sustainable management and enhancement of community-based institutions. The second discourse focuses on commercialisation as a means of poverty alleviation. It includes two more specific orientations. The first concerns ethical sourcing through exclusive purchase agreements and facilitation of market competition; the second focuses on cultivation and biotechnology, stressing the development of large-scale plantations and enrichment planting for small-scale farmers, respectively. This chapter discusses the manner in which these different discourses, storylines and coalitions impacted actual policy development in Namibia. In order to further this policy, there is a need to establish a communicative network through which a common understanding of sustainable and ethical practices for sourcing and cultivating devil's claw can be established in Namibia.

**Keywords:** biodiversity conservation, poverty alleviation, devil's claw, NTFP commercialisation, discourse analysis

## 5.1 Introduction

In many tropical countries the use of and demand for Non-Timber Forest Products (NTFP) has increased since 1990 (Shackleton et al., 2011b). This emergence of NTFPs from their prior ‘invisibility’ is associated with the rise of the idea that NTFP commercialisation can be a sustainable alternative for timber production, as it combines the objectives of biodiversity conservation and poverty alleviation (Laird et al., 2010a; Nepstad and Schwartzman, 1992; Peters et al., 1989). These objectives are in line with the principle of sustainable development that was internationally accepted at the 1992 United Nations Conference on Environment and Development (UNCED). Biodiversity conservation and poverty alleviation also gained prominence with the formulation of the Millennium Development Goals (MDGs) in 2000 and are maintained in the current Sustainable Development Goals (SDGs). These developments resulted in the enactment of several international agreements that aim at aligning the goals of resource conservation with those of poverty eradication.

The gradual institutionalisation of the idea to integrate biodiversity conservation and poverty alleviation in NTFP policies was mirrored by increased research interests in the scope of such integration (Belcher et al., 2005; Kusters et al., 2006; Ros-Tonen and Wiersum, 2005). This research however revealed that the impact of NTFPs commercialisation on rural livelihood and forest conservation varies considerably between products (Shackleton, 2001) and is characterised by both win-win and trade-off situations (Shackleton et al., 2011b).

In Namibia, commercialisation of devil’s claw was also confronted with such variation in outcomes. Devil’s claw is a medicinal herb, which comprises two species; *Harpagophytum procumbens* and *Harpagophytum zeyheri* (Steward and Cole, 2005). These grow as a vine creeper on the ground. The secondary roots of this plant contain an active biological component (iridoid glycosides) which is used as a herbal medicine and pharmaceutical constituent (Mncwangi et al., 2012). Due to harvesting of these tubers, the plant is susceptible to overexploitation. Since the 1990s, Namibia stimulated an active development policy for this commercially interesting species. This so-called National Policy on Utilisation of Devil’s Claw (*Harpagophytum* spp.) Products in Namibia was characterised by diverse considerations. Firstly, much attention was focused on the question of how biodiversity conservation can be achieved, following international conservation discourses and policies, while the needs of rural poor communities, who mostly depend on these wild and protected species, are considered at the same time (Dickson, 2008; Setshogo, 2013). Secondly, in response to the country’s objective of trade liberalisation (Republic of Namibia, 2012b), which exposes small- and medium-sized enterprises to global competition, discussions also emerged on how to add value to devil’s claw processing for increasing income for producers in Namibia (Cole and Bennet, 2007). Devil’s claw therefore offers a good case study to assess how the international discourses of combining biodiversity conservation and poverty alleviation relates to the NTFP policy development at the national level.

Devil’s claw policy in Namibia has undergone several changes in the past two decades. However, no systematic analysis tracing the different discourses that informed the changes in problem definition and solution to this policy has been executed so far. Devil’s claw therefore offers a good case study to analyse the way in which ideas originating at the international level were adopted and adapted at the national level. In order to do so, this chapter will present a discourse analysis of the Namibian devil’s claw policy. Such an analysis will assist in better understanding the institutionalisation of international discourses

at the national level where species-specific policies have been developed. Discourse analysis has recently been widely used to analyse policy processes in the forestry sector (Arts and Buizer, 2009; Dang et al., 2012; Humphreys, 2009; Kleinschmit, 2012; Somorin et al., 2012), but its application in the NTFP literature is negligible.

After this introductory section, the discourse-analytical approach of this chapter is described in section 5.2. This section is concluded by the specific research questions that are addressed below. Thereafter, in section 5.3, the research method is explained. Subsequently, section 5.4 presents a historical background of devil's claw policy, including institutional arrangements and trade structures in Namibia. In section 5.5, the global perspectives on NTFP development since the late 1990 are explained. This part is then followed by section 5.6, in which the different discourses that influenced the development of devil's claw policy in Namibia are justified and elaborated upon. These discourses are subsequently compared in respect of their national storylines and discourse coalitions in section 5.7, thus highlighting the major findings of this chapter, their implications for policy development and the contribution of this study to theory development for NTFP literature.

## **5.2 Theoretical background**

Environmental problems that deserve attention are not always addressed by existing policies. Social constructivist theorists argue that this gap in policy rhetoric and practices can be traced back to the way in which environmental problems have been defined; i.e. by looking at which social realities are included and which ones excluded in the definition of the problem (Hajer, 1995; Sharp and Richardson, 2001). Nullifying the 'single-problem single-solution concept', the social constructivist's theory implies that the language employed by various actors to represent reality is constitutive, in the sense that it shapes the actor's perceptions, interests and preferences, thereby facilitating the production of specific solutions to environmental problems, while excluding others.

Building on this social constructivist approach, this chapter employs the argumentative approach of discourse theory Hajer (1995) to analyse the policy process that was undertaken to develop the National Policy on the Utilisation of Devil's Claw (*Harpagophytum*) Products in Namibia. The argumentative discourse analysis framework places emphasis on the discursive context in which a specific environmental problem is defined as well as on the social practice from which a discourse emerges. Therefore, according to Hajer, (1995: 44), a discourse is defined as 'an ensemble of ideas, concepts and categorizations that are produced, reproduced and transformed in particular sets of practices and through which meaning is given to physical and social realities'. By focusing on social practices and discursive processes, the argumentative approach acknowledges that actors who are engaged in environmental policy actively produce social realities (Hajer, 1995). In this process, actors who are positioned in a particular political context try to make others see environmental problems according to their own views, thereby trying to re-position the views of others. This subject positioning enables (and constrains) actors to see the world in terms of particular storylines and from a particular vantage point.

Storylines are understood as a 'short-hand' narrative which actors derive from discourses in order to give meaning to specific physical and social phenomena (Hajer, 1995, p. 56). Storylines are articulated by drawing from specific discourses. For example, at the international level, a broader discourse of NTFP commercialisation exists, which consists of

two sub-discourses of poverty alleviation and biodiversity conservation. From these discourses, several storylines evolved that justify specific policy orientations. For instance, with respect to poverty alleviation, a storyline emerged that holds the state responsible for the collapse of many NTFP enterprises, because of bureaucracy and over-taxation of NTFP trade, which only targets revenue generation, and often encourages corruption and exploitation of traders and producers (Ndoye and Awono, 2010; Shackleton, 2010b; Wynberg et al., 2015). Through this storyline, overregulation by the government is positioned as a contributing factor to poverty. Moreover, NTFP harvesters are positioned as victims of governments' interventions. Such storylines play a crucial role in positioning both subjects (actors) and structures (discourses). In other words, specific ideas of blame and of responsibilities to specific environmental problems are attributed to specific individuals, organisations, nations and institutions.

Thus, the argumentative approach holds that specific sets of storylines enable actors to position themselves in line with specific discourses which they perceive plausible. When actors are positioned in favour of or in opposition to a particular set of storylines, they form a discourse coalition. Such discourse coalitions can be defined as ensembles of: (a) a set of storylines, (b) the actors who utter these storylines, and (c) the practices on which these discursive activities are based (Hajer, 1995 p. 65). Usually, different discourse coalitions compete with each other in order to establish one or a few discourses that gain dominance (or 'discourse hegemony') in a society. Discourse hegemony emerges when: (1) a society accepts a particular conceptualisation of an environment problem in line with a specific set of storylines (structuration), and (2) environmental policies and institutions are created to guide the implementation of this set of storylines (institutionalisation) (Hajer, 1995).

Based on the above theory, this chapter will analyse how international discourses on biodiversity conservation and poverty alleviation, which are constituents of the broader discourse on NTFP commercialisation, have influenced the development of the National Policy on Utilisation of Devil's Claw (*Harpagophytum spp.*) Products in Namibia. The chapter will specifically consider how these international discourses were translated (adopted and adjusted) at the national level and how they were gradually institutionalised in policy-making. The following questions will be addressed:

1. How did the international discourses on NTFP commercialisation, biodiversity conservation and poverty alleviation emerge and what were their main contents?
2. How were these international discourses articulated in country-specific storylines and discourse coalitions in Namibia?
3. What have been the main implications of these discourses, storylines and coalitions for policy-making on devil's claw?

To enhance this analysis, the conceptual framework in figure 5.1 will be employed. The figure shows how discourse analysis can be structured, starting with discourses at the international level. International discourses are often contested and justified with different storylines, leading to multiple and competing sets of understandings among policy-makers. At national and local levels, these discourses are further adapted and reshaped, being manifested in new or modified policy concepts, constitutional and institutional reforms and changes in social practices (Sharp and Richardson, 2001). In this process, discourse coalitions are formed, based on different understandings and contextual circumstances. Each of these discourse coalitions advocates a particular discourse.

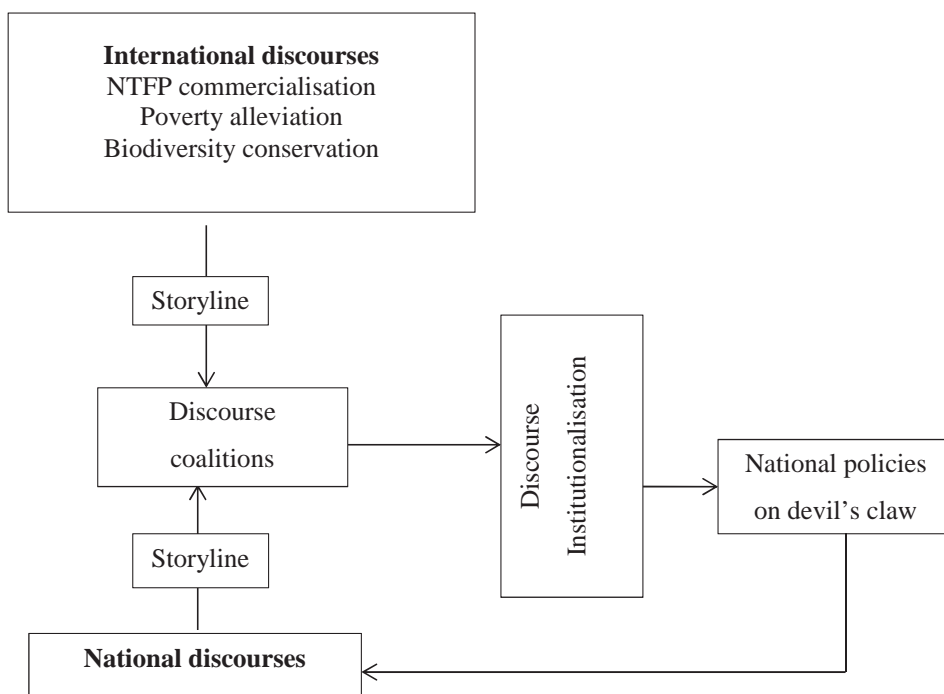


Figure 5.1 Conceptual framework for understanding the discursive processes constituent for the devil's claw policy development in Namibia.

### 5.3 Methods and materials

This study used a qualitative research approach and it was designed as an explanatory single case study (Yin, 2009). Given the influence of product specificity on institutional arrangements for different INPs in Namibia (Ndeinoma and Wiersum, 2016), devil's claw was selected as the single case in this chapter. According to Yin (2009a), case study approaches are useful in understanding the relationship between the social phenomenon and the context in which such a phenomenon occurs. Devil's claw was selected as a case given its largest contribution to Namibia's INP international trade volume and the existence and reform of the formal legislation and policy to regulate its sustainable use.

Since the research methods include an analysis of time-series events to understand the historical emergence and articulation of relevant discourses and devil's claw policy, data collection was mainly characterised by in-depth analysis of related documents, such as: proceedings from the devil's claw conferences that took place in 1999, 2002 and 2013; published and unpublished reports, especially those that were generated through the INP project under the Millennium Challenge Account – Namibia (MCA-N); and the official proceedings of the Devil's Claw Working Group (DCWG) both at the national and regional level. This chapter is specifically focused on the period since 1999; i.e. when the first

workshop took place to guide the reactivation of the devil's claw harvesting permit system in Namibia.

In order to further understand the storylines and practices that shaped the design and implementation of the devil's claw permit system, both individual semi-structured interviews and focus group discussions were conducted, besides document analysis. Interviews and focus group meetings involved stakeholders residing or operating in the regions where devil's claw is located, including Kavango west and east, Omaheke and Otjozondjupa regions. In these regions, devil's claw is located in both protected areas (commercial farms, conservancies and community forests) and unprotected areas (open access communal areas).

Focus group discussions were conducted with harvesters while the semi-structured interviews involved key informants pooled mainly from civil servants under the Ministry of Environment and Tourism (MET); exporters and traders of devil's claw; NGO representatives who support harvesters to comply with devil's claw policy; traditional authority representatives as well as the officials under the Millennium Challenge Account – Namibia (MCA). The MCA is one of the major development projects for devil's claw that existed during the study period. In total, 70 people were consulted; 29 people were interviewed and 41 people contributed to focus group discussions.

During the interviews, a list of pre-defined ideas and concepts were presented to respondents, from which they could choose the ones which have — according to them — shaped INP development in their organisation. These ideas and concepts were drawn mainly from the Convention on Biodiversity Conservation (CBD); Convention of International Trade in Endangered Species of Flora and Fauna (CITES) as well as the design principles of common property resource (CPR) literature (Ostrom, 1990). Interviewees were asked to choose ideas that inform their activities and also to explain how they put these ideas into action during their day-to-day operations. The different approaches undertaken by different stakeholders to practice these concepts were recorded to guide identification of discourse coalitions. On the other hand, focus group discussions mainly addressed activities involved in NTFP development, including harvesting, processing, trade and marketing.

To analyse the data, the argumentative approach to discourse analysis was undertaken. Three steps were followed to identify the discourses within the devil's claw primary industry. Firstly, an iterative process was applied during the interview period to fine-tune the pre-defined list of ideas and concepts in order to delineate the interpretations of NTFP commercialisation at the national level. Secondly, an analysis of interview protocols and relevant documents was undertaken in order to further discern different storylines, which constitute the dominant discourses at the national level. Lastly, the major policy discourses for devil's claw were established through an iterative process of comparing international discourses with the different storylines that were uttered during workshops and meetings at the national level. This process is also illustrated in the conceptual framework in figure 5.1.

The combination of interviews, focus group discussions and document analysis as shown in table 5.1 allows for data validation through triangulation. Furthermore, focus group meetings, which were mainly organised while harvesters were also busy with harvesting, processing and trade, allowed for participant observations. The interviewer could therefore observe some of the actual practices and make comparisons with the content of policy documents at a later stage.



Table 5.1 Data collection technique

| Technique                | Aim  |
|--------------------------|--|
| Document analysis        | To retrieve international and national discourses  |
| Interviews               | To retrieve individual ideas, concepts, storylines as implied in day-to-day activities of key informants |
| Focus groups             | To retrieve shared concepts, storylines and practices as implied in day-to-day activities of harvesters  |
| Participant observations | To retrieve practices  |

## 5.4 Characteristics of the devil's claw enterprise in Namibia

The ecological range of devil's claw is the Kalahari semi-deserts of Southern Africa including countries such as: Namibia, Botswana, South Africa (range states) and to a lesser extent Zambia, Angola, Zimbabwe and Mozambique (Hackfeld and Schippman, 2000). In Namibia, devil's claw is mainly found in Kavango West and East, Omaheke, Otjozondjupa and Zambezi regions, where it is located in both protected areas (commercial farms, conservancies and community forests) and unprotected areas (open access areas in communal areas). In these areas, devil's claw often grows as a pioneer in relatively disturbed grazing areas (Wynberg, 2004a). The distribution pattern of devil's claw is characterised by localised patches and this pattern contributes to the difficulty in estimating the population size and trends of this species with certainty.

In 1960, when devil's claw trade started in Namibia, no formal regulations existed to control harvest, trade and export of this resource. As a consequence, exploitation expanded and in 1977 Namibia declared *Harpargophytum procumbens* a protected species under Schedule 9 of the Nature Conservation Ordinance of 1975. Under this Ordinance, a permit is required for collection, possession, transport and sale of *H. procumbens*. The second species *H. zeyherii* received the status of 'protected species' later in 2010. Similarly, devil's claw can only be accessed through a permit system in Botswana and South Africa, although under different domestic legislations in these countries (Hackfeld and Schippman, 2000).

For harvesting of these protected species, a permit is thus required in Namibia. These are issued by the relevant ministry, including an attachment illustrating and demonstrating how to harvest devil's claw in a sustainable way. The method of sustainable harvesting is described in the 2010 devil's claw policy of Namibia and it consists of digging out half of the side tubers of non-flowering older plants, using a sharpened stick or a flat crowbar. The

taproot is not harvested and after the side tubers are removed, the hole is filled back to assist the plant to recover and also to minimise the danger of unfilled holes to wildlife, livestock and humans.

Devil's claw materials are traded to many parts of the world, such as Europe, the USA, and Asia; but Germany is by far the largest importer and consumer of devil's claw from Namibia. Namibia supplies about 90% of devil's claw to the international market (Republic of Namibia, 2010c). Between 2003 and 2013, Namibia supplied on average 473 tonnes per year to the international market (Cole, 2014a). It is estimated that from 2011 to 2013 foreign export earnings from devil's claw to Namibia ranges between US \$1.38-2.07 million (Cole, 2014a).

## **5.5 Biodiversity conservation and poverty alleviation as part of NTFP commercialisation**

In the late 1980s and early 1990s, new ideas emerged regarding NTFP commercialisation and its role in sustainable use of tropical forests (Nepstad and Schwartzman, 1992; Neumann and Hirsch, 2000). In response to increased timber logging, which led to deforestation and biodiversity loss, commercial use of NTFPs was considered an alternative forest use to achieve forest conservation and livelihood improvement (Nepstad and Schwartzman, 1992). Initially these objectives were promoted in extractive reserves for rubber and Brazil nuts in the Amazon regions. Subsequently, similar ideas were also captured in the international development agenda of the 1992 UNCED, which prioritised the principle of sustainable development.

As a result, many countries paid ever more attention to multiple uses of forests as an alternative approach to sustainable forest management. In particular, an article published by Peters et al. (1989) significantly added to increased interest in the contribution of NTFP commercial extraction to biodiversity conservation and poverty alleviation. At the international level, a novel discourse of NTFP commercialisation emerged. It combines the notion that NTFPs are important resources for poverty alleviation, while their harvesting is benign to the environment, since it often entails fruit extraction from plants without harming them. This notion became reflected in the concept of *conservation by commercialisation* (Evans, 1993).

The idea that commercialisation leads to biodiversity conservation and poverty alleviation was however controversial. Firstly, it was argued that commercialisation of NTFPs will not always be sustainable, particularly when it involves slow-growing species or when the harvest of plant parts concerns roots, barks, leaves and resin tapping (Neumann and Hirsch, 2000; Ticktin, 2004). Again, commercialisation of NTFPs from the wild is often selective, targeting specific species which are popular and thereby changing the forest composition and structure (Arnold and Ruiz Pérez, 2001). For this reason, some species, especially those that are subject to high international demand (Cunningham et al., 1997; Wynberg, 2010), are currently listed under Appendix II of CITES in order to regulate the use and trade of these plant species.

Secondly, historical trends show that commercialisation of NTFPs is often characterised by low product prices and exploitative relations among harvesters and buyers, which yield minimal benefits for local communities (Corry, 1993; Laird et al., 2005). For example, NTFP commercialisation is often based on indigenous technical knowledge (ITK),

but the current intellectual property rights (IPR) regulations do not recognise or protect such knowledge and the owners are therefore not rewarded for this knowledge (Dutfield, 2000, p. 69). Consequently, other storylines than *conservation by commercialisation* do not focus primarily on sustainable use and biodiversity conservation, but rather on poverty alleviation through notions such as access and benefit sharing, intellectual property rights (IPRs) and community-based natural resource management (CBNRM). These principles emphasise the need for value addition, benefit sharing and poverty alleviation and reflect a counter discourse vis-à-vis the more ecologically-oriented one that emphasises biodiversity conservation.

As a result of these various interpretations of NTFP commercialisation at the international level, the NTFP development policies in Namibia are also shaped by diverse storylines. This is reflected in the formation of multiple discourse coalitions, which in turn affect NTFP policies and objectives at the national level.

## **5.6 Discourses on devil's claw conservation and commercialisation in Namibia**

When the interest in devil's claw policy development emerged in Namibia, the initial ideas particularly mirrored international concerns about overharvesting of the resource. This perspective mainly concerned the discourse of biodiversity conservation, as reflected in the permit systems that were established in all range states (see section 4). However, it was also realised in Namibia that the devil's claw trade is characterised by exploitative prices paid to harvesters. Therefore, the scope of the discourse was widened to incorporate both conservation and development of devil's claw. As it was put forward by the Permanent Secretary in the Ministry of Environment and Tourism Hon. Philemon Malima, while addressing the regional devil's claw conference in 2002:

*Whilst offering an important opportunity for developing countries ... to benefit from the use of our natural resources, this [devil's claw utilisation] also creates the challenge of ensuring that such utilisation is conducted in a sustainable manner, and, perhaps most importantly to the benefit of our rural communities.*

This statement illustrates the evolution in the devil's claw policy in Namibia and shows that a set of more national-specific storylines have emerged. Particularly the concept of *sustainable utilisation* became recurrent in reference to commercialisation of devil's claw as opposed to biodiversity conservation.

Due to the growing recognition of these multiple aspects of NTFP production, use and marketing, the global discourses of biodiversity conservation and poverty alleviation gradually transformed into two main national discourses. Each of these discourses reflect a specific set of storylines that refer to different policies and practices related to devil's claw. These discourses are separately dealt with below.

### **5.6.1 The international discourse on biodiversity conservation: the starting point**

As described above, the three range states Namibia, Botswana and South Africa have adopted a protectionist approach by establishing a permit system to control harvesting and trade of devil's claw in the Southern Africa region. This indicates that the international

discourse on biodiversity conservation was a major point of departure in developing a devil's claw development policy. However, the permit system as used in these range states was perceived as insufficient at international level. As a result, it was suggested to regulate devil's claw trade by listing the species under Appendix II of CITES, thus subjecting it to trade restrictions and protection measures. This proposal was submitted by Germany to CITES during the eleventh Conference of Parties (COP 11) that was held in Nairobi - Kenya in 2000 (Lombard and du Plessis, 2003). Germany is the main user country of devil's claw, importing strictly-sliced devil's claw tubers. The supporting storylines of Germany's position focused, among other issues, on the inadequacy of the existing management and permit systems to monitor trade and unsustainable harvesting practices of devil's claw roots in the range states. Germany's proposal was well-received, which is demonstrated by the fact that after CITES' COP 11 meeting Namibia hosted a regional devil's claw workshop in 2002. At this workshop, officials from CITES and TRAFFIC (Trade Record Analysis of Flora and Fauna in Commerce) supported the Appendix II listing. For example, one official from CITES commented:

*One can certainly argue that there are benefits from such a listing, or from any international trade control regime. In the case of CITES: if illegal trade is an issue; if the unsustainability of trade is an issue; if the threat of another country somehow acquiring your resources and competing with you in the international market is an issue; there is definitely a role for CITES. ... in fact - the current systems used by at least Botswana and Namibia are very similar to what CITES requires, so it is not a question of an additional obligation, it can be a substitution of a very similar arrangement.*

However, various actors within the range states, specifically NGOs and harvesters, opposed the idea of CITES listing. These actors mobilised other storylines, such as the right of access to resources for and benefit-sharing with local communities, arguing that unsustainable use of devil's claw is not only fueled by weak regulatory mechanisms at national levels, but mainly due to a lack of incentives that could encourage sustainable practices. These storylines refer to the Articles 15 and 8(j) of the CBD at that time (and currently to the Nagoya Protocol as well) that stress that genetic resources should be accessed through prior informed consent and mutually agreed terms, and that benefits thereof — generated by third parties — should be shared with countries and communities concerned. In line with this principle of Access and Benefit Sharing (ABS), the Namibian actors argued that incentives for sustainable use of devil's claw needed to be established, for example by adopting national ABS regulations. Following this storyline, the participants from Namibia, South Africa and Botswana, who attended the regional devil's claw conference, concluded that CITES regulations are only acceptable when they prove to contribute to sustainable development.

Another storyline held by range states at the 2002 regional conference was that research on the ecological and economic status of devil's claw in the region, as well as on related trends, were inconclusive so far. The species could not yet be considered as being endangered, therefore suggestions to list the species in Appendix II of CITES regulations may be premature and create a wrong perception in that devil's claw is indeed endangered. In this context, range states argued that CITES regulatory measures may not necessarily improve the sustainable utilisation of devil's claw, because the trade has been characterised by exploitative prices paid to the harvesters. Paying such low prices to them might easily imply that large

quantities of harvest beyond a sustainable yield may occur, in order to make a decent living. This storyline was well captured by the then-Permanent Secretary in the Ministry of Agriculture Water and Rural Development in 1999, while addressing the first national workshop on devil's claw, stating that:

*If harvesters were paid a fair price and were able to see the benefits of sustainable harvesting' then 'they were more likely to employ sustainable harvesting practices ... and this way sales of devil's claw could also make a significant contribution to improving rural livelihood.'*

In summary, two competing discourse coalitions emerged at international level, a coalition supporting CITES regulations and a coalition emphasising the need for incentives to stimulate sustainable utilisation. The first discourse coalition involved the main user country Germany, supported by CITES and TRAFFIC officials, while the second coalition largely consisted of the provider countries, including Namibia, Botswana and Zimbabwe. These international discourse coalitions played a major role in structuring the national debate and in institutionalising a policy for devil's claw in Namibia. The latter is evident in the focus of the National Policy on Utilization of Devil's Claw Products, which promotes the balancing of biodiversity conservation and human development (Republic of Namibia, 2010b). As expressed in the 2010 devil's claw policy:

*The policy of the Government of Namibia is to manage harvesting and sale of devil's claw products in the way that recognise the rights and developmental needs of the local communities while also recognising the need to promote biodiversity conservation.*

This policy framework is therefore based on the principles of participatory management, value addition, research and cultivation, sustainable utilisation, as well as the provision of information and technical support (Republic of Namibia, 2010b). With that, two discourses are combined in this policy; i.e. a discourse on sustainable utilisation and management and a discourse on commercialisation as a means for poverty alleviation.

### **5.6.2 Sustainable utilisation and management of devil's claw**

The Namibian discourse on sustainable utilisation and management can be considered a translation of the international discourse stressing both conservation and sustainable use (see for example the CBD and its objective in Article 1). As discussed above, the focus of the national discourse is on the development of incentives for sustainable utilisation of devil's claw in Namibia. In addition, two issues received special attention. In line with the international debate on regulating INP harvest, as discussed in Chapter 4, a diversified permit system to authorise access and harvesting rights for devil's claw was developed. Additionally, much emphasis was put on the principles of participatory management. Within the context of this storyline, community-based initiatives were advocated at the local level. Such local practices should not only serve to regulate access to devil's claw in communal areas (compare Chapter 4), but also to establish benefit-sharing arrangements that would increase the income of harvesters.

These community-based initiatives started in 1996, when the local non-governmental organisation (NGO) Centre for Research Information Action in Africa – Southern African

Development and Consulting (CRIA-SA-DC) obtained funds from various organisations to establish a Sustainably Harvested Devil's Claw (SHDC) project in resettlement farms in Omaheke region. The aim of the SHDC was to increase the benefits for harvesters through sustainable harvesting practices. To do so, harvesters were organised into supply groups, which are locally known as Primary Producer Organisations (PPO). Each PPO consists of a management committee, which has a secretary, treasurer and a coordinator. Access to devil's claw and collective management practices, such as resources assessment and monitoring, are directed through this management committee. Resource assessment and monitoring is conducted before and after every harvesting season in order to determine harvesting quota and assess species regeneration, respectively. In addition, harvesters who are linked to a specific exporter are continuously provided with training regarding assessment, monitoring and sustainable harvesting techniques.

However, harvesters organised in PPOs identified some weaknesses in the regulatory approach undertaken by MET in issuing permits. Firstly, the harvesters felt that they did not have the power to control who comes into the land to harvest devil's claw because the permit is authorised solely at the national level. Secondly, the harvest permit, which is only issued to individuals, is too costly for and too difficult to obtain by the rural poor, some of whom are illiterate. As a consequence, it is difficult to ensure sustainable utilisation of devil's claw, because local level harvesters without a permit lack rights to organise collective management practices, to introduce new local rules and to exclude outside harvesters. As stated by the representative of these harvesters at the devil's claw conference in 1999:

*The issuing of permits to people who did not reside in the land where they want to harvest meant that anyone could theoretically harvest on the farms [referring to group resettlement farms], where groups [user groups] were active, ... undermine community efforts to utilise the resource [devil's claw] sustainably.*

In a similar vein, another respondent in the interviews told:

*If you do not have a management structure and you don't have a boundary [resource boundary], for a farm or an area, then how do you regulate who comes in and who comes out of this area?... If there is no management structure ... anybody can come and do whatever they like and no one is going to take responsibility. (A respondent from a development agency for INP project).*

The management structure of PPOs described above and the storylines narrated by devil's claw users portrays ideas, which equals the international discourse about Community-Based Natural Resource Management (CBNRM). The premise underlying this discourse is that sustainable utilisation and management of natural resources is likely to take place when community-based institutions are established to provide local harvesters with rights concerning use, extraction and management of these resources (Jones and Murphree, 2004; Ostrom, 1990).

The above shows that the national discourse on sustainable utilisation of devil's claw was also supported by storylines tapped from the international forestry discourse on community-based forest management, which was introduced within the scope of the Namibian conservation policy, and that links well with the discourse of sustainable utilisation



of the species. Consequently, the concept of ‘devil’s claw stewardship system’ (Bennett, 2006; Cole and Bennet, 2007) was introduced in reference to those storylines. The institutionalisation of such ideas not only assists in developing locally-based rules, but also in identifying legitimate devil’s claw harvesters who can be granted harvesting permits.

In respect of the question whether to implement participatory management or a permit system in Namibia, two discourse coalitions could be distinguished. Whereas the Ministry of Environment and Tourism focused on the national permit system as a means to achieve sustainable use of devil’s claw, NGOs and devil’s claw users at the local level encouraged community-based institutions as complementary to the permit system. These discourse coalitions are however not in competition but co-exist and complement each other. MET mainly focused on the development of a national permit system but lacked capacity to facilitate institutional development at the local level. NGOs subsequently filled this gap: when asked whether MET also covered institutional development programmes, such as technical training on sustainable harvest and establishment of PPOs, an official indicated that this is not one of their key activities:

*CRIAA [an NGO] has been doing that. And of course we collaborate....our staffs sometimes accompany CRIAA staff to go to the conservancies; during training of sustainable harvesting techniques...so we are not directly involved because somebody is doing that already. But we are collaborating whenever we need to.*

### **5.6.3 Devil’s claw commercialisation as a means to poverty alleviation**

The second major concern in Namibia’s devil’s claw development policy was the need to develop ‘incentives for sustainable utilisation’ through commercialisation, with the aim of poverty alleviation. The latter notion has therefore gradually widened from the provision of basic livelihoods to commercialisation of devil’s claw. This ambition is reflected in catchphrases like ‘job creation’ and ‘rural livelihood improvement’. In order to quantify the distribution of potential benefits among different stakeholders in the devil’s claw value chain, various studies were conducted. These studies revealed that only about seven percent of the potential devil’s claw commercial value is retained in Namibia and that local harvesters only obtain between 0.38% and 1.1% of the final consumer price (Bennet, 2007; Bennett, 2006; Wynberg, 2004a). These research results have substantially influenced the policy debate on the role of devil’s claw in poverty alleviation. The inequity found was largely framed within the context of the principles on access and benefit sharing of genetic resources and the associated traditional knowledge, as formulated in the Convention on Biological Diversity and the Nagoya Protocol. In order to increase benefits to local harvesters, emphasis was placed on issues in respect of access to markets and improving production. Gradually, two main storylines on devil’s claw development emerged: one with a focus on ethical sourcing and one with a focus on the development of devil’s claw biotechnology.

#### ***Ethical sourcing of devil’s claw***

Regarding ethical sourcing of devil’s claw materials, the topic was further detailed in two specific sets of storylines that focus on different practices and that are supported by two different discourse coalitions. The first coalition focuses on ethical sourcing as a means to

increase benefits for local harvesters. This approach is advocated in areas where harvesters are organised in user groups, and supported by NGOs and development agencies, such as the Millennium Challenge Account-Namibia (MCA-N). The main actors in this coalition are organised harvesters, NGOs, community-based organisations and the well-established original network of exporters of devil's claw. Their discourse favours a protected market in which access is based on exclusive purchase agreements. In addition to the buy and sell permits issued by MET to the traders, the communities enter into a contractual agreement with traders to supply them with devil's claw materials for a defined period at a price that is renegotiated on an annual basis. These agreements are a common practice in areas that are managed by community-based organisations such as conservancies, community forests and organised communities in resettlement farms. In some cases these agreements have also been made in national parks, for example in Bwabwata National Park, where the San people who reside in the park have established a trust through which devil's claw materials can be sourced from the national park.

Within the scope of this value chain arrangement, traders pay a fee to the management committee of Primary Producer Organisations (PPOs). The management fee is only paid when all sustainable practices and quota are met in specified harvesting areas. This arrangement provides harvesters with a secured access to markets. The product price offered within this arrangement is relatively high in comparison to prices within unorganised value chains. In some areas, especially communal conservancies, devil's claw is also organically certified, meeting certain sustainability and traceability standards. Therefore the buyer can sell these raw materials at a premium price.

The second discourse coalition strongly adheres to the storyline 'multiple trade permits'. This storyline supports the ideal of unrestricted free trade by allowing traders to source devil's claw from multiple harvesting areas. Given its open nature of the buy and sell permit system, the MET supports this approach, indicating that it allows many people to make a livelihood from the trade of devil's claw. Such an unrestricted buy and sell permit is advantageous to upcoming traders, who are just starting to make a living from trade in devil's claw. Unfortunately, unscrupulous traders, often referred to as '*bakkie buyers*', who are issued with these unrestricted buy and sell permit that is applicable to multiple sites, may find a loophole in sourcing devil's claw materials from areas with exclusive purchase agreements. Although it is assumed that such unrestricted buy and sell permits are not admissible in managed areas which are exclusively for purchase agreements, sometimes individual members of the community are in need of quick cash and sell devil's claw materials to traders that are not party to the agreement. This illustrates that it is sometimes difficult to control compliance among the members and even non-members of the managed areas.

With respect to such practices, a prominent MET official commented in one of the official proceedings for the Devil's Claw Working Group that:

*'In the spirit of free trade, MET would not be in a position to deny permits to such traders nor interfere with bilateral contracts. It should be up to communities to ensure that contracts are honoured'.*

The MET bases such issuing of unrestricted buy and sell permits on the provisions of the Namibia Competition Act No. 3 of 2003, which prevents any forms of anti-competitive practices in the Namibia markets. Such anti-competitive ideals are informed by the trade liberalisation discourse at the international level. At the Namibian devil's claw workshop that was held in 2013, the basis for this anti-competition storyline was further clarified as follows:



*‘Namibian devil’s claw industry needs competition, ... caution should be exercised when trying to prevent more than one trader from operating in an area, as devil’s claw is a national resource, for all Namibians; monopolistic trade practices would attract the attention of the Competition Commission’.*

In summary, two competing discourse coalitions adhering to different storylines have emerged in relation to ethical sourcing of devil’s claw materials in Namibia, i.e. exclusive purchase agreements and unrestricted buy and sell permits. The first discourse coalition of exclusive purchase agreement mainly consists of NGOs, MCA-N and a few well-established private exporters of devil’s claw. The proponents of such exclusive purchase agreement argue that both the fees paid to local management committees and the increase of bargaining power of harvesters through community organisations serve as an incentive for sustainable use and harvest of devil’s claw. The second discourse coalition, while advocating multiple and unrestricted buy and sell permits, emphasise that there is a need to minimise monopolistic practices in the trade of devil’s claw. The idea is to allow as many people possible to make a livelihood by trading devil’s claw instead of restricting this trade to a few lead exporters in Namibia, who are linked to a few lead international buyers.

### ***Development of devil’s claw biotechnology***

Due to an increased demand for devil’s claw in international markets, a growing interest in the cultivation and domestication of devil’s claw emerged in Namibia. Especially since the year 2000, when it was proposed to list devil’s claw under CITES Appendix II, the discussions in the National Devil’s Claw Working Group increasingly addressed the topic of cultivation and domestication. This trend was also largely informed by what happened to other species. Specifically, *Hoodia* spp. became a protected species under Appendix II of CITES in 2004. Since then, wild harvesting of *Hoodia* spp. has been strictly controlled and cultivation has become a common practice. Similarly, devil’s claw cultivation emerged as a means to promote sustainable utilisation of devil’s claw. It would not only contribute towards increasing production, but also to minimising the harvesting pressure on wild plants, thereby contributing to biodiversity conservation. Such conservation objectives falls under the mandate of MET. However, cultivation of devil’s claw became gradually interpreted as an alternative farming practice that could contribute to the diversification of farming livelihood strategies for income generation and poverty alleviation. Diversification of farming however falls under the National Agricultural Policy of the Ministry of Agriculture Water and Forestry (MAWF). Notwithstanding their different policies, both MET and MAWF supported enrichment planting of devil’s claw in areas near people’s settlements and also in communal conservancies. Consequently, different studies were conducted to develop appropriate cultivation methods for devil’s claw (Kumba et al., 2000; Schneider et al., 2006). These studies revealed that cultivation techniques such as seeding in-situ that involves less capital investment and are favourable to small scale farmers, are characterised by extremely low germination rate (less than 1%) and low survival rate of seedlings (Kumba et al., 2000; Schneider et al., 2006). On the other hand, vegetative propagation through for example cutting, grafting and tissue culture, although costly, provides sufficient propagation materials (Schneider et al., 2006).

These results indicate that different forms of cultivation are possible, which differ in their impacts on rural communities. In an opening speech at the devil’s claw conference in

2002, the Permanent Secretary of the Ministry of Environment and Tourism expressed his opinion that:

*Whilst cultivation has been investigated under the guise of alleviating pressure on the wild resource, the question needs to be raised: at what expense? ... These approaches in addressing environmental problems such as unsustainable exploitation of devil's claw ignores the aspirations of sustainable development.*

Thus, the formal policy advocated that the cultivation of devil's claw needs to be targeted on the principles of sustainable development that include both conservation and development objectives.

Nonetheless, the notion of stimulating devil's claw biotechnology aroused two different sets of storylines regarding devil's claw cultivation; these are reflected in the presence of two competing discourse coalitions. The first discourse coalition heralds commercial cultivation as a means to improve the quality of devil's claw materials. This discourse is based on experiences from South Africa, where such commercial cultivation is being experimented with. As reflected in their provision of research funding and demonstration fields, this idea was mostly supported by commercial farmers and processing companies. It emphasises the need for quality control. Due to the variety of supply chains, some of which do not pay much attention to quality and certification standards, it is at present difficult to control the quality of devil's claw materials. According to its advocates, commercial cultivation will mitigate this problem and moreover boost the economy. However, the scope of commercial cultivation is still open to debate. Commercial farmers claim that the current price for devil's claw is too low to stimulate cultivation. The latter is claimed to be only feasible if the price of devil's claw materials increase by at least by 50%.

The storyline on commercialisation has also been criticized. The studies to provide technical knowledge for commercial cultivation of devil's claw have largely been confidential and some have been conducted outside the range states, thereby raising questions regarding bio-piracy and benefit sharing. To address such critical issues, Namibia has recently developed new institutional arrangements through which benefits from genetic resources and the use of traditional knowledge can be shared. Two laws have recently been enacted; i.e. the Business and Intellectual Property Authority Act of 2016 and the Access to Biological and Genetic Resources and Associated Traditional Knowledge Act of 2017. The first Act is coordinated under the Ministry of Industrialisation, Trade and SME Development (MITSMED), while the second is coordinated under MET. From these legal frameworks, regulations are yet to be developed to guide issues such as material transfer agreements and intellectual property of indigenous knowledge.

A second critical opinion about commercialisation argues that it may negatively affect poverty alleviation programmes, which primarily target the livelihoods of people who harvest wild plants. According to this view, the enhancement of biotechnology techniques for commercial farming may facilitate bio-piracy and misappropriation of traditional knowledge. This hazard is of special significance in countries such as Namibia where the domestic institutional framework for facilitating genetic material transfer is still weakly developed. If not well structured, the cultivation of devil's claw through the use of costly propagation methods can thus exclude small farmers and traditional communities from commercialisation of devil's claw. To respond to this criticism, a counter discourse coalition emerged that adheres to a storyline of enrichment planting as a means of stimulating devil's claw

cultivation. Such enrichment planting is especially propagated for natural habitats near settlement areas, where harvesting pressure is high. In order to improve the situation of rural small-scale farmers, cultivation was also suggested to take place in small-scale farming systems in communal areas.

In conclusion, in response to different international conventions, such as trade liberalisation and open markets on the one hand, and intellectual property rights and sustainable development on the other, two different sets of storylines regarding the development of devil's claw biotechnology have emerged (i.e. commercial versus small-scale cultivation). As the implementation of these conventions are coordinated through different ministries, including MET, MAWF and MITSMED, while being supported or criticised by various private and societal actors, different discourse coalitions developed. This suggests the need for a cross-sectoral programme approach, particularly to integrate activities of high value INPs, such as devil's claw, into programmes of technology development and value addition.

### **5.7 Comparison of the discourses on devil's claw development: main storylines and actor coalitions**

As illustrated by the operationalisation of the international discourses on biodiversity conservation and poverty alleviation in the National Policy on the Utilisation of Devil's Claw Products in Namibia, the evolution of this policy was characterised by discursive struggles. Through those struggles, the international discourses were gradually translated into two national and more specific ones in respect of: (1) sustainable utilisation and management; and (2) commercialisation as a means to poverty alleviation, respectively. Each of these national discourses composed of specific sets of storylines, which were supported by distinct discourse coalitions (table 5.2). These coalitions advocated distinctive practices in respect of sustainable utilization and poverty alleviation. In doing so, they paid variable attention to the need to enhance appropriate practices for sustainable harvesting, ethical sourcing, trading and/or cultivation of devil's claw. Table 5.2 summarises the characteristics of these discourses, their respective storylines and related coalitions. It also summarises the original international discourses on biodiversity conservation and poverty alleviation that influenced the national policy development process with respect to devil's claw in Namibia.

As illustrated by this table, the approaches to devil's claw development in Namibia have gradually evolved into a set of specific development activities. Initially, the national policy emphasized harvesting permits to grant access to devil's claw. However, the participation of local people by establishing community-based institutions such as PPOs was strongly argued for at a later stage. Subsequently, the international debate on the impact of trade of endangered species on biodiversity conservation also influenced the development of the devil's claw policy. This resulted in new ideas of ethical sourcing and cultivation of devil's claw in order to increase benefits for the poor in rural areas.

Table 5.2: Major discourses, storylines and discourse coalitions impacting on devil's claw

| <b>Discourse</b>   | <b>Main focus</b>                                | <b>Storylines</b>   | <b>Discourse coalition</b>   |
|--|--|---|--|
| <b>International discourses on biodiversity conservation and poverty alleviation</b> | <i>CITES regulations;<br/>CBD regulations</i>    | Regulate wild harvesting of threatened or near-threatened species under Appendix II of CITES;<br>Recognition of intellectual property rights of indigenous and local people | International organisations with much input from developed countries;<br>In respect of devil's claw: specific influence of consumer countries (Germany), CITES secretariat and TRAFFIC |
| <b>National discourse on Sustainable utilisation and management</b>                  | <i>Incentives for sustainable utilisation</i>    | When benefits of sustainable use are visible, then sustainable practices will be maintained.  | Namibia together with other producer countries (Botswana and South Africa)   |
|  | <i>Harvest permit</i>                            | Regulate wild harvest as means for protection of threatened species   | MET & Community-Based Organisations (CBOs)   |
|  | <i>Community-based institutional development</i> | Empower and increase benefits to local people   | NGOs & MET   |
| <b>National discourse on commercialisation as means for poverty alleviation</b>      | <i>Ethical sourcing of Devil's Claw</i>          | Increase benefits to harvesters by stimulating exclusive purchase agreements  | NGOs, CBOs, MCA-N, well-established traders  |
|  |  | Create competition in the devil's claw enterprise through multiple trade permits  | MET, upcoming traders  |
|  | <i>Enhancement of Devil's claw biotechnology</i> | Reduce pressure on the wild population, improve product   | Commercial farmers, research institutes  |

quality and meet  
increasing demand  
by stimulating large-  
scale commercial  
cultivation

|  |                                       |
|--|---------------------------------------|
| Involve rural<br>harvesters,<br>contribute to poverty<br>alleviation and<br>reduce pressure in<br>the wild by<br>stimulating Devil's<br>Claw cultivation<br>through small scale<br>enrichment planting | MET, MAWF,<br>development<br>agencies |
|--|---------------------------------------|

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## 5.8 Discussions

This chapter analysed how global discourses on biodiversity conservation and poverty alleviation became articulated in country-specific discourses for commercialisation of indigenous natural products in Namibia. Specifically, this chapter analysed how the international discourses impacted the development of the National Policy on the Utilisation of Devil's Claw Products in Namibia and explains how this process produced institutional and practical effects.

The findings of this chapter indicate that the international discourse on biodiversity conservation and poverty alleviation gradually broadened in order to pay attention to socio-economic issues, ranging from international trade regulations to community-level access to devil's claw, benefit sharing arrangements and intellectual property rights. As a result, the South African nations where the species are located decided not just to follow the CITES regulations in respect of international trade in endangered species, but rather to maintain the existing permit systems (harvest and trade permits) at the national level. In addition, the range states also opted to take an incentive approach for sustainable use of devil's claw, which includes fair pricing of products, access and benefit sharing and community empowerment through participation in decision making and resource management. The range states also perceived that strict regulations at international level could reinforce poverty; therefore, they opted for various forms of incentives to be established through which biodiversity can be conserved. This policy was further elaborated in Namibia. Figure 5.2 illustrates how at the interface of international and national discourses, a variety of storylines on devil's claw development emerged.

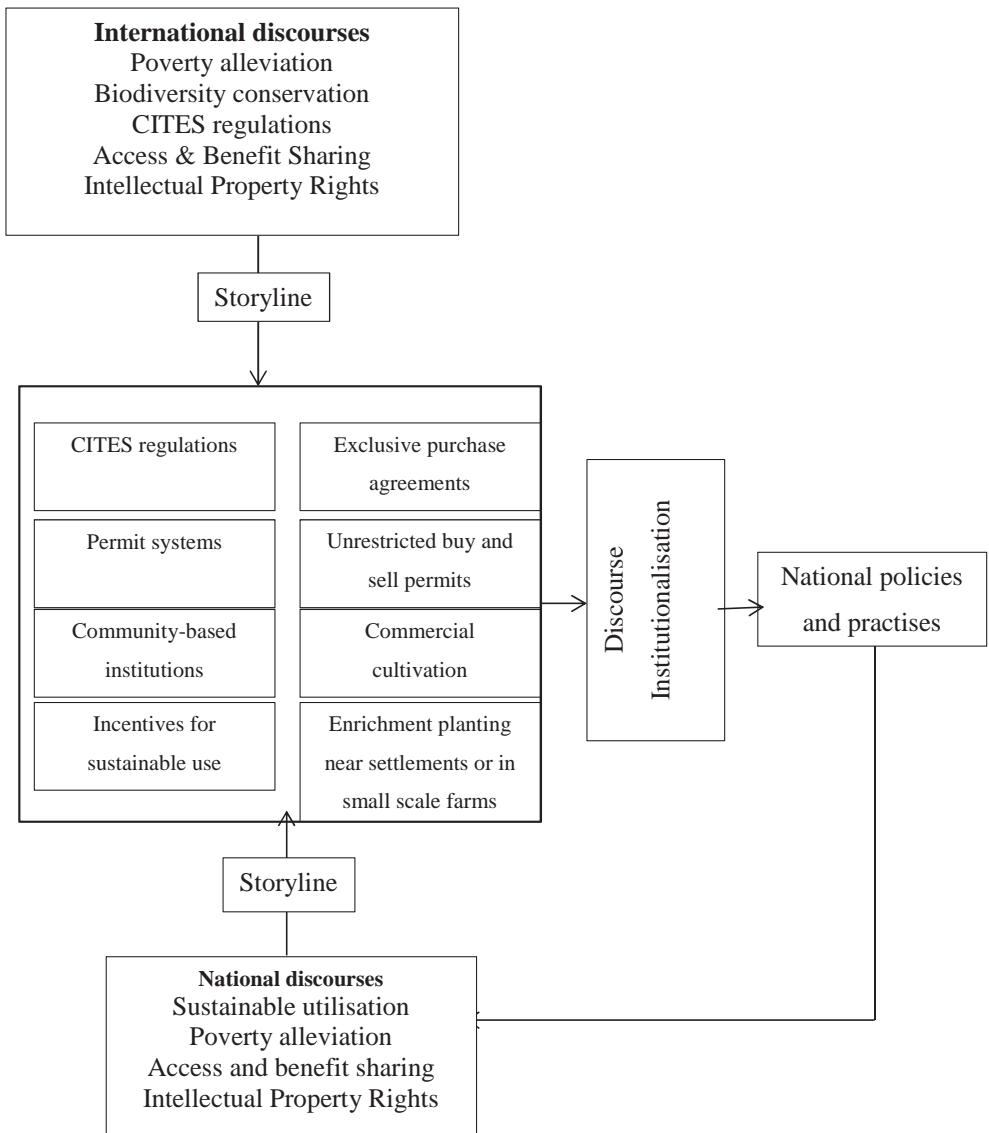


Figure 5.2 The process of devil's claw policy development in Namibia.

These findings correlate with the insights of Ros-Tonen and Kusters (2011), who emphasise that strengthening the rights, capabilities and decision making processes at local levels is one of the key conditions for a successful pro-poor governance of NTFPs. Well-defined and secure property rights motivate rural communities to make long-term investment for sustainable resource management. Non-governmental development organisations may

play an important role in creating such arrangements. This focus on active participation of not only state organisations, but also local communities and development organisations aligns well with the trends in the broader forestry sector in which the scope of governance is broadened towards the involvement of multiple stakeholders (Arts & Visseren-Hamakers, 2012). This is based on the understanding that there is no single social agent that can possess the capabilities to address multi-faceted environmental problems, which occur at multiple scales. Thus, the involvement of local communities is relevant in order to complement state actions with time- and place-specific solutions decided at the local level (Lemos and Agrawal, 2006).

The analysis illustrates that the commercial sector is also an important player in the devil's claw development process, due to its characteristic as an internationally-traded product. However, at the interface of concerns about poverty alleviation and commercialisation, different discourses and practices have emerged. For example, to source devil's claw, both exclusive purchase agreements and unrestricted buy and sell permits have been explored in Namibia. In addition, attention is also given to strengthening devil's claw cultivation as a means to biodiversity conservation and poverty alleviation. Considering the latter, enrichment planting is explored. But commercial planting has been promoted by commercial farmers as a means to economic growth. This approach is, however, contested as not necessarily contributing to poverty alleviation of smallholders.

Considering that the development of devil's claw is based on multiple objectives, it is not surprising that different discourses guide the development process and that they have resulted in a varied set of development practices. Different stakeholders use different storylines to justify these multiple practices. For example, the members of the discourse coalition on exclusive purchase agreements justify the practice of contractual agreement with the argument that it gives harvesters the power to negotiate a fair product price. Such increases benefits for harvesters, who often receive the lowest share of the product value. On the other hand, proponents of unrestricted buy and sell permits assert that this approach will contribute to poverty alleviation by involving many people in the devil's claw trade.

The unrestricted buy and sell permits are informed by international principles of open market and trade liberalisation, and the impact of these on the species collected in the wild, which is often characterised by destructive harvesting methods, is still uncertain. Yet, exclusive purchase agreements, although promoting sustainable use of devil's claw, is premised on ideals of exclusivity, which are perceived by others as monopolistic. Exclusive purchase agreements may also not effectively address issues of rural development and poverty alleviation, because they do not provide equal footing among new upcoming and well-established traders in competing for purchase agreements from different communities that supply devil's claw.

Experience from other NTFP studies shows that national efforts to regulate access to resources can be futile, especially if other policies at the international level undermine the needs of the rural and vulnerable members of societies (Richards and Saastamoinen, 2010). Specifically, trade liberalisation policies have been accused of negatively influencing the performance of small-scale enterprises at the national level, as they compete with larger international companies that are more competitive in value addition. These global economy dynamics disrupt domestic markets in terms of value addition, trade relations and labour relations (McLain and Lynch, 2010; Richards and Saastamoinen, 2010). In Namibia, it is also necessary to consider how approaches selected at the national level will be impacted by international policies. For example, Bennett (2006), observed that trade liberalisation ideals



which promote an open market economy and anti-competitive practices have contributed to the less diverse devil's claw market structure in Namibia. Taking into consideration its small size and limited orientation, different models have been explored for diversifying this market. According to Bennett (2006), devil's claw can be sold into different markets, such as herbal tea, veterinary herbal products, herbal remedy and diet supplement. Expanding the devil's claw trade into these new market segments was identified as one of the best options to innovate value chains that may contribute to poverty alleviation.

In summary, a dominant discourse regarding ethical and sustainable sourcing of devil's claw is yet to be institutionalised in the form of government decision or policy in Namibia. Currently, sourcing devil's claw takes place within the context of two competing discourse coalitions, whereby some devil's claw is regulated through exclusive purchase agreements, while other products are traded through unrestricted buy and sell permits by sourcing devil's claw materials in multiple areas. Therefore, at the devil's claw workshop in 2013, it was suggested that the working group needs to provide a platform through which the competing discourses of 'exclusive purchase agreements' versus 'multiple trade permits' can be further discussed in order to guide and facilitate consensus regarding the best strategy to provide access to devil's claw resources and markets at the national level.

Such can also be argued for theoretically: according to Hajer (2005), multiple stakeholders generally have different understandings of environmental problems, as they draw upon elements from different domains (like politics, society, nature, etc.). The interactive analysis of the different storylines of the various stakeholders may nonetheless contribute to the creation of 'communicative networks' through which stakeholders are offered an opportunity to reinterpret the domain-specific knowledge that underlie their discourses. This may create a common understanding and moral order (Hajer, 2005). Studies in environmental politics also suggest that the emergence of a new policy discourse can change people's perception of a particular problem and eventually enable a reformulation of problems and solutions (Hajer, 1995).

This study attempted to position the NTFP governance literature within the forest policy sciences literature. The use of discourse analysis enabled the structuring of different international discourses that influenced the devil's claw sector in Namibia. It also showed how interactions among actors at different levels of governance have been instrumental in adjusting old and creating new ideas for policy development. However, the findings in this chapter also indicate that the presence of diverse storylines and discourse coalitions, which are informed by knowledge from different domains, has made it difficult to arrive at a consensual discourse, which can structure a common practice for ethical and sustainable sourcing of devil's claw. The study thus revealed that there is further need for continuous multi-stakeholder consultation in order to arrive at a shared policy approach.

## 5.9 Conclusions

This chapter showed how different discourses, storylines and coalitions have emerged in Namibia and how these have influenced the development of the National Policy on the Utilisation of Devil's Claw (*Harpagophytum*) Products. These different discourses, storylines and coalitions were inspired by the international discourse on NTFP commercialisation, serving both objectives of biodiversity conservation and poverty alleviation. These objectives are reflected in international agreements and principles. Specifically, the Convention on



Biological Diversity (CBD) and CITES have provided references for the sustainable utilisation of devil's claw. Furthermore, the CBD has also provided justification for access and benefit sharing mechanisms and for respecting intellectual property rights.

The findings of this chapter indicate that, at the regional level, the range states have unanimously supported sustainable utilisation of devil's claw through market incentives, thus strongly opposing CITES regulatory measures in respect of threatened species. The range states perceived that such strict international regulations could reinforce poverty; therefore, they opted for various forms of incentives through which biodiversity can be conserved. The development process in Namibia demonstrates how this approach of facilitating devil's claw production as a means to poverty alleviation has produced several discourses and storylines. As a consequence, both exclusive purchase agreements and unrestricted buy and sell permits are explored as devil's claw sourcing strategies. Divergence is also illustrated through different cultivation strategies, either through large-scale commercial plantations or enrichment planting by small farmers in local communities.

The coexistence of several discourses, storylines and coalitions demonstrates how in the process of devil's claw policy design different concepts from international agreements were included. Those were not only based on rules and norms of the Convention on Biological Diversity and CITES, but also on more general principles, such as sustainable development, trade liberalisation, intellectual property rights and community participation. As reflected in the different discourse coalitions, these development principles are often coordinated by different bureaucracies at the national level. This indicates the need for further interaction among the various discourse coalitions to foster cross-sectoral development programmes. Specifically, in Namibia, it is necessary to strengthen collaborations with the Ministry of Industrialisation Trade and SME Development, the Namibia Competition Commission, the National standard Institute, the University of Namibia and the National Commission on Research Science and Technology. In view of the need for cooperation at national level, the devil's claw market can also take advantage of existing regional integration policies for industrial development, which promotes access to diverse international markets.

## **CHAPTER 6**

### **General reflection and concluding remarks**

## 6.1 Introduction

As discussed in Chapter 1, indigenous natural products in Namibia have increasingly gained significance due to their use in various industries as well as their contribution to poverty alleviation in rural communities. The increased use of these products has raised sustainability concerns and resulted in the development of multiple policies and laws to control their use, management and trade.

The overall aim of this thesis has been to analyse the nature, diversity, dynamics and/or performance of policy networks, governance arrangements and discourses related to (some of) the different categories of INPs in Namibia. The study, which is qualitative in nature, combined both an explorative and detailed research approach (see methodology section chapter 1). The explorative approach was used to assess the general characteristics of the INP sector by considering the diversity of governance arrangements and the patterns of relations between the state and the various INP stakeholders. The detailed approach was used to analyse the dynamics in the development of INP policies by exploring specific case products in detail. The following research questions were addressed in chapters 2, 3, 4 and 5:

1. To what extent has multi-actor governance influenced INP policy development in Namibia?
2. Which governance arrangements have emerged for accessing INP resources and markets in Namibia?
3. To what extent do local INP governance practices follow the formal arrangements for Community Based Natural Resource Management (CBNRM)?
4. How have different international discourses influenced decision-making and institutional practices in the devil's claw sector in Namibia?

This concluding chapter summarises and integrates the findings and reflects on their overall significance. The chapter consists of six sections including this introductory remarks. The second section (section 6.2) reflects on the scientific significance of the study. It first provides the main conclusions in respect to the four research questions. It then presents a further synthesis of these empirical findings and discusses them in relation to the scientific literature on NTFP and forest governance. This section concludes with a final reflection on the overall scientific relevance of the study with respect to understanding the complexity of NTFP governance systems. After the scientific reflection, section 6.3 and 6.4 reflects on the methodology and on the theories used respectively. Lastly, the two sections (6.5 and 6.6) provided the research agenda and recommendations emanating from this thesis.

## 6.2 Scientific reflection

### 6.2.1 Conclusions with respect to the four research questions

#### *The impact of multi actor governance on policy development*

The complex nature of NTFP governance systems — with a diversity of institutions for production and marketing and with multiple actors involved in governance processes — is generally acknowledged in the literature (Laird et al., 2011). This is reflected in the notion that a multi-stakeholder approach is required in NTFP development in order to contribute towards the combined goals of conservation and development (Arnold and Ruiz Pérez, 2001; Belcher et al., 2005; Kusters et al., 2006). To better understand the actual nature of the multi-stakeholder network that exists in Namibia for INP governance, chapter 2 analysed the different relational patterns within this network. Chapter 2's analyses show how the relational patterns in the INP sector in Namibia are constituted through membership of various multi-stakeholder forums and through collaboration in pilot projects. The various multi-stakeholder forums for INP governance emerged through a process of gradual differentiation of several platforms for stimulation of specific types of INP development activities. This differentiation is reflected in different types of pilot projects for promotion of indigenous natural products. These pilots focused on three key functional areas: (a) value addition and product development, (b) resource assessment and management and (c) institutional capacity building. In addition to these platforms for pilot projects, the multi-stakeholder body IPTT was also established to coordinate INP activities. Although literature on NTFP governance generally recognises the need for multiple stakeholder platforms at different scales Menzies and Li (2010), Namibia is one of the few countries in Africa that has a specialised national forum for addressing overarching INP issues.

Notwithstanding this rather unique feature of a national stakeholder platform, both the multi-stakeholder forums and collaborative pilot activities undertaken in Namibia have not involved all relevant stakeholders. Notably, harvesters, private manufacturing and trade sectors as well as product quality standardisation bodies are one of the weakly represented stakeholders in the IPTT. Consequently, several important development issues, such as the degree of and preferred model for private sector engagement continue to present challenges in the INP development process. The identification of the relationship between the state and private entities in terms of how and what public support can be provided to small and medium enterprises remains a particular problem.

As illustrated by the presence of several pilot projects, similar to the trends observed in west Africa by Ingram (2017), INP activities in Namibia have been dominated by the development project model. These activities are spearheaded by NGOs and international implementation agencies. In addition to these donor-assisted projects, the Namibian government has also committed a budget to pilot projects for INP promotion. As a result of the involvement of various civil society organisation in these development activities, much attention has been given to the empowerment of local communities and primary producers in terms of product supply. Development projects have been instrumental in institutional capacity-building of local communities that supply INPs through cooperatives and purchase agreements. However, the scope of these activities has been limited when it comes to the development of small and medium-sized enterprises (SMEs) for INP manufacturing as a way

of business incubation. For example, the promotion of the Kalahari melon value chain was mainly geared towards export of raw seeds and gave little attention to the issue of product valorising. In addition, tensions emerged over the pricing of INP raw materials, especially when SME- and NGO-led value chains source materials from local communities. These experiences reflect the finding of Ingram (2017) that NTFP development activities are often project-based and that they focus on specific roles, which may complement government services, but may also affect those services negatively. This indicates that there is need to give due attention to the further development of integrated policy networks that balance stakeholder interests and the power of civil society organisations and private sector organisations.

### ***Governance arrangements for accessing INP resources and markets in Namibia***

As discussed in Chapter 3, two policy domains can be distinguished for governance of indigenous natural products: policies related to access to INPs under different forms of land tenure, and policies related to access to INP markets (Ndeinoma and Wiersum, 2016). As illustrated by the Namibian example, the governance arrangements for each of these two domains depend on multiple factors. Arrangements for access to INPs are largely influenced by the degree to which the state intervenes in granting access to INPs, the locus of authority in controlling this access — at either the local, national or international level — as well as the type of tenure of the lands in which the INPs are located (Ndeinoma and Wiersum, 2016). Access to INP markets, on the other hand, is influenced by commercial demand and the economic value of the species, the capacity of producers to supply competitive products, as well as relations between producers and buyers in the value chain (Gereffi et al., 2005; Ndeinoma and Wiersum, 2016; Te Velde et al., 2006).

The Namibian experiences illustrate how, due to differentiation in policy domains and the different types of governance involved, INPs has resulted in a complex system of INP governance arrangements, which are moreover implemented in a fragmented way in many instances. The data presented in chapter 3 demonstrate that the implementation is often product-specific. Various factors determine the optimal governance arrangements for specific products. For instance, access to INPs that are mostly locally used, such as *Ximenia*, *Commiphora* and marula, can be effectively governed through community-based controls. This is because the harvesting methods of these INPs are mostly non-destructive and, because the species are either located in remote areas, where access by external harvesters is limited (e.g. in the case of *Ximenia*), or access is controlled through a secure land tenure type (e.g. in the case of *Commiphora* and marula). However, such community-based self-organised governance is not always effective. This is demonstrated in the case of mopane worms that are collected in a highly accessible area with good road infrastructure and through rather destructive harvesting methods. As both the state and development organisations have given little attention to regulating access to mopane worms, traditional authorities have introduced a permit system to control access.

The rather passive approach of formal INP policies towards such local products may be related to their low commercial value. Access to INPs with high commercial value is often given much more attention in policy. As illustrated by devil's claw, the multi-platform governance arrangements for such products become increasingly complex in the case of internationally-traded INPs, especially in cases where they have been discussed as species that might need protection under the CITES convention. As elucidated in chapter 5, government

policy in respect of devil's claw has been motivated by such international concerns about biodiversity conservation rather than by local community development. Thus, the experiences with governance arrangements for different INPs in Namibia demonstrate that both the commercial viability of a specific INP as well as international concerns about the need to conserve internationally-traded INPs have significantly determined the level of governmental support. This is reflected in the agenda of the multi-stakeholder IPTT platform that coordinates sustainable commercialisation of INPs at the national level.

These findings reflect those from other countries that show that a lower degree of state intervention with regard to a particular product may be linked to the economic value of the NTFP concerned. For example, in India Lele et al. (2010) showed how policies were crafted in such a way that access to the most highly-valued and income-generating NTFPs was controlled by the government through permit fees in order to maximise revenues for the state. And Wynberg et al. (2015) demonstrate how the gradual formalisation of harvesting, trading and export rights for products from baobab trees — which are regarded an important NTFP product in Zimbabwe — arose not only in response to ecological and sustainability issues, but also due to the desire of the local councils to generate income through revenues. International experiences also demonstrate that an equitable distribution of NTFP income is often difficult to achieve (Lele et al., 2010; Wynberg et al., 2015). In theory, there is an intention to distribute this income to local communities through local development projects. However, in reality, funds are often diverted to other projects with minimal support for rural development (Lele et al., 2010; Wynberg et al., 2015).

The findings on the fragmentation of NTFP governance arrangements in Namibia reflect a general international trend concerning the governance of wild products. On the basis of the review of different cases of NTFP governance worldwide, Laird et al. (2011) concluded that NTFP policy development generally lacks coherence. According to these authors, NTFP policy development is either reactive or opportunistic, depending on the specific circumstances of a given NTFP. A reactive policy process often develops for products that are high in demand, especially when they are threatened by overharvesting. And an opportunistic approach is often triggered by economic promises of national income from internationally marketed species through royalties, revenues, taxes and other means.

While NTFP development may lack coherence, it is also flexible and allows for iterative changes when necessary (Laird et al., 2011). Specific circumstances, such as differentiated demands for certain products, coupled with uncertainty about the consequences of increased demands for different types of products, require pragmatic decisions. Most NTFP enterprises are highly volatile and erratic in response to radical changes of supply and demand (Homma and Schwartzman, 1992; Wynberg, 2010). Also, new niche markets for NTFPs emerge in an unpredictable fashion, due to consumer behavioural changes. Under such circumstances, flexibility is key to decision making (Laird et al., 2011).

In summary, NTFPs are diverse and this diversity is reflected in the different governance arrangements that exist in Namibia. This diversity is also due to both reactive and opportunistic policy responses. However, in view of the fact that Namibian INP enterprises are often very small and that they coexist in the same geographical areas, arguments to strive for a further synchronisation of related governance arrangements are definitely valid. Consequently, it would be inefficient and ineffective to develop distinctive policies for individual INPs. A comprehensive policy approach could be based on further identification of different categories of INPs, such as products derived from protected species that are

characterised by destructive harvesting methods, and products sharing either similar processing techniques or market segments.

### ***Performance of community-based management of INPs in Namibia***

Within the international literature on NTFP governance, much attention has been paid to the importance of forming alliances and partnerships with local communities, including securing for them the rights to NTFPs and other resources (Richards and Saastamoinen, 2010; Ros-Tonen and Kusters, 2011). The need to involve local communities in NTFP management dovetails with the central theme in the community-based management of resources. This approach is of special significance to Namibia, as the country has developed a special policy on community-based natural resource management (CBNRM). This policy is specifically focused on the development of CBNRM for wildlife and forest resources, and it did not initially target INPs. Chapter 4 analyses how the Namibian CBNRM approach has nonetheless become entwined with INP development policy over time, and how the wildlife and forest-based CBNRM has impacted on the performance of INPs. This analysis specifically focuses on INPs that are harvested through organised user groups in the communal areas of Namibia and assessed how the institutions that were crafted under the CBNRM policy relate to INP governance arrangements.

The findings of chapter 4 illustrate that institutions that were pre-designed for natural resource management are rather narrow in scope, as they only involve specific resources, such as wildlife, timber or water. These CBNRM institutions thus lack harmony with INP policy at national level as well as with the socially-embedded INP institutions at the local level. These two levels of governance have therefore created parallel arrangements of access to and management of various natural resources, which sometimes compete or even conflict with each other. Such is clearly demonstrated in the case of devil's claw, which shows very different arrangements for access and management. This differentiation is further complicated by the different activities of development support organisations. In areas where a formalised management structure has been established and support is provided through civil society organisations, training is provided in sustainable harvesting practices, such as resource assessments and controlled harvesting techniques.

However, in open-access areas and some CBNRM areas where there is limited support from civil society, the pre- and post-harvesting resource assessment is not taking place because the government or the community by itself has no capacity to do so. Elsewhere, civil society groups — because they operate on the ground and engage hands-on in INP management — quickly grasp the need to transform certain activities to fit local context. As a result, civil society support also provides options for amending CBNRM regulations to better fit the requirements for other kinds of INP production. For instance, in the case of *Commiphora* resin production, it was realised that because the community forests in the Kunene region in Namibia were not established for timber production, but mainly for income generation from INPs, a full-scale and timber-oriented forest inventory could be adapted. The forest inventory, which is required before a community forest can be established, did not fit the resin production practices and it was therefore scaled down to fit the requirements of INP assessments and inventory methods. The need for adjustment of formalised practises in participatory forest management to fit non-wood forest products has long been emphasised in the literature (Kleinn et al., 1996; Toft et al., 2015).



These observations regarding overlap in governance arrangements for different types of INPs and other natural resources in Namibia correlate with NTFP literature, which suggests that NTFP policy interventions should recognise their possible complementarity with existing institutional arrangements for the management of other types of natural resources (Laird et al., 2010b, p. 374). The observations also underline the challenge for governments to explore NTFP frameworks that coordinate and possibly integrate customary and statutory governance systems (Laird et al., 2010d; Wynberg and Laird, 2007a). The development of a local permit system for mopane worm collection is one positive example of the possible options for integrating customary and statutory governance arrangements. Rather than collecting permit fees at the national level, these could be collected at the local level, where they can be used for rural development. In this way, the permit system could be better aligned with local customary systems. Such an adjustment of national regulations to local conditions resonates well with the concept of institutional bricolage (Cleaver, 2002; De Koning and Cleaver, 2012). In this process of crafting local institutions, cultural elements, routines, traditions and experiences of local communities are combined with formal, externally-introduced laws and regulations to create a transformed management system that, is more in harmony with customary norms and cultural beliefs.

The different examples of harmonising CBNRM policies with INP governance illustrate that for some products the formal CBNRM practices, such as forest inventories, need either to be scaled down or adapted. The traditional forest inventory need to be applicable to multiple resources in order to fit the context of INP requirements. For other products, formal practices need to be further adjusted to day-to-day activities so that they become congruent with or complementary to existing local practices. These possible trajectories of transformation indicate that whereas, in some instances, the formal institutions can become fully aggregated with existing customary ones, in other cases, formal institutions need to be altered to fit local conditions. In some cases, they may even be completely rejected at the local level (De Koning and Cleaver, 2012). These different trajectories of institutional transformation reverberate with the recommendation of Shackleton et al. (2011b) that NTFP development policies should recognise — and wherever possible embrace — local-level practices instead of inventing new ones.

Chapter 4 illustrates that the crafting of local institutions for INP development is not only impacted by specific INP policies, but also by other sectorial natural resource policies, such as CBNRM for wildlife and timber. However, congruency between these policies is often lacking. This demonstrates that there is a need for coordination of natural resource management policies across government departments. This observation confirms the general statements made by Laird et al. (2010b) that most NTFP policies are developed in a reactive manner in response to specific development concerns, such as combining forest conservation and rural development. Consequently, development policies often lack an overall objective that is inclusive of all resources and stakeholders. In Namibia, the establishment of CBNRM institutions only focused on wildlife initially and gradually extended to forest-based resources such as timber. This study indicates the need to further modify the policy in respect of NTFPs. An incremental approach is therefore needed to streamline procedures, minimise bureaucracy and improve policy coherence for NTFP governance (Laird et al., 2010b, p. 372).



### ***Linking biodiversity conservation to poverty alleviation***

The governance arrangements for NTFP are not only influenced by national and local policies, but also by international ones. These are often based on the notion that NTFPs serve both conservation needs and poverty alleviation aims (Nepstad and Schwartzman, 1992; Peters et al., 1989). In chapter 5, the policy process concerning devil's claw was used as a case study to analyse how the global discourse on NTFP development has influenced the governance arrangements and institutional practices for NTFP use and trade in Namibia. The findings from this case study demonstrate that the domestic INP policy development for devil's claw has been responsive to the global discourse. In addition, the results illustrate that the nature of this global NTFP development discourse is complex, featuring multiple storylines which are, moreover, often contested.

Although the devil's claw development policy derives inspiration from the global discourse on NTFPs, serving both conservation and poverty alleviation, as propagated by the Convention on Biological Diversity (CBD) and the Convention on the International Trade of Endangered Species (CITES), the analysis of this thesis shows that this discourse is open to different interpretations. Although the Namibian policy actors basically support the international discourse, they do not always emphasise the same elements or storylines. Some storylines support strict regulations, such as harvest permits and regulation of international trade in line with the proposed listing of devil's claw in the CITES Appendix II. The CITES agreement aims to control illegal harvesting of threatened species by limiting or banning the international trade in such species. However, other storylines encourage the promotion of economic incentives as a means to link biodiversity conservation to rural development. As a result of these different storylines, diverging discourse coalitions concerning the development of the Namibian devil's claw industry have emerged. In response to these diverging interpretations, a nation-specific interpretation of the discourse has also gradually emerged. The national policy rejected the strict CITES regulations on conservation through harvest bans and moved toward an incentive approach that gave priority to adjusting harvesting techniques and stimulating the socio-economic development of local producers. Thus, the global discourse on NTFP commercialisation was nationally operationalised by the choice of specific policy instruments. Consequently, the governmental arrangements for the devil's claw enterprise in Namibia are characterised by less strict and, community-embedded regulations with respect to harvesting permits, property rights and exclusive purchase agreements. These institutional arrangements aim at promoting not only responsible sourcing of devil's claw materials, but also equity and benefit sharing among stakeholders.

Chapter 5 thus illustrates how the global discourse on linking biodiversity conservation to poverty alleviation has facilitated provision of a national platform to articulate alternatives for providing access to devil's claw through common property resource (CPR) institutions, such as conservancies, community forests or local-level trusts. These alternative options not only involve the establishment of CPR institutions as a means to conserve threatened biodiversity, but also the integration of useful wild species into agricultural systems. This approach supports the argument of Ros-Tonen and Wiersum (2005) that a gradual domestication of NTFPs into agricultural systems increases control over access to NTFPs and therefore contributes to the conservation of species that were originally collected in open-access regimes.

The development of a specific devil's claw policy in Namibia also illustrates that the discourse of NTFP conservation and poverty alleviation often pays little attention to the need to better regulate the value chain structure, which has a tremendous influence on devil's claw

prices and benefit sharing arrangements. The experiences with the development of other Namibian INPs, such as marula, *Ximenia* and Kalahari melon seeds, indicate that there is scope for enriching the global NTFP discourse with new storylines, about, for example, access to markets, value addition through manufacturing and value chain governance (Schmitz and Nadvi, 1999; Te Velde et al., 2006). And nationally, there is scope for further integrating INP policies into the Growth at Home strategy of the Namibia Industrial Policy. This strategy promotes the development of industrial chains in respect of value addition, upgrading and diversification of manufacturing, facilitation of market access and establishment of a favourable regulatory environment for business investment. Such policy measures might further contribute to the establishment of appropriate market structures for INPs, which are currently dominated by a few international importers who strictly demand raw materials thereby restricting domestic product valorisation. There is also the possibility to further develop a cross-sectoral policy approach to the governance of high-value INPs, such as devil's claw.

The case study of devil's claw policy thus underlines the argument of Wynberg (2010) that a complex system for NTFP regulation is required, because there exists a range of laws and regulations on harvesting, trade and commercialisation of NTFPs. Such an integrated regulatory system should not just consider collaboration between producers and marketing organisations, but also collaboration between various government departments and sectors. For instance, the further integration of devil's claw production and trade would benefit from input from the Namibia Competition Commission and the National Standard Institute. Such widening of the policy network will also expand the scope for defining problems and solutions in the devil's claw primary industry; e.g. concerning the adoption of appropriate anti-competitive approaches, suitable product standardisation and the development of national strategies for value addition. Thus, the devil's claw primary industry can further take advantage of existing regional integration policies for industrial development, which promote access to diverse external markets (Republic of Namibia, 2012a).

### **6.2.2 Synthesis of the findings**

The above conclusions are based on the findings of the four empirical chapters that are linked with the four research questions. This section further synthesises the results. It specifically focuses on three critical governance issues concerning: (a) the complex and specific nature of INPs, (b) actor interactions and (c) the dynamics in INP governance arrangements.

Regarding *the complex and specific nature of INPs*, the findings of chapter 3 reveal that it is appropriate that Namibia has developed a differentiated and species-specific policy approach to INP development. Such an approach better fits the complex nature of INPs than a broad integrated approach, which assumes the presence of a clearly structured INP sector, comparable to forestry, agriculture or wildlife. The 'pipeline approach' suggested by Cole (2014b) for developing different categories of INPs in Namibia thus matches the complex and fragmented nature of INPs well. However, lessons learned on the ground reveal that a differentiated approach to distinctive types of resources may not always be effective and efficient. For example, the findings of chapter 4 show that an integrated approach is increasingly encouraged for governing production (access and management) of INPs. Specifically, in communal conservancies and community forests, where resources such as wildlife, timber, NTFPs and water coexists, efforts are undertaken to integrate the governance

arrangements for different types of natural resources as far as possible. Nonetheless, the analysis in chapter 4 also demonstrates that due to differences in technical requirements for different types of resources (e.g. management scales for different resources) and the different vested interests at the local level, an integrated approach to natural resource management in general and NTFP management in particular remains a challenge (Jones, 2015). Exploring different ways through which INP activities can successfully be integrated into other resource system requires additional research.

In terms of actor interactions, this study reveals that despite the attention that has been given to the development of multi-stakeholder INP governance bodies (i.e. IPTT, DCWG and IBPC), these bodies do not yet represent all relevant stakeholders. Notably, they lack representation from the private sector, standardisation bodies and primary producers (chapter 2) as well as from the Ministry of Industrialisation and SME Development (chapter 3). Although the governance bodies played a crucial role in INP policy development and project activity implementation (chapter 2), the lack of representation led to the absence of tangible technical support for SME incubation, private sector investment and INP valorisation. As elaborated in chapters 2 and 5, this has resulted in inadequate attention to certain development options.

The presence of the multi-stakeholder platforms has contributed to policy development concerning better regulation of access to resources through the establishment of user-group associations, provision of exclusive access rights to INPs and adoption of exclusive purchase agreements for sustainable sourcing of INPs. However, efforts to stimulate access to markets involving benefit sharing, certification and fair trade arrangements (chapter 3) have not facilitated tangible value chain upgrading. Since the existing voluntary instruments have not facilitated such upgrading in Namibia, the involvement of domestic SMEs coupled with government support needs to be further explored and strengthened as a means to upgrade INP value chains through national-level investment. This will involve cooperation among SMEs with complementary development activities, active public-private partnerships and government-funded projects for building local SMEs capacity (Humphrey and Schmitz, 2000; Schmitz and Nadvi, 1999).

The need to consider the involvement of additional actor groups in INP development policies is also reflected in the discourse analysis of the devil's claw enterprise in Namibia (chapter 5). As a result of the international policy discourse on NTFP commercialisation, which emphasises the need to combine biodiversity conservation and poverty alleviation, little attention has been given to the possible contributions of private sector entrepreneurs. Due to lack of interaction with this actor group, no relation was established between INP development policy and the Industrial Policy of Namibia (Republic of Namibia, 2012b), which stresses issues such as value addition, market access and promotion of a favourable regulatory environment for business investment. Comparative studies need to be conducted, which should involve different types of INPs in Namibia, to establish models through which domestic and regional institutions can be engaged to promote value addition either at the national or regional scale. Specifically, these studies should emphasise the role of information exchange, trade associations and government support for the development of skills to produce quality products.

Regarding the dynamics of INP governance arrangements, this thesis illustrates the interplay between national development policies, international NTFP discourses and forest governance at large. Chapter 4 highlights local policy developments concerning the introduction of community-based institutions that provide access to and management of INPs.

The chapter argues that culturally-based or socially-embedded institutions need to be complemented with statute policies and vice versa. In this way, institutions that emerge will be embedded in local cultures and practices. An example of such a customary-based local institution is the local governance system for mopane worms in Omusati region described in chapter 4. The notion of locally-based institutions reappears in chapter 5, which analyses the impact of the internationally-derived discourse on sustainable utilisation of devil's claw on the development of community-based institutions. This chapter illustrates how this discourse, embodied in the Convention on Biological Diversity, has primarily been conceptualised in terms of access and benefit sharing as well as intellectual property rights. This analysis shows how these notions have been further integrated into national policy and in socially-embedded institutions.

The concerns regarding the need for developing local or community-based institutions for INP governance is not limited to Namibia but has also been observed in other countries. The experiences with INP development in many tropical countries indicate that local and customary institutions are increasingly valued and that they are ever-more incorporated into the regulation of NTFPs (Laird et al., 2010c; Wynberg and Laird, 2007c). These trends in NTFP governance are in line with more general paradigms shifts in forest governance. Traditionally, governance of forest resources has been controlled by the state through top-down approaches based on permit systems and forest concessions (Arts and Visseren-Hamakers, 2012). Recently, however, several new practices, including participatory forest management, decentralisation, certification and payments for ecosystem services, have been explored in efforts to improve governance in the forestry sector (Agrawal et al., 2008; Arts and Visseren-Hamakers, 2012). These new practices have been useful in shifting NTFP policies away from the protectionist approach that stressed the role of NTFPs in forest conservation to an approach that embraces both conservation, equity and social justice (Laird et al., 2010a, p. 2).

However, this study adds the caveat that in order to further integrate CBNRM and NTFP production systems, attention needs to be given to the differentiated nature of the latter. Chapter 4 illustrates how locally-embedded institutions such as traditional authorities and local management committees significantly impact on the actual performance of the newly-introduced community institutions. These practices focus not only on the conservation of NTFP resources but also on their domestication in rural production systems (Ros-Tonen and Wiersum, 2005). These findings show how the introduction of local institutions brings a number of challenges that need to be addressed if sustainable management of indigenous natural products is to be achieved in Namibia. Specifically, the emergence of multiple authorities at the local level implies competing interests and diverging discourses. When stakeholders articulate different discourses, they also often support different strategies to achieve sustainability. For example, chapter 4 examines how the procedure used by the conservancy management committee to grant access to devil's claw differs from the one used by traditional authorities. Furthermore, some community organisations, such as the conservancies in Otjozondjupa region, prefer harvest permits to be issued to groups at the village level rather than to individuals in order to enable monitoring of illegal and unsustainable harvesting. However, since the Ministry of Environment and Tourism issue both group permits and individual permits, some people can still obtain individual harvest permits although this may not be a preferred practice in their region. To address discrepancies between practices for sustainability, a platform is needed through which relevant stakeholders,

such as the Ministry of Environment, harvesters, traders and exporters, can deliberate and negotiate sustainable practices.

### **6.2.3 General conclusion**

As discussed in the introduction to this thesis, increased understanding of the complex nature of NTFP governance systems has emerged in recent years. This complexity is on the one hand related to the two key dimensions of these governance systems: access to resources and access to markets (Wiersum et al., 2014). On the other hand, it is related to the various scales of governance, ranging from international regulations to community-based customary norms (Laird et al., 2010e; Pierce and Burgener, 2010). This dissertation specifically contributes towards a better understanding of two critical elements of this complexity: (a) the complex arrangements for regulating different types of products, ranging from internationally traded ones, which are subject to international regulations on biodiversity and trade to local products produced and marketed under traditional rule, and (b) the complex practices of implementing different sets of regulations in processes of institutional bricolage and discursive translation.

As demonstrated by the discussion and synthesis of this thesis's findings, conceptualising NTFP or INP governance systems requires not only a thorough understanding of the variety of actors, institutions and policies for NTFP development, but also attention to the question of how actors, institutions and policies perform in practice and the role of different discourses therein.

## **6.3 Methodological reflection**

At the initial stages of this study, the idea was to evaluate how INP policies in Namibia fulfilled the objectives of sustainability and poverty alleviation. However, it soon became clear that such policy evaluation studies are based on normative values and that those are subject to diverse interpretations. Consequently, the focus of this study gradually shifted towards a more analytical and critical assessment of the nature, diversity and dynamics of governance arrangements for indigenous natural products in Namibia.

In order to conduct such a study, the research design was based on two main considerations. In the first place, it was decided that in view of the diverse nature of INPs, a relatively large number of products should be included in the study. This would allow for an overall picture of the diversity of INPs and of governance systems in Namibia. Secondly, in order to assess the complexity in INP governance, a multiple case study approach was selected. Although such an approach allows for a generic and comparative understanding of the key factors impacting INP governance, it does not explain the specific governance processes related to any given product. Therefore, it was decided to complement the multiple case study approach with a single in-depth case study (Yin, 2009a).

The first stage of research was aimed at gaining a better understanding of the complex and diverse nature of INP policy in Namibia, focusing on governance arrangements and actor constellations. The results not only served to produce findings for chapter 2 and 3, but also provided the necessary baseline information for selecting the topics for the more detailed case studies thereafter. This selection reflected a major critical issue impacting INP governance: the interplay between community management of natural resources as a means for local

development on the one hand and state regulations as means to prevent overexploitation of biological resources and to regulate value chains on the other.

While conducting the case studies, three main methods of data collection were used: document analysis, focus group discussions and interviews with semi-structured questions. This combination of data collection methods provided opportunities to cross-check data and triangulate research findings. The combination also provided a multifaceted picture of the INP setting in Namibia. In the second phase of research, the same three methods of analysis were employed. The experiences of the first round of studies assisted in a critical selection of open-ended questions for the detailed case studies in the second stage. The combination of the two research approaches proved to be successful in gaining new insights into the nature and complexity of NTFP governance systems.

Overall, this study profited much from the combination of two research approaches with three methods of data collection. This not only provided an opportunity to cross-check information, but also assisted in overcoming limitations in the individual research methods. The focus groups and interviews — the major research methods of this study — were appropriate for gathering information on INPs, given that governance of these products is far from straightforward and dependent on contextual circumstances. The focus groups and interviews provided room for adapting the questions to context and for probing, thereby providing a deeper picture.

The use of focus groups and interviews revealed some methodological challenges that need to be considered in analysing the data. The first challenge is that the information gathered does not always represent a trustworthy account of social phenomena. Respondents have a tendency to give strategic answers that fit what they perceive is the interest of the researcher, even if the answer is not necessarily true. For example, in one of the focus groups, one participant who supply *Ximenia* to Tulongei Twahangana Cooperative was not aware that by being a member of the trade cooperative means that she have entered into an exclusive agreement that requires her to supply nuts only through that one trade cooperative. During the discussion, the participant revealed that she did not really honour the contractual obligations of supplying only to the cooperative. However, her revelation was quickly ‘corrected’ by other participants in the focus group who better understood the implications of an exclusive purchase agreement. This forced a consensus that focused on what is expected from these harvesters, rather than what is actually taking place.

Similarly, in another interview involving mopane worm harvesters, one of the respondents commented, *‘We know it is not allowed to harvest those worms that are crawling on the ground because they are supposed to be the seeds of next year, but those ones are actually the best worms for harvesting because they require less work as they only have fat deposits and no gut content’*. The fat deposit is an adaptation mechanism of the worm to survive the awaited dormancy period. This comment was made just after the point was consensually discussed in the opposite way, with everyone agreeing that nobody harvested worms crawling on the ground. Under such circumstances, additional ethnographic methods are useful to check information, especially within a practice-based framework, like the one used in chapter 4. Ethnography allows the researcher to observe what is actually happening and go beyond the socially-desirable representation of these practices.

These experiences illustrate the importance of respondents having trust when discussing their experiences with a researcher. They show the importance of not simply organising focus group discussions and semi-structured interviews with key respondents as one off events, but rather of combining them with field visits and participant observations.



Such on-the ground practices indeed proved to be quite useful in creating a trustful atmosphere for the more formal data collection sessions.

Despite these considerations, it was not always possible to obtain precise information on specific governance arrangements. This was particularly the case with trade-related information, which often touched upon confidential relations among harvesters, middlemen and marketing organisations. The exchange of such trade information could expose traders and exporters to potential competition. Also, the arrangements on benefit sharing and bioprospecting are often characterised by confidential contracts and agreements that cannot be directly accessed by researchers. Such confidentiality also blocked access to research results from some explorative pilot project studies commissioned under IPTT. These difficulties indicate the importance of using a variety of research methods in studying complex governance systems. Varieties of methods allows triangulation of data and increases the validity of research results.

The second challenge posed by focus group discussions and interviews was the difficulty in maintaining a generic questionnaire, when dealing with diverse products and different stakeholders. The key stakeholders are involved in different functions of the INP value chain. Therefore, the list of questions to discuss during interviews were continuously complemented with new ones that suit the different categories of stakeholders. The questionnaire that was used remained the same, but extra information was always added as necessary, for each category of interviewee, or for each type of product. In cases where a single person played multiple roles, their responses gave accounts which reflects these multiple roles or reflecting that the respondent is involved with more than one product. For instance, a respondent could refer to his experiences as a harvester or as a headman, or a trader who is also an exporter. The interviews with stakeholders with multiple identities required careful analysis of their experiences and practices related to INP governance. But they also increased understanding of the multi-faceted nature of governance arrangements.

While this thesis has explored a wide range of INP products involving different categories of stakeholders as interviewee, the category of harvesters was not sufficiently interviewed. Unlike other stakeholders, who were sufficiently included in the interviews, the harvesters involved in this study were mainly those that harvest and trade INPs within organised structures referred to as Primary Producer Organisations. Harvesters in PPOs can easily be identified by a researcher because they belong to an organised group. Focusing too much on organised groups, however, may have narrowed the understanding of the general nature and dynamics of INPs in Namibia because information is skewed toward practices in organised groups. Future research thus needs to interview a wider pool of harvesters.

## **6.4 Theoretical reflection**

This thesis has used the concept of governance to understand the interaction among actors and institutional contexts. The thesis drew on the three dimensions of governance: politics, polity and policy (see section 1.6.2). Aligning this thesis with the governance concept was useful in unfolding the organisational and institutional aspects of the INP policy domain. The application of the polity and politics dimensions of governance proved complementary to each other, because they enabled describing the nature of INP governance in terms of policy networks on the one hand and institutional arrangements on the other.

Although the concept of governance helped to reveal the different actors and rules in INP policy making, it was less helpful in explaining how day-to-day activities are conducted and how they influence policy change. The governance concept is too abstract to provide detailed explanation regarding the changing roles of the state and non-state actors in the INP domain. To address this gap, other analytical concepts were needed to complement the governance concept. The three analytical concepts were used in particular: 1) the policy network (2) the discourse, and (3) the two institutional concepts of bricolage and performance. ~~identified are all part of the~~ These analytical concepts are all parts of the policy arrangement approach (PAA), an analytical framework that addresses policy and governance in terms of organisation and substance (Arnouts et al., 2010; Arts and van Tatenhove, 2006). The PAA has been built upon different but related policy and political theories, including discourse analysis Hajer (1995), policy network analysis (Marsh and Rhodes, 1992) and neo-institutionalism (March and Olsen, 2010).

Policy network analysis (Marin et al., 1991; Marsh and Rhodes, 1992) helped to understand the patterns of interactive processes among multiple actors and their influence on the development of INP policies. This framework was useful in explaining the roles and functional relations among state and non-state actors. Through this framework, it was possible to identify the different governance networks as well as the functional clusters of actors and their influence on INP policy development in Namibia. However, this framework still could not give a deeper account of INP governance processes in respect of how the different INP management activities are governed and changed locally. Here,, the concepts of institutional bricolage (De Koning and Cleaver, 2012; Douglas, 1986) and performance proved useful.

Institutional bricolage is a dynamic process and emphasises the interactions between formal-bureaucratic and socially-embedded institutions at the local level. It is able to explain how local practices influence policy performance (Cleaver and De Koning, 2015). Applying these two analytical concepts (bricolage and performance) was useful in demonstrating how actors — or ‘bricoleurs’ — adapt formal institutions to fit the local context, thus co-shaping the rules of the game for access to INPs and markets in ways often unanticipated by formal policies. The application of institutional bricolage and performance to INP governance revealed how the changes and effects of formal CBNRM institutions were produced. As elaborated in De Koning (2014), institutional bricolage takes place through the three processes of articulation, aggregation and alteration. These have subsequently led to the establishment of locally-adapted multipurpose institutions in Namibia, which did not only address wildlife and timber, but also INPs.

Whereas institutional bricolage and performance focus particularly on local organisations and rules as well as on their dynamics and effects, discourse analysis reveals how discursive practices of language, text and speech, as used by different actors, co-shape policy and governance. Applying discourse analysis to a specific case study in this thesis has brought to light the different discourses, storylines and coalitions that influenced the development of INP policies in Namibia. Combined with the analysis of institutional bricolage and performance, discourse analysis provided a nuanced picture of INP governance. Collectively, these concepts facilitated analysis of the organisation and contents of institutional arrangements and their transformations over time.



## **6.5 Possibilities for future research**

In the course of this study, two main topics relevant for future research have been identified. The first one relates to two key aspects of INP governance: access to resources which this thesis has addressed in detail, and access to markets, which was only addressed cursorily in chapter 3. To better understand market access, a clear need exists for future comparative studies into value chain governance for different types of INP in Namibia. These studies might also focus on identifying the different models through which domestic and regional institutions can be used to promote value addition at national and regional levels. Specifically, it would be worthwhile analysing the role of information exchange, trade cooperatives and government support in improving skills and product quality within Namibia.

Secondly, topic worthy of future research is how INP activities are best integrated into CBNRM programmes. The process of integrating INP into CBNRM has already began, but further research is needed to explore and establish a framework for effective integration of INPs within CBNRM. This study found that existing forest inventory guidelines for establishing CBNRM structures such as community forests are burdensome and not practical especially when community forests are established for INP production. Research therefore needs to guide the establishment of appropriate inventory methods for assessing quantities and qualities of INPs in the wild. These can be independent INP inventory methods or they can be embedded within the traditional forest inventory methods.

## **6.6 Recommendations for INP policy making in Namibia**

According to Laird et al (2010), NTFP policies work best when based on carrots and not on sticks. In contrast, this thesis argues that in developing NTFP governance arrangements, policy makers need to explore the right combination of carrots and sticks. Moreover, the overall NTFP governance system needs to be sufficiently flexible, so that those carrots and sticks can be adapted and transformed to fit ecological and product contexts. In line with the four research questions and their findings, four main recommendations for INP policy reform in Namibia are identified below.

The first recommendation is that there be a critical evaluation of the national platforms for stakeholder interaction. As discussed in the analysis of complex NTFP governance in chapter 2, it is important that membership of the national information-sharing and policy-making bodies, such as IPTT, IBPC and DCWG, is opened up and expanded to primary producers and harvesters, private sector representatives, as well as product quality standardisation bodies, such as the Namibia Standardisation Institute and domestic certification organisations. Participation of primary producers is needed in order to link local communities, who deal with different products and different ecological environments, to national decision makers and to avoid power asymmetry in policy development. Since representation in the existing governance bodies is limited for various reasons, as discussed in chapter 2, it is also recommended that the two key ministries responsible for INP activities, i.e. MAWF and MET provide leadership in their position as public authorities by formally allowing new actors into the governance networks and by changing the rules of the game accordingly.

The second recommendation is to further expand the NTFP development fora to include representatives of the private sector. The analysis of the governance arrangements indicates that most INP activities in Namibia have traditionally been conducted through donor-funded projects, but it may be questioned how sustainable such development interventions are in the long run. Moreover, although the Ministry of Agriculture, Water and Forestry has an annual budget for INP activities, this budget is gradually declining. Consequently, it is important to explore alternative kind of domestic investments to support private sector involvement in INP governance, through, for example SME development involving government programme for business incubation and service provision. Thus, despite existing funds from the Namibian government and international donors, new arrangements like public-private partnerships and inter-SME collaboration are needed to further promote INP value chain upgrading within Namibia.

Thirdly, on the basis of the findings on the interaction among CBNRM and INP institutions, it is recommend that consideration be given to how arrangements for access and management of INPs can be further merged into CBNRM programmes. This need to be done so that the latter do not become overly formalised, but remain flexible enough to be able to adjust to local and product contexts. The adoption of the CBNRM approach should not only enable local communities to organise themselves better and further cut the burden of overly bureaucratic policy monitoring and enforcement from government departments (MET or MAWF), but it should also provide more room to attract donor and private funding for capacity building and cooperative arrangements with marketing organisations and industry.

Besides the need for policy reform at the national level, due attention should also be given to better aligning national policies with international ones. The fourth recommendation therefore is that discursive platforms be established at the national level, e.g. within the IPTT forum, involving stakeholder workshops and consultative policy workshops. This platform should allow the multiple stakeholders to better balance national policy priorities with international discourses on NTFP development. Moreover, this forum should be well aware of the diversity in NTFP development discourses and stimulate interactions among local, national and international actors as a positive way of fostering policy change and improvement.

## References

- Agrawal, A., Chhatre, A., Hardin, R., 2008. Changing governance of the world's forests. *Science* 320, 1460-1462.
- Albertyn, C., 2011. Consulting services for Development of Indigenous plant task team strategy and action plan for 2011-2012. Millenium Challenge Account-Namibia, Windhoek.
- Arnold, J., Ruiz Pérez, M., 1998. The role of non-timber forest products in conservation and development. CIFOR, Bogor-Indonesia.
- Arnold, J.E.M., Ruiz Pérez, M., 2001. Can non-timber forest products match tropical forest conservation and development objectives? *Ecological Economics* 39, 437-447.
- Arnouts, R., van der Zouwen, M., Arts, B., 2010. Analysing governance modes and shifts - governance arrangements in Dutch nature policy. *Forest Policy and Economics* 16, 43-50.
- Arts, B., 2012. Forests policy analysis and theory use: overview and trends. *Forest Policy and Economics* 16, 7-13.
- Arts, B., Behagel, J., Turnhout, E., de Koning, J., van Bommel, S., 2014. A practice based approach to forest governance. *Forest Policy and Economics* 49, 4-11.
- Arts, B., Buizer, M., 2009. Forests, discourses, institutions: A discursive-institutional analysis of global forest governance. *Forest Policy and Economics* 11, 340-347.
- Arts, B., de Koning, J., 2017. Community Forest Management: An Assessment and Explanation of its Performance Through QCA. *World Development* 96, 315-325.
- Arts, B., Leroy, P., Van Tatenhove, J., 2006. Political modernisation and policy arrangements: a framework for understanding environmental policy change. *Public organization review* 6, 93-106.
- Arts, B., van Tatenhove, J., 2006. Political Modernization, Institutional Dynamics in Environmental governance. Springer, Netherlands.
- Arts, B., Visseren-Hamakers, I., 2012. Forest governance: a state of the art review., in: Arts, B., van Bommel, S., Ros Tonen, M., Verschoor, G. (Eds.), *Forest people interactions: understanding community forestry and biocultural diversity*. Wageningen Academic Publishers, Wageningen, pp. 241-257.
- Belcher, B., Ruiz-Perez, M., 2001. An international comparison of cases of forest product development: overview, description and data requirements. CIFOR and DFID, p. 25.
- Belcher, B., Ruíz-Pérez, M., Achdiawan, R., 2005. Global patterns and trends in the use and management of commercial NTFPs: implications for livelihoods and conservation. *World Development* 33, 1435-1452.
- Bennet, B., 2007. Devil's claw: a mature natural product with some unresolved issues, in: CRIAA-SADC (Ed.), *Third National Workshop on Promoting Indigenous Plant Products*, Windhoek.
- Bennet, B., 2014. Past, present and future models: linking producer and processor organization to enterprises., in: Cole, D. (Ed.), *Indigenous Plant Products in Namibia*. Venture Publications, Windhoek, pp. 134-140.
- Bennett, B., 2006. Devil's claw feasibility study. Regional Trade Facilitation Programme, Natural Resource Institute, University of Greenwich, p. 136.
- Bennett, B., 2010. Past, present and future models: linking producer processor organizations to enterprises, in: Cole, D. (Ed.), *Indigenous Plant products in Namibia*. Venture Publications, Windhoek, pp. 134-141.
- Bollig, M., 2013. Social-ecological change and institutional development in a pastoral community in north-western Namibia, in: Bolling, M., Schnegg, M., Wotzka, H.P. (Eds.), *Pastoralism in Africa: Past, Present and Futures*. Berghahn, New York, pp. 316-340.

- Bolling, M., Schwieger, D.A.M., 2014. Fragmentation, cooperation and power: Institutional dynamics in natural resource governance in North-Western Namibia. *Human Ecology* 42, 167-181.
- Börzel, T.A., 1998. Organizing Babylon-On the Different Conceptions of Policy Networks. *Public administration* 76, 253-273.
- Chennells, R., 2009. Putting Intellectual Property Rights into Practice: experiences from the San, in: Wynberg, R., Schroeder, D., Chennells, R. (Eds.), *Indigenous Peoples, Consent and Benefit Sharing: Lessons from the San-Hoodia Case*. Springer, London, pp. 211-232.
- Cleaver, F., 2000. Moral ecological rationality, institutions and the management of common property resources. *Development and change* 31, 361-383.
- Cleaver, F., 2002. Reinventing Institutions: Bricolage and the social embeddedness of natural resource management. *European Journal of Development research* 14, 11-30.
- Cleaver, F., De Koning, J., 2015. Furthering critical institutionalism. *International Journal of the Commons* 9, 1-18.
- Cole, D., 2014a. Devil's claw (*H. procumbens* and *H. zeyheri*), in: Cole, D. (Ed.), *Indigenous plant products in Namibia*. Venture publications, Windhoek.
- Cole, D., 2014b. Introduction: indigenous natural products in Namibia, in: Cole, D. (Ed.), *Indigenous plant products in Namibia*. Venture Publications, Windhoek, pp. 6-7.
- Cole, D., 2014c. Policies, legislations and regulations: creating an enabling environment, in: Cole, D. (Ed.), *Indigenous plant products in Namibia*. Venture Publications, Windhoek, pp. 8-11.
- Cole, D., Bennet, B., 2007. Trade, poverty and natural products: lesson learned from Namibia organic Devil's claw. *Namibian Trade and Poverty Programme of the UK Department for International Development*, pp. 1-32.
- Corry, S., 1993. The rainforest harvest: who reaps the benefits? *The Ecologist* 23, 148-153.
- Cronkleton, P., Pacheco, P., 2010. Changing policy trends in the emergence of Bolivia's Brazil nut sector. Earthscan, London.
- Cunningham, M., Cunningham, A.B., Schippman, U., 1997. Trade in *Prunus africana* and the implementation of CITES: Results of the R+D project 80805080. German Federal Agency for nature Conservation, Bonn-Germany.
- Dang, T.K.P., Turnhout, E., Arts, B., 2012. Changing forestry discourses in Vietnam in the past 20years. *Forest Policy and Economics* 25, 31-41.
- De Koning, J., 2014. Unpredictable outcomes in forestry—Governance institutions in practice. *Society & Natural Resources* 27, 358-371.
- De Koning, J., Benneker, C., 2013. Bricolage Practices in Local Forestry, in: Arts, B., Behagel, J., van Bommel, S., de Koning, J., Turnhout, E. (Eds.), *Forest and Nature governance: a practice based approach*. Springer, Heidelberg.
- De Koning, J., Cleaver, F., 2012. Institutional bricolage in community forestry: an agenda for future research, in: Arts, B., van Bommel, S., Ros Tonen, M., verschoor, G. (Eds.), *Forest people interfaces: understanding community forestry and biocultural diversity*. Wageningen University Press, Wageningen.
- De Vette, M., Kashululu, R., Hebinck, P., 2012. Conservancies in Namibia: a discourse in action, *Forest-people interfaces*. Springer, pp. 121-138.
- Dickson, B., 2008. CITES and the livelihoods of the poor. *Oryx* 42, 548-553.
- Douglas, M., 1986. *How institutions think*. Syracuse University Press.
- Dowding, K., 1995. Model or metaphor? A critical review of the policy network approach. *Political studies* 43, 136-158.

- Du Plessis, P., 1999. Proceedings of the Namibia national Devil's claw stakeholder's workshop, in: CRIAA-SADC (Ed.), devil's claw stakeholder's workshop. Ministry of Environment and Tourism; Ministry of Agriculture Water and rural development and CRIAA-SADC, Greter's conference Center - Windhoek, p. 28.
- Du Plessis, P., 2001. Strategy and action plan for promoting indigenous fruits in Namibia, in: Forestry, M.o.A.W.a. (Ed.). Ministry of Agriculture Water and Forestry, Windhoek.
- Du Plessis, P., 2007a. Brief history of the IPTT and stakeholder's map, in: IPTT (Ed.), The third workshop on promoting indigenous plant products. Ministry of Agriculture Water and Forestry, Windhoek, pp. 3-4.
- Du Plessis, P., 2007b. Integrating indigenous natural products into Namibian farming systems, in: IPTT (Ed.), Promoting Indigenous Plant Products. Ministry of Agriculture Water and Forestry, Windhoek, pp. 1-36.
- Dutfield, G., 2000. Intellectual Property Rights, Trade and Biodiversity. Earthscan publications, London.
- Dutfield, G., 2006. Protecting traditional knowledge: pathways to the future. International Centre for Trade and Sustainable Development.
- Evans, M.I., 1993. Conservation by Commercialisation, in: Hladik, C.M., Hladik, A., Linares, O.F., Pagezy, H., Semple, A., Hadley, M. (Eds.), Tropical forests, people and food: Biocultural interactions and applications to development. Paris and Parthenon Publishing Group, Carnforth, pp. 815-822.
- Faggin, J.M., Behagel, J.H., 2017. Translating Sustainable Forest Management from the global to the domestic sphere: The case of Brazil. *Forest Policy and Economics* 85, 22-31.
- Gereffi, G., Humphrey, J., Sturgeon, T., 2005. The governance of global value chains. *Review of international political economy* 12, 78-104.
- Giddens, A., 1984. The construction of society. Cambridge: Polity.
- Government of the Republic of Namibia, 2004. Namibia Vision 2030: Policy Framework for Long Term National Development. National Planning Commission, Windhoek.
- Granich, C.I., Purata, S.E., Edouard, F., Pardo, M., Tovar, C., 2010. Overcoming barriers in collectively managed NTFPs in Mexico. Earthscan, London.
- Green, K.E., Lund, J.F., 2015. The politics of expertise in participatory forestry: a case from Tanzania. *Forest Policy and Economics* 60, 27-34.
- Hackfeld, B., Schippman, U., 2000. Conservation data sheet 2: Exploitation, trade and population status of *Harpagophytum procumbens* in Southern Africa. , Medicinal Plant Conservation. Medicinal Plant Specialist Group, pp. 4-9.
- Hajer, M., 1995. The politics of environmental discourse: ecological modernization and the policy process. Oxford University press, Oxford.
- Hamunyela, E., 1999a. Current exports, resource status and permit systems, in: CRIAA-SADC (Ed.), Namibia National Devil's Claw Stakeholder's Workshop, Greiter's Conference Centre, Windhoek, pp. 9-10.
- Hamunyela, E., 1999b. Current exports, resource status and permit systems, in: Du Plessies, P. (Ed.), Namibia national devil's claw stakeholder's workshop, Windhoek, pp. 9-10.
- Homma, A., Schwartzman, S., 1992. The dynamics of extraction in Amazonia: a historical perspective. Non-timber products from tropical forests; evaluation of a conservation and development strategy. *Advances in Economic Botany-New York Botanical Garden (EUA)* 9.
- Humphrey, J., Schmitz, H., 2000. Governance and upgrading: linking industrial cluster and global value chain research. Institute of Development Studies Brighton.

- Humphreys, D., 2009. Discourse as ideology: Neoliberalism and the limits of international forest policy. *Forest Policy and Economics* 11, 319-325.
- Igba, M., 1995. Trade restriction affecting international trade of non-timber forest products. Food and Agriculture Organisation, Rome.
- Ingram, V., Ndumbe, L.N., Ewane, M.E., 2012. Small scale, high value: Gnetum africanum and buchholzianum value chains in Cameroon. *small-scale Forestry* 11.
- Ingram, V.J., 2017. Shifting global development discourses: Implications for forests and livelihoods. *International Forestry Review* 19, 1-18.
- Jakubaschl, C., Andreas, A.M.R.P., 2004. Integrating conservancies and community forests in Caprivi region, in: Jakubaschl, C., Andreas, A.M.R.P. (Eds.), *Integrating conservancies and community forests in Caprivi region*, Katima Mulilo, Ministry of Agriculture and Forestry.
- Jones, B., 2015. Challenges, Lessons Learned and Best Practices for Integrating Community Forests with Conservancies in Namibia, Windhoek.
- Jones, B., Murphree, M.W., 2004. Community Based Natural Resource Management as a conservation mechanism: lessons and directions, in: Child, B. (Ed.), *Parks in transition: biodiversity, rural development and the bottom line*. Earthscan, London, pp. 63-103.
- Jones, B., Weaver, C., 2009. CBNRM in Namibia: growth, trends, lessons and constraints, in: Child, B., Suich, H., Anna, S. (Eds.), *Evolution and Innovation in Wildlife Conservation: Parks and Game Ranches to Transfrontier Conservation Areas*. Sterling VA, London, pp. 223-243.
- Jones, T.B., 1999. Policy arena: policy lessons from the evolution of a community based approach to to wildlife management , Kunene Region, Namibia. *Journal of International Development* 11, 295-304.
- Jordan, G., Schubert, K., 1992. A preliminary ordering of policy network labels. *European journal of political research* 21, 7-27.
- Kenis, P., Schneider, V., 1999. Policy networks and policy analysis: scrutinizing a new analytical toolbox, in: Marin, B., Mayntz, R. (Eds.), *Policy networks: empirical evidence and theoretical considerations*. Campus Verlag, Frankfurt am Main.
- Kleinn, C., Laamanen, R., Malla, S.B., 1996. Integrating the assessment of non-wood forest products into the forest inventory of a larger area: experiences from Nepal, in: Leakey, R.R.B., Temu, A.B., Melnyk, M., Vantomme, P. (Eds.), *Domestication and commercialisation of non-timber forest products in agroforestry systems*. International Centre for Research in Agroforestry, Nairobi-Kenya, pp. 23-31.
- Kleinschmit, D., 2012. Confronting the demands of a deliberative public sphere with media constraints. *Forest Policy and Economics* 16, 71-80.
- Klijn, E.H., Koppenjan, J.F.M., 2000. Public Management and Policy Networks. *Public Management: An International Journal of Research and Theory* 2, 135-158.
- Kluppel, M.P., Ferreira, J.C.R., Chaves, J.H., Hummel, A.C., 2010. In search of regulations to promote the sustainable use of NTFPs in Brazil, in: Laird, S.A., McLain, R.J., Wynberg, R. (Eds.), *Wild product governance: finding policies that work for non-timber forest products*. Earthscan, London, pp. 43-52.
- Kooiman, J., 2008. Exploring the concept of governability. *Journal of comparative policy analysis: Research and Practice* 10, 171-190.
- Koppenjan, J., Klijn, E., 2004. *Managing uncertainties in networks*. Routledge, London.
- Kumba, F., Kaurivi, J.Z.U., Katjivena, H., 2000. Final project report: domestication of Harpagophytum procumbens (devil's claw) and evaluation of its therapeutic effectiveness in veterinary medicine. Swedish Local Environment Fund, Windhoek, pp. 1-59.



- Kusters, K., Achdiawan, R., Belcher, B., Ruiz Pérez, M., 2006. Balancing development and conservation? An assessment of livelihood and environmental outcomes of nontimber forest product trade in Asia, Africa, and Latin America. *Ecology and Society* 11.
- Laird, S., McLain, R.J., Wynberg, R., 2010a. Introduction: Wild Product Governance, in: Laird, S., McLain, R.J., Wynberg, R. (Eds.), *Wild product governance: finding policies that work for non-timber forest products* Earthscan, London.
- Laird, S., Wynberg, R., McLain, R.J., 2010b. Recommendations, in: Laird, S., Wynberg, R., McLain, R.J. (Eds.), *Wild product governance: finding policies that work for non-timber forest products*. Earthscan, London.
- Laird, S.A., Ingram, V.J., Awono, A., Ndoeye, O., Sunderland, T., Fotabong, E.L., Nkuinkeu, R., 2010c. Integrating customary and statutory systems: a struggle to develop a legal and policy framework for NTFPs in Cameroon, in: Laird, S.A., McLain, R.J., Wynberg, R. (Eds.), *Wild product governance: finding policies that work for non-timber forest products*. Earthscan, London, pp. 53-70.
- Laird, S.A., Ingram, V.J., Awono, A., Ndoeye, O., Sunderland, T., Fotabong, L.F., Nkuinkeu, R., 2010d. Bringing together customary and statutory systems: the struggle to develop a legal and policy framework fo NTFPs in Cameroon. , in: Laird, S.A., Wynberg, R., McLain, R.J. (Eds.), *Wild product governance*. Earthscan, London.
- Laird, S.A., McLain, R.J., Wynberg, R., 2010e. The state of NTFP policy and law, in: Laird, S.A., Wynberg, R.J., McLain, R.J. (Eds.), *Wild product governance: finding policies that work for non timber forest products*. Earthscan, London, pp. 343-366.
- Laird, S.A., Pierce, A.R., Schmitt, S.F., 2005. Sustainable raw materials in the botanical industry: constraints and opportunities, in: Jatisatiennr, A., Paratasilpin, T., Elliott, S., Anusarnsunthorn, V., Wedge, D., Craker, L.E., Gardner, Z.E. (Eds.), *Conservation cultivation & sustainable use of MAPs*, 676 ISHS 2005 ed, pp. 111-117.
- Laird, S.A., Wynberg, R., McLain, R.J., 2011. Regulating complexity: policies for the governance of non-timber forest products, in: Shackleton, S., Shackleton, C., Shanley, P. (Eds.), *Non-timber forest products in the global context*. Springer, Berlin, Heidelberg, pp. 227-253.
- Legal Assistance Centre, 2006. *Our land they took: San land rights under threat in Namibia*. Printech, Windhoek.
- Lele, S., Pattanaik, M., Rai, N.D., 2010. NTFPs in India: Rhetoric and reality, in: Laird, S.A., McLain, R.J., Wynberg, R.P. (Eds.), *Wild Product governance: finding policies that work for non-timber forest products*. Earthscan, Washington DC.
- Lemos, M.C., Agrawal, A., 2006. Environmental governance. *Annual Review of Environmental Resources* 31, 297-325.
- Lisao, K., Geldenhuys, C., Chirwa, P., 2017. Traditional uses and local perspectives on baobab (*Adansonia digitata*) population structure by selected ethnic groups in northern Namibia. *South African Journal of Botany* 113, 449-456.
- Lombard, C., du Plessis, P., 2003. The impact of the proposal to list Devil's claw on Appendix II of CITES. *The trade in wildlife: Regulation for conservation*, 146-152.
- Lund, J.F., 2015. Paradoxes of participation: the logic of professionalization in participatory forestry. *Forest Policy and Ecoomics* 60, 1-6.
- Mander, M., Le Breton, G.L., 2006. Overview of the medicinal plant industry in southern Africa., in: Diederichs, N. (Ed.), *Commercialising medicinal plants: a southern African guide*. Sun Press, Stellenbosch, pp. 1-9.
- Manyando, B., Muzwalicaba, P., 2013. Management decisions (Balyerwa coservancy), in: *Millenium Challenge Account-Namibia* (Ed.), *Namibian devil's claw workshop*, Windhoek.

- March, J.G., Olsen, J.P., 2010. Rediscovering institutions: the organizational basis of politics. Simon and Schuster, New York.
- Marin, B., Mayntz, R., Verlag, C., 1991. Policy networks: Empirical evidence and theoretical considerations. Campus Frankfurt am Main.
- Marsh, D., Rhodes, R.A.W., 1992. Policy networks in British government. Clarendon Press.
- Matose, F., Mosimane, A.W., Mandondo, A., 2006. The membership problem in people-centred approaches to natural resource management in southern Africa.
- MCA-N, 2010. Producer Processor Organizations Sub-activity: PPO diagnostic report. Millenium Challenge Corporation, Windhoek.
- MCA-N, 2011a. Environmental managment plan for Devil's claw. Millenium Challenge Cooperation, Windhoek.
- MCA-N, 2011b. Indigeneous Natural products in Namibia, INP Market Bulletin. Namibia Botanical Research Institute, Windhoek, pp. 1-12.
- MCA-N, 2013. Proceedings of the Namibia national devil's claw workshop., Namibian devil's claw workshop Windhoek.
- McLain, R.J., Lynch, K., 2010. Managing floral green in a globalized economy: resource tenure, labour relations and immigration policy in the pacific northwest, USA, in: Laird, S.A., McLain, R.J., Wynberg, R. (Eds.), Wild Product Governance: finding policies that work for Non-timber Forest Products. Earthscan, London.
- Mendelsohn, J., Shixwameni, L., Nakamhela, U., 2012. An overview of communal lad tenure in Namibia: unlocking its economic potential.
- Menzies, N.K., Li, C., 2010. One eye on the forest, one eye on the market: multi-tiered regulation of matsutake harvesting, conservation and trade in north-western Yunnan Province. Wild Product Governance: Finding Policies That Work for Non-timber Forest Products, 243.
- Ministry of Agriculture Water and Rural Development, 2003. Proceedings of the 2nd National Indigenous Fruit Stakeholders Workshop, in: IFTT (Ed.), NASSP Workshop Report No. 1/2003.
- Ministry of Environment and Tourism, 1999. Proceedings of the Namibia National Devil's claw stakeholder's workshop:, in: CRIAA-SADC (Ed.), Namibia National Devil's claw stakeholder's workshop:. Ministry of Environment and Tourism, Windhoek, p. 28.
- Ministry of Environment and Tourism, 2010. Sharing the benefits of nature: legitimate access to namibia's biological and genetic resources for Scientific and commercial purposes, in: Affairs, D.o.E. (Ed.). Ministry of Environment and Tourism, Windhoek.
- Mncwangi, N., Chen, W., Vermaak, I., Viljoen, A.M., Gericke, N., 2012. Devil's claw: a review of the ethnobotany, phytochemistry and biological activity of *Harpagophytum procumbens*. Journal of ethnopharmacology 143, 755-771.
- Moller, W., 2013. MET trade statistics and permits, in: MCA-N (Ed.), Namibia Devil's claw workshop, Windhoek.
- Morgan, D.L., Krueger, R.A., 1993. When to use focus groups and why, in: Morgan, D.L. (Ed.), Successful Focus Groups: advancing the state of the art. SAGE Publications, New Delhi.
- Motlhaping, M., 1999. Harvester's perspective: results from the Community Devil's Claw Workshop at Tjaka Ben Hur, Namibia National Devil's Claw Stakeholder's Workshop. . CRIAA-SADC, Windhoek.
- Murphree, M.W., 1993. Communities as resource management institutions. IIED London.
- Mwangi, E., Wardell, A., 2012. Multi-level governance of forest resources (Editorial to the special feature). International journal of the Commons 6, 79-103.



- NACSO, 2015. The state of community conservation in Namibia: a review of communal conservancy, community forests and other CBNRM initiatives, 2015 Annual Report, Windhoek, pp. 1-81.
- National Planning Commission, 2008. Third National Development Plan (NDP3): 2007/2008-2011/12. Volume I Executive Summary NDP3. National planning commission, Windhoek, pp. 1-42.
- National Planning Commission, 2012. Namibia 2011 population and housing census preliminary results. National Planning Commission, Windhoek.
- Ndeinoma, A., Wiersum, K.F., 2016. Diversity of governance arrangements for indigenous natural products in communal areas of Namibia. . Forest Trees and Livelihood 26, 124-141.
- Ndoye, O., Awono, A., 2010. Policies for *Gnetum* spp. trade in Cameroon: Overcoming constraints that reduce benefits and discourage sustainability, in: Laird, S.A., McLain, R.J., Wynberg, R. (Eds.), Wild Product governance: finding policies that work for non-timber forest products. Earthscan, London.
- Nelson, F., Agrawal, A., 2008. Patronage or Participation? Community-based Natural Resource Management Reform in Sub-Saharan Africa. Development and Change 39, 557-585.
- Nepstad, D.C., Schwartzman, S., 1992. Non-timber products from tropical forests. Evaluation of a conservation and development strategy. New York Botanical Garden.
- Neumann, R.P., 1996. Forest Product research in relation to conservation policies in Africa, Research on NTFPs CIFOR, Hot Springs, Zimbabwe.
- Neumann, R.P., Hirsch, E., 2000. Commercialisation of non timber forest products: review and analysis of research. Centre for international Forest Research, Bogor, Indonesia.
- North, D.C., 1990. Institutions, institutional change and economic performance. Cambridge University Press, Cambridge.
- Nott, K., 2014. Essential oils Commiphora, in: Cole, D. (Ed.), Indigenous Plat Products in Namibia: the commercialisation of indigenous natural products. Venture Publications, Windhoek, pp. 82-93.
- Nott, K., Curtis, B., 2006. Commiphora resoures in Kunene Conservancies: the smell of success, Conservation and the Environment in Namibia. Venture Publication, Windhoek.
- Ostrom, E., 1990. Governing the commons: the evolution of institutions for collective action. Cambridge University Press, Cambridge.
- Parson, C., 2010. Costructivism and interpretive theory, in: Marssh, D., Stoker, G. (Eds.), Theory and methods in political science. PalgravMacmillan New York, pp. 80-98.
- Peters, C.M., Gentry, A.H., Mendelsohn, R.O., 1989. Valuation of an Amazonian rainforest. Nature 339, 655-656.
- Pierce, A., Burgener, M., 2010. Laws and policies impacting trade in NTFPs., in: Laird, S.A., McLain, R.J., Wynberg, R. (Eds.), Wild product governance: finding policies that work for non-timber forest products. Earthscan, Washington, pp. 327-342.
- Pierre, J., 2000. Debating governance: authority, steering and democracy. Oxford University Press, New York.
- Republic of Namibia, 2010a. National policy on the utilitization of Devil's claw (*Harpagophytum*) products in: Tourism, M.o.E.a. (Ed.). Ministry of Environment and Tourism, Windhoek.
- Republic of Namibia, 2010b. National Policy on the Utilitization of Devil's Claw (*Harpagophytum*) products in: Tourism, M.o.E.a. (Ed.). Ministry of Environment and Tourism, Windhoek.
- Republic of Namibia, 2010c. National policy on the Utilization of Devil's claw (*Harpagophytum*) products., in: Tourism, M.o.E.a. (Ed.). Ministry of Environment and Tourism, Windhoek.
- Republic of Namibia, 2012a. Namibia's industrial policy, Namibia.

- Republic of Namibia, 2012b. Namibia's industrial policy. , in: Ministry of Trade and Industry (Ed.).
- Rhodes, R.A.W., 1997. Understanding governance: Policy networks, governance, reflexivity and accountability. Open University Press.
- Rhodes, R.A.W., 2006. Policy network analysis. Oxford.
- Rhodes, R.A.W., Marsch, D., 1992. New directions in the study of policy networks. *European Journal of Political Research* 21, 181-205.
- Richards, R.T., Saastamoinen, O., 2010. NTFP policy, access to markets and Labour issues Finland: impacts of regionalization and globalization on the wild berry industry, in: Laird, S.A., McLain, R.J., Wynberg, R. (Eds.), *Wild product governance: finding policies that work for non-timber forest products*.
- Ridgway, R., Krugmann, H., 2010. Desktop baseline study for MCA-N INP target species. Millennium Challenge Corporation, Namibia.
- Ros-Tonen, M.A.F., Kusters, K., 2011. Pro-poor governance of non-timber forest products: the need for secure tenure, the rule of law, market access and partnership, in: Shackleton, S., Shackleton, C., Shanley, P. (Eds.), *Non-Timber Forest Products in the global context*. Springer-Berlin Heidelberg, pp. 189-207.
- Ros-Tonen, M.A.F., Wiersum, F.K., 2005. The scope for improving rural livelihood through non timber forest products: an evolving research agenda. *Forest, Trees and livelihood* 15, 129-148.
- Scheba, A., Mustalahti, I., 2015. Rethinking 'expert' knowledge in community forest management in Tanzania. *Forest Policy and Economics* 60, 7-18.
- Schmitz, H., Nadvi, K., 1999. Industrial clusters in developing countries - clustering and industrialization: Introduction. *World Development* 27, 1503-1514.
- Schneider, E., Sanders, J., Von Willert, D., 2006. Devil' s claw (*Harpagophytum procumbens*) from Southern Africa: sustainable use by cultivation combined with controlled harvesting in semi-wild populations. *Frontis* 17, 181-202.
- Schneider, V., 1992. The structure of policy networks. *European Journal of Political Research* 21, 109-129.
- Schon, D.A., Rein, M., 1995. Frame reflection: Toward the resolution of intractable policy controversies. Basic Books.
- Schreckenberg, K., 2003. Appropriate ownership model for natural product-based samall and medium enterprises in Namibia. European Development Fund, Trade and Investment Development Programme (TIDP), Windhoek, Namibia.
- Schusser, C., 2012. Who determines biodiversity? An analysis of actors' power and interests in community forestry in Namibia. *Forest Policy and Economics* 36, 42-51.
- Setshogo, M.P., 2013. To list or not to list? Arguments for and against listing *Harpagophytum* species on Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). *Journal of Medicinal Plants Research* 7, 3492-3498.
- Shackleton, C., Deland, C.O., Shakleton, S., Shanley, P., 2011a. Non timber forest products: concepts and definitions, in: Shackleton, S., Shakleton, C., Shanley, P. (Eds.), *Non timber forest products in the global context*. Springer-Verlang, London.
- Shackleton, C., Shackleton, S., 2004. The importance of non timber forest products in rural livelihood security and as a safety net: a review of evidence from South Africa. . *South African Journal of Science* 100, 658-664.
- Shackleton, C., Shackleton, S., Shanley, P., 2011b. Building a holistic picture: an intergrative analysis of current and future prospects of Non-timber Forest Products in a changing world., in: Shackleton, C., Shackleton, S., Shanley, P. (Eds.), *Non-timber Forest Products in the global context*. Springer, London.

- Shackleton, C.M., 2001. Re-examining local and market-orientated use of wild species for the conservation of biodiversity. *Environmental Conservation* 28, 270-278.
- Shackleton, S., 2010a. Case Study D Overregulation and Complex Bureaucratic Procedure: A Disincentive for Compliance? The Case of a Valuable Carving Wood in Bushbuckridge, South Africa. Earthscan, London.
- Shackleton, S., 2010b. Overregulation and complex bureaucratic procedure: a distinctive for compliance? The case of a valuable carving wood in Bushbuckridge, South Africa., in: Laird, S., McLain, R.J., Wynberg, R. (Eds.), *Wild Product Governance: Finding Policies that Work for Non-timber Forest Products*. Earthscan, London.
- Sharp, L., Richardson, T., 2001. Reflections on Foucauldian discourse analysis in planning and environmental policy research. *Journal of environmental policy and planning* 3, 193-209.
- Sills, E., Shanley, P., Paumgarten, F., de Beer, J., Pierce, A., 2011. Evolving perspectives on non-timber forest products, in: Shackleton, S., Shackleton, C., Shanley, P. (Eds.), *Non-timber forest products in the global context*. Springer, London, pp. 23-51.
- Silva, J.A., Mosimane, A., 2014. "How could I live here and not be a member?": Economic versus social drivers of participation in Namibian conservation programmes. *Human Ecology* 42, 183-197.
- Silverman, D., 2010. *Interpreting qualitative data*, 3rd ed. SAGE publications, London.
- Silverman, D., 2014. *Interpreting qualitative data*. SAGE publications Ltd, London.
- Somorin, O.A., Brown, H.C.P., Visseren-Hamakers, I.J., Sonwa, D.J., Arts, B., Nkem, J., 2012. The Congo Basin forests in a changing climate: Policy discourses on adaptation and mitigation (REDD+). *Global Environmental Change* 22, 288-298.
- Steward, K.M., Cole, D., 2005. The commercial harvest of devil's claw (*Harpagophytum* spp.). *Journal of Ethnopharmacology*. 100, 225-236.
- Strobach, M., Cole, D., 2007. Population Dynamics and Sustainable Harvesting of the Medicinal Plant *Harpagophytum procumbens* in Namibia, Bonn Germany.
- Sullivan, S., 2002. How sustainable is the communalising discourse of 'new' conservation? The masking of difference, inequality and aspiration in the fledgling 'conservancies' of Namibia, in: Colchester, M., Chatty, D. (Eds.), *Conservation and Mobile Indigenous people: Displacement, Forced Settlement and Sustainable Development*,. Berghan Press, Oxford, pp. 158-187.
- Te Velde, D.W., Rushton, J., Schreckenber, K., Marshall, E., Edouard, F., Newton, A., Arancibia, E., 2006. Entrepreneurship in value chains of non-timber forest products. *Forest Policy and Economics* 8, 725-741.
- Thomas, B., 2013. Sustainable harvesting and trading of mopane worms (*Imbrasia belina*) in Northern Namibia: an experience from the Uukwaluudhi area. *International Journal of Environmental Studies* 70, 494-502.
- Ticktin, T., 2004. The ecological implications of harvesting non timber forest products. *Journal of Applied Ecology* 41, 11-21.
- Toft, M.N.J., Adeyeye, Y., Lund, J.F., 2015. The use and usefulness of inventory-based management planning to forest management: Evidence from community forestry in Nepal. *Forest Policy and Economics* 60, 35-49.
- Toke, D., Marsh, D., 2003. Policy networks and the GM crops issue: assessing the utility of a dialectical model of policy networks. *Public administration* 81, 229-251.
- Torring, J., 2005. Governance network theory: towards a second generation. *European political science* 4, 305-315.

- Treib, O., Bähr, H., Falkner, G., 2007. Modes of governance: towards a conceptual clarification. *Journal of European public policy* 14, 1-20.
- Van Kersbergen, K., van Waarden, F., 2004. Governance' as a bridge between disciplines: Cross-disciplinary inspiration regarding shifts in governance and problems of governability, accountability and legitimacy. *European Journal of Political Research* 43, 143-171.
- Verzijl, A., Dominguez, C., 2015. The powers of water-user associations: on multiplicity, fluidity, and durability in the Peruvian Andes. *International Journal of the Commons* 9, 107-128.
- Wiersum, K.F., Ingram, V.J., Ros-Tonen, M., 2014. Governing access to resources and markets in non-timber forest product chains. *Forests, Trees and Livelihoods* 23, 6-18.
- Wiersum, K.F., Ingram, V.J., Ros-Tonen, M., 2013. Governing access to resources and markets in non-timber forest product chains. *Forest Trees and livelihood* 23.
- Wollenberg, E., Ingles, A., 1998. Incomes from the forest: Methods for the development and conservation of forest products for local communities. CIFOR, Bogor, Indonesia.
- Wynberg, R., 2004a. Achieving a fair and sustainable trade in devil's claw (*Harpagophytum* spp.) in: Sunderland, T., Ndoye, O. (Eds.), *Forest, products, livelihoods and conservation*. Centre for International Forest Research, Bogor, Indonesia.
- Wynberg, R., 2004b. Rhetoric, realism and benefit-sharing: Use of the traditional knowledge of Hoodia species in the development of an appetite suppressant. *Journal of world intellectual property* 7, 851-876.
- Wynberg, R., 2010. Navigating a way through regulatory framework for hoodia use, conservation, trade and benefit sharing., in: Laird, S., McLain, R., Wynberg, R. (Eds.), *Wild product governance: finding policies that work for non timber forest products*. Earthscan, London.
- Wynberg, R., Chennells, R., 2009. Green diamonds of the South: An overview of the San-Hoodia case, Indigenous Peoples, Consent and Benefit Sharing. Springer, pp. 89-124.
- Wynberg, R., Laird, S., Van Niekerk, J., Kozanayi, W., 2015. Formalization of the natural product trade in southern Africa: Unintended consequences and policy blurring in biotrade and bioprospecting. *Society & Natural Resources* 28, 559-574.
- Wynberg, R., Laird, S.A., 2007a. Less is often more: governance of a non-timber forest product, marula (*Sclerocarya birrea* subsp. *caffra*) in southern Africa, *International Forestry Review*. Commonwealth Forestry Association, Oxford; UK, pp. 475-490.
- Wynberg, R., Laird, S.A., 2007b. Less is often more: governance of a non-timber forest product, marula (*Sclerocarya birrea* subsp. *caffra*) in southern Africa. *International Forestry Review* 9, 475-490.
- Wynberg, R., van Niekerk, J., 2014. Global ambitions and local realities: achieving equity and sustainability in two high-value natural product trade chains. *Forests, Trees and Livelihoods* 23, 19-35.
- Wynberg, R.P., Laird, S.A., 2007c. Less is often more: governance of a non-timber forest product, marula (*Sclerocarya birrea* subsp. *caffra*) in southern Africa, *International Forestry Review*. Commonwealth Forestry Association, Oxford; UK, pp. 475-490.
- Yin, R.K., 2009a. Case study research: Design and methods. SAGE, London.
- Yin, R.K., 2009b. Case Study Research: Design and Methods, Fourth edition ed. SAGE Publications, London.
- Young, O.R., 2009. Governance for sustainable development in a world of rising interdependencies, in: Delmas, M.A., Young, O.R. (Eds.), *Governance of the environment: new perspectives*. Cambridge University Press, Cambridge, pp. 12-40.

## Summary

Since time immemorial, rural dwellers have used non-timber forest products (NTFPs) to meet their daily and seasonal household needs and also as a commercial product that contributes to household income. During the past decades increased attention had been given to further stimulate the use of NTFPs in tropical forest areas, especially after the realisation that these products can play dual roles, fulfilling both livelihood needs and contributing to conserving forest biodiversity. The development efforts included measures to improve the governance of NTFPs concerning both access to resources and to markets. Nonetheless, in many cases these products are still poorly regulated around the world.

Namibia is one of the countries in which a conscious effort has been undertaken to stimulate NTFP production and to improve their governance. These products are locally referred to as indigenous natural products (INPs). In order to promote sustainable commercialisation of INPs an Indigenous Plant Task Team (IPTT) was established as a multi-stakeholder forum for fostering development. The concept of sustainable commercialisation is interpreted in Namibia as denoting that commercialisation of INPs can be used to stimulate both income generation and biodiversity conservation. The IPTT was established to facilitate various pilot projects in production, processing and marketing of INPs in Namibia. As a result a multifaceted system involving multiple stakeholders and overlapping institutions has been developed through which decisions are made and implemented for regulating access to INPs and their markets.

As Namibia has undertaken conscious efforts to stimulate NTFP development, this country offers a good opportunity to study the complexity in NTFP governance systems. The concept of governance emerged in political science literature nearly three decades ago to reflect changes in policy process from the traditional approach which is centred on top-down, command and control and state-centric authority toward a new multi-actor and multilevel approach.

This thesis focuses on analysing the nature, diversity and dynamics of different forms and mechanisms for governance of different categories of INPs in Namibia. Specifically, the thesis identifies different forums through which decisions for management and trade of INPs are made and assesses how these forums influenced INP policy process. Furthermore, this thesis analyses the performance practices in the implementation of INP policies as well as the influence of different policy objectives such as biodiversity conservation, poverty alleviation and community-based development on the identification and formulation of INP policies. In order to achieve these research objectives, four questions are addressed in this thesis: (1) to what extent has multi-actor governance influenced INP policy development in Namibia? (2) which governance arrangements have emerged for accessing INP resources and markets in Namibia? (3) to what extent do formal CBNRM institutions follow existing INP practices on the ground and if not how have they been adapted to fit local context? (4) how do the different international discourses influence decision making and institutional practices in the devil's claw enterprise in Namibia? Each of these questions is addressed in the four empirical chapters and further reviewed in the concluding chapter.

In order to study the different manifestations of the complex governance system each chapter is based on a specific analytical concept. In chapter 2 a policy network analysis is used to assess the multi-actor constellation of the INP governance system. In chapter 3 an actor-oriented institutional analysis is employed to identify the different modes of governance as well as different governance arrangements for INP products. In both cases a multiple case



study approach was used involving seven specific INPs. The INPs were purposively selected to represent a range from locally-used to internationally-marketed species. Chapter 2 and 3 focuses on governance as a structure. These structural oriented studies are complemented by two case studies on the governance processes regarding specific INPs in chapter 4 and 5.. These chapters are guided by the analytical concept of institutional bricolage and performance (chapter 5) and discourse analysis (chapter 6). For data collection a qualitative approach was used with data being collected through interviews, focus group discussion, participant observation and document analysis. This combination of data collection methods allowed cross-checking and triangulation of information.

Chapter 2 centres on the first research question. By means of a policy network analysis it gives an assessment of the nature of the INP governance systems in respect of actor constellations and the extent to which different governance bodies influenced INP policy development in Namibia. The governance structure through which INPs are governed in Namibia is identified as having two dimensions. The first dimension constitutes of different multi-stakeholder governance forums such as the Indigenous Plant Task Team (IPTT), the Devil's Claw Working Group (DCWG) and the Interim Bioprospecting Committee (IBPC). These governance forums have emerged in response to different policy concerns and their substantive focus hence varies. Whereas the IPTT mainly focuses on coordination of INP activities, the DCWG and the IBPC have mainly focused on agenda setting and policy-making. The second structural dimension of INP governance network is reflected in an interactive network of pilot projects. In this network, clusters or sub-groups of actors can be distinguished that focus their activities on different functions such as: value addition and product development, resource assessment and management and institutional capacity building. Both the multi-stakeholder forums and the clusters of pilot projects do not yet include all relevant stakeholders, especially stakeholders from the primary producers, private sector and product quality standardisation bodies are weakly represented. This limited representation has various reasons ranging from the lack of financial resources to maintain participation of all stakeholders to the lack of trade associations for different INP industries; for example trade association for cosmetic, herbal/medicinal and or fragrance products. Consequently, several issues including the extent and nature of private sector engagement are still a challenge within the INP governance system. The public participation in the governance networks is dominated by a variety of thematically oriented civil society organisations and private sector organisations. These focus mostly on issues of production and conservation, especially at the community level. The development of improved commercial relationships in terms of providing public support to small and medium enterprises gets less attention. These findings indicate that attention needs to be given to the further development of policy platforms in which all relevant stakeholders are represented; these should stimulate a further balancing of stakeholder interests and power within the project dominated governance networks.

Chapter 3 addresses the second research question regarding the characteristics of the different governance arrangements that have emerged for accessing INP resources and markets in Namibia by analysing the different actor constellations and institutional configurations involved. The governance arrangements can be categorised in two dimensions. The first dimension involves arrangements related to accessing INPs in different land tenure systems by either legal instruments or customary rules. This mix of governance arrangements is species-specific. Commercially interesting INPs are mostly accessed through highly institutionalised legal arrangements. In contrast, products that are exclusively locally collected

and used may be accessed solely through community-based, self-organised governance arrangements with no legal instruments involved. Increasingly, however, a combination of access regulations are present.

The second dimension of the governance arrangements consists of arrangements related to facilitation of access to INPs niche markets. Different types of such marketing arrangements are present depending on the market destination and the relations between product suppliers and buyers. Three types of value chain arrangements for providing access to markets were identified. The captive value chain is mostly dominated by a few lead firms and a minimal value chain upgrading within the producer country. These arrangements concern products such as devil's claw that are sold at international markets. In the relational or quasi-hierarchical value chain, producers are supported through user group associations, trade associations and public support from NGOs and the state. The organised producers are linked directly to manufacturers through financial and technical support led either by NGOs or the state. Products such as marula oil, *Commiphora* resin and Kalahari melon oil are typically marketed through such chain arrangements. The third value chain is highly informal. It mainly operates at the level of domestic markets and is characterised by the interaction between local producers and buyers. Mopane worm production reflects this value chain. This differentiation in value chains indicates that the governance arrangements for accessing resources and markets are characterised by either formal or customary norms, often acting in combination.

Although several relations in the different governance arrangements could be identified, a uniform pattern could not be determined within which factors determine a particular type of governance arrangement for a given INP. Rather than being purposively developed, the governance arrangements for access to resources and markets often result from a reflexive and ad-hoc development process. Considering the diversity in INP production and marketing systems such a differentiated approach to the further development of INP governance arrangements seems to be most appropriate. However, in view of the fact that NTFP enterprises are often very small and that they co-exist geographically, it would be ineffective to develop policies for each specific INP. A general comprehensive policy approach can be adopted for products sharing similar characters, such as products derived from protected species which are characterised by destructive harvesting methods or products sharing similar processing techniques or market segments.

Chapter 4 analyses the performance of governance institutions in providing access to and stimulating sustainable management of INPs in areas where community-based natural resource management (CBNRM) institutions have been introduced. The CBNRM institutions were originally established for wildlife and timber production, but recently INPs were incorporated in CBNRM programmes as a means to stimulate integrated resource management. By using the concept of institutional bricolage as an analytical framework, the chapter critically examines the extent to which the CBNRM institutions are in harmony with the actual INP related practices, and whether they have gradually been adapted to fit the specifications of products and of the cultural and ecological context in which the products are situated. The analysis demonstrates that the performance of CBNRM institutions in providing access to and management of INPs has yielded mixed results. Originally the CBNRM institutions were narrow in scope, involving only specific resources such as wildlife, timber or water. In order to incorporate the INPs in such institutional arrangements several governance practices had to be further adapted in order to become compatible or complementary to existing culturally-based local practices. This often involved devil's claw, where different arrangements for access and management emerged because of overlapping authorities to

oversee these practices. In areas where a CBNRM management structure had been established with support of civil society organisations, training in new techniques for resource assessments and sustainable harvesting practices were introduced. In contrast, in common access areas with limited support from civil society, the capacity of the government to train harvesters and conduct pre- and post-harvesting resource assessment was limited and the customary systems of harvesting were maintained.

Incorporation of INP activities into CBNRM also led to the scaling down of the formal CBNRM practices to the requirements of specific INPs. For example, the establishment income generation activities in communal conservancies such as *Commiphora* resin illustrates how formal requirements of forest inventory was scaled down to fit the harvesting of *Commiphora* resin. A third example in respect of mopane worms illustrates how in contrast to the usual administration of INP collecting permit at the national level, a local level permit system was initiated. The fees were retained at the local level where rural communities could decide how to invest the money. Thus, in terms of scope, practices and procedures the designed CBNRM institutions often lack harmony with both the INP institutions at the national level and the socially embedded institutions at the local level. The stimulation of INP management through CBNRM institutions has therefore brought mixed results, and the role of the CBNRM policy in meeting the sustainable development objectives for INPs depends on the extent to which they are implemented in a flexible and adaptive manner.

Chapter 5 examines the way in which international discourses on NTFP conservation and development have influenced policy making and institutional practices of INPs in Namibia. This analyses specifically focuses on the experiences with regulating devil's claw harvesting and management. Due to its role on international markets, the development policy for this species is significantly impacted by the discourse on the scope of NTFP commercialisation in respect of both biodiversity conservation and sustainable utilisation as well as poverty alleviation. The analysis of the impact of this discourse on the actual governance practices in Namibia demonstrates that the discourse has resulted in the development of multiple storylines that are supported by different actor coalitions. The sustainable utilisation storyline is strongly influenced by the international regimes of the Convention on Biodiversity Conservation (CBD) and the CITES regulations on trade on endangered species. Proponents of this storyline emphasise the need of strict regulations in order to achieve sustainable utilisation. Such regulations involve harvest permits, regulation of international trade through CITES and harvest bans in selected regions where illegal harvesting is perceived to be high. A second storyline encourages a less strict approach by focusing on the adoption of community-based institutions and incentives for sustainable utilisation of devil's claw. Adoption of community-based institutions is believed to empower the local people in negotiating access and pricing of devil's claw. According to this view the benefits of sustainable utilisation of devil's claw can serve as an incentive for sustainable use of the resource. As a result of the interaction between these two storylines in developing a national devil's claw policy, the strict regulations according to CITES framework have been avoided and rejected and more emphasis was given to an incentive approach. This case-study illustrates how the global discourse on NTFP commercialisation stressing strict regulations has been amended at the national level by giving also attention to the development of incentive-oriented policy instruments in respect to stimulating locally embedded property rights and exclusive purchase agreements. These instruments should serve to promote responsible sourcing of devil's claw materials, equity and benefit sharing. This process illustrates how the national development process was not based on a hegemonic discourse but



considered different concepts from different international agreements such as CBD, CITES, intellectual property rights as well as from the trade liberalisation ideals of open market and competition. As the implementation from these multiple principles of international policies fall under the domain of different government authorities, their intertwining required inter-sectoral cooperation. There is space for furthering such inter-sectoral cooperation. Specifically, further inputs from the Ministry of Trade, Industrialisation and SME Development, the Namibia Competition Commission and the National Standard Institute would be beneficial in shaping the market structure and value addition for the devil's claw enterprise. This illustrates how the development of INP policies needs an expansion of the usual governmental policy platforms involving natural resource and community development departments.

In conclusions this study shows that Namibia has a well-established national stakeholder platform for coordinating NTFPs activities and sharing knowledge. This platform, which is dominated by state actors and civil society organisations, has made significant progress in terms of organising access to INPs in Namibia. The state actors and civil society organisations have adopted the international discourse of NTFP commercialisation, which promotes biodiversity conservation and poverty alleviation, to develop governance arrangements that are adapted to the Namibia land-use conditions. These arrangements include command and control measures such as harvest permits in combination with incentive measures such as incorporation of INP harvesting in community-based natural resource management programmes such as conservancies and community forests as well as establishment of purchase agreements between buyers and harvesters in order to secure access to markets for local communities. However, more attention still needs to be given to the development and support of INP-based small and medium enterprises. The international discourse on NTFP commercialisation has not yet resulted in the development of governance measures in respect of the further development of a well-regulated local marketing structure for INP valorisation.

This thesis contributes towards the increasing scientific evidence that indicate that NTFP policies are multidimensional. The stimulation of improved governance of INPs is characterised by pragmatic developments that are differentiated according to the different types of NTFPs. Such a flexible approach is appropriate for NTFPs in view of the variety in NTFP ranging from locally-used to internationally traded products and from endangered wild species to cultivated species as well as the variety in marketing conditions, including emergence of new niche markets. Such a flexible approach is also appropriate in view of the gradual incorporation of INP management activities in related forms of community-based management of natural resources such as wildlife, timber and water. As a result of the varied nature of NTFP production and marketing systems the governance systems for NTFPs are characterised by overlapping institutional arrangements for providing access to NTFP resources and markets. In developing improved governance systems for stimulating NTFP production as a contribution to sustainable development it is therefore imperative to recognize that there does not exist an institutionally clearly delineated NTFP sector, as suggested by the term INP sector in Namibia, but rather an complex network of institutional arrangements for specific NTFPs.

## Samenvatting

Sinds vele jaren hebben plattelandsbewoners niet-houtige bosproducten (NHBP's) gebruikt voor hun dagelijkse en seizoensgebonden huishoudelijke behoeften en tevens als een commercieel product dat bijdraagt aan het huishoudelijke inkomen. Gedurende de afgelopen decennia is er in toenemende mate aandacht besteed aan de verdere stimulering van gebruik van NHBP's in tropische bosgebieden. Deze ontwikkeling was gebaseerd op het inzicht dat deze producten een tweevoudige rol hebben in enerzijds het bijdragen aan levensbehoeften en anderzijds aan de conservering van biodiversiteit in bossen. De ontwikkelingsactiviteiten bestonden uit verschillende beleidsmaatregelen met als doel een verbeterde toegang tot zowel de natuurlijke hulpbronnen als tot de markt voor de producten. Maar in veel gevallen zijn NHBP's in de meeste landen nog steeds slecht gereguleerd.

Namibië is een van de landen waar gerichte maatregelen zijn ondernomen om de productie en regulering van NHBP's te verbeteren. Deze producten worden lokaal aangeduid met de term 'inheemse natuurlijke producten' (INPs). In het kader van de stimulering van een duurzame commercialisatie van deze INPs is er een Task Team Inheemse Planten (IPTT) opgericht die moest dienen als een platform voor de diverse actoren die betrokken zijn bij de INP ontwikkeling. Het principe van duurzame commercialisering wordt in Namibië geïnterpreteerd als een verwijzing naar de mogelijkheid dat de commercialisering van INPs zowel inkomens kan genereren als kan bijdragen aan de conservering van biodiversiteit. De IPTT werd opgericht om de oprichting van proefprojecten op het gebied van de productie, verwerking en vermarketing van INPs in Namibië te vergemakkelijken. Als gevolg van deze ontwikkeling is er een veelvormig beleid- en beheersysteem ontwikkeld voor de besluitvorming over en de uitvoering van maatregelen ter regulering van de toegang tot de INPs en hun markten. Dit systeem omvat een veelheid aan betrokkenen en bestaat uit verschillende overlappende instituties.

Omdat Namibië gerichte pogingen tot stimulering van NHBP ontwikkeling heeft ondernomen biedt dit land een goede mogelijkheid om de complexiteit van het beleid- en beheersysteem voor NHBP te bestuderen. Ongeveer drie decennia geleden werd in de politieke wetenschap het begrip 'governance' ontwikkeld om de veranderingen in het politieke proces te duiden: van de traditionele benadering van een van boven af gestuurde regulering en controlering die gebaseerd was op de autoriteit van de staat naar een benadering die is gebaseerd op de deelname van een veelvoud van actoren op verschillende niveaus van besluitvorming.

Deze thesis analyseert het karakter, de diversiteit en de dynamiek van de verschillende vormen en mechanismen voor de 'governance' van verschillende categorieën van NHBP's in Namibië. Meer specifiek heeft de thesis tot doel om de verschillende platforms voor besluitvorming over het beheer van en de handel in NHBP's te identificeren en om een analyse te maken van de invloed van het INP beleidsproces op deze platforms. Daarnaast wordt tevens een analyse gemaakt van de invloed van de verschillende beleidsdoelstellingen, zoals conservering van biodiversiteit, armoedebestrijding en lokale ontwikkeling, op de identificatie en formulering van het INP beleid en van de uitvoeringspraktijk bij de verwezenlijking van het INP beleid. Om deze doelstellingen van onderzoek te verwezenlijken worden in deze thesis vier onderzoeksvragen behandeld:

(1) in welke mate heeft het multi-actor governance proces de ontwikkeling van het INP beleid in Namibië beïnvloed?

(2) Welke institutionele arrangementen zijn er ontwikkeld voor de stimulering en regulering van toegang tot de natuurlijke hulpbronnen en de markten voor de diverse NHBPs?

(3) In hoeverre weerspiegelen de formele institutionele organisaties op lokaal niveau de lokaal aanwezige praktijken voor INP productie, en indien dit niet het geval is, in hoeverre zijn ze dan geleidelijk aangepast aan de lokale omstandigheden?

(4) Hoe hebben de verschillende formele normen die tot uiting komen in de beleidsverhalen op internationaal niveau het besluitvormingsproces en de institutionele praktijken voor de ontwikkeling van een van de belangrijkste Namibische INPs Devil's Claw beïnvloed?

Deze vier vragen worden behandeld in de vier empirische hoofdstukken uit deze thesis en worden nader geëvalueerd in het afsluitende hoofdstuk.

Om de verschillende manifestaties van het complexe governance systeem te bestuderen is elk van de empirische hoofdstukken gebaseerd op een specifieke analytische benadering. In hoofdstuk 2 wordt het wetenschappelijke concept van beleidsnetwerk gebruikt om de bijdragen van verschillende actoren aan het INP governance systeem te analyseren. In hoofdstuk 3 wordt vervolgens op basis van een institutionele analyse verschillende typen van governance onderscheiden met de daarbij behorende specifieke arrangementen voor beleid en beheer voor verschillende INPs. Deze analyses zijn gebaseerd op een vergelijkend onderzoek van zeven verschillende producten. Deze werden bewust geselecteerd om de variatie van producten voor lokaal gebruik tot producten voor de internationale markt te weerspiegelen. Hoofdstuk 2 en 3 analyseren de structuur van het governance systeem. Vervolgens analyseren hoofdstuk 4 en 5 het governance proces. Deze twee hoofdstukken bestaan uit twee case studies, die gebaseerd zijn op twee verschillende analytische benaderingen. Hoofdstuk 4 analyseert de processen van uitvoeringspraktijken en institutionele vermenging en hoofdstuk 5 analyseert de invloed van formele beleidsnormen en verhalen. De verschillende hoofdstukken zijn gebaseerd op een veelvoud aan kwalitatieve onderzoeksdata. Deze werden verzameld door middel van verschillende onderzoeksmethoden in de vorm van interviews, focus groep discussies, participatieve observaties en documentanalyse. Deze combinatie van dataverzameling maakte het mogelijk om de gegevens te cross-checken.

Hoofdstuk 2 behandelt de eerste onderzoeksvraag. Door middel van een analyse van het beleidsnetwerk presenteert dit hoofdstuk een analyse van het karakter van het INP governance systeem. Deze analyse betreft de samenstelling van het netwerk van de actoren en de mate waarin verschillende actorgroepen het beleid ten aanzien van de INP beleidsontwikkeling in Namibië beïnvloeden. De analyse geeft aan dat de beleidsstructuur uit twee dimensies bestaat. De eerste dimensie bestaat uit een samenspel tussen verschillende beleidsfora van het Indigenous Plant Task Team (IPTT), de Devil's Claw Working Group (DCWG) en de Interim Bioprospecting Committee (IBPC). Deze beleidsforums zijn ontwikkeld naar aanleiding van verschillende aandachtspunten in het INP beleid en hebben derhalve een verschillende focus. De IPTT richt zich voornamelijk op de coördinatie van verschillende INP activiteiten, terwijl de DCWG en het IBPC zich voornamelijk richten op beleidsagendering en beleidsformulering. De tweede structurele dimensie van het INP beleidsnetwerk komt tot uiting in een interactief netwerk van voorbeeld projecten. In dit netwerk kunnen verschillende clusters onderscheiden worden. Deze richten zich specifiek op verschillende activiteiten zoals productontwikkeling en waardevermeerdering, grondstoffen analyse, beheer en ontwikkeling van de institutionele capaciteit. Zowel de multi-actor forums als de clusters van pilot projecten omvatten niet alle relevante belanghebbenden: met name de belanghebbenden uit de primaire industrie, private sector en organisatie voor

kwaliteitsstandaardisering zijn slecht vertegenwoordigd. Er zijn verschillende redenen voor deze beperkte representatie, uiteenlopend van een gebrek aan financiële middelen voor deelname van alle belanghebbenden tot een gebrek aan handelsverenigingen voor verschillende INPs zoals cosmetische producten, medicinale producten en geurstoffen.

Er zijn dus verschillende zaken zoals de mate en aard van de betrokkenheid van de private sector die nadere aandacht vragen in het INP governance systeem. De publieke participatie in de beleidsnetwerken wordt gedomineerd door verschillende thematisch georiënteerde organisaties uit de civiele en private sector. Deze richten hun aandacht voornamelijk op zaken zoals productie en conservering, met name op lokaal niveau. De ontwikkeling van verbeterde commerciële relaties door middel van publieke steun voor kleine en middelgrote bedrijven krijgt veel minder aandacht. Deze bevindingen geven aan dat er nader aandacht gegeven moet worden aan de verdere ontwikkeling van de beleidsforums wat betreft deelname van alle relevante belanghebbenden. Hierdoor wordt gestimuleerd dat er binnen deze forums een beter evenwicht in belangen en in de macht van belanghebbenden tot stand kan komen.

Hoofdstuk 3 behandelt de tweede onderzoeksvraag betreffende de karakteristieken van de verschillende beleidsarrangementen die in Namibië zijn ontwikkeld om de toegang tot de natuurlijke hulpbronnen en hun markten te reguleren. Deze analyse richt zich op de identificatie van de verschillende groepen van actoren en de verschillende soorten van institutionele vormgeving. Twee dimensies in beleidsarrangementen worden onderscheiden. De eerste dimensie omvat de arrangementen voor de regulering van de toegang tot de verschillende producten onder verschillende typen van landeigendom. Hierbij kan er sprake zijn van zowel legale regels of van traditionele lokale regels. Deze combinatie in regelgeving is soort-specifiek. De productie van commerciële INPs worden vaak gereguleerd door een sterk geformaliseerde legale regelgeving. Maar de productie van INPs die voornamelijk op lokaal niveau worden verzameld en gebruikt wordt vaak gereguleerd door zelf-georganiseerde regelingen van de lokale gemeenschappen; hierbij is er geen sprake van formele legale regelgeving. In toenemende mate is er sprake van een combinatie van deze twee vormen van regelgeving.

De tweede dimensie van de beleidsarrangementen omvat verschillende maatregelen ter ondersteuning van de toegang tot gespecialiseerde markten voor specifieke INPs. Afhankelijk van het soort van markt en de relaties tussen producenten en kopers kunnen verschillende typen van arrangementen voor toegang tot specifieke markten onderscheiden worden. Drie typen van arrangementen voor de marktketens kunnen onderscheiden worden. Het eerste type van een 'captive value chain' wordt gedomineerd door een paar handelsfirma's en wordt gekenmerkt door een minimale toevoeging in waarde in het land van productie. Dit arrangement wordt weerspiegeld in de internationale handel met betrekking tot Devil's Claw. Het tweede type van marktarrangementen bestaat uit een 'quasi-hierarchical value chain' model. In dit arrangement krijgen de producten ondersteuning van gebruikersgroepen, handelsorganisaties en publieke organisaties zoals NGOs en staatsorganisaties. De georganiseerde producenten zijn door financiële en technische hulpverlening rechtstreeks verbonden met de verwerkende industrie. Typische voorbeelden van deze markt arrangementen voor INPs zijn marula olie, *Commiphora* hars en Kalahari meloen olie. Het derde type van marktarrangement is zeer informeel. Deze marktrelatie bestaat uit een directe interactie tussen producenten en consumenten en heeft vooral betrekking op producten die op de lokale markt worden verkocht. Mopane wormen vormen een voorbeeld van deze vorm van vermarkting. Het onderscheid tussen verschillende handelsketens toont aan dat de regelgeving

ten aanzien van de toegang tot de natuurlijke hulpbronnen en de markten wordt gekarakteriseerd door een combinatie in formele en lokale normen, die vaak in een gecombineerde vorm tot uiting komen.

Hoewel de analyse verschillende beleidsarrangementen met een verscheidenheid in relaties tussen producenten en consumenten aantoonde, was het niet mogelijk om een duidelijk patroon in factoren die een bepaald arrangement voor een specifieke INP bepalen te onderscheiden. De beleidsarrangementen voor de toegang tot de producten en hun markten worden niet zozeer stelselmatig ontwikkeld, maar zijn het resultaat van een reflectief en ad-hoc ontwikkelingsproces. Gezien de diversiteit in INP productie en marketing systemen lijkt zo'n gedifferentieerde benadering in de verdere ontwikkeling van INP beleidsarrangementen het meest logisch. Maar gezien het feit dat de NHBP ondernemingen vaak klein zijn en op een specifieke geografische schaal opereren, is het niet effectief om voor ieder INP een apart beleid te ontwikkelen. Het is meer effectief om een meer algemene benadering voor producten met dezelfde eigenschappen te ontwikkelen, zoals bijvoorbeeld voor INPs die afkomstig zijn van beschermde soorten die te lijden hebben van destructieve oogstmethoden of INPs die dezelfde eigenschappen hebben ten aanzien van verwerking en vermarkting.

Hoofdstuk 4 analyseert de praktijk in de uitvoering van de institutionele beleidsmaatregelen. Deze analyse richt zich op de praktijkervaringen rondom de regulering en stimulering van duurzaam beheer van INPs op basis van het beheer van natuurlijke hulpbronnen op gemeenschapsniveau (CBNRM = community-based natural resource management). In Namibië werden CBNRM organisaties oorspronkelijk ontwikkeld voor wild- en bosbeheer, maar recent werd deze benadering ook toegepast voor geïntegreerd beheer van INPs. Op basis van het wetenschappelijke concept van institutionele bricolage wordt in dit hoofdstuk een kritische evaluatie gemaakt van de overeenstemming tussen CBNRM-instituten en de praktijken in gebruik en beheer van INPs, en wordt beschouwd in hoeverre de instituten geleidelijk zijn aangepast aan de specifieke eisen van verschillende producten en van de culturele en ecologische karakteristieken van hun productie. De analyse maakt duidelijk dat de praktische uitvoering van de CBNRM regelingen ten aanzien van toegang tot en beheer van de INPs gemengde resultaten heeft opgeleverd. Aanvankelijk waren de CBNRM regelingen beperkt van aard en betroffen zij alleen specifieke producten zoals wilde dieren, timmerhout, of water. De incorporatie van INPs in deze regelingen vereiste dat de verschillende institutionele arrangementen aangepast moesten worden om aan te sluiten bij de reeds bestaande cultureel-bepaalde lokale praktijken. Als gevolg van de verschillende regelingen voor de productie van Devil's Claw, die ontstonden door betrokkenheid van verschillende autoriteiten, vonden dergelijke aanpassingen met name plaats bij de ontwikkelingen van nieuwe regelingen voor dit product. In gebieden waar een nieuwe CBNRM beheer structuur werd ingevoerd met assistentie van civiele organisaties werden met name trainingen in nieuwe technieken rondom inventarisatie en duurzame oogst geïntroduceerd. Maar in gebieden met gemeenschappelijke gronden waar er slechts weinig civiele assistentie werd gegeven was de capaciteit van de overheid om lokale mensen te trainen in gewasinventarisatie en nieuwe oogstmethoden beperkt en werden de traditionele oogst systemen gehandhaafd.

De incorporatie van INP activiteiten in het CBNRM programma had tot gevolg dat de formele CBNRM praktijken verder aangepast werden aan de vereisten van specifieke INPs. Een voorbeeld hiervan is de invoering van maatregelen voor het genereren van inkomens in gemeenschappelijke beheerde landerijen waar het hars van *Commiphora* wordt geproduceerd. Hier werden de formele vereisten van een op houtoogst gerichte bosinventarisatie aangepast

aan de vereisten van de harswinning. Een ander voorbeeld is de aanpassing van de regels ten aanzien van een landelijke registratie voor het verzamelen van INPs. Voor het verzamelen van Mopane wormen werd een lokaal systeem voor toestemming van de verzameling ontwikkeld. De leges voor deze toestemming werden op lokaal niveau beheerd en de lokale bevolking kon zelf beslissen hoe die fondsen werden geïnvesteerd. As gevolg van dergelijke aanpassingen verschillen de aard en de procedures van de INP regelingen vaak van zowel de formele vereisten van CBNRM instituties op nationaal niveau en van de traditionele lokaal-ontwikkelde praktijken. De stimulering van beter beheer van INPs op basis van de regelingen voor communaal beheer van de natuurlijke hulpbronnen heeft derhalve een gemengd resultaat. De rol van het CBNRM beleid bij het ontwikkelen van een duurzaam beheer van INPs hangt af van de mate waarin de betreffende regels op een flexibele en aangepaste wijze worden toegepast.

Hoofdstuk 5 analyseert vervolgens hoe de internationale verhandelingen over de conservering en ontwikkeling van NHBPs het beleidsproces en de institutionele ontwikkeling van INPs in Namibië hebben beïnvloed. Deze analyse richt zich met name op de ervaringen met de regulering van het beheer en de oogst van Devil's Claw. Omdat dit een belangrijk internationaal exportproduct is wordt het ontwikkelingsbeleid in belangrijke mate bepaald door de internationale verhandelingen over de rol en betekenis van commerciële NHBPs ten aanzien van de conservering van biodiversiteit, duurzaam gebruik en armoedebestrijding. De analyse betreffende de invloed van deze beleidsbenadering op de actuele beleidsmaatregelen in Namibië geeft aan dat de formele benadering is vertaald in verschillende meer specifieke benaderingen van verschillende coalities van beleidsactoren. De benadering van duurzaam gebruik is sterk beïnvloed door het internationale beleidsregime van de Convention on Biodiversity Conservation en de daaraan verwante CITES regels ten aanzien van de handel in bedreigde soorten. De voorstanders van deze benadering leggen veel nadruk op de noodzaak tot strikte regulering als voorwaarde voor duurzaam gebruik. Deze regulering betreft de formele uitgifte van toestemming voor het oogsten van bedreigde gewassen, het voldoen aan de voorwaarden voor de CITES regels voor internationale handel en het verbieden van producten uit gebieden waar illegaal wordt geoogst. Een andere benadering stimuleert een minder strenge regulering die veel meer is gebaseerd op de adoptie van gemeenschappelijke regelingen op lokaal niveau en het stimuleren van nieuwe technieken voor duurzaam gebruik. Hierbij wordt verondersteld dat de adoptie van regelingen op lokaal gemeenschappelijk niveau de lokale bevolking meer invloed geven over de toegang tot en de prijsontwikkeling van Devil's Claw. Volgens deze zienswijze draagt een dergelijke benadering van duurzame productie bij aan een de stimulering van een duurzaam en conservatie-gericht beheer.

Als gevolg van de interactie tussen deze twee benaderingen tijdens de ontwikkeling van een nationaal beleid ten aanzien van Devil's Claw is de strikte regulering conform het CITES regime verworpen en is er meer nadruk gelegd op meer stimulerende beleidsmaatregelen. Deze case studie toont derhalve aan hoe de internationale benaderingen ten aanzien van de commercialisering van NHBPs die gebaseerd zijn op strikte regulering op nationaal niveau verder zijn aangepast. Hierbij is met name aandacht besteed aan de ontwikkeling van beleidsinstrumenten ter stimulering van de lokale gebruiksrechten en exclusieve handelsovereenkomsten. Deze beleidsinstrumenten hebben tot doel om zowel de zorgvuldige oogst van Devil's Claw te stimuleren als het gemeenschappelijk nut en sociaaleconomische gelijkheid in het profiteren van de productie te bevorderen. Deze ontwikkeling illustreert hoe het nationale ontwikkelingsproces niet was gebaseerd op een hegemonische benadering. In plaats daarvan was het gebaseerd op verschillende zienswijzen



die tot uiting komen in de diverse internationale overeenkomsten zoals CBD, CITES, en op internationale principes zoals intellectueel eigendom, liberalisering van handel, ontwikkeling van vrije markten en eerlijke handelscompetitie. De implementatie van deze verschillende beleidsprincipes zoals verwoord in internationale beleidsdocumenten valt onder de verantwoordelijkheid van verschillende overheidsdiensten en vereist derhalve intersectorale samenwerking. Er bestaat nog de nodige ruimte voor versterking van deze samenwerking tussen verschillende Namibische instellingen. Met name zou het nuttig zijn als het Ministerie van Handel, Industrialisatie en Ontwikkeling van middenstandsbedrijven, de Namibische Commissie ter regulering van Competitie en het Nationaal Instituut voor Standardisering nader betrokken worden bij de ontwikkeling van de marktstructuur en processen van waarde vermeerdering voor Devil's Claw. Deze constatering geeft aan dat er in het kader van de ontwikkeling van het INP beleid ruimte is voor een verdere uitbreiding van de gebruikelijke beleidsplatformen op het gebied van natuurlijke hulpbronnen en lokale ontwikkeling.

De conclusie van deze studie is dat er in Namibië op nationaal niveau een duidelijk ontwikkeld platform van belanghebbenden bestaat voor de coördinatie en kennisuitwisseling op het gebied van NHBP activiteiten. Dit platform wordt gedomineerd door actoren van de overheid en civiele organisaties en heeft een significante voortgang geboekt bij de ontwikkeling van een gereguleerde toegang tot NHBPs. De actoren hebben op basis van het internationale discours van commercialisering van NHBPs als een middel tot zowel armoedebestrijding en bescherming van biodiversiteit verschillende beleidsmaatregelen ontwikkeld die zijn afgestemd op de Namibische werkelijkheid van landgebruik. Deze maatregelen omvatten zowel controlemaatregelen ten aanzien van het oogsten van de INPs als diverse stimuleringsmaatregelen voor het opnemen van INP productie in de programma's voor communaal beheer van natuurlijke hulpbronnen. Ook zijn er stimuleringsmaatregelen voor het ontwikkelen van overeenkomsten voor verkoop van INPs tussen lokale producenten en opkopers als om de toegang tot markten door lokale producenten te verbeteren. Er dient echter nog verdere aandacht gegeven te worden aan de ontwikkeling van kleine en middelgrote bedrijven voor de verwerking van de INPs. Het internationale discours ten aanzien van duurzame commercialisatie van NHBPs heeft nog niet geleid tot de ontwikkeling van specifieke beleidsmaatregelen voor verdere ontwikkeling van goed-gereguleerde lokale markten, die het mogelijk maken dat de producten een hogere toegevoegde waarde krijgen.

Dit proefschrift draagt bij aan het toenemende wetenschappelijke bewijs ten aanzien van het multi-dimensionele karakter van het beleid rondom NHBPs. De ontwikkeling van een beter NHBP beleid in Namibië wordt gekarakteriseerd door een pragmatische benadering waarin de beleidsmaatregelen worden gedifferentieerd op basis van de aard van specifieke INPs. Deze flexibele benadering past goed bij de variatie in NHBPs. Deze variëren van producten voor lokaal gebruik tot internationaal verhandelde producten en van bedreigde wilde soorten tot gecultiveerde soorten. De variatie omvat ook de verschillende vormen van vermarkting, inclusief de ontwikkeling van nieuwe gespecialiseerde markten. Zo'n flexibele benadering is ook toepasselijk gezien het feit dat de stimulering van INP productie geleidelijk wordt opgenomen in de diverse programma's voor gemeenschappelijk beheer van natuurlijke hulpbronnen zoals wild, bos en water. Als gevolg van het veelsoortige karakter van de verschillende systemen van NHBP productie en verkoop worden de NHBP beleidssystemen gekarakteriseerd door overlappende institutionele regelingen ten aanzien van de toegang tot de verschillende NHBPs en hun markten. Het is daarom noodzakelijk dat bij de ontwikkeling van een verbeterd beleid voor de stimulering van NHBP productie als een middel tot duurzame ontwikkeling niet wordt uitgegaan van de veronderstelling dat er een institutioneel

duidelijk omgrensde NHBP sector in Namibië bestaat. Hoewel dit wordt gesuggereerd door de term INP sector is er veeleer sprake van een complex netwerk van institutionele arrangementen voor specifieke NHBPs.



## About the Author



Albertina Ndeinoma was born on 23 December 1974 in Okalongo constituency in Namibia. After completing her secondary education at Iipumbu Senior Secondary School in 1993, Albertina was admitted at the University of Namibia. However due to the lack of financial means, the studies at the University of Namibia could not materialise. The following year, Albertina then joined Ogongo Agricultural College in 1995, where she obtained her three year Diploma in Agriculture in 1997. It was at this College, where Albertina was nominated to pursue her Degree studies at the University of Stellenbosch, with funding from the training component of the Namibia-Finland Forestry Project (NFFP). In 2001 Albertina obtained a BSc Degree in Forest Science at the University of Stellenbosch. In the following year, Albertina joined her Alma Mata, Ogongo Agricultural College as a Training Officer, where she taught students doing both Certificate and Diploma in Forestry. Just two years after joining the College, Albertina was promoted to head the Forestry Department at Ogongo Agricultural College. During this period, Albertina was also spearheading the implementation of the projects NFFP at the College.

After three years of teaching, Albertina went back to Stellenbosch to further her studies, again with funding from NFFP. At Stellenbosch, Albertina completed her MSc. in Ecological Impact Assessments. Her MSc degree focused on assessing the impact of surface mining on vegetation community, specifically looking at how surface mining alters the mycorrhizal communities, which are important in facilitating plant growth. After completing her MSc studies in 2007, Albertina went back to Ogongo Agricultural College to continue her academic career. In 2008, Albertina joined the University of Namibia (UNAM), through the structural transformation that merged Ogongo Agricultural College with the University of Namibia. Under UNAM, Albertina also served as the Head of the Department of Integrated Environmental Science during the period between 2008 and 2010. During this period, Albertina also obtained a Post-Graduate Diploma in Education, a study she completed on a distance mode at the University of Namibia.

In February 2011, Albertina joined Wageningen University and Research Centre to pursue her PhD under the supervision of Professor Bas Arts, Associate Professor Freerk Wiersum and Professor Isaak Mapaire. The PhD programme that was funded by the Netherlands Fellowship Programmes was undertaken in a form of a Sandwich, whereby Albertina spend a significant time in Namibia collecting data and only stayed in Wageningen for about 18 months writing the proposal and the thesis respectively. Her PhD programme focused on understanding the nature, diversity and dynamics of governance arrangements for indigenous natural products in Namibia.

**Albertina Ndeinoma**  
**Wageningen School of Social Sciences (WASS)**  
**Completed Training and Supervision Plan**



| Name of activity   | Department / institute   | Year      | ECTS *      |
|--|--|-----------|-------------|
| <b>A. Project related competences</b>  |  |           |             |
| Research proposal writing and presentation   | FNP, WUR   | 2011      | 6           |
| Forest and Nature Conservation Policy: theoretical perspectives, FNP 31806   | WUR  | 2011      | 6           |
| Summer school Participatory forest management as a practice and performance  | FNP & WASS   | 2011      | 3           |
| FNP research seminars  | FNP, WUR   | 2011-2015 | 2           |
| <i>'Institutional structures for governance of indigenous natural products in communal areas of Namibia'</i>           | Research Day, University of Namibia  | 2013      | 1           |
| Governance theories and governance frameworks  | WASS   | 2014      | 1           |
| <i>'Institutional arrangements for governance of indigenous natural products in communal areas of Namibia. Durban'</i> | World Forestry Congress, Durban, South Africa  | 2015      | 1           |
| <i>'Balancing Biodiversity and poverty alleviation in the devil's claw primary industry of Namibia'</i>                | International Conference of Agriculture and Natural Resource, University of Namibia, Ogongo Campus | 2017      | 1           |
| <b>B. General research related competencies</b>  |  |           |             |
| Research methodology from topic to proposal  | WASS   | 2011      | 4           |
| Atlas Ti, a hands on practical information   | WASS   | 2011      | 0.5         |
| Scientific Writing   | WGS  | 2015      | 1.8         |
| Research and Teaching  | University of Namibia & Concordia University   | 2012      | 0.3         |
| Writing and Publishing an Article During the Doctorate   | University of Stellenbosch, African Doctoral Academy   | 2017      | 1.5         |
| Introduction to the SPSS Statistical Package   | University of Stellenbosch, African Doctoral Academy   | 2017      | 1.5         |
| <b>C. Career related competencies / personal development</b>   |  |           |             |
| Literacy, including endnote introduction   | WUR library  | 2011      | 0.6         |
| Scientific publishing  | WGS  | 2011      | 0.3         |
| The essentials of scientific writing and presentation  | WGS  | 2014      | 1.2         |
| <b>Total</b>   |  |           | <b>32.7</b> |

\*One credit according to ECTS is on average equivalent to 28 hours of study load

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