

PAPERS

Less is often more: governance of a non-timber forest product, marula (*Sclerocarya birrea* subsp. *caffra*) in southern Africa

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SUMMARY

Non-timber forest products (NTFPs) are often seen as tools to promote rural development and biodiversity conservation but little attention has been given to the different policy approaches adopted for their governance, nor to the role played by customary law. Through the lens of one of the most revered and economically important trees in Africa, marula (*Sclerocarya birrea*), NTFP governance is explored in case studies across South Africa and Namibia. Results are presented from a study that examined the interface between statutory and customary rules and regulations governing marula conservation and use. The major finding is that 'less' is often 'more' when it comes to government regulation of marula, a result that resonates with other NTFP studies from around the world that indicate the need for state-led interventions to be purposely crafted to reflect local circumstances and needs. Such interventions are also most effective when government and traditional authorities cooperate, authorities have legitimacy and sufficient capacity, and there is acceptance of the rules by user groups. It is suggested that state intervention may be least useful where traditional governance is strong, and with the exception of areas and cases in which customary law and traditional authority fall short and commercial pressures on species are significant, governments might do best by leaving well enough alone.

Keywords: Policy, customary law, non-timber forest products, marula, commercialisation

Moins est souvent plus: gestion d'un produit forestier autre que le bois, le marula (*Sclerocarya birrea* subsp. *caffra*) dans le sud de l'Afrique

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Les produits forestiers autres que le bois (NTFPs) sont souvent perçus comme des outils pour promouvoir le développement rural et la conservation de la biodiversité, mais peu d'attention a été accordée aux différentes approches de politique adoptées pour leur gestion, et au rôle joué par la loi coutumière. En se concentrant sur l'un de arbres les plus révéérés et économiquement importants en Afrique, le marula (*Sclerocarya birrea*), la gestion des NTFPs est explorée en étude-cas du sud de l'Afrique à la Namibie. Les résultats d'une étude qui examine les connections entre les les règles et régulations statutaires et coutumières qui gèrent la conservation et l'utilisation du marula. La découverte la plus importante est que "moins" devient souvent "plus" quand il s'agit de la régulation gouvernementale du marula. Ce résultat résonne avec d'autres études sur les NTFPs autour du monde, qui indiquent la nécessité de former les interventions conduites par l'état en s'efforçant de refléter les besoins et circonstances locaux. La suggestion est que l'intervention de l'état est peut-être la moins utile dans les endroits où la gestion traditionnelle est forte, et, les zones et cas où la loi et l'autorité traditionnelle échouent et où la pression commerciale sur les espèces est importante mises à part; que les gouvernements feraient peut-être mieux de s'abstenir d'intervenir dans le secteur.

A menudo al hacer menos se hace más: manejo de un producto forestal no maderable, la marula (*Sclerocarya birrea* subsp. *caffra*) en el sur de África

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Los productos forestales no maderables (PNFM) son considerados a menudo como instrumentos para la promoción del desarrollo rural y de la conservación de la biodiversidad, pero se ha prestado poca atención a las diferentes políticas adoptadas para su manejo, ni al papel desempeñado por la ley consuetudinaria. Se estudia el caso de uno los árboles más venerados y económicamente importantes de

África, la marula (*Sclerocarya birrea*), basándose en estudios procedentes de Sudáfrica y Namibia para analizar el manejo de PNFMs. Se presentan los resultados de un estudio que examinó la interrelación entre normas y reglamentos legales y consuetudinarios relacionados con la conservación y uso de la marula. El resultado más interesante del estudio fue el descubrimiento de que a menudo “menos” resulta ser “más” cuando se trata de la regulación gubernamental de la marula, hecho que concuerda con otros estudios sobre PNFMs de otras partes del mundo, que demuestran la importancia de adaptar específicamente las intervenciones estatales para reflejar las circunstancias y necesidades locales. Se sugiere que la intervención estatal puede resultar poco útil donde el manejo tradicional sigue en vigor, y que convendría a los gobiernos evitar inmiscuirse, salvo en casos en que la ley consuetudinaria y las autoridades tradicionales se queden cortas y exista una fuerte presión comercial sobre las especies.

INTRODUCTION

Increased attention has focused over the last few decades on the potential for non-timber forest product (NTFP)¹ commercialisation to contribute to biodiversity conservation and improved livelihoods for local communities (Clay 1992, Plotkin and Famolare 1992, Arnold and Ruiz- Pérez 2001, Ruiz- Pérez *et al.* 2005, Belcher and Schreckenberg 2006, Marshall *et al.* 2006, Phytotrade 2006). However, in most regions the legal framework within which these activities take place has received little attention.

NTFPs contribute substantially to rural livelihoods (Neumann and Hirsch 2000, Shackleton and Shackleton 2004), but they do so in ways that are ‘invisible’ to policy makers and difficult to regulate, tax and manage as a sector. Harvesters are primarily drawn from the least powerful members of society, the rural poor, and few NTFPs are of great economic value (Hecht *et al.* 1988, Shanley *et al.*, 2002, Shackleton and Shackleton 2004). Those NTFPs that have attracted government attention are typically more industrialised. NTFP regulatory frameworks are characterised by a complex and often confusing mix of measures, overseen by a wide range of sometimes competing institutions (Antypas *et al.* 2002, Laird *et al.* forthcoming). What laws do exist are often poorly implemented because government resources and capacity are rarely allocated for what are perceived as ‘minor’ products (Tomich 1996).

In part, this state of affairs is due to the diverse nature of NTFPs. Unlike timber or agricultural crops, NTFPs include a broad range of species with extremely different ecological, livelihood, and market niches, and equally diverse management and trade practices, end products and consumers. Policy measures are equally diverse, varying from those that directly regulate resource use (Deweese and Scheer 1996), through to others that indirectly, but significantly, impact use, such as taxation, quality standards, and trade restrictions. Overlaying these complexities are different types of land ownership - including communal, private, and various tiers of state control - and different access regimes, from strict prohibitions on use through to open access. Confusion often exists over what is being regulated and why, and there is inconsistency in the development and implementation of different bodies of law and policy. Moreover, surprisingly little attention has been given to the

role played by customary law in regulating use of NTFPs.

As we will report, South Africa and Namibia are good examples of the legal and institutional complexity and inconsistency of NTFP statutory laws and policies. However, in many rural parts of the region customary laws regulating resource use and management continue to provide effective governance of NTFPs. Through the lens of one of the most revered and economically important trees in Africa, *Sclerocarya birrea* (A. Rich.) Hochst - commonly known as marula - this paper explores the context of NTFP governance, and examines the interface between government and customary regulation. We set out to show:

- (1) First, that broader policy prescriptions and improved government regulation of NTFPs are necessary and useful primarily in the absence of local or customary systems of governance, and in situations where species are under commercial pressure, and
- (2) Second, that the efficacy of existing systems of local and customary governance could be an indicator of the extent to which government intervention is necessary.

The next section of this paper provides an introduction to marula, and describes its ecology, use and commercialisation. This is followed by a description of the three study sites - (1) Bushbuckridge, Limpopo, South Africa, (2) Makhathini, northern KwaZulu-Natal, South Africa, and (3) the north-central regions of Namibia. An overview of the methods is presented in Section 4, followed by analysis of the results of the study in Section 5. Section 6 concludes the paper with a discussion of the implications of these findings.

THE ECOLOGY, USE AND COMMERCIALISATION OF MARULA

Marula is a common tree species throughout the semi-arid savannas of sub-Saharan Africa (Coates Palgrave 1956, Peters 1988). A member of the expansive Anacardiaceae family, it is large, deciduous and dioecious, with only the female trees bearing fruit (Hall *et al.* 2002). The ripe marula fruit is oblong shaped and light yellow with a leathery skin enclosing a white fibrous fleshy pulp and a large nut. The nut has two to four locules which, when broken open, contain an oil- and protein-rich kernel. Three different subspecies occur, but this paper focuses on *S. birrea* subsp. *caffra* (Sond.)

¹ The term non-timber forest products (NTFP) is used to describe a wide range of biological resources that originate from the ‘forest’ or veld (an Afrikaans word meaning uncultivated lands or grasslands) except timber and fuelwood.

Kokwaro, found mostly in the southern African region.

Few wild species compare with the economic, spiritual and cultural significance of marula, and it has been aptly described as one of the great trees of the continent (Palmer and Pitman 1972). A rich traditional knowledge exists of the tree and its products, distinct to particular regions and communities (Shackleton *et al.* 2006). This is evidenced not only by the range of uses found across the region, but also by the adoption of a complex variety of vernacular names for the tree, its fruiting characteristics, nuts, kernels, and taxonomy (Quin 1959, Rodin 1985, Shackleton *et al.* 2002a), and the development of a wide range of processing techniques (Shone 1979, Cunningham 1988, den Adel 2002, du Plessis *et al.* 2002).

Its vitamin- and nutrient-rich fruits can be eaten whole, made into juice or jam, brewed into beer, or distilled into a liqueur (Quin 1959, Wehmeyer 1967, Shone 1979, Arnold *et al.* 1985, Cunningham 1988). The kernels, referred to as a 'Food of Kings' (Wehmeyer 1976), provide a delicious and important food supplement, and useful oil for cooking, preserving meat, and for moisturising skin (Wehmeyer 1967, Shone 1979, Burger *et al.* 1987, Weinert *et al.* 1990, Houghton 1999). The bark and leaves have insecticidal and medicinal properties and are used widely in treating dysentery and diarrhoea, amongst other ailments (Watt and Breyer-Brandwijk 1962, Galvez *et al.* 1991, Galvez *et al.* 1992, Galvez *et al.* 1993, Hutchings *et al.* 1996, Kubo and Kinoshita 1999, Lombard *et al.* 2000, van Wyk and Gericke 2000).

The wood is also used for a variety of purposes including fencing, carving, and fuelwood, and until last century was a valued commercial timber (Watt and Breyer-Brandwijk 1962, Shone 1979, Shackleton *et al.* 2002b). A variety of other uses include fodder, hair relaxants, rattles and necklaces, and the tree is also host to a range of edible caterpillars and larvae as well as parasitic mistletoes which produce outgrowths known as wood roses which are sold in the curio market (Shackleton *et al.* 2002b). By far the most prevalent use, however, is the production of marula beer, nearly two tons of marula fruit – equating to about 150-350 litres of beer - is consumed per household each season in Namibia and South Africa (Shackleton 2004).

In addition to its subsistence use, marula is also traded locally and sold to commercial enterprises. In the 1980s a marula-based liqueur, Amarula Cream, was launched and today is exported to 28 countries around the world, using about 2 000 tons of fruit per year (Mander *et al.* 2002, Wynberg 2006). This initiative, together with post-independence relaxations on informal trade, catalysed broader interest in the commercial potential of marula in both South Africa and Namibia. In the late 1990s informal trading in marula beer commenced, despite customary prohibitions on its sale, and largely due to democratisation processes in the region and increased urban demand for marula beer. In 2000 an

initiative to commercialise marula products – in particular the kernel oil, and the fruit for beer – was launched in South Africa by the Mineworkers Development Association to counter the impacts of job loss on the mines. Over 1 500 tons of marula fruit are also processed into oil by the Namibian-based women's co-operative Eudafano, which has developed agreements with the Body Shop in the United Kingdom and the French-based cosmetics company Aldivia (du Plessis *et al.* 2002, Aldivia and Phytotrade Africa 2005). Local incomes from such activities vary from US\$15 to US\$166 per household per year for fruit collection and fruit processing respectively in South Africa with members of Eudafano earning \$23 - \$65 per year (Shackleton *et al.* 2006).

But the benefits of marula extend beyond financial returns. Of particular significance are the collective 'work parties' stimulated by the collection of marula to process the fruit, and the neighbourhood 'marula gatherings' where the freshly brewed beer/wine is drunk. These are important in building social networks and reciprocal relations, and in cementing existing bonds (Shackleton *et al.* 2002a). Especially noteworthy is the central role played by women in collecting, processing and trading marula, and the timing of marula sales at the beginning of the school year, which helps women pay school fees.

STUDY AREA

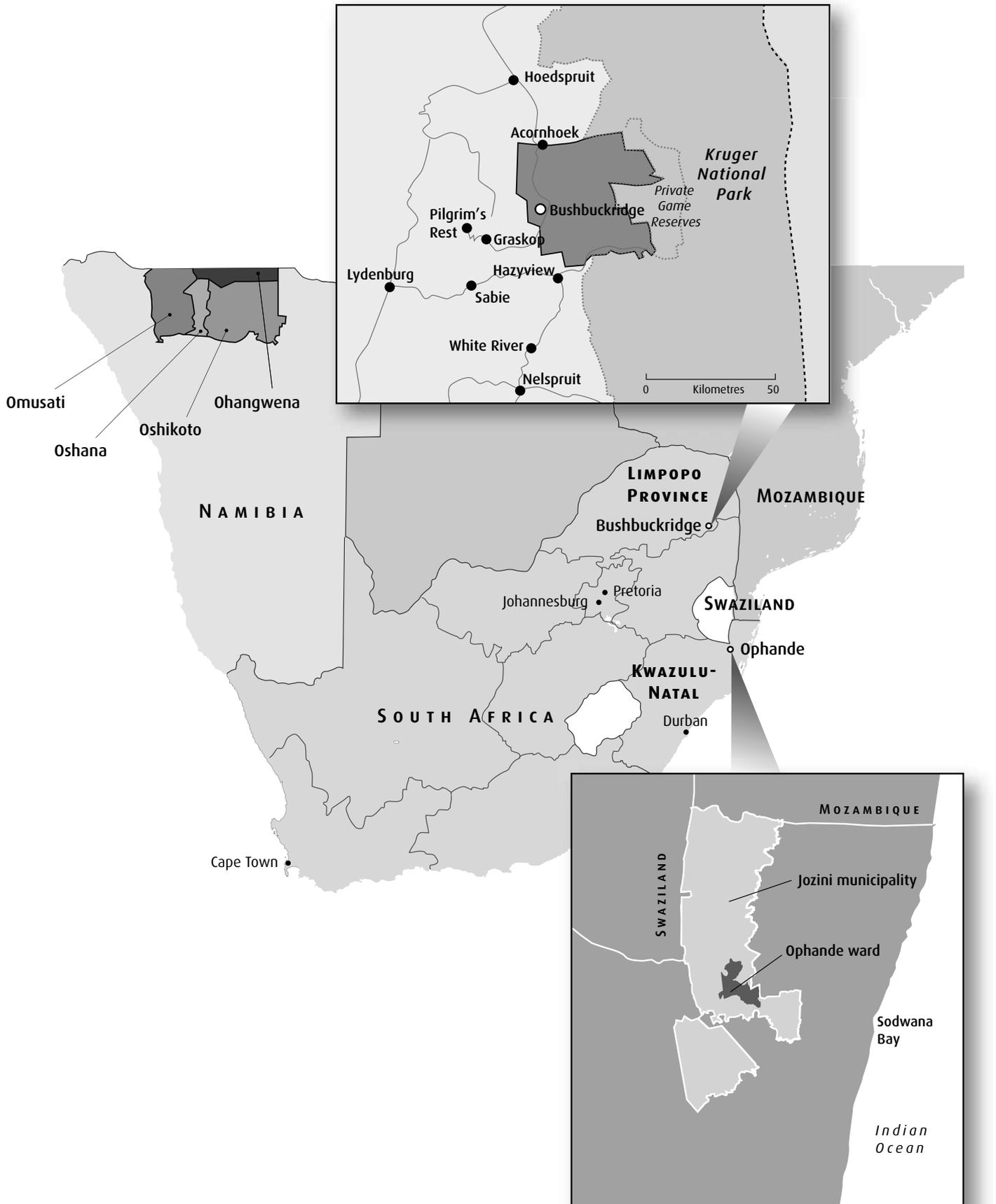
While marula is used widely across southern Africa, its use and management vary considerably from community to community. For the purposes of this study three areas were selected that represented a diversity of ethnicities, nationalities, local governance structures, and marula commercialisation activities. In South Africa, research was undertaken in the Bushbuckridge district of the Limpopo Province (hereafter referred to as Bushbuckridge), and the Ophande ward of the Makhathini Flats, Ubombo District, in the northern KwaZulu-Natal Province (hereafter referred to as Makhathini). In Namibia, the research drew on studies conducted in the north-central communal farmlands (hereafter referred to as north-central Namibia). These areas are illustrated in Figure 1.

Bushbuckridge, Limpopo Province, South Africa

Bushbuckridge is located in a politically and environmentally complex region, bounded on the east by the Kruger National Park, on the west by the Drakensberg mountains, and comprising pieces of two apartheid² 'homelands', Gazankulu and Lebowa (Figure 1). The district extends over an area of about 2 590km², and has been settled by some 500 000 people, 65% of whom are unemployed (Demarcation Board 2005). About 65 settlements span the district, varying in size from less than 100 homesteads to over 800, many living

² An Afrikaans word meaning 'separate development', the policy of the former South African government to enforce racial discrimination and segregation.

FIGURE 1 Map of southern Africa, showing the location of marula producer communities that were surveyed in Bushbuckridge, Makhathini and north-central Namibia.



below the poverty line of R1 050 per month for a family of four (Shackleton 2004). Key sources of income include pension and childcare grants, migrant remittances, livestock, informal trading, wages from formal employment and earnings from various micro-enterprises, including the local trade and sale of marula fruit, kernels and beer (Shackleton 2004). The region is extremely culturally diverse and people speak Pedi (Northern Sotho), Pulana (a mix of Pedi, Swazi, and Tsonga), Tsonga and Swazi (Thornton 2002).

Like many other parts of South Africa that fall within the former 'homelands', residents of Bushbuckridge are victims of the apartheid government's policy of separate development, which entailed the forced removal of people and their relocation to pockets of land considered marginal for agriculture or mining. Through years of apartheid policies, community identity and organisation have been undermined, or have come into conflict with state-appointed tribal authorities or newly emerging local government structures (Ntsebeza 1999). This has been exacerbated by competing ethnicities and political differences in leadership form (Thornton 2002). The frequently conflicting jurisdiction of traditional authorities and political or administrative representatives of the state further complicates matters, in many cases resulting in an administrative vacuum (Wynberg *et al.* 2002b).

Makhathini, Kwa-Zulu Natal Province, South Africa

Social and environmental disruption also characterise the Makhathini study area in Kwa-Zulu Natal, where many of the original Amathonga residents were removed during the creation of the Pongola Dam and Makhathini Irrigation Scheme in the 1970s and 1980s, resettled into 'villages', and allocated 10 ha plots (Bembridge, 1991). Migrants to the region were also allocated land, and represent up to 80% of the population today. Today the Umkhanyakude District is home to 540 000 people, comprising a mixture of Zulu, Thonga, and Swazi-speaking people (Figure 1). Households pursue diverse livelihood strategies, but nearly half of the population farm crops, with wages from commercial agriculture and industry, pensions and grants also comprising a major source of income (Statistics SA 2002). Joblessness, poverty and hunger have spiralled over recent years, and unemployment stands at 53% (Statistics SA 2002). Rates of HIV infection are some of the highest in the country. Despite decades of deformation by colonial and apartheid policies, and a multitude of development interventions, governance systems in this deeply rural region are still based on traditional models.

North-central Namibia

Marula producers in north-central Namibia live in the Oshana, Ohangwena, Omusati and Oshikoto regions, home to about 800 000 people – almost half of Namibia's population (den Adel 2002) (Figure 1). Most people are members of Oshiwambo-speaking groups who settled along the Cuvelai River hundreds of years ago. Unemployment

rates are greater than the national average of 40%, and a high proportion of households have migrant members, who work in urban areas and supplement incomes (den Adel 2002). Largely as a result of the semi-arid climate and poor soil quality, people do not live in concentrated villages, and farms and homesteads are spatially spread. Most people are involved in subsistence farming, with other income sources including formal employment on farms, mines and in urban areas, pensions, small businesses, and the wild harvesting of natural resources for consumption and sale.

The region is characterised by a strong system of traditional governance and all tribal authorities, with their sub-headmen, village headmen, senior headmen, and Chief/King, are still functional, and to some extent acknowledged by the government (den Adel 2002). Moreover, traditional authorities have their own courts for settling disputes and allocating land and grazing rights. Regional governments in the four political regions are divided into 41 constituencies, administered by governors and councillors. Local authorities are in turn responsible for the affairs of towns and larger villages.

METHODS AND APPROACH

This study was part of a larger project examining the benefits and drawbacks of NFTP commercialisation and included a wide range of economic, ecological, and social studies (see du Plessis *et al.* 2002, Mander *et al.* 2002, Shackleton *et al.* 2002b, Wynberg *et al.* 2002b, Shackleton *et al.* 2003, Shackleton 2004, Leakey *et al.* 2005a, Leakey *et al.* 2005b). The authors' role in the project was to examine the policy and legal context of marula use and management, in order to make recommendations on achieving conservation, sustainable use and improved livelihoods through commercialisation of marula. This included examining national and provincial statutory laws governing NTFPs and marula in South Africa and Namibia, and customary law and practice at the three study sites.

The questions we sought to answer through the research were: What laws and regulations govern the harvest of marula fruit and bark, and the felling of trees? What laws and regulations do people know about and respect? What gaps exist in the legal and policy framework, and in implementation? And what policy frameworks will best achieve the objectives of conservation, sustainable use and improved livelihoods?

A range of methods was used to answer these questions. A review of published and unpublished literature on marula was conducted. Records were obtained from the National Archives in Pretoria, with the intention to track government policy for marula over the past century in South Africa, and examine patterns of regulation. Where possible, similar material was gathered for Namibia.

Semi-structured interviews were held with a wide range of government officials, researchers, NGOs, companies and community members in order to build an understanding of current approaches to marula conservation, use, and

management. In an attempt to identify key policy issues requiring further research and investigation, meetings were held in the Bushbuckridge villages of Rolle, Allandale and Hokwe, each attended by 15-20 producers, almost all of whom were women. Resource constraints prevented a similar exercise at the other two sites, but local informants helped to ensure that questions formulated were appropriate to the situation at hand.

Following this framing of the issues, questions relating to resource rights, customary law, and the legal and policy context were incorporated into a common interview schedule examining the uses of marula, the quantities used, sales and income, cultural values, resource availability and household socio-economic characteristics. This household survey was administered amongst households at each of the three study areas. In Bushbuckridge, 142 households were randomly sampled in four Bushbuckridge villages - Allandale, Edinburgh, Hokwe and Rolle - selected from amongst the 26 villages that supplied the Marula Development Agency with fruit (Shackleton and Shackleton 2002). In the Ophande ward of the Makhathini region, homesteads are not aggregated into villages but instead are spread out continuously. Here, 63 households were sampled across two areas: the Makhathini floodplain (31) and the Ubombo mountainside (32) (McHardy 2002). In the north-central regions of Namibia, 60 surveys were conducted over four areas - Endola, Ondangwa, Ohangwena and Outapi - selected for sampling based on the involvement of the Eudafano Women's Co-operative, which collects and sells marula kernels on behalf of rural producers, the availability of marula, soil and vegetation types, ethnicity and distance from urban centres (den Adel 2002). Interviews were typically conducted in the vernacular with the assistance of local interpreters. This paper elaborates only on the institutional, legal and policy elements of marula commercialisation, survey results of other components are reported in den Adel (2002), du Plessis *et al.* (2002), Mander *et al.* (2002), Shackleton and Shackleton (2002), and Shackleton *et al.* (2006).

To further flesh out the distinctions within and between regions, and to better elucidate issues raised in village meetings and household surveys, a second structured survey was undertaken at each of the three study sites. A total of 33 interviews were undertaken across all three study sites with chiefs, traditional authorities, local conservation officers, provincial conservation and forestry officers, agricultural extension officers, police officers and magistrates, and local committees. The survey addressed policy and regulatory issues affecting marula conservation and use in South Africa and Namibia, with particular attention paid to the relationship between customary law and government regulation.

RESULTS

Statutory rules and regulations governing marula

Policies and laws governing the management and use of NTFPs vary substantially between and within South Africa

and Namibia. As with other biological resources, NTFPs are regulated concurrently by both national and provincial tiers of government in South Africa, and by the national government in Namibia. In both countries, tensions are evident between trends towards decentralisation and locally-based natural resource management on the one hand, and approaches that favour centralised political control on the other. This tension is manifested in a lack of clarity surrounding the regulation of NTFPs, and specifically marula.

In South Africa, efforts to legally protect marula were initiated as early as 1941, when timber shortages in the Second World War led to increased use of the tree. A series of measures to protect marula was met by continued opposition from loggers and sawmillers but by 1962 a complete prohibition was imposed on felling (Shone 1979).

Presently, the National Forests Act (84 of 1998) lays out measures to protect trees in South Africa, allowing the Minister to declare a tree, a woodland, or a species of tree as protected, and setting out a number of restrictions for the use of protected trees, and for indigenous trees occurring in a 'natural forest'. A national list of protected tree species has been developed in terms of this legislation, including *S. birrea* subsp *caffra* (Republic of South Africa 2004), which means that marula may not be 'cut, damaged or disturbed or its products transported or sold without a licence'. Such protection applies across the whole country, allowing for legislative coherence to be achieved at the provincial level where a host of sometimes conflicting legislation exists for marula use and conservation. Although not yet actively enforced, the implication of marula's protected status is that all commercial harvesting of marula fruit will henceforth require licensing. However, an unpublished proclamation notice issued in terms of the National Forests Act exempts fruit collected for domestic, non-commercial use from these provisions - up to a maximum of 50% of the fruit or seed of any tree (Republic of South Africa 2006).

Namibia closely followed South Africa's legislative efforts to protect marula and included the tree as one of 23 protected tree species in *The Preservation of Trees and Forests Ordinance 37 of 1952*. This law and its 1968 successor were repealed with promulgation of the Forest Act (12 of 2001), which is now the primary policy instrument regulating wild fruit trees, and also prohibiting marula felling. However, no specific provision restricts the use of fruits and anyone is entitled to collect fruit so long as the tree is not damaged (Kayofa, Forestry Technician, Outapi District Forestry Office, pers. comm., 2002). Section 22(5) allows for the declaration of a protected plant or species while Section 24 enables the 'legal occupiers' of land to harvest and dispose of forest produce in any way he or she likes. Such activities are, however, prohibited in classified forests without a permit. Key differences between the new Forest Act and the so-called Colonial Act of 1968 include the increased emphasis given to community-based approaches to forest management, and the higher penalties for contravening the legislation (Hailwa, Director of Forestry, Namibian Forestry Department, pers. comm., 2002). South Africa's new forest law is similarly heralded as differing from previous laws in its recognition

of the role that communities and other stakeholders play in forest management, and the important contributions that forests can make to rural livelihoods.

Customary law governing marula

The statutory laws described above for South Africa and Namibia apply to marula found on private, state, municipal and communal lands, but the most important source of marula for local communities – communal lands, private fields, farms, and villages – also fall under a layer of customary law. An important result to emerge from this study is that these laws are often the system best understood and most widely implemented by local communities. Customary controls exist in both South Africa and Namibia for felling wild marula fruit trees and harvesting fruit and bark, and these are reportedly stronger than those for other fruit trees. Customary laws also regulate the ways in which marula can be used, and the behaviour of community members during marula season. For example, during marula season in Namibia, there is a prohibition on carrying knives or weapons, traditional courts are closed, and part of the omaongo harvest is provided to the traditional authorities (Botelle 2001).

Felling of marula trees

Marula trees are felled or pruned primarily for use as fuelwood, and in some cases to clear areas for agriculture. Traditionally, the felling of marula trees, in particular female trees, was strictly taboo amongst most rural societies where this species occurs (Cunningham 1989). The Pedi and Phalaborwa of the Limpopo Province regarded the trees as sacred, and severe punishment was administered to anyone who did not respect this rule (Krige 1937). Among the Kwanyama in Namibia, Rodin (1985) noted that the tree was so highly prized for its fruit that it was never cut down. In other cases, marula trees could only be cut with the permission of the chief. Our results corroborate these reports and suggest that the cutting of marula, and indeed any other fruit tree, is still strongly prohibited in the study areas surveyed. Moreover, permission is required from the headman, or induna³, before cutting non-fruit trees that are deemed important by the community.

In Bushbuckridge, all except one respondent confirmed that customary law prohibits the felling of either male or female marula trees. Pruning outside of the homestead is similarly considered to be prohibited, although in practice it was noted that this prohibition was seldom observed. Government laws were interpreted to support this ban. In Makhathini, the cutting of trees is similarly prohibited, although exceptions are made for the erection of housing (with permission of the induna) and in some instances for the clearing of agricultural land. Government law is likewise interpreted to ban cutting. Pruning of trees in this area appears to be generally accepted by both customary and government systems. In Namibia both customary and government laws

are understood to prohibit the cutting of both male and female marula trees, although in practice people appear to be more flexible in their rules for cutting male trees. Pruning is allowed here, with permission from the headman.

Harvesting of marula fruit

Marula fruit is widely collected throughout the region. Across all study areas, and for all wild fruit trees, fruit must first fall to the ground before harvesting is permitted, as Induna Marule of Rolle noted: ‘the tree must harvest itself’.

Strong customary laws govern marula fruit harvesting, but the clarity and effectiveness of these laws varied by area, reflecting the strength of existing traditional institutions, the homogeneity and remoteness of communities, and commercial pressures. In Bushbuckridge, visitors were required to seek permission to harvest fruit in the yards or fields of individual households. However, the communal areas (‘the bush’) were typically regarded as open access areas from which both villagers and outsiders could collect. Remarked the induna of Hokwe: ‘The trees are for nature and everybody so my permission is not needed’. Outsiders harvesting marula on communal lands are commonly opposed by locals, but most felt they had no power to enforce community control in communal lands. In part this was due to a weak community identity as a result of historical patterns of dislocation and resettlement, and current population growth from migration which made it difficult to distinguish between community members and outsiders in such large communities.

In Makhathini, South Africa, permission was required to harvest fruit in yards and fields, which were seen to be the property of members of that homestead or family. Access to marula in communal lands was more strictly controlled than in Bushbuckridge, and a greater distinction was made between outsiders – who were required to obtain permission from the induna to harvest fruit in these areas – and community members – who were not. The Makhathini communities retained a stronger suite of traditional practices and identity than in Bushbuckridge, attributed in part to the fact that this area is located in the deep rural parts of KwaZulu-Natal and is less ‘urbanised’ than Bushbuckridge, is more culturally homogenous, and has been less exposed to the boundary disputes and political conflicts that characterise Bushbuckridge.

In north-central Namibia, customary law regulating access to marula fruit was the most stringent, best articulated, and most widely-understood and practiced system. Permission for harvesting marula fruit in people’s yards and fields – the site of most collections – was required. Communal areas were also tightly regulated, and both villagers and outsiders were required to obtain permission from the village headman prior to harvesting fruit there. This regulation applied exclusively to marula and eembe (*Berchemia discolor*), and not to other fruit trees. Fruit harvesting in communal areas was also coordinated by the village, with women granted permission by the headman to harvest and process the fruit. In the

³ Zulu name for a state official appointed by the king or by a local chief.

customary law of Ndonga, goats and other animals were also prohibited from eating marula fruits from communal lands, and transgression could carry a fine as high as US\$50 or a cow (Tatekulu Moongo, Senior Headman, Ondangwa area, pers.comm. 2002).

Rules for drinking omaongo have reportedly changed over the years. Tatekulu Moongo, the senior headman for 48 villages in the Ondangwa area, recounted that in the past all marula trees belonged to the King and the headmen, and the only places where omaongo could be drunk were at the houses of the King, the senior headman, and the village headman. Today there is increased private ownership of marula trees, and people can drink omaongo anywhere, although a portion is still tithed to the headman.

Harvesting of marula bark

Marula bark harvesting is permitted on a limited basis under both customary and government law, although the interpretation of these laws varied considerably from village to village.

Opinion varied as to how laws apply to male and female trees. In Bushbuckridge, traditional authorities from Rolle and Thulamahashe permitted bark harvesting from male trees only, whereas those in Allandale did not differentiate between the sexes. In Makhathini, no preferences were indicated for bark harvesting of either gender, and in north-central Namibia, marula bark appeared to be seldom used by people and, if at all, dried bark found on the ground was used as firewood or as a dye.

Customary laws applied to bark harvesting techniques are common throughout the region. In South Africa, respondents claimed that a piece no more than 20 X 20 cm could be harvested at any time. Only enough bark for immediate, subsistence use was allowed to be harvested, although there were reports of practices having changed, with the harvest of 'bags and bags' of bark for storage reported by some. Ring-barking was not permitted, and the tree could not be killed. A few individuals mentioned rotational harvesting, in which bark is harvested from different sides of the tree each year, but this seemed to be a minority practice that has become less common than in the past.

Land and resource rights

Secure land tenure and resource rights are critical components of any strategy that aims to sustainably manage resources and deliver fair and equitable benefits to communities from the commercialisation of NTFPs (Ros-Tonen *et al.* 1995, Neumann and Hirsch 2000, Shanley *et al.* 2002, Fabricius *et al.* 2004). This is especially apparent in southern Africa, where communities harvesting NTFPs face ongoing constraints in excluding outsiders from harvesting resources from communal lands with ambiguous tenurial status (Schreckenber 2003, Wynberg 2004, Fabricius *et al.* 2004). Neumann and Hirsch (2000) noted in their review of the literature on NTFPs and land tenure that in southern Africa interactions between NTFP commercialisation and

tenure systems varied greatly even within small geographic areas. This was borne out in this study, in which clear differences emerged across the three research sites with regard to land tenure, resource rights and the harvesting of marula products.

In most cases marula was harvested under a 'user right' that carried no legal status, from lands to which communities had no clear legal title. This was particularly the case in South Africa, where most communal land in the country – the site of the bulk of marula harvesting – is registered in the name of the state. This situation reflects the legacy of South Africa's colonial past, where the majority of land occupied by black people was designated as Crown land. Under apartheid, various discriminatory laws and practices prevented land ownership by black people, who could historically hold land only under weak and legally insecure forms of tenure, such as a 'Permission to Occupy' (PTO) certificate (Makopi 1999). Although this PTO system has now been abolished, ownership of communal lands remains unresolved and highly contentious.

Attempts to redress this situation in South Africa have been made in the long-awaited Communal Land Rights Act (11 of 2004), which sets out the government's approach to communal land tenure reform and traditional land rights (Republic of South Africa 2004). The 1996 Communal Property Associations Act (CPA Act) also aims to provide for communally held tenure by enabling people to acquire and manage property as groups. Both proposals have met with criticism, mainly because of their seemingly inappropriate adoption of the titling model, based on Western notions of ownership, and in the case of the CPA Act, because of the limited support provided by government in the establishment of CPAs and community trusts (Cousins 2002, Cousins 2005).

In Namibia, communities suffered under a similar suite of discriminatory land policies until independence in 1990. Today, efforts to resolve land tenure reflect tensions similar to those in South Africa, between Western notions of titling and African systems of land tenure, with policy approaches now favouring individualised leaseholds, available to all citizens, not just local inhabitants (Alden Wily 2002). Although in the north-central regions of Namibia, communal land ownership remains vested in the state, most marula fruit here is harvested from people's fields or homesteads, and virtually all marula trees are tenured to individual households.

Although traditional legal structures remain stronger in Namibia than in South Africa, here too there has been an erosion of the role of traditional authorities. Especially noteworthy is the shift in the manner in which marula has traditionally been owned and managed, towards a system of increased private ownership. Whereas in the past *all* marula trees belonged to the King and the headman, today the men of the household typically own marula trees (and the women 'other' fruit trees), with only some marula trees being assigned to the King, senior headman and village headman (Tatekulu Moongo, Senior Headman, Ondangwa area, pers. comm. 2002). However, in contrast to the South African sites, customary law in Namibia appeared to effectively

TABLE 1 A summary of policy and practice for marula use across study sites

Policy and practice	Study sites		
	Bushbuckridge, South Africa	Makhathini, South Africa	North-central Namibia
Study area legal and institutional characteristics	Fractured history and weak community institutions Contested leadership Conflicting jurisdiction of traditional authorities and state	Severe social and environmental disruptions but governance is still strongly traditional History of extensive external development interventions	Strong system of traditional governance and high respect for and legitimacy of traditional authorities.
Statutory laws	Marula is listed as protected tree species (National Forests Act (84 of 1998). Commercial fruit harvesting needs a permit but not subsistence use. Provincial legislation governing marula use is confusing and inconsistent.	Marula is listed as protected tree species (National Forests Act (84 of 1998). Commercial fruit harvesting needs a permit but not subsistence use. Provincial legislation governing marula use is confusing and inconsistent.	Marula is listed as a protected tree (Forest Act 12 of 2001) but no restrictions exist for the collection of wild fruit No provinces exist in Namibia.
Marula ownership	Fruit predominantly harvested from communal areas, which are state-owned and increasingly regarded as open access.	Fruit predominantly harvested from communal areas, which are state-owned but strongly managed by traditional authorities.	Marula fruit predominantly harvested from people's fields.
Marula cutting	Cutting of any fruit tree strongly prohibited by customary law, pruning permitted	Cutting of any fruit tree strongly prohibited by customary law, pruning permitted	Cutting of any fruit tree strongly prohibited by customary law, pruning permitted
Marula fruit harvesting	Permission required to harvest fruit in household yards or farms but communal areas open access.	Permission required to harvest fruit in household yards or farms and access to communal areas controlled; distinction between outsiders and community members.	Most stringent customary laws. Permission required to harvest fruit in household yards or farms and access to communal areas tightly regulated and by invitation of the headman.
Marula bark harvesting	Bark harvesting permitted on limited basis with customary laws to restrict offtake.	Bark harvesting permitted on limited basis with customary laws to restrict offtake.	Marula bark seldom used.
Adherence to and implementation of customary law	Widespread tree cutting despite prohibitions. Bark over-harvesting. Increased collection of fruit by outsiders.	Likely increase in tree cutting despite prohibitions.	Good adherence to customary law.
Monitoring and enforcement (M&E)	Lack of clarity as to responsibility for M&E. Weak enforcement.	General agreement as to institutional responsibilities for M&E between traditional authorities and government. Weak enforcement.	Coordinated approach to M&E between traditional authorities and government. Emphasis on community-based M&E. Weak enforcement
Relative influence of customary law in influencing marula use	Low	Moderate	High

regulate marula fruit harvest and felling.

Statutory and customary law in practice

A crucial issue is the nature of the interface between customary and statutory laws and policies, and how this unfolds in the context of marula use and governance. Distinctive policies towards customary law have been in place since Britain's occupation of the Cape in 1806, and were marked in particular by the enactment of the Native Administration Act (no. 28) in South Africa in 1927 to create a separate system of justice to match that of segregation in land and society (South African Law Commission 1999). Both South Africa and Namibia have now formally acknowledged Roman-Dutch law and customary law as major components of the state's legal system yet respect for and recognition of customary law remains inconsistent. Moreover, many have commented on the ideological conflicts that may exist between the predominantly individualistic approach of Roman-Dutch law, and the principally communal approach of customary law (Koyana 1980, Himonga and Bosch 2000).

In the case of marula, although approaches to management vary under different customary and statutory laws, there is no apparent conflict in the overarching objectives, with both sets of laws aiming to ensure sustainable use and long-term benefits for the community. However, customary laws are far better understood and better enforced by the community. In communal areas across all study sites, customary law governing marula use and management generally had greater influence than provincial or national law, both in terms of local knowledge of rules and regulations, and enforcement. It was also often the only system recognised in practice. However, the efficacy of customary law relies substantially on the legitimacy of traditional authorities. Strong traditional structures at Makhathini and north-central Namibia, for example, ensured that control over communal lands was exerted, whereas the more tenuous authority of traditional structures at Bushbuckridge led to reduced control over these areas.

Outside of communal areas, statutory laws had greater prominence and application, although results from the surveys revealed inconsistency in the understanding and application of these laws by community members, traditional authorities and government officials alike. In Bushbuckridge and Makhathini the harvesting of marula fruit in nature reserves was typically prohibited, although in practice conservation staff had an open attitude towards permitting sustainable use of the fruit by local people. In contrast, marula fruit on municipal lands across all study sites was believed to be freely available for anyone to harvest.

Despite widespread knowledge of customary and government laws on marula, respect for these laws and their implementation varied considerably by area. For example, while well-articulated prohibitions exist for marula felling in Bushbuckridge, this practice was described to be widespread and on the increase. At the same time, there was increased over-harvesting of fruit and unsustainable bark harvesting by outsiders to feed commercial trade. The reasons reported

for these trends included: increased local populations and an influx of refugees from Mozambique, a breakdown of respect for traditional authorities and confusion as to the different roles of leadership structures, reduced control by nature conservation authorities, difficulties in paying for electricity, and therefore the use of wood as firewood, increased seeking of fruits and bark to sell for cash, and the psychological and governance changes that have emerged since democracy in 1994, leading to a belief that trees are a free resource, that former apartheid rules do not apply, and that people can help themselves.

A less obvious pattern was evident in Makhathini. Tribal authorities here considered cutting and fruit harvesting to have remained unchanged, although some reported increased bark harvesting by outsiders for the commercial trade. In contrast to these local perceptions, however, conservation and government authorities that work on a regional scale reported an increase in marula felling due to a growing population, the building of more kraals, and the clearing of agricultural lands.

Monitoring and enforcement

The monitoring and enforcement of laws also varied considerably across study sites. An important finding was that the extent of respect for the law and its enforcement hinged upon the levels of cooperation between traditional authorities and government, acceptance of the rules by user groups, and the levels of capacity that existed within authorities. At Bushbuckridge, where levels of marula cutting and the violation of rules were highest, only one person had been apprehended for infringing regulations over five years. At this site there was also the greatest lack of clarity as to who was responsible for monitoring and enforcing rules about marula. Respondents variously considered the induna, the chief, the community, 'everyone', traditional authority rangers, the Department of Environment / Nature Conservation to have responsibility for this function, and were unanimous in their opinion that not enough monitoring takes place. The situation was widely considered to have deteriorated over the past ten years. Despite concerns about the lack of control, most traditional authorities felt the overall system to be working well. In contrast, virtually all government officials expressed the need for improved legislation and management, and additional capacity and resources.

At Makhathini most respondents were clear that monitoring and enforcement fell squarely within the domain of the inkosi (tribal leader) and/or government-run KwaZulu-Natal Ezemvelo Nature Conservation Services. However, rules were not actively enforced and no convictions had been made for infringing marula rules for five years prior to the survey. Few knew that the cutting of marula and selling of its bark were prosecutable offences, and marula conservation was a low priority, perhaps because of other pressing conservation and development priorities in the region, and the belief that marula was an abundant resource. Extra resources were seen as a necessary prerequisite to ensure

improved enforcement by relevant government agencies.

Monitoring and enforcement of marula infractions appeared to be most effective in Namibia, with explicit recognition by government of the efficacy of customary systems, and thus an emphasis on monitoring and enforcement by the community and the village headmen. This was considered to work well, although concerns were expressed regarding the limited powers of traditional authorities, and the need for incentives to be introduced for traditional authorities (e.g. through the payment of salaries) to improve enforcement.

DISCUSSION AND CONCLUSION

The importance of context

A major finding that emerges from this study is that 'less' is often 'more' when it comes to government regulation of marula, a result that resonates with other NTFP studies from around the world that indicate the need for government interventions to be purposely crafted to meet specific needs (Gatmaytan 2004, de Jesus 2005, Laird *et al.* in prep.). This finding also affirms those from other studies that indicate that natural resource regulations are most effective when they build upon the local political, cultural, economic, and historical context, and the relationship between existing customary and statutory laws and policies (e.g. Ørebech *et al.* 2006).

Existing administrative arrangements also play a key role in determining the efficacy of government regulation. In South Africa, there is a need to consolidate, integrate and update the policy framework for NTFPs, which is characterised by a plethora of inefficient and sometimes contradictory national and provincial laws, overlaid by customary systems that may have eroded due to years of colonial and apartheid administration. Similar overlaps are evident in Namibia, but the relatively simpler administrative system in this country, and specifically the absence of separate provincial laws, has provided a less bureaucratic and more enabling policy framework for NTFP management. Both countries, however, face significant governance problems for natural resources, often dispersed over vast areas, remote from government officials.

Where land tenure and resource rights are secure, customary laws are still strong, and local capacity exists to manage the resource base and deal with commercial pressures, customary laws often provide a more nuanced approach to regulation, integrating unique local cultural, ecological and economic conditions in ways that better suit this category of products. In cases where customary law has broken down to a significant degree, or outside commercial pressure has intensified well beyond the carrying capacity of traditional measures, governments can offer important and necessary complementary levels of regulation, something often requested by local groups.

In post-apartheid South Africa a new suite of issues arises for communities and resource management. Since

the emergence of a newly democratic state, a common trend reported in a number of divergent cases throughout the country (e.g. Kepe 2002, Palmer *et al.* 2002, Carnie 2005) has been for local people to take charge of natural resources considered to have been unfairly appropriated from them during apartheid. This, combined with a 'culture of lawlessness' in South Africa, has meant that in some areas local people interpret 'democracy' to mean a free-for-all, in which old rules – including customary laws – no longer apply, and individuals are free to make a living as they see fit.

In this study, the physical dislocation of inhabitants in Makhathini and Bushbuckridge through apartheid and the highly contested governance structures in Bushbuckridge are vivid examples of the political and social complexities that need to be considered when introducing new laws to regulate marula use. An influx of refugees, massive unemployment, and further breakdown of community structures in areas like Bushbuckridge mean that many individuals resort to any means to make a living. Unlike those who, for generations, have harvested marula fruit to supplement their income, or as part of subsistence cultural traditions, these newcomers to the marula trade 'mine' the resource for short-term gain. The absence of new rules further complicates matters, and this is exacerbated by the lack of adequate legal recognition of communal tenure systems and traditional resource management and rights, leading to a situation where communal areas are increasingly considered as 'open access' areas. Moreover, in the context of extreme poverty and hardship, the validity of rules regulating the harvest of widely-available products like marula is tacitly questioned, despite acknowledgement of the need for regulation.

In Makhathini, by contrast, customary law and traditional structures have been maintained to an extent that allows communities to function and remain viable, and for shared community objectives to be expressed through these means. In comparison with Bushbuckridge, governance structures are less contested, political boundaries are more secure, the area is more rural and remote from market and cash economies, and the social structures are more intact and less subject to the pressures introduced by the large influx of outsiders and refugees evidenced in Bushbuckridge. In this area, regulated harvest of marula products is viewed as a desirable means of ensuring long-term benefits for the community, although traditional, customary regulations are those viewed as most legitimate.

The privately tenured nature of marula trees in north-central Namibia, and the strong system of traditional governance in this region are central features that suggest that where tenure is secure, customary laws are strong, and local capacity exists to manage the resource base and deal with pressures of commercialisation, customary law achieves a desired balance between resource use and livelihood needs.

In both South Africa and Namibia, persisting insecurities in land tenure and resource rights could create significant problems if commercialisation of resources such as marula expands. These include increased conflict in areas such as Bushbuckridge, lack of resolution on the allocation of

resources for subsistence purposes versus those needed for commercialisation, a tendency to 'privatise' and 'enclose' communal areas and resources through adoption of Western titling approaches to tenure, and an erosion of indigenous resource tenure systems, and resulting limits in benefits accruing to the community at large, and an *ad hoc* and potentially conflict-ridden approach to controlling and managing natural resources.

Designing effective and appropriate interventions

Government clearly has a role to play in NTFP regulation but interventions must be carefully designed to ensure they are supportive of existing realities and are nuanced to reflect local conditions. In particular, strong systems of customary governance can be an important indicator to signify the need for minimal intervention and extreme caution in applying new rules.

The case of marula makes clear the need to identify whether the objectives policy frameworks are intended to serve reflect complex local realities and needs, and whether intervention in the form of 'improved' policy is in fact a gain for local people and conservation. For example, although changing patterns of land use, expanding rural settlements, and increases in local and commercial use of marula indicate the need for careful management and use of the tree – more especially in poor recruitment years and with increased commercialisation (Shackleton *et al.* 2003) – marula use does not raise pressing resource management issues. The tree is wide-spread and common, fruits abundantly, and is planted in yards, retained in fields, and otherwise well-managed, for the most part, in the region. A tendency to assume the worst-case scenario on the part of conservation bodies, and to prescribe policy interventions, has resulted in conflicts with producer groups in the region, most recently in the case of devil's claw (*Harpagophytum* spp.) where proposed listing of the species on Appendix II of the Convention on International Trade in Endangered Species (CITES) (CITES 2000) would have threatened the livelihoods of up to 24 000 rural harvesters in the region (Wynberg 2004).

Current policy interventions such as those introduced in South Africa to regulate commercial harvesting of marula fruit would likely gain little for biodiversity conservation. At the same time, such interventions might damage local livelihoods, and undermine local control over an important resource for communities, a pattern common with NTFP policy prescriptions (Arnold and Ruiz- Pérez 2001). But local communities can also lose out as species gain in commercial value, harvesting pressures intensify, and outsiders come into their area to harvest products (Lynch and Alcorn 1994).

Some interventions are clearly vital for both communities and species conservation, but they must be designed in a way that is consistent with local needs, based on local input and the engagement of NTFP producers and harvesters, and as part of a coherent policy framework with clear objectives (McLain and Jones 2001). In the case of marula, for example, the primary concern for policy-makers should not be resource

conservation, but rather maintenance and improvement of benefits for local groups from marula harvest, and guarding against the erosion of these benefits that might result from intensified commercialisation and pressure from outside groups on the local resource base. Promotion of marula domestication, for example, could induce shifts in benefits from poorer groups of farmers to richer ones, or to multinational companies if the benefits to poor farmers are not protected and if industrial demand becomes considerable. Harmful outputs from domestication and commercialisation could also potentially arise if interest in growing new tree crops expands to the point where outsiders with capital to invest develop local, large-scale monoculture plantations for export markets (Wynberg *et al.* 2002a). Similarly, changes in tenure and access rights are critically needed but must be implemented with caution as they could also lead towards increased privatisation of the marula resource, with detrimental consequences for those who do not have access to the resource. Intensified commercialisation could also shift benefits away from the most marginalised producers, through for example the introduction of new mechanised technologies that attract men to enterprises and diminish the role of women in marula commercialisation (Shackleton *et al.* 2006).

CONCLUSION

By its very nature, NTFP use, management, and trade – the sustainability and equity of which depends upon a myriad of complex and locally-specific ecological, economic, social, political and cultural factors – is best regulated by a patchwork of local measures. Governments in southern Africa should seize the opportunities that exist within communities for local management and control of natural resources and, rather than intervening unnecessarily, should use these oft-complementary mechanisms to bolster implementation of national policies and laws, with the extent of state intervention being gauged against the robustness of customary systems of governance. This would provide a more streamlined and coherent framework for NTFP use, management and trade than currently exists, suggesting that with the exception of areas and cases in which customary law and traditional authority falls short and commercial pressures are significant, governments might do best by leaving well enough alone.

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