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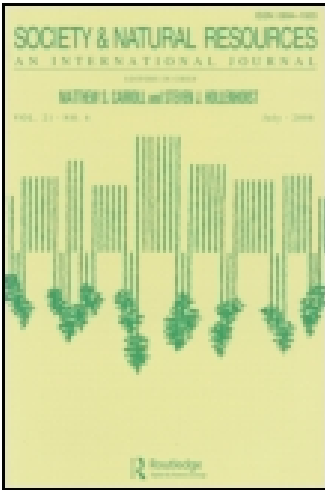
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Formalization of the Natural Product Trade in Southern Africa: Unintended Consequences and Policy Blurring in Biotrade and Bioprospecting

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Concerns about ecological sustainability and inequality are driving increased formalization of the natural product trade, including both biotrade of bulk, raw materials (or nontimber forest products [NTFPs]) and bioprospecting for genetic resources. However, there has been little interrogation as to whether the policy tools used to achieve sustainability and equity goals are appropriate and effective. This article addresses this gap by examining efforts to formalize biotrade, including the blurred regulatory lines that increasingly exist between biotrade and bioprospecting. Two case studies are explored from southern Africa—baobab and Pelargonium. Findings emphasize the unintended consequences that can arise from overregulation and poorly formulated laws, including the further marginalization of women and/or poor communities; elite capture; weakening small businesses; and leakage across political boundaries. Conclusions underpin the need to pursue solutions that are better informed and more respectful of local knowledge and needs, and that draw upon both customary and statutory laws and institutions.

Keywords access and benefit sharing, baobab, equity, governance, Nagoya Protocol, *Pelargonium sidoides*, sustainability

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Increased efforts have been made over the last two decades to promote the equitable and sustainable use of commercially traded natural products. This represents a growing trend toward formalization of the sector, which includes both biotrade, whereby biological resources or nontimber forest products (NTFPs)¹ are traded locally or internationally as bulk, raw materials; and bioprospecting, the exploration of biodiversity for genetic resources and biochemicals. As with other products discussed in this issue, efforts to formalize the natural product sector have often grown from the lofty goals of promoting environmental sustainability and equity for producers, and the more prosaic intention of generating public revenues, or getting a cut for the state of what are perceived to be profitable activities (e.g., Laird, McLain, and Wynberg 2010). Rapid deforestation, population growth, and spiraling commodity consumption have led to widespread concerns over the sustainability of harvesting and the equity of supply chains, which are often characterized by uneven power relations (Carney and Rosomoff 2010). In response, aspects of the trade have become increasingly formalized through a range of international and national laws, as well as social and ecological labeling and certification systems (Shanley *et al.* 2002; Raynolds and Long 2007). At the same time, the formalization of property rights has often led to elite capture, with the exclusion of legitimate claimants and the establishment of exclusive forms of rights over resources (Meinzen-Dick and Mwangi 2008).

In the late 1980s, international negotiations commenced to set in place a treaty to conserve biodiversity and its “medicinal riches,” resulting in the 1992 Convention on Biological Diversity (CBD). Pressure also mounted to recognize the land, resource, human, cultural, and intellectual property rights of indigenous peoples, leading to the development of a suite of global instruments and institutions (Posey 1999; United Nations (UN) 2008). At the same time, NTFP commercialization emerged as a way to conserve biodiversity and improve livelihoods for indigenous and local communities (e.g., Plotkin and Famolare 1992; Arnold and Ruiz-Pérez 2001).

Links between the commercial use of NTFPs, conservation, and equity proved more difficult to realize in practice, however. NTFPs contribute substantially to local livelihoods, but primarily through subsistence and local trade, and in ways that are difficult to regulate, tax, and manage as a sector. Harvesters are usually drawn from the least powerful members of society, the rural poor, few NTFPs are of great economic value, and most NTFP use is “invisible” to policymakers (Shackleton and Shackleton 2004; Alexiades and Shanley 2005). When NTFPs do make it onto the radar screen of governments, the results are often ineffective policy and failed regulatory regimes that discourage sustainability and equity (Laird, McLain, and Wynberg 2010). The sector is poorly understood by policymakers and, unlike other sectors covered in this volume, incorporates a range of very different and diffuse activities. Recent efforts to fold these resources into another layer of regulation—the CBD’s “access and benefit-sharing measures” (ABS) intended to regulate bioprospecting—have created further difficulties for producers, traders, companies, and resource managers (Laird, McLain, and Wynberg 2010; Wynberg and Laird 2012, 2007). Such concerns are likely to escalate with implementation of the CBD’s Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, which entered into force in 2014.

Difficulties associated with these policy frameworks are well reflected in southern Africa, a region that not only contains a remarkable richness of biodiversity

(Driver et al. 2012), but also is the hub for a number of NTFP commercialization initiatives. Common to all countries in the region are massive development problems, including the highest rates of HIV/AIDS in the world, rising unemployment, and levels of income inequality considerably higher than in the rest of Africa (Sawers and Stillwagon 2010). Excluding South Africa, 71% of people in the region live on less than US\$2 per day, and although some headway has been made in recent years, millions of people still lack access to basic services such as water, sanitation, and electricity (Sawers and Stillwagon 2010).

The two case studies described in this article draw on research from South Africa, Zimbabwe, and Lesotho, and are thus located within a diverse array of geographies, policy and regulatory frameworks, and political contexts and at a variety of scales. Zimbabwe, for example, has undergone a number of intense governance changes from the colonial to postcolonial period, including initiatives to centralize, decentralize, and democratize natural resource governance, and economic and land reform policies with far-reaching effects (Kozanayi, Wynberg, and Matose 2014). For both case studies, NTFPs are managed de facto by customary systems that operate in parallel to statutory laws. Customary systems themselves vary considerably in the region, in the extent to which traditional norms govern resource use, and with regard to the role and legitimacy of traditional authorities. This is overlain by decades of intervention and imposition by colonial and apartheid administrations, and their co-option of traditional authorities, often continuing today under the guise of the contemporary independent African state (Mamdani 1996). Throughout the region, tensions are evident between trends toward decentralization and locally based natural resource management on the one hand, and approaches that favor centralized political control on the other.

This article examines efforts to formalize the biotrade component of natural product commercialization, while addressing the blurred regulatory lines that increasingly exist between biotrade and bioprospecting. While equity and sustainability now form part of the biodiversity governance lexicon, there has been little interrogation as to whether or not the policy tools used to achieve these goals are appropriate; whose interests they ultimately serve; the processes through which they are developed; and the overall drivers of formalization initiatives. This article seeks to fill this gap by examining the impacts of formalizing equity and sustainability in the natural product trade through the lens of two case studies in southern Africa. Findings emphasize the unintended consequences that can arise from over-regulation and poorly formulated laws; suggest that formalization can create worrying opportunities for elite capture and problems of leakage; and illustrate how formalization can create entry barriers for small-scale producers and entrepreneurs, and can further exclude women and other marginalized producers from NTFP trade. We emphasize the need to pursue solutions that are more respectful of local knowledge and needs, that draw upon both customary and statutory laws and institutions, that are based on an understanding of the regulated activities, and that are appropriate to local circumstances. The first case study explores the evolution of formalization measures in Zimbabwe for bark and fruit harvesting of the iconic baobab tree *Adansonia digitata*; the second examines the complex governance arrangements that have evolved in South Africa and Lesotho to manage use of *Pelargonium sidoides*, incorporated into a top-selling bronchial remedy in global markets.

Methods and Study Sites

Our methods across the two case studies were similar, drawing on interviews with producers, communities, companies, and government officials. In Zimbabwe, research was undertaken in the eastern Chimanimani District, focused on the Nyanyadzi and Gudyanga wards (Figure 1). Data were collected through interviews with individuals involved in the regulation and use of baobab: 12 local traders of fruits and fiber, 5 traders selling crafts across national borders, 3 companies buying, processing, and exporting baobab fruit products, 12 traditional authorities, 14 government officials at local and district level, and interviews and discussions with provincial and national government officials at a series of meetings and workshops over the last few years. Discussions with 4 resource user groups and 20 community



Figure 1. Study sites in South Africa, Lesotho, and Zimbabwe.

members were an additional source of information, complemented by historical records at the National Archives in Harare, Zimbabwe, newspaper clips, and project reports. One of the authors (WK) grew up in the study area and has participated in research in the area for almost 20 years.

Fieldwork for the *Pelargonium* case study was undertaken in the villages of Lokwe and Nkowankcewa in the Amathole District Municipality, Eastern Cape Province, South Africa, and Ha-Thlaku and Tsatsane in the southwestern Quthing district of Lesotho (Figure 1). At each village a focus group was conducted with harvesters, amounting to 45 harvesters in total. Six companies and four officials from the provincial and national environmental departments in South Africa and the National Environmental Secretariat in Lesotho were initially interviewed, with these interviews repeated each year since 2009. A review of archival material, published and unpublished documents, permits, and relevant legislation complemented the qualitative data collection.

The Case of Baobab

Baobab, one of the most distinctive trees in the African landscape, demonstrates well the unintended negative consequences of formalization. Parts of the tree are widely used by local communities (Wickens and Lowe 2008), and management has long fallen under the purview of customary systems. With increased commercialization, however, the state has strengthened its involvement to promote ecological and economic sustainability, and to generate revenues for government.

Commercial use of the tree centers on its fruit, seeds, and fibrous bark. Baobab fruit is sold in urban areas or is processed into a pulp that is either sold to national confectionery companies or exported. Since the early 1990s, local residents have made and exported to South Africa crafts from baobab fiber. Prior to this, harvesting was mostly for local consumption, with select members of the Gumbu tribe being skilled artisans for fiber crafting, and women and young boys involved in collecting fruits and leaves, with some “export” of the fruit to open markets in urban areas. Baobab seed oil is also exported for use in the cosmetics industry, although the communities involved in this case study have not been strongly involved in this enterprise.

Baobab products constitute a potentially lucrative market opportunity, stimulated in particular by the granting of “novel food” status for baobab in the European Union. Baobab is regarded as the highest earner of all NTFPs in the region, with projections suggesting annual incomes of up to US\$1 billion for producer countries (Regional Trade Facilitation Programme [RTFP] 2007). At the local scale, however, incomes are far more meager, with households realizing between US\$350 and US\$1,500 per year from direct or indirect involvement in the baobab trade (Luckert et al. 2014). More than 5,000 rural producers are engaged in the commercial export trade of baobab in Zimbabwe, with many more involved in selling fruits on local markets (PhytoTrade Africa, personal communication, July 2014). Most producers are women, who have few other sources of income. At the study site, which has one of the highest baobab densities in the district at 3 to 21 trees per hectare (Mudavanhu 1998), at least 70% of the 3,500 households use baobab (Mutasa 2008), with 19% of these households involved in trading products.

Trajectories of Formalization

A number of factors have driven the formalization of baobab management and trade in Zimbabwe (Figure 2). Ecological concerns were a major factor, with debates about the conservation of the tree beginning decades ago with the discovery of black soot disease (Calvert 1989). Sustainability concerns increased again in the 1990s with escalated tree debarking for fiber to make mats to supply a booming tourism industry (Braedt and Standa-Gunda 2000). Another major driver was the local councils' desire to generate revenue, in theory to equitably distribute benefits from commercialization more broadly within the community. As a result, the council today collects harvesting and marketing levies and imposes fines on members who are not fully paid up.

Diverse and often contradictory laws now converge to regulate the use, harvest, and trade of baobab. For example, the Zimbabwean land reform program instituted in 2000 led to resources that were previously privately held for conservation, such as

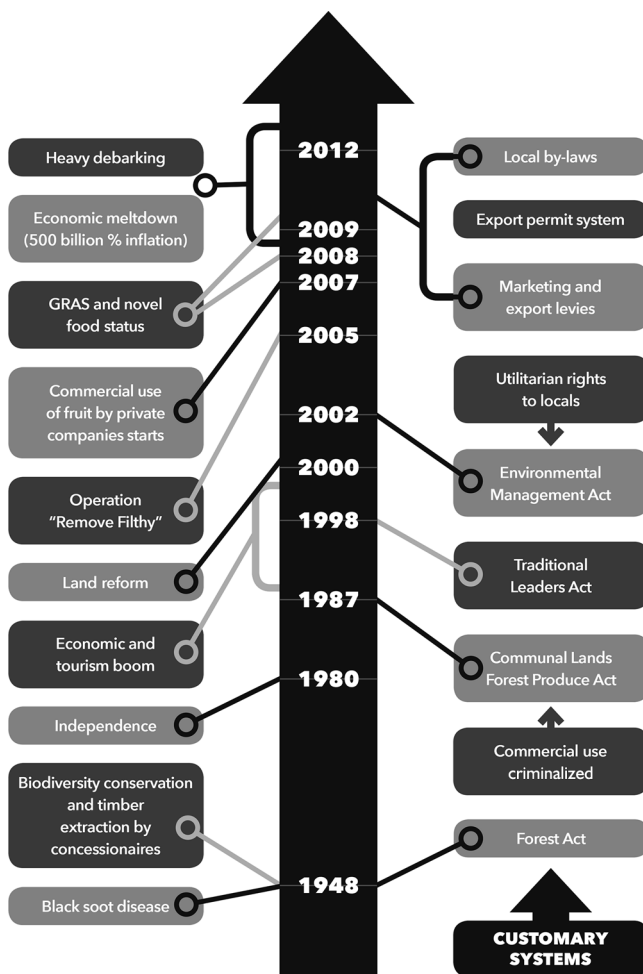


Figure 2. The evolution of baobab formalization.

baobab trees in the Devure/Save Conservancy, becoming communally owned after part of the conservancy was annexed and redistributed to new farmers (Chibisa, Ruzive, and Mandipa 2010). Local residents claim that in the post-2000 period resource use patterns became indiscriminate and unsustainable as new harvesters, outside the controls of local customary laws, moved into the area (Chigumira 2010). The Indigenisation and Economic Empowerment Act (14 of 2007), introduced in an effort to involve indigenous Zimbabweans in economic activities from which they were previously excluded, served to aggravate these trends. Economic empowerment was taken to mean the liberty to use resources in any way one pleased, for one's own benefit, and longer term, communal approaches to management under customary law were cast aside.

Added to these interventions, several by-laws were introduced to sustainably manage baobab in 2004 by the Chimanimani Rural District Council (RDC) in collaboration with local people and nongovernmental organizations (NGOs). Despite this participation, compliance was weak, due in part to a lack of monitoring and enforcement by the ward councillors and the Ward Environment Management Committees (WEMECs), who competed with the traditional authorities for baobab regulation. As an elected politician, the ward councillor would not alienate future voters by enforcing unpopular policies, and, unlike traditional authorities, many ward councillors feared retribution from angry local communities if they did enforce laws.

Today, a bewildering array of costly and time-consuming permits governs the use and trade of baobab, especially for the export market. These include a US\$10 annual marketing levy imposed by the RDC, which all traders must pay. The levy is supposed to be partly invested in local development projects, but no such projects are evident to date. For a fee of US\$20, the Forestry Commission issues harvesting permits to "bulk" harvesters to monitor any volumes sold outside of the ward. The harvester must pay further "movement" fees to the commission to transport material to markets. At the same time, resources are not available to any of those involved to implement many of these provisions. For example, government departments are stationed more than 130 km away from Nyanyadzi and do not have vehicles, and harvesters cannot afford the US\$28 cost for travel to and from the administrative center.

A final Forestry Commission fee of US\$10 or 1% of the value of goods is levied at the point of export, where the exporter must also produce a forestry export permit, indicating appropriate harvesting. Craft exports additionally require a US\$12 fumigation certificate from the Plant Inspectorate Department in the Agriculture Ministry. Once material has arrived in South Africa, traders must pay an additional South African Revenue Services (SARS) import duty of R5.80 (US\$0.6) per mat. Faced with the punitive regime of levies and taxes, there has been widespread use of social relations and kinship ties to access resources in the neighboring district of Buhera (Kozanayi, Wynberg, and Matose 2014).

Formalization Impacts

A range of unintended consequences has unfolded as a result of these formalization initiatives. For example, the new and costly levies and cross-border certificate requirements have led to border guards requesting sexual favors from women baobab traders in exchange for waiving requirements. As a result, women traders have moved from trading to weaving, leaving the more lucrative cross-border trade

to men. This trend echoes findings by Wardell (2006), who describes the negative impacts of colonial formalization on women trading shea products across borders, and is in line with other studies that emphasize the lack of policy support for women engaged in high-risk activities associated with travel to markets (Mwangi and Mai 2011; Shackleton *et al.* 2011). In common with poorly formulated NTFP regulations elsewhere in the world (Lele, Pattanaik, and Rai 2010; Ndoye and Awono 2010), formalization has led to increased corruption and exploitation of traders and producers, who are now required to pay bribes to customs officials to circumvent the complex and costly permitting bureaucracy.

Other results of formalization include heightened conflict between baobab crafters and the RDC, since crafters with marketing stalls have demanded services that are commensurate with the taxes they pay to the council. Craft traders are also now afraid to display their wares along the highway since crafts may be confiscated if the trader has not paid the annual marketing levy. Instead, as a good example of the unintended consequences that characterize poorly drafted and implemented NTFP laws, craft makers display poor-quality crafts to reduce their losses should the state confiscate their wares, thereby degrading the quality of their products. Added to these woes, many permanent vending stalls selling baobab crafts along the highway, some of which were constructed in the 1940s, were demolished in 2005 by the state under Operation Murambatsvina (Operation Restore Order, known colloquially as “Remove Filth”), an intervention that sought to destroy all illegal settlements—initially in urban areas, and then along major highways (Tibaijuka 2005; Chibisa and Sigauke 2008).

Overall, therefore, the benefits to local users from formalization of the baobab trade have been few, and annual incomes of craft makers are in decline. Young, educated men who are able to export crafts to neighboring countries are the main beneficiaries of formalization efforts, alongside corrupt traditional leaders who charge “expedite fees” to harvesters as a way to navigate WEMECs’ onerous permitting systems. Formalization in this case has undermined already marginalized producers and traders, and has benefited those with already greater advantages.

The impacts of formalization on sustainable use are also unclear. For the most part, the government at national, regional, and district levels lacks resources to implement policies to promote sustainability. At the same time, the introduction of statutory policies and state institutions has weakened many customary practices and institutions that once regulated baobab harvest and use. As we have seen, WEMECs taking over the role of traditional village heads can levy fines and grant harvesting rights for baobab, but they do this less effectively and funds generated do not remain in the community. Since the introduction of the annual marketing levy, for example, there has been a concomitant rise in the level of debarking of baobab trees, apparently because some harvesters view this as a licence to freely harvest and ignore traditional laws that regulate harvesting. It should be noted that sustainability concerns are particularly acute in this case due to the harvesting of bark and do not necessarily apply to baobab fruit-based enterprises, which have a much stronger ecological premise for sustainability.

This case study describes a clear case of “biotrade,” with its focus on crafts and fruit for direct consumption. What is noteworthy is that regulation stills falls squarely within the domain of “biological” or “nontimber” resources. Although ABS laws are still embryonic in Zimbabwe, and do not yet affect the baobab export trade, it is likely that this situation will change with implementation of the Nagoya Protocol. This in turn will open up questions regarding the scope of regulation, the way in which baobab is utilized, and whether baobab fruit or oil is subject to ABS

requirements. In South Africa, for example, an already complex regulatory framework for baobab has been made more so due to the government view that the use of baobab in food and cosmetic products constitutes bioprospecting. This has led to an entangled and largely unworkable situation (Wynberg and Laird 2014).

The Case of *Pelargonium sidoides*

The questionable impacts of formalization are also revealed in the case of *Pelargonium sidoides*, traded as Umckaloabo, a medicinal plant endemic to South Africa and Lesotho. Combining aspects of both bioprospecting and biotrade, as well as raising questions around intellectual property, conservation of wild-harvested species, the validity of traditional leadership, and unequal power relations in natural product value chains, the *Pelargonium* industry personifies the complexities inherent in NTFP regulation.

Traditional knowledge about *Pelargonium* is widespread and the plant is commonly used as a traditional medicine, although it is not regularly traded in local, informal markets (Dold 2009). The plant's transition from local remedy to global phytomedicine commenced around the turn of the 20th century, based initially on traditional knowledge from a "witchdoctor" in the highlands of Lesotho (Secheyah 1930). In the 1970s, clinical trials proved its effectiveness for treating respiratory ailments. Intensively marketed as a natural remedy for bronchitis since 1983, Umckaloabo has been a top product for German pharmaceutical company Schwabe, which has had a near monopoly on the industry for nearly 30 years (van Niekerk and Wynberg 2012). A significant national market has subsequently emerged on the back of these global products.

Pelargonium is mostly wild-harvested and cultivation has been limited in scope since it is still more economical for industry to source from the wild. Other factors constraining cultivation are the long growth cycle of the tubers, estimated at 8 to 9 years before commercially viable biomass is reached (Motjotji 2011), and concerns about the potency of active compounds in cultivated plants.

Several hundred harvesters are involved in harvesting the plant's red tuberous roots for the commercial market (van Niekerk and Wynberg 2012). Harvesters comprise both men and women, ranging in age from 18 to 88 years, but mostly between 40 and 50 years. Most wild harvesting in South Africa takes place on communal lands of the former "homelands" of the Ciskei and Transkei, areas that suffer high levels of poverty, widespread dependence on state welfare grants, and inadequate provision of basic services. Such conditions are also prevalent in Lesotho—one of the least developed countries in the region (HSRC (Human Sciences Research Council) 2011). Harvesting communities in both South Africa and Lesotho are governed by traditional authorities, although these differ both in the extent to which they are accepted by communities, and in their traditional involvement in *Pelargonium* management.

Trajectories of Formalization

Sustainability concerns were key drivers of formalization in the *Pelargonium* trade (Figure 3). As demand for Umckaloabo rose toward the late 1990s, wild harvesting increased, whereupon provincial authorities imposed permit limitations that included requirements for a certain percentage of harvested material to be replanted. Permitting conditions were not adhered to, however, and the majority of material

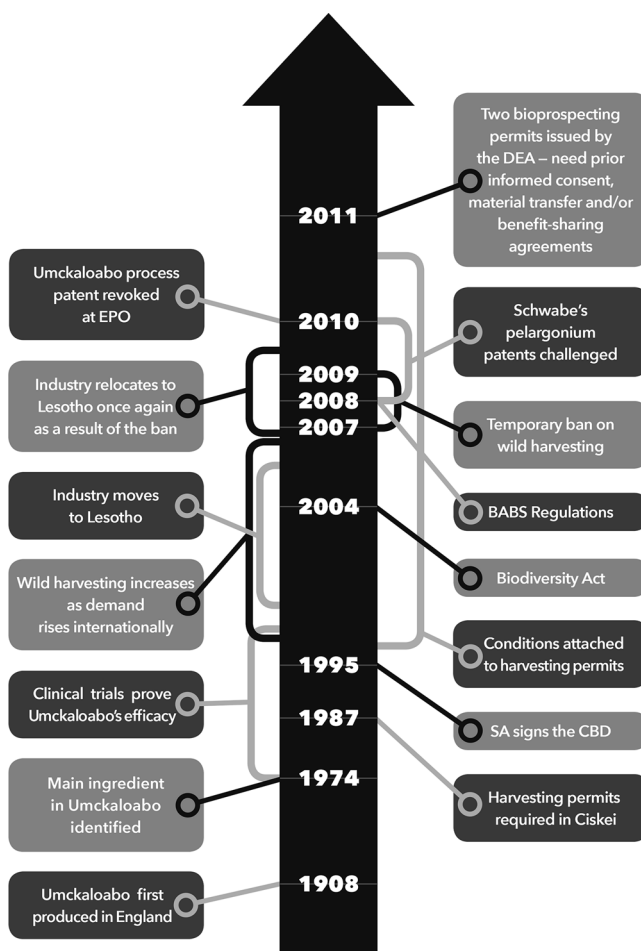


Figure 3. The evolution of *Pelargonium* formalization.

was harvested illegally. Permit restrictions also had the effect of relocating the industry across the border to Lesotho in 2003, where escalating harvesting, most of it illegal, led to the listing of the species as protected in 2004 (Newton et al. 2009).

Growing concerns about inequalities in the supply chain and continued illegal harvesting led to a temporary ban on wild harvesting in the Eastern Cape Province from 2007 to 2009. As with the earlier tightening of regulation through permit conditions, however, this had the effect of further shifting the industry to Lesotho, which, despite listing *Pelargonium* as a protected species, allowed some controlled trade (H. Nieuwoudt, Bophelo Natural Products, personal communication, 2009).

During this period, the Bioprospecting, Access and Benefit-Sharing Regulations (BABS Regulations) giving effect to the National Environmental Management: Biodiversity Act (10 of 2004) were promulgated. Although the trade in *Pelargonium* raw material could be viewed as biotrade, rather than bioprospecting, the broad definition for “bioprospecting” in the Biodiversity Act meant that the industry would be subject to the conditions of the national ABS legislative framework (van Niekerk and Wynberg 2012).

Those already active in the industry were given time to align their activities to the regulations and submit their bioprospecting permit applications to the Department of Environmental Affairs (DEA) (N. Bam, DEDEA, personal communication, 2009). The ban on wild harvesting was partially lifted to give stakeholders with applications awaiting approval the opportunity to ply their trade. Because those in the Schwabe chain were the only companies active at the time, this inadvertently resulted in strengthening the near monopoly of the Schwabe value chain by effectively excluding any other new companies from the trade.

With the introduction of ABS, provincial authorities were still responsible for granting harvesting permits, but only did so once users had obtained a bioprospecting permit from the DEA, which hinged on their demonstrating sustainable use, material disclosure to stakeholders, evidence of prior informed consent, and the conclusion of benefit-sharing and/or material transfer agreements.

In South Africa, bioprospecting permits were granted in 2011 to two companies that had concluded benefit-sharing agreements: Gowar Enterprises, formerly part of the Schwabe chain, and Essential Amathole, a newcomer to the industry. This was done on the understanding that harvesting permits would be issued to traditional leaders—via preexisting development bodies or “trusts”—on behalf of communities. Gowar Enterprises agreed to share benefits with the King Sandile Development Trust of the Rharhabe Kingdom in the Eastern Cape, while Essential Amathole concluded agreements with the Essential Amathole Community Trust, the community development arm of the Amabhele Traditional Authority. By mid 2014, the bioprospecting permit applied for by Schwabe, in conjunction with its local partner, Parceval, after agreeing to share benefits with chiefs of the Rharhabe Kingdom in 2008, had not yet been approved.

Impacts of Formalization

The *Pelargonium* case reveals a succession of inadvertent consequences driven by initial concerns for sustainability and equity. For example, in South Africa, as formalization intensified, particularly in the form of benefit-sharing agreements required by ABS legislation, ruling elites came to the fore, capturing benefits intended for harvesters who were in no position to navigate the complex legal requirements associated with ABS agreements. Prior to the introduction of ABS legislation, local buyers obtained harvesting permits and dealt directly with harvesters, but ABS laws led to permitting being routed via the chiefdoms who historically had not been involved at all in *Pelargonium* management or trade. This form of elite capture may well have been driven by the industry and government themselves, albeit unintentionally, since both sets of actors are in favor of dealing with traditional leaders or established groups because they see it as easier to work with an overarching structure rather than individual communities, and believe that “chiefs will take care of their communities” (Department of Environmental Affairs [DEA] 2010). Some community members have been involved with the trade for much longer than their traditional leaders, however, and resent the fact that they are no longer directly in touch with the resource users. “Chiefs are taking what is ours—this is what we know, this is our knowledge,” remarked one harvester. While the entry of traditional leaders might not affect the price harvesters receive, it does mean that community members who do not accept the authority of traditional leaders are forced to defer to them in order to participate in the industry (Morris 2012; van Niekerk and Wynberg 2012). Further, the fact that

traditional knowledge associated with the plant, and indeed the plant itself, is widely spread is not taken into account when benefit-sharing agreements are concluded with a limited number of communities in a certain area, making these agreements inherently unfair.

Broader economic losses have also resulted from formalization interventions. From the industry's perspective, the financial costs associated with complying with ABS legislation, such as staff time and travel expenses incurred when negotiating benefit-sharing agreements, have deterred small and medium-sized companies from entering the trade, a barrier also noted in studies reviewing compliance with certification initiatives (Putzel 2009; Schepers 2010). Lengthy delays in issuing bioprospecting agreements have had negative financial consequences for companies—big and small alike. The stop–start nature of the trade, and uncertainties around permitting—due in part to the difficulties experienced by the authorities in implementing poorly formulated legislation—have had the effect of putting off potential international buyers, thus forfeiting investment in the industry.

As is the case for baobab, increased formalization has not been able to resolve sustainability issues in the *Pelargonium* industry. In common with other studies demonstrating leakage (e.g., Meyfroidt, Rudel, and Lambin 2010), stricter measures did not prevent illegal harvesting, and instead drove it across the border, and incoherent pieces of legislation further complicated monitoring. Moreover, in response to stricter regulation, Schwabe initiated cultivation in other developing countries, which means that the southern African region has lost out—not only on the potential financial benefits promised by ABS, but also on the possible conservation safeguards of cultivation. Where cultivation has been initiated locally, stakeholders with access to financial and technological capital tend to be favored, thereby excluding those who have relied on wild harvesting to supplement their livelihoods, usually the poorest members of rural society.

Conclusion

Both case studies illustrate that despite the fact that formalization has been driven by the objectives of achieving equity and ecological sustainability, a succession of unintended consequences has materialized. For example, women and/or poor communities have been further marginalized, with elites enriched often at the cost of the poor. Small businesses and entrepreneurs have struggled to navigate the complex and confusing mix of regulatory measures, which has been exacerbated by the wide range of sometimes competing institutions involved in administering the laws. Leakage has also occurred across political boundaries as traders, producers, and companies seek alternative economic opportunities and a lighter regulatory load.

Findings about NTFP formalization from around the world (Laird, McLain, and Wynberg 2010) suggest that these combined experiences are not unique, and point to a number of common trends and lessons, especially with respect to the complexities of regulating both for sustainability and for equity, and the blurred regulatory lines that exist between biotrade and bioprospecting. First, authorities should guard against overregulation and poorly formulated laws, and when they proceed should do so based on a careful understanding of the products and people they seek to regulate. Tighter regulation of the *Pelargonium* trade resulted in the resource being collected from neighboring Lesotho, and the stop–start nature of the industry as a result of harvest bans and tighter controls not only deterred potential investors,

but also had the effect of shifting cultivation outside the region. In Zimbabwe, the inappropriate regulation of baobab led to increased corruption, burdened producers and traders, distorted the use and trade of baobab, and significantly reduced livelihood benefits for local harvesters and traders. In both cases, formalization has also not had the intended effect of curbing overharvesting or enhancing sustainability, and might even have increased threats to the resource.

Second, the cases have revealed the confusion and conflict that exist between customary and statutory laws and institutions, suggesting that problems of NTFP governance seldom fall snugly in the purview of either the state or traditional systems, and require a hybrid of solutions from both sectors. On account of their proximity to the resource base, however, traditional governance structures are usually better placed to be the first line of contact, and the state a second and complementary layer of governance.

Third, the cases suggest that formalization can present worrying opportunities for elite capture of benefits. Despite policy pronouncements that recognize the role of local people in the management of natural resources, both cases suggest that “local” needs to be more clearly elaborated. In these cases, local harvesters have participated and benefited less than local elites, and local communities are often regarded as agents of resource degradation rather than resource custodians and potential co-managers. Emerging ABS frameworks exacerbate elite capture and marginalization of harvesters by favoring communities that are already organized or are astute enough to legally constitute themselves to be a negotiating partner. Moreover, the largely bilateral approach of ABS, designed as a tool for commercial agreements, does not easily address questions of identity, representation, the contested nature of traditional leadership, and concomitant land tenure questions.

Combined, these trends emphasize the importance of applying formalization with a light hand; of exploring alternative approaches toward achieving equity and sustainability that are based on local wisdom and social learning processes and may not necessarily have regulation at their core; of proceeding based on real understanding and knowledge; and of carefully interrogating the possible consequences for all actors of formalizing the natural product trade.

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Note

1. Meaning “all biological materials other than timber which are extracted from forests for human use” (De Beer and McDermott 1989).

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