

POLICY BRIEF

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CONSERVATION AND EQUITY IN THE TRADE AND USE OF BIOLOGICAL AND GENETIC RESOURCES - WHAT DOES ABS BRING TO THE TABLE?

Access and Benefit Sharing and the Case of
Bush Mango (*Irvingia spp.*) in Cameroon

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Voices for BioJustice

Working towards the equitable and
sustainable use of biodiversity

INTRODUCTION

In recent years, the scope of access and benefit sharing (ABS) has been expanded in many countries to include the use and trade of non-timber forest products (NTFPs), also known as biological resources. This raises questions, including: How might ABS impact the local trade and use of these products, sustainability and equity in the value chain, and the range of local stakeholders? How will ABS interface with the existing legal and policy framework for these products?

BioTrade refers to the collection, production, transformation, and commercialisation of goods and services derived from biological resources and biodiversity, sometimes under the criteria of environmental, social and economic sustainability, and usually for the cosmetic, personal care, food, botanical medicine and other sectors relying on the sourcing of raw bulk materials.

This policy brief focuses on one of the most widely traded and used NTFPs in West and Central Africa - bush mango (*Irvingia spp.*). The case of bush mango illustrates how ABS might impact the use and trade of this and other NTFPs in the region, and the potential contribution of ABS to conservation and equity, and challenges it could create.

The Convention on Biological Diversity and Access and Benefit Sharing

In 1993 the **United Nations Convention on Biological Diversity (CBD)** entered into force in order to conserve biodiversity and bring more equity into its use. Its objectives are the conservation of biodiversity, sustainable use of the components of biodiversity, and the fair and equitable sharing of benefits arising out of the utilisation of genetic resources. The CBD affirmed national sovereignty over genetic resources, moving away from the view that biodiversity is the “common heritage” of all people, and past practices in which resources from high biodiversity countries were accessed and used without requirements for prior informed consent or sharing benefits. The CBD established a framework that linked access to genetic resources for research or commercial purposes with benefit sharing – referred to as **access and benefit sharing (ABS)**.

The 2004 **FAO International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)** is also part of the global ABS regime, seeking to recognise the contribution of farmers to the diversity of crops that feed the world; establishing a global system to provide farmers, plant breeders and scientists with access to plant genetic materials; and ensuring that recipients share benefits they derive from the use of these genetic materials with the countries of origin.

After almost a decade of negotiation, ABS concepts were further elaborated in the 2014 **Nagoya Protocol on Access to Genetic Resources and Fair and Equitable Sharing of Benefits Arising from their Utilisation**. As a supplementary agreement to the CBD, the Nagoya Protocol provides a legal framework for implementation of the fair and equitable sharing of benefits arising from the utilisation of genetic resources.

Cameroon is a signatory to the CBD (1995), ITPGRFA (2017) and Nagoya Protocol (2017); it developed a National ABS Strategy in 2012, and put in place administrative procedures for ABS, found in the CBD Clearing House Mechanism. A 2018 draft ABS Law and implementing decree is under development. In 2010, member countries of the Central African Forests Commission (COMIFAC) elaborated and adopted a sub-regional ABS strategy. This strategy provides guidance to member countries to elaborate their national ABS framework.

The case of bush mango in Cameroon

This section reviews the ecological, cultural, economic and equity issues associated with the use and trade of bush mango.

Widespread traditional use

Bush mango is one of the most widely used trees across West and Central Africa. The seed kernels have been harvested for subsistence use for centuries and sold as a condiment used to thicken soups and stews, and widely valued for “drawability” – a quality important in local cuisine. Many other parts of the tree are traditionally used, including the bark as a medicine, and the mesocarp of the fruit which is consumed fresh. It is a multi-purpose species, used as a basic soup ingredient, traditional medicine, condiment, dye, cooking oil, and the wood is used for poles and utensils.

Sustainable use and conservation

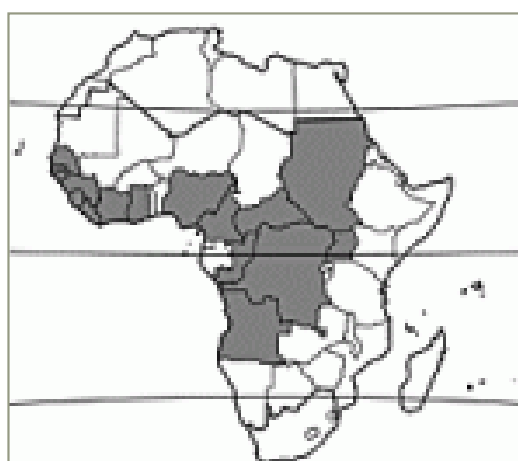
There are two species of bush mango - *Irvingia gabonensis* and *Irvingia wombolu*. The two species are found in tropical humid lowland forests across West and Central Africa. Logging these forests results in collateral damage to bush mango trees, and increased deforestation for agriculture and forest degradation is placing pressure on these species, raising concerns about the sustainability of their use and trade. Over-harvesting of fallen fruits to supply increased demand is also negatively impacting regeneration. The IUCN Red List assessment of *Irvingia gabonensis* was “near threatened” in 1998, but its status has not been updated since. *Irvingia wombolu* is not listed. (<https://www.iucnredlist.org/species/33055/9754010>)

Unlike many other commercially-valuable NTFPs in Central and West Africa, however, the traditional management of bush mango trees can contribute to its resilience. Fruits are generally collected from the forest floor without harming the tree, and both species have been increasingly domesticated in response to rising demand from domestic and regional markets and decreasing forest area. Because they grow to 25 - 40m tall, bush mango are useful in traditional farming systems and as shade trees in cocoa and coffee farms. It is estimated that 41% of bush mango is harvested from farms and fallows, and the remainder from secondary and primary forests.



Range of *Irvingia gabonensis*

Source: Prota database



Range of *Irvingia wombolu*

Extensive local, regional and international markets

Bush mango is one of the most widely traded NTFPs in the region, both nationally, and between Cameroon and neighbouring Nigeria, Gabon, Central African Republic, and Equatorial Guinea. The **national trade** in Cameroon employed 5 190 people and was valued at US\$ 9.43 million in the period 2007 to 2010. The value of the **regional trade** was estimated at US\$ 6.3 million in 2007, with 3 425 tons traded annually in the period 2007 to 2010. Data on **global markets** for bush mango are poorly documented although the volumes are estimated as much lower than the regional trade, and only occasionally in the last decade have hundreds of tons officially been registered. Global markets are characterised by two different uses:

- Since at least the 1990s, **trade in bush mango kernels for traditional food use by the African diaspora** in Europe and the USA.
- Newer, lower volume global trade where processed bush mango is known as *African Mango*, *ogbono*, *bread tree* and *dika* nut, and sold in online **nutraceutical and herbal medicine markets**. Countries that are part of this trade include the US, India, Germany, UK, France, China and Russia. New ABS laws and regulations would apply to these uses.

Research on commercial uses of bush mango kernels has yielded, amongst others, the following: wine; cooking oil and margarine; perfume, soap and gum; medicine to treat obesity, diabetes, weight loss, cholesterol, diarrhea, pain and as an anti-microbial; as a health food due to its high fiber and fatty acid content; to manage pests; and as a binding agent in tablet formulation.

Range of existing benefits from current use and trade

The benefits that new policies and laws aim to secure should be considered alongside the benefits currently produced by existing systems. Bush mango is consumed for subsistence, is important in traditional cooking, and acts as a source of cash income alongside other NTFPs and agricultural crops. These benefits largely accrue to women, who dominate the value chain at all stages. In some rural areas, bush mango is the main source of income for households. In the value chain, traders, processors and exporters tend to earn higher profits, although often taking higher risks and being more dependent upon the trade than harvesters.



Dingha Claudette in a bush mango nursery.

Credit: Stella Asaha

Existing legal and policy frameworks

The legal and policy frameworks for genetic and biological resource use and trade in West and Central Africa blend different types of regulation. The majority of NTFP and biological resource use is for subsistence or local trade. These hundreds of species are regulated *de facto* by customary regulations relating to land tenure, resource rights and markets. Once species grow in cash value, with extensive national, regional and global trade – like bush mango – an additional layer of statutory governance systems emerges that includes forestry and environment laws, land tenure and resource rights, taxation and phytosanitary regulations and policies. A few different laws might regulate a resource, and may overlap, making implementation confusing and respective institutional responsibilities unclear. A snapshot of the complex framework within which NTFPs are governed in Cameroon, with a focus on bush mango, is provided in Table 1.

Table 1. Summary of the legal and customary frameworks regulating NTFPs in Cameroon - with a focus on bush mango

Category	Regulation	Details	Effectiveness in practice
Forest and Environment Laws	<p>Law n° 94/01 of January 20 1994, on the Regime of Forestry, Wildlife and Fisheries (revised 2013)</p> <p>95/531/PM, 1995 Implementing Decree for the Forest Regime (revised)</p> <p>Decision number 0209/D/ MINFOF/CAB, April, 2019</p>	<p>Forest land managed by local communities is considered State property, communities are “users” of resources, and usufruct rights can be withdrawn at any time.</p> <p>Communities may “exploit all forest products, wildlife and fisheries with the exception of protected species for personal use” (Art 8, 94 Law) - regardless of the type of forest estate (permanent or non-permanent), (Art 35. 3 Decree 95).</p> <p>NTFPs can be harvested for sale by local communities in their Community Forest or Council Forest, and in the Permanent Forest Estate, on condition that exploitation is described in an approved management plan (Article 37.1).</p> <p>Authorisation of the sale of NTFPs, known as <i>Special Forestry Products</i> (SFPs) depends upon their classification. Category A (threatened and/or with high economic or socio-cultural value) and B products (vulnerable and/or with an economic or socio-cultural value) require a permit from the Ministry of Forestry and Wildlife (Article 56.1) (Article 8.1), except for community forests (Article 37.3).</p> <p>An April 2019 decision allows small operators without a SFP license to collect and market secondary NTFPs to legally supply the national market.</p> <p>This was the first text on ABS, establishing the sovereignty of Cameroon over its genetic resources, and the requirement for the State to grant access for scientific or commercial use of genetic resources (Article 12.2) and the need to share benefits fairly and equitably (Article 12.2).</p>	<p>The 1994 law was developed without adequate or meaningful consultation with people living in the forest zone and stakeholders such as traders, harvesters, and communities. It remains an avatar of colonial forest policy with minor changes.</p> <p>Many local communities do not consider the State as owner of forests - especially the non-permanent forest estate - and continue to use resources according to customary rules, and do not recognise themselves in much of the law, including limitations on the sale of products.</p> <p>Law No. 94-01 of 20 January 1994 has taken decades to be implemented, and is still not widely known throughout the country.</p> <p>Permitting and taxation are arbitrary and opaque and not well known amongst traders.</p> <p>The articles referencing ABS establish State sovereignty and access and benefit sharing, but the law and implementing regulations do not clarify Prior Informed Consent (PIC) and Mutually Agreed Terms (MAT), now addressed in the draft 2018 ABS Law.</p>
	<p>Decision n° 0336/D/MINFOF, 6 July 2006 Setting the List of Special Forestry Products representing a particular interest to Cameroon and Annual Decisions</p> <p>Decision n° 209 26 April 2019, concerning the classification of special forestry products and NTFPs</p> <p>Decree n° 067/PM 27 June 2006, relating to the organisation and functioning of the Interministerial Coordination Committee and monitoring the implementation of CITES</p>	<p><i>Special Forestry Products</i> (SFPs) are defined as “certain forest products, such as ebony, ivory, wild animals, as well as certain animal, plant and medicinal species which are of particular interest...” (Section 9.2). A list of SFPs is created annually. The 2006 Decision covered 11 SFPs, the 2019 list over 40.</p> <p>Bush mango is classed as SFP Category C (non-threatened) and so does not require an exploitation permit for any harvest area.</p> <p>Species listed in the Convention on International Trade in Endangered Species (CITES) are subject to further quotas and permits.</p>	<p>In the 2006 decision terms like “certain”, “interest”, and “special” are not defined, or based on conservation threats. By 2019, species listed are due to their economic, socio-cultural and/or ecological sustainability.</p> <p>Bush mango was not included in the 2006 Special Forestry Product list, and still is not, despite its high levels of use, national and international trade and IUCN status. Many species potentially relevant under ABS are not included e.g. <i>Echinops giganteus</i>, <i>Mondia whitei</i>.</p>

Category	Regulation	Details	Effectiveness in practice
Institutions	Decree n° 2005/099 of 6 April 2005	Five branches of the Ministry of Forestry and Wildlife are concerned with NTFPs: the Directorate of Forestry (DF), the Directorate of Promotion and Processing (DPP) of Forest Products, the National Brigade (NB) in charge of control, the Service in charge of Decentralisation (SD) and the National Forestry Development Agency.	This expansion of institutional bodies leads to even greater overlap and confusion concerning institutional mandates, and inefficiency and confusion.
	Draft 2018 ABS Law - Institutions	The Ministry of Environment and Nature Protection are home to the CBD and ABS focal points. The draft law delegates the Ministry as the Competent National Authority (CNA) for ABS. A National ABS Committee, established in 2013, worked to develop ABS regulations, and partnered with COMIFAC in regional approaches.	The CNA will oversee access permitting, including elaborating and supervising PIC and MAT procedures. The ABS Committee will advise the CNA. The ABS National Focal Point (NFP) will perform duties outlined in Article 13 of the Nagoya Protocol, and coordinate ABS activities.
	Regional	The regional treaty of COMIFAC (Commission for Central African Forests) aims to improve and harmonise forest policies of the 10 Central African member States. NTFPs are a COMIFAC priority, and in addition to supporting NTFP projects, COMIFAC has developed sub-regional NTFP guidelines in partnership with the Food and Agricultural Organisation. COMIFAC has also developed a regional strategy for ABS.	The regional level has sought harmonisation but also added a layer of institutional complexity as laws and definitions of priority species, trading regulations, customary rights are not yet synchronised.
Land Tenure	Tenure 1974 Land Tenure Ordinance n° 74.1	Property rights underlying management are determined by the land tenure legal framework.	Obstacles to implementation are that governance of NTFPs like bush mango are regulated under the forestry law, but the property rights are determined by the land tenure framework and customary laws, which do not correspond with each other.
Taxation	Decree n° 95/531/PM 1995 Finance Law n° 2002/003 of April 19 2002 Decree n° 96/642/PM of 17 September 1996	SFPs are regulated by an operating license granted from the government, which sets quotas and areas of operation granted by an agreement of the Minister in charge of forests (Article 26(1)) enforcing the 1994 Forestry and Wildlife Law. Exploitation permits, export authorisations and transport waybills are required to trade in NTFPs and are prohibitively complex, bureaucratic and expensive for local producers and traders. These difficulties mean that many producers and traders forego permits, and operate illegally, which means they in turn are more exposed to corrupt practices from officials. NTFPs are taxed under the Finance Law, which set a regeneration tax of 10 FCFA / kg of forest products, based on an annual approved quota. Law No 2002/003 determines on an annual basis the rates for different taxes applicable to forestry activities and in collaboration with the Ministry of Finance, the Ministry of Forestry negotiates the terms of benefit sharing. Decree 96/642 covers the basis and methods of collection of royalties and taxes on forestry activities.	Harvesting quantities are not based on inventories that determine sustainability except for <i>Prunus africana</i> , and it is not clear how domesticated NTFPs (or timber) grown in fallow or agroforests are categorised. The Finance Law is not coordinated with other laws. Receipts from permits are not channeled specifically to NTFP protection or regeneration but to the national treasury. The Regeneration tax does not respond to identified economic, environmental or social needs, is considered arbitrary, is not invested in regeneration and is not differentiated per product category. Taxes do not address sectoral revenues, or levels of marketing, in which products are sold, or conservation threats to species. Industrial commercial uses are taxed at the same rate as small scale local trade, all must be paid in advance, resulting in common reselling of waybills despite the expense (illegally obtained waybills sell at nearly 500% of the official price of the legal documents).

Category	Regulation	Details	Effectiveness in practice
Corruption		Widely traded NTFPs such as <i>bush mango</i> , <i>Prunus Africana</i> , <i>Cola</i> spp., <i>Ricinodendron heudelotii</i> , and <i>Gnetum</i> spp. are subject to regular bribery at roadside checkpoints and markets by government officials. As most traders are not aware of the legal requirements, agents often request bribes or “informal taxation”.	Corruption is widespread at roadside checkpoints for bush mango, with bribes paid to police, forestry, customs, council, trade and quarantine officers accounting for 24% of all costs. In a sample of NTFP traders in 2012, 30% reported having an approval, 41% a permit, and 66% using a waybill to satisfy agents. Few traders minimise the risk of seizure by procuring a certificate of origin, which costs 10 FCFCA/kg of produce from the Divisional Forestry Office. Permits are often difficult to obtain and most traders do not know, or see the benefit, of having them.
Phyto-sanitary		Required for export from the Ministry of Agriculture.	None specified for planted NTFPs. Required for export, and often serves as the main permitting procedure for genetic and biological resource samples.
Customary Laws		<p>Many hundreds of plant and animal species are gathered for subsistence use, with an estimate of 100 traded locally. Most of these species are governed by customary laws on land tenure and resource rights. Some customary rules have similar features, which are accepted, interpreted and enforced by local community and rulers. These are usually not recognised by the State unless enshrined in community forest or council forest management plans.</p> <p>Customary laws relating to bush mango include prohibitions on felling trees and, harvesting fruit from the tree (rather than gathering from the forest floor).</p>	<p>Once species have a high cash value with extensive national, regional and global trade – like bush mango – an additional layer of statutory governance systems comes online, but these are often confusing and inconsistent.</p> <p>Trees on family and community property are generally considered their property if they are managed, but the property of the State if they are not. As a result, in some areas people clear around trees in the forest to claim harvesting rights.</p> <p>Remote communities tend to have stronger customary systems than those near urban areas.</p> <p>The dangers of elite capture under customary law remain in many communities, with chiefs and village councils neither consulting nor sharing benefits equitably with wider communities.</p>
Access and benefit sharing	Cameroon National ABS Strategy 2013 Draft 2018 ABS Law	<p>The Strategy was developed with representatives from different ministries and departments, and civil society. The Interim regulations allowed negotiations to develop ABS agreements between companies and stakeholders. Administrative procedures for access have been lodged with the CBD Clearing House Mechanism, with the ABS Focal Point as contact.</p> <p>A Draft 2018 ABS Law , implementing decree, model ABS permit, model PIC procedure, and model MAT, are under review within government.</p>	The new draft law will elaborate aspects of ABS currently not addressed in law, including PIC and MAT procedures. The scope of the draft law is broad, and it remains unclear how these regulations will interface with existing laws for NTFP use and trade.
	COMIFAC	<p>Developed a Strategy of the COMIFAC countries on access to biological/genetic resources and the fair and equitable sharing of benefits arising from their utilisation.</p> <p>Developing administrative procedures, building capacity for implementation, stakeholder consultations, and institutional frameworks for implementing the Nagoya Protocol.</p>	<p>Promotes exchange and harmonisation across regions.</p> <p>Guidelines for implementation and legal frameworks.</p>

What can ABS contribute to conservation, sustainable use and equitable benefit sharing in the case of bush mango?

First, identify the factors contributing to inequity and unsustainability in the bush mango sector

Prior to developing new laws or policies, it is important to identify the objectives and issues to be addressed. For biological and genetic resources, these will vary significantly for different species and the products made from them. Experience with bush mango suggests the following challenges to equity and sustainability for local, regional and international trade in NTFPs:

- o Indigenous people are sometimes excluded from production forests (FMI) for NTFP exploitation
- o Limited availability of market information in rural areas
- o Lack of access to capital
- o Unclear legislation on domesticated NTFPs, and no distinction from those harvested from the forest
- o Poor processing and preservation techniques that reduce quality and ability to sell at times when prices are higher
- o High transportation costs, and poor condition of roads and access to markets
- o Corruption
- o Land tenure and resource rights uncertainty
- o Low bargaining power of individuals and low levels of collective action in rural areas
- o Little understanding of new and potential non-traditional use of NTFPs
- o Laws and institutional barriers to trade legally
- o Lack of clarity and understanding of permitting, taxation, tenure and poor implementation of laws



Split bush mango kernels, Cameroon. Credit: Ghislaine Bonger

Given these challenges, evaluate how ABS can contribute to conservation, sustainable use, and equitable benefit sharing:

Conservation and Sustainable Use

Company-community ABS partnerships can help develop value chains for particular products. These joint initiatives can produce valuable – if very localised - benefits. In theory, upfront payments and royalties from commercial products can fund community projects and conservation, and result in premium prices. However, the relatively small scale and specialised nature of biotrade markets, and experiences with NTFPs such as *Prunus africana*, suggest the transaction costs could be greater than benefits, and that mediation is needed to ensure wider and more equitable distribution of benefits in the community and avoid elite capture.

Greater positive impact and benefits could result from different, sector-wide governmental actions, which are largely outside the scope of ABS, such as: pragmatic resource management inventories, setting appropriate quotas, support for domestication and management; clamping down on corruption; and rationalising land tenure and resource rights for local communities. Company-community partnerships complement these types of possible government actions, but in themselves cannot address broader inequities in power, ownership and representation, nor achieve conservation gains at scale.

Fair and Equitable Benefit Sharing

The effect of ABS measures in different markets

The current international botanical, nutraceutical and other industrial markets for bush mango are relatively small and specialised, with quantity and quality standards that are often difficult to gauge and understand for those in producer, export countries. These are also notoriously fickle markets, with booms and busts. New research that undermines health claims, or raises safety concerns, can decimate markets even for species with long histories of traditional use and it can take years to correct this. Additionally, end uses like weight loss or beauty aids tend to be faddish. Many of these markets are based on the supply of bulk raw material, and so in some countries might not fall within ABS unless traditional knowledge is used, or new uses are under research and development. However, ABS has recently expanded in many countries to include biotrade.



Bush mango kernels. Credit: Verina Ingram

Any ABS partnership or agreement around the commercial use of bush mango should ensure that the far more substantial and reliable local and regional use and trade is not disrupted. In the few cases in which research on species like bush mango and other NTFPs result in new commercial applications, or when traditional knowledge is used, ABS can be a valuable policy tool, providing framework agreements and benefit-sharing requirements. However, expectations should be realistic - the process of bringing together companies and communities to develop partnerships and sign ABS agreements that end in a profitable value chain is in itself time-consuming, expensive and often difficult, and to date many of these processes are underwritten by donors.

Use of traditional knowledge

Challenges exist in identifying beneficiaries from the use of widely used and traded NTFPs like bush mango. When traditional knowledge is common and widespread, the most viable benefit-sharing mechanism from its use is a fund that represents the region and communities across which knowledge is shared. However, in the case of bush mango the geographic area is vast, and selecting specific communities to benefit from the use of traditional knowledge may lead to conflicts and inequity.

Who benefits?

Bush mango is an extraordinarily multi-purpose and economically valuable species for rural and urban communities, with strong, stable local and regional markets. It provides cash for basic needs and is an important traditional food and medicine. The benefits from local and regional trade are significant and largely predictable and likely far outweigh possible benefits resulting from increased regulation through ABS, including partnerships with companies. ABS models employ royalties shared with governments, and small-scale partnerships with a handful of communities, and so are less likely to benefit the large numbers of people in mainly rural communities, and women, as does the existing trade of bush mango.



Bush mango drying on the side of a house. Credit: Verina Ingram

Recommendations for governments considering ABS laws that cover genetic and biological resources

Learning from the case of bush mango in Cameroon, key points governments should consider when exploring how to apply ABS to NTFP use and biotrade include:

- **Consult widely and clearly identify the problem or issue.** As with any legal framework, **any new law or policy should be based on evidence and consultations with a wide range of stakeholders** to best respond to local and national priorities. ABS is sometimes seen as a regulatory solution looking for a problem. This means there is a need to examine the key local and national issues that ABS can address that other laws do not.
- **What are the specific objectives of ABS and what would it enhance that is currently lacking?** Are existing laws inadequate to address the sustainability and equity issues associated with commercial use of species? If there is a gap in laws, can existing laws be modified to serve the ends of equity and sustainability, or are new laws required?
- **Mainstream ABS?** Rather than creating an entirely new regulatory framework, in some countries integrating ABS principles into existing laws, policies, and institutional frameworks might be more effective than creating new laws. This is particularly the case when existing laws and policies are strong but not well implemented or enforced. Mainstreaming builds on existing frameworks, and so is more affordable, tends to avoid duplication and overlapping laws and institutions, and allows a more coordinated approach. Governments can spend and do less, and accomplish more.
- **Customary law as a critical part of the legal framework.** A review of the adequacy of legal and policy frameworks for NTFP use and biotrade should include both customary and statutory laws since customary systems can support the ABS goals of equitable benefit distribution. New ABS measures might complement or strengthen these systems, but should not undermine effective customary frameworks, which are the way most NTFPs used for subsistence and local trade are governed.
- **If a stand-alone ABS framework is needed, evaluate how ABS measures would interface with existing laws and policies on NTFPs.** Taxation, permitting, trade, natural resource management, forestry, agriculture, land tenure and resource rights, and ABS, among other regulations, may be relevant for species with national or international values. An evaluation of how ABS fits with existing laws and how these interact with and impact each other can help reach the aims of ABS more effectively and may create fewer unintended consequences, including for local communities who are often the least able to deal with the burden of additional regulations, and the most vulnerable to increased costs, bureaucracy and corruption.
- **Weigh the impact of ABS measures on NTFPs with important subsistence values, and local and regional markets.** An over-emphasis on industrial and international commercial values should not overlook local subsistence and trade values for products and species. The gain of any ABS measure should clearly outweigh the costs of increased paperwork, bureaucracy, bribes, taxation and loss of local control over resource governance on the part of local producers, traders, and communities.

SUMMARY OF KEY POINTS

CONSERVATION AND SUSTAINABLE USE

- The substantial subsistence use and local and regional markets for bush mango mean that many communities have a long history of managing *Irvingia* species, upon which cultivation and harvesting systems to supply industrial and international trade might build. However, the capacity and willingness to expand is less clear, since trees must mature, and most production is currently from small-scale farms, fallow, and forests. In addition, bush mango supply is barely enough for local and regional markets today.
- Bush mango has raised conservation concerns as a result of collateral damage from logging operations in natural forests, clearing of forests for agriculture, and the overharvesting of fallen fruits in some areas which negatively impacts regeneration.
- Domestication, sustainable harvesting, and sustainable use issues are unlikely to be addressed at scale by ABS, although companies might invest in farms or sustainable management as a form of benefit sharing. However, such investment for biotrade tends to be highly localised and of relatively small scale, and so its impact more broadly is likely to be dwarfed by existing supply and trade, which requires alternative interventions and supports from government.

LOCAL USE AND MARKETS

- Substantial local and regional markets have long existed for bush mango, developed by local groups in response to widespread demand. These markets are significant, and secure, and provide important cash income to local communities and traders from cities.
- Bush mango is not a product in search of a market, nor do local groups require assistance in developing marketing chains and networks, although improvements could be made in adding value to improve the processing and distribution of benefits in the value chain.
- Global markets exist for bush mango which serve the African diaspora, with its use in these communities remaining traditional. New, global functional foods, botanicals, or cosmetics markets are emerging, which rely on bulk raw material supplies but are very different from traditional consumption of bush mango by Africans living overseas.
- These industrial and international commercial uses could compete with local and regional markets for raw materials. They also tend to be more fragile and prone to booms and busts, vulnerable to consumer fads and trends (evident in the marketing of bush mango products in the global market for weight loss) and research findings that undermine health claims or raise concerns about safety.



Stelle Asaha in Limbe market

TRADITIONAL KNOWLEDGE

- Bush mango has a long history of traditional use across its geographic range, primarily as a condiment and medicine, but also as a dye, to make utensils and mortars, for roof supports, and other purposes.
- These traditional uses are substantial and important, and a policy priority should be to ensure these uses are not negatively impacted by expanded international trade.

- The traditional use of bush mango far exceeds in importance the traditional uses of many other species in international trade – e.g. *Prunus africana* (pygeum), *Paunsinystalia johimbe* (yohimbe) – and it is critical for policy makers to understand that all “traditional uses” are not equal, and to provide additional protections for species that have extremely important traditional and local uses.
- Potential new product development by commercial companies may rely on traditional knowledge and should require benefit sharing through ABS agreements or regional funds (given the widespread and common nature of traditional knowledge on this species). Use of traditional knowledge in biotrade sectors is common and not always appropriately acknowledged and compensated.

WHO BENEFITS?

- Studies show that NTFPs contribute significantly to local incomes, and generate cash for schools, medicines and other household needs. Along with other NTFPs and selling agricultural crops, bush mango provides needed cash income as a supplement to subsistence farming and forest product harvesting.
- Benefits are not evenly distributed along the value chain, with traders, processors, and exporters earning many times the income of harvesters. However, it is not always possible for harvesters to engage in the activities taking place at other stages in the value chain that bring greater revenues.
- It is important to identify who participates in NTFP value chains, and who benefits. In the case of bush mango, women, or small rural communities, including indigenous groups like pygmies, dominate the value chain at all stages, something that might not continue with industrial raw material sourcing associated with ABS arrangements.

LAW AND POLICY

- Many COMIFAC states have good laws on NTFPs but are delayed with implementation. This means that new ABS measures may not be as effective as better implementation of existing laws and improvements in current texts. Harmonisation is still needed to define, understand, and regulate regional trade in high value NTFPs.
- Many land tenure and forestry regulations in Central Africa allow local community usufruct rights to resources in their forests only for subsistence, with local and regional trade in products like bush mango a legal grey area with onerous and expensive permits. This reduces benefits for local stakeholders, discourages sustainable management and encourages corruption.
- Laws do not distinguish between domesticated NTFPs and those harvested from the forest, and at checkpoints they are considered the same, requiring the same paperwork. This burdens those trying to produce sustainable supplies from farms, and discourages domestication.
- Land tenure and resource rights underlie all measures relating to biological and genetic resources, and should be clear and supportive of management and control, but in most countries in the region, there is a great deal of confusion and uncertainty.
- Policy and regulatory barriers can discourage local participation in the NTFP sector, reduce revenues for producers, and undermine communities’ bargaining power. Confusing and overlapping laws and institutions, with poor implementation, provide an opportunity for corruption and nepotism, and undermine the conservation and equity goals of legal texts. The need for transparency and accountability in the NTFP and ABS arena parallels these needs more broadly in the forestry sector. Many of the problems with the legal and policy frameworks regulating genetic resources and biotrade are systemic, and found throughout forestry, environment, natural resource, and related areas of law.

- Governance of bush mango and other NTFPs is often a dynamic hybrid of statutory measures, customary law, international conventions, project-based systems, voluntary market-based approaches, and corruption – and the complexity and disorder tend to undermine sustainability and local livelihoods.
- The majority of NTFPs gathered for subsistence or traded locally are regulated by customary law. Some NTFPs with high trade value nationally, regionally and internationally are subject to statutory laws that set quotas, permits, and taxes, but which are often confusing, inconsistent, little known and not well enforced. Special Forest Products as a legal category was intended to draw attention to endangered species or those with high potential pressure, but in practice draws in all NTFPs including those under no specific pressure.
- Any new ABS law and its implementation should be informed by regional experiences with other global measures and approaches, for example CITES, Payment for Environmental Services, and Community Forests - all of which have failed to live up to their promise in the region. Steps needed to make these approaches more effective are likely to be similar to those required for ABS and NTFP law.
- Permitting and taxation of NTFP trade is currently arbitrary, expensive and bureaucratic for small scale producers and traders, leading to illegal trade and exposure to corruption. Government revenues from taxes, and any resulting from ABS agreements, could be more effectively applied and understood if they support resource conservation locally.
- Strengthening community and civil society organisations to engage in policy consultations and the development of laws improves the relevance and effectiveness of laws, sustainability and allows for more equitable partnerships.
- Sometimes new laws, including ABS laws, are not what is most needed. In the case of bush mango and other traded NTFPs, streamlining and modifications to existing laws, their interpretation, dissemination and implementation, could lead to improved benefits locally and more sustainable use. New laws that increase visibility and formalisation of the NTFP sector can be counterproductive by creating legal and institutional overlaps and confusion, and increasing attention on small scale activities, and attendant bureaucracy and corruption.
- Other forms of government engagement can be effective in promoting equity and conservation. For example, already identified priorities include providing market information, access to microcredit, relief from high transportation costs, training in more effective processing and storage techniques, and in some areas support for domestication and cultivation of species. Governments can also manage and support sectors by developing species inventory, harvesting and monitoring standards.



Transporting bush mango sacks. Credit: Marcus Ewane

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