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LOCAL FOOD SECURITY, GLOBAL MARKETS

Market Evolution and the Transition to High-Value Agriculture

Reducing Poverty for Small-Scale Artisanal Fishermen

Trade in Devil's Claw and Indigenous Natural Products

Linking Rural Land Tenure and Food Supply

Creating Agribusiness for Investors and Small-Holder Farmers

Strengthening Land Rights and Food Security

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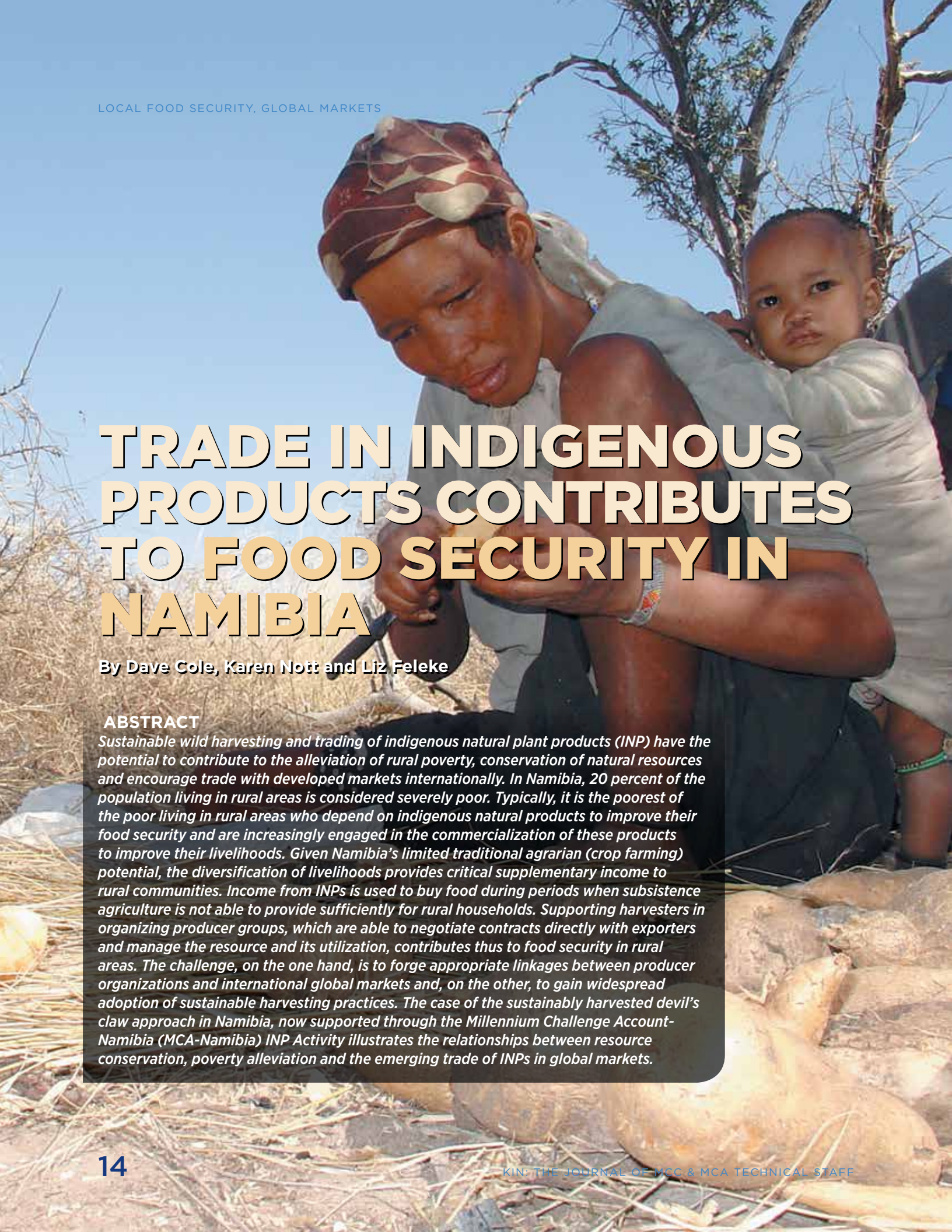

TRADE IN INDIGENOUS PRODUCTS CONTRIBUTES TO FOOD SECURITY IN NAMIBIA

By Dave Cole, Karen Nott and Liz Feleke

ABSTRACT

Sustainable wild harvesting and trading of indigenous natural plant products (INP) have the potential to contribute to the alleviation of rural poverty, conservation of natural resources and encourage trade with developed markets internationally. In Namibia, 20 percent of the population living in rural areas is considered severely poor. Typically, it is the poorest of the poor living in rural areas who depend on indigenous natural products to improve their food security and are increasingly engaged in the commercialization of these products to improve their livelihoods. Given Namibia's limited traditional agrarian (crop farming) potential, the diversification of livelihoods provides critical supplementary income to rural communities. Income from INPs is used to buy food during periods when subsistence agriculture is not able to provide sufficiently for rural households. Supporting harvesters in organizing producer groups, which are able to negotiate contracts directly with exporters and manage the resource and its utilization, contributes thus to food security in rural areas. The challenge, on the one hand, is to forge appropriate linkages between producer organizations and international global markets and, on the other, to gain widespread adoption of sustainable harvesting practices. The case of the sustainably harvested devil's claw approach in Namibia, now supported through the Millennium Challenge Account-Namibia (MCA-Namibia) INP Activity illustrates the relationships between resource conservation, poverty alleviation and the emerging trade of INPs in global markets.

Introduction

Namibia is the driest country south of the Sahara Desert. It covers an area of more than 824,000 square kilometers and has an estimated population of about 2.2 million people. At the same time, Namibia is also endowed with a rich biodiversity, including about 690 rare and endemic or near-endemic plant species. A considerable number are also drought-adapted plants with actual and potential agricultural significance.

Despite its rich biodiversity, Namibia is faced with chronic poverty in rural areas. About 20 percent of the population living in rural areas is considered severely poor with more women than men considered poor (Namibia Statistics Agency 2012). Limited sustainable livelihood options contribute to land degradation, which leads to losses in the natural resources and biodiversity upon which rural communities depend, further entrapping them in the poverty cycle.

INP Commercialization in Namibia

Within this context, the Government of Namibia embarked on an ambitious program to commercialize INPs as a means of expanding rural livelihood opportunities. The objective of the commercialization initiative is to provide supplementary income to many rural inhabitants whose only cash-income, in many instances, is derived from harvesting and selling INPs. From a food security perspective, the INP commercialization supports harvesters in developing local institutional structures to access better market opportunities. Since many rural households depend on the income from INPs to buy food, having a secured buyer and a fair price for their produce will guarantee sales and calm volatile market fluctuations, improving livelihoods and food security.

The Indigenous Plant Task Team (IPTT), a multi-stakeholder forum created by the Ministry of Agriculture Water and Forestry (MAWF), has made a significant contribution to the development of the INP industry in Namibia.[1] The IPTT is chaired by MAWF and includes a broad membership of line ministries and other stakeholders involved with INP commercialization charged with developing a coordinated strategy for the economically sustainable promotion of indigenous fruit in Namibia.

Based on the early successes of the commercialization of INPs in Namibia, support for the INP sector was included in the Millennium Challenge Corporation (MCC) compact, which entered into force in September 2009. The INP Activity is a component of the compact's Agriculture Project and has three sub-activities: support to producer and processor organizations (PPOs), an innovation fund, and capacity support to the INP industry through the National Botanical Research Institute (NBRI) and the IPTT.

The overall goal of the INP Activity is to increase incomes through economic opportunities for INP stakeholders through improved organizational, business and technical capacities along the value chain. The INP Activity is expected to increase incomes for up to 7,000 primary producers and their households, benefiting approximately 35,000 individuals in total. Over 6,600 producers are already members of compact-supported producer groups and have received training under the INP Activity (MCA-Namibia 2013).

Opposite: A San woman slices harvested devil's claw.

1 In 2000, the Indigenous Fruit Task Team (IFTT) was formed and changed to the IPTT to reflect its widened mandate to include all indigenous plants and associated products.

Devil's Claw Plant and its Medicinal Uses

Harpagophytum, more commonly known as devil's claw, comprises two species: *H. procumbens and H. zeyheri*. The plant is a geophyte with a main taproot off which secondary or storage tubers extend. These secondary storage tubers contain the highest concentrations of active ingredients, including harpagoside, which are harvested for their analgesic and anti-inflammatory properties. Devil's claw grows in many parts of southern Africa, mainly in the deep Kalahari sands that cover much of the region. Populations of devil's claw have been recorded in Angola, Zambia, Zimbabwe, Namibia, Botswana, South Africa, and Mozambique.

The indigenous inhabitants of southern Africa, mainly the San, have used the plant's tubers for medicinal purposes for centuries. Ethno-medicinal uses have been recorded mostly for digestive disorders, fever, sores, ulcers, boils, and as an analgesic. The medicinal value of devil's claw for the treatment of rheumatism, arthritis and other similar ailments has been recognized by Western medicine only in the past 50 years.

Pictured left to right are samples of devil's claw flowers, fruiting body and taproot with secondary tubers.

Devil's Claw Contributes to Food Security

Devil's claw harvesters are generally subsistence farmers living in communal areas where resources are shared and limited. Their agricultural activities include rain-fed crop farming, which does not provide a secure source of food. Many households do not own livestock or have only small numbers of animals. San communities are most vulnerable during the dry months, especially if they have been unable to store sufficient quantities of grain during the rainy season to provide staple foods for the rest of the year. During these dry periods, households need to buy food to supplement the limited amounts they have been able to produce through agricultural activities and, in some cases, what they can harvest from wild foods.

Devil's claw harvesting and sales by harvesters to traders take place after the end of the rainy season. The national devil's claw policy states that devil's claw can be harvested from March to October, but generally harvesting starts in June, once the crops have been harvested from the fields. In many areas, the earnings from devil's claw are the only reliable source of cash income. This income is primarily used to purchase food. The contribution of INP earnings to household income and food security is documented for devil's claw as well as for other INPs (Taylor 2007; den Adel 2002; Nott 2009).

THE SAN IN NAMIBIA

Devil's claw harvesters, mainly San, are among the most marginalized and powerless people in Namibia. They number between 32,000 and 38,000, comprising six groups each with a distinct language, custom and history. They are an indigenous community who historically hunted and gathered food throughout Namibia. During the colonial era in Namibia, the former South African administration forcibly evicted most of their population from land they had occupied for millennia. It is estimated that 80 percent of the San have been dispossessed of their ancestral land. Because of this displacement and a long history of marginalization, the San are considered one of the most vulnerable minority groups in the country (Dieckmann 2011). Most San today have little access to employment or consistent income, with up to 68 percent of the Khoisan-speaking people of Namibia (largely comprising the San) considered poor (Namibia Statistics Agency 2012). For the San, the prevailing conditions of landlessness and a lack of education mean that the extent of their dependency and economic vulnerability is greater than that of any other language group in the country.

Prior to the MCA-Namibia intervention, there were nine organized producer groups representing 830 producers who supplied approximately 46 metric tons of sustainably harvested devil's claw[2] during 2009. This generated almost $67,000[3] or about $80 per producer. In 2011, there were 18 producer groups supported by the MCA-Namibia INP Activity. They produced more than 100 metric tons of devil's claw, and producers earned more than $225,000; with 1,321 producers, this equates to $170 per harvester. In 2012, there were 23 producer groups comprising 2,254 producers who produced and sold 215 metric tons. The contribution to producer's income from INPs amounted to a total of approximately $482,000 which translates to about $214 per producer. Germany, Poland and France are currently the largest importers of devil's claw[4].

PPOs that received support through the MCC compact supplied almost 20 percent of Namibia's devil's claw exports in 2011 and close to 43 percent in 2012, a significant increase.

Dried devil's claw slices (l) are processed into tablets (r).

2 Sustainable harvesting methods will be described later in this paper.

3 An exchange rate of 8.8 Namibian dollars to the U.S. dollar has been used on all years although it was probably less in 2009.

4 Namibia is the world's largest supplier of devil's claw and has exported a total of more than 9,000 metric tons to European markets between 1992 and 2012. The value of foreign export earnings from devil's claw in 2011 is estimated to be in the range of $2.9 million to $3.4 million and $2.3 to $2.8 million in 2012.

Protected Status and MCA-Namibia Policy Interventions

In Namibia, devil's claw was listed in 1977 as a protected species by the Ministry of Environment and Tourism under the Nature Conservation Ordinance of 1975. The law was enacted due to increased trade and the subsequent concerns regarding its conservation status. Devil's claw is protected through similar legislation in both Botswana and South Africa, but not in Zambia and Angola. Because of its protected status, the harvesting of devil's claw requires specific strategies to ensure its sustainability.

The government drafted a policy in 1999 concerning the use of devil's claw resources but never ratified it. With the support of the MCA-Namibia INP Activity in 2010, the Namibian government revised and ratified the policy (Namibia 2010). The Ministry of Environment and Tourism enforces the policy and uses traceability as a tool where permits are required for all stages of production and sale of devil's claw.

Benefit-Sharing and Sustainability in the Devil's Claw Model

Although for decades devil's claw has been an established product in the world market, the industry was not focused on sustainability or benefit-sharing with harvesters. Prior to the introduction of the sustainably harvested devil's claw (SHDC) model, the industry's growth was based on extremely exploitative relations between production and trade (Cole and du Plessis 2005). The SHDC model was first piloted with one harvester group in 1997 and since then has expanded steadily. Support for PPOs in the MCA-Namibia INP Activity has enabled significant up-scaling to occur. The SHDC concept introduced a simple benefit-sharing model based on the insight that there is a growing congruence of interests linking ethical consumerism in the Northern Hemisphere to sustainable resource use and socio-economic equity in the Southern Hemisphere.

San women harvest and slice devil's claw tubers.

An important new practice introduced by the SHDC model is to limit harvesting to only mature plants, and taking only secondary tubers. The taproot is not disturbed, and the hole is refilled with soil after harvesting to enable re-growth in two to three years (Strohbach and Cole 2007).

The innovative SHDC model is more than a sustainable harvesting technique. It also includes mechanisms to maximize benefits for harvesters. Organizing harvesters into producer groups so that they can collectively sell directly to an exporter, rather than to an informal trader, is an important aspect of this strategy. The SHDC model includes the following key features:

- Training and registration of harvesters who apply for a group permit,
- A management system for quality control and record keeping that guarantees product traceability,
- Sustainable harvesting methods, compliance with which is ensured through harvest monitoring and post-harvest impact assessments,
- A reliable partnership with a local exporter that secures a market as well as access to market information, and
- A premium price paid directly to harvesters.

Support for Devil's Claw Harvesters

The MCA-Namibia INP Activity aims to adopt the SHDC approach and increase the income earned by each harvester. One of the requirements of the project is for harvesters to form PPOs. The Namibian legislative framework provides several options for community-based organizations to obtain legal recognition. These include registering as community forests, conservancies, associations, and cooperatives. Since devil's claw is a shared resource on communal land, it is essential that a robust institutional arrangement exist for the collective management of the resource (Millennium Challenge Corporation 2008). The government expects PPOs to accept the responsibilities linked to the benefits generated by natural resources within their purview.

PPOs are provided with training relating to resource management, including legislative compliance, sustainable harvesting and processing methods as well as general institutional development. To ensure that resource sustainability and the maintenance of biodiversity are incorporated into PPO management activities, PPO Resource Management and Monitoring Plans are developed and implemented (Natural Resources Institute 2011). The plans outline how the producer organization intends to enforce the harvesting rules, monitor harvesting activities and use this information to make important management decisions.

Newly-created PPOs are also eligible for production improvement grants that can be used to purchase essential materials such as bags, stainless steel knives, scales for harvesters, and storage facilities. Training is followed up with technical support to PPO staff as they implement management actions to ensure consolidation of training and effective integration of processes into PPO management systems.

In addition, PPOs receive support to ensure that contractual arrangements with a buyer are in place before the start of the harvest season. This process involves negotiating the annual price per kilogram that is paid directly to the harvesters by the buyer as well as a management fee paid separately to the PPO for managing and monitoring activities, organizing the buying points and checking quality.

Registered devil's claw harvesters receive training.

INCREASING REVENUES FOR HARVESTERS AT THE KYARAMACAN ASSOCIATION

A good example of the successful implementation of the sustainably harvested devil's claw approach is found among members of the Kyaramacan Association. The association is located in Bwabwata National Park, a relatively small park of some 6,100 square kilometers situated in the Caprivi region of Namibia. It is unique in that it is the only national park in Namibia where people, the majority of whom are San, still reside and have user rights over the resources, both wildlife and plants, found in the park. The area was characterized by large-scale, unsustainable and illegal harvesting of *H. zeyheri*, poor prices paid to harvesters and poor quality of harvested material due to unskilled harvesting methods. It was estimated that more than 10 metric tons a year were illegally harvested and sold from Bwabwata National Park. Traders usually entered the area at night and bought material from residents for extremely low prices (about US $0.45 to $0.57 per kilogram).

Since the introduction of the new approach, the association has about 500 registered harvesters who have received training in sustainable harvesting methods. These registered harvesters are recognized by the government and can legally access the resources, such as devil's claw, in the park. In addition, harvesting activities are closely monitored by the association's staff members. The association has an agreement with a reputable exporter who purchases all of their produce at a price that is agreed upon at the start of the harvesting season. Buying events take place throughout the harvest season, which allows harvesters to access their earnings at regular intervals. Devil's claw supplied by the association is certified organic and in 2012, harvesters sold their devil's claw at a price of $2.38 per kilogram paid directly to the harvester, with a $0.34 per kilogram management fee paid to the PPO. This represents an approximately 19 percent increase in revenue.

To date, 78 PPOs have developed Resource Management and Monitoring Plans for environmentally fragile INPs, and over 4,000 INP producers have been trained in sustainable harvesting techniques (MCA-Namibia 2013). Monitoring of the INP Activity by MCC and MCA-Namibia is ongoing and an independent evaluation is planned in 2014.

Conclusion

The Indigenous Natural Products Activity provides a good illustration of the relationships between resource conservation, poverty alleviation, food security, and the emerging trade in indigenous natural plant products in global markets. The project is addressing critical needs to improve industry growth by providing incentives for harvesters to organize themselves into groups, building reliable supply chains and mobilizing additional working capital for rural, small-scale producers of indigenous plant products. These producers are generally subsistence farmers. In the majority of cases, poor rural women are the primary harvesters and processors of devil's claw.

MCA-Namibia's experience offers the development community some key lessons for future investments to spur economic growth and food security through investments in indigenous natural products.

Having an enabling policy and legislative framework to guide all stakeholders is essential for the successful commercialization of any INP. Establishing an enabling policy environment at an early stage is fundamental. This provides clear guidelines for interventions and support at all the stages along the supply chain.

It is important to understand that any investment in the development of INP enterprises should be seen as a long-term undertaking, since a viable INP sector is not built overnight. One of the fundamental approaches used by MCA-Namibia in the design of the INP Activity was to build on already successful approaches by implementing partners and embrace existing stakeholder institutional structures rather than setting up completely new frameworks. For example, wherever possible, existing community-based organizations were used to facilitate INP activities. Conservancies exist to capture benefits from tourism and wildlife-based enterprises and distribute these benefits to their members. These community-based organizations provided an ideal platform from which INP activities could be implemented effectively and efficiently.

The industry is projecting strong and growing global demand in the future for natural ingredients, including those currently harvested in Namibia, used in medicinal products and cosmetics. Thus, it is critical to address issues relating to improving quality while simultaneously increasing volume to enable producer groups to meet market opportunities in the process of commercializing INPs. The establishment of private sector partnerships is crucial from an early stage.

By creating and working with organized producer and processor groups, the MCA-Namibia INP Activity is ensuring that the benefits of current and future growth in the global market reach individual harvesters. The crucial element is in developing the supply chain to the extent that "producer groups" are able to negotiate contractual arrangements with buyers on a level playing field.

The socio-economic issues influencing and impacting devil's claw resource management, harvesting, trade, and benefits cannot be isolated from broader realities facing people in rural areas or from overall socio-economic conditions in Namibia. When harvested in a sustainable manner, INPs offer opportunities for the rural poor to diversify household income streams and contribute significantly to food security. There is, however, an urgent need to create other income-generating opportunities to supplement the benefits obtained from devil's claw if there is to be any substantial improvement in the livelihoods of the rural poor. The harvesting of and trade in devil's claw offers only one small opportunity for rural inhabitants to generate much needed cash income, and the benefits are available only for a limited season and depend on environmental conditions. Poverty and sustainability are inextricably linked. Unless the issues of poverty are addressed, and tangible benefits or options for primary producers are realized, sustainability will always remain problematic. **KIN**

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