

## Availability and Distribution of Different Rangeland Products and Analysis of Market Opportunities for Some Priority Products in Selected Cross-border Areas of the IGAD Region

### Introduction

Rangeland ecosystems within the IGAD region play a crucial role in food and nutrition security of pastoral communities and also supports diverse livelihood activities. Besides grazing and water resources on which range livestock production is based, these ecosystems make available products and services that enable communities to diversify their livelihoods. This has been a long-standing strategy of communities in arid and semi-arid lands (ASALs) so as to meet their households' nutritional needs, improve their wellbeing and manage other risks. Livelihood diversification in the IGAD ASALs regions is becoming increasingly important as livestock population decline and communities face new challenges such as climate change, ecosystem degradation, population pressure and new forms of conflict. Cross-border communities are particularly vulnerable to such resource-based conflict. They therefore need special attention.

Understanding the availability of different non-wood rangeland products that are a source of diverse livelihoods of pastoral communities and how they are distributed within the ecosystems, is a critical step in appreciating and coming up with interventions that seek to enhance market opportunities. This is a strategy that will help strength the resilience of communities that depend on them. Additionally, it will assist in promoting sustainable management of these

rangeland resources. It is equally important to understand the institutional arrangements for community access, use and conservation/preservation of these resources, so as to strengthen their capacities.

This study was commissioned by IGAD Centre for Pastoral Areas and Livestock Development (ICPALD), under the Sustainable Ecosystem Management (SEM) Project. The study was funded by the Government of Sweden through the Embassy of Ethiopia. The project aims to enhance the resilience of pastoralist and agro-pastoralist livelihoods through sustainable management and equitable use of shared rangelands in cross-border areas of the IGAD region.

The study was conducted in 3 cross-order locations; Kaabong district (Uganda), Kapoeta East County (South Sudan) and Kurmuk Woreda (Benishangul Gumuz, Ethiopia)/ Sudan. At the time (2022), Kaabong district had a population of 167,879, while Kapoeta East County had an estimated population of 157,978 and Kurmuk Woreda was occupied by 23,391 people. This policy brief highlights the study's key findings and implications, for sustainable ecosystems management, and outline major policy recommendations to guide informed and impactful response.

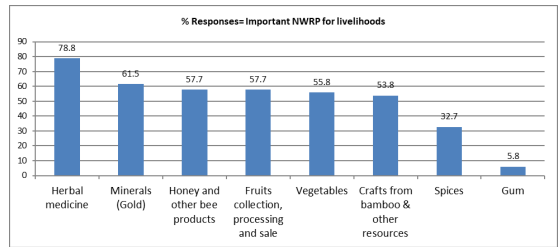
## Key findings and policy messages

The study revealed the following:

**1) Local communities in the three cross-border sites depend on rangeland products for food, income and other forms of livelihood.** There is a wide range of both biological and non-biological products that support the communities' livelihoods. The cross-cutting products which the three communities depend on include honey, gold mining, wild fruits and vegetables, grass and shrubs for household construction and fencing (and mostly for income). Other significant products identified were raw materials for crafts production, sand harvesting and stone quarrying, as well as water.

**2) How important the products are to the community and the issues around each product varies from location to location.** Honey, gold, herbal medicine, fruits and vegetables, grass and shrubs for construction and fencing (known as *Daksil* in Toposa), water, sand and stones, are the most important rangeland products that communities in the three cross-border areas get from the wild. Wild fruits and vegetables are very important for livelihood diversification. They supplement food and nutritional needs. The most important tree species across all areas is *Balanites aegyptiaca* (known by its Arabic name- *lalob*). These species are resilient and provide multiple food and nutritional values such as vegetable, fruit and spice and medicine among others. Another key species particularly in the Kurmuk Woreda area is the *Adonsonia digitata* (locally known as *Agungulees*). This species comes in handy during severe famine periods which most of the time coincide with its fruiting seasons. This makes it very useful and adaptive for pastoral livelihoods. Communities tend to preserve them around homesteads and shun

from cutting them when cutting wood or other products because of their importance.



**Figure 1:** Important NWRPs for livelihoods in the 3 selected cross-border rangeland areas.

**3) Herbal medicine is traditionally an important part of community health.** Largely developed out of necessity considering that back then, modern health care systems were and remain unavailable, far and expensive. All the three areas identified herbal medication as an important benefit gained from the ecosystem. Local communities use different plants to treat human ailments as well as livestock diseases. This knowledge is passed on from one generation to the next. The study found that all socio-demographic groups use herbal medicine, and the plants are easily accessible. *Balanites aegyptiaca* and *Aloe vera* are essential source of medicinal products that treat conditions and ailments like blood pressure, malaria and typhoid fever, intestinal worms and skin infections, among others. Their pharmaceutical effectiveness and reliability were confirmed by community members who have confidence in the treatments, and have also been confirmed in scientific studies<sup>1</sup>.

<sup>1</sup> E.g. D.L Chotani and H.U Vaghasiya (2011). A review on *Balanites aegyptiaca* Del (desert date): Phytochemical constituents, traditional uses, and pharmacological activity.

**4) Products found to have good market prospects and a can generate a good source of income for households are honey and artisanal gold mining.** In Kaabong, the value of honey increases from SSP 1,000 (approx. USD 1) to 10,000 (USD 10) between Natinga (at source) and Juba (final destination), and this is the price offered by traders. In Kaabong, two enterprises are involved in processing of honey from Morungole - LISA PAN. They buy at UGX 10,000 (USD 2.6) and sells at UGX 20,000 (USD 5.3) per litre, suggesting little value added. KARATUNGA on the other hand adds value by enhancing the honey quality, branding and innovative marketing. This fetches UGX 100,000 per litre (USD 26) which is five times the price that LISA PAN earns. There is therefore huge and an untapped potential for value addition in honey and other bee products. Local bee farmers are not so familiar or even interested in exploiting other bee products such as honey comb, candle wax, propolis, etc. In Kapoeta East County, honey is valued beyond monetary or food benefits. It is considered an important tool in securing brides that is to say it can be substituted for cows in addition to brewing alcohol for ceremonies. With at least 200 litres of honey (10 Jerry-cans of 20 litres), a groom can be given a bride. In Kurmuk, bee keeping is not practiced despite the suitability of the ecosystem. However, there are some bee - keeping initiatives in neighbouring areas. Beehives can be spotted from afar hanging high on the trees. Of the 3 cross-border areas covered, gum and resin had been extracted only in the Kurmuk Woreda, although the gum-producing acacia tree species are prevalent in the Kaabong-Kapoeta cross-border landscape as well.

Artisanal mining is practised at subsistence level by all members of the community, including children. From UGX 15,000 (approx. USD 4) per point in Morungole market, the value doubles to USD 4 in Kaabong per

trip when transported on motorcycle. The high cost of transport from Morungole to Kaabong (UGX 15,000) means that producers are better-off selling locally in Morungole or aggregating to have bigger volumes to earn better prices when they take to Kaabong town. However, this is a luxury for a community that goes to the mine with a sole aim of being able to earn food for the household.

In Kurmuk, artisanal gold mining is extensive but miners face many difficulties just to earn a living. They earn an average of ETB 35-160 (approx. USD 2.9) per week depending on one's ability to secure the stone. Some opt to sell to intermediaries who exploit them because of the restrictions of State which requires the intermediaries to sell to the Central Bank of Ethiopia at a fixed but lower than the market rate of ETB 5000 per gram.

Sand and stones are emerging as lucrative tradable products in Kurmuk, with the market mainly provided by rapid expansion of construction activities in and around Assosa city. For instance, a 10-Ton truck of sand costs ETB 16,000 in Kurmuk. The value doubles to ETB 32,000 in Assosa city. Across all the three areas, there is reported presence of adequate gold deposits which make artisanal gold mining a viable income generating activity. However, the subsistence nature constrains its growth and profitability to smallholder actors in the community.

**5) Both men and women are involved in NWRPs gathering and use, with many women noticeably active across all products.** For instance, women are at the forefront in gathering and selling of grass and shrubs (*Daksil*) in the Natinga-Narus area. This is partly due to the fact that women in these communities (and most other pastoralist in the region) have a culturally assigned role of taking care of families. This includes

provision of food and other basic necessities. Men in that community historically spend time grazing livestock and defending the herds and homesteads. Increasing social vulnerability (e.g. teenage single mothers) is also compelling women to be economically active.

**6) Given the ecologically destructive nature of most activities** (notably grass gathering and sale) and the low value to community members who depend on them, providing suitable alternative may help realise ecosystem sustainability from multiple dimensions that is sustainable livelihoods, gender equity and women’s empowerment, ecological restoration and climate resilience building.

communities; climate change and over exploitation. Poor methods of harvesting grass and shrubs affect regeneration and the regenerated shrubs tend to be fewer in density and shorter.

- 2) Insecurity fuelled by increasing competition for resources (water, grazing resources and increasingly other products such as minerals), Transhumance pastoralists not only pose risks in rustling but herds tend to destroy crops of farming communities in cross-border areas, especially in Kaabong (where the problem was attributed to Turkana pastoralists).
- 3) Inadequate infrastructure for productive activities that includes under-developed roads and poor connectivity to radio,



Left: Fruit collection from a *balanites aegyptiaca* tree in Nadapal, Kapoeta East. Right: Pastoralist sell honey in Kaabong

### Constraints and Challenges

The NWRPs and the communities that depend on them are constrained by increasing distance, time to collect the materials, insecurity and conflict. The issues common across all the three cross-border areas are:

- 1) Increasing environmental degradation driven by multiple factors – including frequent wild fires that not only destroy ecosystem habitats and wildlife, but also crops and associated livelihoods of

telephone and internet services worsen the livelihood challenges for communities, especially in pursuing alternative livelihoods. Also, water facilities are few and water harvesting is limited yet the areas face severe water scarcity.

- 4) Low literacy levels and high poverty levels which increase social vulnerability and perpetuate mind-sets of subsistence livelihoods.

The main barriers to market development included:

- Low, inconsistent production, particularly of honey and gold.
- Poor quality of products due to poor and unhygienic handling
- Limited capacity of private sector-absence of capable, motivated self-driven entrepreneurs to support production and marketing.
- Limited institutional capacity of government and non-state entities to support local communities in exploiting productive and sustainable rangeland resources
- Limited access to knowledge and technology to enable communities explore and exploit natural resources efficiently. In Kurmuk Woreda, for example, community members spend a lot of time digging up chunks of earth in search of gold, in vain, yet this activity could be more efficiently and profitably undertaken if they had appropriate equipment to detect where gold deposits are more likely to be.
- Weak market linkages: The three cross-border communities are not organised to produce commercially, and are relatively isolated and disconnected to viable marketing centres for their products. This often creates a disconnect in supply and demand. This exposes them to exploitation by middlemen who offer unreasonably low prices for their products, particularly gold and honey.

There are a number of prospects that can be leveraged for market development and

expanding value for livelihood enhancement. These include: healthy productive ecosystems characterised by high biodiversity suitable for bee production; relative peace despite latent conflict in all the three cross-border areas; prospects of strategic partnerships with external agencies working in the region, and supportive government policies especially in Ethiopia and Uganda.

### Policy Recommendations

The recommended priority course of action is in three dimensions:

#### a) Economic (market-based)

From the economic dimension, it is important to explore the market prospects of all potentially marketable products (notably gold, honey, handicrafts, stones and sand, fruits and vegetables) and support the communities to increase the value they obtain while empowering them to shift from short-term “daily bread” mind-sets to more resilient and long-term livelihood strategies.

#### b) Ecological

In terms of the ecology, it is urgent to take stock of the NWRPs that support food and other livelihood strategies of communities and establish the health and productivity of the ecosystems which provide them. Additionally, highlight the stresses that they face in relation to climate change, demographic pressures and resource-based conflicts.

#### c) Socio-cultural

In socio-cultural positioning, the local communities across the 3 sites have deep connections with the ecosystem. It is important to harness this through cultural products (such as crafts) that are marketable.

The following policy actions are recommended to enhance exploitation of market opportunities for priority products:

- 1) Support bee value chains to increase honey production, diversify bee products and enhance access to lucrative markets: Specific activities would include: apiculture development through training and provision of modern bee hives and other toolkits to improve productivity and management of bees; capacity building for safe and hygienic extraction and processing of honey; and supporting marketing by engaging and facilitating strategic market linkages.
  - 2) Support local authorities and communities to streamline artisanal gold mining operations and support artisanal gold value addition initiatives.
  - 3) Support the communities to harvest and productively use water resources. The implementation strategy would include setting up vegetable and agro-forestry tree nurseries to increase alternative livelihood sources for target communities.
- In the Kurmuk Woreda (Akendeyu Kebele), Benishangul Gumuz, water resources will support fish farming, while across all 3 cross border areas, water availability will boost productivity of bees.
- 4) Support communities to adopt low-cost alternatives in construction to reduce the pressure of deforestation and vegetation depletion.
  - 5) Strengthen institutional capacity of the public sector to effectively facilitate productive and sustainable use of non-wood rangeland products. In particular, local government offices in Kurmuk Woreda, Kapoeta East County and Kaabong district (particularly Morungole sub-county) should be supported with office equipment and transport (at least one motorcycle) as well as training to monitor and support implementation of these interventions.
  - 6) Integrate functional literacy training in all planned interventions to strengthen multi-dimensional resilience of communities.

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