



Agroforestry Network

FOUNDED BY VI-SKOGEN

AGROFORESTRY VALUE CHAINS AND MARKET SYSTEMS

By linking trees and agriculture, agroforestry enables female and male farmers to generate a diversified income from the production of a variety of agricultural products (Agroforestry Network, 2018). These products can be produced from trees, and from countless combinations of trees or shrubs, agricultural crops and often livestock products as part of the agroforestry system. One agroforestry farm can for example produce mango, coffee, macadamia nuts, timber, honey, beans and fodder for dairy cattle. At the same time agroforestry systems protect and conserve biodiversity, soil, water, wildlife habitats and other natural resources. Apart from increased climate change resilience and mitigation potential, an important benefit for agroforestry farmers is strengthened economic resilience, as agroforestry offers multiple income streams at different times. This policy brief gives an overview of agroforestry value chains and market systems, describes the current market barriers and gives recommendations on how these could be resolved, exemplified in successful case studies.

MAIN BARRIERS OF AGROFORESTRY MARKET SYSTEMS

Under-developed markets are the main challenge for agroforestry value chains and market systems to be sustainable and successful. Most agroforestry products lack connections to markets due to poorly developed policies that tend to focus on conventional agricultural methods such as monocropping systems. Adequate farming techniques exist but are in many cases not accessible for the farmers (Campbell, 2014). In order to provide sufficient income to farmers, agroforestry value chains and market systems need to become more efficient and profitable; for example by supporting smallholder farmers to organise themselves

in cooperatives. Smallholders – especially women – need access to finance and advisory services, as agroforestry farming systems require investments in technical skills, and skills for marketing of products.

There is generally inadequate awareness among decision makers about these barriers within market systems and a lack of coordination between stakeholders/value chain nodes. As agroforestry involves various stakeholders and value chains across both agriculture and forestry sectors, institutional mandates are often unclear and divided between agriculture and forestry ministries. This can lead to poor ownership for support to agroforestry systems. If these barriers are resolved, agroforestry can offer various economic, environmental and social benefits, and empower women and marginalised groups (Agroforestry Network, 2018). This calls for more financing to organisations and projects focusing on developing sustainable, equitable and inclusive agroforestry market systems.

Sustainable Development Goals (SDGs)

Agroforestry contributes to many of the SDGs (Agroforestry Network, 2018). In this policy brief we focus on the following SDG targets:

SDG 1.5

By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events, shocks and disasters

SDG 2.4

By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity, help maintain ecosystems, strengthen capacity for adaptation to climate change and progressively improve land and soil quality

SDG 8.2

Achieve higher levels of economic productivity through diversification, technological upgrading and innovation

SDG 12.3

By 2030, halve per capita global food waste and losses along production and supply chains, including post-harvest losses



APPLYING A MARKET SYSTEMS APPROACH

Due to their natural complexity, agroforestry market system connections are not as clear or developed as in singular, staple crop value chains. A flexible market systems approach can be applied to connect, build value added services and enhance market access among smallholder producers and agribusinesses while minimising direct actions that risk further distorting the market system (Ripley & Nippard, 2014). In the short to medium term perspective, the market systems approach aims to create sustainability by making the value chains more efficient, effective, and profitable for all stakeholders, with special regard to vulnerable and marginalised groups including women. In the medium to long term perspective, the market system approach aims to catalyse structural change in relevant markets, and that smallholder farmers organise themselves in for example farmer organisations and cooperatives, to strengthen their market position and change the system on a larger scale to reach a large number of smallholders. Therefore, applying a market systems approach is preferred to enable sustainable, equitable and inclusive change to a diverse market system such as agroforestry.

LINKING FARMERS TO MARKETS

In order for agroforestry systems to be adopted by farmers, they need to be able to make a livelihood from the farm. Supporting farmer organisations can strengthen farmers' economic resilience in various ways; e.g. it strengthens their position in negotiating prices, and enables them to access finance and training, input services and market information. An inclusive market systems approach focuses on connecting farmers to local and regional markets, which have shown to have the highest positive



Photo: Henrik Borgtoft Pedersen.

Malawi – Chirunga forest, Zomba 2014: Intercropping with maays during early stages of forestry plantation.

impact (FAO/CSM, 2016), because of a growing middle-class in developing countries and the relatively easy access to such markets by smallholder farmers. Once the producers/cooperatives can ensure a steady stream of a certain volume of products to for example supermarkets or farmers markets, it can increase the price.

In Kenya, the farmer partner organisation Western Tree Planters Association (WETPA) developed commercial tree farming, nurseries and bee keeping to strengthen climate resilience and improve the livelihoods of the farmers in the region. This inclusive green growth project focused on sustainable agricultural land management including agroforestry, supported by Vi Agroforestry. Approximately 1.5 million trees were planted, increasing vegetation/tree cover in the area and rehabilitating the riverbanks. More than 423,250 tree seedlings were sold to neighbouring farmers. The project also supported the farmers, of which 25% were women, to establish over 185 beehives under 64 apiaries, producing averagely 10 kg honey/hive per year. The honey was sold at about 6 USD per kg, and the increase in bees in the catchment supported the

pollination of crops, such as beans, coffee and tomatoes – resulting in increased yields of these crops.

There is a huge potential in quality products from agroforestry-systems that can be sold at high income markets, with a good margin. Global markets are already showing interest in products from agroforestry tree species, such as baobab, lucuma and neem. Also, climate change and biodiversity are both strong selling points to influence consumers in the supermarkets and in the growing urban centres in developing countries, servicing the rapidly growing urban middle class. Certifications like Organic, Rainforest alliance or FSC timber are often too expensive for smallholder farmers, but could be addressed through e.g. promoting Participatory Guarantee Systems (PGS). PGS function as locally based, peer reviewed quality assurance systems building on social networks, knowledge exchange, and support within an association of farmers (IFOAM, 2020). It is important to relate to the consumers and raise their awareness. Therefore, national civil society organisations need to be reinforced, so they can advocate for strengthened policies and an enforcement of biodiversity

1.5
million trees were
planted which incre-
ased vegetation
in the area



Mr. Deus Nuwagaba from NUCAFE drying coffee beans in Uganda.

conservation and climate resilience measures through agroforestry. Additionally, more attention needs to be paid to agricultural commodity traders, as they are positioned at the centre of most common value chains. As a result, they have a huge power and influence over the entire value chain.



It's well-known that consumers can exert pressure to close market failures through their purchasing decisions. However, this only works in practice when the products available are:

- 1) affordable and sustainably produced,*
- 2) products are labelled*
- 3) that the information given is trustworthy (transparency, accountability).*

Christina Snöbohm, Senior Sustainability Strategist, COOP supermarkets, Sweden

TRACEABILITY AS A MARKET INCENTIVE

Export of agroforestry products to international markets could offer higher incomes to farmers for their top-quality products. One option is to focus on speciality products, such as organic coffee. The National Union of Coffee Agribusinesses and Farm Enterprises (NUCAFE) is a national umbrella coffee farmers' organisation in Uganda supported

by NIRAS in a project financed by the Nordic Development Fund (NDF). NUCAFE has evolved as a private sector led farmer organisation formed to serve and position farmers well in the liberalised coffee value chain. NUCAFE is using a "farmer ownership model", in which farmers own their coffee beans as long as possible in the value chain before the export. This increased ownership improves the farmer's income due to less middlemen involved and ensures community benefits, sustainable livelihoods and an enhanced product quality. NUCAFE is also using geo-referencing in order to make their products traceable to end-consumers and receive UTZ certification, which in turn has offered higher incomes for the coffee farmers (NUCAFE, 2019). Other tools used are e.g. blockchain and drones to get access of data in agriculture projects. Blockchain is often used in coffee value chains in order to trace the coffee beans back to its origins and allows the customers to track the supply chain journey of their consumed coffee.

Moreover, Vi Agroforestry has had successful experiences with fairtrade certified coffee. For example, the GREAN project in Uganda is providing an opportunity for coffee producing organisations to own a new fairtrade coffee brand, thus engaging them from production and processing, to packaging and marketing – an innovation to increase the value chain ownership and retain the benefits of value addition for their farmer members.



Laurence Mukandama, Rwanda. Photo: Elin Larsson.

SUPPORTING DIVERSE MARKET SYSTEMS

The Green Economic Growth Programme for Papua Provinces (GEGPP) in Indonesia that NIRAS implements on behalf of UKAid focuses on agricultural commodities and value-added, down-stream products that can be developed from those goods. As a part of this, it is selecting, training and mentoring Papuan SME's to become successful entrepreneurs, or 'agripreneurs', trained in the full range of small business management skills.

The GEGPP has identified and developed a range of agroforestry and related commodities such as: coffee, cacao, coconut products (virgin coconut oil), nutmeg, sago starch, and sustainably harvested timber (modular houses, furniture). The most basic problem faced by smallholder farmers and SMEs is their inability to produce commodities, products and services in sufficient volumes to achieve viable economies of scale. This results in marginal incomes, in one of the highest-cost business environments in Indonesia. The GEGPP programme identifies, defines and pilot tests the changes to market systems which are needed, in order to enable wide scale adoption of sustainable crop farming systems and land use practices to generate pro-poor local market development. The GEGPP programme is currently emphasising local Papuan markets instead of focusing on exporting to western Indonesian or overseas markets. This circulates money in the local economy while also creating more jobs and business opportunities, as well as substituting for unnecessary imports.

RECOMMENDATIONS TO POLICY- AND DECISIONMAKERS

Investments in the following aspects could boost the adoption of agroforestry and other sustainable production systems that are needed for biodiversity and climate resilience:

1. *Linking farmers to markets*

Establishing fair market connections is central to the development of agroforestry value chains. This is most effectively done by focusing on linking farmers, with specific attention to vulnerable and marginalised groups, to local markets and using regional and export markets for top quality/niche products.

2. *Enabling knowledge exchange and capacity building*


Agroforestry requires knowledge of complex agro-ecological systems and diverse market systems, and there is a need for adequate extension services and technical assistance, as well as supporting small-holder farmers to organise themselves in order to access markets.

3. *Improved communication on the benefits of agroforestry*

Agroforestry is gaining increased recognition worldwide. However, in order to be recognised by the endconsumer, agroforestry products need strong marketing, added value from specific labels (different labelling can be suitable for different markets) and they need to be traceable and trustworthy.

4. *Government policy incentives for diversified farming systems*

Agroforestry involves diversified farming systems that require a long-term engagement/investment and farmers need incentives in order to convert to agroforestry practices. Government policies to promote agroforestry exist, but are usually not enforced, implemented, financed or coordinated at national and local level. Clear institutional mandates need to be developed and strong coordination between the stakeholders in the market system need to be established. There is also a need to reform incentives, such as taxes and subsidies, to act in favour of agroforestry systems and move away from the emphasis on monoculture production systems.



Agroforestry products need strong marketing and they need to be traceable and trustworthy.



Photo: Linda Andersson

References

Agroforestry Network, 2018: Scaling up Agroforestry: Potential, Challenges and Barriers. A review of environmental, social and economic aspects on the farmer, community and landscape level. https://viagroforestry.org/app/uploads/2018/11/Scaling-up-Agroforestry-Potential-Challenges-and-Barriers_FINAL.pdf

Campbell, 2014: A Framework for Inclusive Market System Development. <https://www.marketlinks.org/library/framework-inclusive-market-system-development>

Catacutan et al., 2017: Agroforestry: contribution to food security and climate-change adaptation and mitigation in Southeast Asia. White Paper. Bogor, Indonesia: World Agroforestry Centre (ICRAF) Southeast Asia Regional Program; Jakarta, Indonesia: ASEAN-Swiss Partnership on Social Forestry and Climate Change. <http://www.worldagroforestry.org/region/sea/publications/download?dl=/BK00201-17.pdf&pubID=4231&li=7520>.

IFOAM - Organics International, 2020: Participatory Guarantee Systems (PGS). <https://www.ifoam.bio/en/organic-policy-guarantee/participatory-guarantee-systems-pgs>

FAO, 2015: Agroforestry "Knowledge Bank". <http://www.fao.org/forestry/agroforestry/80338/en/>

FAO/CSM, 2016: Connecting smallholders to markets. Civil Society Mechanism (CSM) working group in the Committee on World Food Security (CFS). http://www.fao.org/fileadmin/templates/cfs/Docs1516/cfs43/CSM_Connecting_Smallholder_to_Markets_EN.pdf

NUCAFE, 2019: Value addition through digitalisation for Ugandan coffee farmers. <https://www.nucafe.org/index.php/media-centre/latest-news/184-value-addition-through-digitalisation-for-ugandan-coffee-farmers>

Ripley & Nippard, 2014: Making Sense of 'Messiness' – Monitoring and measuring change in market systems: a practitioner's perspective. https://beamexchange.org/uploads/filer_public/18/10/181025ff-14f0-4ad9-8772-88269b4cfbc9/makingsenseness2014_compressed.pdf



Uganda, Shores of Lake Victoria 2017: Coffee – Matoke (banana) cassava system with various species of shade trees.



AGROFORESTRY
SVERIGE



Agroforestry Network

FOUNDED BY VI-SKOGEN

This brief has been commissioned by the Agroforestry Network, www.agroforestrynetwork.org

Authors: Kristina Mastroianni, Line Sofie Adser and Samira Loibl (NIRAS)

Reviewed by: Gunilla Eitrem (Swedish Society for Nature Conservation), Madeleine Fogde (Swedish International Agricultural Network Initiative, SIANI), Sara Elfstrand (SwedBio, Stockholm Resilience Centre), Amos Wekesa, Malin Gustafsson, Maria Schultz and Million Belay (Vi Agroforestry/Vi-skogen)

Layout: Kölare Design. Printer: Botkyrka Offset.

This product was funded by Svenska Postkodlotteriet. However, Svenska Postkodlotteriet has exerted no influence on its contents.