FO-RI TZ 8

Agroforestry, crop diversification and beekeeping

Respondents:

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Identifying innovation(s)

Description of the selected innovation(s)

The FO-RI project in Tanzania aims at building resilience into rural communities with trees.

It works with the Njombe Agricultural Development Organization, a Tanzanian member-based organization working as implementing agency for the Project. The project is supporting farmers through a participatory approach.

Three innovations have been identified for the present needs assessment.

For the present needs assessment, we agreed to work on three innovations, tested through experimental on-site trials:

- Agroforestry (integration of food crops such as avocado or macadamia nuts) with trees
- Use of biochar, animal manure and other good agricultural practices in line with agroecological resilience
- Beekeeping using modern beehives and modern harvesting methodology.

Innovation stage

- All the innovations have been tested “on-site” in a part of the Njombe region as well as in the mainland. However, the Project underlines that it is difficult to really see the impact of the innovations within the four years of the project.
- 2000 NADO members have been reached over the past four years. So far, biochar is the innovation that reached the larger scale.
- Adoption of the innovations by smallholder farmers is still limited, especially as some innovations require upfront capital. For example, innovations related to soil management require to test the soil, either through sending soil samples to a laboratory or through acquiring equipment, in order to identify excess or lack of various kinds of nutrients.

Current institutional arrangements for supporting innovation

- The Project works in partnership with the Sokone University of Agriculture (SUA). The SUA capacitated NADO to make soil samples and send them into laboratories.

- The Project uses the following approach: Farmers are grouped and trained by NADO field officers, that were capacitated by the Project.
- One of the roles of NADO is to link farmers with financial institutions. NADO also used to train their members on farm business schools and how to prepare a business plan. So far these “access to finance” activities are not performing so well.
- NADO is also working with other projects on creating saving groups among farmers so that they can provide loans to their members and access agricultural inputs or equipment. However, it is unlikely that these groups alone will cover all the needs of their members, who tend to need money all at the same time.

Business model

- As planting trees is a long-term investment, the project didn’t have the possibility to establish business models at farmers’ level to validate the financial sustainability of the innovations.

Strategy for scaling up

Scale up ambitions

The ambition is to expand access to the innovations to reach all NADO members, i.e. 16,000 farmers.

Scale up characteristics (mechanism, organizational structure, business model)

The scale up of the innovations relies on an established implementing partner, NADO. The scale up depends on NADO’s capacities to finance its activities. Several revenue sources were identified to ensure financial sustainability of the organization.

- The scale up will rely on NADO. NADO will keep on capacitating more farmers, making tests and proposing adapted solutions. Then, NADO counts on early adopters to support dissemination within the communities.
- NADO’s goal is to be able to continue supporting farmers on these innovations even after the end of the Project, in order to continue its capacity building activities. Various sustainable revenue sources have been identified by the organization:
  - Entrance fees and annual fees paid by members,
  - Organization of NADO’s farmer day
  - Market linkage to be performed by NADO against some commission
  - Act as a (commissioned) agent to supply farm input (artificial fertilizer, seeds) to farmers
  - Lend a biochar maker equipment to farmers against a fee
  - Pack and sell the biochar to schools to apply to their gardens (Having a garden in each school is a government strategy)
- Financial sustainability is also sought at farmers’ level: innovations are supposed to generate more revenue for farmers. However, it is worth underlining that as far as (fruit) tree planting is concerned, it takes at least 3-4 years for the tree to start providing revenue.

Analysis of the financing needs associated to the scale up of the innovation

Timeframe

FO-RI TZ started in 2022 and is planned to end in December 2025.

Characterization of financial needs and types of structures to be targeted

Financial needs of NADO

To develop revenue generating activities such as providing input to farmers or linking farmers with agro-industries / traders, NADO may need liquidities (to buy the input and/or to pay farmers for example). These liquidities could be proposed by input suppliers and/or agro-industries. However, to become more independent and get better bargaining power, NADO may be willing to access funds on its own at some point. If possible, it would be recommended that NADO starts its business activities with its own funds / partner funds before seeking credit from private financial institutions, as the lack of track record severely hampers the chances to actually get credit from these institutions.

Tanzanian Agricultural Development Bank, that NADO already knows because it used to link the institution with farmers, can also be a potential financial partner for the organization. National Microfinance Bank Tanzania is also well positioned on the agricultural sector, having as major shareholder Rabobank International, as well as Tanzania Commercial Bank (TCB) and National Bank of Commerce (NBC).

Financial needs of the farmers

Farmers will need capital to invest in their farms and adopt new sustainable agricultural practices.

- First, farmers need money to test their soils. It is unlikely that farmers will be able to cover the cost of these tests. In the short run, we would recommend finding ways to subsidize and mutualize these tests. Grant-based governmental programs appear to be the most suitable option to this aim.
- Then, farmers need money to invest in agroforestry and/or beekeeping. To finance these activities with credit, they would need mid-to-long-term loans, which are not easily available within SACCOs or MFIs (even if the farmer can provide collateral). One beehive, for example, costs 100,000 to 120,000 Tz Shillings and farmers would need several of them to launch beekeeping activities. Partial subsidies may be required. One Acre Fund currently proposes fruit trees on credit and non-fruit trees for free to NADO members. Alternative revenue sources could be explored such as governmental tree planting programs or carbon credits (see below). It is interesting to notice that microfinance banks receive support from the public sector in reaching out to women and youth clients. One is the agriculture credit facility in collaboration with TADB and another one is the PASS credit facility, that encourages lending to women and youth by guaranteeing up to 80% of the loan amount (accessible through FINCA, for example).
- Finally, farmers need working capital to implement good agricultural practices. MFIs/Microfinance Banks (such as Yetu Microfinance Bank, Access Microfinance Bank, FINCA or CRDB) and SACCOs are well suited to cover these kinds of needs through short term loans (< 12 months) with adapted repayment schedules. NADO could partner with a microfinance institution or a bank to ease access

to credit for farmers, either by taking a loan itself and redistributing it to farmers or by signing an MoU to share the risk and operations on credit delivery.

Conclusion / recommendation regarding the development of alternative funding strategies

One big strength of FO-RI's innovations is to have a clear innovation holder, with sustainable presence in Tanzanian rural areas, that can lead a scale up strategy.

NADO's willingness to reach financial sustainability is a key asset to the scale up of the innovations. Several relevant revenue sources have already been identified.

However, there are several prerequisites to the launch of an alternative funding strategy, on which the Project could work before December 2025.

- Impact on farmers' revenues and financial sustainability of the proposed innovations should be further assessed once the avocado trees will enter into production.
- NADO should strengthen its strategy towards financial sustainability and turn it into a proper business plan. It should explore market opportunities both on the (organic) input supply and market access sides by entering partnerships with relevant private companies.
- The "access to finance" activities of NADO should be assessed and dynamized, in order to provide farmers with concrete financing solutions. Reasons for the limited success of access to finance initiatives so far should be cautiously identified to propose the right incentives and risk mitigation solutions. In addition to traditional capacity building and linkages between farmers and financial institutions, other solutions could be explored such as:
  - Placing a guarantee fund with a financial institution, within the framework of a partnership agreement can ease farmers' access to credit.
  - Placing a revolving fund within a financial institution is also a way to unlock agricultural credit by lowering the risk and the cost of funds.
- The partnership with One Acre Fund should be assessed and NADO should validate the opportunity and possibility to scale it up.
- As long-term investments, tree planting activities are not so easy to finance with credit. Alternative revenue sources could be explored to cover these needs such as carbon revenues. Potential partners such as Carbon Tanzania could be contacted.