Future Horizons

Poverty reduction through business development and formal cooperation







Near-End Review of Norges Vel's project support to smallholder farmers in Madagascar, Mozambique, and Tanzania

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This report was prepared by Future Horizons AS for Norges Vel.

The report was written by Elisabeth Fosseli Olsen (team leader), Reza Lahidji (team member), José Jaime Macuane (team member, independent consultant), and Anja Svendsen Østgård (analyst, KPMG). Knut Lakså provided quality assurance for the report.

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This report is the product of its authors, and responsibility for the accuracy of data included in this report rests with the authors. The findings, interpretations, and conclusions presented in this report do not necessarily reflect the views of Norges Vel.

Acronyms and abbreviations

AMPCM Association for the Promotion of Modern Cooperativism

ASA Agricultural Seed Agency

FGD Focus Group Discussions

FCR Feed Conversion Ratio

GAP Good Agricultural Practices

GIZ Deutsche Gesellschaft für Internationale Zusammenarbeit

GMP Good Manufacturing Practices

HPLC High-performance liquid chromatography

IAM Edible Nuts Institute of Mozambique (Instituto de Amêndoas de

Moçambique)

IDP Internally Displaced Person

KTC Kilombero Rice Trading Company

LFL Livestock Feed Limited

MAEP Ministry of Agriculture, Animal Husbandry and Fisheries

MPEB Ministry of Fisheries and Blue Economy

MTC Mbarali and Neighbors small scale farmers limited

Mts Metric Tonnes

MZM Mozambican metical

NOK Norwegian Krone

Norec Norwegian Agency for Exchange Cooperation

NRDS National Rice Development Strategy

NV Norges Vel

QDS Quality Declared Seeds

RCT Rice Council of Tanzania

SDG Sustainable Development Goals

SH/SEA sexual harassment and sexual exploitation and abuse

SRI System of Rice Intensification

TARI Tanzania Agricultural Research Institute

TDE Tilapia de l'Est

ToR Terms of Reference

TOSCI Tanzania Official Seed Certification Institution

ToT Training of Trainers

TSH Tanzanian Shilling

UniLurio Universidade Lúrio

USD United States Dollars

Contents

Acknowledgements	2
Acronyms and abbreviations	
Executive summary and recommendations	&
Key Findings	8
Lessons Learned	9
Madagascar	
Tanzania	10
Mozambique	10
Recommendations	11
Madagascar	11
Tanzania	12
Mozambique	12
Considerations for Norges Vel ahead	13
1. Introduction	14
1.1. Project overview	14
1.1.1. Madagascar	14
1.1.2. Tanzania	15
1.1.3. Mozambique	16
2. Scope and purpose of the review	18
2.1. Methodology	18
2.2. Data collection	19
3. Findings	21
3.1. Relevance	21
3.1.1. Responding to beneficiaries and country needs	21
3.1.2. Alignment to current policies and priorities	22
3.1.3. How the project responds to global priorities	23
3.2. Coherence	24
3.2.1. The project's fit with other country/sector interventions	
3.2.2. The project's alignment with Norwegian development cooperation priorities	

3.2.3.	Inclusion of women, youth and people with disabilities	26
3.2.4.	Degree of linkages to relevant R&D institutions	27
3.3. Ef	ffectiveness	28
3.3.1.	Madagascar	
3.3.2.	Tanzania	
3.3.3.	Mozambique	32
3.4. Ef	fficiency	33
3.4.1.	Madagascar	
3.4.2.	Tanzania	35
3.4.3.	Mozambique	37
3.4.4	Methods of data collection and involvement of beneficiaries	37
3.5. In	npact	38
3.5.1.	Increased income for smallholder farmers	38
3.5.2.	Improved living conditions and improved economic situation	41
3.5.3.	Improved Food security	42
3.5.4.	Job creation	42
3.6. St	ıstainability	43
3.6.1.	Madagascar	43
3.6.2.	Tanzania	45
3.6.3.	Mozambique	46
3.6.4.	Assessment of the enabling environments	47
3.7. Ri	isk Management	48
3.7.1.	Madagascar	48
3.7.2.	Tanzania	50
3.7.3.	Mozambique	51
4. Annex	xes	52
4.1. A	nnex 1 References	52
4.2. A	nnex 2 List of stakeholder consultations	54
	nnex 3 Interview guides	
	G	
	nnex 4 Result frameworks and reported results	
4.4.1.	Full country assessments.	
4.4. 4.4.	0	
4.4.	1.3. Mozambique	

4.5. Annex 5 Terms of Reference	84
List of figures:	
Figure 1: Evolution of unit costs and prices (2015=100), Madagascar	35
Figure 2: Distribution of gross margins per pond – Female and male farmers, 2022, Madagascar	39
Figure 3: Distribution of income per farmer – Female and male farmers, 2022, Madagascar	39
Figure 4: Smallholder farmers average income increase from the baseline of the project Tanzania	40

Executive summary and recommendations

Norges Vel's (NV) project "Poverty Reduction through Business Development and Formal Cooperation" supports smallholder farmers in Madagascar, Mozambique, and Tanzania, with funding from Norad. It operates from 2020 to 2023, building upon previous interventions in Madagascar and Tanzania. The objective is to increase smallholder farmers' income in Tanzania, Madagascar, and Mozambique, by boosting the production and sales of rice, tilapia, cashew, and groundnuts, as well as advocating for a supportive political framework.

This near-end review aims to evaluate the progress and lessons learned from the implementation of the project. It provides recommendations to enhance Norges Vel's work and achieve better outcomes. The assessment focuses on sustainability, climate resilience/adaptation, gender equality, improved work methods and models, as well as priorities and changes for future work.

The review was conducted from February till May 2023, with fieldwork conducted in all three countries.

Key Findings

Relevance. The project is highly relevant and responds to the needs and challenges of the target groups in the three implementing countries. The project has also enabled Norges Vel to continue responding to the smallholder farmers' needs, even when circumstances change. It is also highly aligned with current policies and priorities in the three intervention countries, and makes direct contributions to several of the Sustainable Development Goals (SDGs), particularly SDG 1 (No Poverty), 2 (Zero Hunger), 8 (Decent Work), 13 (Climate Action) and 14 (Life Below Water). In Tanzania, the project also contributes to SDG 5 (Gender Equality).

Coherence. The overall finding is that the project aligns with similar or complementary interventions in the implementing countries, and fits with other interventions. However, it does not directly link to or collaborate with these. The project is also highly aligned with the Norwegian development cooperation policy, particularly the new Strategy for improving food self-sufficiency launched in 2022. The project also responds to the overall aim of the new Strategy of transforming the current large-scale food system to a more resilient food system, based on local and national production, as well as the need to include women, youth and people with disabilities in food production. However, explicit, and direct approaches for increasing women and youth participation are only present in the interventions in Tanzania.

Effectiveness. Overall, most activities have been implemented and results have been achieved according to plans, despite the highly challenging international context. In Madagascar and Mozambique, interventions have been particularly successful in supporting the production and sales levels of farmers and their organisations. In Tanzania, progress has been more limited, but this has not hampered a strong increase in farmers' incomes. Achievements in support of access to inputs, development of infrastructures, and policy changes, have been more uneven. Still, due to a flexible approach by Norges Vel and additional grants, partners in all three countries have been strengthened. In Madagascar, NV's partner exhibits promising prospects for development.

Efficiency. In all three countries, the project is largely executed as planned. A distinguishing feature of the intervention in Tanzania is the establishment of two businesses. Till now, the project has successfully developed robust companies, made investments in inputs and machinery, and attracted private capital through the sale of shares to smallholder farmers and private investors. In Madagascar, the intervention has encountered various

obstacles that have caused delays and incurred costs. Nevertheless, economic indicators suggest that the business model created has proven effective and is expected to increase efficiency in the near future.

Impact. The project has contributed to increased income for smallholders in all three countries. The achievement is particularly remarkable in Tanzania, with an 85% increase in income, and Madagascar, with a 75% increase in income during the project period. This increased income has also contributed to an improved economic situation, job creation and livelihoods for farmers, particularly for women and youth. The farmers report that the project has also contributed to improved food security in all three intervention countries.

Sustainability. The project interventions are at different phases in the three countries. In Tanzania and Mozambique, many achievements will have lasting effects even after the project's end, including agroecology practices, agricultural techniques, and environmental awareness. In Mozambique, the organisation of cooperatives and companies will remain, and in Tanzania, the two rice companies will also remain. However, scaling up will not be feasible if the project were to end now. Rather, there is an urgent need to increase working capital and additional staff. In Madagascar, NV's partner organisation is approaching full sustainability, but several issues require further monitoring before the exit decision is enacted.

Lessons Learned

The project aims to enhance farmers' sales and income while empowering women by increasing their participation in leadership roles. However, the project has encountered challenges due to market structures, dynamics, and prevailing social norms that impact the socioeconomic status of women. These structural factors pose challenges in attaining the desired outcomes. Further, complex global factors influence the work carried out in the interventions, including poor infrastructure, climate changes and political instability:

- Poor infrastructure, such as bad (or lack of) roads, and thus access to the markets, lack of irrigation schemes or lack of access to technology, electricity, and internet, exist on local, regional, and national levels. The project's success hinges on partners being able to identify these challenges and include in project design appropriate measures to overcome these challenges.
- ✓ The effects of climate change are increasing burdens and challenges for smallholder farmers. Although the project has successfully enabled smallholder farmers to adapt to climate changes, harmful effects of climate change are increasing more rapidly than project activities can mitigate these.
- External factors, such as the pandemic and war in Ukraine, also heavily disturb smallholder's production.
 Lack of fertilizers, quality seeds and other input factors, has made farming more challenging.

To safeguard the sustainability of key outcomes, it is imperative to account for these factors and implement mitigation measures. Failure to do so can undermine the project's long-term viability.

Below follows a summary of country-specific lessons learned.

Madagascar

✓ The intervention in Madagascar has been relevant to the needs and priorities of NV's partner Tilapia de l'Est and the country at large. TDE has managed to continue its development and exceed most outcome indicators, despite the difficult international context. Solutions have been found to mitigate the consequences of trade disruptions and cost increases, although they have temporarily affected the smallholders' income. The

- disruption in the supply of fingerlings was a main implementation challenge, but it has been gradually addressed.
- ✓ The impact of the project on the lives of smallholders has been remarkable, with significant improvements in earnings, housing, clothing, and nutrition. The project's ambitions for equality of opportunity have not been fully achieved, with women representing a smaller proportion of farmers and leadership positions.
- ✓ TDE's business model is sound, and the intervention has strengthened its production capacities for future growth. And lastly, the intervention has included measures to mitigate the impact of cyclones and floods, reducing vulnerability to climate change risks.

Tanzania

- ✓ Further strengthening of KTC and MTC is necessary to meet their annual sales targets. The effectiveness review of COMRICE II revealed that annual sales by the companies are significantly behind schedule, but this is expected as they are still in the early start-up stage.
- ✓ The companies need to focus on scaling their activities, improving their revenue stream, and enhancing their business model. And building trust with shareholders and smallholder farmers is crucial for ensuring consistent production and a stable rice supply.
- ✓ Marketing and sales efforts should be intensified, including the recruitment of marketing officials.
- ✓ Technology and digital solutions, particularly for savings and weather forecasting, should be prioritized to support the companies' future growth.

Mozambique

- ✓ Structural factors, such as market structure, dynamics, and social norms, have hindered the project's ability to achieve its expected results in terms of increased sales, income, and women's empowerment.
- √ Farmers' socioeconomic condition has disrupted their access to markets and fair prices, as traders exploit their vulnerability to negotiate lower prices. Failure to consider and mitigate these structural factors undermines the sustainability of key project outcomes.
- ✓ The continued political and military instability in Cabo Delgado in northern parts of the country, constitutes a potential future risk to the project.

Recommendations

The following constitute the overall general recommendations to the project:

- ✓ **Increase the focus on youth and women as target groups.** Africa faces a vast youth population, with significant unemployment rates, and the youth project in Tanzania has already proven successful in focusing on youth. Also, the focus on female farmers has proven successful to increasing raw materials for processing and paddies for sales for the companies.
- ✓ **Continue strengthening the companies create strong market players.** The establishment and general strengthening of companies has largely been successful and should be continued.
- ✓ Continue and increase efforts to assist farmers in coping with climate change. The effects of the climate change are increasing the burdens and challenges for smallholder farmers. Although the project has successfully enabled smallholder farmers to adapt to climate changes, the harmful effects of climate change are increasing more rapidly than activities presented to the farmers.

Below, we present our country-specific recommendations:

Madagascar

- ✓ **Governance:** TDE's governance structures function well but are dependent on a small number of highly competent members. Communication with the farmers can also be improved to keep them informed and empowered (fingerlings issue).
 - Explore with TDE the possibilities for making its human resource management more inclusive for women and vulnerable groups.
 - Support TDE in identifying further capacity development activities directly targeted at farmers (particularly female farmers) struggling to achieve profitability in their activity.
 - O Discuss with TDE practical steps in order to better inform the cooperatives and their members about technical and financial data of relevance for their activities.
- Climate change adaptation: The considerable work undertaken by TDE with support from NV to increase its resilience to climate change- induced events could be completed by the introduction of a targeted insurance mechanism to cover occasional loss affecting individual farmers. TDE could potentially incorporate such a mechanism within its cooperative structure, with appropriate pricing, diversification and control of moral hazard.
 - Enhance the dialogue with TDE on the development of a mutual insurance mechanism among the cooperatives against climate-related loss, with a feasibility study as a first step.
- Access to inputs: TDE's payment credit for purchases from its feed supplier LFL is dependent on NV's guarantee. The loss of the credit could have dramatic consequences for TDE as its members do not have the capacity to pay for their feed inputs at the start of the production cycle.
- ✓ **Finances**: TDE has had to use part of its capital to cover increased expenditures (input purchases, investments). Its cost structure has become heavier, and its margins (8% admin fees) are not adequate. Farmers' incomes have also been affected by the rising costs of feed.

Consider allowing for a limited extension of the engagement (as envisaged in the intervention's exit strategy) to help TDE 1) Undertake the above actions; 2) Find a sustainable solution for obtaining a payment credit solution for its feed purchases; and 3) Restore a more robust financial position.

Tanzania

- Investments in the companies should be secured to ensure essential working capital and operational liquidity.
 - Exploring blended finance models that align with the interests of existing shareholders (smallholder farmers) and the unique business model of KTC and MTC is important.
 - o Hiring staff with marketing and sales expertise is essential for effective management.
- ✓ Strengthening smallholder farmers' resilience to climate change should be a priority.
 - Expand training in climate-related farming, focusing on climate-smart approaches like the System of Rice Intensification (SRI).
 - o Continue and expand testing and production of drought-tolerant seeds.
 - Provide training and technology to help farmers cope with water scarcity and unpredictable rainfall.
- ✓ Give special attention to women and youth farmers by prioritizing them as a target group.
 - Support women in accessing funds for farming activities and agro loans, addressing the challenge of collateral.
 - o Promote the application of improved farming practices among female farmers.
 - $\circ \quad \text{Explore incentives to overcome gender-related obstacles in accessing resources and loans}.$
 - Continue supporting youth groups and initiatives to encourage their involvement in agriculture and develop their business capabilities.
- Evaluate and strengthen the sustainability of RCT, exploring potential business models and income generation strategies.
 - Consider the possibility of NV's country office collaborating with RCT to handle policy advocacy, leveraging NV's expertise, network, and reputation in Tanzania.

Mozambique

- Dedicate more time to understanding market dynamics and supporting cooperatives. The project has assisted cooperatives to increase their sales and get better prices, but market dynamics which involve international and national factors have proved to be more complex and difficult to predict. Increase in sales is a key element of the project impact, hence, understanding market dynamics is important for the success of the project and the farmers.
 - Developing companies should be considered.
- ✓ Improve the approach to involving women, youth, and people with disabilities.
 - Move beyond a quantitative approach to a qualitative approach in women's involvement, focusing on their meaningful representation in leadership positions.

- Address gender-based discrepancies identified in project monitoring and use them as an opportunity to take corrective measures during project implementation.
- o Develop a dedicated approach for involving youth in the project, including specific interventions.
- Adopt a more visible and sensitive approach to include people with disabilities, ensuring their meaningful participation.
- Continue, intensify, and consolidate the transfer of knowledge on cooperative organisation to public partners.
 - Develop systematic courses and materials to mainstream cooperativism in agricultural policies and basic training packages in the sector.
 - Strengthen training provided to public and government entities on cooperative establishment and principles/values.
- Assess the effectiveness of the Training of Trainers (ToT) model in building capacity for continuous training in cooperatives.
 - Reassess the effectiveness of the ToT model and make improvements to ensure more sustainable results in replicating the training.
- √ Assist cooperatives and farmers in better understanding market dynamics.
 - Dedicate more time and resources to understanding market dynamics, including international and national factors.
 - Provide support to cooperatives in navigating market complexities and improving their sales strategies to achieve project impact and benefit farmers.

Considerations for Norges Vel ahead

The following constitutes some suggestions that Norges Vel may consider for the next phase of the project:

Can a strategic plan for knowledge-transfer between the countries strengthen the capacity building across countries? For example, exchanges of key personnel (through Norec), or regional workshops for sharing lessons learned, and best practices?

Should Norges Vel consider development/implementation of relevant and important digital solutions/ technologies across countries? For example, search/develop relevant tools that may be piloted in each country, and thus be developed for the region, making the technologies easy and ready for scale? For instance: 1) Digital insurance mechanisms, 2) FinTech solutions (for bank guarantees, easy access loan for inputs, etc.), and 3) Digital Weather forecast solutions for more efficient farming (especially in areas lacking irrigation).

Should Norges Vel consider a strategic partnership with research agencies in Norway and in East Africa for enhancing knowledge and insights in how climate changes affect smallholder farmers in particular? In Madagascar, enhance the dialogue with TDE on the development of a mutual insurance mechanism among the cooperatives against climate-related loss, with a feasibility study as a first step. In Tanzania, maybe develop a private-public partnership with Yara and Public seed researchers for developed drought resilient rice seeds?

1. Introduction

1.1. Project overview

Norges Vel's project "Poverty Reduction through Business Development and Formal Cooperation" supports smallholder farmers through project interventions in Madagascar, Mozambique, and Tanzania, with funding from Norad. The project runs from 2020 to 2023, building on previous interventions in Madagascar and Tanzania. The ambition is to trigger a shift from subsistence-oriented aqua- and agriculture to more commercialized and profitable ways of production and marketing, primarily by working with smallholder organizations to engage in a value chain approach. This is intrinsically challenging, as all three countries are characterized by the weakness of the enabling environment, e.g., limited access to market and to credit, absence of licensing, capacity gaps and lack of technical assistance, and an inadequate policy framework.

The project's overall objective is to *increase the income* of smallholder farmers in Tanzania, Madagascar and Mozambique. The desired effects for the project's target group are 1) Increased production and sales of rice, tilapia and cashew and groundnuts and 2) a political framework that supports rice and tilapia value chains.

The following subsections provide an overview of the project in the three intervention countries.

1.1.1. Madagascar

In Madagascar, NV's intervention, entitled "Producer-Steered Fish Farming, Organisation and Sales in Toamasina, Madagascar, Phase 3", is funded by Norad as part of its frame agreement with NV. The intervention builds on a decade-long collaboration between NV and its local partner Tilapia de l'Est (TDE), through which NV has supported TDE in organizing as a cooperative union of smallholder farmers engaged in tilapia production and in strengthening the tilapia value chain in Madagascar. For the project period running from January 2020 to December 2023, the cooperation is backed by an initial grant agreement established in June 2020, with a budget slightly exceeding NOK 9 million, later extended by several addenda. The intervention aims to strengthen TDE's human, technical, organizational, and financial capacity to become a self-sustaining business by the end of 2023.

The activities foreseen in the initial agreement fall under four areas: training of smallholder farmers in the tilapia value chain; provision of inputs (fertilizer, feed, fingerlings); provision of access to production and processing infrastructure; and strengthening of the capacity of smallholder farmers' cooperatives or business companies.

An addendum to the initial agreement was signed by both organizations in March 2021, whereby NV would guarantee up to USD 100,000 of feed purchase by TDE from Livestock Feed Limited (LFL) in 2021, and TDE would commit part of its assets as a guarantee for NV in case of insolvency. The guarantee enabled TDE to obtain payment credit from its supplier LFL. In exchange, TDE agreed to submit its feed purchases to NV's prior approval. The annual guarantee scheme was renewed in January 2022 and in February 2023, with a purchase ceiling of USD 200,000 until September 2023.

A second addendum to the initial agreement was signed in October 2021 to introduce a component entitled "Climate Resilient Local Food Production and Food Security" with a budget of NOK 2.5 million. The additional component had two key objectives: (1) to strengthen TDE's production infrastructure by setting up a new hatchery, breeding unit and laboratory in an appropriate location; (2) to support TDE in training 100 new farmers and helping them in digging and stocking ponds and increasing production further. The component was initially to be

implemented between 15 October 2021 and 15 April 2022; a no-cost extension was later granted until 31 December 2022 to cover for delays in the establishment of the new hatchery.

A new addendum to the agreement was adopted in November 2022 (finalized in December 2022), with a budget of NOK 3.8 million, to cover for the increase in the cost of inputs caused by the Covid-19 pandemic and particularly by the war in Ukraine and also allow for additional investments in transport logistics and marketing and sales capacities, which TDE was not able to finance with its own funds due to the financial impact of the international context.

The target group of the intervention initially consisted of 340 tilapia farming members of seven existing cooperatives under TDE, about 2,000 members of their families and other participants in the value chains (workers employed to dig or maintain the ponds, transporters, sellers), as well as 30 TDE employees. With additional funding from GIZ in 2019-22, NV supported the integration of 50 new farmers (including 15 women), organized in a separate cooperative, into TDE. With the addition of these and the above 100 members, the group of smallholder tilapia farmers expanded to 490 individuals and the group of their family members and other participants in the value chain to close to 2,700 people.

The results framework of the intervention has been adapted to include indicators for the additional components (see Annex 4 for a summary presentation), but the results reported and commented further on in this report concern the original group of 340 farmers.

1.1.2. Tanzania

The project "Commercialisation of Rice Farming in Tanzania" seeks to increase income of smallholder farmers from the rice value chain. The expected results of the COMRICE II project are two-folded; to increase production and sales of rice produced annually, and to Improve political framework that supports rice value chain. To reach the objectives, the project works at improving farmers' ability to improve their production. Trainings of farmers has been focusing on climate smart agriculture, with trainings in Good Agricultural Practices (GAP) including System of Rice Intensification (SRI).

The target group of COMRICE II is smallholder farmers in the two districts, Mbarali and Kilombero, in Tanzania's Southern agricultural growth corridor. Norges Vel has been working in this area since its establishment in 2008. The project is a continuation of the four-year COMRICE I project, which was working on increasing production and expanding farmers' participation in the value chain. According to reports, the most significant achievement in the COMRICE I was establishing the two farmers' rice trading companies, and thus COMRICE II is now focusing on further developing the farmers' participation in the rice value chain through their own companies.¹

The project is implemented in partnership with Kilombero Rice Trading Company (KTC), Mbarali and Neighbors small scale farmers limited (MTC) and the Rice Council of Tanzania (RCT). Developing sustainable businesses that sell rice in the value chain is also an expected outcome of the project. The two companies, KTC and MTC, were registered in 2019 and started their operation in 2020. KTC currently has 144 shareholders, while MTC has 135 shareholders. Since 2020, the companies have developed and operated and are still in the implementation phase of various revenue streams, warehouse services, rice milling, branding and selling, agricultural machines hiring, input

¹ Commercialization of rice farming in Tanzania (COMRICE II) Project Document Version 3.0

distribution and transportation. RCT's expected contribution to the project is to ensure that political lobbying and information flow to political entities on national and regional levels are secured.

An addendum to the Norad grant was signed and approved in late 2022. The addendum was compensation and extra funds for the existing COMRICE II project and was to be used exclusively to finance additional components as agreed in the approved results framework for 2022 and 2023. The objective was to support 200 youth and 200 women in the rice value chain in Mbarali and Mlimba to create employment and improve production to increase food security in their households and the country's food basket in the 2022/2023 season. Towards the women, the main activities being implemented are training in GAP including SRI, Gender, Climate smart Agriculture as well as training on financial and business skills (entrepreneurship), in addition to inputs and mechanizations support, the funds are used to purchase land to support women groups (10 acres of land for each group). The youth support aims are to empower 200 youth through youth groups so that they can provide on-farm services to other farmers, especially women, to increase production and generate income.²

1.1.3. Mozambique

The project "Building Resilience" addresses agricultural challenges in northern Mozambique, which include climate change impacts, agricultural practices, limited access to inputs and finance, and unfavourable socioeconomic conditions. These challenges have led to low productivity, food insecurity, and critical socioeconomic situations for farmers and their families.

To tackle these issues, the project adopts an agroecological approach and promotes crops that can enhance income and food security. It builds upon previous experience in the cashew and groundnut value chains, taking into account the existing challenges faced by these crops and agriculture as a whole. Environmental conditions also impact farmers' livelihoods and income in Nampula province. Cashew trees in Mozambique have lower productivity than the global average, and groundnuts have a history of aflatoxin contamination. Farmers' income remains low due to a combination of factors such as limited production, weak associations, and limited market access.

Furthermore, social norms and gender relations contribute to inequalities and exclusion in society, affecting resource access for historically vulnerable and marginalized groups, including women, youth, and people with disabilities. The expected impact of the project is to increase the smallholder farmers income from the cashew and groundnut value chain through sustainable agricultural practices and taking advantage of the organisation in cooperatives3. The impact must be sensitive to gender equality and inclusion of vulnerable groups, among them women, the youth, and people with disabilities.

The strategic actions of the project include the creation of capacity for farmers to increase their resilience, through training in agricultural practices and access to agricultural inputs, services, and technologies to increase in production, sales, and income. It includes the creation of a centralised nursery to produce high quality seeds available to the farmers, including cashew polyclonal seedlings, with an aim to reach 2 million units by 2025/26. The central nursery was designed to work as a training centre and incubator of a network of locally owned micronurseries, to contribute to the improvement of access to seeds and increased income for small farmers⁴. Strong

² Extra Fund Women and Youth, Scope of Work Nov 2022 - June 2023, Norges Vel

³ 2019 ToC Mozambique, page 1.

⁴ Norges Vel (2020). Synergies Between Agroecology and Cashew-Intensification in Nampula: Concept Note.

cooperatives are key to entail agroecological transformation and to increase farmers' production, sales and income. The project supports the strengthening of existing cooperatives and associations and promotes the creation of new cooperatives. Experience shows that cooperatives allow for better and efficient access to finance, agricultural services, markets, aggregation of harvests, and fair prices⁵. Construction and rehabilitation of warehouses for aggregation of the harvest and drying facilities to improve the quality of the products are also key actions of the project, to contribute to farmers' increase of sales and income.

The project is linked to other initiatives, such as the Aflasafe project and ConnectCaju. Connect Caju is a mobile application and database that tracks and shares information on the cashew value chain, which allows the Government agency responsible for the sector - the Edible Nuts Institute of Mozambique (IAM) - to improve the management of cashew production and contributes to empower farmers through better access to inputs and information. Building from the experience of ConnecCaju, the project developed the application My Coop, for data gathering and access to information of multiple aspects of the value chain for the farmers. The AflaSafe project promotes the use of a biological control method called AflaSafe, aimed at reducing aflatoxin contamination, which will improve food security and contribute to increasing farmers' income, since aflatoxin-free products have a higher market price. The project is linked to the construction of a factory to produce AflaSafe in Nampula and the dissemination of its use by the farmers, aimed at developing an aflatoxin-free value chain in Mozambique.

An addendum was signed in 2022, mostly with measures and funding to mitigate the effects of the cyclone Gombe that ravaged the Northern region in the same year and destroyed farmers' production, cooperatives and central nursery facilities.

 $^{^{5}}$ 2019 ToC Mozambique, page 2.

2. Scope and purpose of the review

The object of the assignment is a near-end review of the grant frame agreement project 2020-2023 "Poverty reduction through business development and formal cooperation".

The review aims to assess the progress to date and lessons learned in the implementation of the frame agreement and give recommendations on how Norges Vel can improve its work and achieve stronger results going forward. In accordance with the Terms of Reference (ToR), this includes a focus on sustainability, climate resilience/adaptation, gender equality, relevant improvements in work methods and models for further success, as well as recommendations on priorities and changes relevant to Norges Vel's future work.

Key factors in assessing the project's outcomes and impact are whether production and sales have increased, general improvements have taken place in the regulative framework and the enabling environment, whether beneficiaries have indeed increased their income, and/ or there has been any other impact on beneficiaries/ other stakeholders.

During the inception phase, the review team developed an inception report for the assignment, which was endorsed by Norges Vel. The Inception report has been used as a roadmap for data collection, analysis, and reporting.

2.1. Methodology

The near-end review has been conducted in line with the OECD DAC's evaluation principles to assess the relevance, coherence, effectiveness, efficiency, impact, and sustainability of the project. In addition, the review has also scrutinized the intervention models and risk management provisions implemented in each project country.

Four aspects characterise the review's methodological approach:

- Diversified sources of information: The review team has applied a mixed-method approach, combining a documentation review, an analysis of data reported about each intervention, fieldwork in the three countries, and additional feedback collected from stakeholders through a validation workshop. The mix of sources for data collection has enabled the team to validate and triangulate the data at the same time as it has ensured a participatory approach.
- ✓ **A utilization-focused approach:** The team's approach has involved engagement with key stakeholders throughout the review process, with a focus on the possible uses and utility of the review's findings to inform the future development of Norges Vel's intervention models and frameworks.
- A systematic approach to building the evidence base: The team used a review matrix to systematically bridge each driving question to sources of information and rank findings and conclusions according to the quality of the underlying evidence.
- Quality assurance: The work of the review team has been monitored and assessed by a dedicated quality assurer at every step of the assignment.

The review is comparative in nature and analysis tools has been used to reveal and help develop an understanding of Norges Vel's project experiences over time (pre- and during COVID-19), taking special precautions to account for the various contexts of operation, sectors, and markets of the project portfolio.

2.2. Data collection

The team has deployed four data collection methods to ensure high-quality triangulation of findings: 1) documentation analysis, 2) in-depth interviews and 3) focus group discussions with stakeholders, as well as 4) debrief meetings carried out during missions in the three countries. The final report includes inputs and adjustments from the validation workshop with Norges Vel.

Documentation analysis. The desktop research involved reviews and analyses of all documents relevant to the scope of this assignment. The analysis has provided qualitative and quantitative insights into the projects, their implementation, and results, and into their economic and policy context. In Madagascar, the data collected by TDE within the monitoring and reporting framework of the intervention provided a rich base for quantitative analysis. These insights have been summarized as short country-specific vignettes that fed into the analysis. A complete list of references is in Annex 1.

Field visits. The review team conducted field missions to Madagascar, Tanzania, and Mozambique. During these visits, the review team collected data through the following methods:

In-depth interviews were conducted with a large selection of identified stakeholders. The interviews were participatory and inclusive, and provided rich empirical information from a range of stakeholder standpoints. Interviewees were selected among the various stakeholder groups: Norges Vel staff (International Director, Project Managers and Senior Advisors) at headquarters and in country offices, staff, and members of the boards of partner organisations, representatives of donor agencies, government officials, consumer/ producer organisation representatives, and NGOs.

The list of interviews for the Madagascar project included NV and TDE staff, members of the TDE board and the boards of the eight cooperatives under TDE, an expert from NV's consultant Imani, representatives of the Ministry of Fisheries and the Blue Economy at national and regional level, representatives of the Regional Directorate for Industry, Trade and Consumption, researchers from the University of Toamasina, and program advisors from Norad and GiZ. In Tanzania, interviews were conducted among Norges Vel country staff; RCT, as well as staff and board members in the two rice companies MCT and KCT. In Mozambique, primary data was gathered in Maputo with the government agency working closely with the project and the Mozambican Association for the Promotion of Modern Cooperativism (AMPCM), the Edible Nuts Institute of Mozambique (Instituto de Amêndoas de Moçambique – IAM). Field work was carried out in four districts of the Province of Nampula (Mogovolas, Angoche, Monapo and Rapale) where the project is being implemented, covering one district union and four cooperatives. In the capital city of Nampula, the interviews were carried out in March and April 2023 with project management, staff, and partners, including a research institution. The list of key interviews is presented in Annex 2.

The interviews were based on interview guides and informed by evidence gaps identified in the desk study. Two general interview guides were developed – one for beneficiaries and partners and the other for other stakeholders (see Annex 3). Both guides have been structured to include key questions that address the assignment's main objectives as stated in the ToR and designed in accordance with the review matrix. The guides were used in a flexible manner and primarily to foster open communication with interview participants.

Focus Group Discussions (FGDs) were conducted among smallholder farmers in selected project interventions in each country. FGDs are a mean to triangulate data from interviews in a participatory manner. The assumption behind the method is that cultural values and ideas are social, and they are created in the encounter between

people. The intention of the focus group discussion is therefore to create such an encounter, enabling participants and staff to discuss, grasp and interpret experiences, learning and changes due to the project. The approach is also efficient in collecting data relevant for analysing lessons learned and the creation of recommendations for further design of the project. In accordance with the general methodology of FGDs, the team has sought, in each discussion, to cover the themes included in the interview guide for beneficiaries and partners, but without framing and orienting the discussion through direct questions.

The evaluators also participated in field visits to farm plots and youth- and women's groups participating in the project. These visits gave us important inputs which enabled us to get a more holistic understanding of the challenges, needs and results of the project.

Observation and site visits. The consultants visited several plots, demonstration plots, youth, and women groups during the visits. The site visits gave us important insight in the challenges faced by the smallholder farmers, and the work that is carried out in this project.

Mission debriefs and validation workshop. In addition, the team carried out a debriefing meeting with Norges Vel teams and partners at the end of each field mission to share preliminary findings, to collect feedback and to identify possible gaps. This provided an additional source for data verification and triangulation.

3. Findings

3.1. Relevance

Below, we assess the project's relevance in the three intervention countries.

3.1.1. Responding to beneficiaries and country needs

The Norges Vel project is highly relevant and responds to the needs and challenges of the target groups in the three implementing countries. The project has also continued responding to the smallholder farmers' needs, even when the circumstances were changing.

In **Madagascar**, NV initiated its work on tilapia aquaculture in 2011. Its collaboration with local actors of the tilapia value chain led to the establishment of TDE as a union of tilapia farmer cooperatives in 2014. The intervention continues this collaboration and draws from NV's knowledge and understanding of the sector's long-term development needs.

In the period under review, the intervention has helped to further strengthen TDE's production, harvesting and marketing model, notably by rationalizing its operations and professionalizing its staff, considerably increasing its capacity to supply high-quality fingerlings to its members, getting access to payment facilities for its purchases of feed and extending the same facilities to its members - and also to continue to provide inputs to relevant national strategies and policies.

The intervention has also evolved to continue responding to the partner's needs, particularly in the difficult international context resulting from the Covid-19 pandemic, the Russian invasion of Ukraine, and their respective impacts on international commodities markets and trade. These challenges have affected TDE's finances at a time when it was undertaking important investments, and NV flexibly responded by providing financial support through an addendum to the agreement in November 2022.

TDE's management finds value in NV's openness and attention to its specific needs and conditions, an attitude that it considers as the key factor behind the success of the partnership, and which it contrasts with the prevalence of rigid investment rules and models among other development partners. NV's support to the decision to invest in a technical hub and a site for the new hatchery are cited of examples of this openness, but TDE's management emphasise s even more NV's willingness to gradually adapt the intervention to the needs, living conditions and culture of the farmers, so that their personal fulfilment would form the basis for the success of the project.

In **Tanzania**, NV's interventions, which started in 2007, are still relevant and correlate to smallholder farmers' crucial challenges and needs. There are three main reasons for this. Firstly, the project has introduced new agricultural techniques and standards that are accessible and highly adaptable for the target group. Secondly, by establishing businesses owned by smallholder farmers, the project has managed to organize the farmers in new, positive ways. Traditionally, farmers organised themselves through state-owned cooperatives. These failed on many levels; politics were interwoven with sales, corruption was a huge problem, and over time bureaucracy increased along with the decrease of integrity in the management of the groups. By developing smallholder farmers' owned businesses, the project has introduced new ways of organizing farmers, which contribute to a sense of ownership and responsibility, transparency in management and performance, and become a means of increasing incomes and wealth for the

farmers and their communities. Thirdly, the project has provided much-needed inputs, such as machinery and equipment, that smallholder farmers need to improve the production and sales of rice.

In **Mozambique**, the project is built on multiple issues identified in the farming systems of Nampula, linked to farmers' socioeconomic development, in a context of broader social, economic, and environmental challenges. Amongst the key problems identified are: weak production and productivity, weak access to agricultural technical assistance and inputs, weak access to markets, smallholder farmers' weak combination of food and cash crop for income generation and food security, reduced areas of cultivation, inefficient use of the potentialities of the farms, low diversity of crops, lack of post-harvest management (with loss of around 30%), crop-diseases and environmental toxins, climate change (seasonal fluctuations of weather impacting on agriculture) and weak organisations of farmers to defend their interests⁶.

The project addresses key problems of agriculture production, commercialisation, income generation, food security, environment, through the promotion of agroecology, improvement of farming systems, promotion of effective forms of farmers' organisation, specifically the cooperative organisation and development of key crops. Whilst the project advocates for the development of multipurpose crops – food security, income generation and environmental management – it has a particular focus on two main crops: the cashew nut and the groundnut value chains.

In the case of the cashew, there are 1.4 million scattered producers in the country, with only 1% organised in associations and most of them working individually, which poses challenges to their technical assistance by government agencies and reduces their possibilities of efficiently accessing markets and selling their production at fair prices⁷. Mozambique's Agriculture has a history of aflatoxin-contamination of staple foods, among them peanuts⁸. Control of aflatoxins in the production of groundnuts is weak or inexistent in Mozambique, which poses problem of public health and undermines access to markets with tighter control of these substances.

The project addresses the key problems identified above, with an approach that combines the promotion of the cooperative organisation to solve the problems of efficient access to inputs and technical assistance (extension services) from government agencies, among them the Edible Nuts Institute of Mozambique (IAM), and improved conditions for access to markets and fair prices, through the aggregation of production in cooperatives for better negotiation with traders. The project also addresses the problem of aflatoxins in the groundnut, through the facilitation of access to products to control the incidence of this substance, and raising awareness of the public health risks it poses.

3.1.2. Alignment to current policies and priorities

The project is also highly aligned with current policies and priorities.

In **Madagascar**, the specificities of NV's approach have been critical to TDE's growth and to its contribution to the structuring of the tilapia value chain. The latter, in turn, have been fully aligned with the country's long-term development plans, to the point of inspiring the government's policies for the development of aquaculture. Madagascar's National Development Plan "Emergence Madagascar" (2019-23) has fisheries and aquaculture as one

⁶ Synergies Between Agroecology and Cashew-Intensification in Nampula: Concept Note.

⁷ Interview with The Edible Nuts Institute of Mozambique (IAM), 10 April 2023.

⁸ Synergies Between Agroecology and Cashew-Intensification in Nampula: Concept Note, page 10.

of its priority sectors; the National Strategy for the Blue Economy (June 2022), the Strategy for Aquaculture Development (June 2021) and the Plan de Développement de l'Aquaculture Continentale de Madagascar (Avril 2022) include specific measures for its development. The Ministry of Fisheries and the Blue Economy, the key stakeholder in charge of elaborating and later implementing the plan, recognizes the importance of the Toamasina region for the future development of the sector. In the words of the Ministry's regional director in Toamasina, "Madagascar's tilapia comes from the region and from TDE, and we have to build on this success". The Ministry currently works on emulating TDE's model in other regions of the country and for other types of fish.

In **Tanzania**, the project aligns with the Tanzania Development Vision 2025, which puts Tanzania as a future nation imbued with five main attributes, including quality livelihoods. Targeting rice farmers is a priority, and the various government policies and priorities show the importance of rice in Tanzania's food security over the last decade. In the Government's National Rice Development Strategy (NRDS 2019-2030), the Government highlighted that they aimed to double rice production by 2018 to improve food security and export to neighbouring countries. With the extra funds that the project received from Norad in late 2022, the project's new focus on targeting women and youth in terms of livelihood opportunities is also aligned with the Government's new priorities, and in particular, the "Building Better Tomorrow Initiative", which is targeting youth intending to bring new job opportunities through agribusiness initiatives. In

In **Mozambique**, the project approach and interventions are relevant, considering the key problems identified. In this regard, AMPCM has been praised by IAM as a key partner supporting the government strategy to promoting efficient access to inputs, agricultural service, and markets, through the cooperative organisation, construction of key infrastructures and creation of conditions for negotiation of fair prices¹². This is consistent with the country development objectives of agricultural development and the improvement of socio-economic conditions of the populations, especially in the rural areas, where poverty incidence is higher.

3.1.3. How the project responds to global priorities

The project makes direct contributions to several of the SDGs, with direct contributions to the achievement SDG 1 (No Poverty), 2 (Zero Hunger), 5 (Gender), 13 (Climate Action) and 14 (Life Below Water).

The project provides opportunities for smallholder farmers to trade their rice, tilapia, and cashew- and groundnuts at fair trading environment, and in Tanzania it also provides an occasion for rural farmers to own business by shares and becoming shareholders in the companies, and thus increase spared income (SDG 1).

The goal of the project is to improve smallholder farmers' standard of living by expanding their participation in the value chain through their own companies, fair prices, increased income, and operation in fair trade environment, hence improving food securing and thus reducing hunger (SDG 2).

 $^{^9\} The\ Tanzania\ Development\ Vision\ 2025,\ The\ United\ Republic\ of\ Tanzania,\ http://www.tzonline.org/pdf/the Tanzania development vision.pdf$

¹⁰ Relevant policies in this regard are: 'Agricultural Sector Development Project phase II '(2017/2018-2022/2023), 'National Strategy for Youth Involvement in Agriculture (2016-2021), National Rice Development Strategy (NRDS II) (2019-2030)

¹¹ Building a Better Tomorrow: An Initiative for Agribusinesses (BBT-YIA) 2022 - 2030, https://www.kilimo.go.tz/uploads/books/BBT-YAI_Booklet_(26072022).pdf

¹² Interview with IAM, 10 April 2023.

In Tanzania, the project considers gender equality (SDG 5) by aiming at reaching at least 40% women in the sumtotal of beneficiaries. Gender equality is however not equally addressed in Madagascar and Mozambique, although they have included gender disaggregated indicators to monitor re

The project contributes to Climate Action (SDG 13) by training farmers in climate-related agricultural practices in Madagascar, Mozambique and Tanzania. In Madagascar, the intervention has supported TDE in adopting a strong and comprehensive strategy to build resilience to climate-induced disasters, including structural measures, systematic assessment of flooding risks, emergency procedures and support to affected farmers (see section on risk management).

The project also highly contributes to SDG 8 (Decent Work and Economic Growth). In Madagascar, the activity of the cooperatives under TDE in 2023 provides decent work and income to 480 families – many of whom would otherwise be confronted with poverty – and supplies for the annual fish consumption of 288,000 people in Madagascar. In Tanzania, Kilombero Rice Trading Company and the Mbarali and Neighbours Small Scale Farmers Limited (MTC) have already organised 289 smallholder farmers as company owners (shareholders). Additionally, the project has directly contributed to creating new jobs and income for youth.

3.2. Coherence

Below, we assess the project's coherence in the three intervention countries.

3.2.1. The project's fit with other country/sector interventions

The overall finding is that the project is well aligned with similar or complementary interventions in the implementing countries.

The intervention in **Madagascar** is well aligned with those of German development cooperation, which is currently the foremost international development partner of the Malagasy aquaculture sector. This led GIZ to piggyback on the intervention by financing (also through NV) the recruitment of 50 additional farmers and their organisation into TDE's eighth cooperative between 2019 and 2022.

As part of its Project on Sustainable Aquaculture in Madagascar, GIZ is currently carrying out an analysis of the sector's vulnerability to climate change, for which TDE has been consulted. In the coming months, GIZ plans to finance a review of climate change adaptation measures in place in each of TDE's eight cooperatives, with recommendations for additional steps where needed. As discussed in the sequel, TDE already has a strong approach to limit the vulnerability of its farmers to climate-related events, which it has developed with support from the project.

In **Tanzania**, other donors and interventions are only present in one of the project districts - the Kilombero district - and in this case, the intervention is similar with other project and donors' objectives and contributes with added value in terms of relevant training, inputs and additional support to the farmers, however there is little or no collaboration with these interventions and projects.

In **Mozambique**, the project relates and is built on the experience of an ongoing initiative, ConnectCaju, with focus on the development cashew value chain and the Groundnut Value-chain Improvement project (AflaSafe Project)¹³. Current connection with other ongoing projects in the sampled beneficiaries' areas is limited or non-existent.

For example, the Government agricultural project Sustenta is also being implemented in the areas of the cooperatives visited for this evaluation, however, there is not any visible linkage. An all-women cooperative based in the district of Monapo is also involved in the project Agri-Mulher (Agri-Women). An identified fundamental difference with the Norges Vel support is that Agri-Mulher involves much more people in its training activities, and this reduces the risk of loss of capacity in the organisation, if a trained member leaves, whilst the project is criticized for only involving a very few cooperative members in its training activities¹⁴. This calls attention to the need of reflecting further on the effectiveness of the Training of Trainers (ToT) approach adopted by the project, in which it trains a few members to replicate the training with their peer cooperative members.

3.2.2. The project's alignment with Norwegian development cooperation priorities

The project corresponds well with Norway's new strategy for promoting food security in development policy launched in November 2022, «Combining forces against hunger - a policy to improve food self-sufficiency» ¹⁵. The Norges Vel project responds to the overall aim of the new strategy of transforming the current large-scale food system to a more resilient food system based, to a greater extent, on local and national production.

The intervention in **Madagascar** is fully aligned with Norwegian development cooperation priorities in sectoral terms. Norway's new strategy identifies aquaculture as a key area for promoting food security in development policy. Citing the Ocean Panel, the Strategy notes that aquaculture could be the primary source of a dramatic increase in food production from the sea in the coming decades.¹⁶

The agreement between NV and TDE also requires the systematic management of any risk related to four cross-cutting issues emphasise d by Norwegian development cooperation: anti-corruption; climate and environment; women's rights and gender equality; and human rights, with focus on participation, accountability, and non-discrimination.

It should be noted, however, that Madagascar is currently not a priority country for Norwegian development cooperation in general, and for the strategy for promoting food security in development cooperation in particular.

The **Tanzania** intervention is also highly aligned with the Strategy's vision to promote local production of nutritious food that is processed and sold locally and regionally. The intervention results (see effectiveness section below) also shows that the Strategy's hypothesis is correct in assuming that this also increase the income of small-scale food producers, stimulating local job creation throughout the value chain and expanding access to healthy food. The

¹⁵ Norwegian Ministry of Foreign Affairs (2022), Combining forces against hunger – A policy to improve food self-sufficiency, Norway's strategy for promoting food security in development policy.

 $^{^{\}rm 13}$ Synergies Between Agroecology and Cashew-Intensification in Nampula: Concept Note, page 10.

¹⁴ Interview with a cooperative.

¹⁶ Costello, C., Cao, L., Gelcich, S. et.al. (2019), "The Future of Food from the Sea', World Resources Institute, Washington, D.C., The Future of Food from the Sea – WRI Ocean Panel.

intervention also correlates to the Strategy's aim of increasing local climate-resilient food production, through the training in climate-smart agricultural practices (GAP and SRI).

Also, intervention in **Mozambique** is fully aligned with Norwegian development cooperation priorities. Mozambique is one of the prioritized partner countries of Norway¹⁷, and Norwegian efforts in 2023 is, among other things, particularly focusing on socioeconomic development, and supporting food security, agriculture, climate, and climate adaptation. This is also emphasised in the Government's Hurdal platform¹⁸. Further, the Norwegian government is also focusing on measures that will strengthen financial management, business conditions, and national resource mobilisation.

3.2.3. Inclusion of women, youth and people with disabilities

Norway's new strategy also highlights the need to include women, youth, and people with disabilities in food production. The Strategy for promoting food security places particular stress on the importance of combatting discrimination and marginalization of vulnerable groups such as women, children, and persons with disability as a means of asserting food as a human right. Explicit approaches for increasing women and youth participation are however only present in the project's interventions in Tanzania.

In **Madagascar**, NV has sought to put non-discrimination and inclusiveness principle in practice in the context of the intervention, notably by defining ambitious objectives in terms of women holding leadership positions in the farmer cooperatives. As part of the initial agreement, NV also shared its policy to prevent and respond to sexual harassment and sexual exploitation and abuse (SH/SEA) with TDE, and TDE made the commitment to abide by the policy's requirements.

However, further progress can be made in this area. Women's participation objectives have so far not been met (see Effectiveness section). TDE's management also recognises that it has not taken additional steps for the integration and inclusion of women and other vulnerable populations groups beyond what was required by NV. TDE is currently developing a strategy and policy for gender inclusion, with support from NV and its consultant Imani. Acknowledging that inclusion in the specific context of the farmer cooperatives is challenging, one practical way forward could be to make TDE's own human resource management more inclusive. TDE's management indicates that it has started to account for equality of opportunities in its hiring policy.

In **Tanzania**, the project targets women with 40% attendance to all training, and participation in boards and committees. NV's extra fund for exchange compensation from Norad in late 2022 focuses on supporting youth and women. The aim is to create employment and improve production to increase food security in their households and the country's food basket in the 2022/2023 season. 200 youth in a group of 20 from different schemes and associations, in addition to 200 female rice farmers, are now being supported by the project.

26

¹⁸ https://www.regjeringen.no/no/dokumenter/hurdalsplattformen/id2877252/

As the intervention targets smallholder farmers *per se*, the country project staff in Tanzania found it difficult to find approaches for enable disabled people to participate in food production on an equal basis. In Tanzania, no particular methods or activities were included to reach smallholder farmers with disabilities.

In **Mozambique**, the project had training and sensitisation on gender equality and equity involving both women and men, and sought to raise awareness in gender equality. The integration and empowerment of women has been more visible in the leadership of the cooperatives, in access to services and some involvement in the production chain – as in spraying services (not clearly documented in the reporting). The project results indicate considerable progress in ensuring women participation and has even proposed literacy projects to empower women to better participate and take leadership roles in the cooperatives, and to face the social structural barriers to their development. However, the reporting does not capture and demonstrate how it addressed the effects of gender inequality in key project outcomes, such as income inequalities, and challenges for men and women in the agricultural sector. For example, interviewees mentioned that the project could have done more market research and created the capacity to develop business plans considering the challenges women face. Women have more difficulties to carry out market research, because buyers are unwilling to provide information, since they do not consider them as reliable and relevant business counterparts¹⁹. Training activities with limited time are also challenging to women, due to their household activities, and ineffective in creating the expected skills, as was the case of the ICT training the project funded for women members of a cooperative in Monapo.

There were sensitisation campaigns in the inclusion of the youth and people with disabilities in the project and in the agricultural value chain generally. However, evidence of the results of the inclusion of these two groups are not documented. According to interviewed cooperative members, agriculture is not, generally, attractive to the youth. Some youths were integrated in the projects as service providers, especially for spraying services, as operators of atomizers²⁰.

3.2.4. Degree of linkages to relevant R&D institutions

In **Madagascar**, TDE has strong links with the University of Thomasina's Institut Supérieur de Sciences Environnement et Développement Durable. TDE's staff provides lectures and seminars on aquaculture which, according to the Institute's management, have attracted students towards the sector. TDE has also hired several students from the University and provided internships to numerous students to assess the local impact of its activities or work at the hatchery, at farmers' ponds or at the technical hub as part of their studies. Through the project, TDE also benefits from the University of Sterling's expertise on tilapia breeding, most recently to assure the quality of the work of NV's consultant Imani (2022).

In **Tanzania**, collaboration with the Tanzania Official Seed Certification Institution (TOSCI) is essential. So far, have 29 selected farmers²¹ in the project been trained and certified as quality seed producers by TOSCI, and several of these have already increased their production and started their seed production businesses. The outcome report from 2022 shows that local access to high-quality seed is integral to increasing yields for smallholder farmers, and also

¹⁹ Interview with a cooperative.

²⁰ Interview with a cooperative.

²¹ COMRICE II Outcome report 2022

providing farmers with timely access to appropriate, affordable seed.²² The need for enhancing this work is however urgent. In 2022, only 2% of smallholder farmers in Tanzania used approved seeds.²³

Another interesting cooperation is also about to take place for MTC, as they are currently looking into partnering up with a private sector company, Vitua Agronomist, for joint work on soil testing. The company comes with unique technology and advises farmers to apply fertilizers better, which will be crucial to increase production and adapting to climate change.

In Mozambique, AMPCM has been working with Universidade Lúrio, and Universidade Católica since 2019. In 2021, AMPCM in cooperation with Universidade Católica introduced short courses on basic notions of cooperativism, while with Universidade Lúrio (UniLurio) the parties are working on the mitigation of aflatoxin in groundnut and maize. In this regard, the project supported UniLurio in the refurbishing of the laboratory with the allocation of Highperformance liquid chromatography (HPLC) equipment adopted for high mycotoxins testing, training of laboratory experts and its linkage with European Union accreditation authorities. This will allow for the access of Mozambican products to the European Union market.

3.3. Effectiveness

Below, we present the results per intervention country. Please see Annex 4 for a detailed overview of the reported results in the results framework, and a more detailed narrative elaboration.

3.3.1. Madagascar

The intervention in Madagascar aims to achieve two primary outcomes: (1) Increased production and sale of tilapia, and (2) Development of a political framework that supports tilapia value chains.

The intervention in Madagascar has shown significant progress in increasing the production and sale of tilapia. Challenges related to fingerling supply, input affordability, and market accessibility remain important factors for future growth. Efforts to strengthen cooperatives' capacities and promote women's leadership have achieved mixed results. Continued investments, improved communication, and the preservation of TDE's organisational structure are essential for the sustainability and success of the intervention.

Below follows an overview of the activities and outputs related to each outcome and discusses the progress made, challenges faced, and future prospects. See Annex 4 for more detailed assessment.

Outcome 1: Increased production and sale of tilapia

- ✓ After being slightly below target in 2020 and 2021, the intervention's outcome objectives regarding the production and sales of tilapia have surged and exceeded targets in 2022.
- ✓ Members have on average produced 2.5 tons of marketable fish during the year (baseline in 2019: 1 ton; level in 2021: 1.6 tons; target for 2022: 2.2 tons) and total sales of tilapia on ice have neared 800 tons (baseline in 2019: 357 tons, level in 2021: 530 tons, target for 2022: 750 tons).

²² COMRICE II Outcome report 2022

GOMINGE II OUTCOME TEPOTE 2022

²³ The number was presented in an interview with RCT during the evaluator's field visit to Tanzania in March 2023.

- ✓ This makes it likely that, despite the current slowdown in production due to the disruption in fingerlings supply, the overall target of 900 tons of sales will be met in 2023.
- ✓ The price of TDE's tilapia has increased as a consequence of rising input prices, even though TDE has managed to keep the increases below the general level of inflation (see Figure 1 below).

Output 1.1 Smallholder farmers trained in the tilapia value chain

- ✓ Technical experts regularly visit farmers, providing training in tilapia farming techniques tailored to their specific needs.
- ✓ Training programs have successfully covered aquaculture techniques, financial management, entrepreneurship, gender mainstreaming, and leadership development.
- ✓ The objective of training all farmers in aquaculture techniques throughout the year has been consistently achieved.

Output 1.2 Smallholder farmers have access to inputs:

- ✓ Farmers receive essential inputs such as fertilizer, fingerlings, and fish feed.
- √ Fingerling production initially faced challenges but has exceeded targets since 2021.
- √ However, delays in fingerling supply affected farmers' activities and required them to seek alternative sources of income.
- \checkmark Efforts are being made to improve fingerling supply with the completion of a second hatchery.

Output 1.3 Smallholder farmers have access to production and processing infrastructure:

- ✓ Investments have been made to upgrade production and processing facilities, including a new technical hub, hatchery, breeding unit, and laboratory.
- \checkmark The completion of these facilities faced delays due to legal, administrative, and construction issues.
- ✓ Efforts are ongoing to establish additional hubs in strategic locations to enhance operational efficiency.

Output 1.4 Capacities of smallholder farmers' cooperatives or business companies are strengthened:

- Actions have been taken to improve cooperatives' management of production processes and business development.
- ✓ Implementation of a production database management system and adherence to relevant protocols and guidelines have been achieved.
- ✓ Marketing initiatives and participation in national fairs have been pursued, although challenges due to COVID-19 and demand exceeding production have affected results.
- ✓ The share of female leaders in cooperatives has not met expectations, highlighting the need for further efforts to increase women's participation.

Outcome 2: Political framework that supports tilapia value chains:

- ✓ The intervention aims to establish a political framework that facilitates and promotes tilapia value chains.
- ✓ Governance structures within TDE (Tilapia Development Enterprise) and cooperatives are considered satisfactory.
- ✓ Communication between TDE, cooperatives, and farmers can be improved to ensure timely and transparent information sharing.
- ✓ Preserving TDE's democratic and decentralized organisational structure will be crucial for maintaining cohesion and commitment within the cooperatives.

3.3.2. Tanzania

The intervention in Tanzania is expected to lead to two outcomes: (1) Increased production and sale of rice; and (2) Political framework that supports rice value chains.

Some positive outcomes have been achieved, such as training farmers in the rice value chain and promoting the adoption of improved seeds and farming practices. However, challenges in achieving sales targets, establishing a stable market, and certifying millers have been encountered. The intervention has contributed to policy implementation and adoption, but further details on specific policies are needed. Overall, the findings suggest the need for continued efforts to address the challenges and ensure sustained improvements in rice production, sales, and the political framework supporting rice value chains in Tanzania.

Below follows an overview of the activities and outputs related to each outcome and discusses the progress made, challenges faced, and future prospects. See Annex 4 for more detailed assessment.

Outcome 1: Increased production and sales of rice

- 1.1 Average production per farmer (bags per acre):
 - ✓ In 2020, the target of 21 bags per acre was met.
 - ✓ In 2021, production remained the same as the previous year and slightly below the target of 23 bags. Low rice prices in 2020 resulted in difficulties in purchasing inputs, affecting yields.
 - ✓ Female farmers had lower yields compared to men due to limited access to inputs and loans.
 - ✓ In 2022, average production decreased significantly to 11 bags, with female farmers producing 7 bags and male farmers producing 13 bags. Drought conditions and increased fertilizer prices contributed to the decline. Mbarali district outperformed Kilombero district in terms of production.
 - ✓ 1.2 MT paddy sold annually by smallholder farmers:
 - ✓ In 2020, 9,987 MT of paddy was sold, exceeding the target and providing rice for 250,000 Tanzanians.
 - ✓ In 2021, 12,878 MT of paddy was sold, surpassing both the annual and end targets. However, Kilombero district had lower sales compared to Mbarali district due to less favorable conditions.
 - ✓ In 2022, the quantity of paddy sold decreased to 9,028.4 MT due to lower productivity.

- ✓ 1.3 MT rice sold annually by companies:
- ✓ The goal of selling 500 MT of rice in 2020 was not achieved. Only 371 MT of paddy/rice was sold by the companies, partly due to challenges with milling machines and low market prices.
- ✓ The target of 49 MT of rice and 120 MT of paddy in 2021 was also not met. The companies focused on providing inputs to farmers instead of trading rice.
- ✓ In 2022, only 102 MT of rice were sold by the companies, falling short of the goal.

Outputs

- 1.1 Smallholder farmers trained in the rice value chain:
 - ✓ In 2020, 220 farmers were trained, reaching 92% of the target.
 - ✓ In 2021, 627 farmers were trained, exceeding the target, with a focus on post-harvest loss, quality seeds, and good agricultural practices.
 - ✓ In 2022, 310 farmers were trained, surpassing the target. A total of 2,416 farmers have been trained since the beginning of the project.
- 1.2 Smallholder farmers have access to inputs:
 - ✓ Farmers using improved rice seeds exceeded the targets from 2020 to 2022, with a higher percentage of women using these seeds.
 - ✓ In 2022, only 1,230 farmers used improved seeds, with variations between male and female farmers and districts.
- 1.3 Smallholder farmers have access to production and processing infrastructure:
 - √ The percentage of farmers using improved farming equipment exceeded targets in 2020 and 2021.

 However, in 2022, only 59% of farmers had access to improved equipment, and Kilombero district had lower usage.
 - ✓ MTC purchased a combined harvester in 2021, benefiting 116 farmers and generating income for the company.
- 1.4 Capacity of smallholder farmers' cooperatives or business companies are strengthened:
 - ✓ Trainings for board members were carried out as planned in 2020-2021, covering various thematic areas.
 - ✓ The development of a digital information application to facilitate communication between farmers and buyers was phased out in 2021.
 - ✓ The certification of millers faced challenges, and no millers were certified in 2021 or 2022.

Outcome 2: Political framework that supports rice value chains

✓ The number of policies implemented and formally adopted exceeded targets.

3.3.3. Mozambique

The intervention in Mozambique is expected to lead to one outcome: (1) Increased production and sale of cashew and groundnuts.

Overall, the intervention in Mozambique has led to significant increases in cashew and groundnut production and sales, exceeding targets in most cases. However, challenges persist in the groundnut market, access to inputs, and infrastructure for smallholder farmers. Efforts have been made to train farmers, improve gender equality, and strengthen cooperatives. Additional measures are needed to address these challenges and ensure sustained growth in the cashew and groundnut sectors in Mozambique.

Below follows an overview of the activities and outputs related to each outcome and discusses the progress made, challenges faced, and future prospects. See Annex 4 for more detailed assessment.

Outcome 1: Increased Production and Sales of Cashew and Groundnuts

- ✓ Cashew and groundnut production exceeded targets in recent years, with 2666 MT produced in 2021, almost double the target.
- ✓ Cashew production accounted for the majority, reaching 2103 MT in 2021.
- ✓ Groundnut sales faced challenges due to a weak market and limited demand, especially in the internal market.
- ✓ The delayed opening of the AflaLivre factory in Nampula further impacted groundnut market strengthening efforts.
- ✓ Sales via cooperatives represented only 618 MT, while the majority was sold outside the cooperative scheme.
- ✓ The average prices were 44.45 MZM per kilogram for groundnuts and 35 MZN per kilogram for cashews (minus 5% of the reference price).
- ✓ Challenges in the cashew sector included insufficient jute bags, logistical problems, unstable market, drop in reference prices, and lack of financing for aggregation.
- ✓ Limited market linkages and lack of production per contract model affected sales in 2022.
- ✓ Successful mediation between Moza Cashew and cooperatives led to an agreement to supply 500 MT of raw cashew annually, with the possibility of extra premium for higher quality.
- ✓ The establishment of demo plots and agroecology practices aimed to share knowledge and encourage sustainable agriculture.

Output 1.1: Smallholder Farmers Trained in the Cashew and Groundnut Value Chain

- ✓ The number of smallholder farmers trained in the cashew and groundnut value chain exceeded targets in both 2020 and 2021.
- ✓ In 2020, 587 farmers (272 women and 315 men) received training, and 4,264 association members were trained through the Training of Trainers (ToT) approach.

✓ In 2021, 1,850 farmers (701 women and 1,149 men) were trained, and 14 cooperatives set up demo plots to share agroecology practices.

Output 1.2: Smallholder Farmers' Access to Inputs

- √ The production of cashew trees from centralized and decentralized nurseries fell below targets in both 2020 and 2021.
- ✓ Efforts were made to rehabilitate the Namaita nursery to produce 1,000,000 cashew trees by 2024.
- ✓ The use of bio-spray and AflaSafe by smallholder farmers was below targets, with delays in factory construction and importation of AflaSafe.

Output 1.3: Smallholder Farmers' Access to Production and Processing Infrastructure

- ✓ The number of cooperatives with functional warehouses and drying capacity for crops fell below targets.
- ✓ Challenges included COVID-19 restrictions, material price increases, and funding limitations.
- ✓ Efforts were made to rehabilitate warehouses and increase access to drying facilities, benefiting more farmers.

Output 1.4: Capacity Strengthening of Smallholder Farmers' Cooperatives

- ✓ Female leadership in cooperatives and business companies fell below percentage goals in 2022 but showed improvement over the years.
- \checkmark Challenges included cultural stigma, limited elections, and illiteracy.
- ✓ Efforts were made to promote gender equality, sensitization on women's rights, and collaboration with local government institutions.
- ✓ Cooperatives' access to finance was slightly above targets in 2020 and 2021 but fell below in 2022.
- ✓ The revolving fund provided loans, and cooperation with parallel projects enhanced aggregation services.

3.4. Efficiency

Below, we assess the project's efficiency in the three intervention countries. We have evaluated the efficiency both in terms of costs and in the timeliness of the implementation of activities.

3.4.1. Madagascar

A simple way to assess the efficiency of the intervention is by analysing the cost of the employment and income opportunities that it has created. Focusing on the 340 members of the farming cooperatives that benefited from the original agreement, the total intervention budget (NOK 9 million initially + two extensions of NOK 2.5 and 3.8 million) represent a cost of about NOK 45,000 (close to USD 4,300) per farmer. As explained in the overview, however, the current intervention builds on two previous phases of the project (2011-2014 and 2015-2019), which have therefore contributed to the current results. By integrating the cost of the project between 2011 and 2019 and correcting for inflation, the cost of the support to each of the 340 farmers increases to NOK 95,000, equivalent to USD 9,000 (at 2023 prices and exchange rates). Considering also that the intervention has equally benefited the 150

new farmers under TDE - and therefore integrating these in the calculations - brings down the per capita cost of the support to NOK 66,000, equivalent to USD 6,250 at 2023 prices and exchange rates.

These calculations point towards a relatively high cost of the intervention – for instance, the third estimate, which is the most comprehensive, is equivalent to about five years of the farmers' average income in 2022 (see income estimates in the section on impact).²⁴

The cost of the intervention must be weighed against its positive impact in terms of creating decent jobs and lifting people out of poverty, as well as the high level of sustainability achieved for the future of TDE's activity. Further, the causes of a relatively high cost appear to lie in the project's capital requirements, which have established TDE's production and commercialisation infrastructure for the years to come, and in part to the process of trial and error undergone to achieve the current state of development of the cooperatives, rather than a lack of economic efficiency in the activity.

The intervention has met and addressed multiple bottlenecks and barriers to the development of TDE. During the current phase of the project, transport logistics and the production of fingerlings are two areas that have required further investment. NV's application to Norad for additional funds in 2022 describes TDE's challenges in organising timely and regular delivery of inputs to the farmers and harvesting from their ponds due to the lack of adaptation of its vehicles to the poor condition of the roads. In parallel, as already explained, the capacity of TDE's existing hatchery was saturated, contributing to a disruption in the supply of fingerlings, including for new farmers who were expecting to stock their ponds for the first time and cover their initial investment costs. These challenges impacted the farmers' production cycles, which were reported at 160 days on average and up to 185 days in certain areas in 2022, making it difficult to reach the objective of 140 days in 2023.

The 2021 and 2022 addenda to the initial agreement, which represented a 70% increase in the intervention's budget, helped carry out investments in a new hatchery and new trucks. It is expected that TDE's strengthened production and transport capacity will lead to important efficiency gains, with a transition from 1.6 production cycles per farmer per year in 2021 to 2 cycles in 2023-24, and thereby sustain growth in production and sales in the coming years.

Solving these challenges has also generated delays and costs in project implementation which could have been better anticipated and in part avoided. According to the TDE management, the limited capacity margins of the existing hatchery and the risk of fluctuations in its water supply were identified in 2019, and TDE and NV already discussed the need for a new hatchery at the start of the current phase. Yet the process of identifying an appropriate location, analyzing the legal requirements, and preparing for the administrative formalities was not started before funding was granted by Norad in November 2021. The process itself was longer than expected, so that work on the site did not start before October 2022. In the original timeline, the new hatchery was expected to be operational in April 2022; this was later extended to December 2022; it now appears that the hatchery will be effectively operational in May 2023, with deliveries of fingerlings to the farmers from June-July onwards. These delays and their cascade consequences on production, sales and relations to farmers point towards the need for better planning.

The impact of these developments on production costs has, however, remained limited. In the difficult context caused by the Covid-19 pandemic and the war in Ukraine, TDE has nonetheless managed to continue to supply the

²⁴ These figures slightly overestimate the actual support to each farmer in the initial target group as they include expenditures aimed at training the additional group of 100 farmers integrated in 2021, as well as expenditures benefitting the broader group of 440 farmers in 2022.

market with relatively regular deliveries and competitive prices. Because of Covid-related restrictions, TDE experienced a disruption in feed deliveries from its Mauritius-based supplier LFL. Since 2019, the average cost of feed purchased by TDE has increased by 24% (see Figure 1). Yet TDE has maintained the price of its fingerlings unchanged (admittedly after a strong hike between 2017 and 2019) and kept the increase in the price of Tilapia well below general inflation (11.8% increase of the price of Tilapia fish of over 150 grams against 19.2% increase in the consumer price index between 2019 and 2022).

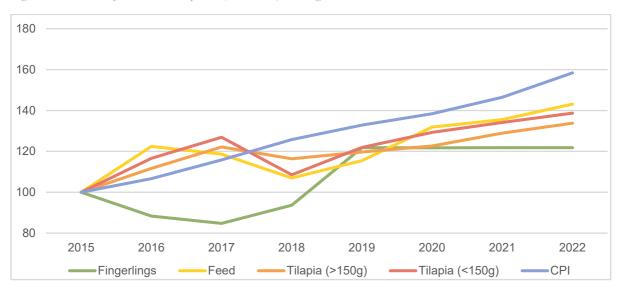


Figure 1: Evolution of unit costs and prices (2015=100), Madagascar

Overall, economic factors indicate that the business model developed through the intervention has been efficient and should become highly efficient in the near future. TDE's production costs are considered very competitive by regional standards; the product is supplied reliably and with high quality; prices are under control and despite the large increase in volumes, all marketed fish is sold.

3.4.2. Tanzania

In Tanzania, the project implemented most activities according to plans. The two companies highlighted that Norges Vel's office in Tanzania has efficiently managed the grants and distributed these to the companies. The office has also proven to have an essential role in securing partnerships with financial institutions, such as Victoria Finance, thereby contributing to increased access to loans and guarantees for the two companies and smallholder farmers. As described elsewhere, the companies' ability to access fertilizers sold to the farmers is perceived as a significant action that ensures continued and quality farming under challenging times.

The uniqueness of the Tanzania intervention is establishing the two businesses and transforming former subsistence smallholder farmers into business owners. Thus, being a business and market-oriented intervention, we argue that assessing the project's cost efficiency must focus on how the grants have been used to create sustainable and scalable businesses.

COMRICE II is in its final implementation year (2020-2023). The budget for COMRICE II has been between 6 - NOK 7 mill per year, with the additional funding in 2022, for late December and 2023. So far, the project has established two solid rice companies that are gradually becoming relevant actors in Tanzania's rice value chain. The companies have managed to employ and thus contribute to jobs for eighteen STAFF (fourteen employees, incl. junior staff in

MTC and four employees in KTC). The companies have also transformed 279 subsistence smallholder farmers in rural Tanzania into shareholders and, thus, owners of two commercial rice companies. Initially, some of the shareholders were farmer associations, but these has also changed to be individual owners. currently shareholders in MTC; 3,5 MNOK in 2022 and 4.4 MNOK in 2023, which is in total MNOK 7.9.

Through financial support provided from this project, the businesses have also invested in crucial inputs and machinery, such as Warehouses, millers, offices, tractors, and ploughs. These are, in turn, owned by the companies and shall contribute to increased production and sales, but are also used as income-generating activities for the companies. Inputs are sold in their shops, and machinery is sold as services to the shareholders and other smallholder farmers in the regions. The companies are selling their services to more clients in the two districts. The companies' total gross profit for 2022 is THS 125,834,097 (NOK 565,100). However, the project pays for several significant costs, which are not accounted for in this calculation. KTCs' profits derive mainly from rice trading, tractor services and the sale of fertilizers. MTC's primary income derives from rice trading, combining harvester and transportation services.

Business-wise, the companies could - according to themselves - have performed better. When considering the resources, they received compared to what they achieved, they retrospectively see that building up the business took more time than anticipated. Consequently, they have not performed as well as expected regarding marketing and rice trading. Time and effort were used to build partnerships, networks, skills and know-how in how the market operates and how the companies could position themselves within the rice-selling market in the future. In the evaluator's view, these companies have not taken longer time, nor been more inefficient than other start-up companies in same contexts.

Thus, the cost for developing commercial companies; creating shareholders; creating jobs, as well as well as providing crucial input for smallholder farmers. Importantly to note, the project has also attracted private investments, first and foremost from the smallholder farmers who have managed and prioritized investing in the two companies. At the beginning of the project, the start capital was TSH 10,000 or 18kg paddy (in case of lack of capital) per share. The shareholder overviews from 2022 show that the total value of shares is TSH 29,735, 000 in MTC and TSH 16,156,000 in KTC. The companies have also attracted private investors, and in sum, the two companies have raised NOK 181,335 in private funding from Tanzanian farmers and private investors into the project.

Thus far, since COMRICE I and in particular COMRICE II, the project has efficiently invested in needed rescues (human resources as well as machineries and inputs) needed for establishing solid companies. Partners and smallholder farmers agree that the set-up of the companies and its business models developed is a main contributor for efficient achievement of project results. The activities have been efficiently implemented also because of the business-related training the companies received from IMED. In particular has the training related to business planning, marketing and record keeping been essential. The company staff, with background in agribusiness and business development, are also highly contributing to the financial literacy of the companies. The companies now manage to work through the whole value chain and are consequently contributing holistically to the smallholder farmer's needs, by providing inputs; loans; plots; trainings; processing and markets access.

Covid-19 pandemic and the war on Ukraine has negatively affected the implementation of certain activities. During the pandemic, the companies had to stop the trainings for a while, however, according to company staff, it did not affect the farmers' ability to produce rice. The war on Ukraine, however, impacted inflation and price of fertilization.

Regarding the inflation costs for certain activities, such as building warehouses, increased with 50%, thus delaying the implementation. Due to the extra fund provided by Norad in late 2022, most of the delayed activities are now being implemented. The positive effects of these extra grants are elaborated several places in this review.

3.4.3. Mozambique

Generally, most of the activities were implemented and the results achieved can be considered positively against the resources mobilised.

Some financial issues affected the implementation of the project, but not in a magnitude that affected substantially its results. The variation of the exchange rate reduced the volume of resources available and with implications on the implementation of activities. In 2022 the disbursements were delayed (funds received only in December), which also affected the implementation of some activities. There was also a delay in the distribution of seeds, which undermined the farmers' activities.

Farmers complain about the funding mechanisms for the acquisition of inputs. The cost of paying back the seeds is considered high and unfair. The project gives 50 kg of groundnut seeds per hectare and farmers must pay back 100 kg, an "interest rate" of 100%.

The expansion of cultivation areas was challenging and limited by lack of proper services, as tractors for rental. Most of the farmers must expand their agricultural areas clearing the fields manually and complained about risks of health problems. Some cooperatives suggest the financing of their productive activities as the expanding of their cultivation areas. Practices in this regard seem to be variable. A cooperative referred that a rotation fund is used to finance the expansion of the production areas of their members, whilst another cooperative complained about lack of funds to expand their cultivation fields.

Global events also effected the efficiency of the project. COVID had a great impact in their activities, because even with resources they would not implement some activities. For example, training activities were delayed or limited to a few beneficiaries, since people could not agglomerate. The war in Ukraine impacted on the increase of prices and impacted on the activities.

3.4.4. Methods of data collection and involvement of beneficiaries

Methods of data collection and involvement of the target group by Norges Vel and partners, were considered good in the project countries, through field visits, surveys, and communication with farmers to share information through WhatsApp and the use of the application My Coop. However, it was noted in one cooperative in Mozambique that it was not clear if the messages conveyed to the field staff reached the project management. In some cases, the farmers felt constrained to present their requests, since they had been informed that AMPCM did not have the power to change unilaterally the focus of the project and the allocation of resources. This feeling that their grievances would not be responded contained them from presenting their perspectives of how the support should be. One cooperative proposed that there should be a fund to support production activities, as clearing the fields, which demands considerable work, and in some cases, there is not a nearby service of tractor rental. A concrete suggestion was of purchasing tractors to be made available for rental to farmers and managed by the cooperatives or district unions. This is one example where it was felt that AMPCM did not have the necessary decision-making power to tackle key decision for the effectiveness of the support from the farmers' perspective.

Also, despite generally good level of involvement, an obstacle that was raised by Tanzania farmers, is the long distances from their homes and plots to the companies' headquarters, including milling machines and warehouses.

Most of the farmers do not have access to transport facilities, in particular women, making it a long and often risky travel. A good mitigation action by the companies was the purchasing of bicycles to be used by women and youth, funded by the project.

3.5. Impact

The project has contributed to increased income for smallholder farmers in all intervention countries. This has additionally contributed to improved economic situation, living standards and to job creation. In Tanzania, the project has also contributed to increased food security. Below, we outline the impacts in the three countries more in detail.

3.5.1. Increased income for smallholder farmers

At project level, the impact goal is that smallholder farmers in Tanzania, Madagascar and Mozambique have increased their income. For Tanzania this is from the rice value chain, cashew and groundnuts value chain in Mozambique and from tilapia value chain in Madagascar. From the last annual reporting in 2021, Tanzania and Madagascar demonstrated monthly income results high above targets, and meeting their end targets, while Mozambique was slightly behind target with 95% of its target.

For the farmers included in the projects the income augmentation is substantial and a steppingstone towards poverty reduction.

For **Madagascar**, the intervention's impact indicator is the level of income smallholder farmers derive from the tilapia value chain. The intervention aims for a goal of a monthly income equivalent to USD 120, to be reached in 2022 and maintained in 2023. The reported results show that after a start that was approximately in line with the target in 2020, the intervention achieved its final target of USD 120 already in 2021. Average income remained practically unchanged in 2022 (USD 122) despite the strong increase in production and sales, due in large part to the increase in the cost of feed and reduction in the farmers' margins discussed above. The level of income of smallholder farmers in the target group appears likely to reach USD 150 in 2023.

The achievement is remarkable, as it represents a 75% increase over the farmers' baseline level of income (USD 86 in 2020), and 3.7 times the average gross national income per capita (MGA 1,88 million or USD 484 in 2021 according to the World Bank).

TDE has produced gender-disaggregated data on production and income levels in 2021 and 2022, which provide interesting information on the distribution of income and on differences between male and female farmers. There are no significant differences on average between female and male farmers in terms of profit margins per pond, number of ponds per farmer, and overall level of income. Female farmers generated profit margins per pond and annual incomes that were 1% above those of than their male counterparts on average in 2022. The analysis of within-group distributions, however, reveals differences between female and male farmers. Women were more likely than men to have ponds running at or just around break even (between MGA -1 million and MGA 1 million, see Figure 2) and to generate a modest level of income (MGA 0 to 4 million, see Figure 3), while men were more likely to have higher margins and derive a substantial income from their activity (MGA 4 to 7 million).

²⁵ The original data included coding errors which were corrected by the review team, leading to differences between the results discussed here and those reported by TDE.



Figure 2: Distribution of gross margins per pond – Female and male farmers, 2022, Madagascar

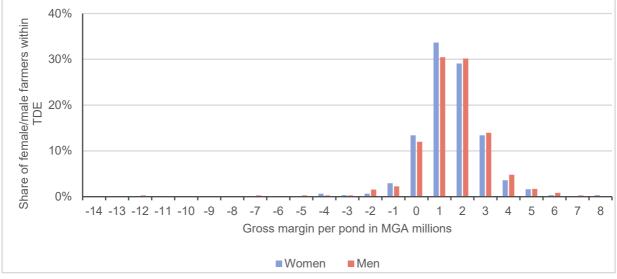
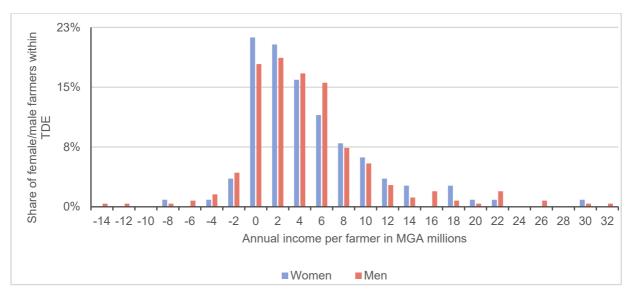


Figure 3: Distribution of income per farmer – Female and male farmers, 2022, Madagascar



The similarity in averages was the result of higher dispersion of incomes among men, in particular due to the very substantial losses of a handful of farmers. The median income of male farmers²⁶ was 7% higher than that of female farmers, pointing towards substantial inequalities that are not visible in averages. To address these inequalities, it appears that more focus is needed in supporting the large group of women (and also the substantial group of men) who are not achieving adequate levels of productivity and profitability in their operations, for instance through dedicated and targeted advice and training.

The intervention's impact should however not be understood solely in terms of increased income, as numerous other positive changes are observed in the target groups' livelihood and welfare. Many farmers consulted for this

²⁶ The median is the level of income that is exceeded by half of the population.

review reported having been able to undertake new expenses thanks to the income generated by their activity, with positive consequences for their lives and those of their families. Houses have been improved; more resources have been devoted to food, clothing and healthcare. Farmers who had never sent their children to school have been able to do it; some have even financed their children's university studies. According to local observers, visible changes have happened in the living conditions of farming communities involved in the cooperatives, and even in landscapes – as farmers have been actively maintaining the areas and waterways around their ponds.

The baseline for **Tanzania** was an average annual income of 2 200 000 Tanzanian shilling. The 2021 result indicated a 52% increase (39% for women, 56% for men). In 2022, the increase results indicated a remarkable 85% increase from baseline.²⁷

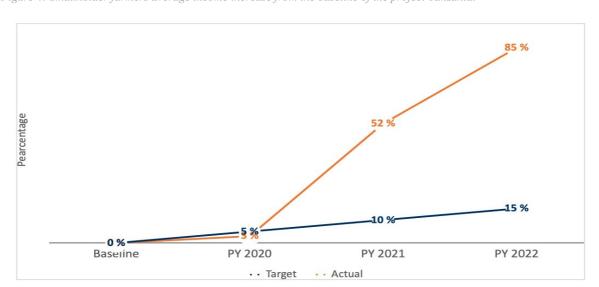


Figure 4: Smallholder farmers average income increase from the baseline of the project Tanzania.

For **Mozambique**, the income baseline was 1,500 Mozambican metical (MZM), compared to the 2021 results of MZM 5,605 (USD 95).

The Mozambican income results for 2020 are missing in the results framework and progress reports. This was due to AMPCM not having an instrument to measure the impact indicator for 2020. A tool for collection of income data, disaggregated by gender and age was developed in 2020. The results for 2021 smallholder farmers monthly income in MZN from cashew and groundnuts value chain, are slightly lower than anticipated with MZN 5,605 compared to the target of MZN 5,900. This amounts to 95% of the goal and is considered partially met.

The 2021 results are based on a survey of 547 farmers, 196 women and 351 men. The data reveal a gender gap in the income values. Female farmers have an average income of MZM 4,510 compared to MZM 6,900 for male farmers. This divergence is explained by women probably having a smaller number of trees than men, as well as lower production due to less agricultural knowledge and access to inputs.

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²⁷ COMRICE II Outcome report 2

The monthly income increased to MZN 6,350 in 2022, but still below the target of MZN 6,700. In fact, there was not a real increase compared to the target, considering that this amount is still 95% of the target as in 2021. These figures result from survey of 489 farmers – 146 women and 343 men.

3.5.2. Improved living conditions and improved economic situation

Further impacts are observed on the target groups' livelihood and welfare. In **Madagascar**, many farmers consulted for this review reported having been able to undertake new expenses thanks to the income generated by their activity. Houses have been improved; more resources have been devoted to food, clothing and healthcare. Farmers who had never sent their children to school have been able to do it; some have even financed their children's university studies. According to local observers, visible changes have happened in the living conditions of farming communities involved in the cooperatives, and even in landscapes.

The field visit to Tanzania in March 2023²⁸ revealed that the intervention has contributed to impact for the smallholder farmers in two essential ways. Firstly, the farmers have gained a significant improved economic situation. In general, the project enabled them to increase their sales and incomes in a way that put them in a significantly better economic situation than before part-taking in the project. The improved economic situation is mainly due to their enhanced production of rice, but several other achievements in the project feed into this positive change. For example, due to entrepreneurship training, which some chosen women in the project have been given, enabled them to establish new businesses next to farming, which had more than doubled their income. Additionally, several farmers have started with combined harvests, which has reduced the time for harvesting, reduced loss and increased quality of paddy. In the Mbarali district, the company (MTC) has also enabled to a large degree succeeded, to connect the farmers to financial service providers, as well as to the markets. This, in turn, has contributed to better conditions for production, resulting in reasonable sale prices on the market. Due to their increased income, the farmers stress that part of the profits has been used to invest in machinery and buy input for farming that they previously could not afford. These investments have, in turn, enabled them to increase their production further. Several stressed they are now able to buy new land and thus extend their production and cultivation, which in turn has enabled the farmers to pay tuition fees and send their children to colleges and universities. The increased income has also improved their living standards. They could now access electricity, purchase goods such as television and motorbikes, and build new and better houses.

In **Mozambique**, there were reported improvement of living conditions with savings and the possibility of improving their houses (with zinc sheets roofing), resources available to send children to school and buy inputs, and the knowledge to produce seeds for the following agricultural campaign.

These results stem from a combination of factors, as: (i) an average increase in areas of cultivation; (ii) production of multiple crops and throughout the year with a better knowledge of the proper crops according to seasons; (iii) improvement of production techniques reflected in higher levels of production, through the adoption of new techniques, access to agricultural services — as spraying — and agricultural inputs, as quality seeds; (iv) sales were generally increased with better production facilities as warehouses and aggregation of production for better negotiation of prices and reduction of transaction costs to traders.

41

²⁸ The analysis is based on focus group interviews with approximately 70 smallholder farmers, and field visits to farmers 'plots, in the 2 project districts between 22 - 30th of March 2023.

3.5.3. Improved Food security

In **Madagascar**, the intervention has dramatically increased the food security of the farmers and their families - a group of about 2,700 individuals. The intervention has also supported food supply more generally through the production and sales of up to 800 tons of fresh tilapia - although, as explained earlier, these are principally consumed by middle- to high-income consumers, making it difficult to interpret the result in terms of food security. It should also be noted that TDE has supported the income of its farmers by protecting them in part from increases in input prices (fuel, fingerlings).

In **Tanzania**, Secondly, the increased income deriving from the project has contributed to improved food security for the farmers. Currently, they reported to always have sufficient food for the household. The project's business model has proved to be an efficient means of securing food production in extreme situations, such as securing fertilizers in challenging times, as described elsewhere in this review. For example, last year, due to inflation and the war in Ukraine, the Tanzanian Government decided to support the country's farmers by subsidising the fertilizers. However, the setup of the subsidised scheme was complicated and not necessarily beneficial for the farmers. The fertilizer producers can only claim the subsidy from the Government after the aftermath of the sales of the fertilizers. The economic risk has therefore been channelled to the fertilizer producers and agro dealers. Thus far, the producers have only received small recoveries from the Government and are consequently reluctant to continue selling the fertilizers. Consequently, Tanzania has faced a difficult situation when it comes to access to fertilizers - in particular for the smallholder farmers. The COMRICE II project managed to maintain the distribution and sales of fertilizers to farmers by being provided liquidity to the two companies. This was provided as bank guarantees by the project partner Victoria Finance.

In **Mozambique**, farmers adopted a strategy to mitigate market risks by cultivating dual-purpose crops such as groundnuts, which serve both as food and cash crops. According to their words, when they were not able to sell their production, they could use it for their consumption. The project strategy to stimulate the diversification of crops, alongside cashew nut and groundnut, contributed to improve food security, although this was not quantified in the project reports. The project report shows that in 2021 and 2022, farmers reported having, on average, two meals per day, and food is the second major expenditure for the majority of farmers.

3.5.4. Job creation

In **Madagascar**, as explained earlier, the intervention has created or consolidated employment and income opportunities for 480 farmers, as well as TDE's 60 staff members. To these, one should add indirect job creations for a broad range of service providers, from workers employed to dig ponds and build TDE's installations (hatchery, technical hub) to truck drivers and resellers.

In **Tanzania**, the focus on youth is already showing impact in terms of job creation youth in addition to jobs created through the two farmer-owned companies. The aim with targeting youth, was to is to create employment and improve production to increase food security in their households and the country's food basket in the 2022/2023 season. Although the activities related to the extra funds have only been going on for some months, it is already starting to show some exciting and existing results, particularly towards the youth. MTU KAZI was chosen to lead a demonstration plot under COMRICE II since they had performed well as a group. The demonstration plot was set up to train farmers in Good Agricultural Practices (GAP). The group received training, seeds, fertilizers and agrochemicals from the project. MTU KAZI managed to produce 34 bags per acre compared to the average of 21

bags per acre from the project farmers. They also harvested almost 6000kg of seeds. The group members also applied these techniques to their land, increasing their productivity and income. This work demonstrated the difference between optimal production and not, in addition to being an example for other youth that farming can be profitable. During the field visit, MTU Kazi also explained that they had now bought extra land for building storage for their forthcoming seed production. They had also taken the initiative to establish an incubator of youth even younger than themselves, for which they have committed themselves to training and mentor.

Targeting the youth motivates them to do business within agriculture. It has also given them purpose and hopes for the future. As one of the members of the youth group explained to the evaluator:

As a young person, I used to hate cultivation, but after we were united as a group by MTC, after being trained, we see that we can do it. I have changed as a person.

In **Mozambique**, cooperative members reported that they hired seasonal workers in the harvest periods and for clearing the fields, due to higher production levels. Spraying services are another source of job creation. The commercialisation period is also another phase of creation of jobs. In 2020 the project created 1877 jobs, of which 800 for women²⁹. Generally, there has not been a systematic reporting on the creation of jobs in the project.

3.6. Sustainability

Below, we assess the project's sustainability in the three intervention countries. As the project interventions are at different phases in the three implementing countries, we present below an assessment of the project thus far, and per country.

3.6.1. Madagascar

TDE was constituted in 2014, with 12 staff and about 60 farmers. At the start of the current phase of the intervention in 2020, it had 30 staff and 340 farmers. In the first half of 2023, TDE employs 60 staff and represents 480 farmers. The intervention has strengthened TDE's organisation, technical approach and know-how, physical and human capacity, and helped establish positive prospects for the sustainability of its results, even though several issues identified in this review will require continued attention and further investment in coming years:

- ✓ The business model proposed to farmers is attractive and will continue to motivate farmers to invest in additional ponds and/or new candidates to join the cooperatives.
- √ However, about half of female farmers are struggling to generate adequate income from their activity a share that is higher than for men and questions the attractiveness and inclusiveness of the model for women.
- The cooperative and cooperative union structure is functioning well and allowing farmers to have their voice heard; it will be important to maintain seamless communication between the TDE management, the farmers and their cooperatives in the future.

43

²⁹ AMPCM & Norges Vel (2020). Progress Report 2020 - NORAD Funding.

- ✓ The new hatchery is providing adequate capacity for fingerling production and considerable extension possibilities in the future if needed; adequate water supply and improved technical facilities should enable TDE to maintain a reliable supply of high-quality fingerlings to its members.
- ✓ TDE has somewhat diversified its sources of supply in feed, even though it remains largely dependent on its purchases from LFL. The payment credit provided by LFL is critical to TDE's business model as it enables TDE to offer in turn a credit to its members; the continuation of the credit is dependent on the provision of a guarantee equivalent to that provided for free by NV.
- ✓ TDE has strengthened its production, processing, transport and administrative structures and should be able to make further efficiency gains in its operations.
- √ TDE has also developed its means of delivery to Antananarivo's high-potential market and is currently investing in new marketing facilities in the capital. TDE's competition in the market appears limited professional producers are principally focused on frozen products from fishing.
- ✓ TDE's management and staff are competent and have adequate capacity to continue to steer operations and provide training and support to farmers.
- ✓ However, recent investments have increased the financial burden on TDE and reduced its available capital.
- ✓ TDE has placed great emphasis on assuring the quality of its product and environmental sustainability of its production process.
- ✓ TDE has also integrated measures to mitigate the impact of climate-induced events early on in its development process. The cooperatives' vulnerability to risks related to climate change appears limited (see below).

NV has communicated its exit strategy for the intervention.³⁰ The strategy rests on a range of assumptions that appear likely to be fulfilled according to the above analysis, including that:

- ✓ The volume of sales of fresh Tilapia will exceed 900 tons in 2023.
- ✓ Ongoing investments in production, processing, administration and transport structures will be completed and operational by the end of 2023, with a positive impact on efficiency and product quality.
- ✓ TDE's staff has the capacity to provide continued training and technical support to producers.

Other elements of the exit strategy call for further efforts that are also echoed by this review's findings:

- ✓ TDE will need to maintain its focus on monitoring and evaluation of its production methods and results, and further implement its M&E tools at farm level.
- ✓ TDE should pursue its growth strategy in 2024 and beyond, while maintaining its focus on environmentally sustainable production methods.

³⁰ Project Producer Steered Tilapia Farming, Organisation and Sales in Toamasina, Madagascar (Phase 3). Updated Project Document, December 2022.

- ✓ TDE will have to update and, if necessary, strengthen the resilience of its activities to climate change.
- ✓ Further follow-up will be necessary to ensure that women enjoy equal possibilities to participate in farming activities and in cooperative membership and steering.

Some assumptions, finally, are in part contradicted by this review's findings, notably that:

- √ The rate of 8% of administration fees currently applied by TDE will be sufficient to cover its operations, training, maintenance and marketing activities from 2024 onwards. Considering TDE's financial prospects, TDE's administration fees will have to be increased in the near future, particularly if NV exits at the end of the intervention period. TDE's management and Board indicate that an increase could be decided in 2024, once the production of fingerlings and total output and sales have been stabilised at high levels.
- ✓ TDE's structure and organisation ensure that farmers can take the governance of the union fully in charge from 2024 onwards. The union's governance structures function well but are dependent on a small number of highly competent members, who as a consequence find themselves engaged on multiple fronts (as farmers, members of the leadership of their respective cooperatives, members of the union's Board, etc.). The sustainability of the governance structures over the medium to long term will depend on TDE's capacity to attract, train and empower a generation of younger leaders from both sexes.

While the latter points indicate, from the standpoint of the review team, further areas of vigilance and investment for the future, they do not seem to represent threats to TDE's performance in the near future.

When asked about their sustainability prospects, TDE's management and Board consider that the greatest challenge of ending the partnership with NV would be related to the payment guarantee for feed purchase - even though TDE has never defaulted on its payments, so that the guarantee has never been used. As indicated, losing the payment credit could have dramatic consequences for TDE as its members do not have the capacity to pay for their feed inputs at the start of the production cycle. TDE is currently negotiating with its bank in order to obtain a payment credit or a guarantee. The outcome of that discussion will have a significant impact on TDE's short-term sustainability prospects and should therefore be closely monitored by NV when considering its exit conditions and timing.

3.6.2. Tanzania

If the project were to end now, the companies and the activities developed by the intervention would most probably sustain, including GAP and quality seed production, but not at scale. The GAP practice is an efficient and scalable tool because it involves agronomists that can provide five formal pieces of training and a demonstration plot for farming. So far, selected farmers in the project have been trained and certified as quality seed producers by Tanzania Official Seed Certification Institute (TOSCI). According to RCA, the numbers from 2022 show that only 2% of smallholder farmers used approved seeds, and they believe that the situation will change completely first in 3-4 years.

However, if he project-support is to be stopped now, the goal of increased rice production will likely not be met. KTC and MTC emphasise an urgent need to scale out the activities and target more smallholder farmers to meet the company's need for a constant (and sufficient) rice supply to the market. Therefore, a strategic goal for the companies is to reach out to more farmers. KTC, for example, is working in 9 villages today. They are now

considering scaling their activities to other villages in the area, as the new warehouse has a capacity of 40,000 bags and 4000 Mts of rice.

Secondly, the two companies, KTC and MTC, will probably sustain if the project support stops. COMRICE II has already transformed the way of working and contributed to commercial thinking in the farmers' mindsets. The companies will probably continue providing services to smallholder farmers in the value chain. However, as the companies are still in their initial phase, discontinued support will negatively affect their ability to scale and thus become a bigger and stronger market player. Therefore, the goal of increasing rice sales will likely still need to be met. Further steps still need to be taken to enable the companies to become competitive in the internal and export markets.

3.6.3. Mozambique

A considerable number of achievements will likely remain even after the end of the project, among them: agroecology practices, agricultural techniques, environment awareness and the organisation in cooperatives.

The cooperative organisation is pointed out by all the members as an achievement that will stay, considering its advantages. Most cooperative members consider that their life improves and that is at their best interest to continue in their organisations. However, there are also members that were enticed to join the cooperative because of the access to agricultural inputs provided by the project. These members, according to their peers, will likely abandon the cooperatives if there are not immediate benefits. The sustainable continuation of the cooperative organisation also depends on training more members on the business and training models.

The digital applications, as My Coop, are considered important and might continue, but they have used basically as information collection tools. As the incentives for sending information reduce, sustaining this platform from the farmers side might be more difficult. More functionalities that are useful to farmers in the applications might increase their incentives to continue using them. In one cooperative, farmers referred to difficult access to internet as a possible cause of lack of sustainability of digital applications, especially My Coop. The project is making changes on My Coop utilization within the cooperatives, with the goal to make them understand the importance of the tool and have a higher incentive to maintain the devices and data by themselves that are currently provided through the project. Some farmers feel also that the training package should be replicated to consolidate their learning and competences, in areas such as business management, business plan, and women leadership for them to continue doing their work without external support.

Cooperatives' access to markets and negotiation of better prices still needs additional support, considering that it involves market research, gathering of information and negotiation with traders, capacities that most cooperative members think that are still lacking. The construction of infrastructure for aggregation is an achievement of the project, whose sustainability will depend on the strength of cooperatives and the incentives of its membership to continue in this form of organisation. Some cooperatives already had storage facilities or were planning to build them, but were facing resource limitations to rehabilitate, expand or build these infrastructures. Thus, sustainability will be variable, depending on the results of the production aggregation on the sales level and the incentives the membership will have to nurture the cooperative organisation. Most cooperatives will still be unable to make major rehabilitation work without external support, if their infrastructures are severely damaged as was the case with the cyclone Gombe or need substantial interventions. An example was the cooperative 1st of May in Angoche, whose

warehouse rehabilitation, initiated by a previous project (Sana) was still pending and awaiting support of this project³¹.

Farmers have the possibility to continue increasing their production levels, based on the business models knowledge transferred by the project. Continuous increase of income levels is not guaranteed considering that market fluctuations, and weak negotiation capacity can still undermine the capacity of the farmers to get a fair price for their products. There are still difficulties of cooperatives finding members to negotiate the prices in a proactive manner. Even the logistics of going to meet the traders is still being funded by AMPCM. There will still be needed more work and support in this area.

Gender equality of results are more visible at the management level. Farmers consulted in this evaluation expressed their awareness on gender equality issues and pointed out to participation of women in leadership positions as the main results as well. The increase of women in leadership position has not been strong and considering the selection processes in the organisations. As the number of cooperatives of the project increased, the percentage of women in leadership positions tended to reduce.

Climate change awareness is significant, especially because it relates to the farmers activities, as in the unpredictability of the seasons and their relation to the timing of the production cycle. Consequently, this awareness will likely remain.

3.6.4. Assessment of the enabling environments

Three main issues will likely continue to negatively influence the work carried out in the interventions in the future: poor infrastructure, climate changes and political instability.

1. Poor infrastructure in the project countries highly affects the potential achievements.

Infrastructure challenges exist on local, regional and national levels. In Madagascar, the market demand for fresh tilapia on ice in the capital Antananarivo is steadily growing. Still, TDE cannot access the customers sufficiently through the existing resellers in the capital (currently four resellers - 2 TDE agents selling only TDE tilapia and two sales points selling both tilapia from TDE and fish from other producers. There needs to be more vehicles to transport sufficient tilapia from TDE's technical site in Toamasina to the main growing market in Antananarivo. The transport is currently mainly ensured by external transporters (such as a local transport cooperative and other transporters), but these are only sometimes stable and reliable, creating risks of fish being degraded significantly in the warm/ rainy season if not transported on time to Antananarivo.

In Tanzania, the main challenges are two-folded. There needs to be more irrigation schemes and efficient water management in the country, negatively affecting the smallholder farmers' ability to produce rice efficiently with constant production. At the same time, there is a severe challenge related to transporting rice and paddies. The smallholder farmers' plots are typically placed quite far from the companies. Thus, the transportation costs are high. In one of the project districts, the main road to towns (and therefore larger markets) could be better, making it difficult for farmers (and their companies) to become significant players in the market. This is a similar issue also in Mozambique.

2. Climate change is increasing the burdens and challenges for smallholder farmers.

³¹ Interview with the Association of Cooperatives of Angoche, 18 March 2023.

Although the intervention is already responding to climate change, there is an urgent need to increase support for climate adaptation.

In Tanzania, the droughts deriving from the climate crises and the lack of irrigation schemes increasingly negatively affect the smallholder farmers' ability to produce rice efficiently. There is a need to address climate-smart agriculture more than what is done currently. This includes ways of managing water, developing drought and flood tolerant seeds. This also involves policy development related to rice production in climate-adaptive ways. Recent droughts have not only affected rice production, but it has also negatively affected the rice farmers' ability to pay back their agri-loans.

Also In Mozambique, farmers are depending on seasonal agriculture where rain fluctuations, heavy rains and drought pose risks to production and productivity. Lack of rain made it hard to apply AflaSafe both in 2020 and 2021, and access to water is an ongoing challenge for the micro nurseries. The Nampula region was hit by a cyclone in March 2022, resulting in destruction of cashew trees and cooperative infrastructure. A project addendum was signed in 2022 for the rehabilitation of the destroyed premises, specifically the rehabilitation of the warehouse and the greenhouse of the Central nursery.

3. Continued political and military instability in Cabo Delgado in northern parts of Mozambique, provides a potential challenge to the project.

Overall, the project has not been significantly impacted by the conflict, although there are certain factors that have indirectly affected the project outcomes. These include the presence of internally displaced persons (IDPs) in the province of Nampula who are asserting their land rights, as well as restrictions on commercialization in conflict-affected regions.

3.7. Risk Management

Below, we assess the project's risk management in the three intervention countries.

3.7.1. Madagascar

The intervention is supported by an extensive monitoring, reporting and risk management framework, which have been developed by NV and its technical advisors and consistently used by TDE – from collecting a large body of data at pond and farm level to publicizing KPIs at production sites. The extensive risk analysis was updated in 2021 in the context of the application for additional support from Norad.

Prevention and mitigation measures included in the risk management framework are one of the strong features of the project, including for example:

- ✓ Strict financial management rules and sensitisation activities to reduce the risk of theft or financial misconduct.
- ✓ Comprehensive contracts with farmers covering risks such as the side-selling of fish or feed.
- ✓ Security measures at sales points and hatcheries to avoid vandalism and theft.
- ✓ Strong emphasis on biosecurity at hatchery and farmers' ponds to reduce the likelihood of disease outbreaks.

- ✓ These measures have contributed to the fact that TDE's activity has not been severely affected by risks such as financial mismanagement, theft, vandalism, corruption and diseases.
- ✓ The management of climate-related events deserves a detailed discussion. The intervention has envisioned from an early stage a wide array of measures to manage cyclone and flooding risks. These include:
- ✓ Structural measures such as depth and width of ponds, side channels to control the inflow and outflow of water, and diversion canals.
- ✓ Protocols such as the systematic assessment of flooding risks at pond sites and a policy of no stocking in high-risk ponds during the cyclone season
- √ Response procedures such as emergency harvesting.
- ✓ Support to affected farmers in the form mutual help to reconstruction within the cooperatives.

The Eastern coast of Madagascar is highly exposed to cyclones from November to March. In 2023, TDE's region of activity was affected by two events: tropical storm Cheneso in January and cyclone Freddy in February. Cheneso reportedly destroyed a dike at the new hatchery site and affected 40 to 50 ponds, about 30 of which were stocked. In 2022, cyclone Anna reportedly damaged 25 ponds, including two at 100%.

TDE's management and the consulted cooperatives and farmers consider that the costs induced by cyclones and flooding have remained manageable in recent years but will probably increase in the future. Furthermore, while average losses are limited, they can be extensive for individual members. While the project's mitigation measures are effective according to most respondents and should be continued, many farmers formulate the need for a form of insurance and show a positive willingness to pay for it.

Classical insurance coverage is virtually non-existent in aquaculture because of a strong moral hazard issue (i.e., the insurer's inability to observe which part of damage is attributable to the policy holder's negligence). The cooperatives and the cooperatives union, however, are not exposed to moral hazard as they continually monitor the farmers' actions to maintain their pond sites and manage their risks. TDE and its cooperatives therefore seem to be ideally positioned to propose a limited mutual insurance scheme to their members in order to manage future risks related to climate-induced events. As a first step, TDE could seek support to carry out a feasibility study for such a scheme.

Other risks were correctly foreseen on the onset of the intervention, but the proposed measures have not been as effective as expected. In particular, the cooperatives' inability to attract women to leadership positions was deemed a medium risk, to be managed through training and sensitisation. It appears such measures are not sufficient to overcome structural barriers to women's participation and that complementary approaches are necessary – such as better supporting financial outcomes for female farmers and including more women in TDE's staff.

Finally, some risks have materialized which were either not foreseen or not correctly assessed in the risk management framework. The risks of major disruptions in supply chains and input price increases caused by external events such as a pandemic or a war are obvious cases in point, but it seems unrealistic to consider that the intervention should have been better prepared for these. Of note, risks related to high dependence on imports (of feeds in particular) were assessed as the intervention's most significant risk in the original application, with a recommendation to promote local production of inputs.

By contrast, the review team considers that several risks discussed above could have been better anticipated and addressed, specifically:

- √ the lack of capacity and inadequate water supply of the existing hatchery (of note, the risk update of September 2021 draws attention to the need for reliable water supply at the new hatchery)
- ✓ TDE's inability to secure a guarantee for its feed purchase payments and LFL's refusal to renew the payment credit after NV's exit.

3.7.2. Tanzania

In **Tanzania**, The COMRICE II project document identified several key risk areas that could negatively influence the achievements of the results or unintentionally have harmful consequences. The project document also includes a comprehensive risk mitigation matrix. Overall, the project has managed to mitigate its risks when mitigation has been possible.

However, the project faced some threats that were difficult to alleviate, alongside the rest of the world, notably the Covid-19 pandemic. The most predominant challenge in 2020 was thus the decreased market price for rice since export to Congo, Kenya, Uganda, Malawi and Zambia was limited by Covid restrictions, leaving the domestic market saturated. This, in turn, affected the companies in the project, and they struggled to earn from their rice sale.

Another risk that was hard to mitigate was the drought occurring in 2022. Most farms faced drought, which also involved lower production than anticipated. Where there is no paddy in the field, there must be more material for the milling machine. The businesses were therefore affected because there needed to be more paddy to harvest, and thus there was a lack of turnover in both project companies. In the future, project staff and partners will emphasise the need for increased training in climate-smart production, such as water management.

The same year as the drought hit the farmers, which also made them struggle to pay for their agri-loans, the Ukraine crisis also impacted the inflation and price of fertilization. The sudden price increase was 50%, and as shown elsewhere, COMRICE II was a key actor enabling smallholder farmers to access fertilizers in this challenging time.

Another risk that materialized was rice diseases and pest outbreaks. There was a national outbreak of insects in the fields. According to KTC, this became challenging for the farmers in the district as the disease occurred without their knowledge. The company decided to use chemicals to kill insects, but applying them in prominent areas was necessary, and many farmers could not afford to buy them. The disease destroyed a lot of farms.

One area that may be improved regarding risk mitigation is handling environmental and pollution problems related to rice production. The companies highlighted that environmentally threatening practices are still occurring among farmers, such as volume management of fertilizers or better use of chemicals, and to improve waste management systems related to empty bottles.

In 2020, the market information system and application were developed to inform the companies about market fluctuations and to facilitate informed decisions on when to sell and where. However, at the end of 2021, an assessment of the Marketing Information System platform of RCT was carried out. Norges Vel discontinued the funding for this development after a discussion with RCT and the developer. The reasons for this include competing platforms emerging in the market, one funded by Norad, limited knowledge of ICT at the RCT and a small budget planned for this.

3.7.3. Mozambique

The climate change affected some of the project cooperative members, with loss of their crops due to warming in 2020, warehouses and houses due to the cyclones Kenneth in 2019 and Gombe in 2022 that affected the project areas. The farmers were trained in techniques to mitigate the effects of warming in crops such as tomato (covering with grass) and increased awareness in choosing habitation and farming areas less prone to climate change effects, such as flooding, as higher lands. They also were made aware of the need to adopt climate seeds, more resistant to climate changes.³² In 2022 an addendum to the project was made to deal with the effects of cyclone Gombe, as support to farmers to recover from the loss of their crops, and infrastructures rehabilitation, including of the central nursery.

Covid affected production and sales due to restrictions to mobility imposed to contain the epidemic. The project reduced the number of participants in its events and took other standard preventive measures.

In one cooperative, the members referred to frequent District Government requests to borrow their tools and seeds, and as they are not giving them, they fear that the Government might create difficulties for their activities in future.

Empowerment of women and their increase in leadership positions is threatened by a combination of factors, among them cultural beliefs, women's self-confidence, illiteracy and the process of selection itself. Whilst the project has worked to sensitize cooperative members on gender equality, the number of women in leadership positions is still low. The selection process in the cooperatives is restrictive to women, due to their shyness to present themselves as candidates, caused by a combination of factors, among them cultural norms of women subordination and illiteracy. Unless some of the structural causes are addressed, the risk of low presentation of women in leadership positions will remain. The project has recommended and is working with the cooperatives to enrol women in government adult alphabetization programmes.

Sales of cashew are affected by market dynamics, which are complex and volatile. Prices of cashew in India, affects prices in the country. Local buyers are also volatile and tend to gang up and circumvent cooperatives to get lower prices from individual producers. The project has invested time in providing information on cashew prices, organizing auctions and negotiating contracts with buyers. Whilst the auction organised in 2021 was successful the same did not happen in 2022, and contracting seems to be the most viable solution. As mentioned, a deal with Condor was reached in December 2022.

Access to agricultural inputs such as seeds and spraying was pointed out as a critical element. There were reported delays in the distribution of seeds, which were eventually made available after the proper time for sowing. The increase in fuel price has impacted on the level of spraying, and the farmers were forced to invest additional resources to continue spraying. The model of providing atomizers for farmers to pay in tranches adopted by the project, was pointed out as a solution to this risk of increasing costs in spraying.

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³² Namaita, Rapale farmers.

4. Annexes

4.2. Annex 1: References

Project documents

Extensive project documentation provided by NV, including:

- √ Norges Vel: 2019 ToC Mozambique
- √ Norges Vel: 2022 final AOS page no.20-23
- ✓ AMPCM & Norges Vel (2020). Progress Report 2020 NORAD Funding.
- ✓ AMPCM (2023): Building Resilience 2022 Annual Report.
- ✓ AMPCM 2022 Annual Report
- ✓ Building a Better Tomorrow: An Initiative for Agribusinesses (BBT-YIA) 2022 2030, https://www.kilimo.go.tz/uploads/books/BBT-YAI Booklet (26072022).pdf
- ✓ Norges Vel: Commercialisation of rice farming in Tanzania (COMRICE II) Project Document Version 3.0
- ✓ COMRICE II Outcome report 2022
- ✓ Norges Vel: Extra Fund Women and Youth, Scope of Work Nov 2022 June 2023
- ✓ Norges Vel: MOZ-2022-Addendum Annex c-2 Compensation Funds Application Moz, page 4.
- ✓ NORAD. 2023 Updated Implementation Plan and Budget, page 2.
- √ Norges Vel (2021) Results Framework
- ✓ Norges Vel (2020). Synergies Between Agroecology and Cashew-Intensification in Nampula: Concept Note.
- ✓ Norges Vel's 2020 progress report.
- ✓ Norges Vel's 2021 progress report.
- ✓ Norges Vel (2019) Problem Analysis Tanzania
- ✓ Norad, Grant Agreement 2020 2023
- ✓ Norad, addendum 1 to Grant agreement 2020-2023, Tanzania
- √ Norges Vel (2020, 2021) Budget Tanzania
- √ Norges Vel TOC Tanzania, Mozambique and Madagascar
- √ Norges Vel (2020-2023), Grant agreemnt between Norges Vel and NV-TZ
- √ Norges Vel Progress Reports Tanzania

- ✓ Norges Vel Tanzania Strategy 2021-2025
- √ Norges Vel (2022) Extra Fund Women and youth, Scope of work
- ✓ Norges Vel Tanzania Strategy 2021-2025
- ✓ Norges Vel (2020, 2021, 2022 and 2023) Revised Overall Budget
- ✓ Norges Vel, Financial Report 2020, 2021
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- √ Norad, Progress Report 2020, 2021,
- ✓ Project Producer Steered Tilapia Farming, Organisation and Sales in Toamasina, Madagascar (Phase 3). Updated Project Document, December 2022.
- ✓ Synergies Between Agroecology and Cashew-Intensification in Nampula: Concept Note.
- ✓ Upgrading CNN Once off investments with great potential for enhancing food security. Moz-2022 Addendum, Annex C-1. Application for extra funds Moz.
- √ Norges Vel (2021) NeedsAssesment and Development Program for COMRICEProject Supported Companies in Kilombero and Mbarali, IMED
- ✓ BDO Audit Reports 2020, 2021

Other references:

- ✓ Costello, C., Cao, L., Gelcich, S. et.al. (2019), 'The Future of Food from the Sea', World Resources Institute, Washington, D.C., The Future of Food from the Sea WRI Ocean Panel.
- ✓ Norwegian Ministry of Foreign Affairs (2022), Combining forces against hunger A policy to improve food self-sufficiency, Norway's strategy for promoting food security in development policy.
- ✓ Agricultural Sector Development Project phase II' (2017/2018-2022/2023), 'National Strategy for Youth Involvement in Agriculture (2016-2021), National Rice Development Strategy (NRDS II) (2019-2030)
- ✓ The Tanzania Development Vision 2025, The United Republic of Tanzania

Web links:

- √ https://www.regjeringen.no/no/dokumenter/hurdalsplattformen/id2877252/
- ✓ Prop 1 ST (2022-2023), accessible at https://www.regjeringen.no/no/dokumenter/prop.-1-s-20222023/id2931090/
- √ http://www.tzonline.org/pdf/theTanzaniadevelopmentvision.pdf

4.3. Annex 2 List of stakeholder consultations

Madagascar

Stakeholder	nolder People Met/Functions Consultation method		Date
Norges Vel	Anita Sæbø, international director	Online interview	17/02/2023
	Anne Mugaas, senior advisor	Online interview	24/02/2023
	Anne Mugaas, senior advisor	Follow-up interview	29/03/2023
Tilapia de l'Est Union of	Top management	Group interview	09/03/2023
Cooperatives (TDE)	Hatchery / technical experts	Visit and discussion	10/03/2023
	3 members of the Board	Group interview	15/03/2023
	Sales points	Visit and discussion	15-16/03/2023
	Félicité Ahitantsoa, executive director	Follow-up interview	15/03/2023
	Félicité Ahitantsoa, executive director	Follow-up email	19/04/2023
KHF cooperative	4 members of the Board	Group interview	11/03/2023
Kofiamit cooperative	5 members of the Board	Group interview	13/03/2023
KPTI cooperative	6 members of the Board	of the Board Group interview	
Tsaradia cooperative	radia cooperative 6 members of the Board Group interview		13/03/2023
Tsarafara cooperative	6 members of the Board	Group interview	11/03/2023
Tsimivaha cooperative	6 members of the Board	Group interview	13/03/2023
Vitasoa cooperative	6 members of the Board	Group interview	11/03/2023
Vonona cooperative	7 members of the Board	Group interview	13/03/2023
Members of the KHF and Tsarafara cooperatives	22 farmers	Focus group discussion	14/03/2023

Members of the Tsaradia, Vitasoa, Vonona and Kofiamit cooperatives	26 farmers	Focus group discussion	14/03/2023
Ministry of Fisheries and the Blue Economy	Regional director, Toamasina Interview Group interview lirectorate		09/03/2023
Ministry of Industry, Trade and Consumption	Cooperative registration and monitoring unit	Group interview	09/03/2023
University of Toamasina Director, Institut supérieur des sciences environnement et développement durable		Interview	09/03/2023
GIZ	Olivier Joffre, program officer	Interview	16/03/2023
Norad	Silje Hanstad, program officer	Online interview	19/04/2023
lmani	Michael Fuller, technical expert	Online interview	05-06/04/2023

Mozambique

Stakeholder	People Met/Functions	Local	Date
University Lúrio - Centre of Interdisciplinary Studies - Laboratory of Food Quality and Security	Isac Presse - Director Cesário Feliciano - Physics- Chemistry Unit Laura Jamisse - Microbiology Laboratory Palmira Rapissone - Communication and Image	Nampula City, Nampula Province	17 March 2023
District Union of Mogovolas	Union Leadership and Cooperative Members	Mogovolas District, Nampula Province	18 March 2023

Cooperatives Association of Angoche	Association Leadership and Cooperative Members	Nametoria, Angoche, Nampula	18 March 2023
Cooperative of Women of Nacololo	Cooperative Leadership and Members	Nivenhe, Monapo, Nampula Province	05 April 2023
Agro-Ecological Cooperative of Itoculu	Cooperative Leadership and Members	Itoculu, Monapo, Nampula Province	05 April 2023
Agrarian Cooperative of Namaita	Cooperative Leadership and Members	Namaíta, Nampula Province	06 April 2023
Helvetas	Ali Mgido - Programme Officer	Nampula City, Nampula Province	06 April 2023
The Edible Nuts Institute of Mozambique (IAM)	Feliza Macome - Director of Edible Nuts Development and Production Services Mateus Comé - Head of the Department of Plants Protection and Biotechnology Tomás Marrengula - Head of Department of Producers's Organisation and Support	Maputo City, Maputo Province	10 April 2023
Project Management	Natalino Barnete - Project Coordinator Marco António - Accounting and Finance Ilídio Dias - ICT Officer	On-line Meeting	13 April 2023

	KTC Shareholders (Farmers)				
SN	NAME	VILLAGE			
1	ASHURA WAGALA	MPANGA			
2	JENISTA MKOKA	MPANGA			
3	ANIPHA MWARIVARIRA	MPANGA			
4	GIRBERT HANJA	MPANGA			
5	CLESENSIA MWALIGA	MPANGA			
6	JUSTINE MBWILO	MPANGA			
7	THOBIAS VAREMA	MPANGA			
1	CHARLES LEMA	MLIMBA B			
2	LILIAN NGOWI	MLIMBA B			
3	EMMA MAMBA	MLIMBA B			
4	YUSTO MWELEKE	MLIMBA B			
5	YASINTA KIBONGORO	MLIMBA B			
1	ZITTA LYAKWIPA	KALENGAKELU			
2	LAULENCE CHEYO	KALENGAKELU			
3	ZINGATIA MAYOWELA	KALENGAKELU			
4	SIMON SAMBO	KALENGAKELU			
5	BETTY JAPHET	KALENGAKELU			
6	SALVINA LIHAMBAMOYO	KALENGAKELU			
7	EDDA KAJINGA	KALENGAKELU			
	EXEDITHA MPALALE	KALENGAKELU			
1	CATHELINE MAHIMBALI	VIWANJASITINI			
2	PETRO SKANZWE	VIWANJASITINI			
3	ALLY KIWANGA	VIWANJASITINI			
4	TEOFRIDA MANDIKE	VIWANJASITINI			
5	ALEX MSALIBOKO	VIWANJASITINI			

6	WILBARD NDUYE	VIWANJASITINI
1	ASNATH MLOWE	MLIMBA A
2	EDDA NDUNDULU	MLIMBA A
3	INES GONGO	MLIMBA A
4	ANDREW ROCK	MLIMBA A
5	JOSEPHAT MLANGE	MLIMBA A
6	DENIS MWAPILI	MLIMBA A
1	BRUNO MSEMWA	NGALIMILA
2	KARIM NYALYOTO	NGALIMILA
3	MATHEY NYONI	NGALIMILA
4	REGINA KISUNJULU	NGALIMILA
5	LAZIA NY'ENGO	NGALIMILA
6	TUMAINI WOMEN GROUP	NGALIMILA
7	TUSAIDIANE A WOMEN GROUP	NGALIMILA
5	THEODOLA MBILANGO	KAMWENE

Tanzania

1	GAUDENSIA MDALAHELA	МАТЕМА
2	ESTER NGENDA	МАТЕМА
3	BEATUS NDAUKA	MATEMA
4	DOMINIKA KIHUNDA	MATEMA
5	CYPRIAN MBEYA	МАТЕМА
6	WILBERT MWAPINGA	МАТЕМА
7	FARAJA CHELESI	
1	HAMIS KILAMILO	MWEMBENI
2	YUNISTA MJENGA	MWEMBENI
3	AGUSTINO KAMGUNA	MWEMBENI
4	JOHNSTA KADINDA	MWEMBENI

5	VALENTINA NGAVANGA	MWEMBENI
1	DONATH MBULI	KAMWENE
8	KTC WOMEN GROUP	NGALIMILA
2	NICHOULAUS SAMBA	KAMWENE
3	ELITHA COSMAS	KAMWENE
4	THERESIA MSISI	KAMWENE

Norges Vel Tanzania Office Secilia Jeremia

Norges Vel Tanzania Office Anastasia Massay

Norges Vel Tanzania Office Sophia Weinand Stephen

Rice Council Tanzania Winnie Bashiagi

MTC Staff, Board members and shareholders

KTC' Staff and board members

	SAMPLE OF TRAINED FARMERS UNDER COMRICE II INTERVIEWED BY PROJECT EVALUATOR.					
S/N	NAME	GENGER	PHONE NUMBER			
1	навіва м. Shambe	KE	752918210	CHIMALA		
2	GRACE JOHN	KE	754213837	MSWISWI		
3	FATUMA ZUBERI	KE	758235755	MSWISWI		
4	ISSA CHIKUMBA	ME	756432777	MHWELA		
5	RIVERLATUS MTITU	ME	678159569	MHWELA		
6	TUNTUFYE MWAMBAGE	KE	719678052	ILONGO		
7	SHUKURU ABDALLAH	KE	756781119	BETHANIA		
8	AMINA SAID AMRI	KE	769778098	CHIMALA		
9	FURAHA LANGSONI	ME	753369786	BETHANIA		
10	HASSAN ANUBI	ME	769003109	IGURUSI		
11	EMMANUEL MWAKAKUKA	ME	766944571	MHWELA		

12	JUMA NYASA	ME	745370898	MSWISWI
13	BAKARI TIMBULO	ME	756862227	GWILI
14	ANANIA MWANGUKU	ME	717710062	AZIMIO MSWISWI
15	TUMPALE MWAISOBA	KE	755667426	MHWELA
16	KURUTHUMU ABDALLAH	KE	766892806	BETHANIA
17	FLEDI MWAKAPETA	ME	757995299	UHAMBULE
18	HARID SAID	ME	765282686	UHAMBULE
19	BONIFACE NAHUTWA	ME	755814231	ISENYELA
20	ZAWADI KOGHA	ME	752587717	UHAMBULE
21	MESHAK MBANA	ME	755670618	KAPUNGA
22	GERVAS MWINUKA	ME	754916527	KAPUNGA
23	ENEA BARAGASI	KE	746870585	KAPUNGA
24	ELIZA KAPEGE	KE	757693679	KAPUNGA
25	BARAKA MWAMBOGO	ME	763212250	MHWELA
26	SHUKRANI ABDALLAH	KE	753698392	BETANIA

SAMPLE OF TRAINED FARMERS UNDER COMRICE II INTERVIEWED BY COMMUNICATION OFFICER.					
S/N	NAME	GENDER	PHONE NUMBER		
1	WITNESS SIMBEYE	KE	768274812	BOARD CHAIR WOMAN	
2	JUSTINE PATRICK MPONGO	ME	764111344	MEMBER OF YOUTH GR	
3	RENATHA MBUJI	KE	742837042	MEMBER OF YOUTH GR	

4.3. Annex 3 Interview guides

Partners and beneficiaries

Relevance

- What issues/challenges were you facing before Norges Vel's support started and to what extent did its support
 address these issues/challenges (consider the overall engagement and then more specifically 2020-2023 period
 under review)?
- Did the support evolve in time to better respond to your needs and priorities or has it on the contrary moved away from your priorities (consider the overall engagement and then more specifically 2020-2023 period under review)?
- If there has been such a change, what has caused it according to you?

Coherence

- Do you know of any other project funded by donors in your area of activity? How does it compare or relate to NV's support?
- Does the support scheme help to integrate and empower the women, youth, or persons with disabilities? Could it do more in this respect and how?

Effectiveness

Madagascar

- To what extent has the support scheme achieved or exceeded your expectations when it comes to increasing tilapia production and sales? What do you see as the key reasons for these achievements?
- What have been the challenges you have faced in developing production and sales? What are the sources of these challenges?
- How could the support scheme better address future challenges and strengthen its results?
- How well have you/the farmers been involved in the key decisions and in the management of the cooperatives and of TDE?
- Do you see the cooperatives and TDE as a common property of the farmers or as someone else's property?

Mozambique

- To what extent has the support scheme achieved or exceeded your expectations when it comes to increasing cashew and groundnut production and sales? What do you see as the key reasons for these achievements?
- What have been the challenges you have faced in developing production and sales? What are the sources of these challenges?
- How could the support scheme better address future challenges and strengthen its results?
- The methods/ processes for involvement of the target group in the intervention and in the organisations/ businesses supported are they democratic and is there local ownership?
- Are farmers organised in the most effective and appropriate way?

• Do you think that the methods, formats and processes used to monitor results and collect data are efficient?

Tanzania

- To what extent has the support scheme achieved or exceeded your expectations when it comes to increasing rice production and sales? What do you see as the key reasons for these achievements?
- What have been the challenges you have faced in developing production and sales? What are the sources of these challenges?
- How could the support scheme better address future challenges and strengthen its results?
- The methods/ processes for involvement of the target group in the intervention and in the organisations/ businesses supported are they democratic and is there local ownership?
- Assess farmer selection methods, training strategy, and business development how can work/implementation methods in these areas be improved?
- Do you think that the methods, formats and processes used to monitor results and collect data are efficient?

Efficiency

- Do you think that the various activities under the support scheme have been implemented efficiently and on time?
- Do you see any way in which costs could have been lower in the past or could be reduced in the future?
- Do you think that your activities and results have been seriously impacted by the COVID-19 pandemic, the war on Ukraine, or other external problems, including reduced demand, increases in prices of inputs, etc.?
- When considering the resources that have been used, do you think that the support scheme has achieved good results?

Impact

- What would be, in your opinion, the economic situation of the farmers and the businesses involved in the value chain if it wasn't for the support scheme would it be comparable, slightly worse, much worse?
- How has the training received under the support scheme changed the farmers' way of working and their livelihoods?
- Do you think that the support scheme has had broader tangible effects, such as creating jobs and bringing different products to customers? Can you give specific examples and explanations?
- Do you think that the support scheme has had any negative effect on the lives of farmers and their families, businesses, and other groups in society? Can you give specific examples and explanations?

Sustainability

- If Norges Vel's support was to stop today, what would remain of the support scheme's achievements in a few years from now in terms of:
 - o the production methods
 - o the business models and training models (such as digitalization and apps)
 - o the cooperative organisation
 - o the increase in farmer's income levels

- o gender equality and human rights
- o attention to the environment, biodiversity and climate issues
- o good governance and combating corruption
- o overall regulatory and policy conditions
- What can be done to make each of these achievements less dependent on Norges Vel's continued support?
- Is it possible to continue the growth in your activities without external support and, if yes, how?
- Which activities are more likely to sustain themselves without support, and which are less likely?
- Which external factors might influence your ability to sustain these achievements and to further develop in a positive way? And in a negative way?
- To what extent does climate change affect your sustainability and development prospects and what can be done about it in order to become more resilient to climate events in ten years from now?

Risk management

- Have you or your activity been affected by unexpected developments in any of the following areas and, if yes, how did you respond?
 - o Project management
 - Access to quality inputs
 - o The evolution of markets, logistics and value chains
 - o The environment and pollution problems
 - Climate change
 - o Negative outcomes in terms of gender equality and equity
 - Negative outcomes in terms of participation of youth
 - o Negative outcomes in terms of human rights, including for people with disabilities
 - Good governance and corruption
 - Political developments
 - o Legal conditions affecting the sector
- Have you been affected by any other unforeseen events and how did you respond?

Other stakeholders

Relevance

• To what extent do the programme's objectives and design respond to beneficiaries', global, country and partners' needs, policies, and priorities? To what extent have they evolved to respond to changing circumstances?

Coherence

- How well does the programme fit with other country/ sector interventions, and with Norwegian international development cooperation priorities?
- What are main positive and negative issues currently influencing or seen to in the future most likely influence the work carried out by the programme?
- Relating to project targets and taking into consideration Norway's new Strategy for Food Security in International Development Cooperation (2022), how well are women, youth and persons with disabilities included in the project, and how can they be further integrated?
- To what degree does the programme cooperate with R&D institutions and make linkages between small-scale farmers and relevant R&D institutions?

Effectiveness

Madagascar

- To what extent has the support scheme achieved or exceeded your expectations when it comes to increasing tilapia production and sales? What do you see as the key reasons for these achievements?
- What have been the challenges faced by the support scheme in developing production and sales? What are the sources of these challenges?
- How could the support scheme better address future challenges and strengthen its results?

Mozambique

- To what extent has the support scheme achieved or exceeded your expectations when it comes to increasing
 cashew and groundnut production and sales? What do you see as the key reasons for these achievements?
- What have been the challenges faced by the support scheme in developing production and sales? What are the sources of these challenges?
- How could the support scheme better address future challenges and strengthen its results?

Tanzania

- To what extent has the support scheme achieved or exceeded your expectations when it comes to increasing rice production and sales? What do you see as the key reasons for these achievements?
- What have been the challenges faced by the support scheme in developing production and sales? What are the sources of these challenges?
- How could the support scheme better address future challenges and strengthen its results?

Efficiency

- Is the support scheme implemented as cost-efficiently as possible, on time, particularly taking into account the effects of COVID-19, the war on Ukraine, and possibly other shocks?
- Are results achieved with reasonable use of resources?

Impact

• What would be, in your opinion, the economic situation of the farmers and the businesses involved in the value chain if it wasn't for the support scheme – would it be comparable, slightly worse, much worse?

- How has the training received under the support scheme changed the farmers' way of working and their livelihoods?
- Do you think that the support scheme has had broader tangible effects, such as creating jobs and bringing different products to customers? Can you give specific examples and explanations?
- Do you think that the support scheme has had any negative effect on the lives of farmers and their families, businesses, and other groups in society? Can you give specific examples and explanations?

Sustainability

- If Norges Vel's support was to stop today, what would remain of the support scheme's achievements in a few
 years from now in terms of:
 - o the production methods
 - o the business models and training models (such as digitalization and apps)
 - o the cooperative organisation
 - o the increase in farmer's income levels
 - gender equality and human rights
 - o attention to the environment, biodiversity and climate issues
 - o good governance and combating corruption
 - overall regulatory and policy conditions
- What can be done to make each of these achievements less dependent on Norges Vel's continued support?
- Is it possible to continue expansion without external support and, if yes, how?
- Which activities are more likely to sustain themselves without support, and which are less likely?
- Which external factors might influence the programme's ability to sustain these achievements and to further develop in a positive way? And in a negative way?
- To what extent does climate change affect the programme's sustainability and development prospects and what
 can be done about it in order to become more resilient to climate events in ten years from now?

Risk management

- Have any expected risks materialized which influenced the achievement of results or had unintended harmful consequences, including for cross-cutting issues? Including:
 - o Project management
 - Access to quality inputs
 - The evolution of markets, logistics and value chains
 - The environment and pollution problems
 - Climate change
 - Negative outcomes in terms of gender equality and equity
 - o Negative outcomes in terms of participation of youth

- o Negative outcomes in terms of human rights, including for people with disabilities
- o Good governance and corruption
- o Political developments
- o Legal conditions affecting the sector
- Are the originally identified risks still relevant? Have any unforeseen risks occurred, and how were they dealt with?
- Are there any new risks that are relevant for the grant manager, project implementer and/or target group, including pandemics, wars and geopolitical tensions, augmented climate change impacts, or other?

4.4. Annex 4 Result frameworks and reported results

Below we present the reported results as a «traffic light». The results are categorized in the colours red, orange, green and white, with the following criteria:

- Red indicates little progress and less than 40 % of target achieved.
- Orange indicated partially completed, between 40 90% of target completed.
- Green indicates target completed or right below target from 90% completion.
- Blank indicated insufficient information in report to conclude.

ANNEX – RESULTS FRAMEWORK AND REPORTED RESULTS FOR TANZANIA*

Level	Objective	Indicator	2022 target	2022 realised**	2023 target****
Impact	I.1 Smallholder farmers in Tanzania have increased their income	I1.1 Smallholder farmers (40% women) monthly income in TZS from rice value chain	15 %	61 %	20 %
		O1.1 Average production per farmer (bags per acre)	24 bags	11 bags (7 bags for female and 13 bags for male)	25 bags
	O1 Increased production and sales of rice	O1.2 MT paddy sold annually by small holder farmers	11200MT	9,028.4 MT	12300MT
Outcome		O1.3 MT rice sold annually by companies	1500MT	102 MT	2000MT
	O2 Political framework that supports rice and	O2.1# of policies implemented	1	Not sufficient information in report to conclude	2
	tilapia value chains	O2.2 # of policies formally adopted	1	Not sufficient information in report to conclude	2
	OP1.1 Smallholder farmers trained in the rice value chain	OP1.1.1# of smallholder farmers (40% women) trained	2400	2416 (41% women)	2900
	OP1.2 Smallholder farmers have access to	OP1.2.1# of smallholder farmers (40% women) using improved rice seed	35 %	41% (37% women)	40 %
	inputs	OP1.2.2 # of smallholder farmers (40% women) using fertilizer and pesticides	90 %	53% (42%/37% women)***	95 %
	OP1.3 Smallholder farmers have access to production and processing infrastructure	OP1.3.1# of smallholder farmers (40% women) using improved rice farming equipments	65 %	59% (34%/44% female, 66%/56% male)***	80 %
Outputs	OP1.4 Capacity of smallholder farmers' cooperatives or business companies are strengthened	OP1.4.1# of trainings provided to board members	8	6	8 (repeated to new members
		OP1.4.3 # of certified millers (20% women)	25 millers	No millers certified, 48 identified for potential certification	30 millers
	OP2.1 Policy weaknesses identified and recommended changes drafted	OP2.1.1# of meetings with decision-makers	6	Not sufficient information in report to conclude	8
	OP2.2 Decision-makers lobbied on policy weaknesses and advantage of recommended changes	OP2.2.1# of policy proposals presented by partners to decision makers	4	Not sufficient information in report to conclude	4

^{*}Results framework incl. Add. 2022-2023 from document "2022 QZA-0881 QZA-19-0271 Norges Vel RRV Updated Nov. 2022".

^{**}Based on draft annual outcome survey "COMRICE II AOS report - 2022 - 2nd draft".

^{***}Report includes discrepancy on F/M ratio under OP1.2.2 and OP1.3.1.
****Targets from the sheet "TAN add.2022-2023" in "2022 QZA-0881 QZA-19-0271 Norges Vel RRV Updated Nov. .

ANNEX – RESULTS FRAMEWORK AND REPORTED RESULTS FOR MOZAMBIQUE*

Level	Objective	Indicator	2022 target	2022 realised**	2023 target
Impact	Smallholder farmers in Mozambique have increased their income	Smallholder farmers monthly income in MZM from cashew and groundnuts value chain 6 700 MZM 6 350 MZM		6 350 MZM	7 700 MZM
Outcome	O.1. Increased production and sales of cashew and groundnuts	O1.6 MT cashew and groundnuts produced annually*	3 000 MT	2 980 MT	5000 MT
		O1.7 MT cashew and groundnuts sold annually	3 000 MT	2 980 MT	5000 MT
Outputs	OP1.1. Smallholder farmers trained in the cashew and groundnuts value chain	OP1.1.1# of smallholder farmers trained	70	High above target****	100
	OP1.2. Smallholder farmers have access to inputs	OP1.2.5 # of cashew trees produced by centralised nursery and distributed by decentralised cashew micronurseries	600 000 602 200		1 000 000
		OP1.2.6# of smallholder farmers using bio-spray and AflaSafe 3 000		2 885 (1 017 Women)	4 500
		OP1.2.7# of hectares of food crops replanted after cyclone Gobe***	0	No result expected	468
	OP1.3. Smallholder farmers have access to production and processing infrastructure	OP1.3.3 # of cooperatives that owns a functional warehouse	20/25*****	3	25/30*****
		OP1.3.4# of cooperatives with access to drying capacity for crops	34	44	34
		OP1.3.8 The commercial composting compound (CCC) at CNN is completed****	No	No result expected	Yes
		OP1.3.9 The soil life laboratory (SLL) at CNN is completed****	No	No result expected	Yes
		OP1.3.10 The greenhouse at CNN is completed****	No	No result expected	Yes
	OP1.4. Capacity of smallholder farmers' cooperatives or business companies are strengthened	OP1.4.7 % women leaders in cooperatives and business companies	48 %	21 %	50 %
		OP1.4.8 # of cooperatives with access to finance	25	21	30
		OP1.4.9 # of cooperatives with aggregation services to their members	50	60	65

^{*}Results framework from document "2022 QZA-0881 QZA-19-0271 Norges Vel RRV Updated Nov. 2022". Merge between the two sheets: "MOZ" and "MOZ ADD.2022-2023".

^{**}Based on AMPCM report "MOZ Coop Development - 2022 Annual report V1.2 EN".

^{***}New indicator addendum 2022-2023, compensation funds.

^{****}New indicator addendum 2022-2023, extra funds.

^{****}The reporting includes more output indicators for trainings (OP1.1.2-1.2.5) than the results framework. The numbers of trained farmers is a lot higher than target, but a total

total
******Different targets in the two sheets for Mozambique in the updated results framework.

ANNEX - RESULTS FRAMEWORK AND REPORTED RESULTS FOR MADAGASCAR*

Level	Objective	Indicator	2022 target***	2022 realised**	2023 target***	
Impact	Smallholder farmers in Madagascar have increased their income	1.3 Monthly income from tilapia value chain	USD 120	USD 122	USD 120	
	1. Increased production and sales of	01.4 Tons of tilapia produced annually per member	2.2 tons	2.5 tons	2.6 tons	
Outcome	tilapia	O1.5 Tons of tilapia on ice sold annually	750 tons	799 tons	900 tons	
	2. Political framework that supports the tilapia value chain	O2.3 # of policies suggested or put on the agenda by decision-makers	1 (tax policy)	0	1	
	1.1. Smallholder farmers trained in the tilapia value chain	OP1.1.1 # of smallholder farmers trained	340	361	340	
	1.2. Smallholder farmers have access to inputs	OP1.2.3 # of affordable quality tilapia fingerlings produced	3.6 million	3.8 million	3.9 million	
		OP1.2.4# of farmers with FCR on target	340 farmers with average FCR<1.25	256 harvests average FCR<1.25	340 farmers/ average FCR<1.25	
	1.3. Smallholder farmers have access to production and processing infrastructure	OP1.3.2 New tilapia technical hub operative	Technical hub fully in place and operational	Fish handling/ conditioning: ok Feed storage: 85%	Technical hub fully in place and operational according to standard + 2 (Tamatave & Antananarivo)	
Output	1.4. Capacity of smallholder farmers' cooperatives and business companies are strengthened	OP1.4.4% of women leaders in cooperatives and business companies	35 %	22 %	40 %	
		OP1.4.5 Improved production management programme in use	Full implementation by producer organisations	Basic system in use Last training planned Q1 2023	Professional production management program updated/ improved	
		OP1.4.6 # of marketing initiatives by cooperatives or business companies	Regular radio + social media	Regular postings + participation in fairs	Regular radio + social media	
	2.1. Policy weaknesses are identified and changes are drafted	OP2.1.1# of meetings with decision-makers	3 meetings with regional authorities	Ongoing communication 3 meetings		
		OP2.1.2 # of trainings for decision- makers	Training of MAEP-DDA staff	No training requests for Ministry	Follow-up training	

^{*}Results framework from "MAG 2020-2023 TDE Results Frame_Updated 20.10.2022".

**Results from "MAG 2022 TDE Activity + Indicator Report_before NV comm".

***Targets from the original results framework since these are the ones that have been reported on in the indicator report for 2022.

4.4.1. Full country assessments

4.4.1.1. Madagascar

The intervention in Madagascar is expected to lead to two outcomes: (1) Increased production and sale of tilapia; and (2) Political framework that supports tilapia value chains.

Outcome 1. Increased production and sale of tilapia

Activities under the intervention are classified in four areas: (1) Training of smallholder farmers in the tilapia value chain; (2) Provision of inputs; (3) Provision of access to production and processing infrastructure; and (4) Strengthening of the capacity of smallholder farmers' cooperatives or business companies.

Output 1.1. Smallholder farmers trained in the tilapia value chain

TDE technicians visit each farmer on average every two to three weeks. In addition to monitoring farming practices and fish growth, they train the farmers in tilapia farming techniques during these field visits, in accordance with the farmer's needs at the time. When visiting the farms, the technicians typically also train family members who are engaged in the production process. Many farms are nominally managed by a man, while his wife plays a key role in feeding the fish and/or managing the accounts. In such cases, the women also benefit from the training.

The objective of training all farmers in aquaculture techniques all year round has been attained every year since the start of the intervention.

In addition, farmers have been trained in financial management and entrepreneurship (255 participants in the last training sessions in September-October 2022, including 70 women), in sensitisation to gender mainstreaming (246 participants including 72 women in 2022) and in leadership and personal development for women (85 female participants in 2022).

Output 1.2. Smallholder farmers have access to inputs

The key inputs provided to the farmers are fertilizer, fingerlings and fish feed. At the start of each production cycle, TDE signs an agreement with each farmer whereby it advances the value of all inputs to the farmer during the entire production cycle; farmers repay the advance, (in addition to TDE's fees,) once the fish is sold.

Fingerling production was slightly below target in 2020, but exceeded targets for 2021 and 2022, thanks in particular to the improvement in the management of breeders on the advice of Imani, NV's technical consultant. It should be noted that the level of production reached in 2022 (3,8 million) represents more than twice the 2019 baseline (1,75 million). Still, TDE's supply of fingerlings fell behind the farmer's demand in the course of 2022, causing delays in delivery that affected nearly all farmers in the second half of the year and in the first quarter of 2023.

The disruption had a strong impact on the farmers' activity and morale. Many had invested in new ponds and counted on a high level of production in order to amortise their investments; instead, they had to suspend their activity and turn to other sources of income (such as cultivating rice and vegetables). The causes of the shortfall in fingerlings were partly foreseeable and partly accidental. What could be expected (and was actually expected by TDE's management) was that the surge in demand from the farmers would rapidly exceed the capacity of the Ambohimangakely hatchery. What aggravated the stress (and was not anticipated) was a problem of water supply at the hatchery that virtually brought down the production of fingerlings to zero during several months. The section on efficiency further discusses the causes of the disruption.

The supply of fingerlings resumed in the first months of 2023 and with the expected completion of the second hatchery by the middle of the year, a strong improvement was foreseen during the second half of the year. A swift return to an adequate supply of fingerlings is indeed a critical precondition for the achievement of 2023's ambitious production and sales objectives.

The supply of fish feed, which was exclusively imported from Mauritius in 2020, was affected by trade disruptions caused by the Covid-19 crisis and by price increases after the start of the Ukraine war. Multiple delays from the supplier and tedious custom clearance procedures in Madagascar led TDE to turn to Agrival, a Malagasy feed producer that provided 7% of feed purchases in 2021, and 30% in 2022.

The results framework includes the ambitious objective of achieving a Feed Conversion Ratio (FCR) of 1,25:1 for all farmers (against a baseline of 1,36). The target has thus far been reached only for a minority of farmers and ponds.

Output 1.3. Smallholder farmers have access to production and processing infrastructure

One of the key objectives of the intervention was to upgrade TDE's production and processing facilities in order to increase feed storage capacity, to comply with sanitary standards for fish handling, to rationalize operations, and to expand fingerling production capacity. During the intervention period and thanks in part to its resources, TDE has invested in a new integrated technical and administrative hub in Toamasina, as well as a new hatchery, breeding unit and laboratory near Brickaville, and planned to also set up a technical hub in Antananarivo.

TDE's new tilapia technical hub in Toamasina comprises technical and administrative offices, fish handling and conditioning premises, as well as a storage building for the feed. The hub was initially planned to be completed and operational in the course of 2022, but due to legal, administrative and construction delays (primarily to appropriate land and ensure that property rights were effective), it was finalised during the first quarter of 2023. The cost of the hub was initially estimated at MGA 1.2 billion (close to NOK 3 million) including acquisition, construction and equipment costs, to be covered in part through the budget of the initial NV-TDE agreement, and in part by TDE's own funds. However, the initial cost was eventually exceeded by close to 50% and the difference had to be financed by TDE's capital.

Additional activities initiated thanks to the October 2021 addendum to the NV agreement consisted in setting up a new hatchery, breeding unit and laboratory in an appropriate location, which would in particular benefit from better water supply conditions than the existing hatchery.³³ As TDE was keen on owning the site – and buying enough land for future expansion – the available budget was exceeded and TDE had to finance the remainder of the work on its own funds. The hatchery is expected to start operating with three ponds by May 2023 and further extend its capacity in the coming months and years.

Finally, an additional hub in Antananarivo has been financed through the additional allocation in November 2022. It is expected to be fully functional by the end of June 2023.

Output 1.4. Capacities of smallholder farmers' cooperatives or business companies are strengthened

The intervention has enabled a range of actions to strengthen the cooperatives' and farmers' management of production processes and business development. In particular, a production database management system was

³³ The following output indicators were also added to the results framework: OP1.3.5 - New hatchery operative; OP1.3.6 - New breeding unit operative, OP1.3.7 - New laboratory operative.

selected, tested and implemented in 2022 with support from NV and its technical consultant Imani to help TDE centrally manage feeding and the provisions of inputs to each cooperative member. In 2021, Imani helped TDE update and quality-assure its protocols and documentation on fish health, biodiversity, biosecurity and sustainability of farming practices, which are aligned on the recommendations of the Norwegian Veterinary Institute, on the Aquaculture Stewardship Council's guidelines for tilapia and on Malagasy governmental regulations. Following up on this work, TDE, NV and Imani have since been developing a fish health and disease management plan, which builds on and updates TDE's efforts in this area. In 2022, following Imani's advice, TDE implemented a trial to test an alternative feeding plan (feed to satiation) and measure its impact on FCR. Imani also provided a training on feeding procedures and the rationale behind the trial to TDE's technicians.

TDE's staff also includes a socio-organizer who continually interacts with the farmers and cooperatives to provide follow-up and advice on organizational and business development, while technicians continually ensure that farmers are informed about and continue to follow the production protocols.

TDE has also carried out marketing initiatives such as regular social media posting to sell tilapia, as well as participation in national fairs for networking and sector strengthening. Notwithstanding, the 2020 results in this area were behind target due to Covid, and the reported results in 2021 and 2022 did not meet all targets in terms of marketing activities - admittedly in a context where demand already exceeded production.

In terms of general governance, the cooperatives appear to be functioning in a satisfactory manner, although low levels of engagement in cooperative activities are reported in some cases, and minor incidents notwithstanding. Cooperatives members elect a board every two years; the boards seem to appropriately represent their constituents, and farmers are in general able to participate in the cooperative's decisions and voice their concerns and priorities. The cooperatives and TDE have been developing organically; interested farmers have increased their production capacity and the union has integrated an additional cooperative.

One of the objectives of the intervention in terms of organizational capacity development is to increase the share of cooperative leadership positions held by women. Developments in this area have been disappointing, as the share of female leaders remained the same as the baseline of 31% in 2020, before decreasing to 30% in 2021 and falling to 22% in 2022. Although regular elections of boards have been organized in all cooperatives, recruiting women for leadership positions has proved challenging. In 2022, the local cooperatives elected two women as Board Presidents and three women to TDE's General Assembly. The objective of attaining 40% female presence on the boards of the cooperatives and the cooperative union by the end of 2023 will likely not be met.

More generally, efforts to increase women's participation have been hampered by low turnover among the members (in itself a positive development) and particularly by structural barriers. While traditional fish farming, with small ponds and locally sold output, is a backyard activity carried out by women, the TDE model requires capital investment and risk taking, as work on ponds has to be started before financial support is provided. Although women are traditionally quite autonomous in rural parts of Madagascar, ownership of land and capital is controlled by men; there is also a need to occasionally hire and oversee male workers, e.g., to dig the ponds, and these tasks are not easily accessible to women. While such obstacles are clearly detrimental to women's participation, many still contribute to running the family farms by being in charge of feeding the fish or accounting and financial management.

Cases are also reported in which male farmers, after experiencing an increase in their income, have entered into relationships with other women and/or asked for a divorce. TDE has contacted the ministry in charge of gender to

address such cases of divorce and the risk of unfavorable outcomes for women, but this has not led to any remedial action at the time of this writing.

TDE itself is governed at the highest level by the General Assembly of its members. The General Assembly meets once a year and elects a Board of Directors constituted by 3 ongoing or former chairs of cooperative boards. The Board offers a valuable link between the management of TDE, the cooperatives and the farmers. This comes in addition to the work of TDE's social organizer, through whom TDE's management can constantly provide information and explanations to the farmers and receive feedback on their situation and reactions.

Communication can and should be further improved, however, notably in the way farmers are informed about aspects in the management of TDE that are of direct relevance to their work. Reference is made in particular to the problem of shortage in fingerlings, on which communication from TDE is described as tardy and incomplete although the management had a clear understanding of the problem at an early stage. TDE's model for information sharing - from the Union's Board and management to the Boards of the cooperatives, and from the latter to the farmers - might need to be assessed and strengthened.

It might prove increasingly challenging to make further progress towards democratic decision-making structures – or even to preserve TDE's relatively decentralized model of governance – in the coming years. TDE's operations have substantially grown and become more complex as important assets have been acquired; this complexity might further increase as marketing and sales are strengthened in Antananarivo and as TDE has to rely more on financial institutions to compensate for NV's exit. This will make it more difficult to explain TDE's strategic choices and to open decision-making processes to farmers who, for a large share of them, cannot write and read. TDE has, however, managed to explain the context of its strategic decisions to its members, even when it involved concepts that were entirely new to them.

In summary, thanks in particular to the strengthening of its business model and management capacity through the intervention, TDE's cooperative organization appears to provide an effective basis for growth while at the same time generating a high level of local ownership. In the coming years, it will be crucial for TDE to invest in preserving its relatively flat and democratic organization in order to maintain a high level of cohesion and commitment within the cooperatives. In particular, providing up-to-date and transparent information to the cooperatives and their members will be a critical basis for the preservation of trust-based and constructive relations between the union, the cooperatives and the farmers.

Indicators for Outcome 1

After being slightly below target in 2020 and 2021, the intervention's outcome objectives regarding the production and sales of tilapia have surged and exceeded targets in 2022. Members have on average produced 2.5 tons of marketable fish during the year (baseline in 2019: 1 ton; level in 2021: 1.6 tons; target for 2022: 2.2 tons) and total sales of tilapia on ice have neared 800 tons (baseline in 2019: 357 tons, level in 2021: 530 tons, target for 2022: 750 tons). This makes it likely that, despite the current slowdown in production due to the disruption in fingerlings supply, the overall target of 900 tons of sales will be met in 2023. This objective, as discussed below, is perceived as critical for TDE's sustainability prospects.

³⁴ The figure concerns fish produced by the 340 farmers who were targeted by the initial agreement; an additional 280 tons of sales is expected from the 100 farmers included in the 2021 addendum.

To manage this sales performance, TDE has had to tackle two key challenges that will continue to be important factors for its future growth potential: the affordability of the product and the accessibility of the Antananarivo market.

The price of TDE's tilapia has increased as a consequence of rising input prices, even though TDE has managed to keep the increases below the general level of inflation (see Figure 1). Still, in a context where a large fraction of the population is experiencing reductions in its purchasing power and dim economic prospects, TDE's tilapia sold on ice increasingly appears as a product for middle-income (or even higher middle-income) consumers. This implies that future economic downturns could affect TDE's outlets, and also that access to the Antananarivo market, where a large majority of middle-to-high income families live, will be critical.

80% of TDE's fish is currently sold in Antananarivo and TDE is currently making further investment to increase its presence in the capital. The travel from TDE's central hub in Toamasina is made in trucks and can take up to 10-12 hours with very difficult road and traffic conditions. Mechanical failures are common, and it happens that the product does not reach its destination in time for market hours – or more seldom that it is lost. The transportation challenge led NV and TDE to devote part of the additional funds granted by Norad in 2022 to the acquisition of a refrigerated truck, so that TDE could take part of its deliveries in charge. Poor road conditions, combined with the importance of the Antananarivo market, might necessitate further capital investment to support TDE's future expansion.

Outcome 2: Political framework that supports rice and tilapia value chains

Output 2.1. Policy weaknesses identified and recommended changes drafted

Since restrictions related to the Covid-19 pandemic were lifted, TDE has planned and held regular meetings with policymakers, in particular with the aim to influence the unbalanced tax regulation for fish farming. After focusing initially on the Ministry of Agriculture, Animal Husbandry and Fisheries (MAEP), TDE has redirected its efforts towards the new (2021) Ministry of Fisheries and Blue Economy (MPEB). TDE has excellent working relations with the Ministry at both central and regional level, and a very positive image among key decision-makers. On the Ministry's request, TDE delivered a written proposal of changes to tax regulations in 2021, as well as inputs to policy and strategy development processes. Madagascar's new National Strategy for Freshwater Aquaculture (2022) puts emphasis on the importance of assessing the tax aspect in freshwater fish farming. The Strategy for 2022-2026 prioritizes the spread and increase of fish farming in Madagascar. It should be noted that the time span of these policy documents – and the likely horizon of a tax policy horizon – extend beyond the end of the intervention period in 2023.

Regarding training of decision-makers, the training scheduled for 2020 was postponed and carried out in the beginning of 2021 for 10 MAEP and Regional Director personnel (supported by the GIZ project). The refresher training scheduled for 2021 was not deemed relevant since the main training was carried out the same year. No request was made by the Ministry for further training in 2022, but in 2023 TDE reports having been requested through GIZ to make an offer for the training of 60 employees of the MPEB in tilapia pond farming techniques and financial management at farm level, confirming the Ministry's interest for TDE model of aquaculture.

Indicators for Outcome 2

Although TDE has delivered the planned policy outputs in a satisfactory manner, the outcome objective of triggering a tax policy reform by the government has not been achieved and is likely to require further efforts beyond the

intervention period. TDE has become a recognized and influential organisation in the aquaculture sector nationally and is able to deliver policy messages effectively. However, progress in this area is slow due to inadequate capacity and general governance weaknesses within the government, which are beyond TDE's reach.

4.4.1.2. Tanzania

The intervention in Tanzania is expected to lead to two outcomes: (1) Increased production and sale of rice; and (2) Political framework that supports rice value chains.

Outcome 1: Increased production and sales of rice

O1.1: Average production per farmer (bags per acre):

In 2020, the target of 21 bags per acre was met. In 2021, the production level was the same as the year before and slightly below target of 23 bags. The reason for this was the low rice price from 2020 which led to difficulties purchasing inputs such as fertilizers. The female farmers have lower yields than men since they do not have the same access to inputs like seeds and fertilizers. Part of the reason for this is that it is hard to obtain loans due to little collateral. In 2021, KTC and MTC provided small input loans to some stakeholders to ensure financial access to inputs. For 2022, the average production has decreased substantially to 11 bags, 7 bags for female farmers and 13 bags for male. This is less than half of the target and below the baseline. Reasons for this were drought conditions that had a dramatic effect to the annual yield and fertilizer price increase to almost double. Within these overall production numbers there are big differences between Mbarali and Kilombero districts. Since farmers in Mbarali had better access to water and fertilizers they produced 13 bags per farmer compared to 5 in Kilombero.³⁵

O1.2: MT paddy sold annually by small holder farmers:

In 2020, they were above target with 9 987MT. According to the progress report, this will provide rice for 250 000 Tanzanians. ³⁶ The rice customers included individual buyers, middlemen, KTC and MTC companies. In 2021, 12 878 MT of paddy was sold, exceeding both the annual and end targets. With the higher prices at the end of the year, the farmers were motivated to sell out their 2020 stocks. The sale varies substantially in the two project districts Kilombero and Mbarali. The project works with 1500 farmers in each area, nevertheless, the farmers in Kilombero only sold one fifth compared to their peers in Mbarali. This is due to less favourable agriculture and rice conditions in the Kilombero district, such as less improved seeds, irrigation and use of fertilizers. As a consequence of lower productivity in 2022, the quantity of paddy sold was lower than previous years and amounted to 9,028.4 MT.

O1.3: MT rice sold annually by companies:

The 2020 goal of 500 MT was not reached. KTC and MTC bought the total quantity of 465 MT from the smallholder farmers, but only 371 MT of paddy/rice was sold by the companies. This left an end of year inventory to be sold in 2021. Two contributing factors for the limited sale were: 1) Challenges with the MTC milling machine, and 2) low price for rice in the market. The latter was a result of restricted rice sale to neighbouring countries due to Covid-restrictions, leaving the Tanzanian market saturated with rice and consequent low prices. The 2021 target was not reached either, and far below target with only 49 MT of rice and 120 MT of paddy sold. The latter was the stock left from 2020. The price for the paddy barely covered the purchasing costs. This led to reluctance of trading rice in

³⁵ Draft COMRICE II Outcome report 2022.

³⁶ Based on the average amount of rice consumed per person per year, Norges Vel's 2020 progress report, p.2.

2021. By the time the companies realized that the 2021 prices would be better, the price for paddy had already gone up and profitable sales would be hard to achieve. Therefore, the companies put focus on inputs to the farmers instead. In 2022, the goal of 1 500MT was not reached. Only 102 MT were sold by MTC and KTC. This outcome target has not been met any of the project years and the trend has been deteriorating. According to NVE Head office, the goals were also unrealistic given the infrastructure in the intervention areas, however upgrading these have been part of the project from the start.

Outputs

OP1.1 Smallholder farmers trained in the rice value chain:

220 farmers were trained in 2020. This amounts to 92% of the target. The number of trained farmers is added to the baseline of 1260 and in the results framework reported as 1480, with 39% women. In 2021, 627 farmers were trained, 56% male and 44% female, which is above 2021 target both in total and the female percentage. In 2022, 310 people were trained. Of the participants 41% were women. This exceeds the target and accumulatively a total of 2 416 farmers have been trained since the beginning of the project. The trainings provided by MTC and KTC focused on post-harvest loss, weigh scale importance, use of quality declared seeds, Good Agricultural Practices (GAP), System of Rice Intensification (SRI) and proper use of agro chemicals.³⁷

OP1.2 Smallholder farmers have access to inputs:

The percentage of farmers using improved rice seeds was above targets 2020 - 2022 with 34%,37 % and 41% respectively. The goal of 40% women was exceeded all three years as well. In 2022, the total number of smallholder farmers applying improved seeds was 1 230. In 2021, 36% women and 38% men used improved seeds, this is almost equal usage and positive compared to other adoption rates in the project. The female-male ratio had a bigger gap in 2022 with 37% of the female farmers reached using improved rice seeds, compared to 46% of the men. Mbarali farmers purchased used improved seeds a lot more than in the Kilombero district, due to better irrigation and water access.

Selected farmers have been trained and certified in quality declared seeds (QDS). In 2020, 18 were certified. In 2021, 17 were certified and produced 17 400kg of QDS providing quality seeds to around 2900 farmers. ⁴⁰ The demand for these seeds is high.

Targets for smallholder farmers using fertilizer and pesticides were met in 2020 (80%, 34% women) and 2021 (85%, 78% women, 90% men). The goal of 40% women was not fully met in 2020 but exceeded target in 2021. In 2022, it was only 1 590 of the total rice farmers that used fertilizer and pesticides in their production. This is just 53% completion of the target and 24% below baseline. Reason for this is that the price for fertilizer uncreased substantially from 70 000 TZS to 110 000 TZS. There are also big differences between male and female farmers, the latter not having property to set as collateral for input loans. The draft reporting includes different numbers for the

³⁷ Norges Vel's 2021 progress report.

³⁸ Norges Vel's 2021 progress report.

³⁹ Draft COMRICE II Outcome report 2022.

⁴⁰ Norges Vel's 2021 progress report.

female-male ratio, and it is unclear whether the goal of 40% was reached in 2022. There are also a great variety between Mbaralii and Kilombero. 41

OP1.3 Smallholder farmers have access to production and processing infrastructure:

The number of farmers using improved rice farming equipment were above targets the first two years. In 2020, 56% (34% women) and 66% (64% for women, 68% for men) in 2021. The percentage of women was below the 40% goal in 2020 but considerably higher the following year. Women and men have almost equally deployed improved farming equipment. The end target of 70% with access to improved equipment was almost met. In 2022, only 59%, 1 770 persons, applied one or more improved farming equipment. This is 91% of the annual target of 1 950 farmers. Only 22% of farmers reached in Kilombero used improved equipment.

MTC purchased a combined harvester in 2021, allowing 116 farmers to use the machine for less labour-intensive harvesting. Shareholders can hire the harvester at lower rates. The harvester generated good income for MTC already the first year.

OP1.4 Capacity of smallholder farmers' cooperatives or business companies are strengthened:

The number of trainings provided to board members were achieved according to plan in 2020-2021. In 2022, eight trainings were planned and six were carried through. Board members and management of KTC and MTC have been trained in thematic areas such as finance and compliance, marketing and sale, governance, leadership. business plans and business models.

The digital information application was further developed in 2021. The app, both a webpage and app, was established to help farmers secure their produce and facilitate the communication between farmers and buyers with information about amount, variety and quality of rice, as well as a direct chat possibility, geographical data and price fluctuations. Nevertheless, the development of the app was decided to be phased out. Only three trainings were accomplished in 2021, compared to the seven planned.

The 2020 target of two companies certified, was achieved. Further, 40 millers were trained in business and trade regulatory compliance to feed into certification planned the coming years.

In 2021, 48 millers were trained and are in the certification process. The results framework stated a goal of eight millers certified while results are reported as two companies. On the other hand, the progress reporting states that "[n]o millers were certified in 2021, and this was according to plan".⁴³ There seems to be a discrepancy between the results framework reporting, and the narrative progress reporting. Thus, some results are not directly comparable. Further, the percentage of women certified is not reported on but set to 20 % in the output indicator. No millers have been certified in 2022 either. Reporting is only referring to the same 48 millers being prepared for certification. No progress on this output.⁴⁴ According to NV's Tanzania office was the activity of certifying Millers suspended by

⁴¹ Draft COMRICE II Outcome report 2022.

⁴² Draft COMRICE II Outcome report 2022.

⁴³ Norges Vel's 2021 progress report, p.4.

⁴⁴ Draft COMRICE II Outcome report 2022.

the project due to slow rice Millers response in PY 2002. Despite the efforts and investment in this activity, it was realized that clarification is not driving force for rice business because there is weak enforcement. The project continued however to support capacity building on good manufacturing practices (GMP) to ensure quality rice production. Training rice millers on good manufacturing practices (GMP), maintenance of rice milling machines, business development and branding of milled rice and compliance to business regulatory frameworks facilitated millers to improve rice business and earn higher income.⁴⁵

Outcome 2: Political framework that supports rice value chains

The number of policies implemented were above target both years, particularly high for 2020 with seven policies. These were policies that RCT has worked for over a long period of time. The continuation will be to ensure that the policies are presented and implemented to and for the stakeholders. The reporting acknowledges that these results do not solely derive from the work of RCT but highlights RCT's role in the process being the voice of the rice farmers and the other value chain stakeholders.

The number of policies formally adopted also exceeded targets both years. In 2020, the crop insurance policy was adopted.

In 2021, the narrative progress reporting does not describe the details of the achieved results of outcome indicators O2.1 and O2.2. According to the result framework reporting, the results were above target, but the complementary narrative does not elaborate on which policies were implemented and adopted. The 2021 narrative report lacks details at the output level.

Notwithstanding, the narrative progress reporting describes the focus of RCT to work for access to quality seeds. Meetings and discussions with relevant authorities have been held and specific initiatives are already being operationalized by Tanzania Agricultural Research Institute (TARI) – multiple improved seeds selling centres; Tanzania Official Seed Certification Institute (TOSCI) – guidelines for QDS production; Agricultural Seed Agency (ASA) – additional seed multiplication centres. Furthermore, the 1% cereal crop withholding tax was removed in 2021, lobbied for by RCT and other stakeholders.⁴⁶

Meetings with decision-makers and policy proposals to decision-makers were met and exceeded targets both years.

The 2022 report does not provide sufficient information to conclude about progress about the outcome and output indicator for political framework, as the report is not yet finalised.

4.4.1.3. Mozambique

Outcome 1: Increased production and sales of cashew and groundnuts

The annual production of cashew and groundnuts⁴⁷ was in 2020 above target with 753 MT. In 2021, the results were 2666 MT which is high above target, almost double. The majority of this was cashew production, with 2103 MT. The production numbers refer to production by all coop members and community farmers. In 2021, new cooperatives

 $^{^{45}}$ 2022 final AOS page no.20-23

⁴⁶ Norges Vel's 2021 progress report.

⁴⁷ Reference from results framework: "*Increased cashew production can only be increased on a 4-year scope by improved tree care and the implementation of bio-spray."

were established which increased the number of members and added to the production numbers. In 2022 the production increased to 2980 MT, slightly below the target of 3000 MT, of which 2229 MT was of cashew.⁴⁸

The market for groundnuts is still weak. Reportedly, the opening of the AflaLivre factory in Nampula in 2022 was expected to help strengthen the market since the production of AflaSafe would help prevent aflatoxins in the groundnuts. The construction of the factory is delayed and its completion and beginning of operations is expected for August 2023⁴⁹. Whilst not directly linked to the delay of the factory operations, some producers still report difficulties in selling their production of groundnut due to its limitation mostly to the internal market and the fluctuations of prices and the possibilities of the traders buying directly from the individual small producers at lower price⁵⁰.

Regarding annual sale of cashew and groundnuts⁵¹, the results were high above target with 718 MT in 2020 and 2666 MT in 2021. This is more than double of the targets both years. In 2022 the sales via cooperative were only of 618 MT (21% of the total production) and the rest was sold outside the cooperative scheme. The groundnut was sold at an average price of 44.45 MZM per kilogram, and the cashew at 35 MZN, less 5% of the reference price. The cashew quality was considered very good⁵²

The strong results in 2020 were due to aggregation and an auction strategy. AMPCM reported that the sale could have been even stronger in relation to production volume and sale, if more aggregation could have been financed. The coops had the capacity to buy 75% of the production of farmers, the rest the farmers sold themselves to lower prices. Fall 2021, the auction did not have the same success as the previous year due to lack of buyers and will to pay the reference price. A probable cause was the boycott by processors and exporters, to avoid paying reference prices.

While exceeding the target of annual sales, the cashew nut sector encountered several challenges in 2021; 1) Insufficient jute bags, 2) logistical problems, 3) unstable market and drop of reference price, and 4) lack of financing to aggregate.⁵⁵

In 2022 the sales were lower than expected due to: 1) lack of market linkages - despite the aggregation of their harvest and control of quality the linkages with the market are still low; 2) lack of production per contract model, which forced them to look for buyers and more vulnerable to price fluctuations; or 3) unfair local business traders,

⁴⁸ AMPCM (2023): Building Resilience 2022 Annual Report.

⁴⁹ Interview with AMPCM – 13 April 2023.

 $^{^{50}}$ At least two cooperatives reported difficulties in selling their groundnut production in Angoche and Monapo.

⁵¹ Reference from results framework: "**Registrered sale of raw cashew and groundnuts with low aflatoxin levels by Cooperatives and organised farmers."

⁵² AMPCM (2023): Building Resilience 2022 Annual Report, page 3.

⁵³ Norges Vel's 2020 progress report.

⁵⁴ Norges Vel's 2021 progress report.

⁵⁵ Norges Vel's 2021 progress report.

which ganged up to disrupt the sales of the producers through the cooperative scheme and pay lower prices ⁵⁶. The project negotiated and successfully mediated an agreement between a Condor company subsidiary operating in the North - Moza Cashew and the cooperatives, in December 2022. According to the agreement, the cooperatives will supply 500 MT of raw cashew annually, with high quality standard and an extra premium will be paid if the quality is higher than what was agreed⁵⁷.

Outputs

OP1.1 Smallholder farmers trained in the cashew and groundnuts value chain

The number of smallholder farmers trained in the cashew and groundnut value chain, were high above targets both years. ⁵⁸ In 2020, 587 were trained, 272 women and 315 men. With the AMPCM approach of Training of Trainers (ToT) and that the trained farmers trained all members from their associations, the number of members that received training amounted to 4 264, 42% women and 58% men.

For 2021, the number trained was 1 850, 701 women and 1149 men. In 2021 only the ToT numbers are indicated and not the representatives that were directly trained. 14 of the cooperatives in the project set up demo plots where they planted various crops. The aim was to encourage agroecology and share knowledge to the wider community, and not just to members.⁵⁹

In 2022, 6600 local smallholder farmers, of which 2100 women, were trained on techniques of peanut production mixed with other crops and, in this regard, 22 demo plots were established. The project trained 1020 farmers and field officers on how to use Aflasafe, of which 351 are women. Additional 30 new cashew seedling micro nurseries were created, and 61 nursery operators were trained.⁶⁰

The trainings focused on how to operate a nursery, good agricultural practices and the topics included agroecology, post-harvest, traceability and aflatoxin free production of groundnuts.

OP1.2 Smallholder farmers have access to inputs

The number of cashew trees produced by centralized nursery and distributed by decentralized cashew micro nurseries was far below targets for 2020 and 2021. The 2020 target was 100 000, actual result was 44 242. In 2020, 99 000 polyclonal seeds were allocated, 53 770 were used for seedling production and 44 242 survived. The lower number of allocated seeds used was since the coops planted according to the farmers' demands. The 2021 target was 300 000 trees, actual reported as 44 242. According to the 2021 reporting, the numbers are identical in 2020 and 2021 since the 44 242 cashew trees reported as results in 2020 were actually planted in Q4 in 2020 and distributed in Q1 of 2021. Therefore, the correction is that these should rather have been reported when the

 $^{^{\}rm 56}$ AMPCM 2022 Annual Report, page 3, and interviews with producers.

⁵⁷ Interview with AMPCM, 13 April 2023.

⁵⁸ Reference from results framework: "***Trainings in treecare, bio-spraying, value addition of cashew by drying, sorting and bagging - for goundnuts the use of AflaSafe and drying, deshelling and storage technics to maintain quality."

⁵⁹ Norges Vel's 2021 progress report.

⁶⁰ AMPCM 2022 Annual Report, page 4.

⁶¹ Norges Vel's 2021 progress report.

seedlings were distributed. Accordingly, the numbers should then be 0 for 2020 and 44 242 for 2021, which is far below targets both years.

Norges Vel has taken over the Nursery in Namaita from Green Resources on behalf of the cashew partners. Work to rehabilitate buildings, electrical supply and seedling production was started in 2021, as well as establishing good relations with the surrounding community. The central nursery will comprise, a polyclonal cashew orchard, Demo Machambas (demonstration farms), a composting facility, a warehouse, a greenhouse, a learning centre for farmers, youths and schools, among other facilities⁶². With the Namaita nursery operative, Norges Vel considered that the end target of producing 1 000 000 cashew trees will be reached.⁶³ In 2022 the production of cashew seedlings was 602 200, of which 270 000 from the central nursery of Namaíta and the remaining from micro-nurseries. The target of 1 million cashew seedlings is expected to be met in 2023, with the harvest to be in the first quarter of 2024⁶⁴.

The number of smallholder farmers using bio-spray and AflaSafe was below target both years. For 2020 the goal was that 1000 farmers should use bio-spray and AflaSafe. 0 farmers used bio-spray, but 670 smallholder farmers were using AflaSafe on their farms. For 2021, the goal was 1500 farmers. The results indicate that 0 farmers used bio-spray, while 1000, of which 331 women and 669 men, farmers were using AflaSafe on their farms. In 2022, 2885 farmers used AflaSafe, of which 1017 women.

The bio-spray was used in test farms/fields in 2020, but tests of its efficacy were not conclusive and, consequently, no certified product was promoted or distributed. no official, final product has been released.

The 2020 reporting indicated that AflaSafe hopefully would be produced in Nampula in 2021.⁶⁵ However, the construction of the factory was delayed, and it is expected that its production starts in August 2023. The AflaSafe used in 2021 and 2022 was produced and imported from Arusha.

OP1.3 Smallholder farmers have access to production and processing infrastructure

The number of cooperatives that own a functional warehouse was 12 in 2020 and 15 in 2021. This is slightly below the respective goals of 15 and 20. The target for 2022 was 4 warehouses rehabilitated ⁶⁶ and 3 warehouses were rehabilitated (2 in the district of Mogovolas and 1 in Moma) ⁶⁷. The challenges in 2020 included Covid-restrictions and its effect on rehabilitation work, increase in material prices and uncertainty at the AMPCM whether they would have enough funding to cover costs for rehabilitating the remaining three warehouses. With unspent 2020 funds and currency gain, these warehouses were rehabilitated in 2021. AMPCM reported in 2021 that the end target of 30

⁶² Upgrading CNN - Once off investments with great potential for enhancing food security. Moz-2022 Addendum, Annex C-1. Application for extra funds Moz.

⁶³ Norges Vel's 2021 progress report, p.12.

 $^{^{\}rm 64}$ NORAD. 2023 Updated Implementation Plan and Budget, page 2.

⁶⁵ As part of the Groundnut project supported by the Norwegian Embassy in Mozambique and where Norges Vel and AMPCM are partners.

 $^{^{66}}$ MOZ-2022-Addendum Annex c-2 Compensation Funds Application Moz, page 4.

⁶⁷ AMPCM 2022 Annual Report.

operational warehouses would be hard to reach unless more funding was allocated to this end.⁶⁸ The target for 2023 is to rehabilitate 4 more warehouses, thus, it is expected that at the end of the project a total of 23 warehouses will be operational⁶⁹.

The target numbers of cooperatives with access to drying capacity for crops have not been met. The 2020 goal was five, while only two coops had access to drying capacity by the end of 2020. The goal for 2021 was 29 and only three were achieved. 2020 progress reporting claims that this was due to Covid-restrictions and same challenges as the rehabilitation of warehouses, but that this would be prioritized in 2021. The 2021 results, on the other hand, do not demonstrate improvement. The reporting states both years that 48 members would benefit from the drying capacity if the products were processed at union level but, in reality, only the coops located near the unions are able to use the drying capacity for crops. Thus, the remaining members prefer to process at community level. ⁷⁰ In 2022 it was reported that 44 cooperatives had access to drying facilities, benefitting 2885 farmers (1017 women), against a target of 34 by the end of the project in 2023.

OP1.4 Capacity of smallholder farmers' cooperatives or business companies are strengthened

The percentage goals for female leaders in cooperatives and business companies were 38% in 2020 and 45% in 2021. In 2022 it was 21%. The results were 23% and 30% in 2020 and 2021 respectively, both below baseline due to new cooperatives that have come aboard since the initiation of the project period. In 2021, AMPCM had 69 members in the project, including unions. 13 of these were led by women. In 2022 there were 70 coops and 15 led by women. Some coops only have female members, and these prove to have better results than the other coops. This is used by AMPCM to argue for women's participation and the added value.

Challenges to improve gender equality are cultural stigma, elections are not held annually and illiteracy. Mitigating measures from AMPCM include sensitisation on women's rights and gender, contact with local government institutions to include coop members in local literacy projects, to tackle shyness and lack of confidence, pointed out as concerns of women to be selected to leadership positions⁷¹.

The number of cooperatives with access to finance were slightly above targets in 2020 and 2021, with 16 and 21, respectively and below target in 2022 with only 21 accessing revolving funds, against a target of 25⁷². The 2020-23 report claims that all 65 coops (unions included) have access to the revolving fund, against a target of 30 for the period 2020-23. It was through this fund that the project acquired 44 atomizers for 21 coops. The access is through the Revolving Fund managed by the cooperative unions. Production plans are submitted by the primary coops. Funds are disbursed from the union and coop members receive funds through their cooperative to invest in production. Until 2021, it was reported that the loans are paid back on an annual basis with an interest rate of 10%

⁶⁸ Norges Vel's 2021 progress report, p.13.

 $^{^{69}}$ Interview with AMPCM, 13 April 2023.

 $^{^{70}}$ Norges Vel's 2020 and 2021 progress reports.

⁷¹ Building Resilience 2022 Annual Report, page 6.

⁷² Building Resilience 2022 Annual Report, page 3.

on average.⁷³ In 2022, the report only refers that "the repayment process is still ongoing"⁷⁴, and according to the source of the project, about MZN 1,500,000 (50%) was paid back.

Cooperatives with aggregation services to their members was above targets in the three years with 36 in 2020, 48 in 2021 and 60 in 2022.⁷⁵ Parallel projects, such as ConnectCaju⁷⁶, have synergy effects since new coops have been established and all new cooperatives in the cashew and groundnut sectors benefit from aggregation services.⁷⁷

⁷³ Norges Vel's 2021 progress report, p.14.

 $^{^{74}}$ AMPCM 2022 Annual Report, page 7.

⁷⁵ Reference from results framework: "****Aggregation and quality enhancement of cashew and groundnut by cooperatives will be measured by volume and value addition giving improved margins." Building Resilience 2022 Annual Report, page 3.

⁷⁶ Funded by the Norwegian Embassy in Mozambique.

⁷⁷ Norges Vel's 2021 progress report.

4.5. Annex 5 Terms of Reference





Terms of Reference for Near-End Review of the frame agreement project "Poverty reduction through business development and formal cooperation, QZA-0881 QZA-19/0271",

January 2020-December 2023,

financed by the Norwegian Agency for Development Cooperation (Norad)

1. Introduction

A near-end review of the grant frame agreement project 2020-2023 "Poverty reduction through business development and formal cooperation, QZA-0881 QZA-19/0271" shall be carried out before the end of the project with focus on results achieved, according to agreement between the Norwegian Agency for Development Cooperation (Norad) and the Royal Norwegian Society for Development (Norges Vel). It is however in addition in the near-end term review crucial to focus on "lessons learned", both positive and negative, and give recommendations on how Norges Vel going forward can achieve further improved results. The near-end review shall be carried out January-May 2023.

The near-end review is viewed as complementary to ongoing monitoring and reporting by Norges Vel to Norad and is an external source of information and an important basis for Norad's assessment of current project development. The near-end review can also give important inputs to Norges Vel's application to Norad for a new frame agreement (2024-2027).

There is a structured results framework covering the sub-projects in the frame agreement project with Norad, with expected impact, outcomes and outputs all with indicators and values expected, as well as sources of verification and frequency of measurement. Baselines can be separate studies or structured information from preceding project phases and form an integral part of developing the project as well as monitoring the progress regularly in well-structured approaches.

Background

Norges Vel has since its establishment in 1809 strived to create viable local societies. Our core competence lies within the professionalisation of value chains, specifically within agriculture and aquaculture. The international department was established in 1978 and has since then been working with international development matters. The overall goal of Norges Vel's international work is to reduce poverty and to fuel local economic growth through local business development, mainly based on climate-smart use of local natural resources. We believe our interventions contribute to broadbased, increased food security, income levels and employment in local communities. Norges Vel's





international department has its head office in Norway (Hellerud) in addition to local offices in Tanzania (Dar es Salaam) and Mozambique (Maputo) currently.

Our target groups are women and men whose livelihoods stem from agriculture and aquaculture. These include small-scale producers, entrepreneurial smallholders, business entrepreneurs and small and medium-sized enterprises (SMEs).

The agricultural and aquacultural sectors in our focus countries are swamped by multifaceted challenges, thus restraining a large proportion of the population from making a noticeable leap out of poverty. Challenges range from low productivity and competence, vulnerability to weather, limited access to credit and financial services, to the lack of organisation and integration into formal markets and value chains. Smallholders are in the frontline of combatting these constraints, while at the same time confronting tremendous threats and effects from climate change. A large number of these smallholders are in a unique position to benefit from transforming subsistence farming into profitable business enterprises, while at the same time playing a significant role in ensuring climate resilient practices and contributing to the development of sustainable local communities and societies. Norges Vel's role with support from Norad is to equip smallholders with the skills, tools and capacities to become active players in a formalised market approach and position themselves to take control of their own development.

Poverty is not just lack of resources or income, but also inequalities in access to and control over non-material resources available in any society. Gender is one of the main determinants of inequality in access to and control over resources and benefits in the society. In all our interventions we seek to address gender imbalances, by encouraging equal involvement of men and women in formal business operations, from production to decision-making and holding of leading positions. Often this requires particular focus on empowerment and capacity building of women.

We believe strong partnerships on both local and international level are of utmost importance to achieve the needed results. We work with local partners and strengthen them directly as integral parts of our projects, to stand on own feet, and we are in regular contact with relevant governmental institutions and ministries and participate actively in giving inputs about the sectors which we and our partners work within. To create learning, innovation and increased value chain development, Norges Vel works with linking different expertise and promotes networking between research and development (R&D) and business. Lessons learned from our work are in collaboration with our partners presented to other stakeholders.

By supporting smallholder farmers to become more sustainable as specified above - food production, increased jobs and income are expected to be achieved. With the rapid change in climate, we are ensuring that our target groups are becoming more resilient, equipping them with know-how and tools to sustain these challenges. Through farmers organising into cooperatives or other business forms, there is a strengthening of their market access and improvement in their living conditions. Strong and solid national and international cooperation are key to achieving the expected results.

Our international work is thus focussed on specifically SDG 2 – End hunger, achieve food security and improved nutrition and promote sustainable agriculture, SDG 8 – Promote sustained, inclusive and





sustainable economic growth, full and productive employment and decent work for all and SDG 17 — Strengthen the means of implementation and revitalise the global partnership for sustainable development.

The current project/ frame agreement to be reviewed was planned and conceptualised in 2019, before the COVID-19 pandemic, the war in Ukraine and Norway's newly adopted strategy for food security in international development cooperation (2022). In addition, climate change has accelerated further the last three years. It is crucial to ensure that current development cooperation initiatives are fully aligned to current climate change and fully climate resilient, and also taking into account the current financial consequences of international pandemics and politics, and current strategies and policies.

3. Focus of the project to be reviewed

Under this ToR it is the current frame agreement project "Poverty reduction through business development and formal cooperation, QZA-0881 QZA-19/0271" which is to be reviewed.

The intended target group in the project is smallholder farmers in Tanzania, Madagascar, and Mozambique.

The expected effect(s) on society or the Expected Impact is:

Smallholder formers in Tanzania, Madagascar and Mozambique have increased their

I Indicator 1.1. Smallholder farmers monthly income in TZS from rice value chain (TAN)
I Indicator 1.2. Smallholder farmers monthly income in MZM from cashew and groundnuts value chain (MOZ)

I Indicator 1.3. Smallholder farmers monthly income in MGA from tilapia value chain (MAD)

The expected effects for the target group of the project or the Expected Outcomes are:

- . Outcome 1 Increased production and sales of rice, tilapia and cashew and groundnuts
 - O Indicator 1.1. Average production per farmer (bags per acre) (TAN)
 - O Indicator 1.2. MT paddy sold annually by small holder farmers (TAN)
 - O Indicator 1.3. MT rice sold annually by companies (TAN)
 - O Indicator 1.4. MT tilapia produced annually (per member) (MAG)
 - O Indicator 1.5. MT tilapia on ice sold annually (Antananarivo and Tamatave) (MAG)
 - O Indicator 1.6. MT cashew and groundnuts produced annually (MOZ)
 - O Indicator 1.7. MT cashew and groundnuts sold annually (MOZ)
- Outcome 2 Political framework that supports rice and tilapia value chains
 O Indicator 2.1. # of policies implemented (TAN)





O Indicator 2.2. # of policies formally adopted (TAN)
O Indicator 2.3. # of policies suggested or put on the agenda by decision-makers (MAG)

The Expected Outputs of the project are1:

- OP1.1 Smallholder farmers trained in their respective value chain
- OP1.2. Smallholder farmers have access to inputs
- OP1.3. Smallholder farmers have access to production and processing infrastructure
- OP1.4. Capacity of smallholder farmers' cooperatives or business companies are strengthened
- OP2.1. Policy weaknesses identified and recommended changes drafted
- OP2.2. Decision-makers lobbyed on policy weaknesses and advantages of recommended changes

Please see the most recent results frame for the frame agreement as approved by Norad in Annex 1.

The Frame Agreement's/ Project's documents such as grant agreements, addendums, further results frame information, budgets, narrative and financial reports and all other relevant project documentation will be shared with the chosen Consultant.

4. Purpose and use

The near-end review's main purpose is to assess the progress to date (achievement of targets set 2020-2023), lessons learned (positive and negative), and give recommendations on how Norges Vel can improve work and results achievements going forward. This includes focus on sustainability, climate resilience/adaptation, gender equality, relevant improvements in work methods and models for further success, and thus recommendations on priorities and changes relevant to Norges Vel's work.

This shall include the results in relation to the goal hierarchy (results framework) and implementation plans and budgets, as well as assessment of relevance, impact, coherence, efficiency, effectiveness including the models and methods employed in the project, sustainability with risks and including also the capacity of the grant recipient for the project.

¹ Indicators to be seen in the complete results frame, please see Annex 1.





The projects in Madagascar, Tanzania and Mozambique are in different phases of the project cycle and there shall be different weighting of the different parts of the assessment in the different countries:

- Focus on sustainability will be stronger in Madagascar where the current focus of the support
 is closer to being phased out (but potential for some new intervention might be crucial).
- Focus on methods, way of organizing and efficient processes shall be more emphasized when assessing Tanzania and Mozambique.
- However, all areas addressed in the ToR shall be assessed at some level for all the three countries' work.

The main purpose and use of the End-Term Review is thus to:

- Assess the relevance, impact and coherence of the intervention.
- Assess the interventions' results achieved/ effectiveness, lessons learned, and the
 potential for further improving results achievement and sustainability.
 - Assess the implementation/ methodology/ work processes and value chain developments achieved as well as the organization of the intervention and how achievements can continue serving the target groups (women and men), customers and other sector players.
 - Recommend adaptations or other related to results achievement and sustainability.
- Assess the enabling environment and risks, such as the climate change, political, regulatory, economic, technical, socio-cultural and other relevant requirements for developing successfully the projects and targeted value chains.
- Give other constructive recommendations for how to go forward to develop sustainable work methods, models and results targeted in each country and if relevant sector changes are required
- Recommendations for Norges Vel's application to Norad for new frame agreement 2024-2027 – with special focus on any needs for further climate resilience

5. Objectives and Review Questions

Relevance:

 To what extent do the intervention objectives and design respond to beneficiaries', global, country and partners' needs, policies, and priorities, and continue to do so if circumstances change?

Impact:





 What are the positive and negative effects of the intervention, intended or unintended, directly on the target groups, women and men, and indirectly on society at large?

Including but not limited to:

- Increased income for the target groups (ref. Project Impact indicators I.1.1-I.1.3) in the value chains/ sectors.
- o Impact of training received on the target groups' lives.
- Impacts such as increased income, jobs, products relevant for customers, other players in the value chains and the overall sectors in which work is implemented.
- Other impacts identified, or other stakeholders impacted positive and negative.

Coherence:

 How well does the intervention fit with other country/ sector interventions, and with Norwegian international development cooperation priorities?

Including but not limited to:

- o What are main positive and negative issues currently influencing or seen to in the future most likely influence the work carried out by the intervention?
- TAN, MAG, MOZ: Relating to project targets and taking into consideration Norway's new Strategy for Food Security in International Development Cooperation (2022) include assessment about how women, youth and persons with disabilities are and can be included further in the project.
- TAN, MAG, MOZ: To what degree are R&D institutions worked with/ are linkages made between the small-scale farmers and R&D institutions which are relevant for the farmers?
- Recommendations to improve any of the above or other areas as seen relevant?

Effectiveness:

Is the intervention achieving or expected to achieve its objectives and results?
 To be documented according to the results frame indicators expected achieved.

Including but not limited to:

- O TAN: Assess farmer selection methods, training strategy, and business development – how can work/implementation methods in these areas be improved?
- o MOZ: Are farmers organized in the most effective and appropriate way?
- TAN, MOZ: Are monitoring and data collection methods, formats and processes efficient? Please propose possible alternative improvements.





- TAN, MAG, MOZ: The methods/ processes for involvement of the target group in the intervention and in the organisations/ businesses supported – are they democratic and is there local ownership? Any recommendations for further improvements?
- TAN, MAG, MOZ: What are the reasons for objectives and results achievement? What are the reasons for non-achievement of objectives and results?
- Recommendations to improve any of the above or other areas as seen relevant?

Efficiency:

- Is the project implemented as cost-efficient as possible, on time? [ref. all indicators as relevant)
 - Taking into account the effects of COVID-19, the war on Ukraine, evt. other
- Are results achieved with reasonable use of resources? (ref. all indicators as relevant)
 - O Taking into account the effects of COVID-19, the war on Ukraine, evt. other

Sustainability:

- Are the exit plans and sustainability strategies well and clearly addressed?
- Which factors might influence the sustainability of achievements made, and of further sector developments?
- What are the realistic activities that can be self-sustained after the project period (especially for Madagascar – Tanzania and Mozambique still under further development)?

Including but not limited to:

- Sustainability of achievements made to date? [ref. Indicators for Outcome 1.1-2.3 with Output Indicators 1.1.1-2.2.1 – especially MAG]
- Sustainability of the business models, technical models and training models (incl. digitalization/apps/systems) – to achieve sustainability for all involved? (ref. Indicators for Outcome 1.1-2.3 with Output Indicators 1.1.1-2.2.1)
- Sustainability regarding gender equity and equality, fulfilment of human rights, environment, good governance and combating corruption (crosscutting issues in the project - covering all indicators)
- Any other issues influencing the sustainability of the models established and for a potential expansion if seen required/ relevant (ref. all project indicators + for other related required developments as relevant)
- Improvements needed to ensure full sustainability at all levels.





 Special focus on climate adaptation/ resilience (covering all indicators as relevant) — what actions are required to ensure climate resilience towards 2030?

Risk management:

 Have any expected risks materialized which influenced the achievement of results or which had unintended harmful consequences, including for cross-cutting issues?

Including but not limited to:

- o Quality input access + quality management
- Markets, logistics and other value chain developments/ changes
- o Environmental sustainability
- o Climate change with climate resilience
- o Gender equality and equity
- o Participation of youth
- Human rights including people with disabilities
- o Good governance and corruption
- o Political
- O Legal conditions affecting the sector- and value chain development
- · Are the originally identified risks still relevant?
- . Have any unforeseen risks occurred, and how were they dealt with?
- Are there any new risks that are relevant for the grant manager, project implementer and/ or target group?
 - Including but not limited to how has the COVID-19 pandemic, the war in Ukraine, augmented climate changes and evt. other affected the project/ frame agreement work?
- · Propose actions to counteract/ contravene negative risks as possible.

6. Scope

- a) Project to be covered: "QZA-0881 QZA 19-0271 Poverty reduction through business development and formal cooperation" under Norges Vel with Norad support.
- b) Time period: February-April 2023. Timing proposal is around 7-10 days preparation/ document review, 21 days for fieldwork (incl. travel), in addition to 7-10 days report writing and 10 days to integrate comments on the draft report. To be assessed and finally proposed in the Technical and Financial Proposal by the Assessment team.
- Geographical area: Tanzania Dar es Salaam, Mbarali, Mbeya and Kilombero, Morogoro; Madagascar – Tamatave and Antananarivo; Mozambique - Nampula.





7. Approach and Methodology

Relevant methodology shall be proposed by the consultant as a central part of the Technical Offer (ref. also 8., 9. and 12. below).

The approach and methodology should include but not be limited to:

- a) Use of both quantitative and qualitative methods, as found relevant by the evaluation team, with a triangulation of the data collected (with documentation) field visits/ questions to more than one player on crucial questions in a relevant combination). The data triangulation shall be documented by the consultant.
- b) Assessing all relevant Sources of information:
 - Project documents, reports and other relevant documentation from Norges Vel, partners, project consultants, authorities/ Ministries and other, consumers, other relevant organisations/ private players/ donors or other project stakeholders.
 - Field visits, meetings/ interviews, observation etc. with and of Norges Vel, partners, project consultants, authorities/ Ministries, consumers, other relevant organisations/ private players/ donors and other project stakeholders.
 - iii. Other as/ if deemed relevant by the Consultant.

Specification of the methodology planned must be presented in the Technical Offer to be delivered as specified in 8., 9. and 12. below.

If needed, request will be made of a further detailed methodological approach to the chosen Consultant and to be specified in the Inception Report to be sent by the Evaluation team to Norges Vel before the field visits and meetings. This shall be finally agreed with and approved by Norges Vel before its implementation.

An evaluation grid and an evaluation programme are to be elaborated by the chosen consultant as part of the Inception Report, to be discussed and agreed in Final Form with Norges Vel before its implementation.

Methodological challenges and hence potential limitations in findings and conclusions shall be included in the Inception Report and the End-Term Review Report.

In short, appropriate methods and data must be applied and used to answer the evaluation questions, so that all findings and conclusions are backed by proper analysis and evidence.

8. Quality Standards





- OECD/DAC Quality Standards² and Criteria³ for Development Evaluations shall lie at the basis to ensure the quality of the mid-term review and pertaining reports.
- All findings and conclusions must be backed by reference to evidence (source) and their magnitude/ representativeness commented (alternatively prepared to be presented on demand) (also OECD/DAC standard).
- Ethical standards such as confidentiality of informants, sensitivity and respect to stakeholders, Do No Harm, Code of conduct etc. should be fully applied and respected. Norges Vel's Ethical Guidelines apply for all Norges Vel personnel, consultants and partners.

9. Management of the mid-term assessment/ review

- a) Assessment/ review team:
 - The assessment/ review team shall be external and independent of the intervention and of the intervention stakeholders.
 - Qualifications required:
 - Background in addition to demonstrated experience and competence in conducting reviews/ evaluations/ assessments of international development cooperation projects.
 - Background in addition to demonstrated experience and competence in local business- and value chain development for small scale producers
 - Background/ competence in agriculture-based development/ management for Tanzania and Mozambique, and in aquaculture-based development/ management for Madagascar).
 - o Background and competence in organizational development.
 - Competence about the Norwegian international development cooperation politics, policies and priorities is a benefit.
 - Fluency in English.
 - Competence in Portuguese and French as well as local languages is a hopefit
 - All background, experience and competence to be documented in CVs for all persons in the team.
- b) Roles and responsibilities:
 - Technical Offer including methodological approach, in addition to CVs and Financial
 Offer all in English to be sent to Director International Development Anita Sæbø at
 anita.saebo@norgesvel.no with copy to Senior Advisor Anne Mugaas
 anne.mugaas@norgesvel.no and norgesvel@norgesvel.no.

https://www.oecd.org/dac/evaluation/qualitystandardsfordevelopmentevaluation.htm

https://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm





- The offers will be scored based on a weighting of technical offer and CVs in relation to the criteria listed above under 9.a). and budget in relation to 11. Budget below.
- The chosen evaluator will sign contract with Norges Vel as overall responsible for the Evaluation.
- Norges Vel and partners as relevant will give access to documents.
- Norges Vel with partners in Tanzania, Madagascar and Mozambique and Norges Vel's local offices in Tanzania and Mozambique will in coordination with the evaluation team help in the arrangement of field trips etc.
- The consultancy team will independently or with Norges Vel's and partners' and local offices' support as needed contact the relevant authorities and other relevant stakeholders (ref. as mentioned above under 6.).
- Presentation of main facts and findings to partners (and Norges Vel) should be done
 at the end of each fieldwork.
- A workshop should be held at the end of the evaluation by the consultancy team with Norges Vel, in order for the consultancy team to present and with Norges Vel to validate facts and findings and discuss recommendations.
- Norges Vel is responsible for the final approval of the report with inputs from partners, local office(s) as relevant.

10. Time frame and Schedule

The Evaluation is to be carried out and finalized before 15.05.2023.

11. Budget

The estimated budget frame for the end-term review is 700.000 NOK (incl. taxes).

12. Deliverables / Reporting (and other dissemination)

Tentative dates:

- a) 6th of January 2022 the evaluation is publicly disseminated and open for offers
- b) 27th of January 2023 Technical Offer with methodology, CVs and Financial Offer all in English to be sent to anita.saebo@norgesvel.no with copy to anne.mugaas@norgesvel.no and norgesvel@norgesvel.no.
- c) 3rd of February 2023 choice of Consultants by Norges Vel.
- d) 8th of February 2023 signature of Contract by Norges Vel with Evaluation consultants.
- e) 8th 10th of February 2023 sharing of documents from Norges Vel to the Evaluation Team.





- f) 15th 17th of February 2023 upstart interview(s) with Norges Vel International Director and project responsibles for Tanzania, Madagascar and Mozambique/ evt. other personnel + upstart of desk study and other relevant preparations by Evaluation team.
- g) 27th of February 2023 Inception report w/ final Evaluation plan by the Evaluation team to Norges Vel.
- During March 2023 Field work exact time and dates to be proposed by the Evaluation team.
 - Including feedback meetings with partners and Norges Vel Tanzania for partners and Norges Vel Tanzania to validate preliminary findings and potential recommendations.
- i) 14th of April 2023 Draft Evaluation Report from Evaluation team to Norges Vel.
- j) 28th of April 2023 feedback on Draft Evaluation Report given by Norges Vel and partners to the Evaluation team.
- k) End April/ start May 2023 workshop with Evaluation team where the team presents main findings and especially recommendations, for common revision of main issues in Report and feedback given from Norges Vel for alignments as relevant.
- I) 15th of May 2023 Final Evaluation Report by Consultant is delivered to Norges Vel.
- m) Final Evaluation Report to be delivered by Norges Vel to Norad.

The draft and final reports shall each be maximum 30-40 pages (including summary and recommendations) plus annexes as relevant.

Future Horizons

Contact:

CEO: Reza Lahidii

E-mail: reza.lahidji@futurehorizons.no

Telephone: +47 97 15 53 36

Address: Orreveien 5L, 0789 Oslo, NORWAY