

Gender Inclusive Financing for Scaling up Improved Fish Processing Technologies in Malawi

Scaling Strategy

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Research Organizations involved in the study:

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Table of contents

Acronyms	3
Introduction.....	4
<i>Scaling-up (vertical scale)</i>	4
<i>Scaling-out (Horizontal scale)</i>	5
Identified constraints for scaling.....	5
The Strategy	6
<i>Strategy Objective</i>	8
<i>Target</i>	9
<i>Strategic Actions</i>	9
<i>Partnerships</i>	11
<i>Implementation Arrangements</i>	12
Action Plan.....	13
Annex	15

Acronyms

FAO	Food and Agriculture Organization of the United Nations
GTA	Gender Transformative Approach
IFPTs	Improved Fish Processing Technologies
NAIP	National Agriculture Investment Plan
SMEs	Small and Medium Entrepreneurs
VSLA	Village Savings and Loans Associations
WEEI	Women Economic Empowerment Index

Introduction

Women are involved in many activities along the value chain of fish trade in Africa including post-harvest handling, processing, branding and marketing. However, limited access to and control of key assets such as capital, skills and technologies limit their engagement in formal fish related businesses. Women work under critical conditions with the use of obsolete processing equipment which exposes them to health challenges. According to FAOⁱ, most women using smoking ovens suffer from serious respiratory illnesses because of their exposure to frequent heat and smoke. They also suffer exploitation especially in trade at various nodes of the value chainⁱⁱ. In addition, social norms and power relations further increase women and youth's barriers to enter into cross-border fish trade resulting in harassments and growing opportunities for corrupt practices by trade authoritiesⁱⁱⁱ. The result is low productivity, exclusion with demonstrable social and economic cost.

The “Gender Inclusive Financing for Scaling up Improved Fish Processing Technologies in Malawi” project was formulated around promoting wider use of improved fish processing technologies namely: Solar tent dryer and Improved smoking kiln (fish smoker). The need to scale up and out of these technologies follows the designing and piloting of these technologies through CultiAF 1 project, “Improved Processing and Marketing of Healthy Fish Products in Inland Fisheries in Malawi”. Evidence from the project has shown that improved fish smoking kilns and solar tent dryers are environmentally friendly, effective and economically viable fish processing technologies that require scaling.

This strategy provides an array of approaches and methods to overcome various constraints (especially financial capacities and information) that will result in increase of numbers of actors in the value chain and volume of processed fish. Apart from promoting the adoption of the improved technologies, this strategy outlines an innovative communication system that will be a vehicle for disseminating information for adoption. The communication messages will be created utilizing gender-transformative approaches to transform the underlying power inequalities, and social norms with the aim of ensuring increased participation of women and youths. It also looks further on providing best practices for measuring the impact of the scaling approaches especially for women and youth that have for a long time been neglected on accessing new technologies and controlling their own or household incomes. Scaling in this strategy is therefore simply defined as *the process of expanding beneficial technologies and practices over geographies, and across institutions and levels to impact large numbers of people*. Specific strategies include vertical scale-up (institutionalizing through systematic change), horizontal scale-up (growth or replication in different locations or groups), diversification (adding other functional innovations to the one under consideration), and spontaneous scale-up (expansion prompted by unexpected needs or circumstances).

Scaling-up (vertical scale)

This requires the assessment and understanding of macro-level policy, development, and financing. With the aim to institutionalize the innovations and the scaling process, the project has already built strategic partnership with government and private sector such as the Malawi

Government through the Department of Fisheries, the Department of Commerce and Industries, the Malawi Investment Trade Center, FDH Bank and the Peoples Trading Center. Results from phase one have shown that improved fish smoking kilns and solar tent dryers are environmentally friendly, effective and economically viable fish processing technologies. The Fish Solar-Tent Dryer technology, in particular, has been accepted as a flagship technology for drying small fish species by the Department of Fisheries of the Ministry of Agriculture. The Department has now put up a new program that will be funded by the African Development Bank to scale-out the technology to all fishing villages in Malawi. We will continue to share information that is emerging from our scaling process with the Department of Fisheries with the aim of continuing to support policy processes in the Department. Information will be shared through participation of officers from the Department in the project as well as invitation of other officers from the ministry to project meetings and activities.

Scaling-out (Horizontal scale)

This is aimed at wide-scale reproduction of the technologies through dissemination and advocacy to initiate outlets for expansion. The project has thus formulated communication mechanisms that are gender responsive for enhancing participation of women and youth in the fisheries value chain herein referred to as a gender transformative communication (details below) to communicate about the technologies and financing mechanism to processors, suppliers of materials, traders (both retail and wholesale) and consumers. In the scaling phase, the aim is to increase the number of actors in the fisheries value chain to further reduce post-harvest losses at a large scale, increase trade and profitability. Special messages will therefore be developed that target women and youth.

Identified constraints for scaling

The scaling is informed by the following identified constraints:

a. Inadequate financing of fish processing and trading

Scaling efforts for the improved technologies were challenged in the previous piloting phase by limited accessibility to financial capital especially by women and youth. Three business models for scaling-out the solar tent dryers were tested (government owned solar dryers, group (cooperative) owned, and individual owned) and the results showed that solar tent dryers owned and operated by individuals had superior performance indicators. However, despite being the best business model, the individual business model was met with financing challenges. No single fish processor financed construction of solar dryers on their own because of inaccessibility to commercial loans from banks and microfinancing institutions.

b. Extension of support to pilot beneficiaries to catalyze production

There were capacity challenges in terms of knowledge and information for marketing and access to capital among women and the youth. Gender norms in the fishing industry further restricted women's access to labor and non-labor inputs, training, and output markets. More importantly, women had limited control over resources which made it difficult for them to

acquire and increase production of processed fish using (Improved Fish Processing Technologies¹ (IFPTs)

- c. *Limited communication for supporting industries as a vehicle for sustainable businesses.*
The first phase lacked a proper planned communication strategy that would identify the fundamental elements of information and its delivery for successful businesses. Apart from the innovations, business plans, profitability analysis and methods of dissemination were not done to support investments in the processing business in order to create opportunities for diffusion.

The Strategy

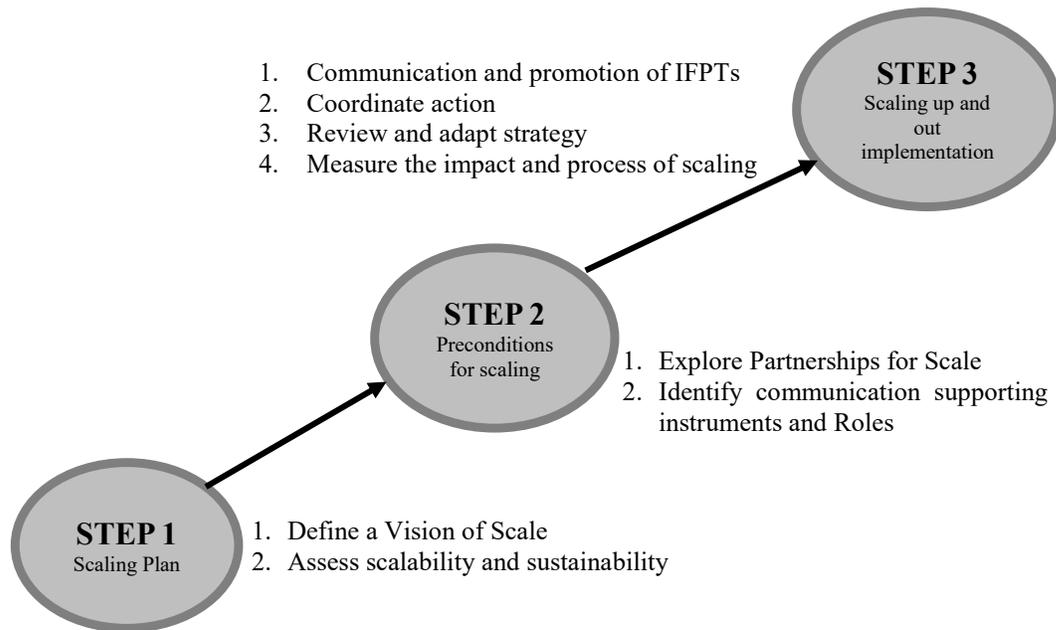
Although the development of the fish solar-tent dryer and the improved smoking kiln technologies followed comprehensive series of steps, this scaling phase is built on the premise that these technologies had not reached many actors in the fisheries value chain particularly women and youth because of their lack of access to capital financing. The scaling phase will therefore develop and promote innovative financing products from commercial banks and microcredit firms, targeted recruitment of men and women, and introduction of packaging houses. These innovations will be packaged to fit with the characteristics and needs of the user group and their operating environments. The strategy is also aligned to policy frameworks for its sustainability and ownership. Some important frameworks are: (1) At the National level the project is aligned to the National Fisheries Policy priority area on Fish Quality and Value Addition that ensures the supply of quality fish products through value addition; (2) this effort is enhanced in the National Agriculture Investment Plan (NAIP) that plans to increase participation of women and youth in agricultural value chains and institutions by establishing 300 agribusiness Small and Medium Entrepreneurs (SMEs) owned/operated by women and youth. The strategy is embedded in the Voluntary Guidelines for Small Scale Fisheries which aims at enhancing the contribution of small-scale fisheries to food security and nutrition and support the progressive realization of the right to adequate food. Through this process, it will be easier for both the nation, individuals and groups to see the technologies as being acceptable or beneficial, and subsequently promote their use.

The strategy will promote scaling of improved technologies as a package. These packages will include processing, packaging, marketing, business approach and financing mechanism from the following technology choices:

- a. Adopting a solar tent dryer only
- b. Adopting a smoking kiln only
- c. Adopting a combination of solar tent dryer and smoking kiln operated as a single business unit.

¹ These include the solar-tent dryer and the improved smoking kiln

The following framework provides a structure through which this strategy is conceptualized, and the text below explain the framework in detail.



Step 1: Scaling Plan

This step will involve developing action plans to increase scalability. During this phase, the project will reassess the different issues that may affect the outcome of scaling i.e. credibility (if the innovation has sound evidence or proven advocates), relevance (if the innovation adequately addresses problems at hand), advantage (if the innovation is advantageous over other alternatives), and appropriateness (if the innovation fits the needs and context of the user).

Step 2: Preconditions for scaling

This will involve identifying and screening partners for scaling to increase capacity of the project team to support scaling. The type of partners extends from public to private or singular to combined institutions regardless of size but mostly those who are willing to advocate for the scaling packages. The partners will also support capacity-building, either having already developed or having created plans to develop the organizational capacity for implementing the packages. Further, the preconditions for scaling will also assess the financial, human, and material resources required to implement the strategy.

Step 3: Scaling implementation

This is the “functional scaling” to create demand for increased adoption. It involves:

- Communication and promotion of IFPTs, with intent to generate investments in the IFPTs. These will be routine set of activities on communication and Gender transformative approaches using the John Hopkins transformative tools. This will involve advocacy meetings that will be spiced up with video and drama to sell the technology package with its associated financing mechanism.
- the coordination and monitoring of the plan of actions around success. The project will establish a monitoring and evaluation system to track the implementation of activities in general. However specific monitoring with be conducted by gender specialists on engagement of women and youth.
- The inbuilt ongoing reviews (quarterly) to analyze environmental factors influencing scaling, understanding the political system, policy infrastructure, donor culture, relationship between government and civilians, and socioeconomic context of the site where scaling should occur. Timely responses to any potential shock will be developed.
- Measuring the impact of scaling. Assessing the economic impact of scaling especially on women and the youth. The project will also measure women empowerment (social and economic) using baseline and end-line PRO-WEAI tools.

Strategy Objective

This strategy aims at increasing equitable adoption of IFPTs and the production of quality processed fish products through viable businesses in the small-scale fisheries value chain (processors, traders, warehousing, and transporters). The participation of women and youth will remain at the core of the strategy throughout the implementation process to address gender barriers to participation, use and benefits from technologies and food security innovations. The scaling will focus on improving the sustainability of small-scale businesses which will increase the adoption rate and household incomes.

The strategy has been developed to answer the following research questions with two main specific objectives

<i>Specific objectives</i>	<i>Research Questions</i>
1. To develop equitable and inclusive investment and business models through gender transformative approaches.	<ul style="list-style-type: none"> • What are the most promising opportunities and enabling factors and strategies for women and youth to enhance their livelihoods in fisheries-dependent communities • How can small- scale fish related businesses on improved technologies and access to finances be made more pro-poor, gender-responsive and sustainable?
2. To improve access and control over natural resources through business profitability	<ul style="list-style-type: none"> • Do business dependent on natural resources, such as the fisheries, improve the sustainable management of the resources
3. To increase women’s agency and empowerment	<ul style="list-style-type: none"> • What scalable strategies catalyze changes towards gender-equity in both men and women?

	<ul style="list-style-type: none"> • What are the effects of gender equality in decision making on income, food security, and women’s empowerment? • How do gender transformative approaches improve fish processing technologies and adoption rates for women and men? • What M&E tools facilitate process monitoring to understand how changes in gender norms and relations at community and household levels?
<p>4. To identify promising means of facilitating change in the norms, attitudes and practices underlying patterns of gender disparities in fishing dependent communities</p>	<ul style="list-style-type: none"> • What communication strategies are effective in influencing gender norms and attitudes? • How can they be married with technical and institutional interventions providing access to technologies, markets and assets?

Target

In this process, the project initially targets new districts² of Nkhatabay and Nkhotakota on top of the previous piloted districts of Mangochi and Salima targeting 50 processors; and 300 traders. Through partnerships with NGO and Government and advocacy the project will reach potential and existing fish processors and traders in Malawi and expected to benefit about 2000 fish value chain actors.

Strategic Actions

1. Development and dissemination of financing mechanism

The project will include innovative financing products from commercial banks targeted recruitment of men, women and the youth, and introduction of packaging houses in the fish value chain. Promotion of locally based financial services and linkages to commercial banks and the establishment of Village Savings and Loans Associations (VSLA) will increase savings and sustainable investment culture and build a comprehensive financial service delivery for the community members with focus on eco-friendly financial services. VSLAs will mainly be used to strengthen the individuals that will be accessing the innovative financing from the commercial banks. The innovative financing will require that individuals that are accessing the loans work in groups to provide peer support in repayment of the loans. The VSLAs will also act as business groups for group marketing that could evolve into cooperatives.

Devolution spreads innovation to more user groups through social networks including district development funds. Social network mapping will identify target user groups, to facilitating innovation sharing from current to new users bringing the technologies beyond the initial target.

² In Phase one only Mangochi and Salima were targeted for piloting

FDH Bank will spearhead this activity by among other things providing favorable tailor-made financial product to the businesses; organizing campaigns to increase bankability of the whole fisheries sector.

2. Gender transformative activities

This activity will address the environmental factors that best support increased use of the packages. Factors may include socio-cultural norms, and other infrastructural components that boost support and lessen resistance among stakeholders and opinion leaders. Since user group characteristics will vary according to the innovation, market, and current situation, development of structural support will require tailoring to context. Gender transformative tools using the John Hopkins modules for Malawi will be used to achieve this as it attempts to transform the underlying power inequalities, and social norms to achieve gender equality. The gender transformative tools include drama (role plays), videos of successful women, facilitated sessions, panel discussions following the needs that were identified in the first phase of the project. The project will promote positive change by fostering critical examination of inequalities and gender roles, norms and power dynamics, strengthening positive norms that support equality. It enhances mind-set change and attitudes of societies (men and Women) to provide women and the youth an enabling environment for doing business and highlighting the proper position of women and girls in the society's social structure. As transformation is a process, the project will engage and capacitate Gender transformation champions that will be facilitating local groups (platforms) through weekly meetings.

i. Capacity building for profitable businesses

The project will use discussion forums coupled with business and entrepreneurial ethics, to help actors in the value chain sustain themselves from sales of products and promote commercial banks for continuous service through a win-win approach. This assumes that if actors realize economic benefits from fish, they will be able to take up better management and governance activities for sustainability of their businesses. Capacity building will also include building the knowledge and skills of value chain actors by providing in-depth business training, improve on their marketing skills and successful loan repayment. Any support given to communities will depend on the needs and capabilities jointly identified with the actors and local leaders. The Gender Transformative Approach will emphasize on empowering the vulnerable community members to be self-sufficient through well trained community-based organizations such as cooperatives. The change in mindset brings a lot of social benefits that are more likely to be sustained.

ii. Gender Transformative Communication

Gender Transformative Communication is comprised of communication tools and channels that aims at changing the mindset of the communities to transform gender imbalances in control and access of resources as well as power. The communication tools will contain information that addresses the misconception about the position of men and women in the societies and the channels will ensure that both men and women are accessed with the information. The Gender transformative communication involves three focus areas namely: Problem Identification, both in gender and young people's relations connecting to the access to finance and other productive

resources. The others are the segmentation of the beneficiaries along gender, age and socio-economic status, apart from identifying the communication channels specifically accessed by women, young people, and others in the segmented beneficiaries' population. Other organizations within the targeted areas will also be identified for possible collaboration. A combination of these focus areas leads to production of gender transformative communication products such as leaflets, videos, policy briefs, advocacy meetings etc., focusing on the barriers to adoption and finance by the segmented groups of beneficiaries. Delivery of the communication products and a crafting of a Monitoring and Evaluation tool will be done to assess the effectiveness of the communication, apart from the communications' link to the desired impact. Annex 1 provides a road map or conceptual framework which will guide the gender transformative communication.

iii. Measuring impact

The scaling strategy rests on the need for social transformation to realize the full potential of the improved fish processing technologies to achieve long lasting poverty reduction, food and nutrition security through applying gender transformative approaches to fish processing challenges. The impact of the strategy will be measured through evaluating the changes in the range of outcomes including changes in existing gender norms, reduced gender disparities in access to resources, services, knowledge and skills and markets, more gender equitable enabling environment, and women empowerment.

The project originally planned to develop its own Women Economic Empowerment Index (WEEI) by looking at the flaws that the current indices such as WEFI and WEAI are having. In general, WEAI is biased towards agricultural production while WEFI was adapted to suit the fisheries but with limitations on the economic empowerment. However, during our meeting in Nairobi, we finally resorted to using a common index across all IDRC and CultiAF projects. Using Pro-WEAI, this strategy includes the assessment of the impact of the scaling activities in terms of sustainable economic empowerment especially for women and youth. The economic empowerment will be measured by five domains (a) Institutional climate (b) individual or household assets (c) Social and political structure (d) individual or collective capabilities and (e) development outcomes. Gender-sensitive indicators will therefore be developed to assess the gendered dynamics in the fish value chain.

Partnerships

Forging strategic partnership at local and national levels is critical for working towards gender transformative change. The complex nature of gender inequality necessitates partnerships that brings together individuals and organizations with diverse views and experiences in order to illuminate as many aspects of the problem. Partnerships are also important for implementation through outreach, for out scaling and upscaling of improved technologies. We will build on current partnership and synergies with ongoing and planned projects with a strong gender focus at both local and national levels.

Implementation Arrangements

The strategy took cognizant of past experience by adequately considering as much as possible: (i) the need for strong political institutional ownership and a high level partnership; (ii) a sizeable level of autonomy in order to reduce layers of administrative bottlenecks that can impinge on its implementation and performance (iii) full stakeholders' engagement and participation of all researchers and business owners; (iv) sustainable funding mechanism; and (v) coordinated implementation of project activities. The implementation will be led by WorldFish but through the existing structure of the project. A strategy coordination team will be put together for the day today management monitoring of the implementation process.

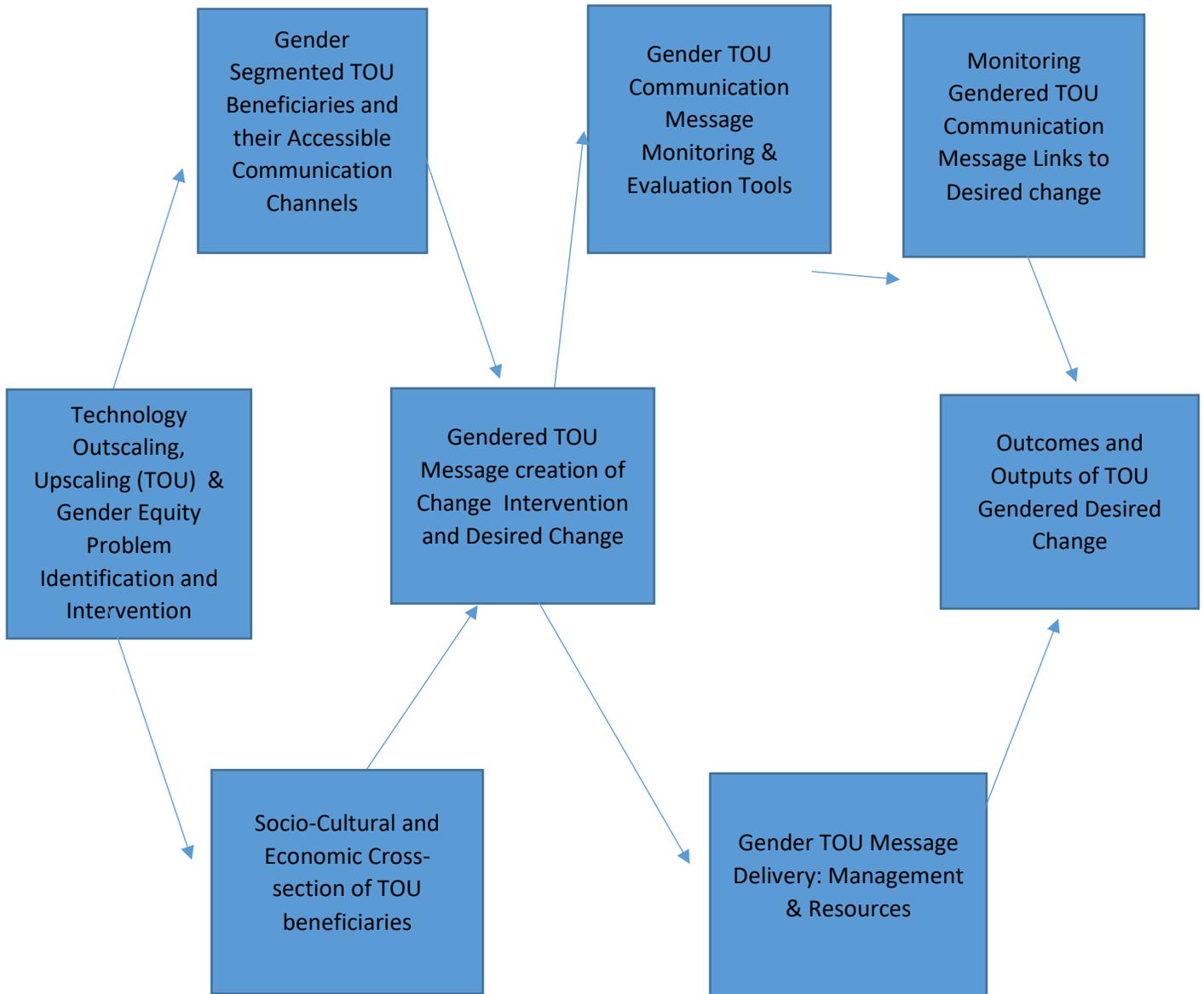
Action Plan

Activities	Timelines (Quarters)						Implementers ^{iv} (See below full names)	Responsibilities
	1	2	3	4	5	6		
1.0	Devolution and dissemination financing mechanism							
1.1	Develop a gender sensitive criterion for identifying beneficiaries						JN, LB, LC, JS, MM, CP, LM, MN, MK, AM, DC	WorldFish and CHANCO
1.2	Identify key partners for scaling IFPT and financing products						CP, DFOs	
1.3	Engage and sensitize the partners on the financing products						MM, AM, JN	
1.4	Engage and sensitize women and youth on the financing products						AM, MM, DFOs	
1.5	Develop and or strengthen VSL						DAs, JN, LM	
2.0	Gender transformation activities							
2.1	Facilitate organization of clusters of women and youth to access loans						JN, LB, MM, CP, LM, DAs	WorldFish
2.2	Establish local GTA platforms							
2.3	Identify champions of GTA to facilitate platforms							
2.4	Conduct ToT of GTA champions							
2.5	Train project partners in GTA							
3.0	Capacity building for profitable businesses							
3.1	Train actors on the usage of the IFPT and finance product						AM, MN, LC	FDH, CHANCO, FRU
3.2	Train women and youth actors on entrepreneurship						AM, MM, JN, LC, MK	
3.3	Sensitize communities including women and youth on business plan development						JN, MM, AM, LB, CP	
3.4	Orient the women and youth and other actors on saving culture							
4.0	Gender Transformative Communication							

Activities		Timelines (Quarters)						Implementers ^{iv} (See below full names)	Responsibilities
		1	2	3	4	5	6		
4.1	Design and create communication products							MM, LB, JN, MK,	CHANCO, WorldFish
4.2	Identify communication channels both traditional and innovative accessed by segmented populations of beneficiaries								
4.3	Create and pretest upscaling and out-scaling products underpinned by GTC for both interpersonal electronic and e-communication								
4.4	Manage and deliver communication messages to segmented populations through the identified channels								
5.0	Measuring impact								
5.1	Develop Pro-WEAI tools that have a fisheries focus							JN, JS, LB, CP, LC, MK	WorldFish, CHANCO
5.2	Undertake baseline study on the existing norms and practice							JS, JN,	
5.3	Undertake end-line survey to establish the impact of gender transformation								
5.4	Develop peer reviewed publications							JN, LB, MM, LC	

Annex

Conceptual framework and strategic communication for upscaling and out-scaling of improved fish processing technologies of the solar tent dryer and the improved smoking kiln



ⁱ FAO. 2016. A Strategy for sustainable fisheries and aquaculture in the Volta Basin riparian countries' post-harvest chains and regional trade. FAO Fisheries and Aquaculture, Circular No. 1121. Rome, Italy.

ⁱⁱ Manyungwa-Pasani, C., Hara M., Chimatiro, S. K. 2017. Women's participation in fish value chains and value chain governance in Malawi: A case of Msaka (Lake Malawi) and Kachulu (Lake Chilwa). Institute for Poverty, Land and Agrarian Studies (PLAAS), Working paper 45.

ⁱⁱⁱ Onyango, P. O., Uwamahoro, F, Kakwasha, K, Mpangala, H and Mkazala A (2017). Informal Cross border fish trade at Tunduma Border Post, Tanzania East Africa. A Field Report for Fish Trade Program.

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