



Unlocking Public and Private
Finance for the Poor

FINAL REPORT

Market scoping study for the digitization of the Fish Value chain in Uganda

June, 2020

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Executive summary

This report shares insights from a market scoping study for the digitization of the fish value chain in Uganda. The study was intended to explore opportunities where digitization - especially digital financial services (DFS) - can add value and positively impact the lives and productivity of actors in the fish value chain. The study was commissioned by the United Nations Capital Development Fund (UNCDF) and it focused on: conducting a value chain analysis in order to understand the key actors involved and their roles; economic impact of the different activities in the value chain; an analysis of the state of financial services / digital financial services in the value chain. Similarly, the study also centered on carrying out a gap analysis to assess the unmet needs associated with access to financial services, coping mechanisms and how DFS can provide solutions.

Using a value chain approach, the study scrutinized all the key nodes of the value chain, from input supply, production, local processing, transportation, factory processing, and marketing stages. The objective was to understand the different interactions as they happen in the life of the fisherfolk. This information helped to uncover the challenges, important use cases and opportunities for digitization at each node of the value chain. Consequently, a total of 125 stakeholders including fishers, boat owners, fishmongers, fish processors were interviewed. Equally, other key actors from the supply side including financial services providers, technology companies, traders and other macro actors like the Ministry of Agriculture, Animal Industry and Fisheries and the donor community were interviewed. These engagements with demand and supply-side actors produced several unique insights. These are the most prominent ones.

The fisheries sector contribution to Uganda's economy

The fisheries sector is considered one of the main contributors to Uganda's economy. After coffee, the fishing industry is the country's main foreign exchange earner, accounting for an income of USD 200 million per year. It currently employs a variety of people including boat owners, fish-mongers, transporters, fish processors, and an estimated 1.5 million fishermen across the country.

The fisheries value chain is largely unstructured

Despite fish being a big export commodity, the fish value chain in Uganda is still largely unstructured. Activities are still largely artisanal. The value chain involves many players who include fishers/ baristas, boat owners, fishmongers, transporters, processors - and many fisherfolks work individually. There are no prevalent on-ground organizations to handle the affairs of the fish stakeholders or advocate for better markets and prices for the fish.

Savings groups are influential agents of change especially among immobile members of the fishing communities

The village savings and loan associations (VSLAs) are the predominant option for mobilizing savings and accessing credit among immobile residents of the fishing communities - for example, women and boat owners. This is because savings groups suit the needs of such people better as they provide quick access to loans. The groups are also an avenue for learning and socializing; and as such, the fisherfolks we encountered during the field research were usually members in multiple savings groups.

Accessing traditional banking services is still low, only prevalent among boat owners and traders

The registered boat owners and traders are currently considered the most banked group among the fisher folks because they are mandated to have a bank account where they can process payments for tax registration and obtaining a Tax Identification Number (TIN). However, many of the boat owners and traders only use these accounts to process tax payments and thus the accounts are inactive most of the time.

Vast knowledge of mobile money exists among fisherfolk but there are few advanced use cases

Familiarity with Mobile Money services is high among the fishing communities although many people rely on agents to complete transactions. This is due to the inability of most people to navigate through the mobile money menu.

Moreover, usage is still centered on basic use cases such as person to person transfers, airtime purchases, and bill payments. This is partly attributed to the limited availability of innovative solutions that are appropriate for the fisherfolk.

This report concludes with a set of strategic actionable recommendations, relatively easy to implement ("quick wins") that stakeholders can pursue. These include:

1. Digitization of savings groups in the fishing communities and their linkage to formal financial institutions as a way to expand opportunities for members to access formal financial services. Some of the support needed includes introduction of a group electronic mobile wallet and digitization of the group financial ledgers.
2. Encourage the formation of strategic partnerships with providers of important services in rural areas, for example, the solar energy companies – who can leverage the vast mobile money awareness among the fisherfolk and extend services that lead to advanced DFS use cases.
3. Digitization of payments to government from the fisherfolk such as the collection of license fees from fishing boats and fish movement permits as well as digitize the registration of all players in the sector should be prioritized. This will lead to increased transparency in the collections and hence increased government revenue.
4. Leverage digital technology to improve access to essential information such as financial literacy, technical literacy, weather information and access to market information: the first step would be to carry out an evaluation of the existing solutions in the market, form partnership with owners of the best solutions, and then customize the solution to fit the fisherfolk.
5. A group-based approach to fishing activities should be encouraged as way to improve the structure of the fish value chain. Additionally, for the formed groups, it is important to modernize internal operations and processes of these entities by digitizing the many highly manual tasks and activities such that they run efficiently. Strong and efficient entities are in better position to participate in linkage banking opportunities that connect formal and informal FSPs to deliver products and services to the underserved.



Terms and acronyms

ATM	Automated Teller Machine
B2W	Bank to Wallet
DFS	Digital Financial Services
FSP	Financial Services Institution
GSMA	Groupe Spéciale Mobile Association: Global apex body that represents the interests of mobile technology service providers
KYC	Know your Customer
ICT	Information and Communication Technology
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MDAs	Ministries Departments and Agencies
MFEPD	Ministry of Finance and Economic Planning and Development
MM	Mobile Money
MNO	Mobile Network Operator
MSME	Micro, Small and Medium enterprises
NAFIRRI	National Fisheries Research Resource Institute
SACCO	Savings and Credit Cooperative
P2B	Person to Business transfers
P2G	Person to Government transfers
P2P	Person to Person transfers
VSLA	Village Savings and Loan Association
W2B	Wallet to Bank
USD	United States of America Dollar
UGx	Uganda Shilling
UNCTAD	United Nations Conference on Trade And Development

1

Project Overview

The fishery industry contributes to the livelihoods of close to 1.5 million people in Uganda.



1.1. Project Background and objectives

Approximately 18% of Uganda's total surface area of 241,000 km is covered by water (World Bank, 2006); part of which forms the five major lakes, namely Victoria, Kyoga, Albert, Edward, and George. The first three lakes together contribute to about 95 percent of the total annual catch, with Lake Victoria alone contributing to half of the total annual catch. Additionally, available records show that 468 million tons of fish were caught in Uganda's water bodies in 2016. This is evidence that the fish industry is one of the greatest contributors to the country's foreign exchange earnings right after coffee, while also contributing to the livelihoods of close to 1.5 million people.

On the other hand, persistent overfishing, the capture of immature fish and the pollution of the fisheries resources have led to an increasing concern about declining fish stocks in capture fisheries. In response, the Government has stepped up efforts to control the unsustainable fishing practices. Such efforts include but are not limited to the promulgation of new fisheries regulations which have introduced stricter licensing of fishing boats and registration of all actors as well as a reorganization of community-level monitoring. However, more needs to be done.

To that end, this study has helped identify key actors in the fish value chain as well as determine intervention areas where digitization can lead to an improvement in the lives of the fisherfolk or people who depend on the fisheries sector. This study was guided by the following key objectives:

- 1 | **Value chain assessment**
More specifically the research intended to:
 - Understand and map typical personas of key actors in the fish value chain, their roles, influences and powers that each actor plays in the fish value chain
 - Gain an understanding of the economic and financial impact of those who depend on the fisheries sector
 - Map information, transactions, and payments flows in the fish value chain as well as regional business/trade flows.
- 2 | **State of (Digital) Financial services**
More specifically the research intended to:
 - Gain understanding of the access to and use of (digital) financial services in the fish value chain, along with an inventory

of tailor-made products for and providers serving the fish value chain

- Gain an understanding of their financial and technical literacy and capacity for embracing DFS solutions
- Gain an understanding of the payment needs and behaviors of fisher-folk and other actors in the value chain as well as the current coping mechanisms in place for dealing with payment-related challenges.

3 | Sizing or assessing the opportunity and feasibility for digitization

- Assessment of the customer needs (expressed or latent) for digitization and potential solutions for fish value chain
- Assessment of the viability of digitization (market size, the value proposition for providers and users)
- Gain an understanding of the different prerequisites for digitization in the selected regions plus potential barriers and enablers for the digitization of the fish value chain

1.2. Project scope

Sector: The project focused on scoping and understanding the needs, viability and feasibility of digitization in the fish value chain in Uganda

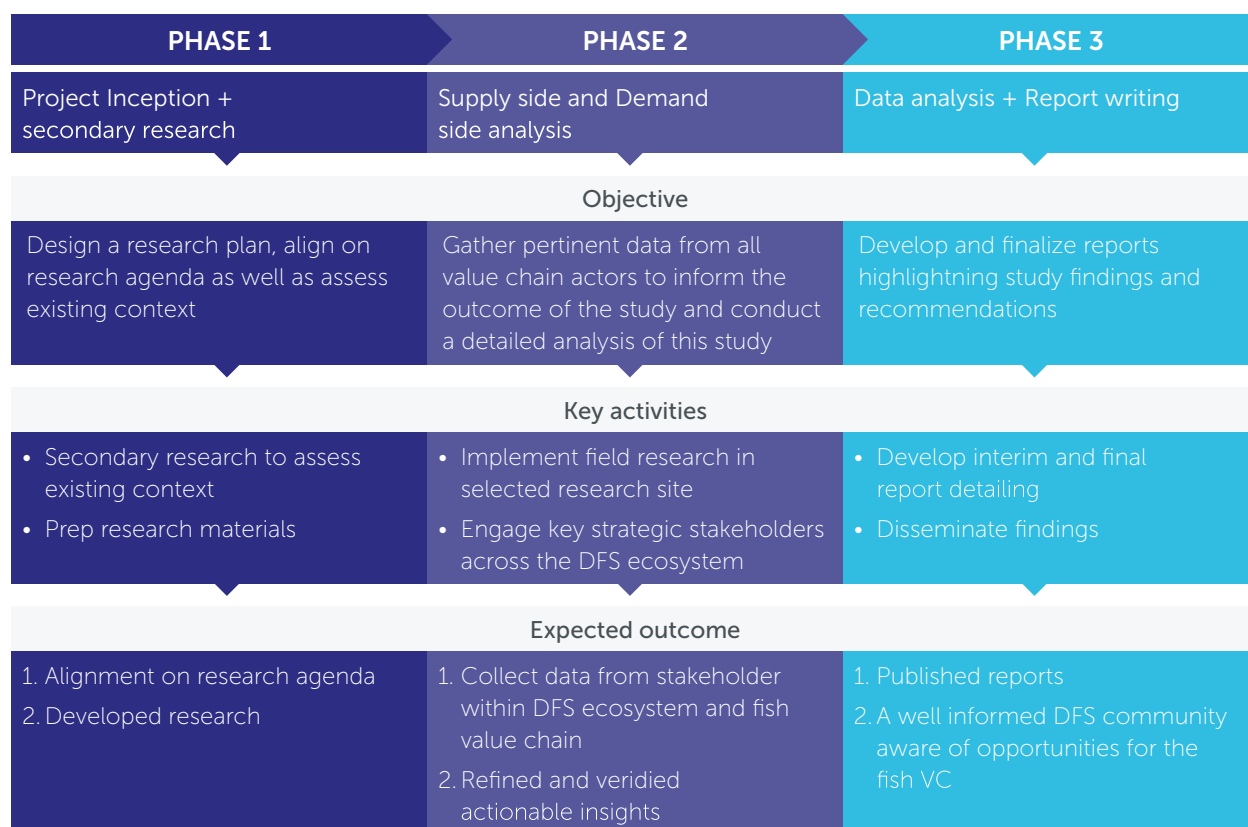
Target Population: Fishing community and all populations whose livelihoods depend on fisheries resources in Uganda

Geography: The study was conducted in 9 fish landing sites – 8 sites on Lake Victoria and 1 fish landing site on Lake Kyoga. These fish landing sites were in the Districts of Buikwe, Buyende, Jinja, Kalangala, Mpigi, Masaka, and Wakiso.

1.3. Engagement model

We conducted a qualitative research exercise where we engaged with 125 research participants through key informant interviews and focus group discussions (FGDs). We targeted key stakeholders on both the demand and supply sides of services along the fish value chain. This was necessary to enable a holistic assessment and validation of insights obtained from the supply and demand sides (as shown in box 2 of Figure 1).

Figure 1. Research Approach

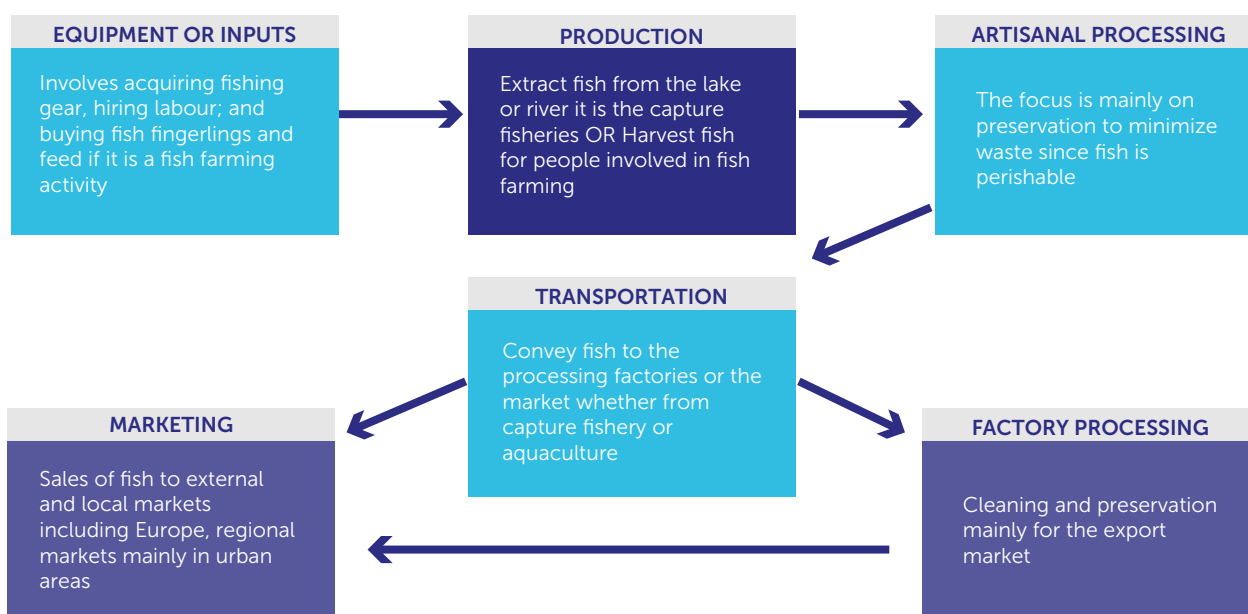


1.4. Assessing the suitability of fish value chain for digitization

As a way to assess the suitability of the fish value chain for digitization, we adopted a value chain approach to examine and assess all the key nodes of the value chain as they are sequenced (figure 2). This helped gain a deeper understanding of:

- Different value chain actors and their roles, influence and power equation in the value chain process
- Flows of information, transactions and payments
- Existing challenges (at each node), solutions and new opportunities for digitizing the fish value chain.

Figure 2: Fish Value Chain - Known Fish value chain nodes



1.5. The progression of Uganda's fish value chain

Access to Equipment or Inputs

This stage deals with the acquisition of fishing gears such as fishing nets, boats, and outboard engines. Similarly, for aquaculture, this stage involves getting fingerlings, cage construction materials and fish feeds. However, acquiring these inputs involves incurring costs such as transport costs and loading fees. This is because the input suppliers usually operate in big towns like Kampala, Jinja and Masaka, and have no agents in fishing villages. Consequently, fishers incur transportation costs to deliver the inputs from these towns to the fishing village.

Production

This stage is about the extraction of fish from the lake or harvesting fish from ponds and cages for those who are involved in aquaculture. The production stage includes 3 key categories of people:

- a. Boat owners – they are usually successful business people or influential members of the fishing communities who own the fishing gears and hire people to fish on their behalf.
- b. Fish farmers – they own the fish ponds or the cages where the fish is farmed. The fish farming business is an activity that is undertaken by well-established members of the communities because it is regarded a capital intensive activity. The fish farmers also hire people to work as Barias (see below) and help harvest the fish from the water.
- c. The Barias¹ / fisherman, who are involved in actual extraction of the fish from the water and are usually paid by the boat owner a wage equivalent to 15 – 30% of the value of fish caught.

For open capture fishery, the barias are employed as a crew, of 2 people for Nile perch fishing and 3 people for Mukene² fishing. The payment of 30% is shared by the entire crew. In Uganda, most of the fish industry workforce pertains to this category with an estimate of between 1 to 1.5 million artisanal fishermen.

Processing

This node involves the transformation of fish into an improved and more marketable finished product for the final consumer. In Uganda, fish processing is divided into two categories:

Traditional / artisanal processing

is usually done at the landing site and includes smoking, salting, drying and sun drying. This kind of processing is mainly done by women at the fish landing site. The artisanal processors mainly deal with Mukene and Tilapia that they buy from the barias or boat owners and sell to local markets in nearby towns, regional markets or neighboring Countries (Kenya, Tanzania, Rwanda, DR Congo and South Sudan). Ugandan Mukene and Tilapia cost higher as compared to Mukene and Tilapia imported from Vietnam or China.

Factory processing, is where cleaning, preservation, and more value is added at the fish factory making the product ready for the export markets. Usually, the fish factories facilitate their agents with a refrigerated truck and provide them with ice cubes to ensure that the fish is transported fresh until it reaches the factory. Currently, there are 21 fish factories in Uganda but so far only 11 are functional. The others 10 have closed down due to dwindling fish stocks that Uganda experienced especially in the period before 2017 as a result of bad fishing practices.

It is estimated that out of the total quantity of fish landed (~ 450,000 T), about 60% goes to fish processing plants for export, while 20% is processed using traditional methods and sold in domestic markets [1].

Transportation

This activity is mainly undertaken by the youth for the delivery of fish to the factories for processing or to its final market destination - mainly in Kampala city and in the neighboring towns. There are various categories of transportation methods for fish in Uganda. The most common ones include trader owned, buyer owned, communally owned, and factory owned. All of these different forms of transport arrangements incur various types of costs.

For example, while communal transport is considered the cheapest, delays on the road due to the communal trucks moving around the villages to pick up everybody's fish is exposed to the risk of rotting fish.

Additionally, the cost of fuel being too high is another challenge that fish transporters face. For example, a liter of petrol currently costs UGX 4250 (approx. USD 1.3). These high fuel prices

1 Barias – is a local term used in East Africa to refer to fishermen or the people involved in actual extraction of fish from the water

2 Mukene fish is referred to as silver cyprinid (*Rastrineobola argentea*) and also known as the Lake Victoria sardine

are a huge concern because most fishing villages are located in remote areas where roads are impassable. This leads to an increase in the cost of transportation as trucks use a lot of fuel to deliver fish to the markets.

Marketing

This involves the sale of fish to local / regional markets - mainly in urban areas - and to export markets – mainly in Europe.

The export market is mainly served by the fish factories. The main fish supplied in export markets is the Nile perch which now accounts for 90% of the official fish export earnings [1].

The local / regional markets mainly involve the following East African countries i.e. South Sudan, Democratic Republic of Congo, Rwanda, Kenya as well as markets in big urban centers within the country. The local market mainly deals in traditional fisheries such as tilapia, cut fish and mukene which is mainly sold by women traders.

During data collection, all the women we interviewed were involved in this trade. It means that mukene trade is an attractive fishing activity for women.

1.6. Contribution of fisheries to the national economy

The fisheries sector in Uganda is the second largest foreign exchange earner for the country after coffee³. The investment in the sector is estimated at US\$ 200 million a year. The sector depends on natural water bodies which account for about 18% of Uganda's total surface area.

Lakes Victoria, Kyoga and Albert together contribute to about 95% of the total annual catch. Lake Victoria, the largest tropical lake and second largest fresh water lake in the world, contributes to 60% of the annual fish catch of 223,100 metric tons, while Lake Kyoga contributes to 16% (60,000 metric tons), Lake Albert to 15% (56,000 metric tons), and the balance of 9% comes from the other smaller lakes.

Uganda has more than 350 fish species. The major species caught in the lakes are Nile perch, Tilapia and Mukene; the first two account for the majority of fish exports to extra regional markets and the latter is generally heavily traded in the immediate Great Lakes region. The Nile perch and Tilapia remain the most important for trading, respectively making up 46% and 38% of the total.

³ UCTAD chapter 09, 2017: https://unctad.org/en/PublicationChapters/aldc2017d2_ch09_en.pdf

The fisheries sector in Uganda contributes to the livelihoods of over 1.5 million people⁴, or about 4 % of the population. An estimated 800,000 people are involved in fish related activities in Lakes Victoria and Kyoga with about 80% of these people categorized as artisanal fishers⁵.

1.7. Status of Aquaculture in Uganda

Aquaculture is the practice of farming fish in aquatic environments. In Uganda, aquaculture is mainly carried out by a) fish ponds and b) cage farming. According to the Department of fisheries (MAAIF), there are mainly two cultured species which are the North African catfish and the Nile tilapia. They contribute to 90% of aquaculture production in the country. It is estimated that there are 20 000 farmers involved in the production of cultured fish countrywide. Similarly, there are 25 000 ponds and over 3 000 cages across the country - many of which are small scale with very few large scale intensive or semi-intensive farms that give low output. Currently, the total production of fish through aquaculture is estimated at 120 000 T (Nyeko, 2019).

The high pressure on the captured fish such as Nile perch in Uganda is noted to have contributed to a tremendous reduction of fishermen's income and of fish availability in the market, loss of business for local processors/ traders, as well as led to processing plants operating below the installed capacity.

This challenge has climaxed into the development of innovative aquacultures production systems such as cage culture farming and aquaculture parks to help close the fish production gap. A key challenge is that these technologies are not being fully embraced yet. This is partly due to the lack of appropriate policies to promote these technologies as well as an insufficient budget allocation for the fishery sub-sector and ineffective fishery monitoring mechanisms to support farmers learning to use the aquaculture technologies.

1.8. Fisheries regulation

Over the last decades, persistent overfishing, capture of immature fish and pollution in many lakes in Uganda have led to increasing concerns about declining fish stocks in capture fisheries. To that end, the government amended the [fisheries act in 2011](#) – which now makes it mandatory to register all boats and for all fishing boats to license and register all people involved in the fishing activity like the fishermen, boat owners etc...

⁴ MAAIF 2016/17

⁵ FAO 2017a

The President gave authority to armed forces in 2017⁶ to work alongside the Ministry of Agriculture to curb the illegal fishing practices and enforce adherence to the new regulations. It is believed that the stringent fisheries regulations have pushed some of the fishers away from fishing activities and yet they need income to take care of their needs⁷.

Furthermore, there are ongoing efforts by the government to review the current law of 2011 which only regulates captured fisheries to ensure that it addresses aquaculture activities such as management of commercial fishing, fish selling, post-harvest handling, fish transportation, surveillance and control monitoring of fisheries units as well as fisheries research. This proposed Fisheries and Aquaculture Bill, 2018, is currently being reviewed by the Cabinet and the Legislature, and if approved, it will then become the new law governing the fisheries sector in Uganda⁸.

6 Alec Jacobson, published in National Geographic, May, 2019

7 Alec Jacobson, published in National Geographic, May, 2019

8 FAO 2019: <http://www.fao.org/uganda/news/detail-events/en/c/1178145/>

1.9.

A general overview of digital financial services in Uganda

In Uganda, financial services providers (FSPs) are increasingly becoming aware of the importance of digital finance technologies and how these technologies can help serve more customers at a lower cost and in a better way. To that end, many FSPs are taking advantage of digital finance and partnering with technology providers which has largely contributed to increase in financial inclusion with today 58%⁹ of the adult population can be considered as financially included (See box 1) .

9 Finscope 2018

BOX 1:

Use of Digital payments

- More than half of adults (55%; 10.1 million) send or receive money to someone elsewhere in the country – 82% (8.3 million) of whom do so through mobile money services.
- 28% (5.2 million) of adults use digital payment systems to pay for goods/services
- 6% (1.1 million) of adults use digital payment systems for bill payments
- 44% (8.2 million) of adults have activated digital accounts ~

Uptake of formal services is driven by mobile money services

- 56% (10.4 million) of adults have/use mobile money services
- whilst 8% (1.5 million) use mobile money services through family or friends and
- 5% (0.9 million) use the services through agents.

Setting aside savings

- 54% (10 million) of Ugandan adults report to save or put money away with intention to accumulate it to meet a savings goal, and 23% of savers (2.3 million) keep money on their mobile phones

Savings by Gender

- Saving with formal service providers are skewed towards males (22%; 1.9 million) while 15% (1.5 million) of females save formally
- Females are significantly more likely to rely on informal mechanisms than males – 26% (3 million) vs. (17% (1.5 million)

Savings - Urban verses rural

- Saving with formal service providers are skewed towards adults in urban areas (34%; 1.5 million); 14% (2 million) of rural adults save formally
- Rural adults are significantly more likely to rely on informal mechanisms (24%; 3.4 million) than their urban counterparts (14%; 0.6 million)

Source: Finscope, 2018

Other important factors that have facilitated the increase and uptake of DFS include:

- a. Expansion and improvement of network infrastructure:** There have been significant improvements in the signal presence and mobile telecommunications network quality - especially in Uganda's urban areas which tend to be more populated (see table 1). The connectivity strength and quality of signal ranges between 2G to 4GLTE; and this has resulted into 10% of the adult population to have easy access to internet – with the majority of them living in the urban areas¹⁰. The mobile network signal is a key enabler of access to DFS products and services and its quality plays an integral role in usage and user experience of the products.

Table 1: Uganda mobile network coverage as of March 2018

Coverage by region	Geographic coverage			Population coverage		
	2G	3G	4G	2G	3G	4G
Central	78%	48%	9%	99%	88%	53%
Eastern	84%	51%	4%	99%	82%	15%
Northern	78%	31%	1%	96%	65%	9%
Western	93%	55%	2%	98%	78%	8%
Total	83%	44%	4%	98%	78%	23%

10 Finscope 2018

- b. Mobile phone penetration:** The mobile phone has been a catalyst for Ugandans in accessing DFS. There is a deep mobile phone penetration even in rural areas, for that reason, 52% of the adult population own a phone. The rapid expansion of mobile money infrastructure makes the phone an ideal tool that can be leveraged along with the right low cost channels to connect people – especially the rural dwellers - to savings and credit products, timely market information and agricultural extension services advice. Additionally, there is a soaring penetration of smartphones among Uganda's rural dwellers though still low. In all the 9 fish landing sites visited, we repeatedly met people who had smartphones and feature phones- especially the Chinese brand of Tecno. The Jumia white paper on the impact of mobile 2019, attributes the growing penetration of smartphones to the reduction in the average price of smartphones now valued at USD 82 (approx. UGX 300 000)

This expansion in smartphone penetration is also paving the way for improved customer experience in using DFS and access to new products (for example, digital credits, savings, and insurance).

- c. Introduction of agency banking:** Following the passing of the agency banking regulation in July 2017, several Ugandan banks have expanded their presence across the country - particularly in the rural areas, through third parties appointed as their agents and who are in charge of extending banking services to the people on behalf of the banks (UNCDF 2019). During the research excursions, we came across a total of 10 mobile money agents offering banking services in 5 different fish landing sites. This is an indication that agency banking is helping to facilitate the deepening of DFS to multitudes of Ugandans as well as bringing the unbanked to the formal fold because financial services are extended closer and at a lower cost.

A woman with large, curly hair is walking towards the camera. She is wearing a light-colored, sleeveless top and dark pants. She is holding a clear plastic water bottle in her right hand. The background shows a dirt path, some buildings, and a body of water under a cloudy sky.

2

Research findings

This assignment adopted a value chain approach to scrutinize all the key nodes of the value chain from production to commercialization.

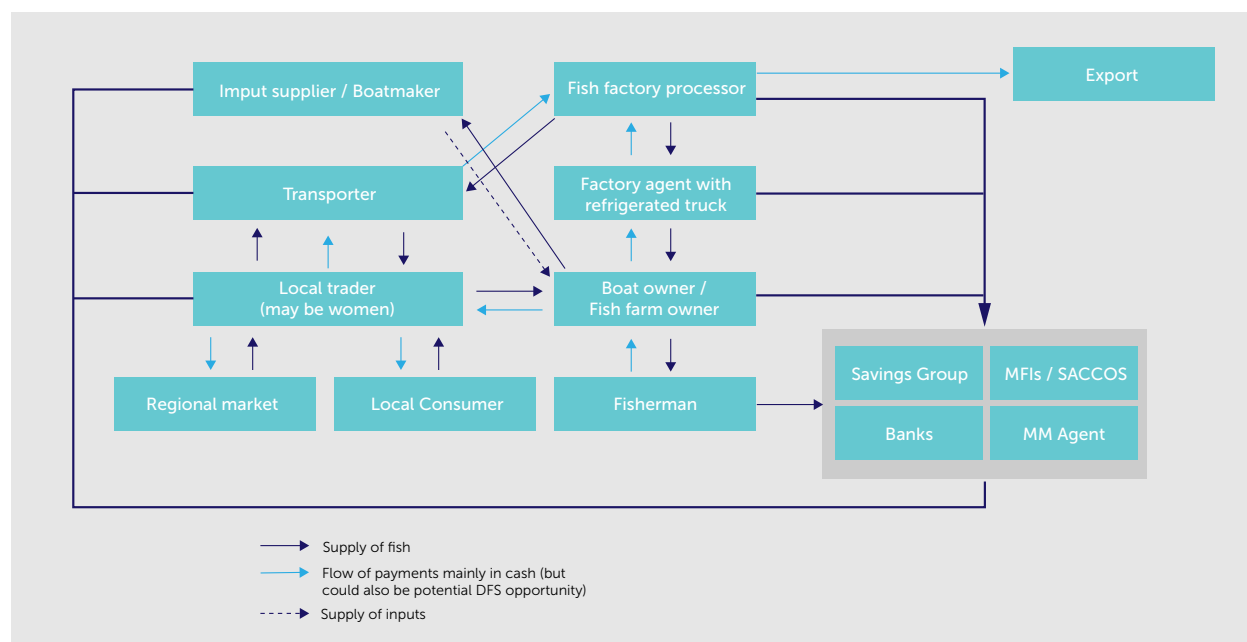
2.1.

Value chain assessment

2.1.1. Fish value chain mapping - key players and their roles

This assignment adopted a value chain approach to scrutinize all the key nodes of the value chain from production to commercialization to understanding the key players involved at each stage, their roles as well as the influence and power equation of each actor in the value chain. Figure 3 below shows how the players interact within the fish value chain.

Figure 3: Hierarchy of stakeholders in the fish value chain



Source: field data, 2019

Note: The interactions between value chain players indicated in figure 3, are mainly cash based and therefore, present opportunity for innovating DFS products.

Table 2 below helps provide more insights into the roles that each player undertakes within the value chain as well as challenges each player faces.



Table 2: Role of the Value Chain actors

VALUE CHAIN ACTOR	ROLE IN THE VALUE CHAIN	INCOME SOURCE	KEY EXPENDITURE ITEM	FINANCIAL SERVICE USED	CHALLENGES FACED
Fish factory Processors <i>(They transform the fish into an improved and more marketable product)</i>	<ul style="list-style-type: none"> • They clean, add value and preserve fish mainly for the export market • They offer soft loans to the traders/agents and boat owners. Such soft loans are usually between UGx 3 – 5 Million (approx. USD 1000 – 1500) and often used to replenish fishing nets 	<ul style="list-style-type: none"> • Exporting fish to Europe and regional markets (Sudan, Kenya, DR Congo) 	<ul style="list-style-type: none"> • Paying wages to factory workers where the payment for some individuals is sometimes as low as UGx 5000 per day • Providing ice cubes to traders to ensure they keep the fish fresh while in transit to the factory 	<ul style="list-style-type: none"> • They use formal bank in-order to receive payments from sale of fish, pay workers and make tax payments 	<ul style="list-style-type: none"> • High interest rates on credit with the current bank lending rates standing at 26% p.a.
Factory agent / traders <i>(Middlemen who aggregate fish from farmers, vessel owners and fishers and sell it to the processing plant)</i>	<ul style="list-style-type: none"> • Buy and aggregate fish from boat owners and fishermen and sell it to the factory processors • Some of them are money lenders who provide quick loans to members of the fishing villages. Some traders have capacity to lend an individual up to UGx 15 million (approx. USD 4 500) in a single loan. 	<ul style="list-style-type: none"> • Sell fish to the factory processor • Also get income from money lending business to community members in the fishing village. This is because their rates are often exorbitant and extortionary – as high as 10% per week and this is charged on a rolling balance of the loan. 	<ul style="list-style-type: none"> • Buying ice cubes to supplement ice portions received from factory processors • Transportation costs – especially as they move around different fish landing sites to aggregate fish 	<ul style="list-style-type: none"> • They have accounts with formal banks as a requirement to be able to make tax payments and renew fish trading licenses • They also use informal financial service providers such as Savings and Credit Cooperatives or savings groups 	<ul style="list-style-type: none"> • The traders dislike using banks, because the banks are located far from fishing villages. • The traders find banks lacking appropriate products, they prefer to get access to quick savings and credit, but bank have a lengthy process due to bureaucracy.
Boat owner / Fish farmers <i>(They own the fishing vessels or own the fish farms and cages where the fish is extracted. These are usually senior members of the community, are above 35 years old and they have accumulated enough funds to invest in buying fishing vessels)</i>	<ul style="list-style-type: none"> • They are the owners of the fishing boats and they hire fishermen to fish on their behalf • May also sometimes lend money to fishermen as soft loans to enable fishermen take care of their problems like buying food or paying medical bills 	<ul style="list-style-type: none"> • They sell off fish to agents of fish factories and local markets 	<ul style="list-style-type: none"> • Boat owners regularly spend money on replacing fishing equipment especially fishing nets • They pay daily wages to casual workers and fishers • Spend on operational expenses such as buying fuel and helping to supplement food expenses for Barias • Boat owners spend on paying landing site dues and taxes to local authorities 	<ul style="list-style-type: none"> • Mainly use the SACCOs and savings groups 	<ul style="list-style-type: none"> • The SACCOs don't always have enough funds available for borrowing in case they wanted a big loan

VALUE CHAIN ACTOR	ROLE IN THE VALUE CHAIN	INCOME SOURCE	KEY EXPENDITURE ITEM	FINANCIAL SERVICE USED	CHALLENGES FACED
Fishermen / fish farmers <i>(Fishermen extract the fish from the water or from the farm or cage. A great majority of these people are youth between the ages of 15 – 30 years old. All the 39 barias we interviewed during data collection were below 35 years old.)</i>	<ul style="list-style-type: none"> • They extract or harvest the fish from the water. They work on behalf of the boat owners/ middlemen/ traders. • Farmers practice aquaculture and harvest fish from the ponds and cages 	<ul style="list-style-type: none"> • They receive a daily wage from boat owners and this wage is usually valued at 30% of the value of fish landed per day • These are daily income earners and their income may be UGx 20 000 – 50 000 per day 	<ul style="list-style-type: none"> • Spend mainly on food and health to cover medical bills when they fall sick • They also spend money on entertainment and airtime 	<ul style="list-style-type: none"> • Mainly use mobile money as a savings place as majority have no bank accounts 	<ul style="list-style-type: none"> • Have limited knowledge on how to operate the mobile money menu. Instead, they rely on agent assisted transactions
Input suppliers <i>(Input suppliers include suppliers of feeds, fingerlings, boat makers and engine repairers)</i>	<ul style="list-style-type: none"> • They supply inputs such as feeds, nets and boats to the fisher-folk 	<ul style="list-style-type: none"> • They mainly get income from the sale of fish equipment 	<ul style="list-style-type: none"> • Transport costs to source material that are used to make the fishing gear as well transport used to deliver in-put to the landing site 	<ul style="list-style-type: none"> • They are usually members of MFIs and SACCOs, but also members of local savings groups 	<ul style="list-style-type: none"> • There are often insufficient funds available in a group incase one wanted a big loan
Local trader <i>(People who supply the local market with traditional fish species)</i>	<ul style="list-style-type: none"> • Aggregate fish - especially tilapia; and they mainly sell it to local consumers in markets found in the different urban centres across Uganda. 	<ul style="list-style-type: none"> • They earn their income from trading in fish in local markets, for example, the research finding revealed that on a good day, he may earn up to UGx 300 000 and on a bad day earn UGx 50 000 	<ul style="list-style-type: none"> • High transport costs and lost time as they move around from village to village to sell fish 	<ul style="list-style-type: none"> • They are usually members of MFIs and SACCOs, but also belong to local savings groups 	<ul style="list-style-type: none"> • Face risk of carrying large sums of cash which they accumulate or acquire after the sale of fish in different markets



2.2.

The profile of the value chain actors

2.2.1. Education levels of participants

The education level among the artisanal fishing communities interviewed during the landing site visits is low - with most people having attained only primary school education or none, regardless of the age group. Out of the 125 research participants, 60% noted that they had attained some primary school education, 10% had secondary school education and the rest had no formal education. Additionally, among the people with a low level of education, majority are women. 34 out of 41 women interviewed noted that they have primary education.

2.2.2. Experience in accessing financial services

One of the main reasons that keep most of the fishing activities in Uganda artisanal is the lack of financing.

Box 2: VSLAs in fishing villages

All women we interviewed and 8/ 10 male

- boat owners were members of savings groups 6 out 39 barias are members of a savings group in their villages.
- The barias don't strongly embrace the group concept because they have a nomadic life-style that doesn't permit them to adhere to group
- group gour icdoemlinmeist. to the

During the field interviews, around 80% of the fish stakeholders interviewed indicated the need for finance to expand fishing operations. The fisherfolks mainly rely on informal financial services providers such as Village Savings groups and Loan Associations (VSLA) or Savings and Credit Associations (SACCOs) because these institutions provide the quickest and easiest access to credit. Fisherfolks have the desire to access finance from formal institutions because they can offer bigger loans than what savings groups can give. However, there are limited formal financial options such as banks or agency banking available in the fishing villages.



Women involved in processing and trading of fish at Mulabana, Kalangala District

2.2.3. Experience with Savings Groups

The village savings and loan associations (VSLAs) are the predominant option for mobilizing savings and accessing credit among the fisherfolks. The research findings reveal that permanent residents at the fish landing sites, for example, women and boat owners, find VSLAs more attractive because they suit their needs better and provide quick access to savings in the form of loans.

For example, groups¹¹ help provide funds for covering regular expenses such as replacing of worn out, lost fishing nets or paying wages for fishermen and boat cleaners. Moreover, permanent residents in the fishing villages preferred the VSLAs because, in these groups, members have a special fund dubbed the "welfare" which is interest-free and can be accessed to cover unexpected expenses – for example medical expenses and funeral expenses. Additionally, the VSLAs are regarded as an avenue for learning and socializing, besides savings and credit.

The key concern is that the VSLAs face multiple challenges such as inconsistent processes, paper based record keeping, and governance structures and process management that are highly underdeveloped. Additionally, another key problem with savings groups is that the loan amounts given out by these groups are not transformative enough to power fishing businesses - leaving fisherfolk stuck in a low investment/low return cycle. Additionally, in the event of an economic shock occurring in the village such as disease outbreak, the majority of group members would run to the group to cash out increasing the likelihood of severe shortage of funds.

¹¹ The groups we interviewed revealed that they usually provide loans between 5-10 % per month.

2.2.4. Experience with Saving and Credit Cooperatives (SACCOs)

The study findings indicate that 2 out of 7 visited landing sites at the shores of Lake Victoria had a SACCO and none in the Island had a SACCO. Similarly, 20 out of 125 people (that is 3 barias and 17 boat owners) who participated in the research noted that they were SACCO members. The SACCOs are semi-formal financial institutions, member-based owned and they are regarded as the best alternative for fisherfolks who live far from bank branches to access larger and transformative loans. These SACCOs mainly operate in rural communities where there is limited access to banks as well as the communities with the most rudimentary forms of financial services. However, the findings revealed that these SACCOs were more prevalent in landing sites along the Lake Victoria shores than in the Islands. As such, more fisherfolk – especially fish traders and boat owners along the Lake Victoria shores had accounts with SACCOs with presence in their villages compared to fisherfolk from Kalangala Islands.

One key challenge is that the SACCOs are characterized by basic systems and processes and a very limited range of financial products. To that end, many members still find that the SACCOs don't meet the needs of the fishing community members. The fisherfolks usually want large loans to be able to acquire fishing gears such as fishing nets or boats. Additionally, fisherfolks may also access loans from SACCOs to be able to set up other income-generating activities as a way to diversify from fishing activities, for example, the youth group from Mabbigo landing site in Kalangala District revealed that they had borrowed money from a SACCO at the District headquarters to buy a "boda-boda" motorcycle taxis as a way to diversify from fishing. This is because the stringent fisheries regulations have pushed some of the fishers away from fishing activities and yet they need income to take care of their needs.

2.2.5. Experience with formal financial institutions

To further understand the experience of the fishing communities about accessing and using formal financial services, we asked the research participants to tell us if they have a bank account and if they have ever used any banking services. The findings revealed that all registered boat owners and traders are mandated to have a bank account where they can process payments for tax registration and obtaining Tax Identification Number (TIN). Obtaining a TIN is part of the process for obtaining a fishing license for every fishing boat. This is per the new fisheries regulations that are currently being implemented

and enforced by the Ministry of Agriculture with support of the Uganda People's Defense Force's special unit that is against illegal fishing on Ugandan Lakes. Whereas all registered boat owners and traders now have bank accounts, many of them revealed that they mainly use these accounts to process tax payments and thus the accounts are inactive most of the time.

This indicates that the boat owners and fish traders may open accounts in financial institutions that are not appropriate for their needs - hence the reason for not regularly using them.

For the case, we also took a perfunctory look at their experience with bank accessibility. The findings indicate that only 2 out of the 39 barias had an account in the bank. The barias are generally not banked and the reasons given by the barias to support this include: They don't earn enough money to justify using banking services, the stringent requirements (that is, a national ID, passport photograph) for opening a bank account and lastly because of the banks being far from the fishing village. On average, the visited fish landing sites during this research are located 15 km away from the main bank branches.

Box 3: Other key reasons for low bank account ownership among fisherfolk

Low financial education and literacy

There is generally limited knowledge especially among the lower tier fisherfolk (the barias) concerning understanding key concepts of financial education such as savings, credit, and insurance. To that end, the barias miss out on leveraging formal institutions to smooth their complex income-expenditure scenarios.

Banks lack visibility into the activities of fisherfolk

The banks have little or no data available concerning the behavior of fisherfolks. According to the members of the visited fishing communities, the fisherfolks feel the financial service providers don't understand well the nature of fishing activities; and as such, the banks view the fisherfolk as being too risky. For that reason, the banks have not designed custom-fit solutions for this segment. Hence fishing communities find most financial products available in the market inappropriate and avoid signing up for them.

2.2.6. Strong reliance on close friends and family for savings and access to credit

Many members of the fishing communities noted that they also rely on friends and family to set aside savings or to access credit. For example, 6 out of the 39 bariaas interviewed informed us that they send their daily income to family members (who live in the mainland) to save it for them. Additionally, 15 out of 20 boat owners/ local traders noted that when they need money to facilitate their activities, they are confident to borrow money from money lenders. They prefer to borrow from money lenders - regardless of the high interest charged because they provide the quickest access to money. In all the visited fishing villages, all traders who had large scale operations (such as selling fish to fish factories) were also money lenders. Money lenders require borrowers for collateral as well as the money lending act of 2016 requires money lenders to charge interest not exceeding interest of 24% per annum. However, in the fishing villages visited, some money lenders charged 10% per week (about 40% per month) which is exorbitant.

2.3. Key challenges in the value chain

(a) Lack of proper organization among the fisherfolks

The fisherfolks are not well organized, operate haphazardly; and as such, are voiceless when it comes to raising issues that affect them. For example, in every fish landing site, there is supposed to be a breach management unit charged with ensuring proper management of the landing sites and fishery-related issues as well as supposed to enforce the adherence to fisheries policies and regulations. However, these committees are rendered inactive since the armed forces were deployed on Uganda's lake to fight illegal fishing practices.

Likewise, the fish traders are also not well organized – their efforts are limited to informal groupings for the representation of the traders to the authorities. The only strong organization is the Uganda Fish Processors and Exporters Association (UFPEA).

This association enables the members to speak with a common voice particularly on matters related with the Government. Generally speaking, although this category of value chain actors is fewer in number, they can exert significantly more influence because of their market power and the strength of their organization.

(b) Lack of access to financial services for value chain players

Equipment and facilities required at the different nodes of the value chain include transportation equipment, storage facilities, operating capital and labor. However, capital sources available to value chain actors are limited and consist mainly of personal savings or informal loans. Loans from formal financial service providers (FSPs) are not common, reflecting the limited support of these institutions to the fish industry. This is due to the informal nature of most of the activities in the fishery sector and lack of collateral. As such, many traders operate by taking credit deliveries of fish supply from boat owners or fishers, effecting payment after sale.

However, industrial processors can obtain loans from commercial and development banks, as their operations are considered "creditworthy" because they are formal and they have collaterals to offer.

(c) Fluctuating Fish prices

Fish prices are generally determined by demand and supply conditions and vary from one water body to another.

The fish prices often fluctuate widely between seasons based on demand for fish in the world market. At Lake Victoria, the fish prices are relatively stable. A kilogram of Nile perch in Lake Victoria costs UGX 7000 (1.9 USD) and one kilogram of Tilapia costs UGX 5000 (1.35 USD). The Lake Victoria market is more stable as it mainly targets urban population, has good infrastructure and also has a strong demand by the industrial processing plants. The key challenge in Lake Victoria and other landing sites, however, is that the boat owners and artisanal traders lack transparent means to find out the prevailing fish price in the market.

(d) Physical infrastructure

Many of the fish landing sites lack essential infrastructure such as permanent concrete slabs, ice plants, fish drying racks, public toilets, refuse disposal units, portable water supply, and environmentally friendly housing. This is particularly prominent in the Kalangala islands. Permanent concrete slabs help in sorting, cleaning and weighing the fish.

The absence of the aforementioned infrastructure compromises the quality of fish as the fish gets contaminated due to poor sanitary conditions. Poor quality fish is usually rejected by the fish factory. If accepted, it fetches low price when delivered to the fish factory.

Additionally, the road network leading to most of the fish landing sites is poor. Most of the roads are mainly gravel and impassable. This increases the cost of transportation of fish from these landing sites to the local markets or the fish processing factories and hence significantly affects the market price. For instance, due to bad roads, the price of traditional fish species such as tilapia is two times lower at certain fish landings compared to some markets in Kampala.

(e) Engine repairs and spare parts

There are no adequate facilities for repair work of engines and engine spare parts are not readily available for most of the fish landing sites we visited. Additionally, the fish landing sites lack fuel stations. Fuel and oil is purchased from fuel stations located more than 40km away. Alternatively, islands populations rely on supplies from the major landing on the mainland closest to them. Fuel and oil is used by outboard engines while on fishing trips in the Lake and to transport fish to the mainland where the fish factories are found. Shortage of fuel exposes fish to spoilage as it hinders available means to quickly get to market.

3

Supply side of the fish value chain assessment

Financial Institutions have no tailored financial products for the fisherfolk.

The supply side of the fish value chain assessment is represented by a diverse range of actors including financial services providers and technology companies along with their products and services. Specifically, the financial services providers identified in the case study areas - and implicitly in the value chain, include tier 1 (commercial banks), tier 3 (micro-deposit taking institutions), tier 4 (SACCOs), and financial non-governmental organizations (NGOs) as well as other informal players, for example, savings groups. The technology players comprise the Mobile Money Operators and the financial technology companies (fintechs) who work in partnership with regulated financial institutions to develop targeted, pro-poor product offerings that may be beneficial for the fisheries segment. A snapshot of the supply-side actors identified in the 9 study sites -and implicitly in the value chain, is shown below:



3.2. Financial Service Providers (FSPs)

The tier 1 financial services providers listed above have a strong desire to serve the rural people in the fishing communities. To that end, all these institutions have branches in urban centers that are proximate to some of the case study sites. However, a key challenge is that these institutions view the opportunity of serving the fisherfolk as one that is largely riddled with many barriers. For example, the banks believe that a huge investment is required to profile the fisherfolk to understand their needs before developing tailor-made products. As such, all the institutions listed above have no tailored financial products for the fisherfolk. Instead, they supply the fisherfolks with the same products as in the urban market.

The fisherfolks are mainly interested in credit facilities from these FSPs - especially the lump

sums that they can't obtain from the savings groups. Similarly, the fisherfolk also use the same banks to pay taxes, process registration, and fishing license.

3.3. Financial Services NGOs

Financial services NGOs who have a presence in the fishing communities include Plan International - mainly focusing on the youth and women; CARE Uganda working with all categories of rural dwellers along Lake Victoria and Lake Kyoga and World Vision - mainly focusing women, especially in Kalangala Island. Majorly these organizations are engaged in implementing the village savings and loan association methodologies. To that end, these NGOs carry out training, supporting the fishing villages to set up the savings groups and run them efficiently. This is partly the reason why savings groups are popular in the fishing villages, especially for permanent dwellers and women.

3.4. Technology providers – Mobile Money Operators

The prevalent mobile money platforms in the fishing village are MTN Mobile Money and Airtel Money and these platforms provide a range of services that are used by the fisherfolks including cash IN, cash OUT, p2p, bill payments (electricity, Pay-As-You-Go solar), school fees, airtime and data purchases.

The findings of the study reveal that all study participants had used the buy airtime option with most of them using agent-assisted airtime purchase option (over the counter transactions) and this is mainly due to the low literacy levels that limit the fisherfolks' ability to easily navigate the mobile money USSD menus.

3.5. Technology providers - Fintechs

As part of the technology providers, fintechs are among the actors within the fish value chain and are charged with innovating appropriate products and providing a gamut of solutions such as financial literacy education to credit scoring using mobile data. Unfortunately, a perennial challenge that confronts many of these entities is access to capital to support their initiatives and holds back innovation in product development within this space. Consequently, in Uganda, there are no fintechs that are running projects tailored for the fisherfolk alone. Instead, there are Fintechs implementing solutions in other value chains that could easily be replicated or implemented in the fish value chain. This is because such solutions address similar challenges as those prevalent in the fish value chain. Examples of these tech providers include:

Ensibuuko: Offers a cloud-based microfinance management platform to SACCOs and this is designed uniquely to help them go paperless and become more efficient by digitizing how they manage customer data and transactions¹². Currently, Ensibuuko has rolled out this solution to SACCOs in other value chains such as coffee, dairy, and tea. Since the fish value chain is also littered with several SACCOs and savings groups, Ensibuuko can be supported to extend its solution to the fish value chain.

¹² <https://ensibuuko.com/>

Abalobi¹³ –a smartphone app suite for small-scale fishers developed in South Africa supported by a consortium of partners including Fisheries Business Chain Project (RFBCP), Blue Solutions and the German Corporation for International Cooperation GmbH (GIZ). These app suites are intended to enable reliable catch data collection, sound monitoring, transparency and traceability of small-scale fisheries-related data, and empowers small-scale fishers to take an active part in fisheries governance, management and in the market. To that end, there are efforts to replicate Abalobi in Uganda and these efforts are powered by GIZ and Lake Victoria Fisheries Organization.



¹³ <https://bluesolutions.info/abalobi-demonstrating-and-exploring-ict-solutions-for-small-scale-fisheries-in-uganda/>

Table 3: Financial Services as used by the Value Chain Actors

VALUE CHAIN ACTOR	FSP ACCESS	FSP USE CASES	IDENTIFIABLE PAIN POINTS
Fish factory Processors	Bank branches, and Mobile Money (MM) services	<p>Bank branches</p> <ul style="list-style-type: none"> • Business loan acquisition and repayment • Supplier payment processing through bank transfers • Statutory fees payments • Large cash withdraws • Utility bills payments <p>MM Services</p> <ul style="list-style-type: none"> • Merchant services to pay fish and other key suppliers • Bank to Wallet (B2W) and Wallet to bank (W2B) • Utility bills payments 	<p>Bank branches</p> <ul style="list-style-type: none"> • Long loan processing turnaround times <p>MM Services</p> <ul style="list-style-type: none"> • High transaction charges + taxes • Agent float and cash liquidity inadequacies • Low transaction/account limits that are not sufficient to meet business needs
Factory agent/ traders	Bank branches, Automated Teller Machines (ATM) and MM services	<p>Bank branches</p> <ul style="list-style-type: none"> • Business loan acquisition and repayment • Statutory fees payments like permits and trading licenses • Large cash withdraws <p>ATMS</p> <ul style="list-style-type: none"> • Cash withdraws <p>MM Services</p> <ul style="list-style-type: none"> • Cash IN/OUT services • P2P 	<p>Bank branches</p> <ul style="list-style-type: none"> • High KYC requirements for account opening <p>ATMS</p> <ul style="list-style-type: none"> • Low transaction limits of not more than (UGX 1 million) • Time allowed to complete transactions is low and sometimes leads to ATM card confiscation by the ATM machines <p>MM Services.</p> <ul style="list-style-type: none"> • High transaction charges + taxes • Agent float and cash liquidity inadequacies, Low transaction/account limits that are not sufficient to meet business needs
Boat owner / Fish farmers	Bank branches, ATMs, MM services and SACCOs	<p>Bank branches</p> <ul style="list-style-type: none"> • Statutory fees payments like permits and trading licenses • Large cash withdraws • Savings <p>ATMS</p> <ul style="list-style-type: none"> • Cash withdraws <p>MM Services</p> <ul style="list-style-type: none"> • Cash IN/OUT servicesP2P • B2W and W2B <p>SACCOs</p> <ul style="list-style-type: none"> • Daily/weekly savings • Loan borrowing and repayment 	<p>Bank branches</p> <ul style="list-style-type: none"> • Bank branches are distant and require high transport costs • Low financial literacy levels provided by the FSPs <p>MM Services</p> <ul style="list-style-type: none"> • High transaction charges + taxes, Agent float and cash liquidity inadequacies • Low transaction/account limits that are not sufficient to meet business needs

VALUE CHAIN ACTOR	FSP ACCESS	FSP USE CASES	IDENTIFIABLE PAIN POINTS
Fishermen /fish farmers	MM services, SACCOs	MM Services <ul style="list-style-type: none"> • Cash IN/OUT services • P2P SACCOs <ul style="list-style-type: none"> • Daily/weekly savings • Loan borrowing and repayment 	MM Services <ul style="list-style-type: none"> • High transaction charges + taxes • Agent float and cash liquidity inadequacies • Lack of MM agents in the distant landing sites • Difficult in navigating mobile money menu and rely agent assistance to perform transaction. However, some agents defraud such customers and this leads to further distrust in the mobile money services
In-put suppliers (For example fish feed, out board engine equipment, fishing nets suppliers)	Bank branches, ATMs and MM services	Bank branches <ul style="list-style-type: none"> • Statutory fees payments like permits and trading licenses • Large cash withdraws • Savings ATMS <ul style="list-style-type: none"> • Cash withdraws MM Services <ul style="list-style-type: none"> • Cash IN/OUT services • P2P • B2W and W2B 	Bank branches <ul style="list-style-type: none"> • Bank branches are distant from fishing landing sites • Long loan processing turnaround times ATMs <ul style="list-style-type: none"> • ATMs are located in major towns and have limits on • withdrawal amount – usually not exceeding UGX 1 million per transaction MM Services <ul style="list-style-type: none"> • High transaction charges + taxes • Agent float and cash liquidity inadequacies • Low transaction/account limits that are not sufficient to meet business needs
Local traders	MM services and SACCOs	MM Services <ul style="list-style-type: none"> • Cash IN/OUT services • P2P • School fees payments • Bill payments (solar, and electricity) SACCOs <ul style="list-style-type: none"> • Daily/weekly savings • Loan borrowing and repayment 	MM Services <ul style="list-style-type: none"> • High transaction charges + taxes • Agent float and cash liquidity inadequacies • Low transaction/account limits that are not sufficient to meet business needs • Prevalent mobile credit products have low limits that don't meet business needs SACCOs <ul style="list-style-type: none"> • Difficult in making weekly savings using mobile money platforms • Difficult to access credit from SACCO using mobile platforms
Transporters	ATMs and MM services	ATMS <ul style="list-style-type: none"> • Cash withdraws MM Services <ul style="list-style-type: none"> • Cash IN/OUT services • P2P • School fees payments • Bill payments (solar, and electricity) 	ATMs <ul style="list-style-type: none"> • The ATMs are only found in major towns which are far from fish landing sites MM Services <ul style="list-style-type: none"> • High transaction charges + taxes • Low awareness levels regarding MM products and services • Trust in mobile money is hampered by negative agent experiences (liquidity shortfalls, poor customer service, agent fraud, etcetera)
Women	MM services and SACCOs	MM Services <ul style="list-style-type: none"> • Cash-in/out services • P2P • School fees payments. • Bill payments (solar, and electricity) SACCOs <ul style="list-style-type: none"> • Daily/weekly savings • Loan borrowing and repayment 	MM Services <ul style="list-style-type: none"> • High transaction charges + taxes • Low awareness levels regarding MM products and services SACCOs <ul style="list-style-type: none"> • Low SACCO capitalization to meet female borrower needs • Repayment default by some borrowers denies women the chance to borrow

The background of the slide is a photograph of a fishing boat, likely a small-scale vessel, with a large net full of small fish, possibly sardines or anchovies, visible in the lower left. The boat is on a body of water, and the overall scene is in shades of blue and purple.

4

Demand side / customer side of the fish value chain assessment

The high phone penetration in the fishing villages presents great opportunities for easily extending DFS solutions to fisherfolk.

This section focuses on the demand side findings and we take a cursory look at the drivers and levers affecting financial services provision and digitization adoption in the fisheries sector.

4.1. Drivers and levers affecting adoption and usage of DFS in the fish value chain

In many parts of the world, DFS has been recognized for its potential to open a range of unprecedented opportunities to reduce the financial inclusion gap, deepen usage of financial services and impact the economic welfare of vulnerable communities – in this case including the fisherfolk. However, for the above scenario to be satisfactorily achieved and the benefits of DFS to be sufficiently felt, there is a need to have a right ecosystem environment in place including a well-developed payment system, appropriate regulations, and a well-designed financial product portfolio tailored to the needs of the target population.

In this section, we take a detailed look at the drivers (external factors beyond the control of the provider community) and levers (factors internal to the provider environment which they have control and influence over) that contribute to the setting of the right ecosystem environment and can affect the adoption and growth of DFS in the fisheries sector in Uganda.

4.2. Drivers of DFS adoption

4.2.1. Phone ownership

The deep penetration of mobile phones and the availability of mobile money infrastructure (availability of mobile money network and availability of agents) along with low-cost channels present great opportunities for easily extending DFS solutions to the intended beneficiary. For example, in the areas visited during this research, phone penetration was high - where 112 out of 125 people had a phone. This is an indication that there is a high phone penetration in the fishing villages and that a phone is an ideal tool that can be leveraged along with the right low cost channels to connect fishing communities to savings and credit products, timely market information, weather information and so much more.

4.2.2. State of Infrastructure

The state of physical infrastructures such as rural road, power, access to water and essential amenities undeniably impact the provision of

financial services. For all fish landing sites visited, they all had access to electricity or had alternative energy sources (such as solar and bio-energy). However, a key concern resides in the road infrastructure which is in a poor state in all the landing sites visited.

The availability of these amenities is crucial to DFS adoption because they affect the cost of undertaking any business. For example, available literature on the provision of financial services to rural dwellers shows that FSPs are mindful of poor roads, lack of electricity, poor water sources and substandard health facilities. This is because a lack of these amenities prevents the FSPs from establishing their touchpoints to meet the demand in these rural areas.

Moreover, poor infrastructure also limits the MNO agent network spread, as more resources must be spent to put up an agent outlet in a far-flung area compared to an urban area. Although, all landing sites visited had a fair coverage of agent outlets – there was at least an agent at each of the landing sites, it's believed that there would be more agent outlets established to serve the fishing communities if all the other amenities like alternative energy sources (such as solar and bio-energy) are in place.

4.2.3. Enforcement on illegal fishing

Regulation is a key gating condition for the growth of DFS in every sector – the fisheries sector being no exception. DFS, although largely under the jurisdiction of mobile money regulations, in the fisheries sector, its growth is also affected by the Fish Act of 2011. This act gives powers to the Department of Fisheries Resources to collect fees, issue fishing licenses, fish movement permits as well as identification plates that are displayed on every fishing vessel. Such approaches present opportunities for creating innovative mobile money solutions that can bring efficiencies in the fisheries sector. For example, for payment of boat licenses, mobile payment platforms could be leveraged to ensure a smooth and transparent collection of the licensing fees. Similarly, registration of fishing vessels could be digitized and payment for licenses done via mobile money.

4.2.4. Presence of a national identity card

Currently, a large number of Ugandans including fisherfolk communities, have registered and acquired national identity cards (ID). The introduction of the national IDs has simplified the Know Your Customer (KYC) requirements for signing up for a bank account or mobile money account. In the past, to sign-up for these services, a person had to produce a range of

documentation including passport photos, a recommendation letter from the local council, etcetera. This is because there was no standard way of identifying potential customers. However, with the establishment of a national identification system, all of the tedious KYC processes have been removed - making it simple for potential customers to sign up for formal accounts. Similarly, FSPs have found it easy to expand their customer base. For example, the findings from the field interviews revealed that 100 of 125 research participants possessed national IDs. Those who had no national IDs noted that they were in the process of getting one.

4.3. Levers of DFS adoption in the fish value chain

4.3.1. MNO Network availability

The strength of the network signal is impacted by the distance from an urban center. Besides, the study results show that the signal is stronger in areas along the shore of Lake Victoria or what is dubbed as the “mainland” than the islands or rural Lake Kyoga areas. All of the study areas/ fishing villages visited generally have network coverage with quality ranging from 2G (EDGE) to 4G especially for towns and district portals. Additionally, of all visited sites, Kalangala Islands and Lake Kyoga areas – (lyingo fish landing site) had the most intermittent and spotty signal.

Since phone penetration naturally follows mobile network available throughout the country¹⁴, this makes mobile network signal a key enabler of access to DFS products and services and its quality plays an integral role in usage and user experience of the products.

4.3.2. Agent Network availability

Mobile money access points are by far more than the bank branches in all the study locations – for example, each of the fish landing sites had at least one agent, but yet the bank branch was only available at the main town or district capital. The large spread of mobile money agent networks is an opportunity to ensure that there are easy backstopping and quick resolution of user experience challenges about the product as well as a channel to deliver customer education about the service.

4.3.3. Liquidity

Finding liquid agents who can support basic transaction amounts is a real challenge in fishing villages or near fisher locations. Most rural agents do not have enough capacity to support a one-

time cash-out/in the amount above UGX 500 000 (136.1 USD). This is a major deterrent to mobile money use in an ecosystem that is not well developed with other digital use-cases. As such, there is a need for mobile money providers to find creative ways to resolve agent-liquidity challenges.

4.3.4. Fisher’s digital Literacy

The finding revealed that 82 out of 125 participants in the field were doing agent-assisted mobile money transactions. This is because they find the mobile money menu difficult to navigate. This means that there is a need to boost user technical literacy. Also, a big number of the 125 participants had feature phones and are less familiar with smartphones.



A group of young men who work as baria in Kisaba attending a focus group meeting

4.3.5. Agent management practices

The findings revealed that agents in the fishing villages had limited knowledge of tariffs, promotional details. For example, two agents from Mabiggo and Mulabana in Kalangala Islands don’t know how mobile money credit work that is to say how, MoKash for MTN and “Wewole” for Airtel Money work. This is because rural agents appear to receive little support from the MNO in terms of visits, training/refresher training from the provider, and compliance monitoring most probably due to the high costs involved in servicing these agents. Also, we noted that mobile money agents in the fishing villages are non-exclusive and are expected to serve customers of competing networks. For example, all agents serve MTN Mobile Money as well as Airtel Money customers. This scenario, while appearing to serve the interests of customers, is a disincentive for the MNO to invest in agent network expansion and training. This may affect the adoption and use of DFS in fishing villages.

4.3.6. Financial Literacy among fishers

Financial literacy is still among the lower tier of fishing communities, that is, the barias/ fishermen as the majority are challenged as regards to understanding the concepts and implications of savings, credit, and therefore can't leverage financial institutions to deal with their basic and complex income-expenditure scenarios. As such, there is a need for a more intensified effort to increase financial literacy so people DFS know-how increases and the benefits of linking to formal financial institutions.

4.3.7. Lack of tailor-made products

There were not many known digital financial products according to the findings of the research revealed. The common products included person – to-person, airtime purchases, bill payments, and a few people used mobile money to save. Remarkably, the P2P transfers were also commonly used by many people as they buy merchandize or order for new stock of merchandise from the city than sending money

to relatives. This is partly because fisherfolk have limited knowledge about mobile money merchant payments. That being the case, it is important to note that any products for the fisherfolk or riparian communities should be borne out of deep inquiry of their condition and needs and revolve around a core, existing use cases. This will ensure that such products will produce a turning effect and lead to the desired uptake.

4.4. Opportunities and constraints for different actors in the value chain

In the table 3 below, we explore the potential opportunities available for exploitation where DFS could add value to the life of the players within the fish value chain; these opportunities have been identified based on the current challenges that these players are experiencing.

Table 4: This section explores opportunities and challenges that affect the growth of DFS among the fisherfolk in Uganda

No.	Stakeholders	Opportunities	Challenges
1.	Barias	<ul style="list-style-type: none">Financial and technical literacy: Leverage digital channel to educate fishermen on financial literacy and improve transparency on prices/ share real time information on fish pricesCollecting and sharing essential information: Leverage digital tools to collect and share essential information such as market price, weather information, and business tipsReporting: Leverage digital tools to report illegal and unregulated fish by providing fisherfolk a platform where they can anonymously report wrong doers or wrong fishers	<ul style="list-style-type: none">Many fishers have limited knowledge about formal financial services and how they can find them and utilize them. As such, there is a need to boost fishermen's financial literacyLack of price transparency / ways to find out about pricesDwindling fish stocks – as a result of bad fishing practices, is one of the major challenges facing the fisheries sector in Uganda
2.	Boat owners	<ul style="list-style-type: none">Registration and licensing: Make information related to boat registration and licenses electronically available. To that end, fishers and boat owners can access via mobile platforms and electronically register.Helping different players within the value chain gain access to credit: Explore indirect value chain financing opportunities and how to structure lending/financing arrangements between value chain actors	<ul style="list-style-type: none">Boat registration is now a mandatory exercise for all fishers. However, they experience many challenges to obtain these licenses as they have to undertake this activity at the local government – sub-county headquarters, but often the fish landing sites are located far from the sub-county headquarters
3.	Fish farmers	<ul style="list-style-type: none">Fintech such as Ensibuuko that have implemented DFS in other agri-value chain can be supported to develop digital tools can be leveraged to ensure proper tracking of the records - allowing farmers to know if business is business is profitable or not and receive guidance on how to improve it	<ul style="list-style-type: none">Poor record keeping is one of the challenges most fish farmers in Uganda face. The problem hinders the sustainability of their fish farming businesses

No.	Stakeholders	Opportunities	Challenges
4.	Factory processors	<ul style="list-style-type: none"> Tracing the source of the fish is a way to ensure high quality: Leverage mobile platforms to track and trace the source of the fish that has been delivered to the factory. This will help ensure that quality of fish supplied to the fish factory 	<ul style="list-style-type: none"> Fish processors and exporters lack valuable information related to direct sourcing and traceability of fish because of weak linkages with fishers and vessel owners
5.	Financial Services Provider	<ul style="list-style-type: none"> Profiling the different actors in the value chain: Use digital tools to profile the different actors in the fish value chain to gather sufficient behavioral, transactional and productivity data that can be analyzed to understand farmer needs and leverage these insights to develop appropriate products Unlocking the opportunity to save more: Use digital tools for creation or innovation of opportunities that help groups and individuals grow their savings together 	<ul style="list-style-type: none"> Lack of custom fit products for the fishing communities/ fisherfolk The VSLAs are guided much by rule of equality which they apply in-order to protect the group from individual dominance or exploitation. However, there are members who sometimes want to save more than the group limitations.
6.	Mobile money agents	<ul style="list-style-type: none"> Mobile money agents are near users; and as such, efforts must be taken to increase trust in mobile money services by addressing negative agent experiences (liquidity shortfalls, poor customer service, agent fraud, etc.) as the agent is seen as the face of the MNO. 	<ul style="list-style-type: none"> Sometimes there is low trust in the mobile money services when there is negative experiences, for example, when agents have no money when a customers need to make a withdrawal
7.	Agency Banking	<ul style="list-style-type: none"> Spreading Agency banking: Formal finance service providers can piggyback on agents of Mobile Network Operators to introduce agency banking which can enable the deepening of DFS in fishing communities 	<ul style="list-style-type: none"> Agency banking is yet to penetrate the fishing communities
8.	Fintechs	<ul style="list-style-type: none"> Work in tandem with banks and MNOs to deliver Fisheries-centric solutions Harness and build relationships with MNO and FSPs to innovate low cost products leveraging the vast MNO and FSP agent networks. 	<ul style="list-style-type: none"> Few or no products geared towards the fisheries sector Low smartphone penetration, internet affordability, and the low reading and writing skills of the would be beneficiaries might limit the fintech products which are mainly phone and technology based
9.	Government	<ul style="list-style-type: none"> Digitize fisheries management activities such as boat licensing and collection of fees; fisherfolk registration; leverage mobile technology to collect monitoring data and dissemination of information that leads to sustainable utilization of fisheries and promotion of productive aquaculture 	<ul style="list-style-type: none"> Prevalence of illegal fishing activities and depletion of fish stocks/ unsustainable utilization of the fisheries
10.	Development partners	<ul style="list-style-type: none"> Promote extension of important services in rural areas like solar services and explore ways to mobile money enable them to enrich the rural use case 	<ul style="list-style-type: none"> There is need to push for more important services such as solar in rural areas

5

Gap Analysis

This section highlights gaps prevalent in the DFS ecosystem for the fish value chain across a wide number of focus areas.



This section highlights the list of identified gaps prevalent in the DFS ecosystem for the fish value chain across a wide number of focus areas.

Table 4: Gap Analysis

GAP	STATE	IMPACT	EXTENT
Use cases	The number of mobile money use cases although growing is still low. Currently, the predominant use cases include cash IN, cash OUT, p2p, bill payments (electricity, Pay-Go solar), school fees, airtime and data purchases.	Increased use case implies a fertile ground for introducing DFS. Additionally, increased use-cases help to increase agent viability and profitability	Low
Pricing	High transaction charges – especially withdraw charges are too expensive due to taxes imposed	This discourage use of DFS	Low
Liquidity	Agent float and cash liquidity inadequacies are still predominant in the fishing villages. Most rural agents do not have enough capacity to support a one-time cash-out/in the amount above UGX 500,000 (136.1 USD).	Negative agent experiences (liquidity shortfalls, poor customer service, agent fraud, etc.) bring low trust in use mobile money services	Low
Agent network	There is high spread of mobile money agent network. All fish landing sites have presence of mobile money agents	Formal finance service providers can piggy-back on agents of Mobile Network Operators to introduce agency banking which can enable	High
Literacy Level	Financial Literacy: Many fishers have limited knowledge about formal financial services and how they can find them and utilize them. Technical literacy: 82 out of 125 participants in the field were doing agent-assisted mobile money transactions. This is because they find the mobile money menu difficult to navigate	As such, there is a need to boost fishermen's financial literacy This has led to increase in the number of agent assisted transactions	Low
Access to power	Many fishing villages have off-grid environment and the most common alternative is solar power and bio energy	Availability of reliable sources of energy support the growth in use of DFS as it makes possible to charge the devices which are used are the tools that facilitate DFS transactions	Medium
Phone penetration	There is deep penetration of mobile phones - the area visited during this research, phone penetration was high - where 112 out of 125 people had a phone.	The phone is an ideal tool that can be leveraged along with the right low-cost channels to connect fishing communities to savings and credit products, timely market information, weather information and so much more	High
Network coverage	All of the study areas/fishing villages visited generally have network coverage with quality ranging from 2G (EDGE) to 4G especially for towns and district portals. the signal is stronger in areas along the shore of Lake Victoria or what is dubbed as the "mainland" than the islands or rural Lake Kyoga areas	Mobile network signal a key enabler of access to DFS products and services and its quality plays an integral role in usage and user experience of the products	Medium

6

Recommendations

Our recommendations for the development of a strategy for the digitization of the fish value chain in Uganda.

This section lists our recommendations on the course of action in the development of a strategy for the digitization of the fish value chain in Uganda:

- Leverage digital technology to improve access to essential information such as financial literacy, technical literacy, weather information and access to market information: the first step would be to carry out an evaluation of the existing solutions in the market, form partnership with owners of the best solutions, and then customize the solution to fit the fisherfolk.
- Support the formation of strategic partnerships with providers of essential services in rural areas, for example, the solar energy companies – who can leverage the vast mobile money awareness among the fisherfolk and extend such services that lead to advanced DFS use cases. Correspondingly, providers should explore the bundling of DFS products and services with such essential solutions as a way to curb high costs of rolling out DFS solutions to the fisherfolk.
- Support digitization of savings groups in the fishing communities and their linkage to formal financial institutions as a way to expand opportunities for members to access formal services. Some of the support needed include a) introduction of a group electronic mobile wallet b) digitization of the group financial ledgers.
- Promote the spread of agency banking: formal financial service providers can piggy-back on agents of Mobile Network Operators to introduce agency banking services within fishing communities. This will help savings groups - with linked bank accounts, to easily move groups funds from the cashbox to the bank. This improves the security of the group funds.
- Explore digitization of payments to government from the fisher folk such as collection of license fees from fishing boats and fish movement permits as well as digitize the registration of all player in the sector. This will lead to an increase in revenue collection for government through increased transparency in collection and increased number of payers as a result of mandatory registration of all payers / actors in the value chain.
- Additionally, develop digital tools that allow the profiling of actors in the value chain; and such data bases can be leveraged to develop a judgmental scoring tool to help financial institutions easily give credit to fisher folk. Fintech can collaborate with MNOs and banks to profile fishing community members by

collecting data about their livelihood activities, the quantity of fish and its value. Such a tool would be beneficial to identify risky borrowers and hence guide decision making about advancing credit to potential borrowers in the fishing communities.

- A group based approach to fishing activities should be encouraged as way to improve the structure of the fish value chain. Additionally, for the groups formed, it is important to modernize internal operations and processes of these entities by digitizing the many highly-manual tasks and activities such that they run efficiently. Strong and efficient entities are in better position to participate in linkage banking opportunities that connect formal and informal FSPs to deliver products and services to the underserved.

As a strategy for implementing the recommendations, UNCDF should first focus on quick wins. To qualify as quick wins, we considered the level of interest from the fisherfolks and the easiness of implementation of the idea.

These quick wins are generally services that have been implemented in other value chains that can be benchmarked:



QUICK WIN 1:

Digitization of payments to government from the fisher folk such as collection of license fees from fishing boats and fish movement permits as well as digitization of the registration of all players (fishers, boat owners and traders) in the sector.

DESCRIPTION

Fish value chain actors like boat owners, traders and fishers are now mandated by the new fisheries Act to acquire licenses and permits in-order to undertake fishing activities. This is intended to curb illegal fishing in Uganda and also helps generate revenue for the government. A key challenge is that the current process of making these payments is lengthy as it involves traveling long distances from the fishing villages to the sub-county where payment valuations and assessments are done. It also involves traveling to major towns where the banks are located to make the payments. This is tedious; and consequently, many fish value chain actors opt to use well-connected middlemen who claim to have immense knowledge of the payment process and can speed things along. However, these middlemen are known for tinkering with the registration process where they can issue fake documents and hence expose the government to pilferage of revenues. Such being the case, digitizing government payments will lead to an increase in revenue collection volumes for the government through increased transparency in the collections. It will also increase the number of payers as a result of mandatory registration of all payers/actors in the value chain.

DESIRE GOAL

Digitization of government payments will ensure smooth and transparent collection as well as it can be considered as another advanced mobile money use case that can trigger evolution of other use cases.

QUICK WIN 2:

Leverage digital technology to improve access to essential information such as financial, technical, weather information and access to market information

DESCRIPTION

Access to essential information which can boost the fisherfolk livelihoods is limited. The fisherfolk relies on 3rd parties to access such important information, but unfortunately, these 3rd parties are sometimes ill-equipped to deliver information to the fishing communities or they deliberately misinform the fishing communities – for example as regards to price information, such that they can take advantage of them. Inefficiencies along the value chain and income loss to the fisherfolk occur because many of the value chain actors, particularly women, are misinformed about the price of their fish.

DESIRED GOAL

Have a centralized digital information portal that disseminates essential information such as current prices and weather information.

QUICK WIN 3:

Digitization of savings groups in the fishing communities and their linkage to formal financial institutions as a way to expand opportunities for members to access formal financial services. Some of the support needed include a) introduction of a group electronic mobile wallet b) digitization of the group financial ledgers

DESCRIPTION

Savings groups are prominent - especially among immobile members of the fishing communities - particularly women and elderly boat owners and traders. These groups have one key challenge which is that their operations are largely paper-based, along with inefficient processes that are costly, error-prone and time-wasting. Due to such challenges, formal FSPs are hesitant to partner with savings groups; and as such, linkage banking opportunities suffer.

DESIRED GOAL

- Groups that operate with efficient processes and ones with organized financial records present opportunities to link to formal institutions
- Digitizing savings by introducing digital ledger and mobile wallets can be considered advanced DFS use cases that can be leveraged to trigger introduction, uptake and use of other DFS use cases to the fishing communities.

Finally, we also recommend further research to cover communities that depend on transboundary water resources, for example, Lake Albert and Lake Edward. This will help to collate more insights and help identify more digitization opportunities appropriate for transboundary or cross-border communities.



References

- FAO, 2019: FAO and Ministry of Agriculture, advance efforts towards regulation of fisheries and aquaculture in Uganda <http://www.fao.org/uganda/news/detail-events/en/c/1178145/>
- Finscope – Uganda – Topline findings report 2018
- Food and Agriculture Organisation of the United Nations report, 2017a
- Jacobson, A., 2019, Fishermen fight to survive on the world's second largest lake, published in National Geographic, May, 2019
- Jumia 3rd White Paper on impact of mobile, 2019 / Jumia Business Intelligence
- Ministry of Agriculture, Animal Industry and Fisheries 2016/2016 Annual report
- Ministry of Agriculture, Animal Industry and Fisheries 2013/2014 Annual report
- Ministry of Finance and Economic Planning and Development (MoFEPD); budget speech 2019/2020
- Namatovu, S., et al (2018); Profitability and Viability Analysis of Aquaculture Production in Central Uganda: A Case of Urban and Peri-Urban Areas
- United Nations Capital Development Fund Report (2019): Introducing Agency Banking in Uganda
- United Nations Conference on Trade And Development, 2017 report, chapter 09: https://unctad.org/en/PublicationChapters/aldc2017d2_ch09_en.pdf







LEAVING NO ONE BEHIND IN THE DIGITAL ERA

The UNCDF strategy 'Leaving no one behind in the digital era' is based on over a decade of experience in digital finance in Africa, Asia and the Pacific. UNCDF recognizes that reaching the full potential of digital financial inclusion in support of the Sustainable Development Goals aligns with the vision of promoting digital economies that leave no one behind. The vision of UNCDF is to empower millions of people by 2024 to use services daily that leverage innovation and technology and contribute to the Sustainable Development Goals. UNCDF will apply a market development approach and continuously seek to address underlying market dysfunctions.

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