



VIRTUAL MEETING HELD ON 21st May, 2021

PROJECT START-UP AND STAKEHOLDER WORKSHOP REPORT MALAWI

Piloting Inclusive Business and Entrepreneurial Models for Smallholder
Farmers and Poor Value Chain Actors in Zambia and Malawi

Catherine Mawia Mwema, Alinafe Maluwa, Dorothy Chisusu, Netsayi Noris Mudege

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About WorldFish

WorldFish is an international, not-for-profit research organization that works to reduce hunger and poverty by improving fisheries and aquaculture. It collaborates with numerous international, regional and national partners to deliver transformational impacts to millions of people who depend on fish for food, nutrition and income in the developing world. Headquartered in Penang, Malaysia and with regional offices across Africa, Asia and the Pacific, WorldFish is a member of CGIAR, the world's largest global partnership on agriculture research and innovation for a food secure future.

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Contact

WorldFish Communications and Marketing Department, Jalan Batu Maung, Batu Maung, 11960 Bayan Lepas, Penang, Malaysia. Email: worldfishcenter@cgiar.org

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Summary

On the 21st May 2021, the 'Piloting Inclusive Business and Entrepreneurial Models project' hosted a three-hour virtual stakeholders meeting to further develop and modify the fish seed and feed models, as well as to discuss how the project can be integrated into the existing roundtable in Malawi. The meeting objectives was to ensure stakeholders' understanding of the objectives and purpose of the project, to update fish seed and feed business models, to outline areas the innovation platform can focus on, and to identify synergies with other projects and initiatives. Presentations covered information about the project, the seed and feed models, and the innovation platform. Participants included men and women smallholder fish farmers hosted by the department of fisheries officers, private sector, government representatives, local and international NGOs, and representatives from the universities.

1. Introduction

The 'piloting inclusive business and entrepreneurial models for smallholder fish farmers and poor value chain actors in Zambia and Malawi' project is funded by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. The project goal is to establish pro-poor, gender and youth-inclusive business and entrepreneurial models that provide sustained access for smallholder fish farmers in Zambia and Malawi with productivity and profitability enhancing fish seed, feed and knowledge and increased access to fish for enhanced nutrition of consumers. In Malawi, the project will pilot thirty hatchery and feed operators with the aim to reach close to 1,000 farmers with feed, seed and training. The project will be implemented in the Southern region of Malawi in the following districts: Zomba, Blantyre, Mwanza, Thyolo, Mulanje and Phalombe.

The project's outputs include:

- Output 1: Inclusive business and entrepreneurial models (IBEMs) established and functional for piloting to service local smallholder farmers
- Output 2: Innovation platforms with private and public actors established and functional
- Output 3: Innovative training materials on best management practices, business skills development, entrepreneurship

- Output 4: Assessments evaluating efficacy of the IBEMs, innovation platforms, and training materials and approaches

Through interactions with regional networks and investors, results from the pilot will be widely shared, contributing to scaling of aquaculture technologies within the sub-Saharan African region. The project facilitates progression along the FISH CRP impact pathway through the change mechanism “Private sector investment and replication of innovative business models in fish production, processing, and trade” towards the SLO targets.

A similar workshop was held in Zambia in October, 2020 ([Stakeholder workshop report - Zambia](#)).

2. Workshop objectives

On the 21st May 2021, the GIZ funded project 'Piloting Inclusive Business and Entrepreneurial Models' hosted a virtual stakeholders meeting to further develop and modify the fish seed and feed models, as well as to discuss how the project can be integrated into the existing roundtable in Malawi.

The three-hour workshop meeting was split into three sessions as follows:

1. About the project
2. Presentation and discussion of fish seed and feed business models
3. Discussion of the round table in Malawi

Presentations covered information about the project, the seed and feed models, and the innovation platform. The section on the innovation platform was presented by Mr. Henry Mwiseperere the aquaculture round table coordinator. Four break out session were held to discuss the proposed feed and seed models. The workshop integrated an interactive chat communication platform where participants could ask questions.

Participants included men and women smallholder fish farmers hosted by the district extension officers from the department of fisheries, officials, private sector, local and international NGOs, and representatives from the universities (See Annex 1 for list of participants)

Expected meeting outcomes

1. Stakeholders understanding the objectives and purpose of the project
2. Updated fish seed and feed business models
3. Initial outline of areas the innovation platform can focus on
4. Identification of synergies with other projects and initiatives

The meeting report is divided into three sections aligning with the three sessions of the workshop (see Annex 2 Workshop agenda).

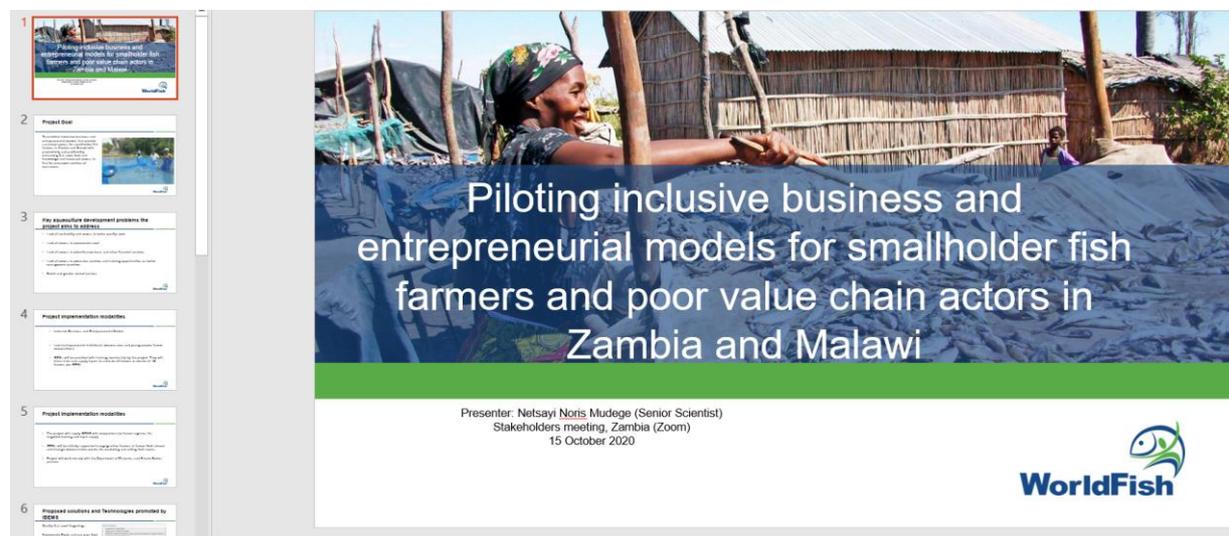
3. Welcoming remarks and introducing the project

The workshop officially started at 10.00 a.m., with welcoming remarks from Dr. Kanyumba, Scientist based in Malawi. Dr. Kanyumba applauded all the participants for

taking time to attend the meeting. He encouraged them to actively share their ideas during the workshop, as it will contribute to improving aquaculture in Malawi. He pointed out that the project is being implemented in six districts in Malawi and it officially started in 2019. The project activities kicked off in August 2020 due to some delays. The project aims to tackle two major challenges in aquaculture: Access to quality seed and quality feed. He welcomed the participants and took time to explain about the project in Chichewa (local language) for the benefit of participants who are not conversant with the English language. After the welcoming remarks, participants were randomly assigned to breakout rooms for self-introductions. Each group consisted of 3-5 members. The farmers were hosted by the extension officers, and they too got an opportunity to introduce themselves. All the participants including those on shared laptops indicated their names and contacts in the chat box.

Presentation session 1: About the project

Dr. Netsayi Mudege presented about the project highlighting on the project goals, the Project rationale and problem statement, project implementation modalities including collaborations with the government, private sector and farmers, and finally, solutions and technologies being implemented by the project.



Questions and answer session

Which institution has been assigned to conduct the training to hatchery operators, asked Ms Grace Chijere (Mwanza DFO)

Dr. Mudege responded that the trainings are conducted by WorldFish, however these trainings are conducted in collaboration with the department of fisheries. She highlighted

that the training of trainers held early in the year was conducted in collaboration with the fisheries officers.

Mr. Chimwemwe Tembo (Phalombe DFO) asked how much of the project funds is allocated for the Malawi component. This question was followed by another question in the chat box on the total cost of the project.

Dr. Mudege responded that the project amount is 280,000 euros, and it entails purchase of equipment, travel and training activities.

After the launch, what are the plans to involve the council to evaluate the project objectives. Due to decentralization of councils in Malawi, every project has to go through the council before any launch and implementation on the ground. A participant asked

Dr. Mudege responded that traveling to district councils has been limited due to COVID-19. However, the District Commissioner (DC) and Director of Planning and Development (DPD) from all the 6 districts were invited, unfortunately majority were not present. She further explained that WorldFish will make effort to physically reach out to the council when it becomes safe to travel. Additionally, the project team will make courtesy visits to councils for project briefing. Dr. Kanyumba added that Mr. Tembo's concerns have been taken note. WorldFish team is already making efforts on the same issue and will continue to make such deliberate effort to reach out to respective councils. The presence of extension workers from all the project districts also means that the councils were well represented.

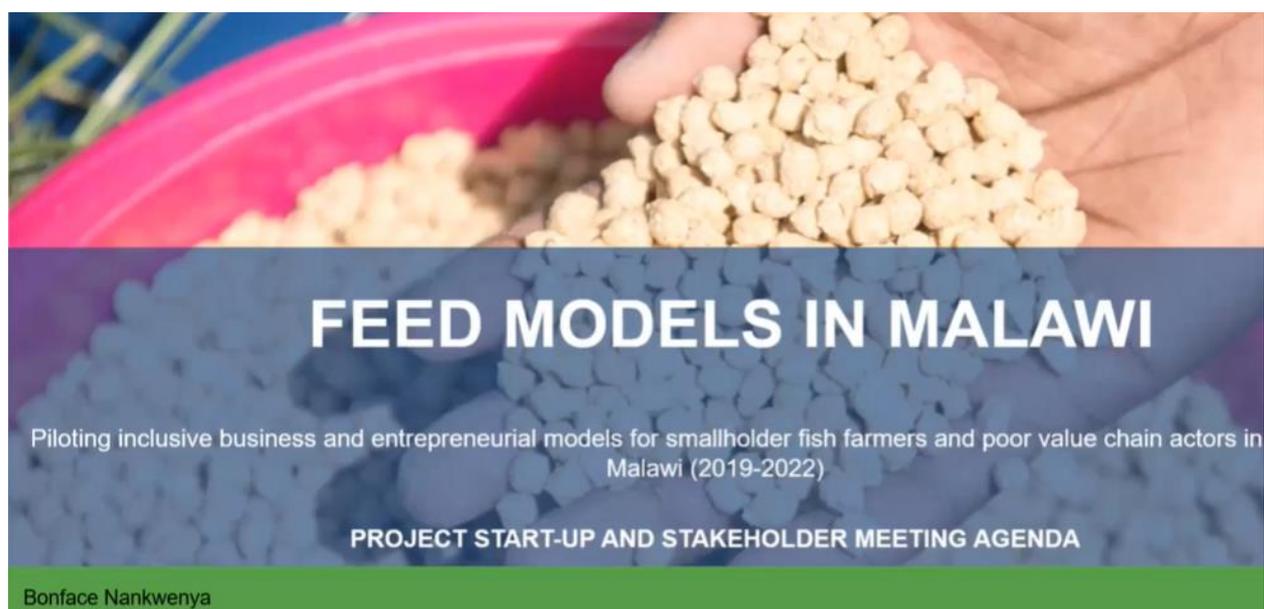
Emmanuel Natsatsala asked in the chat if the project is going to use local ingredients to make feed affordable?

Dr Mudege responded that the question will be addressed in the subsequent presentation but in case it's not addressed she will be happy to revisit it.

4. Feed and hatchery operator models

The feed and seed operator models were presented by Bonface Nankwenya and Merriam Phiri, respectively. After the presentations, there was a short interactive reflection session, followed by discussions in four breakout rooms to discuss the seed and feed models. Representatives of the groups presented three key points in the plenary session

Presentation 1: Feed models



On feed model, Boniface Nankwenya presented a brief description of current commercial feed situation in Malawi, feed model distribution network, proposed operational models, selection criteria of feed operators, and project sustainability.

The proposed feed models focused on commercial feed distribution network to enhance access to commercial feeds by smallholders. Two models: Decentralized feed retailers and aggregation by cooperatives were proposed. The decentralized feed aquapreneurs comprised of both individuals and agro shops to supply feed from agents to smallholder farmers. Aggregation will involve bulk purchases by cooperative members to enjoy economies of scale.

Both models will operate on a co-financing grant; 70% from the project and 30% aquapreneurs investment on the purchase of feed.

The project has selected thirteen feed operators across the six districts. The feed operators were selected after an assessment which considered nearness to fish farmers, financial capacity, potential and interest to sell feed as a business venture, gender and youth considerations, among other factors. The operators will target a potential demand generated by almost 1,000 active fish farmers in the project areas.

The feed model also focuses on training, mentoring and coaching farmers. The targeted feed operators have been trained as trainers to reach at least 42 farmers in their respective districts. WorldFish will continue to train the feed operators in feed handling and storage, best management practices, record keeping and marketing.

Lastly, Bonface highlighted the sustainability of the feed model which includes: 1) Re-invest gains, 2) Best market prices, 3) Business development, 4) Knowledge and farmer training, and 5) Innovative platform.

Presentation 2: Seed Models

Merriam Phiri presented on the hatchery operator model. The presentation covered the need for the hatchery operator model, the operational working of the model, sustainability approaches and the progress to date.



The model involves training hatchery operators (HOs) in seed production and in managing a hatchery business, with technical support from the Department of Fisheries (DoF). Hatchery operators have undergone a training of trainers on better management practices to equip them in training other farmer. Each operator is expected to reach at least 42 farmers.

In Malawi, fifteen HOs were selected, trained and equipped with materials and accessories to set up hapa-based seed production system. The HOs will soon be supplied with an initial brood stock of 106 parent stock and two bags of feed, each. The HOs are expected to purchase more accessories/materials such as aerators, scoop nets, and scales to be used in the production system.

Reflections and clarifications in plenary:

A participant mentioned the need for the project to equip hatchery operators with oxygen cylinders to be used during transportation of fingerlings and brooders. Similarly, provision of protective gears like chest guards and boots to hatchery operators.

Dr. Mudege responded that these are indeed important, and if there will be some additional funds, the project will consider purchasing the additional equipment. Currently, the project has purchased hapas, broodstock and other materials.

Break out session: Discussion of feed and seed models

Four break out rooms were initiated to discuss the feed and seed models. The majority of the farmers and operators (IBEMs) were hosted by the extension officers in two regions; Blantyre and Mwanza. Government staff from the department of fisheries were therefore grouped in these two break out discussions. The third and fourth groups comprised mainly of staff from the universities and other non-profit organizations like GIZ and PACT. The four groups discussed both the seed and feed models.

Discussion of seed models and plenary feedback

What are the key issues affecting smallholder fish farmers in the fish sector in Malawi in relation to access to seed/feed? What about in Southern Region?

Farmers, hatchery operators, feed operators, and the government raised the following issues as areas of concern:

- Lack of access to quality fingerlings
- Lack of access to sex reversed fingerlings
- Lack of access to extension services and training opportunities
- Lack of transportation and long distances to government research institutions that produce quality fingerlings
- Farmers Recycle fingerlings which may result in stunted fish and risk of inbreeding
- Lack of accessibility and availability to fingerlings in rural areas
- Lack of oxygen cylinders and protective pond wears to hatchery operators
- There is a challenge with material to produce quality fingerlings, which may result to stunted fingerlings.
- There is an issue on marketing of fingerlings where some farmers may not be willing to buy fingerlings from fellow farmers, as they may want it for free.
- Mwanza district for example, is far from where farmers can collect broodstock, resulting to increased recycling of broodstock.

The academia and NGOs raised the following issues:

- The quality of fingerlings is compromised; some dealers sell stunted fish as fingerlings.

- Government needs to work hard on research and extension services. The type of fingerlings produced in the government research centres are not good quality. Farmers tend to produce better fingerlings compared to government stations.
- Besides *O. Shirenus* and *T. Rendalli*, there are also other species like *Clarias* that needs to be considered so that farmers have wider choices.
- Each district needs to have a hatchery centre. Currently, there are only two centres in Lower Shire and Zomba.
- There is need for improved access to land and capital by fish farmers. Formation of cooperatives, recognized by local leaders can facilitate acquisition of land for fish farming by cooperatives.
- Mind-set change for fish farmers as most farmers are used to receiving handouts. Some farmers always wait for organizations to give them free fingerlings, the hatchery operators may therefore lack a market for the fingerlings they sell.

Are the proposed seed models appropriate for the smallholder sector in the project area and Malawi at large? Why?

Farmers, hatchery operators, feed operators, and the government stated that the proposed seed models were appropriate because they will improve availability and accessibility of fingerlings by smallholder farmers. They also mentioned the following reasons why the seed model was appropriate:

- The model will help farmers in rural areas to be able to access quality fingerlings within their reach since the Hatchery operators will be within their areas.
- The model will reduce cost of the fingerlings since the farmers will not need to travel long distances to access fingerlings
- The quality of fingerlings will be improved; it will reduce cases where stunted adult fish is sold as fingerlings
- In this model, the collaboration with DoF and also training of farmers, hatchery operators and DoF make the model appropriate because all the parties are involved
- Constant coaching, mentorship and monitoring from WorldFish centre and the DoF will ensure sustainability.

The academia and NGOs reiterated that the models were good however, how the implementation will determine their outcomes. If the activities are not implemented as

planned or designed, the models may fail even if they are good. The seed models were deemed appropriate, with an even distribution of the hatchery operators, it will reduce the distance travelled by farmers to access seed.

They also said the following:

- The proposed seed models will break the habit of farmers recycling seed due to unavailability of seed.
- Capacity of Hatchery Operators will be boosted, and they will also support other farmers bringing up overall capacity in the smallholder aquaculture sector.
- The proposed model will also provide an income generating opportunity for those farmers that will be involved

Will the proposed seed models result in increased availability of and access to quality seed? What needs to be improved?

Farmers, hatchery operators, feed operators, and the government were in agreement that the models would result in increased seed availability. However, they suggested the following improvements:

- Cluster farmers or farmers in general should be encouraged to get rid of their old stock of fish and buy new stock from hatchery operators
- The hatchery operators should be encouraged to own the model so that it is sustainable
- The project could supply additional equipment like gas cylinders and water-proof gears
- Monitoring and supervision of hatchery operators to produce quality fingerlings should be considered
- The hatchery operators can offer discounts in the first cycle to farmers to ensure farmers also benefit on benefits from the project, for at least one cycle.
- There is need to get clean material from the wild only, not from farmers.
- There should be a system to ensure broodstock is replaced after 3years.
- Need for certification process to ensure quality seed and a clear definition of who should be a hatchery operator. Having a hapa and some few equipment is not enough to qualify one to be a hatchery operator, there is need for more quality standards.

- We need fingerlings that are adapted to the environment and local available to reduce mortality rates which comes with long distances and very hot conditions.
- The Department of Fisheries needs to be involved from the start of the activity. This is because DoF will act as a medium between the project or WorldFish and the farmers. DoF has a good relationship with many smallholder farmers in their respective areas, and they would play a critical role in involving them. DoF will be helpful in ensuring that these models are sustained beyond the Project

The academia and NGOs felt the model is good because it can address the issues relating to quality seed, as long as the trained hatchery operators produce quality fingerlings. The hatchery operators will also train their customers on good management practices which makes the model more viable.

They suggested the following:

- There is need however to have some initial discounts on the fingerlings, the farmers will know that the hatchery operators received some start-up kits from the project and yet they are selling the fingerlings at market prices. The initial discounts will also help to attract customers.
- The need to develop an approach for local transportation of fingerlings, including purchasing oxygen cylinders and aerators.
- Visits from trainers and DoF should be continuous
- There is need to have a good seed certification system. The seed that will come from hatchery operators must be checked.
- Broodstock from the wild should be allowed to breed on station, and then the offspring will be recruited as brooders because they would have adapted to the culture environment.
- Need to provide information of who and where these hatchery operators will be found.

How can the proposed models be improved to benefit women and young people both as farmers and as IBEMS?

Farmers, hatchery operators, feed operators, and the government had the following suggestions:

- Sensitization by inviting women and youth during fish harvest
- Make fish farming attractive to this particular group

- Deliberately select women and youth headed households to participate as operators
- Break some cultural norms; there are jealous husbands who do not want their wives to leave homes alone; involving them as couples would help.

The academia and NGOs felt that:

- Women should be engaged not only in fish farming but in accessing the benefits.
- Women can easily move in aquaculture if they see the economic benefit because they are always looking for food and income for their households. For example, now women are engaged in caterpillar harvesting because it is profitable to them.
- Make aquaculture as a home-based activity integrating all family members so that there is overall household participation including women. This could be integrated in the training sessions.

Discussion of feed models and plenary feedback

Are the proposed feed models appropriate for the smallholder sector in the project area and Malawi at large? Why?

Farmers, hatchery operators, feed operators, and the government were in agreement that the feed models were good as there is no choice of a local feed manufacturer.

However, use of commercial feed from Zambia should be adopted in the short-run as we work towards having local manufacturers

The academia and NGOs reiterated that the feed model will import high quality feed from Zambia which will address the current lack of manufacturers producing floating feed in Malawi. However, long-term solutions/models are desirable to address the challenges. Such solutions may include provision of resources to project participant to venture into high quality production of both floating and sinking feed.

They further mentioned that:

- The feed operators have the capacity to handle logistical challenges that come with importing feed from Zambia. The feed operators are strategically located to reach seed operators and farmers with fish feed.
- Floating feeds are good as the fish performs better. This is based on experience with trialling floating feeds and sinking feeds.

- The matching grant for the feed operators will encourage them to invest in the feed business. The grant will act as a subsidy hence reducing the purchasing price of the feed
- The project will help in developing the value chain by enhancing the capacity of local agro dealers/ feed operators.

Will the proposed feed models result in increased availability of and access to quality seed? What needs to be improved?

Farmers, hatchery operators, feed operators and the government felt that the imported feed is high quality, however:

- Imported feed from Zambia can be easily affected by changes in import/trade policies such as import bans and quotas.
- The need to train more people in high-quality feed manufacturing in Malawi.

The academia and NGOs reiterated the need for floating feed which is currently lacking in Zambia. The floating feed fits better with the characteristics of fish species that are kept under aquaculture and will essentially result to good quality fingerlings and fish.

. They mentioned the following:

- Chinese feed is the best compared to Zambian and Malawian feed, there is currently no floating feed in Malawi, Zambia offers a good option as it is closer to Malawi.
- Logistical costs on importation of feed which increases prices, it should be
- Sustainability of high-quality feed supply from the imports may be a challenge
- The model has other players who will be importing – there is need for coordination among all those involved to shorten the chain.
- The feed should be packed in smaller quantities that farmers can easily access

How can the proposed models be improved to benefit women and young people both as farmers and as IBEMS?

Farmers, hatchery operators, feed operators, and the government emphasized that:

- Cooperatives particularly women and youth cooperatives will empower them, and the aggregation will result to lower feed prices.
- We could have clusters to ensure all beneficiaries encompasses women and youth
- The youth can also be involved in other small business like buying fish to facilitate demand of fingerlings.

- We could start with men to encourage women and youth to get involved. If more men and women are involved in fish farming, the likelihood of youths to participate becomes high

The academia and NGOs mentioned that

- Women can be linked saving groups to influence re-investment of earning from fish farming.
- During project selection, there is need to consider new entrants, farmers that have not worked with any organization to promote participation. Some farmers have become ‘project farmers’ and are the usual beneficiaries of projects

5. Round table and Innovation Platform

In this session, Mr. Henry Mwaipesere, the coordinator for the round table presented on the existing roundtable forum in Malawi.



He mentioned that the roundtable consists of multi-actors (private, public and civil society) active in aquaculture who work towards meeting the challenges and emerging issues in the aquaculture sub-sector. The round table provides linkages with the emerging cross-cutting policies, plans and activities of national bodies. The roundtable was officially initiated in Nov 2019.

Mr. Henry further explained the structure of the round table which consists of the steering committee chaired by the director of fisheries and the deputy is from the private sector. The roundtable has five working groups comprising of feed, fingerlings, research,

implementing agencies and outreach. Currently, the roundtable has 94 registered members from universities, private sector, department of fisheries, civil and international organizations and farmers. Membership is free and open to individuals as well as organizations.

Mr. Henry thought that the project can help to localize the roundtable in the provinces they work in. Hosting platforms with IBEMs at local levels and feed into the national round table. He further added that the farmers and operators in the project can also be part of the feed and seed working groups of the round table.

Reflections and clarifications in plenary:

Mr. Chimwemwe observed that the membership of the roundtable mainly comprises of the central government, more members from the local government (councils) could be considered to create more ownership

Mr. Henry responded that there are members, mainly farmers, from the provinces. Membership is open to all individuals; the secretariat will however work to reach out to the council and local governments.

What is the criteria for coming up with the steering committee considering representation of farmers in the provinces? Some provinces like Southern have more farmers and yet they have only one representative, asked Mr Munthali

Mr. Henry answered that the criteria used was based on the stakeholders from key thematic areas, that's why the platform comprises of stakeholders representing different organizations and working groups. The farmers' representation was based on recommendations from IFFNT, an association of farmers. If the number of farmers are larger in the southern region, this can be discussed in the steering committee and provisions made for more representation.

5. Evaluation questions and workshop closure

At the end of the workshop, participants were asked to respond to a 4-questions survey for evaluation.

Participants were asked which feed models they think will be most impactful in reaching smallholders, majority of the respondents (88%) of the respondents selected both

decentralized retailers and aggregation by cooperatives. 6% chose decentralized retailers and the other 6% chose aggregation by cooperatives.

On question 2- Will the proposed seed model ensure access to quality seed from farmer? All the participants voted Yes.

On question 3-How did you find the presentation? 73% felt that the presentation was very useful while 25% felt that the training was useful. Lastly, Majority of the respondent responded would like to be part of the innovation platform, a few of the participants were already members of the platform.

As a closing remark, Dr. Kanyumba thanked all the participants for their time, acknowledging the different stakeholders who attended the launch, including farmers, private sectors, government, academia and other organization. He thanked the participants for their patience and enthusiasm in the subject matter, and the contributions made in developing the business models. He reiterated the importance of all the stakeholders and their contributions, and WorldFish commitment to work with all the stakeholders.

6. Observations

The attendance was average (50% of the confirmed invitees). Majority of the invited participants were unable to attend due to challenges in internet connection owing to network connection challenges in the regions the project is implemented in Malawi. During the meeting, the participants who faced difficulties in joining made attempts to call the organizers in Malawi by phone, some were completely not able to join the virtual meeting.

Due to lack of devices to join the meeting coupled with poor connectivity, the local private players and hatchery operators had to be hosted by the government extension officers. The farmers and operators actively participated in the session albeit through a shared laptop provided by the DoF.

7. ANNEXES

Annex 1: participants list

No.	Name of participants	Institution/ Organization	Sex	Region
1	Noel Masangano	Agro-dealer	M	Southern
2	Eric Maganga	Farmer (HO)	F	Southern
3	Friday Nikoloma	Farmer (HO)	M	Southern
4	John Ntambo	Farmer (HO)	M	Southern
5	Jammy Ganizani	Agro-dealer	F	Southern
6	Martias Synoid	Farmer (HO)	M	Southern
7	Falesi Machipisa	Farmer (HO)	F	Southern
8	Dorothy Twaibu	Farmer/Agro-dealer	F	Southern
9	Lyton Galimoto	Farmer (HO)	M	Southern
10	Sinoden Lipapata	Farmer (HO)	M	Southern
11	Charity Banda	Farmer (HO)	F	Southern
S	Maggie Dyson	Farmer (HO)	F	Southern
13	James Masonga	Agro-dealer – Chumachilimunthaka	M	Southern
14	Mphatso Giun	Technical	M	Southern
15	Agnes Nyasulu	Technical	F	Southern
16	Irima Gondwe	DFO	F	Southern
17	Chimwemwe Tembo	DFO	M	Southern
18	Chrissie Banda	DFO	F	Southern
19	Great Munthali	DFO	M	Southern
20	Grace Chijere	DFO	F	Southern
21	Clesensio Likongwe	DFO	M	Southern
22	John Nyirenda	Care Malawi	M	Central
c	Odio Mwangode		M	Northern
24	Emmanuel Nasasara		M	Central
25	Dennis Chinkhata	Innovative Fish Farmer Network Trust (IFFNT)	M	Central
26	Prof. Fanuel Kapute	Mzuzu University	M	Northern
27	Andrew Salapa	PACT Malawi	M	Central
28	Victoria Hara	PACT Malawi	F	Central
29	Grace Kaunda Sakala	Ecoret Limited/Agro- dealer	F	Southern
30	Hassib Sainan	NAC	M	Southern
31	Henry Mapwesera	Aquaculture Around Table	M	Southern

32	Keagan Kakwasha	WorldFish Zambia	M	
33	Mary Lundeba	WorldFish Zambia	M	
34	Meriam Phiri	WorldFish Malawi	F	Southern
35	Alinafe Maluwa	WorldFish Malawi	M	Southern
36	Dorothy Chisusu	WorldFish Malawi	F	Southern
37	Hanzunga Halumamba	WorldFish Zambia	M	
38	Catherine Mwema	WorldFish Zambia	F	
39	Lizzy Muzungaire	WorldFish Zambia	F	
40	Netsayi Mugege	WorldFish Zambia	F	
41	Agness Chileya	WorldFish Zambia	F	
42	Bornface Nankwenya	WorldFish Malawi	M	Central
43	Lucious Kanyumba	WorldFish Malawi	M	Central
44	Victor Siamudala	WorldFish Zambia	M	

Annex 2: Workshop Agenda

Piloting inclusive business and entrepreneurial models for smallholder fish farmers and poor value chain actors in Zambia and Malawi (2019-2022)

Time	Activity	Facilitator
9:30 – 9:40	Welcome, introductions and registration	Dr Lucious Kanyumba
9:40- 9:50	Presentation of the project objectives, aims, geographical location	Dr Netsayi N Mudege
9:50 – 10:00	Question and discussions	Ms. Lizzy Muzungaire
10:00- 10:20	Presentation of the Hatchery IBEMS (Malawi)	Ms. Merriam Phiri
10:20 – 10:30	Presentation of the feed models (Malawi)	Mr Bonface Nankwenya
10.30 – 10.45	Questions and discussions	
10:45 – 11:20	Group discussions on the models (breakout rooms (Small holder farmers, private sector players, Extension)	Group Facilitators Ms. Chrissie Banda Ms Grace Chijere Mr. Brino Chirwa Dr. Mtenthiwa Ms Victoria Hara Mr. Dennis Chinkhata
11:20 – 11:30	Report back to the session	Lizzy Muzungaire
11:30 – 11:40	Presentation on the Aquaculture Round Table	Mr Henr

		y Mapwesera
11:40– 11.50	Questions and answers	Lizzy Muzungaire
11.50- -12:00	Meeting evaluation, Closing remarks and next steps	Keagan

Annex 3: Questions discussed during breakout sessions

Breakout session 1: Introduction (5 min breakout sessions for 6 people)

- Please introduce your name, what you do and what you hope to understand from this meeting and what you want others to know about you that they don't already know.

Break-out session 2: Seed Model Questions

1. What are the key issues that need to be addressed in the fish seed sector in Malawi in relation to access to seed for smallholder farmers?
2. Are the proposed seed models appropriate for the small holder sector in Malawi? Why?
3. Will the proposed seed models result in increased availability of and access to quality seed? What needs to be improved?
4. How can the proposed models be improved to benefit women and young people both as farmers and as IBEMS?

Feed Model Questions:

1. What are the key issues that need to be addressed in the fish feed sector in Malawi in relation to access to feeds for smallholder farmers?
2. Are the proposed feed models appropriate for the smallholder sector in Malawi? Why?
3. Will the proposed feed models result in increased availability of and access to commercial feed? What needs to be improved?
4. How can the proposed models be improved to benefit women and young people both as farmers and as IBEMS?

About WorldFish

WorldFish is an international, not-for-profit research organization that works to reduce hunger and poverty by improving fisheries and aquaculture. It collaborates with numerous international, regional and national partners to deliver transformational impacts to millions of people who depend on fish for food, nutrition and income in the developing world. Headquartered in Penang, Malaysia and with regional offices across Africa, Asia and the Pacific, WorldFish is a member of CGIAR, the world's largest global partnership on agriculture research and innovation for a food secure future.

For more information, please visit www.worldfishcenter.org