WATER FOR LIFE, WATER FOR LIVELIHOOD

JALJEEVIKA STRATEGY PLAN 2020-2025

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Jaljeevika Approach Toward Sustainable Development Goal

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FORWARD

India is the second largest fish producing nation in the world. Fisheries is a sunrise sector with varied natural resources and potential. In India, this sector engaging over 14.50 million people as primary producers and millions more along the value chain. Transformation of the fisheries sector from traditional to commercial scale has led to an increase in fish production from 0.75 Million Metric tonnes in 1950-51 to 12.61 Million Metric tonnes during 2017-18 with a contribution of 8.92 MMT from inland sector and 3.69 MMT from marine sector.

The priority for small-scale fisheries must be to secure and improve the benefits they provide by increasing their resilience to ecological, social and economic change. Challenges about the livelihoods of fishing community, the sustainability of inland fisheries and sustainability of the aquatic resources on which they depend also need to be built up.

We are committed for promotion of aquatic livelihood through better resource management, institution building, technology transfer, access to credit, inputs, markets and support in developing end to end value chain towards enhancing livelihood opportunities, securing food and nutritional security in rural India. Centre for Aquatic Livelihood-Jaljeevika is working with fish farming community to develop technical capacity, install innovations, strengthen institutions, collectives and deliver systemic change to scale impacts. We focus on fisheries and aquaculture sector, preliminary for the following reasons:

- All sorts of waterbodies with varied size has potential to produce food, fodder and fuel. Shifting focus from land-based farming to waterbodies-based farming is a paradigm shift approach to ensure food, nutrition and livelihood security.
- Globally fisheries and aquaculture contribute to the livelihood of more than 800 million people, more than 90% lives in developing countries and belongs to small and marginal farming families.
- Diversity in fish's variety are source of cheapest source of animal protein and micro-nutrients consumed by poor households.
- Integrated farming is the way forward to ensure food security, livelihood enhancement and economy generation. Focussing to developing a Blue economy is going to revolutionise farming and food sector in future days.

Multi stakeholder engagement, sectoral partnership is the key mantra to leverage existing potential, knowledge and resources for people's overall development. From Scale -Impact Our strategy is to IMPACT SCALE; it is one of the proposed ways to move forward from Scale-Impact.

RELEVANCE OF AQUATIC LIVELIHOOD

SECTION 1: RELEVANCE OF AQUATIC LIVELIHOOD

Why fish and aquatic livelihood; is important for us:

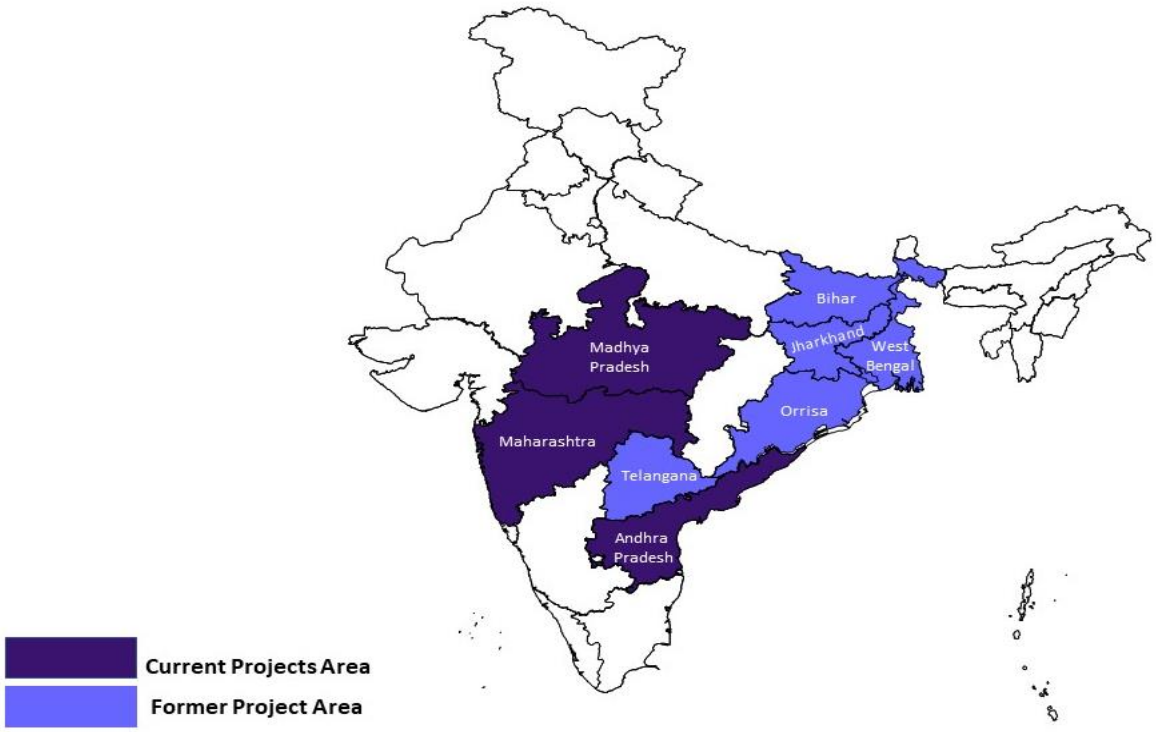
- Global fish production stands at 167 million t, of which 44% (73.8 million t) is contributed by the aquaculture sector (FAO, 2016).
- Global capture fishery is presently at crossroads with over 70% of the resources exploited and therefore aquaculture is the only option to fill up the gap of much of the future demand for fish
- Global aquaculture production in 2016 included 80.0 million tonnes of food fish and 30.1 million tonnes of aquatic plants, as well as 37,900 tonnes of non-food produce.
- Aquaculture is the fastest growing animal food-producing sector, growing at a rate more than 7% annually.
- Globally 19.3 million people were engaged in aquaculture and 40.3 million in capture fisheries. It is estimated that nearly 14 percent of these workers were women
- With a national per capita consumption of 11 kg, fish is recognised as one of the chief components in the domestic food security in India
- Freshwater capture fisheries account for only 7% of reported global fish harvests, yet these harvests are concentrated in low-income countries where their essential contributions to food security and rural economies are widely underappreciated
- Fish and fish products have presently emerged as the largest group in agricultural exports from India, with 13.77 lakh tonnes in terms of quantity and Rs. 45,106.89 crores in value.
- as much as 75% of the world's inland wetlands may have been lost during the 20th century, and freshwater populations have declined by 83% on average between 1970 and 2014, equivalent to 4% per year, according to the latest Living Planet Report (IUCN)
- More than 50% of existing water resources in India is yet to be included for fisheries-based livelihood intervention
- the total fish seed required for optimal stocking in the existing ponds, new ponds and reservoirs is about 60,000 million fry. As against this, the fish seed production in 2017-18 was about 39,261.31 million fry. Thus, there is a gap of about 20,738.69 million fry.
- Setting up of brood banks, community based hatcheries, utilisation of small and seasonal tank as seed nursery unit across the country, is therefore a priority area for sector development
- Aquaculture is the world's fastest growing food production system, increasing at a rate of 8 percent. It is evident that future food supply will be dominated by aquatic produces.
- Good governance, accountability and business acumen in collectives of inland fisheries system will enhance food security, nutrition, biodiversity, gender equity and employment and community resilience to mitigate climate change.

In a country like India where majority of regular population depends on agriculture-based livelihoods, presence of millions hectare of underutilised waterbodies and millions of unaccounted small seasonal farm ponds has tremendous potential for collaborative interventions. What needed is

long term, focused, innovative integrated approach so that community becomes skilled to operate new technology independently and for securing collective goods.

> ***Aquaculture is the fastest growing animal food-producing sector, growing at a rate more than 7% annually***

Jaljeevika Project Area



ABOUT JALJEEVIKA

SECTION 2: ABOUT JALJEEVIKA

2.1 The Challenge:

There are several bottlenecks that need to be addressed to make fishery related livelihood activity profitable. The major bottlenecks identified are:

- Non availability of knowledge centre, training, technical support
- Unavailability of quality fish seed.
- Absence of Linkage with the bigger market.
- Lack of logistics and Transportation facility.
- Absence of local processing technology
- Poor curated advisory support to farmers.
- Absence of Credit and insurance support
- Poor institutional structure and governance

To describe challenges further, as per an estimate, the total fish seed required for optimal stocking in the existing ponds, new ponds and reservoirs is about 60,000 million fry. As against this, the fish seed production in 2017-18 was about 39,261.31 million fry. Thus, there is a gap of about 20,738.69 million fry.

2.2 Our Vision

Enhancing human capability and ensure wellbeing through knowledge transfer, empowerment and collective process. We believe in evolving process to facilitate and nurture **Everyone as Change maker**. We dream to create an equal, gender just, ecologically balanced and sustainable community through creating knowledge and institutions hub.

2.3 The Mission:

Reduction in Poverty, vulnerability, build resilience and empower community through strengthening aquatic-based livelihood opportunities.

Jaljeevika transforms lives by improving access to knowledge, institutions and market in the poorest communities to establish water-based livelihood portfolio. We work with local partners, community-based institutions and private sector to maximize our impact.

During last two decades, there is a shift from capture fisheries to aquaculture. in India, the vast inland resources comprise more than 7 million Ha of varied typology of waterbodies. So far about 1 Million Ha of water area have been brought under fish production, there is scope to bring more than 5 million ha of water area for fish production. Bringing all potential waterbodies for fish production will increase production to manifold and has potential to create million more employments in this sector.

OUR DIFFERENTIATORS

- **Sectoral intervention**
- **Open source**
- **Explore localised possibility**

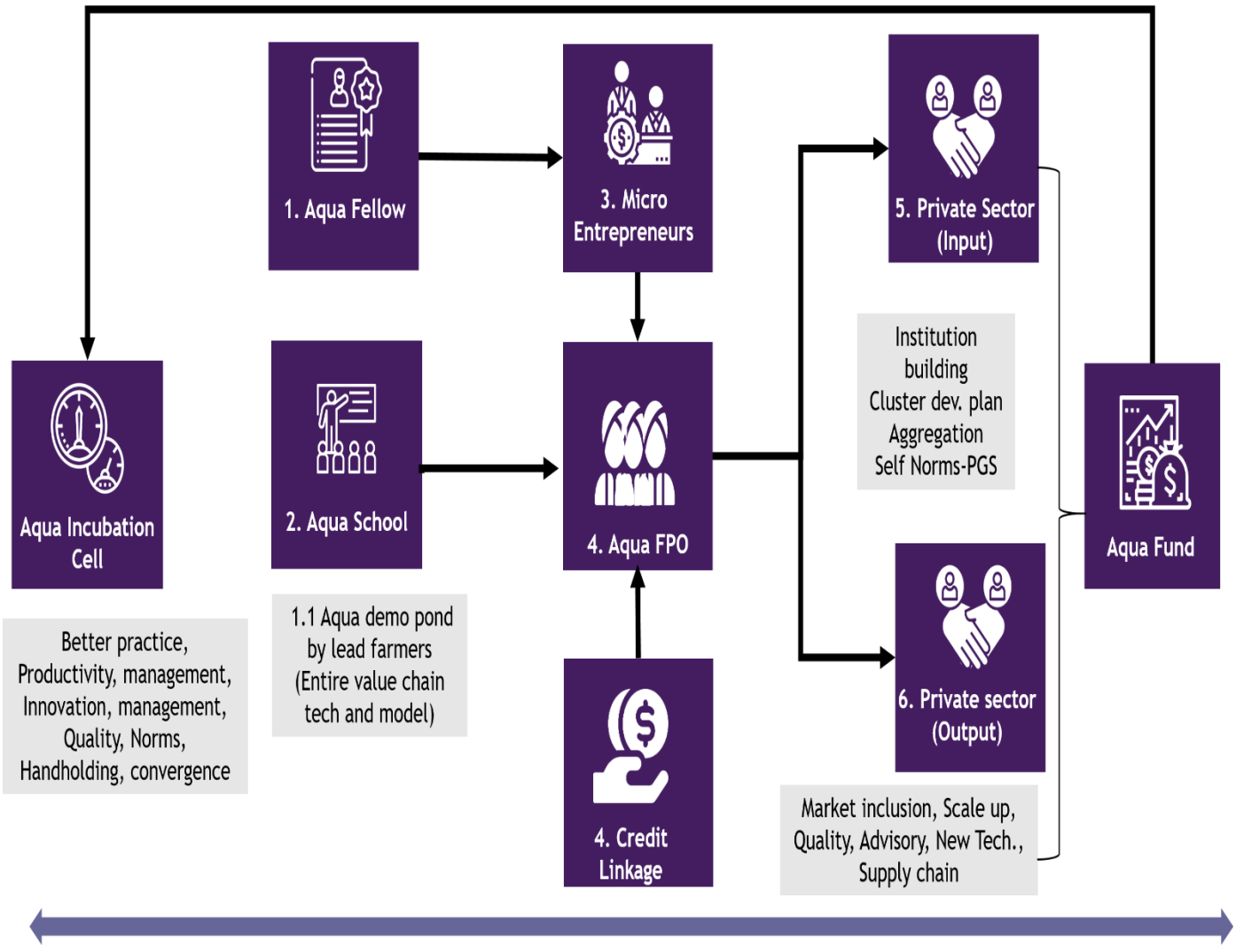
2.4 Mission 2025

1 Million fish farmers

1 Million Hectare water area

Create 1 ,00,000 + jobs

Jaljeevika Systemic Change Initiative



STRATEGIES TO IMPACT-SCALE

SECTION 3: # STRATEGIES TO IMPACT-SCALE

During 2019-20, We were involved in Ashoka Globaliser process and Unltd Growth Challenge program, that shaped organisational long-term visioning process and helped us to strategize system change journey. Our organisational strategy became sharpened through regular engagement of thought leaders, advisors and mentors.

Our Impact Scale Model is organized around five focal areas.

- **Integrated livelihood model**
- **Aqua Entrepreneurship**
- **Institution as Catalyst**
- **Inclusive and Empowering Technology**
- **Multi Stakeholder Engagement**

Well-managed fisheries and aquaculture has potential to reduce poverty, create wealth, wellbeing, enhance food and nutrition security and make fishing communities more adaptive to climate change and new market paradigm.

Therefore, Jaljeevika will make sustained efforts towards realisation of:

3.1 Integrated livelihood model

Land based farming system and aquaculture can be integrated to improve efficiency, livelihood generation, food security, and to ensure sustainability. Integrated approach will enhance natural fish stock and improve health of biodiversity. Ensuring location specific fisheries system integrated with other livelihood functions requires systemic investment in skill development and human capacity, such process will create avenues for blue economy across fisheries value chain. access to institutional support, credit and microcredit, can facilitate entry and exit for marginal households. Well-integrated fisheries can be sustainable and resilient against climatic variability and other external shocks. Such scalable model will create wealth and economic growth for practising fishing and communities. This is an approach from poverty reduction to wealth and wellbeing creation for the farming community. Further, Increased fishery and aquaculture production will ensure in securing better health and nutrition.

3.1.1 What we will deliver

- Demonstrate a community-based Ecosystem Approach to Inland Fisheries
- Establish production and sustainability factor through interaction of integrated landscapes and aquaculture
- Define best practices guidelines for fisheries and aquaculture.
- Establish fishery and soil-water management plans for nutrient maintenance.
- Establishment of community managed brood bank, fish seed production and seed rearing units to establish seed sovereignty.
- Encourage culture of diversified small and indigenous species and using diversified indigenous knowledge systems

3.1.2 Program delivery mechanism

- **Aqua School:** Community led process for training, practical learning, regular pond specific data based advisory generation and powered by digital learning infrastructure
- Peer led extension mechanism: Integrated learning and hand holding system to support farmers,

practitioners, entrepreneurs and scientists

- Convergence: Well integrated model to collaborate with Government agency, Research station and Private sector
- E learning module, App, use of IT technology: Different curated interactive content across technologies and production system for Farmers, Entrepreneurs and Policy community
- Publication: Better management guidelines, Process of changes, Process documentation, Annual Status report on Aquatic Livelihood in India.
- Training program: for other interested Farmers, NGO, INGO, other livelihood network etc.

3.2 Aqua Entrepreneurship

In Indian context, fisheries-based enterprise is always considered as a task associated with a community. But with rise of technology, globalisation process and engagement of private sector, such myths are breaking away. Still, there are structural barriers to participate in fisheries and aquaculture related value chains activities due to limited access to natural capital (fishing grounds), financial capital and human capital (Capacity building).

Women and Youth are hardly considered as target group in effort to promote small scale fisheries and aquaculture sector. To achieve aspiration of global development goals, we need to leverage the power of private sector and flourish entrepreneurial fabric through youth and women. Process of imparting skill to visualise possible entrepreneurial journey must cover spectrum of small and seasonal pond to commercial processing operation, logistic, supply chain as well as knowledge delivery system. In a large country like India, large numbers of smaller enterprise have more social and employment generation value rather a large automated commercial unit. Apart from fish production, culturally Indian community is engaged with various other water-based production system like Makhana cultivation, Lotus, Water chestnut etc. an integrated enterprise planning using water bodies as production centre will establish various product specific value chain across different Agro-climatic zones.

3.2.1 What we will deliver

- Impart knowledge and skill to understand aqua entrepreneurship, business model and business plan across value chain
- Facilitate process of convergence, market access, access to resources.
- Support in developing cluster plan and assist in designing appropriate enterprise scale.
- Analyse value chains to determine the potential livelihood and wellbeing opportunities for community
- Analysis to ensure integration of credit and insurance agencies for sector development
- Create, suggest and apply best practice business models,

3.2.2 Program delivery mechanism

- **Aqua EDP (Aqua Entrepreneurship)**: Curated module for potential entrepreneurs, fisheries graduate student and others, Shape entrepreneur's business acumen,
- Setting up an Incubation unit
- Facilitate credit linkages and investors, business model canvassing/ business plan pitch events
- Content creation: **Aquatalk, AquaStory** series with entrepreneurs

3.3 Institution as catalyst

Better governance mechanism, institutionalised business decision making, and capacity building of members improves production performance of fisheries and aquaculture resources. Large waterbodies and open water sources need well-defined user rights to enable them for better governed participation in creating livelihood and collective wellbeing. A poorly governed collective creates challenges in decision making, fisheries operations and investment design implementation, ultimately that leads to poor productivity, conflict among members, weak market negotiation, economic and environmental risk. Most of fish producers collective , fisheries cooperatives lack proper management, dysfunctional decision making system, fragmented leadership and lack of capital to invest , considering all these limitations as well as potential opportunities; Fisheries collectives require capacity building intervention to strengthen for making them a business entities by taking up various activities with good governance, leadership development, convergence, transparency and accountability in their functioning. It is well documented that large and sustainable economic as well as social gains can result from better governance in capture fisheries through controlling the leakages in 'open accesses. apart from governance system improvement, bring value chain component will offer livelihood generation and socio-economic growth opportunities, especially in distress zones in India.

3.3.1 What we will do

- Ensure rights-based governance arrangements and improve effective measures, compliance with fishery management regulations.
- Effort to enhance fishery resource management arrangements, data gathering for decision making, develop awareness to protect the productive capacity of inland waters.
- Advise on the better organizational functioning to facilitate livelihoods generation for community's dependent on open resource.
- Create sustainable Blue economy through better fishery governance using ecosystem approach, ensuring rights, supportive regulations and collective responsibility. Such process will lead to ensure food security, improved nutrition and resilience from climate change effect. Converging rural, agriculture and farmer development policies with FPOs
- In difficult situation, establish appropriate social security measures, safeguards and provision of alternative livelihoods for people who are dependent on fishery sector.

3.3.2 Program delivery mechanism

- **AquaFellows:** Trained, technically skilled, motivated youths will be attached with fisheries collectives to ensure good governance practices and establish as a business entity., Regular capacity building of FPO board members and other key appointments on Management Practices
- **AquaFPO:** Revive poorly managed collectives, develop new collectives as farmer's producer company to provide end-to end services to members, value chain development and market linkages
- Develop a standardized scoring method of FPO; including financial, management, social and environmental score

- Improvement of risk management systems in FPO, Documentation and MIS system, use of IT for better enterprise management etc.
- Convergence and financial linkages to ensure capital structure of FPO in different phase.

3.4 Inclusive and Empowering Technology

Technology for fisheries and aquaculture sector has taken tangent from extensive production system to include IT & Nano technology. Still most of the dependent community are deprived of harnessing benefits of all advance technologies in a country like India. Proper utilisation of affordable and appropriate technology paves way for socio economic development. integrating technologies to enhance management efficiency, reduce human drudgery and promote inclusion will empower community. Many affordable technologies are developed by Government research institution and private entity but due to lack of collaboration and partnership mechanism still that remains unused. Technology and market integration have the potential to promote sustainability and create social goods.

Improving technical capability and exposure to markets will help improve the status of women across fisheries value chain who are generally more engaged in post-harvest, marketing and processing.

3.4.1 What we will do

- Use innovative affordable technology for diversification, increasing production and productivity
- Integrate GIS-based mapping of land and freshwater resources and establishment of database for developing cluster plan
- Installation of innovative technology, indigenous knowledge according to the capacity of the farmers and collectives
- Work with Government research organisation, national level fisheries management organizations and private sector to achieve better livelihood opportunities

3.4.2 Program delivery mechanism

- **AquaLab:** Community based technology demonstration and knowledge promotion system,
- **AquaMart:** Platform to share technology, farming practices and create linkages with service providers, buyer-producers
- **Aqua Tech compendium:** Partnership with Government research institutes, Private sector, technology dissemination

3.5 Multi-Stakeholder engagement

Achieving Sustainable development goal (SDG) is a global commitment. Fisheries and aquaculture sector contribute in realisation of some of the SDG. Partnering with and strengthening platforms, civil society and institutions to create meaningful collaboration will offer a paradigm shift to sector. It is not possible to address all of the issues without mutual cooperation. There are many social enterprise, NGOs, network of community organisations are working on livelihood thematic. We will partner with such livelihood agency to integrate component of aquatic livelihood. Partner organisation can use our open source modules, knowledge series and content to add on one more layer of livelihood portfolio for marginalised community. Develop

partnerships with Government and private sector organizations to set up a participatory stewardship will promote uniform quality in better practice guidelines, input, service, community based eco-labelling and market negotiations. Such systemic change in sector will ultimately help Regulatory, Private sector and collectives to work in harmony and efficiently.

There are various forum and partnership model exists in Marine, Aquaculture (particularly Shrimp) like All fish, MSC, ASC, Re-circulatory farm coalition,

Sustainable seafood coalition, GAA etc. till date effort is not been made to engage Public Private and community institutions together in freshwater sector. **AquaNet** will be a process to fill such sectoral gap and lead as a facilitating platform.

3.5.1 What we will do

- Facilitate incentive mechanisms to encourage sustainable and inclusive
- business operations.
- Collectivisation and Rule-of-Game to ensure participatory stewardship, eco-labelling in freshwater fisheries and aquaculture sector
- Create new opportunities across value chain through quality standardization process, strengthen enforcement capabilities
- Dialogue towards transparent and ethical business environment

3.5.2 Program delivery mechanism

- **AquaNet:** Collectivisation and dialogue platform for Policy makers, Private sector, Scientists, Service providers and farmer's collectives
- **AquaTrace:** Branding and market linkages of new order practices-products.

Dialogue: Interactive platform for various stakeholders across sector.

> ***In India fisheries-based enterprise is always considered as a task associated with a community***

AQUA SOCIAL IT

SECTION 4: AQUA SOCIAL IT

Our solution to Impact Scale

Jaljeevika is working in collaboration with Microsoft for Start-up and Tech for good initiatives- J. P. Morgan & Chase to provide timely support to fish farmers across value chain with integration of IT enabled support mechanism. This work is in progress with substantial traction from the field in collaboration with farmer's producer organisation, micro entrepreneurs and market agency. This platform will provide location specific advisory support, market intelligence, IVR based support services for small farmers and link them to various support agency like bank, government program, insurance agency for better integration. We are going to launch soon our IT based support services for fish farmers to help them in enhancing production, productivity and market linkages.

The solution we are working on

Aqua IT is a producer-market centric digital platform, to facilitate systemic change solution, suggests a potential integration, convergence with various service providers. In coming days, this system will facilitate to create producer centric eco-labelling protocol to improve their enterprises, market traction and quality control.

Aqua IT with its open digital platform provides

- Location specific best practice guidelines, knowledge, Solution
- Market intelligence and linkages
- Curated advisory support based on adopted process, data analytics, sensor data
- Convergence and linkages with service providers, support, existing infrastructure.

Quality, Traceability and eco-labelling protocol.

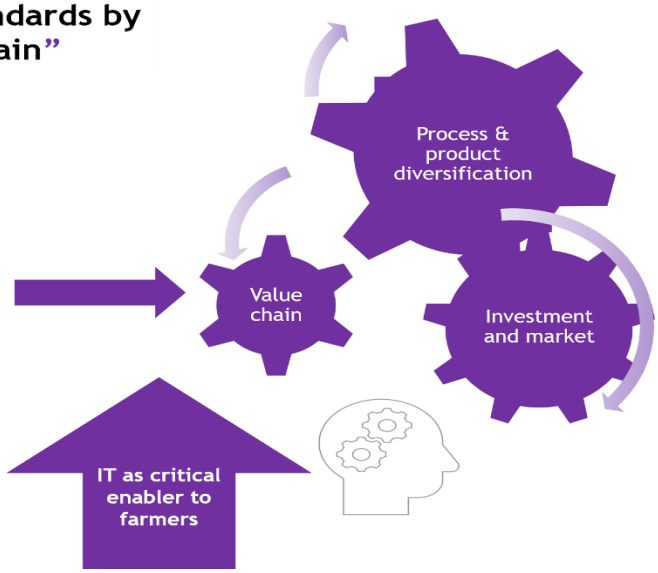
System Change Model

"Adoption of new quality and industry standards by multiple stakeholders across value chain"

Standardization of content, process , operation across value chain,

Collective process to establish new norms towards farming as social enterprise

Ecosystem approach to facilitate market and entrepreneurship with support of IT



RESOURCE MOBILISATION

SECTION 5: RESOURCE MOBILISATION

Like any corporate plan social enterprise also need effective system development, proper impact measurement and branding to raise resources. There is huge potential for fundraising success provided; we widely share about our efforts and outcome, integrate IT based innovation and collaborate with other stakeholders.

Revenue generation using organisational capacity is one of the pre-requisites, it requires up-front investment of time and skill for innovative concept formulations, build alliance and collaborate, and establish our services as a product. Such process will secure more and long term engagement with institutional donors and greater net income from individual supporters; and will strengthen individual affiliates, and provide flexibility to innovate, invest to achieve organisational goal.

5.1 Fund raising Objectives

- Increase resources (restricted and unrestricted) raised from all streams including individuals, foundations, corporates, institutional donors, Service offering and Publications.
- Organizational Brand building to attract talent pool and explore unrestricted resource mobilisation.
- Develop open source IT based support services to impact scale and collaboration with large numbers of existing NGO, INGO, livelihood networks etc.
- Maximise individual and institutional engagement by innovative, compelling campaigns.

5.2 Processes to be explore

- Explore engagement with Aquaculture and agriculture service corporates.
- Social media platform, partnering in national -international strategic events, Digital channels and organising national level annual events for brand positioning.
- Institutionalise crowd funding and setting up a collaborative funding stream **"Aqua Fund"** for Aqua entrepreneurship and incubation cell.
- Develop fund raising and donor relationship development capacity in organisation, use of email marketing, concept promotion, engagement with urban professionals and media.
- Marketing partnership to promote aquatic produces, install other bi product and waste management produce like fish hydrolysate, dried Moringa leave, bio flock system, RAS system, aqua geoponics, local cages etc.
- Engagement with financial institutions, NBFC, SFAC, FPO promoting nodal agency.
- Drive for regular committed giving from individuals, humanitarian appeal, digital fund raising.
- Establish dedicated research & communication team to support branding, donor mapping, innovation, exchange of experiences and learning, training and partnerships.

> ***flexibility to innovate and invest can help on achieve organisational goal***

5.3 Impact measurement

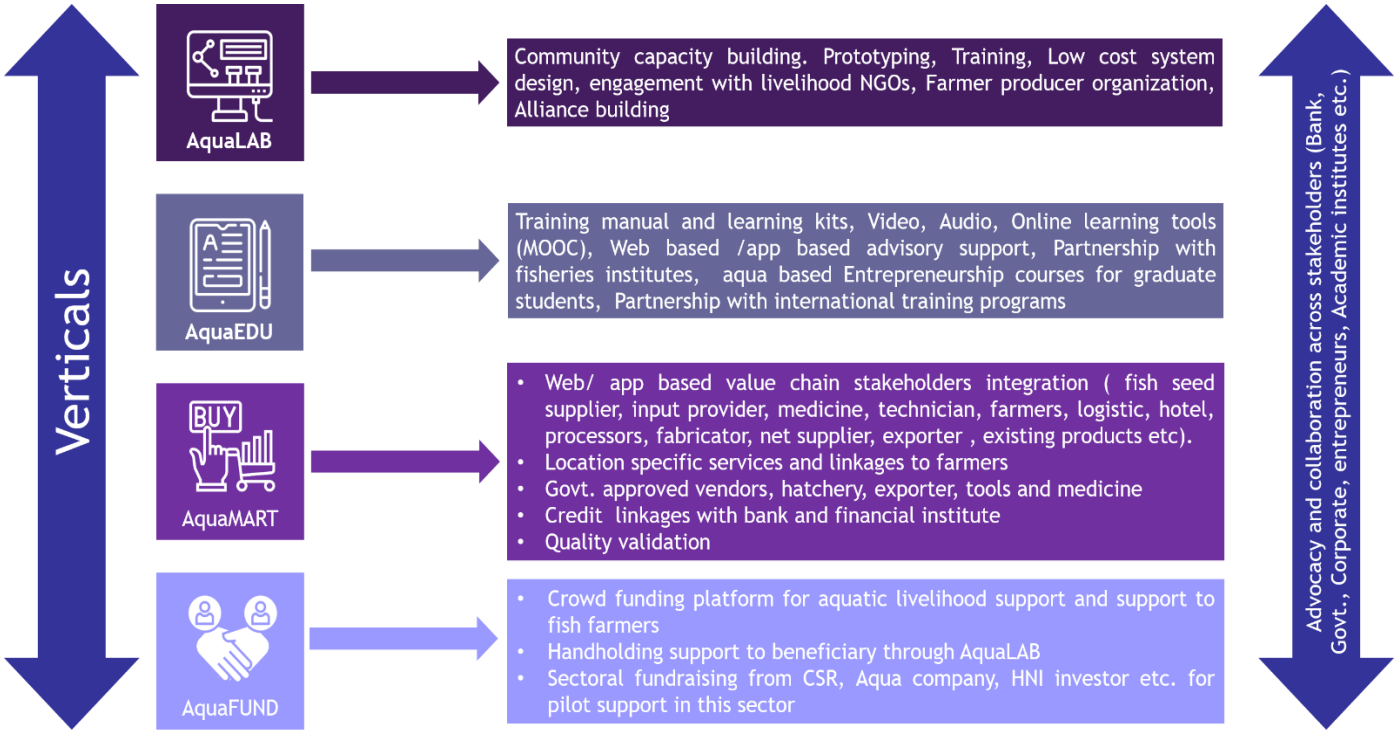
Jaljeevika will invest on ensuring proper MIS and impact measurement toolkit development to measure our impact against SDG and global tools to measure efficiency of fisheries and aquaculture program. Digitalisation of organisational activity and community action needs to be recorded in regular interval.

To realise such objective, we will:

- Develop measurement tools and indicators for project assessment and cross- intervention comparisons.
- Identify and measure factors **creating wealth, wellbeing and sustainability in** fisheries and aquaculture.
- Measure institutional, environmental, social and economic sustainability.

> ***Institutionalise crowd funding and setting up a collaborative funding stream "Aqua Fund" for Aqua entrepreneurship and incubation cell***

Jaljeevika Flagship Initiatives to Achieve System Change and Impact-Scale



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