

Theory of Change

Project Scope: Modernizing traditional fisheries towards a sustainable culture

IF we educate and advocate for the fishers by addressing wicked problems of SSFs, and by creating values for and from the fishers by providing channels to sustainably commercialize and alleviate these wicked problems, THEN we will be able to reach out to the public and corporates through our educational materials and volunteers, THEN there will be a developed sense of urgency to address and pursue marine and sustainability issues, increasing partnerships and contributions from our "impact as a service", THEN there will be a possible drive to increase the continuity, sustainability, and impacts of our social mission for artisanal SSFs, along with an integrated, holistic and independent social and environment governance.

IF we uplift and upskill traditional fishers by providing them with an alternative income, connecting them to city/retail businesses while digitizing their fish trade through AI and IoT converting them into citizen scientists, THEN the fisher people will have access to better tools and skills in stock management and increased market reach, THEN we would be able to uplift traditional fishers from poverty by training them to run cold-chain microbusinesses which will be their alternative income while also minimizing the impacts of overfishing and generating traction for sustainability for the marine field, THEN we can influence and inculcate sustainable fishing practices in SSFs, while increasing food security and fisheries governance through a circular economic model.

Monitoring **Process** **Impact**

Activity

Output

Outcome

Impact

Educating and advocating for the fishers by addressing wicked problems of traditional small-scale fisheries (SSFs), transforming their value-chain, towards a trackable and traceable based on sustainable fishing guidelines

Increased awareness on wicked problems of SSFs as we share materials through our platforms and educational volunteers that will reach the public, corporates and retail/city businesses

Develop a sense of urgency to address marine food security issues, develop traction for marine sustainability and encourage public to pursue sustainable consumption of marine resources

Increase the continuity, sustainability, and impacts of our social mission for artisanal SSFs, along with an integrated, holistic and independent social and environment governance

Uplifting and upskilling traditional fishers by providing them with an alternative income and connecting them with retail/city businesses. while digitizing fish trade to increase transparency and traceability through AI & IoT

Uplifts fisher people from poverty by giving them access to better tools and skills in stock management and increasing their market reach.

Training traditional fishers to run cold-chain microbusinesses which will be their alternative income and minimize the impacts of overfishing while generating traction for sustainability for the marine field

Influence and inculcate sustainable fishing practices in SSFs, while increasing food security and fisheries governance through a circular economic model.

Input	1. Through our #Demilimu initiative, we will recruit educational volunteers to create educational and awareness materials on SSF. We will empower educational institutions to provide education and awareness to the public and beneficiaries.
	2. Through providing low-lean tech fishing gears, cold-chain improvements and digitization of fish trades, we will be uplifting the fisher people. We will be providing the fishing community with reusable ice packs to reduce the operating costs for fishers to manage their fish stock. We will also be empowering the fishers to manage the ice pack rental micro-business. We are also connecting the fishers to retail/city businesses to increase the fishers' market reach. We are also providing the fishers with improvements to their fishing operations through low-tech, a.i. & IoT.

Project Structure		Input	Baseline	Indicator	Target	Risk	Assumptions
Outcome 1.0 Circular Social Innovation #Demilimu's initiative hopes to help: 1. Encourage of public to pursue sustainable consumption of marine resources 2. Develop traction for marine sustainability 3. Build of relations to create a community that is better informed 4. Develop of sense of urgency to address marine food security issues	Output 1	Increased awareness on wicked problems in SSFs	General public has limited knowledge of the wicked problem of traditional fishers	Public education/ conversion	Empowering 300 volunteers through training and micro-competition	Public may not be interested in being aware of the wicked problems of traditional fisheries	1. Public has the right to know our current state of food security in the region 2. Unsure of how Malaysians are willing to adopt to sustainable changes
	Activity	1. Creating educational and awareness materials on wicked problems of SSFs 2. Disseminating / sharing the materials on different platforms 3. Reaching out to educational institutions to promote education and awareness to the public and other beneficiaries	Research and educational institutions have interest in educating the public but only through conventional means.	1 # of partnerships or collaboration with education, GLCs or research institutes 2. # of fishers interviewed 3. # of corporate outreach through networking and pitching to corporates 4. # of trained talents 5. # of public outreach on social media 6. # of communities outreach through ground work 7. # of certifications provided 8. Size of database covered	1. Collaboration with 3-5 corporates or research institute 2. 600 fishers interviewed 3. 4 pitches to corporates per month 4. Empowering 300 volunteers through training and micro-competition 5. 1000+ views per post 6. 3-5 communities outreach 7. 300 certifications provided	1. Fishers may be resistant to changes 2. Cultural barrier due to nuances 3. Bureaucratic interruption 4. Geopolitical play	1. Public, GLCs, education and research institutes are willing to cooperate and be involved in marine education and awareness 2. A number of unemployed youth benefits from volunteering with #DemiLaut and has opportunity to stay sustainable from incentives return 3. Corporations are open to invest & contribute to #DemiLaut's 'Impact as a service'.

Project Structure		Input	Baseline	Indicator	Target	Risk	Assumptions
<p>Outcome 2.0 Transforming Value-Chain</p> <p>Improvement on fishing gears and operations, cold-chain improvements, exposure to larger value-market, alternative incomes and digitization of fish trade will:</p> <p>1. Commercialize SSF fish with consistent quality with proper QAQC standards and reduce overfishing by reducing fish wastage</p> <p>2. Increase value-market reach and access to profitable customer relationships</p> <p>3. Enable adoption of circular model products & services for traditional fisherpeoples' benefits</p> <p>4. Automation of reporting & tracking, enabling a transparent market and traditional fisheries</p>	Output 1	Fishers have access to better tools and skills in stock, financial, legal, & educational management.	Improper stock management Transformation of cold-chain systems, education on value and quality assurance, would introduce higher value market.	1. # of beneficiaries impacted 2. # of communities impacted 3. % of income increased	1. Minimum 30 fishers 2. Minimum 2 fishing communities 3. Reduction of fish wastage to 10% or less 4. Saving minimum RM1,000 per fisher 5. Profit margin for fishers increase by minimum 15%	1. Prototype stage: Social barrier in cultural nuances 2. Discipline issues of individuals	1. Fishers have little to none access to tools, technologies, and knowledge 2. Having fishers to be in a neo-cooperative subscription by commitments to sustainable practice is a social innovation
	Activity	1. Providing reusable ice packs for fishers 2. Empowering fisher role models to manage ice-pack rental microbusiness 3. Providing 'Pemukat Noh', an automated net-hauler, equipped with tracking and counting IoT equipment 4. Convert fisherpeople into citizen scientists	There is a limited number of social innovations and sustainable projects in Malaysia especially in Small-Scale Fisheries	1. % of reduction in fish wastage 2. % of reduction in operating costs 3. % of increase in fishers income 4. % of increase in profit margin 5. # of fishers handling ice pack microbusiness 6. # of fishers renting ice	1. Minimum 30 fishers 2. Minimum 2 fishing communities 3. Reduction of fish wastage to 10% or less 4. Saving minimum RM1,000 per fisher 5. Profit margin for fishers increase by minimum 15%	Prototype stage: Ice packs may not maintain fish quality	Addressing pain points of traditional fishers would interest fishers to embrace sustainable changes and incorporate the use of technology.
	Output 2	Increase market transparency & reach for fishers	Fish stocks are mostly imported, and not sourced locally	# of outreach and awareness to city/retail businesses	1. Profit margin for fishers increase by minimum 15% 2. Increase in fish quality 3. Transparency and fair trade	Businesses may prefer cheaper wholesale options that are less sustainable	Businesses are willing to connect to fishers with reasonable prices that reflect the quality especially those interested in CSR credibility
	Activity	1. Connecting fishers to retail/city businesses to increase B2B reach	Inconsistent fish quality by traditional fishers, making them not able to provide fish supply that are of consistent quality to retail/city businesses	1. # of fishers connected to retail/city businesses 2. # of connected retail/city businesses	1. Minimum 30 fishers 2. Minimum 2 fishing communities 3. Profit margin for fishers increase by minimum 15% 4. 3-5 retail business connected	1. Undersupply from fishers due to COVID-19 restrictions that reduce workforce 2. Businesses may be hesitant to work with traditional fishers due to past inconsistencies in fish quality	There is a market need for sustainable and fair trade Transparency in sea to plate will increase fishers' value

Project Structure		Input	Baseline	Indicator	Target	Risk	Assumptions
Outcome 2.0 Transforming Value-Chain (continued) 3. Produce a transparent supply chain to develop a circular economic model and empower traditional fishers to be citizen scientists	Output 3.0	Empower traditional fishers together with technology & research partners and corporations	Limited number of social innovation and sustainable marine projects in Malaysia	1. # of corporate outreach through networking and pitching 2. # of agreements signed 3. # of partnerships converted	Collaboration with 3-5 corporates and universities for social innovation and marine sustainability	1. Corporates may not be willing to work with us 2. Negotiation process may take awhile	1. SDGs are an upcoming trend in Malaysia based on our National Budget 2022 2. Companies are willing to use their CSR budgets to incentivize social innovation and sustainable change
	Activity	1. Digitizing fish trade 2. Modelling the sea	1. Limited adoption of technology for stock management 2. Limited data on real-time oceanic conditions and marine resource populations 3. Limited B2B reach by traditional fishers	1. # of citizen scientists empowered 2. # of research collaborating research institutes 3. # of beneficiaries connected to B2B	1. Increasing market reach of 30 fishers B2B by connecting them to 3-5 retail/city businesses 2. Providing 30 citizen scientists with alternative income source by connecting them to 3-5 research institutions	1. Retail/city businesses may be hesitant to work with traditional fishers 2. Fishers may not be willing to adopt to new technology 3. Fishers may not be able to afford the AI and IoT devices	1. Retail/city business are willing to make local connections 2. Fishers are willing to adapt to changes for an alternative income source 3. Research institutions require real time ocean data and are willing to pay for it.
Impact		Impact 1.0 1. Integrated holistic & independent social governance 2. Encourage and develop eco-system to continue drive social innovation in SSF					
		Impact 2.0 1. Influence and inculcate sustainable fishing practices in SSFs 2. Increase food security and fisheries governance through a circular economic model					