Japan SDGs Innovation Challenge for UNDP Accelerator Labs

100% FISH USE

UNDP Accelerator Lab Samoa MCO

IDENTIFIED SDGs ISSUES

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OCEAN 98%
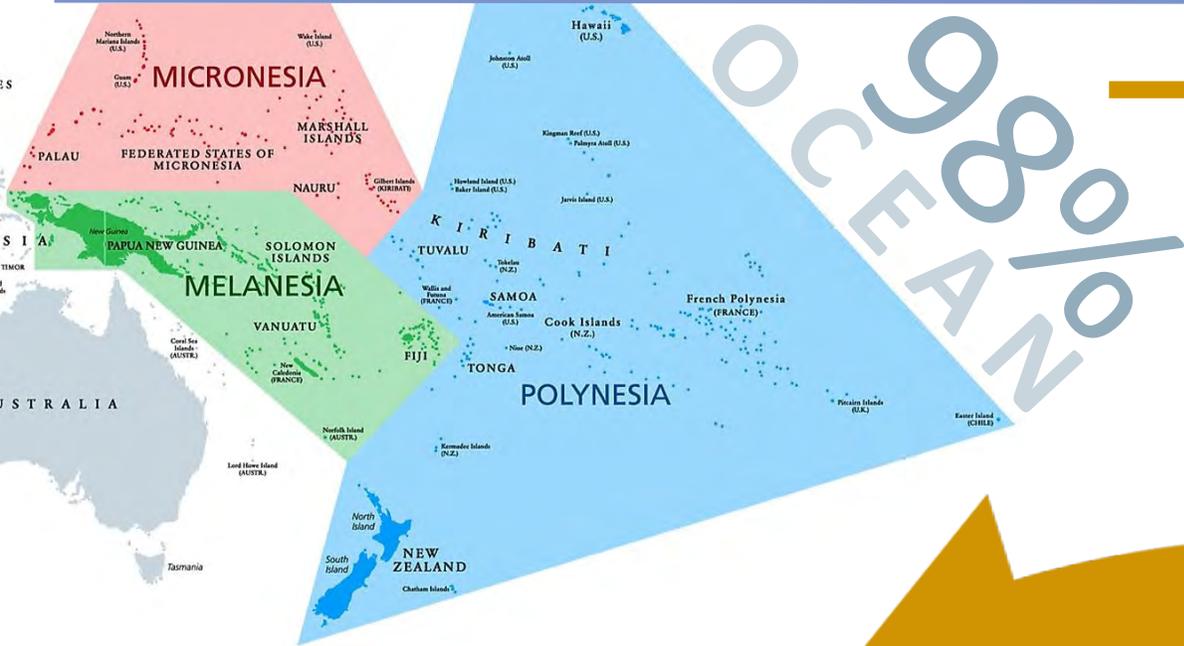
F I S H is critical for **food** and **livelihood** security
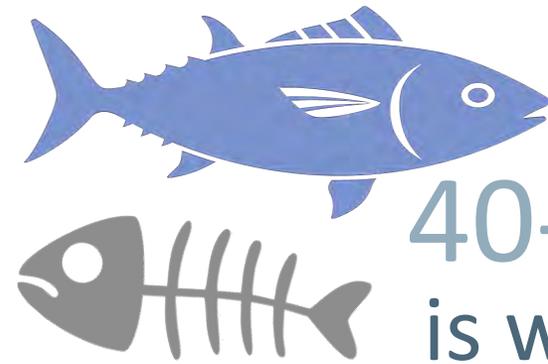
YET 40-60% is wasted.

NUTRIENT LOSS

ENVIRONMENTAL CONCERN

ECONOMIC LOSS

Apia Fish Market

PROPOSED SOLUTION

CONVERT FISH WASTE INTO VALUE ADDED PRODUCTS THAT:

1. IMPROVE FOOD SECURITY;
2. DIVERSIFY BLUE ECONOMY EMPLOYMENT; &
3. STRENGTHEN MARINE CONSERVATION.

HOW CAN SAMOA'S OCEAN RESOURCES BE SUSTAINABLE WHEN SO MUCH CATCH IS UNUSED OR UNDERUSED?

CONTEXTUALISING THE SOLUTION

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SAMOA OCEAN STRATEGY

2020–2030

INTEGRATED MANAGEMENT FOR A HEALTHY AND ABUNDANT FUTURE OF SAMOA'S OCEAN

30% Converting 30% of Samoa's Exclusive Economic Zone (EEZ) into a connected system of Marine Protected Areas.

$$$ Leading to a reduction in fish catch and associated revenue as a result of protecting the EEZ.

SOS URGENT need to maximise economic benefits from all caught fish and diversify coastal and ocean-dependent livelihoods.

UNDP Small Islands Developing States (SIDS) Priorities

CLIMATE ACTION   BLUE ECONOMY   DIGITAL TRANSFORMATION

UNDP is developing strategic programmes to translate Samoa's Ocean Strategy into action. Japan is a key partner supporting UNDP's Blue Economy pillar through the Japan Supplementary Budget (JSB) 2020.

Community **Aquaculture** of Seagrapes *(Limu)*

- Benefiting 20 villages;
- Providing infrastructural and technical support to innovate *limu* cultivation;
- Ongoing discussions with Japanese private sector for *limu* export.

Ministry of Agriculture & Fisheries (MAF) **Hatchery**

- Multi-species hatchery to diversify aquaculture and mariculture stocks;
- Supporting coastal communities and semi-commercial fisheries in Samoa.

100% FISH USE SDG Japan Innovation Challenge (JIC)

- As per MAF, converting fish waste into a value-added product is critical to maximising economic benefits from each **tuna** (albacore, yellow-fin and big-eyed tuna) to offset the reduced revenue from the protection of 30% of Samoa's EEZ.
- 100% Fish Use is at the cross-section of climate action, blue economy and digital transformation.

PLANNED SOLUTIONS BY UNDP ACCLAB

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NEW VALUE TO BE EXPECTED:

- Generate **critical data** on fish waste.

- Prototype value-added **nutritional products**.

- Test low-cost processing **technology**.

- Create blue economy **livelihoods**.

- Proof of concept for **sustainable** marine resources.

BENEFICIARIES

- Government of Samoa
- Research Institutions
- SME — Small & Medium Enterprises
- Community Stakeholder
- Development Partners

ACCLAB'S PLAN TO DELIVER

- Use innovative technologies & methodologies to generate data & analytics on fish waste;
- Create a replicable framework for data collection on fish waste in Pacific Island Countries and Territories (PICTs).

- Map innovative value-added products;
- Contextualize mapped innovations for Samoa and PICTs;

- Map low-cost technology to reduce fish waste;
- Test technologies to process fish waste into value-added products.

- Co-create and run tests / experiments with the community to inspire uptake of blue livelihood opportunities and creating Small and Medium Enterprises (SMEs).

- Develop proof of concept and share intelligence report to be used by other stakeholders

EXPERTISE/TECHNOLOGIES FROM JAPAN

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INNOVATIVE METHODOLOGIES

Leveraging digital technologies to generate data on fish catch, fish utilization, type of fish waste and fish quantity.

TECHNOLOGY FOR DATA COLLECTION AND ANALYTICS

Vision-based AI devices, IoT and Deep Learning, Machine Learning and AI to implement innovative data collecting methodologies to generate analytics on fish waste.

EXPERTISE

DATA COLLECTION

VALUE ADDING

TECHNOLOGY

KNOWLEDGE AND EXPERIENCE

Private sector experience around systems for collection, storage, processing, value-adding and marketing of fish waste products.

TECHNOLOGY

Affordable and low-cost technological solutions/ machinery that can be piloted and scaled up if successful to process fish waste into value-added products.

ORDER OF PRIORITY

SENSE

EXPLORE

TEST

GROW

*
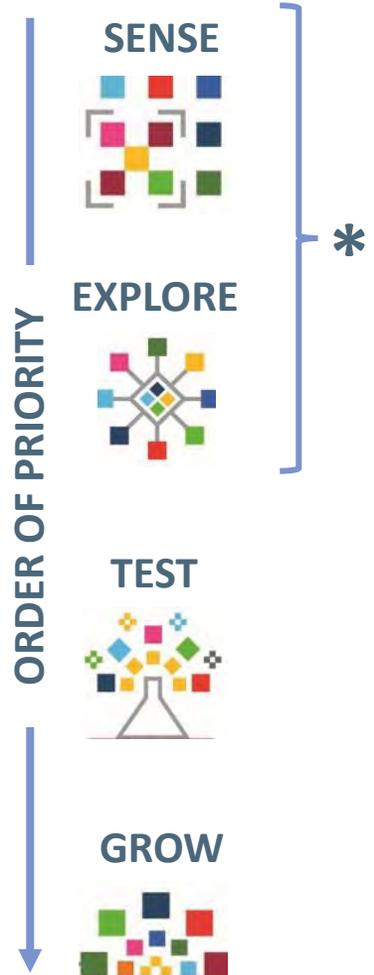
* Focus of interventions during the SDG JIC.

STAKEHOLDERS OF THE PROJECT

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UNDP – Lead throughout the JIC, liaising and collaborating with partners.

STAGE 1

GENERATING CRITICAL DATA ON FISH WASTE:

PARTNERS

BENEFICIARIES

STAGE 2

CREATING VALUE-ADDED PRODUCTS:

PARTNERS

BENEFICIARIES

Key Decision Makers

COLLABORATION STATUS WITH THE STAKEHOLDERS:

Ministry of Agriculture and Fisheries: partnership on sustainable aquaculture.

Samoa Bureau of Statistics: partnership on digital transformation.

Scientific Research Organization of Samoa: consultations on seaweed fertilizer.

Japan International Cooperation Agency: human capacity support for community-based interventions.

Conservation International: national and regional blue economy partner.

SMEs: partnership with Samoa Chamber of Commerce.

Communities: partnerships with 20 village councils under Japan Supplementary Budget 2020 project for innovative and sustainable aquaculture of *limu*.

RESOURCES THE ACCLAB CAN PROVIDE

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HUMAN RESOURCES

4 UNDP staff with complimentary skills, will work on this project:

1. **Kaisarina** – Explorer; Tech Savvy, Analytical and can drive the innovative process for data generation;
2. **Maria** – Solution Mapper; Samoan Culture Expert, Community Champion and can find & contextualize solutions;
3. **Pragya** – Experimenter; Entrepreneurial, Systems thinker and can create and pilot prototypes ; and
4. **Monty** – Integrator; Blue Economy specialist and can integrate AccLab work on JIC with UNDP Samoa work to continue building the Blue Economy pillar.
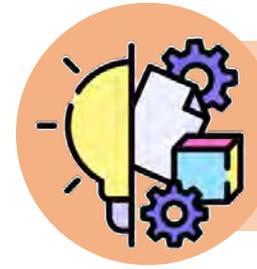
RESEARCH DATA & MARKET INSIGHTS

- Access to UNDP Blue Economy expert with 30+ years' experience in the Pacific;
- Capacity to leverage UNDP Samoa's extensive research on the Blue Economy for this project.

INFRASTRUCTURE

- Dedicated office and access to UNDP shared spaces which can be used for JIC related processes;
- UNDP procurement processes and can leverage it to get necessary technology in the country if required.

EXPECTED OUTCOMES AND FOLLOW UP ACTIVITIES

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GENERATE CRITICAL DATA

DATA COLLECTION MODEL FOR PICTs

PRODUCT & TECH PROTOTYPE

BLUE LIVELIHOOD OPPORTUNITIES

SUSTAINABLE USE OF MARINE RESOURCES

REPLICATE PROOF OF CONCEPT FOR PICTs

SDG Japan Innovation Challenge
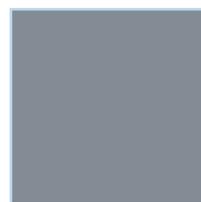
Activities by UNDP beyond August 2023

GEOGRAPHICAL SCOPE:
1. Apia Fish Market
2. Manono Community Fishery
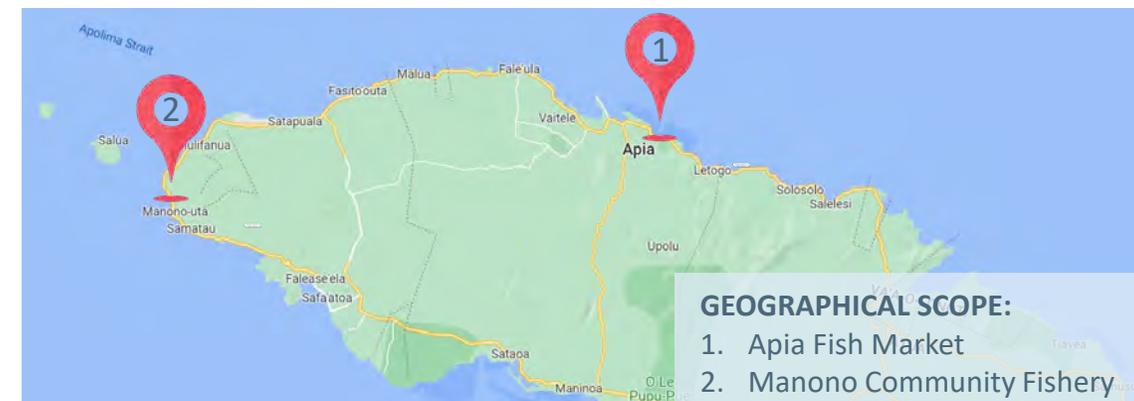
PROPOSED PLAN TO SHOWCASE THE OUTCOMES:

SHARE DATA & METHODOLOGY WITH GOVERNMENT PARTNERS AND RESEARCH ORGANISATIONS

OPEN SOURCE THE COLLECTIVE INTELLIGENCE REPORT

SHOWCASE PROTOTYPES AT 100% FISH SUMMIT (TO BE ORGANISED BY UNDP IN MID-2023)

CONVERT PROTOTYPES & LEARNING INTO PROGRAMMES UNDER UNDP SAMOA BLUE ECONOMY PILLAR

SUPPORT PRIVATE SECTOR TO SPIN-OFF SUCCESSFUL PROTOTYPES INTO BUSINESS VENTURES

UNDP ACCELERATOR LAB TEAM

Pragya Mishra
Head of Experimentation
- Manage team coordination throughout the Japan SDGs Innovation Challenge;
- Prototype value-added products from fish waste;
- Pilot low-cost technological solutions on ground

Experimenter   **TEST**

EXPLORE   **Solutions Mapper**

Maria Bernard
Head of Solution Mapping
- Map innovative value-added products that can be made from distinct categories of fish waste;
- Map low-cost technology solutions
- Contextualizing the innovations for Samoa and PICTs

SENSE

Monty Jefferson
Innovative Programming
& Partnerships Analyst
- Conduct financial, ecological, and social feasibility studies of the value-added products
- Tie the project progress and outcomes with the ongoing UNDP Blue economy portfolio

GROW

Explorer

Kaisarina Salesa
Head of Exploration
- Explore innovative technologies and methodologies to generate data & analytics on i) fish catch; ii) fish utilization; iii) fish waste categories and iv) fish waste quality in Samoa's fisheries sector

Integrator   **AccLab Learning Approach**

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