ESTABLISHING A SUSTAINABLE FISH WASTE MANAGEMENT AND UTILISATION DRIVE THROUGH CAPACITY BUILDING IN THE FISHERFOLK COMMUNITY

PROJECT REPORT

Developing Organisational Capacity for Ecosystem Stewardship and Livelihoods in Caribbean Small-Scale Fisheries
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OVERVIEW OF THE DEVELOPING ORGANISATIONAL CAPACITY FOR ECOSYSTEM STEWARDSHIP AND LIVELIHOODS IN CARIBBEAN SMALL-SCALE FISHERIES (STEWARDFISH) PROJECT

- From September 2019 to July 2021, the Caribbean Natural Resources Institute (CANARI) collaborated with the Caribbean ICT Research Programme (CIRP), Caribbean Network of Fisherfolk Organisations (CNFO), Caribbean Regional Fisheries Mechanism Secretariat (CRFM), Centre for Resource Management and Environmental Studies of the University of the West (UWI-CERMES) and the fisheries authorities of Antigua and Barbuda, Barbados, Belize, Guyana, Jamaica, Saint Lucia and St. Vincent and the Grenadines to execute the Developing Organisational Capacity for Ecosystem Stewardship and Livelihoods in Caribbean Small-Scale Fisheries (StewardFish) project.

- The main objective of the StewardFish project was to empower fisherfolk throughout fisheries value-chains to engage in resource management, decision-making processes and sustainable livelihoods with strengthened institutional support at all levels.

- StewardFish was implemented by the Food and Agriculture Organization of the United Nations (FAO) Sub-Regional Office for Latin America and the Caribbean with funding from the Global Environment Facility (GEF).
Under the StewardFish project, CANARI implemented a US$24,000 microgrant facility to provide support to Caribbean fisherfolk organisations to implement practical ecosystem stewardship pilot projects that would enhance their capacity to be ecosystem stewards and contribute to fisheries sustainability.

This microgrant facility formed part of CANARI’s Caribbean Sea Innovation Fund (CarSIF). CarSIF supports innovation and best practices by civil society and community enterprises to address priority needs and actions in the Caribbean on marine and coastal resources governance and management.

In March 2021, the St. Vincent and the Grenadines National Fisherfolk Cooperative Limited (SVGNFO) was awarded a microgrant US$4,000 from this microgrant facility for their project, “Establishing a Sustainable Fish Waste Management and Utilisation Drive through Capacity Building in the Fisherfolk Community”. The project was implemented over a 4-month period from March to July 31, 2021.
The St. Vincent and the Grenadines National Fisherfolk Co-operative Limited (SVGNFO) is a non-governmental organisation registered in 2013 under the Co-operative Societies Act No.12 of 2012. It is the umbrella organisation for five primary fisherfolk organisations - the Barrouallie Fisheries Development Co-operative Society Limited; the Goodwill Fishermen’s Co-operative Society Limited; the Calliaqua Fisher-folk Co-operative Society Limited; the Fish Vendors Cooperative and most recently, the St. Vincent and the Grenadines Fish Aggregating Device Fisheries Co-operative Society Limited. The mission of the SVGNFO is “Educating and empowering fisherfolks for future livelihoods.” Some objectives of the SVGNFO are to:

- Promote the organisation and development of fishermen’s co-operative societies
- Work for the improvement of the fishing industry and the betterment of living standards of fishermen
- Act as spokesman, representative and negotiator for all fishermen in relation to Government and other authorities and organisations
The South Coast Marine Park (SCMP) in St. Vincent spans from Brighton to Arnos Vale and includes the coastal areas of Indian Bay, Blue Lagoon and Calliaqua Bay. The SCMP has significant expanses of coral reefs and seagrass beds. It is a sanctuary for various fish species, a nesting ground for turtles and is important for both livelihoods and conservation.

Water quality in the SCMP is being threatened by the daily dumping of fish waste (flesh, skin, bones, entrails, shells, blood etc.) near the waters of the Calliaqua Fisheries Centre (CFC). An estimated 70% of fish waste is disposed there. Fishers operating at the CFC dispose of unwanted fish and fish waste in the water near the Centre because of its close proximity and the belief that this customary practice attracts fish. However, this practice is damaging to the marine environment, as it depletes oxygen levels and smothers marine life. Furthermore, unsightly views of rotting fish waste and repulsive odours are points of conflicts with other users of the area.

Fish waste can be processed into livestock feeds and supplements, fertilisers, composts etc., and can be used to generate additional income for fisherfolk. However, capitalising on this opportunity requires educating fisherfolk about the immediate and long-term dangers of dumping of fish waste into the marine environments; encouraging them to properly dispose of fish waste; and demonstrating the employment and income opportunities that can be created through linkages with the agricultural sector.
PROJECT GOAL AND OBJECTIVES

Goals

• To increase the knowledge of fisherfolk on the deleterious effects of the dumping of fish waste on the marine environment and to create a positive change through the collection and appropriate use or disposal of fish waste.
• To conduct a feasibility study which informs the potential for commercialising fish waste processing as an income stream to fisherfolk organisations.

Objectives

• To raise awareness of the negative effects of fish waste on the marine environment, and by extension the SCMP, among fisherfolk and the consuming public
• To sensitise fisherfolk on the uses, benefits and economic opportunities involved in the processing of fish waste
• To conduct a feasibility study for the commercial production of compost and silage from fish waste
The project helped to raise awareness of the negative effects of fish waste on the marine environment and by extension the SCMP. The activities carried out helped to enhance the knowledge of the members of the SVGNFO and the Calliaqua Fisherfolk Cooperative of the economic potential of fish waste processing. It also increased the dialogue and engagement around the issue of fish waste disposal and utilisation with stakeholders.

Key outputs:

- 1 promotional billboard communicating the dangers of improper dumping of fish waste and alternative economic benefits that can come from processing fish waste was created. This will be erected in a public location where stakeholders can benefit from the message.
- Jingles and short videos were created and disseminated to raise awareness about issue of fish waste.
1. AWARENESS RAISED OF THE NEGATIVE EFFECTS OF FISH WASTE ON THE MARINE ENVIRONMENT

Key outputs (continued):

- Signs with waste-disposal instructions were designed and printed for posting at the Calliaqua Fisheries Centre. These will be installed after renovations at the Centre have been completed. The signs were designed as reminders for the continued collection and storage of fish waste which will be used for silage/compost or collected for proper disposal at the landfill.
2. FISHERFOLK SENSITISED ON THE USES, BENEFITS AND ECONOMIC OPPORTUNITIES INVOLVED IN THE PROCESSING OF FISH WASTE

To sensitise fisherfolk and other stakeholders of the uses, benefits and economic opportunities involved in the processing of fish waste, communication products were created including a video and audio jingles on silage and compost.

A virtual fish waste management training workshop and two in-person silage and compost demonstrations were also used to sensitise fisherfolk and others on the benefits and economic opportunities of fish waste processing.

Key outputs:
- 1 virtual workshop on fish waste management and 2 in-person fish silage demonstration workshops arranged and facilitated with partners from the Ministry of Agriculture.
- Equipment (e.g., a meat grinder, freezer, bins etc.) and materials were purchased to support collection, storage and processing of fish waste for the fish silage demonstrations. This equipment will be used for continued storage and processing of fish waste beyond the life of the project.
3. TO CONDUCT A FEASIBILITY STUDY FOR THE COMMERCIAL PRODUCTION OF COMPOST AND SILAGE FROM FISH WASTE

A study to determine the feasibility of fisherfolk cooperatives commercially producing compost and silage from fish waste was completed and presented to the SVGNFO by SUS-CAB Solutions, a consultancy agency engaged by the SVGNFO under the project.

The feasibility study was conducted via desk research and included a financial and institutional analyses to understand the opportunities in this area.

Key output:

- 1 feasibility study on the commercial use of fish waste for fish silage and composting prepared.
Access to the grant funds was delayed for two weeks due to a hold placed on the SVGNFO’s bank account. While the SVGNFO’s Board addressed the issue with the bank, preliminary stakeholder engagement and procurement activities were initiated to allow for prompt implementation when the funds were made available.

After two initial fish silage trials, it became evident that the first meat grinder procured would not be able to adequately grind the type of fish waste collected (i.e., large pelagic, intestines etc.) during the project. This resulted in a delay in project implementation as additional funds had to be identified and sourced to purchase a more powerful grinder.

Project activities were further delayed due to the eruption of the La Soufriere Volcano in April 2021. However, with the support of project partners and an extension to the project 90% of the project’s activities were able to be completed.

The attendance of local fisherfolk in the virtual fish waste management workshop was poor. However, fisherfolk organisations in other Caribbean countries expressed interest in the opportunities associated with the use of fish waste in their own operations and were invited to attend.

The national COVID-19 protocols limited the number of participants that could attend the in-person fish silage demonstrations. However, the SVGNFO was still able to host both demonstrations, which allowed for persons who would not typically engage virtually, to attend.
LESSONS LEARNED AND BEST PRACTICES

- Due to the limited number of persons that could attend the in-person fish silage demonstrations, a hybrid approach was developed where in-person demonstration sessions were recorded and documented to be used for further virtual training.

- Safety and sanitising products were made available to participants during in-person demonstrations to reduce exposure to COVID-19.

- Prior to the silage demonstration, two small trials were done, each lasting three weeks or more. The trials provided an opportunity to identify technical and procedural problems which can occur in the process. The initial trials were critical since fish silage was never attempted by the Animal Health and Production Division or the SVGNFO.

- The engagement of local partners in both the design and implementation of the project played a critical role in its success.

- A project communication and implementation committee, which includes women and youth, should be established within the SVGNFO’s Board to support with monitoring and oversight for the SVGNFO’s projects.

- The assignment of a stewardship mentor by CANARI to support the SVGNFO with the design and implementation of this project was very beneficial.
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Visit the project webpage:
https://canari.org/stewardfish-project