STAKEHOLDER ENGAGEMENT PLAN: PHILIPPINES

Blue Horizon: Ocean Relief through Seaweed Aquaculture (GEF ID: 10573)

GEF Agency: WWF US
Lead Executing Agency: Southeast Asian Fisheries Development Center
Philippines National Executing Agency: Bureau of Fisheries and Aquatic Resources

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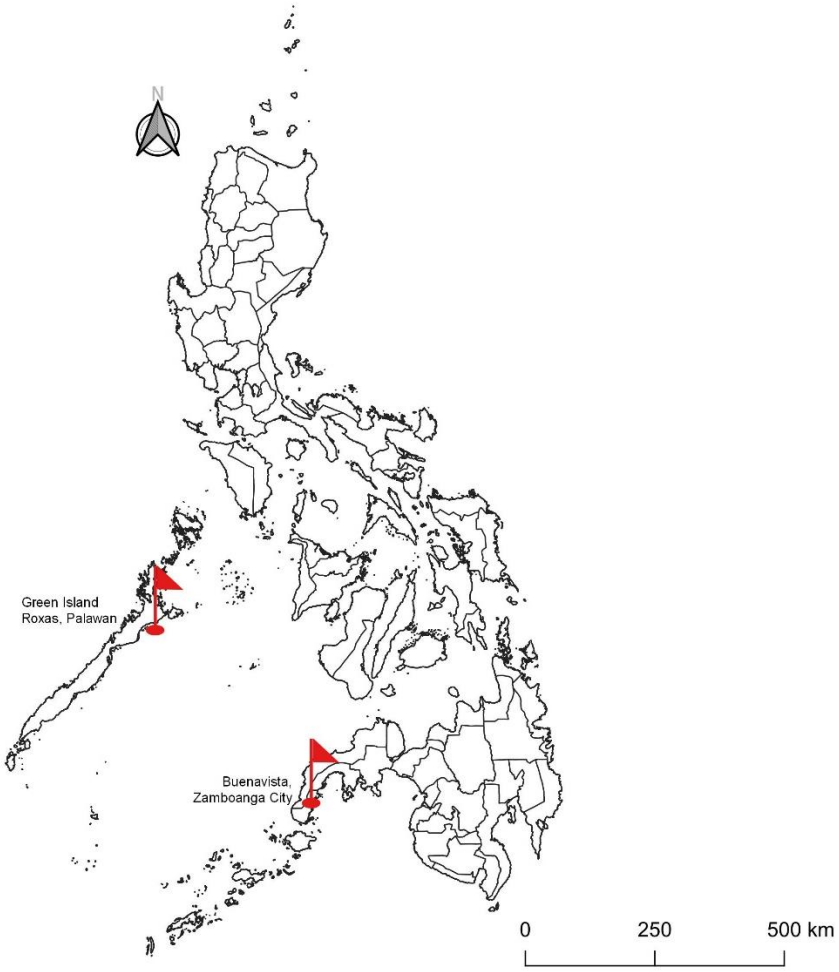
1. Introduction

The project 'Blue Horizon: Ocean Relief through Seaweed Aquaculture' will work regionally in Southeast Asia, as well as in Philippines and Viet Nam specifically, to develop seaweed value chains that deliver ecosystem services and socio-economic benefits. Ecosystem services include the assimilation of excess nutrients from coastal waters, which mitigates ocean eutrophication and acidification and improves habitat for marine life. Seaweed also captures carbon, which reduces ocean acidity and allows for greater capacity of the ocean to slow the rate of climate change. Downstream of the farming segment of the value chain, additional environmental benefits will be derived from the manufacture of seaweed-based products that are biodegradable, such as bioplastics, and other low-energy product substitutes (such as seaweed-based animal feed). Social and economic benefits include the diversification of livelihood options, improved household and community revenues, and opportunities for equitable participation of women and men in the improved or new livelihood opportunities along the value chain.

The Project sites are in the Philippines and Viet Nam (see map below). In the Philippines, the sites are in (1) Buenavista, a district of Zamboanga City in the Southwestern Philippines, and (2) off Green Island in waters under the authority of the municipal government of Roxas, Palawan Province. Additional maps can be found in Annex 3.



The project's objective, "to create new sustainable seaweed value chains that will deliver ecosystem services and provide socioeconomic benefits", will be achieved through four components:

1: Regional capacity building for seaweed aquaculture. Under this Component, the project will develop plans, tools, and trainings to build a supportive regional enabling environment for seaweed aquaculture. This will include development of a Regional Guide for Seaweed Aquaculture in the Region, to be adopted by the SEAFDEC Governing Council, principles of responsible and safe seaweed aquaculture that are adapted to the region and provide guidance on operational, environmental and consumer safety standards (aligned with those of the Safe Seaweed Coalition), the development or updating of codes of conduct and good management practices, and trainings and capacity building to support both the Guide and application of the principles. Such a regional approach will support the region's capacity to further expand, modernize and establish a strong influence in global seaweed value chains.

2. Enabling Environment for Seaweed Aquaculture in Philippines and Viet Nam. Involves creating an enabling environment for seaweed aquaculture at the national level. A governance framework comprising policy, regulatory and technical guidelines for seaweed aquaculture (including offshore seaweed farming) will be developed. The project will support processes to identify suitable areas for seaweed expansion, and to formulate and operationalize management plans specific to such areas, with accompanying plans and coordination mechanisms (provincial/national/regional/global) to support this component.

3. Seaweed Value Chains (production + processing + market access). This will require working with producers (organized into associations or cooperatives) to pilot farms in areas farther than current sites (i.e., off-the-coast or off-shore) that will serve as proof of concept for seaweed production in these environments. Demonstration farms will be established within national marine spatial plan (MSP) frameworks, and with the purpose of advancing uniformly accepted risk assessment, rapid alert systems and data collection in order to develop safe modes of production, focusing on food safety, environmental safety and occupational safety and in order to overcome barriers of insufficient information that directly limit off-take agreements among global supply chain actors, contribute to the low level of regulations, and pose a barrier to insurability. The project will support seaweed value chain initiatives to address barriers to production and processing. This includes establishing new biorefinery and processing solutions closer to the site-level, both to increase livelihood benefits for coastal seaweed farmers and to develop markets for value-added seaweed products (thereby encouraging additional seaweed aquaculture that further compounds the environmental benefits).

4. Knowledge Management, M&E, and IW Learn (regional). The project will support knowledge sharing and monitoring and evaluation. Project activities will be monitored and communicated through multiple channels, including through IW: LEARN. In this way the project will utilize and expand on current baseline activities in the seaweed industry in the Philippines and Viet Nam to promote the interests of seaweed farmers and their communities, and grow the global market for seaweed in a sustainable and responsible fashion.

This Stakeholder Engagement Plan is specific to the Philippines (Component 2 and Component 3). Stakeholder Engagement Plans have also been prepared for Viet Nam and at the Regional level.

2. Regulations and Requirements

WWF Standard on Stakeholder Engagement

The WWF GEF Agency requires all GEF projects comply with GEF and WWF standards on Stakeholder Engagement, specifically the WWF Standard on Stakeholder Engagement and the associated Procedures for Implementation of the Standard on Stakeholder Engagement. Stakeholder engagement is an overarching term that encompasses a range of activities and interactions with stakeholders throughout the project cycle and is an essential aspect of good project management.

The WWF Standard on Stakeholder Engagement requires the Executing Agency to engage stakeholders throughout the life of the project; communicate significant changes to project stakeholders and consult on potential risks and impacts; establish a grievance redress mechanism and register and respond to grievances throughout project execution, and; disseminate information in a way that is relevant, transparent, objective, meaningful, easily accessible. The Standard on Stakeholder Engagement promotes an inclusive process to support the development of strong, constructive and responsive relationships that help to identify and manage risks, and which encourage positive outcomes for stakeholders and project activities.

*The project will comply with WWF and government restrictions to prevent the spread of the COVID-19 virus. During field visits and in-country travel, all attempts to practice social distancing will be made, as well as the use of personal protective equipment (PPE).

3. Project Stakeholders

National Government Entities

Department of Environment and Natural Resources (DENR) is responsible for the conservation, management, development and proper use of environment and natural resources, including marine resources. DENR promotes social justice by ensuring equitable access to resources by different sectors. It also provides licenses and certifications for utilizing natural resources, particularly reserved and watershed areas. DENR coordinates closely with local government units (LGU) in ensuring proper implementation of resource conservation/management/development of natural resources (*see PENRO and CENRO*).

The **Foreign-Assisted and Special Projects Service (FASPS)** oversees, coordinates, and facilitates the preparation, implementation, and evaluation of DENRs foreign-assisted and special projects. It is primarily responsible for preparing the development framework plan, guidelines, and strategies in conducting feasibility studies and appraisal of project proposals, provision of technical assistance for the design, preparation, and facilitation of foreign-assisted and special projects, and in monitoring and evaluation of the progress and performance of these projects (i.e., WWF-GEF seaweeds project). FASPS will be able to provide technical assistance on the project design and training in relation to biodiversity conservation, water quality, and other resource conservation-related activities pertinent to the mandates of DENR.

Department of Agriculture (DA) is primarily responsible for the advancement of agriculture and fisheries through the formulation of policy frameworks and provision of public investments and support services for domestic and export-oriented business enterprises. Among the strategies adopted by the DA is to empower the farmers, fishers, and the private sector and to promote sustainable, competitive, and

resilient technologies and practices to achieve agricultural productivity and profitability. The DA serves as a key actor in the WWF-GEF Blue Horizon seaweeds project since it is mandated to oversee coastal and marine resources, including seaweeds.

- **Bureau of Fisheries and Aquatic Resources (BFAR)** is the national executing agency for this project, and is the government agency responsible for the development, improvement, management, and conservation of the Philippines' fisheries and aquatic resources. It implements the national fisheries development plan and issues licenses/permits for the operation of fisheries-related businesses. Among the primary responsibilities of BFAR is to coordinate with Local Government Units and other agencies for the establishment of fisheries development programs in fishing communities, promote sustainable technologies and practices, and enforcement of laws/regulations concerning the use of fishery resources. As the lead agency on seaweed development, BFAR has two programs/projects primarily responsible for the development and management of the seaweed industry in the Philippines:
    - The *National Seaweeds Technology Development Center (NSTDC)* started out as a foreign-funded project (Seaweed Production and Development Project) under the BFAR and the United Nations Development Program (UNDP) of the Food and Agriculture Organization of the United Nations (FAO) in August 1992. The NSTC undertakes all applied research and development work in seaweeds including products derived from different seaweed varieties, organizes/trains seaweed industry's manpower (e.g., extension workers, farmers, entrepreneurs), and conducts studies that may be needed for the formulation and implementation of policies and programs.
    - The *National Seaweed Development Program* was conceptualized to implement projects and activities at national and regional levels for the advancement and sustainability of the seaweed industry in the Philippines, particularly for *Kappphycus* and *Eucheuma* varieties. In essence, all seaweed-related projects and activities are handled by the SDP.
- **Bureau of Agriculture and Fisheries Standards (BAFS)**: formulates and enforces standards of quality in the processing, preservation, packaging, labelling, importation, exportation, and distribution of seaweed products; produces the Code of Good Aquaculture Practices (GAqP) for Seaweed which aims to promote safety concerning seaweed production and harvest as well as food safety and quality, plant health, environmental integrity, and socioeconomic welfare and the Philippine National Standard for Raw Dried Seaweeds that prescribes the quality specifications and food safety of products from seaweeds.
- **National Fisheries Research and Development Institute (NFRDI)** is the lead agency for fisheries research and development; it is mandated to provide a venue for intensive training and development for fisheries personnel and serves as the repository of all fisheries researches and scientific information.

Department of Trade and Industry (DTI) is established to spearhead the expansion of economic opportunities in industry and services and by increasing the access of micro, small and medium enterprises and cooperatives; established programs for the development of export and investment and small/medium enterprises; coordinates with the Department of Agriculture-Bureau of Fisheries and Aquatic Resources (DA-BFAR) in promoting seaweeds and seaweed products for marketing (locally and internationally); provides market and trade promotion for seaweed products.

- The **Export and Marketing Bureau (EMB)** is mandated to oversee the development, promotion and monitoring of Philippine exports, including seaweed products. The DTI-EMB provides exporters with an enabling environment to make them globally competitive by assisting companies/businesses on export-related matters (e.g., information, export procedures, and documentation) and provision of consulting services on market and product opportunities and regulations.
- The **Board of Investments (BOI)** is an attached agency to DTI which is responsible for the development of investments in the country by providing information and technical services to investors/business owners; supports product development and provides information about technologies and processes to investors, including small and medium enterprises (SMEs).

Sub-national Government Administration

Provincial Government – provincial development planning including marine resources development; formulates long/medium term plans and annual socioeconomic development plans and policies for the province and its component cities/municipalities; the management of environment and natural resources (including marine resources) have been devolved to local government units (LGUs) by virtue of Republic Act 7160 or the Local Government Code of the Philippines. As such, the LGU (Provincial, Municipal, and Barangay/Village) exercises control and responsibility of delivering basic services and management/development of marine resources. The PENRO and CENRO (*see descriptions below*) will be the lead actors in terms of policy formulation at the provincial and city level.

- **Provincial Environment and Natural Resources Office (PENRO)**. The PENRO is the provincial arm of DENR and is responsible for supervision, control and enforcement of laws or regulations on natural resource utilization, pursuant to the policies, programs, and projects of DENR.
- **City Environment and Natural Resources Office (CENRO)** is the DENR office based in a city or municipality which is headed by the City/Municipal Environment and Natural Resources Officer; the CENRO is responsible for the implementation of DENR policies, programs, and projects and the enforcement of laws and regulation on environment and natural resources at the city/municipal level.

Palawan Council for Sustainable Development (PCSD) was established through Republic Act 7611 or the Strategies Environment Plan (SEP) for Palawan. PCSD is a multi-sectoral and inter-disciplinary body responsible for the governance, implementation, and policy direction of the SEP which mainly focuses on the protection and enhancement of the natural resources and endangered environment of the province. PCSD assumes most of the functions of the DENR and BFAR such as the management and conservation of terrestrial and aquatic flora and fauna, including seaweeds. The Council will play a big role in marine spatial planning, particularly in ensuring that the project area is in consonance with the local resource use map, zoning, and Environmentally Critical Areas Network (ECAN).

Municipal Governments have similar functions with the provincial government but is limited at the municipal level. This includes formulation and implementation of local ordinances and issuance of licenses and permits, such as permits for establishment of seaweed farms; supervises and manages the utilization of coastal and aquatic resources (e.g., seaweeds) and establishes land use and coastal/marine management plans.

- **Municipal Agriculture Office (MAO).** Responsible for advancement and management of agriculture and fisheries at the municipal level; enforce fisheries laws and regulations pursuant to national and provincial policies/laws; provides technical services, facilities, and infrastructure support to farmers, including seaweed farmers

- **Municipal Fisheries and Aquatic Resource Management Council (MFARMC)**. The Fisheries and Aquatic Resource Management Council was established to institutionalize the role of fishers and other resource users in the planning and formulation of policies and programs for the management, conservation, and development of fisheries and aquatic resources; a Barangay Fisheries and Aquatic Resource Management Council (BFARMC) was also established to assist in the preparation of municipal and barangay fisheries development plans, advise the local government council on fishery-related matters, and assist in the enforcement of fishery laws and regulations in municipal waters. The MFARMC officers have expressed interest in supporting the project since the Council is working closely with the NPFC and the MAO.

Corporation

Seaweed Industry Association of the Philippines (SIAP). SIAP is a non-stock corporation composed of seaweed processors and exporters, traders, and farmers. It is composed of six clusters – Cluster 1 (Tawi-Tawi and Sulu); Cluster 2 (Western Mindanao); Cluster 3 (Eastern Mindanao); Cluster 4 (Eastern and Central Visayas); Cluster 5 (MIMAROPA and Western Visayas regions); and Cluster 6 (Luzon provinces). SIAP coordinates and partners with seaweed experts, government agencies, non-government organizations, and the private sector to increase business support for the seaweed industry in the Philippines. SIAP will be able to contribute towards strengthening the link between and among actors in the Philippine seaweed industry.

Community Based Organizations (cooperatives, village fisheries management council)

1. Palawan

The **Northern Palawan Fishermen Cooperative (NPFC)** is a fishermen cooperative composed mostly of seaweed farmers and fishers from three municipalities in Northern Palawan. The idea of setting up a cooperative was introduced in Green Island in the municipality of Roxas by the National Consultant for Cooperatives of the Bureau of Fisheries and Aquatic Resources (BFAR) in 2013. At present, NPFC has a total of 111 members (47 women, 64 men) from three municipalities, namely, Roxas, Taytay, and Dumaran. Membership is open to all seaweed farmers and fishers from Northern Palawan who are able to comply to the requirements for cooperative membership (i.e., participation in meetings/seminars and community service activities, pay the minimum capital share of PhP 1,000). There is no limit on the number of household members who can apply for membership.

Through the NPFC, seaweed farmers [and fishers] are able to consolidate their harvests and sell these to large enterprises (e.g., consolidators). Through this, seaweed farmers [and fishers] were able to expand their market opportunities, improve their bargaining power, and obtain higher income from their seaweeds [and other fisheries products]. The NPFC engages in buy and sell business of raw dried seaweeds (RDS). Since its conception, NPFC has received and managed several projects funded by the BFAR (i.e., seaweed nursery, solar dryer and storage facility, seaweed propagules).

The officers and members of NPFC have actively participated in the two local stakeholder meetings conducted last August 3 and September 8, 2021. The members of the cooperatives will be engaged as cooperators of the WWF-GEF seaweeds project. The following are the proposed activities/arrangements if NPFC will be entrusted with the project:

1. The project will be considered as a special project, separate and independent from the regular business of the cooperative to provide equal opportunities for members and non-members to participate;
2. NPFC will establish project-based policies and will assign a different set of personnel for bookkeeping, record keeping, and documentation.
3. These project personnel will need to undergo trainings to upgrade their knowledge and skills to enable them to successfully manage a community business enterprise
4. The earnings from the project will be allocated in accordance with Article 86 of RA 9520 (Philippine Cooperative Code of 2008) as adopted in the Constitution and By-Laws of the NPFC and as approved by the Cooperatives Development Authority:

    - 35% will be divided among cooperative shareholders based on the number of shares they hold;
    - 35% will be divided among project workers and 100 seaweed farmers who sold their harvest to NPFC (i.e., Patronage Refund); and 30% for the Community Development Fund to be used for the benefit of the community where NPFC operates.

2. <u>Zamboanga City</u>

The **Aplaya Buenavista Seaweed Farmer Association** is composed of seaweed farmers from Buenavista, a coastal village in Zamboanga City. ABSFA will be organised into an organization by BFAR through funding from the WWF-GEF seaweeds project. It will be the recipient of different capacity building activities and will be tapped as project partner in the operation of the demo farm. Once organized into a cooperative, ABSFA will be the full operator of the seaweed farm at the end of the project. Once the cooperative takes over the farm, they will be responsible (using their own resources) for the farm's operation and maintenance, including labor, boat, fuel, documentation and record keeping, and farm planning and budgeting for the next cropping. They will produce a business and marketing plan supported by BFAR Region 9 to ensure efficient integration of the RDS produced into the seaweed value chain.

- MOA signing between BFAR and organized coop beneficiaries, witnessed by the barangay and office of the city agriculturist, including notarization costs and signing ceremony
- BFAR 9 will oversee trainings to provide the seaweed farmers/cooperative members the knowledge and skills to operate the new technology.
- BFAR9 will continue monitoring and providing advice beyond the 4-year duration of the project.

The **Barangay Fisheries and Aquatic Resources Management Council (BFARMC)** works together with the Municipal Fisheries and Aquatic Resources Management Council (MFARMC) for the conservation, management, and development of fisheries and aquatic resources at the barangay level; advises MFARMC about issues/concerns affecting fishers and seaweed farmers in the community; has expressed interest in supporting the project since the Council is working closely with the NPFC.

Indigenous Peoples and Local Communities

Results of local stakeholder meetings showed that there are two classifications of residents in Green Island, Roxas – local residents (those born and raised in Green Island) and migrants (i.e., residents who came from other provinces or municipalities in Palawan). The Cuyunon is the largest ethnic group residing in Green Island (originally from the municipality of Cuyo in Palawan) and are also involved in seaweed farming. The Cuyunons are identified as one of the indigenous groups in Palawan, but unlike the other ethnic groups, they are well-integrated in communities and the whole province (i.e., have adopted the national system of governance). They have also become less and less distinguishable because they have long intermingled with residents from other municipalities in Palawan.

There were five ethnolinguistic groups identified in Zamboanga who are involved in seaweed farming and are members of the Aplaya Buenavista Seaweed Farmers Association. Majority of them are Yakan, an ethnic group that originated from the province of Basilan. The rest are Tausugs, Sinama-Badjau, Banguingui, Subanon (or Subanen), and Kalibuga that refers to members of the Subanon group that intermarried with other ethnic groups in Mindanao (i.e., Tausug and Samal). Majority are Muslims but there have been no conflicts recorded concerning relationship between Muslims and non-Muslims and with regard to access to seaweed farm and coastal resources (at least among seaweed farmers and members of the organization). The indigenous groups are heavily dispersed throughout southern Mindanao and are well-integrated in the communities where they are residing.

Private Sector

Brabender GMBH & Co. KG is a leading manufacturer of instruments and equipment for testing raw materials used in R&D and industrial production in various sectors of the food & feed and plastic & rubber industry. As a partner to the global industries, Brabender offers customized individual and modular solutions for rheology and extrusion on a laboratory scale, suitable peripheral equipment and equipment for special measuring tasks, such as moisture testing or density determination.

In the application laboratory Brabender does own research and development work on processing of seaweed into natural polymer materials. This knowledge and experience will contribute to set up a first pilot extrusion of seaweed compound in this project. If bioplastic will be selected as one of the bankable business models, Brabender may be a project partner under Component 3, based on a selection process described in ProDoc section 3.1.2. Depending on its own progress in application development for seaweed bioplastics, Brabender GmbH & Co.KG reserves the right to withdraw from participation in the WWF-GEF Project – "*Blue Horizon: Ocean Relief through Seaweed Aquaculture*". Brabender will contribute:

- Measurement equipment to determine seaweed quality prior extrusion processing
- Processing equipment to convert raw dry seaweed into seaweed compound granules
- Provide training and consulting to seaweed farmer cooperative to enable local seaweed processing
- Project collaboration in biorefinery pilot project including hardware (pilot scale plant) and training of operators

Coast4C is a social enterprise launched by Zoological Society of London (ZSL) in 2020. It aims to integrate the supply of regenerative seaweed for communities, commerce, conservation, and climate. It has established a network of suppliers in the Philippines for scaling up production. Coast4C is primarily interested in promoting seaweed productivity and scaling up production and market to address various

anthropogenic and environmental risks. These initiatives and their experience in dealing and engaging with communities will be valuable in promoting and adopting best practices in seaweed production and in providing additional support services to organized farmers. Coast4C will facilitate a participatory marine spatial planning process with BFAR, the municipal government (LGU), the community, and other relevant stakeholders (i.e., PENRO, CENRO, MAO, PCSD, etc.) under Component 2, section 2.1.1. The following activities will be conducted:

- Develop knowledge products such as toolkits and training materials.
- Assessment of social infrastructure through cross visits with other sites where similar spatial planning approaches have been taken that integrate seaweed in northern Iloilo and/or Bohol and will enable people to see how it works in practice and speak with community members and LGUs. This is essential part of FPIC, and our experience has shown that it helps catalyze the marine spatial planning processes.
- Strengthening social infrastructure and establishment of community level Technical Working Groups to lead stages of the planning process.
- Conduct of baseline assessments, including socioeconomic profile of the community, marine resource use and environmental baselines and habitat mapping. Carrying capacity assessment for seaweed farming will be undertaken as part of this with the scientific input and participation of the European Space Agency.
- Facilitate the conduct of spatial planning by a Technical Working Group following an inclusive participatory process. Spatial planning process will lead to the formulation and adoption of an Ordinance, ultimately signed by the Municipal Mayor following due participatory processes and consultations.
- Formulation of the Ordinance based on the output of the spatial planning process. The TWG will actively be involved in the formulation of the Ordinance. Following consultation periods and readings, the Ordinance will be passed for endorsement to relevant bodies, and ultimately enactment. Enactment requires the signatures of the Sangguniang Bayan (Municipal Council) and the Mayor. Once the Mayor has signed the Ordinance, they will sign another Executive Order to establish – if there is none currently existing – a management body, the Marine Management Council, which will define the Implementing Rules and Regulations (IRR).
- Facilitate the management planning process by the MMC for a 5-year implementation plan of the Ordinance and IRR, including the development of a financial sustainability plan where financial commitments from the Local Government Unit and other stakeholders are identified. Following a participatory process and consultations, the management plan is ultimately approved by the Mayor. The management plan is reviewed and translated every year into an operational plan which is reviewed by the Municipal Fisheries and Aquatic Resources Management Council (MFARMC) and adopted by the municipal council, which triggers the release of approved budget amounts.
- Training and deputization of *bantay dagat ("guardian of the sea")*

Shemberg is one of the carrageenan manufacturers and exporters in the Philippines, producing all kinds of carrageenan products (e.g., Kappa, Iota, and Lambda). Their products are used for dairy, meat, confectionary, pharmaceutical, cosmetics, food. Shemberg has more than five decades of experience in carrageenan production and marketing and their products have conformed to national and international standards. Shemberg mostly markets its product abroad (e.g., US and UK) and a smaller percentage is sold locally, mostly for food application; has participated in national stakeholder meeting and has a strong

interest in upscaling the seaweed production in the Philippines; has been providing production and marketing support for seaweed farmers in top seaweed producing sites in the Philippines.

MCPI Corporation is one of the manufacturers and exporters of natural grade carrageenan designed for food and beverage, personal care, pharmaceutical, printing, textile, and other essential industries. It is also one of the major exporters of seaweed raw materials to international carrageenan manufacturing companies. MCPI is based in Cebu and produces carrageenan at an annual rate of 1,200 MT and is due for expansion to increase yearly production to 4,000 MT. To ensure sustainable supply of seaweeds and to assist marginalized seaweed farmers, MCPI provides farming support to seaweed farmers in various regions.

Academia

Palawan State University (PSU) is a government-funded university in Puerto Princesa, Palawan. PSU has been involved in seaweed-related research and extension work (e.g., technical support for seaweed farmers) in the province of Palawan. PSU can be tapped to continue their engagement with seaweed-producing communities, primarily through the provision of technical assistance to seaweed farmers, provision of facilities and manpower for project-related activities, and ensuring the sustainability of seaweed propagules for the project. PSU maintains and operates a seedbank repository/nursery which can be a source of good quality propagules which can be used for field trials.

University of Philippines, Marine Science Institute/Marine Environment and Resources Foundation, Inc (UPMSI). UPMSI conducts research, teaching, and extension work in marine biology, marine chemistry, physical oceanography, marine geology, and related disciplines. Its marine station, Bolinao Marine Laboratory (BML), is in Bolinao, Pangasinan, Northwest of the Philippines. BML is the research base for different scientific activities, serving as the focal point for coastal-based resource management activities involving the municipality of Bolinao and its adjacent areas. The Algal Ecophysiology (AlgaE) Laboratory of UPMSI has expertise in the production of new cultivars from spores of wild reproductive seaweeds specially the eucheumatoids (*Kappaphycus* spp. and *Eucheuma denticulatum*), among others. They will be able to provide technical support concerning sustainable farming and in monitoring and evaluation of grow-out/production in the project sites.

University of Philippines in the Visayas is one of the constituent units of the University of the Philippines system with the College of Fisheries and Ocean Sciences (CFOS) as its flagship college. It is one of the partner institutions of the GlobalSeaweedSTAR program funded by the UK Research and Innovation-Global Challenges Research Fund (UKRI-GCRF). UP Visayas has been conducting research on seaweeds and has recently established a seaweed biobank and micropropagation facility through funding support from the Department of Science and Technology (DOST) and UKRI-GCRF. UP Visayas, together with SEAFDEC/AQD, UP MSI, Palawan State University, and University of San Carlos can provide technical support for seaweed micropropagation, including trainings on sustainable farming technology/techniques.

The **University of San Carlos** has also been involved in seaweeds research, primarily on seaweed biology/taxonomy, farming, and socioeconomic viability. USC can be tapped to provide technical support to seaweed farmers particularly on issues concerning climate change, declining productivity/biomass, and other environment-related issues affecting the seaweed industry.

Intergovernmental organization

SEAFDEC/Aquaculture Department has been conducting research on seaweeds (e.g., micropropagation, farming techniques, disease and pest detection and management, etc.) for decades. SEAFDEC/AQD has also been providing technical support to government agencies (e.g., BFAR), the private sector, non-government organizations, and seaweed farmers for the improvement of seaweed quality and biomass. SEAFDEC/AQD will be able to provide technical inputs during project implementation, particularly through training and information dissemination concerning seaweed farming techniques, tissue culture (i.e., micropropagation), and will be able to assist in the conduct of biological/socioeconomic research. SEAFDEC/AQD has the technical expertise integral for monitoring and evaluation of project outcomes. SEAFDEC/AQD can provide tissue culture of K. alvarezii plantlets to augment seedlings requirements, if needed by BFAR or the communities.

4. Summary of previous stakeholder engagement activities

February to September 2020 (PIF stage): During project concept stage, the project team had meetings with BFAR National Coordinating Unit-Seaweed Development Program (NCU-SDP), Philippines Foreign Assisted Special Projects Service (FASPs), and Seaweed Industry Association of the Philippines (SIAP).

Detailed Project Development: During project development, the project undertook a series of consultations – one with national stakeholders and three with local stakeholders. Most of the consultation meetings, except in Zamboanga, were done virtually because of restrictions concerning travel and gatherings due to the COVID19 pandemic. Aside from virtual meetings, the stakeholders were also requested to complete a questionnaire to supplement information that were obtained through the virtual meetings.

National Stakeholders Consultation. The project preparation team hosted an online National Stakeholders Consultation on 29 June 2021. Forty-seven participants representing 17 stakeholders attended, including government policy, regulatory and management agencies (6), academic and research and development institutions (4), NGOs and Social Enterprises (2), Processing and trading enterprises (4), and the Seaweed Industry Association of the Philippines (1). Participants identified numerous challenges to the seaweed industry, including: diseases and pests (lack of biosecurity measures); declining productivity/yields of seaweed farms due to low quality seed, farm practices, and technologies; in terms of seaweed products – many products are low value, there is a lack of diversification in seaweed products, and this is linked to limited markets; environmental/natural challenges related to climate change and other environmental threats, biodiversity considerations (e.g. dugongs can get caught in nets), and potential of alien species. Participants suggested that the project consider the following during project design:

- Support seaweed farming to be more productive and produce higher quality raw dried seaweed.
- Support a reliable and year-round supply of quality propagules.
- Enhance seaweed farmers' entrepreneurial skills, ability to influence price and improved and more affordable financial services such as loans bundled with index-based insurance.
  New seaweed products should be explored to help position the Philippines as a manufacturing hub. It should include the development of or access to markets for high value products.

In Roxas, Palawan, one provincial and two local stakeholders' consultations took place.

a) During the **Provincial Stakeholders Consultations in Palawan** (see participant list in Annex 2), provincial-level stakeholders agreed to the rationale of selecting Roxas, Palawan as a target site for the project, given that it has existing seaweed farms and a well-developed cooperative. The provincial-level stakeholders noted several key considerations for the project design:
    - The project should test the viability of farming techniques in several sites and under different conditions to determine the feasibility of the farming technique
    - Postharvest techniques and facilities need improvement in order to reduce foreign matter contamination. The local government had provided farmers with bamboo poles to build drying platforms but this has not been sustained and farmers are now again drying their seaweeds on the ground.
    - Value-adding activities should be improved. The local government, through the Philippines Rural Development Project (PRDP), has trained some women's groups on seaweed processing (e.g., pickles, chips, etc.). It is hoped the cooperatives will be provided with the skills and facilities to produce and market seaweed food and other consumer products.
    - The project site must be established within the multiple use zone delineated by the Palawan Council for Sustainable Development (PCSD), and a management plan should be developed

b) The **local Stakeholders Consultations in Roxas, Palawan** included seaweed farmers, traders, officers of the Northern Palawan Fishers Cooperative (NPFC), and representatives from the provincial, city, and municipal government (full participation list is included in Annex 2). Two activities were conducted: a SWOT Analysis on strengths, weaknesses of the local seaweed industry on Green Island and in the municipality of Roxas, and a resource mapping exercise to verify the location of the proposed project site (initially identified by the Northern Palawan Fishers Cooperative) and to obtain basic data on the location of areas currently used for seaweed farming and trading (see result resource mapping in Annex 3). The stakeholders noted three key limitations concerning seaweed farming in Roxas: (a) lack of proper drying facility; (b) lack of capacity to address impacts of diseases and epi/endophytic infestations; and (c) lack of quality propagules or seedstocks. Nine threats were identified three of which directly concern the local seaweed industry and these are (a) disease and pest infestations; (b) poor weather condition; and (c) grazing by fish and turtles. Of these, diseases and pest infestations and poor weather conditions were considered to be of utmost concern. The local seaweed industry may also be threatened if the demand for carrageenan from the Philippines drops because of reports of presence of microplastics in the exported carrageenan products. There is also no electricity connection in Green Island, which will be considered if the project plans to put up a facility that would require electricity. Green Island is also a nesting site of sea turtles and "dugong" (*Dugon dugong*), which should not be adversely affected (and instead protected and their habitat enhanced improved) with the expansion of seaweed farming offshore.

c) **Local stakeholders' consultation in Zamboanga City.** One consultation was carried out in Zamboanga City in Zamboanga del Sur on December 3, 2021. The Project's Lead National Consultant met with three BFAR Region IX officers, two local government unit officials from the Office of the City Agriculturist, and one farmer, the president of the Aplaya Buenavista Seaweed Farmers Association, (Buenavista is the district of Zamboanga City which has jurisdiction of the site of the BFAR demonstration project), and the BFAR Regional Director, who is in charge of the demonstration project. Key information on the BFAR project, the beneficiaries, and the status of

seaweed farming in Zamboanga City were provided by the persons met. Most important was arriving at an understanding of the role of the Blue Horizon Project in the BFAR demonstration project, which were further clarified and expressed in concrete terms in subsequent meetings.

- BFAR9 proposed of using the Norwegian circular fish case for seaweed cultivation – modified to suit seaweed cultivation in deeper offshore waters.
- BFAR9 will partner with the Aplaya Buenavista Seaweed Farmer's Association who will serve as the project's co-operator in Zamboanga. Upon deployment of the marine cages modified for seaweed culture, the members of the beneficiary cooperative will oversee the farming and maintenance of seaweed under the supervision of BFAR 9. It is projected to cultivate six crops per year (as specified in the BFAR9 project proposal) The structure can last 20 years but would require regular maintenance e.g., replacement of nets. Revenue from the sale of the RDS will sustain farming activities and pay for maintenance of the structure. At the end of the project, the Norwegian cage structure will be turned over to the beneficiary cooperative. BFAR9 will continue to supervise and provide technical advice to the beneficiaries.
- This project is expected to directly benefit 136 families and could "potentially" benefit and additional 165 families
- BFAR9 will spearhead social preparation activities to (i.e., consultation meetings, workshops, etc.) to ensure that all stakeholder groups, especially the marginalized groups (e.g., women) are involved at throughout the project implementation phase.

A **national stakeholders meeting** took place, which included government policy, regulatory and management agencies, academic and research and development institutions, NGOs and Social Enterprises, Processing and trading enterprises with projects or ventures in the Philippines, and the Seaweed Industry Association of the Philippines. The participants identified specific challenges, that included diseases and pests (lack of biosecurity measures); declining productivity/yields of seaweed farms due to low quality seed, farm practices, and technologies; in terms of seaweed products – many products are low value, there is a lack of diversification in seaweed products, and this is linked to limited markets; and environmental/natural challenges related to climate change and other environmental threats, biodiversity considerations (e.g. dugongs can get caught in nets), and potential of alien species.

Participants suggested that the project consider the following during project design:

- Support seaweed farming to be more productive and produce higher quality raw dried seaweed. Select better strains and higher yielding, stress-tolerant strains. The global carrageenan market will continue to expand. To meet the demand the farming of carrageenan seaweed should also increase in volume and improve in quality.
- Support a reliable and year-round supply of quality cultivars for distribution to farmers. This should include considerations for improving cultivars, domestication of new species, and a refinement of existing cultivation techniques to improve quality control and traceability.
- Enhance seaweed farmers' entrepreneurial skills, ability to influence price (e.g., through warehouses), and improved and more affordable financial services (such as specific loans bundled with index-based insurance)
- New seaweed products should be explored to help position the Philippines as a manufacturing hub, and should include the development of markets for high value products such as functional foods, cosmetics, nutraceuticals, and pharmaceuticals. Entry into these markets will require a level of standardization, efficacy, and traceability that has not previously been required.

A **validation workshop** was conducted on February 18, 2022 and was participated by a total of sixty-six participants from government agencies, provincial and municipal local government units,

intergovernmental agency, non-government organizations, and cooperative officers. The following were the key points discussed during the workshop:

- The PENRO and CENRO should be involved in the project implementation, particularly for site planning and zoning, to ensure that there will be no conflicts arising with regards to resource use and protection/conservation of threatened or endangered species
    - Site selection was thoroughly discussed during the local stakeholders' meeting and the participants mentioned that the project will not affect the wildlife. Also, Coast4C will be engaged in IMPA and will look into the integrity of the whole system. Though there are no specific activities stipulate in the ProDoc, PENRO and CENRO will definitely be involved in project implementation. There will be series of consultation meetings conducted in Year 1 and CENRO and PENRO could be consulted or could be part of the oversight/steering committee
- The target date of implementation will depend on WWF Philippines, WWF-GEF. The schedule of implementation of some activities have been estimated already. For instance, project implementation in Zamboanga will take place within the first 6 months to one year given that there is already a blueprint. There will be no problem with regards to biomass production, however, decision regarding bankable business models is yet to be made given the short period of time allotted for discussing about this topic
- BFAR is already engaged in mariculture but only for fisheries commodities (i.e., grouper) and it would be good to try this method with seaweeds, document best practices that can be replicated in other areas in the country, such as Zamboanga and Roxas, Palawan.
- Establishing a seaweed nursery would be necessary given that farms have been affected by typhoons. BFAR is planning to revive the seaweed nurseries in partnership with Palawan State University
- Aside from WWF-GEF funding, there will also be contributions from BFAR, NCU, SDP, NSTDC, Coast4C
- SEAFDEC/AQD could also provide tissue culture of *K. alvarezii* plantlets to augment seedling requirements, when needed
- The project will ensure that child labor will not be practiced in the project site through the safeguards/standards that are set in place
- Good practices will be documented and could be shared to others

In addition to the above, multiple meetings and correspondence took place with **Coast4C** and **Brabender** to inform (a) possibility of partnership and (b) strategy development. It was decided that Coast4C would be a project partner, undertaking capacity building in best practices and provision of services to organized farmers. In addition, Brabender would be included as a potential biorefinery solution, and may be selected during project execution if a number of conditions and criteria are met.

5. Stakeholder Engagement Plan

The purpose of this Stakeholder Engagement Plan is to ensure appropriate and consistent involvement of project stakeholders in every stage of the project implementation, supporting effective communication and working relationships. The PH National Project Management Unit (N-PMU) will ensure that the views and inputs of stakeholders are taken into consideration throughout project implementation. See Annex 1 for the full Stakeholder Engagement Plan.

A Safeguards and Gender Specialist will be recruited to the N-PMU to oversee the implementation of the safeguards guidelines and gender mainstreaming activities. The specific activities for each of the stakeholders listed in the Stakeholder Engagement Plan will be finalized during project implementation. Most of the stakeholders will be engaged throughout the project cycle, except for those whose mandates relate only to certain phase or stage.

- In Roxas, Coast4C will facilitate a participatory marine spatial planning process in close coordination with the community, BFAR, the municipal government (LGU) and other relevant stakeholders.
- BFAR 9 will establish an offshore seaweed farm in Zamboanga City, together with the Aplaya Buenavista Seaweed Farmers' Association. The project will also engage community members towards the establishment of a cooperative.
- The NPFC will be the lead project co-ordinator in Green Island, Roxas, Palawan.
- The LGUs could issue the relevant municipal ordinances concerning spatial plan, seaweed farming practices, and quality, etc. They will also be involved in reviewing the Seaweed Roadmap and Standards, identifying policy gaps, barriers to market expansion, capabilities for and constraints for enforcement, and gaps in human and financial resources.
- Project implementation will require series of workshops and consultations meetings for designing and operationalizing the seaweed farms. This will be done with BFAR, MAO, PFO, PCSD, MFARMC, BFARMC, and Municipal Council, NPFC in Roxas and BFAR 9, LGU, and ABSFA.

6. Resources and Responsibilities

The WWF GEF Project Agency is responsible for oversight. The lead Executing Agency (SEAFDEC) and the Philippines national Executing Agency (BFAR) are jointly responsible for executing the Stakeholder Engagement Plan and overall compliance with the WWF Standard on Stakeholder Engagement. A Project Manager will be recruited to the Project Management Unit at SEAFDEC to ensure overall execution of the Stakeholder Engagement Plan and compliance with the WWF Standard on Stakeholder Engagement. He/she will oversee implementation of the Stakeholder Engagement Plan at an overall project level.

In the Philippines, BFAR will be responsible for overseeing stakeholder engagement with communities and local partners. BFAR will recruit a Safeguards and Gender Specialist who will be responsible for implementing the Stakeholder Engagement Plan and Gender Action Plan, and will report to the PH National PMU Project Manager. Budget has been allocated for travel, monitoring, and implementation of the Stakeholder Engagement Plan, Gender Action Plan, and Environmental and Social Management Framework.

7. Grievances Mechanism

A grievance is a concern or complaint raised by an individual or group negatively affected by project activities. A Grievance is not: (a) A question or suggestion for the project; or (b) An appeal or request for assistance.

Both concerns and complaints can result from either real or perceived impacts of the project's operations, and may be filed in the same manner and handled with the same procedure outlined in the GRM. Therefore, an effective and independent Grievance Redress Mechanism that collects and responds to stakeholders' inquiries, suggestions, concerns, and complaints is necessary to the project. The Project may

have direct and indirect effect on a large number of communities and stakeholders living within or outside the project implementation areas.

The Objectives of GRM

The Objectives of the grievance mechanism are:

(i) To provide stakeholders with a clear process for providing comment and raising grievances;
(ii) To allow stakeholders the opportunity to raise comments or concerns anonymously through accessible channels;
(iii) Structure and manage the handling of comments, responses and grievances, and allow monitoring of effectiveness of the mechanism; and
(iv) To ensure that comments, responses and grievances are handled in a fair and transparent manner.

The Project Management Unit will establish specific roles and responsibilities related to the process below at the project inception workshop for resolving any and all grievances related to the project. All grievances will be reviewed and responded to in writing within 7 working days of receipt.

Country Level Grievance Resolution Mechanism

The GRM shall constitute an integral part of the Project and assist the PMU in identifying and addressing the needs of local communities. Both complaints and responses shall be recorded in the Grievance Register for monitoring. If the claimant is not satisfied with the response, the grievance may be appealed in writing to the focal point at D-Fish or to the WWF US GEF Agency. The country-level grievance resolution mechanism will be developed at the inception workshop and finalized in the first three months of project implementation.

The GRM should be constituted as a permanent and accessible institutional arrangement for addressing any grievances arising from the implementation of project activities. It is in the interest of the Project to ensure that all grievances or conflicts that are related to the Project activities are appropriately resolved at the lowest level possible, without escalation to higher authorities or the initiation of court procedures. Project Affected Communities will therefore be encouraged to approach the Project's GRM for dispute settlement.

GRM Principles and Types of Grievances

This will include seven steps described below and demonstrate a typical grievance redress mechanism. The GRM shall operate based on the following principles:

(i) Fairness: Grievances are assessed impartially, and handled transparently.
(ii) Objective and independence: The GRM operates independently of all interested parties in order to guarantee fair, objective, and impartial treatment to each case.
(iii) Simplicity and accessibility: Procedures to file grievances and seek action are simple enough that project beneficiaries can easily understand them.
(iv) Responsiveness and efficiency: The GRM is designed to be responsive to the needs of all complainants. Accordingly, officials handling grievances must be trained to take effective action upon, and respond quickly to, grievances and suggestions.
(v) Speed and proportionality: All grievances, simple or complex, are addresses and resolved as quickly as possible. The action on the grievances or suggestion is swift, decisive, and constructive.

(vi) Participation and inclusiveness: A wide range of affected people – particularly communities and vulnerable groups – are encouraged to bring grievances and comments to the attention of the project implementers. Special attention is given to ensure that poor people and marginalized groups, including those with special needs, are able to access the GRM.

(vii) Accountability and closing the feedback loop: All grievances are recorded and monitored, and no grievance remains unresolved. Complainants are always notified and get explanations regarding the results of their complaint. An appeal option shall always be available.

Complaints may include, but not be limited to, the following issues:

a. Allegations of fraud, malpractices or corruption by staff or other stakeholders as part of any project or activity financed or implemented by the Project;
b. Environmental and/or social damage/harm caused by projects financed or implemented (including those in progress) by the Project;
c. Complaints and grievances by permanent or temporary workers engaged in project activities.

Complaints could relate to resource efficiency; negative impacts on public health, environment or culture; destructive of natural habitats; disproportionate impact on marginalized and vulnerable groups; discrimination or harassment; violation of applicable laws and regulations; destruction of physical and cultural heritage; or any other issues which adversely impact communities or individuals in project areas. The grievance redress mechanism will be implemented in a culturally sensitive manner and facilitate access for vulnerable populations.

GRM Procedures

The Project will be administered by the PMU. The Safeguards & Gender Specialist will be in charge of the operation of the GRM at the PMU and will be responsible for collecting and processing grievances that relate to activities in the landscape. The GRM will operate according to the following procedures.

1. Submitting complaints: Project Affected People or interested stakeholders can be submitting grievances or complaints directly to the PMU through a variety of communication channels, such as phone, regular mail, text messaging/SMS, or in-person, or by visiting the local PMU offices. It is important to enable to separate channels for complaint submissions in order to ensure that project affected people have sufficient opportunities to lodge their complaints to impartial and neutral authorities.
2. Processing complaints: All grievances submitted to the PMU shall be registered and considered. A tracking registration number should be provided to all complainants. To facilitate investigation, complaints will be categorized into four types: (a) complaints relating to non-performance of the Project obligations and safeguards-related complaints; (b) complaints referring to violation of law and/or corruption while implementing project activities; (c) complaints against authorities, officials or community members involved in the Project management; and (d) any complaints/issues not falling in the above categories.
3. Acknowledging the receipt of complaints: Once a grievance is submitted, the Safeguards & Gender Specialist at the PMU shall acknowledge its receipt, brief the complainant on the grievance resolution process, provide the contact details of the person in charge of handling the grievance, and provide a registration number that would enable the complainant to track the status of the complaint.
4. Investigating complaints: The Safeguards & Gender Specialist at the PMU will gather relevant information, conduct field visits as necessary, and communicate with all relevant stakeholders as part of the complaint investigation process. The PMU dealing with the investigation shall ensure

that the investigators are neutral and do not have any stake in the outcome of the investigation. A written response to all grievance will be provided to the complainant within 10 working days. If further investigation is required, the complainant will be informed accordingly and a final response will be provided after an additional period of 10 working days. Grievance that cannot be resolved by grievance receiving authorities/office at their level should be referred to a higher level for verification and further investigation.

5. If the grievance is in any way related to the behavior or actions of the Safeguards & Gender Specialist, it may be submitted directly to the Project Manager, another member of the PMU, or it may be submitted directly to the WWF GEF Agency.
6. Appeal: In the event that the parties are unsatisfied with the response provided by the GRM, he/she/they will be able to submit an appeal to the WWF GEF Agency within 10 days from the date of submission.
7. Monitoring and evaluation: The Safeguards & Gender Specialist will prepare semi-annual reports with full information on the grievances received and their investigation status which the Project Manager shall submit to the WWF GEF Agency and the SEAFDEC PMU as part of the regular project progress reporting.

Information about channels available for grievance redress shall be widely communicated in all project affected communities and with all relevant stakeholders. The contact details (name, phone number, mail and email address, etc.) of the Safeguards & Gender Specialist in the Project PMU should be disseminated as part of all public hearings and consultations, in the local media, in all public areas in affected communities, or project activity area sites.

The GRM seeks to complement, rather than substitute, the judicial system and other dispute resolution mechanisms. All complainants may therefore file their grievance in local courts or approach mediators or 25 arbitrators, in accordance with the legislation of Viet Nam. In addition to the project specific GRM, a complainant can submit a grievance to the WWF GEF Agency.

WWF GEF Agency Grievance Mechanism

Project-affected communities and other interested stakeholders may raise a grievance at any time to the WWF GEF Agency. Contact information of the WWF GEF Agency will be made publicly available.

A grievance can be filed with the Project Complaints Officer (PCO), a WWF staff member fully independent from the WWF GEF Agency, who is responsible for the WWF Accountability and Grievance Mechanism and who can be reached at: Email: SafeguardsComplaint@wwfus.org.

Mailing address:
Project Complaints Officer Safeguards Complaints,
World Wildlife Fund
1250 24th Street NW
Washington, DC 20037

Complaints may be submitted in the Affected Party's native language and should include the following information:

- Complainant's name and contact information;
- If not filed directly by the complainant, proof that those representing the affected people have authority to do so;
- The specific project or program of concern;

- The harm that is or may be resulting from the project;
- The relevant Environmental and Social Safeguards policy or provision (if known);
- Any other relevant information or documents;
- Any actions taken so far to resolve the problem, including contacting WWF;
- Proposed solutions; and
- Whether confidentiality is requested (stating reasons).

The PCO will respond within 10 business days of receipt, and claims will be filed and included in project monitoring. Stakeholders may also submit a complaint online or over the phone through an independent third-party platform at https://report.whistleb.com/en/wwf.

8. Monitoring and Reporting

Progress against the Stakeholder Engagement Plan will be monitored and reported on throughout implementation. The following comprises the monitoring and reporting activities to be undertaken with respect to stakeholder engagement by the SEAFDEC PMU at the regional level and by the National PMU in the Philippines:

- The SEP will be periodically reviewed and updated as necessary at an annual Reflection Workshop. The review will ensure that the list of project stakeholders and methods of engagement remain appropriate.

- Activities related to stakeholder engagement will be documented and reported by the PMU every 6 months in a Project Progress Report (as part of regular reporting). The project Results Framework and Annual Work Plan and Budget will track beneficiaries of the project and activities related to the Stakeholder Engagement Plan.

Stakeholder Engagement will be evaluated by **independent consultants** recruited for the project midterm and terminal evaluation. The **WWF GEF Agency** will undertake annual supervision missions to ensure compliance, and report on progress against the Stakeholder Engagement Plan annually to the GEF through Project Implementation Reports.

Annex 1. Stakeholder Engagement Plan

Stakeholder Type	Name	Interests (stake) in the project	Frequency of Engagement/ Project Years	Engagement During Project Implementation
Central Government	DENR – FASPS	• Coordination for foreign-funded projects • Serve as project advisor • Assist in monitoring and evaluating project outcomes	Years 1,2,3,4	• Link and coordinate with the DENR regional/local offices and stakeholders • Co-finance project-related activities, especially those concerning biodiversity conservation • Assist DENR regional offices and other local project partners involved in seaweed livelihood on labor and community development • Assist in monitoring and evaluation of project's progress and performance by checking reports produced by the project team
	NFRDI	• Research and development • Provide technical support for seaweed farmers and other actors in the seaweed industry trainings and capacity building activities	Years 1,2,3,4	• Provide guidance and support for seaweed value chain development • Assist in training and capacity building for adoption of new technology and value chains • Contribute to development of knowledge products (i.e., toolkits, training materials)
	DA-BAFS	• Issue policies on seaweed quality • Provision of information and technical support on seaweed quality	Year 1 and 2	• Provide technical support on seaweed standards • Provide materials for trainings and capacity building concerning seaweed quality • Conduct capacity-building activities, trainings, etc.
	NSTDC	• Policy formulation • Provide financial and technical support for seaweed farmers and other actors in the seaweed industry	Years 1,2,3,4	• Provide technical support for seedstock propagation • Take part in project monitoring and evaluation • Provide technical expertise on phycocolloid analysis • Provide trainings for seaweed food processing
	DTI-EMB	• Marketing information • Product promotion • Support implementation of policies/guidelines	Years 3 and 4 Half yearly	• Provide market information and establish linkage with prospective markets • Product matching (i.e., match product with prospective markets) • Contribute during monitoring and evaluation stage

	DTI-BOI	• Industry and investments promotion through provision of fiscal and non-fiscal incentives • Formulate and support implementation of policies concerning product development and marketing	Years 3 and 4 Half-yearly	• Secure high-level support for the project • Co-fund certain activities pertinent to the mandate of the Bureau • Promote product development
Provincial and Municipal governments	PENRO	• Policy formulation and support • Environmental protection and biodiversity conservation	Years 1,2,3,4 Half yearly	• Provide guidance and support for seaweed value chain development • Monitor project impacts, particularly in terms of environmental protection and biodiversity conservation
	CENRO	• Policy formulation and support • Environmental protection and biodiversity conservation (works together with municipal and provincial environment and natural resources offices)	Years 1,2,3,4 Quarterly	• Provide guidance and support for seaweed value chain development • Monitor project impacts, particularly in terms of environmental protection and biodiversity conservation
	PCSD	• Policy, knowledge sharing, and advocacy (environmental, biodiversity, zonation, and resource use) • Regulation and technical support (Zoning)	Yrs 1 to 4 Half yearly	• Provide technical support for zoning-related activities • Ensure that the project area is in consonance with the local resource use map, zoning, and ECAN
	MAO	• Policy formulation and support for fishers and seaweed farmers	Yr 1-4 Half yearly	• Provide policy and technical support concerning management of coastal and marine resources within the jurisdiction of the municipality ○ designation of project site ○ contribute to development of plans, activities, policies, and strategies concerning seaweed farming, introduction of new technology, capacity building for seaweed farmers ○ assist in overseeing, monitoring and evaluating project outcomes
	FARMC	• Provides collective platform for seaweed farmers (and fishers)	Yrs 1,2,3,4 Quarterly	• Provide policy support for seaweed farmers • Liaise seaweed farmers with local government and other governmental bodies

CBOs	NPFC	• Provides collective platform for seaweed farmers (and fishers) in northern Palawan • Marketing support for seaweed farmers	Yrs 1 to 4 Continuing	• Primary project coordinators (i.e., project recipients) and beneficiary in Roxas, Palawan • Provide manpower for project implementation in Roxas, Palawan
	ABSFA	• Provides collective platform for seaweed farmers (and fishers) in Buenavista, Zamboanga City • Marketing support for seaweed farmers	Yrs 1 to 4 Continuing	• Primary project coordinators (i.e., project recipients) and beneficiary in Zamboanga City • Provide manpower for project implementation in Zamboanga City
Communities, including marginalized groups (i.e., IPs, women)	Communities and marginalized groups in Green Island, Roxas, Palawan	• Majority of households in Green Island engage in seaweed farming • Resources (i.e., coastal and marine area) are shared by all households, including marginalized groups such as the IPs (i.e., Cuyunon) and women • Majority of members of NPFC are from the municipality of Roxas, particularly in Green Island • Green island is a major seaweed production area in the municipality of Roxas	Yrs 1 to 4 Continuing	The community in Green Island will be consulted and engaged throughout the project cycle, particularly for components 2 and 3. This will include: • Series of consultation meetings will be conducted in Year 1 concerning (a) project background and activities; (b) approval of the location of pilot seaweed farm site; (c) seaweed carrageenan roadmap and PNS; (d) formulation of farm plan and farming technology (Activities under Output 2.1.1) • Communities will also participate in feasibility studies for adoption of new seaweed value chains and when these initiatives are finalized and implemented (Output 3.1.2) • Recruitment and selection of co-operators and farm workers and trainings on operation of farm and cooperative management (Output 3.1.1) Environmental and Social Management Framework and Gender Action Plan stipulates specific activities to ensure that marginalized groups (i.e., women, IPs) are involved throughout the project cycle.
	Communities and marginalized groups in Buenavista, Zamboanga City	• Communities are involved in seaweed farming • The Aplaya Buenavista Seaweed Farmers' Association (ABSFA) is composed of multiple IP groups (i.e., Yakan, Subanon, Kalibugan,	Yrs 1 to 4 Continuing	The community in Buenavista, Zamboanga City will be consulted and engaged throughout the project cycle. This will include: • Series of consultation meetings will be conducted in Year 1 concerning (a) project background and activities; (b) location of pilot seaweed farm site;

		Tausug, Banguingui, and Sinama-Bajau) • BFAR IX has been engaged with ABSFA and communities in their various activities		(c) seaweed carrageenan roadmap and PNS; and (d) selection of co-operators and farm workers • Series of trainings for conversion of organization (i.e., ABSFA) into a cooperative as stated under Output 3.2.2 Environmental and Social Management Framework and Gender Action Plan stipulates specific activities to ensure that marginalized groups (i.e., women, IPs) are involved throughout the project cycle.
Private Sector	Brabender GMBH & Co. KG	• Research and development • Support new value chain initiative	Yrs 1-4 Continuing	• Measurement equipment to determine seaweed quality prior extrusion processing • Processing equipment to convert raw dry seaweed into seaweed compound granules • Provide training and consulting to seaweed farmer cooperative to enable local seaweed processing • Project collaboration in biorefinery pilot project including hardware (pilot scale plant) and training of operators
	Coast4C	• Support livelihood development of seaweed farmers through provision of technical support for farming and marketing • Monitoring of negative environmental and social impacts of seaweed farming • Support product development • Development of technical and non-technical innovation • Building social and political acceptability • Conducts capacity building activities and trainings to seaweed farmers and seaweed-farming communities	Yrs 1-4 Continuing	Coast4C is a project partner, and will be receiving funds under the project. Coast4C will undertake the following activities: • Conduct community-based activities such as building social infrastructure, financial inclusion, spatial planning and integration into marine protected areas, building community-level infrastructure, and facilitate/support marine protected areas • Contribute to project design (i.e., farming technology • Provide technical support to test implementation/operations of approaches to increase quality and yield • Contribute to monitoring and evaluation of project outcomes (i.e., formulation of toolkits)
	Shemberg	• Carrageenan production and marketing	Yrs 2-4 Half yearly	• Advisor on carrageenan production and marketing • Provide marketing support to farmers • Communicate and coordinate with stakeholders

		• Product development and marketing (e.g., Export of processed seaweed products)		• Benchmark practices from successful sustainability programs • Monitor and evaluate through supplier audits
	MCPI	• Carrageenan production and marketing • Product development and marketing (e.g., Export of processed seaweed products) • Support engagement with seaweed farmers and traders	Yrs 2-4 Half yearly	• Advisor on carrageenan production and marketing • Provide marketing support to farmers • Communicate and coordinate with stakeholders • Benchmark practices from successful sustainability programs • Monitor and evaluate through supplier audits
Academia	Palawan State University	• Research and development on seaweeds • Technical assistance or support to seaweed farmers • Provision of facilities of R&D and other project-related activities • Development and provision of good quality propagules	Yrs 1 to 4 Quartlery	• Contribute to project planning and implementation (i.e., production of propagules, establishment of seaweed farms for pilot testing • Allocation of facilities for project-related activities • Contribute to project monitoring and evaluation • Assist BFAR in sourcing out and assessing propagules to be used in project sites
	UP MSI/MERF	• Research and development on seaweeds • Development and provision of good quality propagules	Yrs 1-4 Quarterly	• Provide background data on seaweed biology and updates in current and on-going research studies • Recommend areas for research and design experiments • Monitor and evaluation project outcomes • Could provide good quality propagules, if needed
	University of San Carlos	• Research and development on seaweeds • Technical support for farmers and other stakeholders	Yrs 1-4 Yearly	• Contribute to project planning and implementation (i.e., production of propagules, establishment of seaweed farms for pilot testing • Contribute to project monitoring and evaluation
Intergovernmental organization	SEAFDEC/AQD	• Research and development on seaweeds • Development and provision of good quality propagules		• Provide technical support/input on seaweed farming techniques, tissue culture, etc. • Assist in biological/socioeconomic research • Assist in monitoring and evaluation of project outcomes • Could provide tissue culture of *K. alvarezii* to augment seedling requirements, if needed

Annex 2. Documentation of Stakeholder Consultations

Date	Description of Consultation	Venue	Objective of the Consultation	Summary of Meeting Outcomes	Participants
29 June 2021	National stakeholder consultation	Virtual (via Zoom)	• Introduce the project and set expectations • Identify organizations and agencies with mandates pertinent to the seaweed industry • Identify potential project partners - collaborators and co-funders	• Identified challenges that affect the seaweed industry, e.g., pests and diseases, climate-related hazards, declining productivity due to low quality seaweed and poor farming practices • Clarification regarding the purpose and manner of project implementation, particularly on pilot testing of deep-sea seaweed farming • Obtained feedback and suggestions on how to effectively implement the project, including potential contributions of government and non-government organizations with mandates pertinent to the seaweed industry. This includes: (a) provision of more support for seaweed farmers to ensure higher biomass and production of good quality raw dried seaweeds; (b) provision of good quality cultivars whole year round to sustain farming activities; (c) enhance seaweed farmers' entrepreneurial skills and ability to influence seaweed prices through establishment of improved and affordable financial services • Market expansion through the introduction of new seaweed products to provide livelihood alternatives for seaweed farmers	• WWF Philippines • National consultants and Lead Consultant • Government agencies – BFAR, DTI, NFRDI • Academia – University of San Carlos, Palawan State University, UP Marine Science Institute, SAMS • Processors/Exporters – Shemberg • NGOs – SIAP, COAST4C
3 August 2021	Local stakeholder meeting (Provincial) - Roxas	Virtual (via Zoom)	• Introduce the project and set expectations • Identify potential project partners at the local level -	• There is a need to determine the suitability of the "identified" site for the establishment of off-shore seaweed farm – project implementers may also consider conducting a similar activity (i.e., pilot site) in other areas	• WWF Philippines • National consultants and Lead Consultant

			collaborators and co-funders	in Palawan but it will entail large costs, especially in terms of logistics • There have been seaweed projects introduced to seaweed farmers in Palawan. One of which is the Smart Seas Philippines which was funded by UNDP-GEF. The project has been successful and was adopted by the local government (to be funded using local government budget) - the WWF-GEF seaweeds project may build on this existing initiative • Seaweed farmers in Green Island are using shortline or monoline method. The seedstocks are used to be purchased from Agutaya but they are now one of the main producers of seaweed cultivars • Women are actively involved at all stages of seaweed production • If a new farming technology or technique will be introduced, there is a need to provide technical support for farmers so that they will be able to successfully adopt this method • The project may also introduce new value chain initiatives to provide additional livelihood options for seaweed farmers – however, there is a need to design a good marketing strategy to effectively promote these new seaweed products	• National government agencies – BFAR, DENR-FASP • Provincial and City Environment and Natural Resources Officers • Provincial and Municipal Agriculture Officers • Local government council • Cooperative officers • Academia – Palawan State University
8 Sept 2021	Local stakeholder meeting (Municipal and Provincial) - Roxas	Virtual with in-person attendance at the Municipal Hall	• Identify the strengths, weaknesses, opportunities, and threats (using SWOT method) • Understand resource use pattern through	• Through the SWOT analysis, the participants were able to identify the internal (strengths, weaknesses) and external (opportunities, threats) factors that promote or constrain the growth of the local seaweed industry in Green Island and in the municipality of Roxas	• WWF Philippines • National consultants and Lead Consultant • National government agencies – BFAR

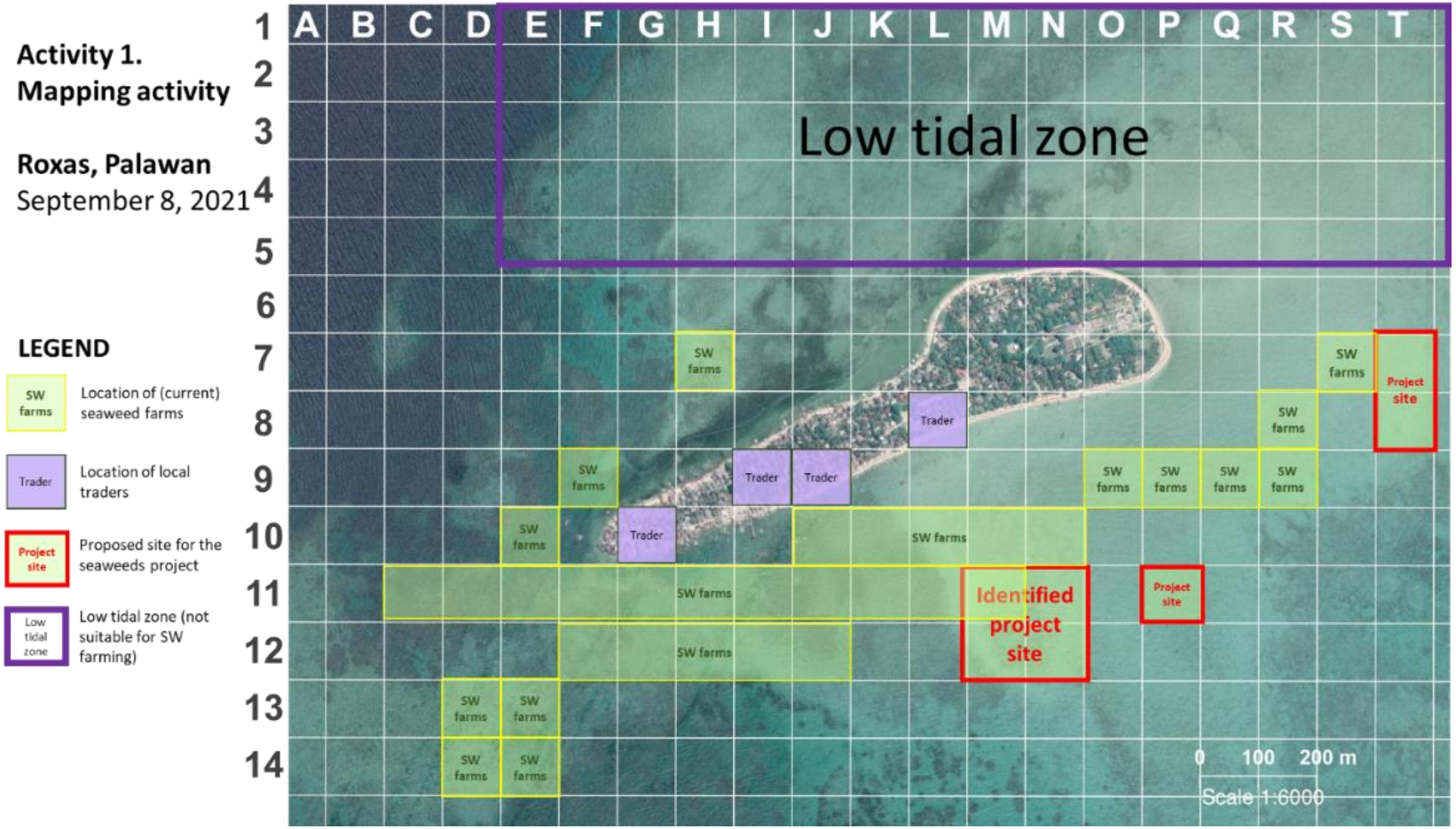
			resource use mapping activity	• The SWOT profile of the local seaweed industry in Green Island provides clear insights on how the different stakeholder groups perceive the seaweed industry, including their discernment on how it should be managed. • Overall, there were more strengths and opportunities identified as compared to weaknesses and threats (*see meeting summary*). • The results of the mapping exercise showed that there is no overlap or conflict between the project site and the existing seaweed farms because the Cooperative officers and members ensured that the site allocated for the project is not currently used for seaweed farming by residents • The characteristics of the sites also satisfies the basic requirements of the project and it is protected by corals, which according to participants, help in dispersing strong waves during typhoons so they believed that the seaweed farms will be protected (*see Appendix 2*) • There are currently six traders in Green Island that purchase dried seaweeds from farmers at PhP 52.00 per kilogram dry weight (dw). There are also five stockers that buy seaweed trimmings from farmers to be sold as propagules or seedstocks to other farms. These are bought from farmers at PhP 5.00 per kilogram fresh weight (fw). The trimmings may be obtained from seaweeds that are infected by diseases (e.g., ice-ice disease) as farmers tend to trim infested seaweeds in order to prevent further spread of	• Provincial and City Environment and Natural Resources Officers • Municipal Agriculture Officer • Local government council • Cooperative officers • FARMC • Seaweed farmers and traders

				"infection". After cleaning (e.g., trimming), farmers would transfer the seaweeds to a different location, usually in an area adjacent to the farm, to give time for the seaweeds to recover.	
3-4 Dec 2021	Meetings at Zamboanga City	Person-to person meetings in conjunction with a regional workshop on use of plastics in seaweed farming, with BFAR Regional Director, fisheries officers, municipal officers and a seaweed farmer leader.	• Understand the planned BFAR demonstration project and identify the role of the Blue Horizon Project in its implementation. • Obtain indications of women/men roles and participation in the seaweed farming sector of the area • Obtain a broad status of the seaweed industry of the province.	• Blue Horizon will provide support to the construction of 4 circular cages • Provide technical assistance in the formation of the farmers' cooperative (converting the Association into a cooperative) of the district where the project is located, Aplaya Buenavista, Zamboanga City	• Regional Director of BFAR Region IX • 3 BFAR officers of Zamboanga Province • 2 Local Government Officials (Office of the City Agriculturist) • Seaweed Farmer: President of the Aplaya Buenavista Seaweed Farmers Association
8 Feb 2022	Internal validation	Virtual	• Present and validate the proposed project activities, governance structure, and budget to BFAR • Solicit comments and feedback from BFAR on the key features of the project	• BFAR to finalize and governance structure and budget and forward	• WWF-GEF Philippines • BFAR SDP • BFAR National • BFAR MIMAROPA • BFAR 9
18 Feb 2022	Validation workshop	Virtual	• Present and validate the draft project document and explain its key features	• Overall Project Lead and Philippine WWF-GEF team presented an overview of the project, key points in the Project Document and	• WWF Philippines • SEAFDEC • DENR-FASPS

			• Solicit feedback and comments from stakeholders on the key project features and proposed institutional arrangements • Explain next steps for the finalization and submission of the ProDoc	reports (i.e., SEP and GAP), and the project governance structure, budget, and activities • Additional revisions in the ProDoc will need to be done • **Participants/Stakeholders raised questions concerning:** 1. How the project will address issues concerning environmental conservation and protection • Ensure that environmental safeguards are in place for the protection/conservation of endangered/threatened species. C4C said that these can be integrated in marine spatial plan 2. Clarify project timeline (i.e., target date of implementation) and project cost • Other than the WWF-GEF budget, BFAR, C4C, UP MSI, and Brabender (if bioplastic initiative will be pursued) will provide counterpart budget 3. Roles of agencies, government agencies, specifically, provincial and municipal offices/departments 3. Composition the committees formed during project implementation (i.e., steering committee, monitoring and evaluation committee) 4. Clarify how certain issues (i.e., child labor) will be resolved/avoided 5. Ensure that stakeholders have access to the google drive containing the project documents	• NEDA • BFAR-NFRDI • BFAR SDP • BFAR IFAD • SEAFDEC/AQD • BAFR MIMAROPA • BFAR 9 • PENRO Roxas • CENRO Roxas • SIAP • NPFC

Appendix 3. Location Maps of Project Areas

Annex 3.1. Results of community resource mapping in Roxas, Palawan on September 8, 2021



Annex 3.2 Location of project sites