Ninth Session of the SIDS DOCK Assembly
Via Telephone and Videoconferencing
Thursday, 25th September 2025
4:00 p.m. to 6:00 p.m. (Eastern Daylight Time)

A/9/15

SIDSDOCK
SMALL ISLAND DEVELOPING STATES
ISLAND ENERGY FOR ISLAND LIFE

INTRODUCTORY PROPOSAL

PREPARED FOR

Delegation of the European Union to the United Nations in New York

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GLOEA
GLOBAL OCEAN ENERGY ALLIANCE

IWON
Island Women Open Network

By
SIDS DOCK SECRETARIAT

March 4, 2025

SIDS DOCK Introductory Proposal to the Delegation of the European Union to the United Nations in New York

Partnership Supporting the Development of the SIDS DOCK Project Pipeline

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Introduction & Background

The SIDS DOCK Secretariat is seeking support from the Delegation of the European Union to the United Nations in New York, toward the SIDS DOCK Programme of Work for the period 2025 to 2027 in the amount of ten million three hundred and fifty million euros (€10,350,000) in support of the Programme of Work. SIDS need to replace approximately ten thousand megawatts (10,000 MW) of ageing diesel fueled baseload electricity generating systems (24/7 power all the time) in the coming decade. Replacing these diesel generators with baseload ocean energy systems will minimize the use of fossil fuel, reducing emissions, and to positively impact the growing trade imbalances and foreign debts. This is being accomplished through the Global Ocean Energy Alliance (GLOEA), the most significant mechanism established in 2022 by the Alliance of Small Island States (AOSIS), since the establishment of the SIDS DOCK Organization in 2015. The GLOEA Secretariat was established in Belmopan, Belize in April 2024, and startup activities are being coordinated by the SIDS DOCK Secretariat.

SIDS can argue that they are more attuned to the ocean than any other group of people. As islanders, SIDS livelihoods are dependent on the ocean for food, energy, water, and its contribution to the tourism and other marine-based industries. Therefore, SIDS actively pursue ways in which to achieve the goals formulated within the framework of the SDG14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development. In this regard, Target 14.7 is most relevant for SIDS, in terms of increasing economic benefits, followed by Target 14.A.1, that speaks to the "transfer of marine technology", and are aligned with the mission and goals of the Global Ocean Energy Alliance.

The GLOEA is focused on accelerating the development of ocean energy projects through partnerships that mobilize technical, human and financial resources and building a global community of vested interest with the capacity to develop a pipeline of bankable ocean energy projects to serve islands, cities and coastal nations. The introduction of ocean energy technologies in the marketplace faces manifold barriers related to policy and regulation, technology availability, knowledge management and awareness, capacity building, in addition to finance and entrepreneurship. The COVID-19 Pandemic has shown once again a high level of economic vulnerability of SIDS and their significant dependence on international markets to maintain a functioning economy. In particular, the import cost of petroleum fuels in some SIDS is greater than the total export earnings of the country. Using ocean energy to replace diesel generated baseload electricity would be a game changer for SIDS and many coastal nations, who also use fossil fuels for generating electricity. The positive financial impacts of minimizing fossil fuels use would significantly reduce their economic vulnerability while contributing to adaptation costs to address global climate change.

The GLOEA Indicative Project Pipeline

At the heart of the SIDS DOCK Programme of Work approved by the SIDS DOCK Assembly in 2024, is the five hundred million euros (€500,000,000) project pipeline being developed by SIDS DOCK and its private sector partners and governments that include jointly conducting desktop studies for a dozen islands on their thermal energy resource endowment and potential for deployment of Ocean Thermal Energy Conversion (OTEC) technology. Desktop studies have also been conducted for eight countries on the potential of Wave energy technologies. Several of these countries have entered into agreements with private sector partners, and the next step is to provide assistance to the countries to conduct feasibility studies.

Whilst the main projects in the SIDS DOCK Indicative Project Pipeline fall under the GLOEA, emphasis is placed on the SIDS transportation sector which is the biggest user of fossil fuels in SIDS, where approximately seventy percent (70%) of imported fuel is used for transportation. Gasoline and diesel oil used primarily for land transport represent the largest share of liquid fuels followed by maritime transportation and aviation. In this regard, E-Mobility was made a priority within the Programme of Work from as far back as 2017, but delayed by the COVID pandemic. A planned electric golf cart pilot project on San Pedro Island, Belize, is poised to have significant importance for the country and the entire Caribbean region. The project is aligned with several country and regional initiatives, and the relevance of the San Pedro electric golf cart project to these initiatives underscores the benefits that the project will bring through supporting Belize's critical industries like agriculture and tourism, contributing to Belize's national objectives by delivering intelligent, modern and affordable clean, efficient, and safe mobility solutions, and helping the region's transition towards a low-carbon transport sector.

Tourism is the life-blood of the SIDS economy, and currently, the Caribbean region is facing one of the greatest menaces – Sargassum seaweed, that is choking the ocean, killing the marine life and destroying the pristine white sandy beaches, resulting in significant losses within the tourism industry, right across the board. Research conducted by the SIDS DOCK Secretariat and its partners show that deployment of technology to convert Sargassum into an energy resource for the Belize energy mix is a viable solution. The goal of the project is to develop and deploy the Caribbean region's first waste-to-energy facility for converting carbon-based material in Municipal Solid Waste (MSW) and Sargassum into replacement for diesel fuel resulting in a significant reduction in emissions. This Waste to Energy (WtE) project will be done in partnership with private sector technology companies, by executing Power Purchase Agreement (PPA) for sale of the baseload power from the WtE facility to the national utility.

Establishment of the Island Women Open Network (IWON), a Women's Sustainable Energy and Climate Resilience Network, is intended to help build the capacity of women at the community and grassroots levels in small islands and low-lying developing states and was jointly launched by SIDS DOCK and UNIDO in 2016. This initiative is necessary as women make up half of the population in SIDS and 50 percent are heads of households. In 2019, the IWON and its partners launched the initiative, *"Promoting The Development of A Global Sustainable Botanical/Herbal Supplier Market From SIDS DOCK Member States [Botanical/Herbal Project]."* The main goals of the Pilot Botanical/Herbal Project are to formulate and demonstrate activities that support the establishment of a sustainable botanical/herbal market chain in the context of biodiversity

protection and conservation, and the gender-energy poverty nexus, and to promote expansion of regional and inter-regional trade and investment opportunities among Island Women. The project can help kick-start innovative micro-businesses, promote climate resilience, biodiversity conservation, sustainable livelihoods, sustainable investments in clean energy and looking at multiple value chains, "from the field to the fork."

The IWON also drafted an *"Energy Innovation Financing Facility Proposal: Facilitating Women's Participation in the Transformation of the SIDS Energy Sector*. This Pilot Project is in support of financing for project preparation, feasibility studies and business plans for energy efficiency projects. The Proposal's aim is to mobilize seed funding for the design and resource mobilization for a Women's Sustainable Energy Financing Facility.

Statement of Need

SIDS face significant challenges in transitioning their energy sector away for liquid fossil fuels as they and their partners find it difficult securing financing for ocean energy projects from multinational financial institutions. SIDS have the highest energy costs of any group of countries in the world due to their reliance on imported fossil fuels, and the highest costs of delivering small quantities of fuel. Despite the private sector demonstrating high interest in investing in the SIDS energy market due to the high price of energy that could generate high returns, they point to factors which act as barriers to financing that includes, but is not limited to:

a. High cost of local capital and high level of perceived financial risk including non-convertible local currencies.

b. Electric Utilities Balance Sheets: The electric utilities in SIDS, despite the high tariffs, are not very profitable and not attractive to private financing.

c. Vulnerabilities to Climate Change: SIDS are highly vulnerable to climate change impacts such as sea level rise, extreme weather events, and ocean acidification. These vulnerabilities exacerbate their energy challenges.

d. Institutional and Regulatory Obstacles: The current regulatory and policy environment in SIDS represent institutional barriers to the development of renewable energy projects.

Justification for Financial Support

Support for the SIDS pipeline of ocean energy projects is crucial for several reasons:

a. Economic Stability: Reducing reliance on imported fossil fuels can help stabilize SIDS economies by lowering energy costs and reducing vulnerability to global oil price fluctuations.

b. Climate Resilience: Investing in renewable energy projects can enhance SIDS' resilience to climate change impacts by helping them adapt to and mitigate the effects of climate change.

c. Sustainable Development: Ocean energy projects can contribute to sustainable development by addressing trade imbalances and dependence on external borrowing at high interest rate, due to the highly indebted nature of their economies. By providing clean, reliable energy sources that support economic growth and improve quality of life.

With the backing of AOSIS leadership, SIDS now have widespread support for the Global Ocean Energy Alliance (GLOEA), and most recently, at the October 2024 Commonwealth Heads of Government Meeting (CHOGM) in Apia, Samoa, Commonwealth countries adopted the *Apia Commonwealth Ocean Declaration for One Resilient Common Future*, which calls on all 56 Commonwealth nations to protect and restore the ocean in the face of severe climate change, pollution and impacts related to over-exploitation. The Declaration recognized "the vast potential of marine renewable energy to support a just and equitable sustainable energy transition, and encourage increased investment in alternative marine energy sources, such as wave, tidal, ocean thermal energy conversion, offshore and floating wind, floating solar, green hydrogen and marine biomass energy, by expanding research and development and identifying potential and optimal implementation strategies."

There is no question about the solid, committed and unrelenting support from the SIDS leadership, meanwhile, at the individual development partnership level where funding has been available to jump start the process of project development, large institutions have been reluctant to fund grant requests for ocean energy. Institutions such as the Global Environment Facility (GEF), the Green Climate Fund (GCF) and the World Bank have been reluctant to provide support, despite multiple requests. In summary, financial support for SIDS' ocean energy projects is essential to address their high energy costs, external balance of payments and for promoting economic stability and sustainable development to provide financial resources to invest in reducing vulnerabilities to climate change.

Project Overview

Capacity Building & Institutional Framework For The Global Ocean Energy Alliance (GLOEA) [2025-2027]: Global Programme Promoting Ocean Energy For Climate Resilience and Blue Economies in SIDS, LDCs, and Coastal Nations - Implementation of the First Operational Phase of the GLOEA

The SIDS DOCK Secretariat is requesting support in the amount of two million euros (€2,000,000), for capacity building and institutional strengthening over the period 2025 to 2027. The budget is based on projections for the operationalisation of the Interim GLOEA Secretariat based in Belmopan, Belize. Support is being requested to cover: (a) Basic core organisational and administrative costs including, equipment, communications, and the direct expenses of day-to-day work; (b) Development of prefeasibility and feasibility studies and pilots from the Indicative Projects Pipeline; (c) Information and knowledge management, capacity building, and gender mainstreaming across all project activities.

Ocean Thermal Energy Conversion (OTEC) Technology

The Pacific region provides the best potential for the commercialisation of OTEC technology. In follow up to the Japan International Cooperation Agency (JICA) supported Pacific SIDS High-Level Learning Tour of the Okinawa Prefecture Deep Ocean Water Research Center, in Okinawa,

Japan, and visit the Ocean Thermal Energy Conversion (OTEC) demonstration plant on Kume Island in Japan. The original proposal to the Japanese was for participation of PSIDS, who are SIDS DOCK Member States. The SIDS DOCK Secretariat had some indicative information on OTEC resources, namely, for the three (3) PSIDS that are SIDS DOCK Members. After review of the proposal from the SIDS DOCK Secretariat, the Japanese indicated agreement with the selection of the three SIDS DOCK Member States, representing Tonga, as Chair of the Executive Council and Head of Delegation, Samoa, and Tuvalu.

Having brought back and documented the knowledge and information gained on the "Kumejima Tour," the PSIDS are strategically positioned to advance the pilot project and engage in field visits, discussions, and national consultations and dialogue, conduct studies and surveys toward developing a proposal for the development and deployment of OTEC technology in three recommended PSIDS Pilot Countries: Tonga, Tuvalu, and Samoa. Support in the amount of two million euros (€2,000,000) is requested for the pilot countries to conduct studies needed to advance the planning of pilot projects and prepare financing project proposals in partnership with development agencies, private sector, and philanthropic partners.

Wave Energy Technologies

This project promotes commercial demonstrations of two-megawatt (2MW) capacity Wave Power Parks using Seabased Group technology. Seabased Group is a global leader in seafloor wave energy technology development suited to SIDS. Seabased proposes to design, build, install, and maintain wave-to-grid energy parks for islands with sea bottom wave resource. The SIDS DOCK Secretariat and Seabased Group have conducted eight Wave Energy Resource Assessments: Grenada, Mauritius, St. Lucia, St. Vincent and the Grenadines, Samoa, Sao Tome and Principe, Seychelles and Tonga. Locations for the deployment of commercial demonstration scale, 2MW Wave Power Parks, at no cost to the Governments, have been prepared. The commercial demonstration projects are designed to have a two-year timeframe for installation and commissioning, after signing a Power Purchase Agreement (PPA).

Based on preliminary research conducted by the SIDS DOCK Secretariat and Seabased Group in the pilot countries, there is high potential for the development of Wave Power Parks; additional assessment of other countries is planned. The Resources Assessments show potential wave energy park sites with capacity ranging from 40MWs, to more than 500MWs, based on forty percent (40%) availability. These countries could meet and exceed their Nationally Determined Contributions (NDCs) under the 2015 Paris Agreement. They also have resources to provide more than 100 percent of their current electrical energy needs from their wave energy resources. It is calculated that each megawatt of installed capacity would reduce the requirement for importing one million litres of diesel fuel. All sites studied to date in the pilot countries have electricity generating capacity upwards of 40MWs. The anticipated cost of electricity will be significantly lower than the current cost of baseload electricity using diesel generators, based on the estimated investments in Seafloor Wave Energy Park development, electricity will be competitive with that from PV and Wind, with energy storage. Support in the amount of two million euros (€2,000,000) is requested for the commercial demonstration pilot countries to provide institutional support for the countries in developing the projects.

Sargassum (Seaweed) Bioenergy Solution

The Commercial Demonstration Pilot Project is intended to capitalize and mitigate against the ongoing Sargassum invasion in Belize and across the Caribbean region, one of the world's top tourist destinations. Scientific evidence suggests that not only will the problem remain, but its impact will likely increase with warming ocean temperatures and increased nutrients concentration of ocean waters resulting from absence or inadequate wastewater management and crop production and processing activities. The Sargassum invasion has caused substantial loss of livelihoods and economic opportunities, primarily in the fisheries and tourism sectors, where many sources of income dried up, characterised by empty hotels and restaurants, deserted dive attractions, laid-off workers, and cruise lines unable to navigate the seaweed.

The biggest challenge with Sargassum is what to do with it. All current options incur additional costs and potential ecological damage. There is also accelerating beach erosion from the sand removed with the Sargassum. The pilot project proposes harvesting Sargassum from the ocean before it reaches ashore and mixes with the sand. The presence of sand in high concentrations makes conversion into biofuels very costly, as the sand has to be removed. The Sargassum biomass will be collected prior to reaching shore and is transported to the Waste-to-Energy Project plant location, where water is removed, and the biomass is dried and converted into raw material for Syn-gas, liquid biofuel and char. The Syn-gas will be used as fuel to generate electricity. Some of the biofuel produced will be used to fuel the Sargassum Collection Vessels. Converting Sargassum into fuels will reduce fossil fuel importation and generate employment, reduce negative environmental and ecological impacts, in addition to larger benefits that accrue to two major industries - tourism and fisheries.

Capital requirement for the Project is approximately thirty-five million euros (€35,000,000). The private sector partners have estimated a return on investment of 14.03%. The 25-acre project site is in a 50-acre industrial area. The project will be developed in three phases, starting with an initial phase on 12 acres, where docking will be constructed for the Sargassum transport boats to unload; construction of other infrastructure and structures for conversion of the biomass material and product storage. The Government of Belize is seeking support for filling and preparing the site for construction of the first phase, which is estimated to cost approximately five hundred thousand euros (€500,000).

Blue Regeneration: Biorock Nature-Based Solution for Coastline Protection and Coral Reef

This project will regenerate reefs and protect coastline from erosion using electrolytic mineral accretion science. The electrolytic mineral accretion system (**Biorock**), which is ten times the strength of concrete, is comprised of steel reinforcing bars fabricated into ramp-like structures placed on the ocean floor. These structures are then attached by electrodes to an electricity source that provides low voltage direct current causing deposition of Calcium Carbonate on the surface of the structure and, over time, results in regeneration of corals.

Within months, these structures have increased surface area, and incoming wave energy is significantly reduced prior to reaching the shore, and sand is deposited and accumulate instead of being washed away. Growth of the Biorock reef is accompanied by fishes, crabs, corals, mangroves, and increased diversity of marine life. Unlike traditional seawalls which increase erosion in front of them and eventually collapse, Biorock reefs are living structures that grow back

where damaged and can grow upward faster than sea level rise so they will not be overtopped like hard sea walls. The Calcium Carbonate that grows on the structure is stronger than concrete and the rebar is completely protected from rusting. Estimated cost of the living breakwater: €3,000/metre versus over €22,000/metre for traditional concrete seawall.

Currently, project proposals for Tuvalu, Tonga, Belize and Samoa are at various stages of development. With Tuvalu as the Lead Pilot Country - the most economically vulnerable country in the world - the Biorock Coastline Protection and Reef Regeneration project is being designed to help protect the Capital, Funafuti, as Tuvalu is facing erasure and the country may no longer be habitable due to sea level rise eating away at its coastline. The estimated cost is three million euros (€3,000,000). The main climate change vulnerabilities of Funafuti are from sea level rise and shoreline erosion. To reduce the threat from further sea level rise, the Government of Tuvalu, with assistance from the Green Climate Fund (GCF) and partners, will be constructing a coastal seawall approximately 780 meters long. The Biorock project will cover the approximately 300 meters of coastline, which will not be protected by the sea wall.

SIDS E-Mobility Pilot Project

Development and Deployment of New Electric Vehicle (Ev) Transport and Renewable Energy Charging Solutions to Reduce Emissions, Promote Technology Development and Exnd Employment Opportunities, in San Pedro, Belize

One of the three programme goals of the SIDS DOCK is to reduce the demand for imported transportation fuel by a minimum of 25 percent (25 %) of demand in 2033. In pursuit of this goal, the SIDS DOCK organization has developed an Electric Vehicle (EV) Transportation Partnership for Islands to accelerate EV deployment in the Islands, thereby reducing dependence on import fuels, which causes an imbalance of trade and many economic obstacles for SIDS, as well as contributing to increasing GHG atmospheric concentration.

With a mandate from the SIDS DOCK Assembly to support SIDS-wide e-mobility, the SIDS DOCK Secretariat, the Government of Belize, and the Climate Institute and other partners are pioneering the first-of-a-kind project that is intended to replace 5,000 gasoline powered golf carts in San Pedro Island with electric, battery-powered golf carts and provide an infrastructure to charge the batteries mainly from renewable energy generation sources. This pilot is intended for replication across other SIDS in the Caribbean in the first instance and then scaling up across all interested SIDS. The first step is an essential document for designing, financing and implementing this ambitious project. The main focus will be on the options and designs for a battery-powered golf cart and on selecting the most adequate type of battery and the most advanced in terms of performance aspects that contribute to driving range, the charging speed and the battery lifetime (or number of charge-discharge cycles). financing and implementing this ambitious project.

In this regard, on behalf of the Government of Belize, SIDS DOCK and its partners are requesting support in the amount of four hundred thousand euros (€400,000), to co-finance with the Climate Institute, the Feasibility Study, and demonstration of six (6) EV golf carts and a charging station to be located at the San Pedro Town Council. In April 2024, the Government completed consultations and discussions with the people of San Pedro.

Island Women Open Network (IWON)

Development of a Global Sustainable Botanical/Herbal Supplier Market from SIDS DOCK Member States

Further support in the amount of three hundred thousand euros (€300,000), is being sought for the Island Women Open Network (IWON) to prepare a comprehensive proposal for funding to launch and implement the *"Pilot Initiative for the Development of a Global Sustainable Botanical/Herbal Supplier Market from SIDS DOCK Member States*," with the Kingdom of Tonga the Lead Pilot Country. In preparation, in July 2023, five Tongans were trained and awarded *FSPCA Preventive Controls for Human Food* Certificates from the United States (US)-based Food Safety Preventive Controls Alliance (FSPCA). In May 2024, on the margins of the Fourth International Conference on SIDS in Antigua & Barbuda (SIDS4), the IWON Committee approved the Concept for a Pilot Zero-Carbon Food Processing Facility in Tonga, and for scaling up across the SIDS. There are nine (9) countries that have signed on as pilot countries. The total project cost, to be developed under a PPP, is approximately thirty million euros (€30,000,000), in support of the Initiative that will focus on entering the dietary supplement market in the European Union, the United Kingdom (UK), and Canada. The Initiative is currently supported under a Joint Declaration between SIDS DOCK, UNIDO and Austria, signed during the SIDS4 Conference in Antigua & Barbuda, as well as other partners.

IWON Energy Innovative Financing Facility Proposal: Facilitating Women's Participation in the Transformation of the SIDS Energy Sector

This Pilot Project in support of financing for project preparation, feasibility studies and business plans for energy efficiency projects. The Proposal's aim is to mobilize seed funding for the design and resource mobilization for a Women's Sustainable Energy Financing Facility. The IWON wishes to secure grant funding for the Facility in the amount of fifty thousand euros (€50,000), to retain consulting services for the preparation of a Public-Private-Partnership (PPP) Proposal of three million euros (€3,000,000) in-co-financing from development partners, Philanthropic organizations and national governments and the Green Climate Fund (GCF) to fund the several aspects of the programmes described in the concept paper.

Specifically, it wishes to house these funds in a Facility, under a dedicated fund manager, which would comprise a Studies and Technical Cooperation (TC) Window, a Project Cost Subsidy Window, an Equity Window and a Loan Guarantee Capability, and be used to finance the activities required prior to seeking financing for the development of Energy Efficiency (EE) and Renewable Energy (RE) projects. It will also provide resources to fund the services of consultants that will prepare the project documentation and analyses required to secure financing from commercial and other sources of finance and technical assistance to governments for developing the enabling environment for empowering women energy entrepreneurs. Generally, the Facility will provide contingently recoverable grant funding or direct grants to fund the activities that are preliminary to project financing and implementation.

IWON Children's Programme

With the establishment of the GLOEA, the youth in SIDS are poised to inherit a transitioning economy, therefore we need to begin preparing our young people to participate as partners in the Blue Economy and to play a significant role in achieving the SDGs and other national and

international commitments. But... *"Our children can't swim."* These four words opened the presentation that Jeannette Larue, IWON Children's Programme Coordinator delivered at the SIDS DOCK Side Event on the launch of the Global Ocean Energy Alliance (GLOEA[1]), held in the margins of the United Nations (UN) Ocean Conference, on 29 June 2022, in Lisbon, Portugal. During her presentation, Ms. Larue, who is also the Director-General, Public Education and Community Outreach, Ministry of Agriculture, Environment and Climate Change, Government of the Republic of Seychelles, said it was no point promoting the GLOEA if the majority of the children of Small Islands and Low-Lying Developing States cannot swim, and called for the establishment of an Ocean Education and Survival Swimming Skills Programme.

"Johnnie's Kids Can...Swim!" is an IWON Children's Programme Pilot Project intended to teach survival swimming skills in schools in SIDS and Low-lying countries, beginning with Belize as the first Pilot Country. The Pilot is modelled after the decades-long successful swim programme in the Republic of Seychelles, where almost every child and adult can swim, as swimming lessons are part of the school curriculum and compulsory. Seychelles is now in the process of including snorkelling in the school curriculum to better educate the children on "Life Below Water[2]". They will also learn about the causes and effects of climate change and the steps we can all take to help solve the problems. There will also be multimedia presentations that combine actual specimens, biological models, life-sized (or larger-than-life) inflatable animals, unique props, costumes, creative dramatics, storytelling techniques, Scuba diving equipment, breathtaking Belize underwater photography, and parent/guardian participation.

Swimming is seen as a privileged skill that is costly with low household income a barrier to child water safety. Individuals in high-income countries are considerably more likely to report being able to swim without assistance than individuals in low-income countries. Disparities also exist within countries. In particular, women are less likely to be able to swim without assistance than men in virtually all countries, birth cohorts, and levels of education[3]. Investing in reducing inequalities in life skills, such as swimming, can foster economic development and empowerment, especially in light of threats, such as climate change. Flood-related disasters affect millions of people globally due in part to the escalating adverse impacts of climate change, with drowning being the main cause of deaths during floods. Small Islands and Low-lying Developing States are the most vulnerable to the impacts of climate change and sea level rise.

The proposed Ocean Education and Water Safety Pilot Project, *"Johnnie's Kids Can...Swim!",* can help our children understand the essential principles and fundamental concepts about the functioning of the ocean; can communicate about the ocean in a meaningful way; and is able to make informed and responsible decisions regarding the ocean and its resources, achieving an ocean-literate Belize. The Pilot Project can also contribute to providing proper training and water safety education which plays a crucial role in preventing drowning. In this regard, the IWON is

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[1] https://gloea.org/

[2] Sustainable Development Goal (SDG) 14: Life Below Water. Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

[3] Borgonovi, F., H. Seitz and I. Vogel (2022), "Swimming skills around the world: Evidence on inequalities in life skills across and within countries", *OECD Social, Employment and Migration Working Papers*, No. 281, OECD Publishing, Paris, https://doi.org/10.1787/0c2c8862-en.

seeking support of one hundred thousand euros (€100,000) towards the Ocean Education and Water Safety Programme.

PROJECT IMPLEMENTATION HISTORY

Since the signing of the Agreement Establishing the SIDS DOCK in 2009 by members of the Alliance of Small Island States (AOSIS), in Copenhagen, Denmark, SIDS DOCK has mobilized approximately $48 million in support of project activities in member states of the SIDS DOCK, and the development of the Indicative Project Pipeline, beginning with $14.5 million from Denmark in 2010, and $14.5 million from Japan in 2011. Initial projects focused on capacity building and institutional strengthening, laying the foundation for two specialized SIDS organizations, the CCREEE and the PCREEE to coordinate the further development and implementation of the regional project pipelines. With support from UNIDO and Austria, in 2021, SIDS DOCK and UNIDO launched the GLOEA, a mechanism to facilitate stakeholders in ocean energy, government, researchers, equipment manufacturers, technology developers, and investors to share a platform promoting cooperation. For SIDS, the GLOEA is the most significant mechanism since the establishment of the SIDS DOCK organization.

Table: SIDS DOCK Project Implementation (2010-2024)

Year	Project	Description	Donor	Project Cost
2010-2015	SIDS DOCK Support Program	SIDS DOCK received support from Denmark (14.5M) and Japan (15M), with 29.2M jointly administered by the World Bank and UNDP. SIDS DOCK received $300,000 in support of start-up activities for the SIDS DOCK Secretariat and establishment of the SIDS DOCK Foundation	Denmark, Japan	29,500,000
2012-2018	Energy for Sustainable Development in the Caribbean (ESD Project)	To promote energy efficient technologies and practices in appliances and buildings	UNDP-GEF	12,484,500
2014-2015	Preparatory phase of the Caribbean Centre for Renewable Energy and	Execute needs assessment, develop project document on	UNIDO, Austria, Spain	3,000,000

	Energy Efficiency (CCREEE)	the institutional set-up and technical design of the centre for further consideration to a regional meeting of energy officials and Ministers		
2016-2017	Preparatory phase of the Pacific Centre for Renewable Energy and Energy Efficiency (PCREEE)	Support development of project document on the institutional set-up and technical design of the centre for further consideration to a regional meeting of energy officials and Ministers	UNIDO, Austria, Spain, Norway	2,000,000
2019-Present	Promoting south-south and triangular SIDS-SIDS cooperation under the Global Network of Regional Sustainable Energy Centres: Launch & Establishment of the GLOEA	To catalyse investments in Ocean Energy to promote Blue Economies and accelerate the transition of national energy sector to increase energy security, reduce greenhouse gas (GHG) emissions and generate resources for investment in adaptation to climate change	UNIDO, Austria	171,730
2022-Present	Sargassum (Seaweed) Bioenergy Solution	The pilot project proposes harvesting Sargassum from the ocean before it reaches ashore and mixes with the sand, transported to the Waste-to-Energy Project plant location, where water is removed, and the biomass is dried and	Sargassotec Ltd.	150,000

		converted into raw material for Syn-gas, liquid biofuel and char. The Syn-gas will be used as fuel to generate electricity. Some of the biofuel produced will be used to fuel the Sargassum Collection Vessels.		
2023-Present	(IWON) Herbal/Botanical Project	Focus on entering the dietary supplement market in the European Union, the United Kingdom (UK), and Canada.	UNIDO, Austria	25,000
2024-Present	Development and Deployment of New Electric Vehicle (Ev) Transport and Renewable Energy Charging Solutions to Reduce Emissions, Promote Technology Development and Expand Employment Opportunities, in San Pedro, Belize	To replace 5,000 gasoline powered golf carts in San Pedro Island with electric, battery-powered golf carts and provide an infrastructure to charge the batteries mainly from renewable energy generation sources	Climate Institute, USA	25,000
Total Project Costs				**47,356,230**

PROFILES OF PRIVATE SECTOR PROJECT PARTNERS

Project	Partner	Role
Wave Power Parks	Seabased Limited, located in Ireland, wave technology company aiming to accelerate the commercialisation of a wave energy technology to develop Zero-Carbon, high baseload, predictable and clean energy generation.	Under a MoU, to develop and execute Pilot Wave Parks (2MW) in Tonga and Grenada. The Pilot will be followed by a further 8MW extension therefore totaling 10MW of installed capacity in each country.
Blue Regeneration: Biorock Nature-Based Energy Solution	Global Coral Reef Alliance (GCRA), located in the U.S., serves as a platform for	Under a MoU, to accelerate the synergistic deployment and monitoring of ocean

	pooling knowledge, sharing best practices, and seeking innovative solutions for accelerated uptake of clean and cost-effective marine technologies on islands.	environmental management, rehabilitation of ecosystems, and ocean based renewable energy technologies in SIDS. GCRA to deploy Biorock technology in Tuvalu, Tonga, St. Lucia and Belize.
Sargassum (Seaweed) Bioenergy Solution	SARGASSOTEC, Belize Ltd., parent company located in Germany, is a technology company specializing in waste-to-energy technology systems.	Under a MoU, to invest in an estimated 60MW WtE Facility in Belize: Development and deployment of the Caribbean's first waste to energy (WtE) facility capable of converting Sargassum seaweed and other solid waste into biofuels and connected and supplying fuel to the electricity grid, using new technology for the utilization of marine biomass and carbon-based waste material from municipal solid waste and agriculture and forestry for the production of electricity and liquid fuels.
E-Mobility: San Pedro EV Golf Cart Project	Climate Institute, located in the U.S., is an international NGO, established in 1986, as the first organization dedicated to combating climate change. The Institute has distinguished itself as a world leader in promoting global climate change mitigation with practical and cooperative approaches	Under a MoU, to replace 5,000 gasoline powered golf carts in Belize with electric golf carts and provide an infrastructure to charge the batteries mainly from renewable energy generation source.
Island Women Open Network (IWON) Herbal/Botanical Project	• Rivkin Radler LLP • Squire Patton Boggs LLP • GRID-Arendal • IRENA	Under MoUs, the parties will establish a sustainable supply chain market that will initially target the European Union, United Kingdom and Canadian herbal and botanical supplement markets, with Tonga as the first pilot. Includes Development Strategy; Market Research;

		Support Policies; Feasibility Studies; Processing; Zero-Carbon Food Processing Facility; Business Plan.

Indicative Budget: Partnership Supporting the Development of the SIDS DOCK Project Pipeline

Project	Total Project Cost Euros	Funding Requested (2025-2027) Euros
Capacity Building & Institutional Framework For The Global Ocean Energy Alliance (GLOEA) [2025-2027]: Global Programme Promoting Ocean Energy For Climate Resilience and Blue Economies in SIDS, LDCs, and Coastal Nations - Implementation of the First Operational Phase of the GLOEA	4,000,000	2,000,000
Development of the GLOEA Project Pipeline (OTEC & Wave)	500,000,000	4,000,000
Sargassum (Seaweed) Bioenergy Solution	35,000,000	500,000
Blue Regeneration: Biorock Nature-Based Energy Solution	3,000,000	3,000,000
SIDS E-Mobility Pilot Project – San Pedro EV Golf Cart Project	10,000,000	400,000
IWON Herbal/Botanical Project	30,000,000	300,000
IWON Energy Financing Facility	3,000,000	50,000
IWON Children's Programme: Ocean Education and Water Safety Programme	350,000	100,000
Estimated Total	**585,350,000**	**10,350,000**