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UNITED NATIONS
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***STRATEGIC PARTNERSHIP TO PROMOTE SIDS-SIDS PROJECTS IN THE CONTEXT OF GREEN
COVID-19 RECOVERY AND THE COMBAT OF CLIMATE CHANGE***

**PROJECT TITLE: PROMOTING SOUTH-SOUTH AND TRIANGULAR SIDS-SIDS
COOPERATION UNDER THE GLOBAL NETWORK OF REGIONAL SUSTAINABLE
ENERGY CENTRES:**

***“GLOBAL NETWORK OF REGIONAL SUSTAINABLE ENERGY CENTRES PLATFORM
PROGRAMME” (ID 180301)***

***“ESTABLISHMENT OF THE PACIFIC CENTRE FOR RENEWABLE ENERGY AND
ENERGY EFFICIENCY” (ID 140276)***

***“START-UP AND FIRST OPERATIONAL PHASE OF THE CARIBBEAN CENTRE FOR
RENEWABLE ENERGY AND ENERGY EFFICIENCY (CCREEE)” (ID: 130200)***

***“STRATEGIC PROGRAM TO PROMOTE RENEWABLE ENERGY AND ENERGY
EFFICIENCY INVESTMENTS IN THE ELECTRICITY SECTOR OF SAO TOME AND
PRINCIPE” (ID 150124/200158)***

PROJECT NO.: 3000093247

INCEPTION REPORT

**IMPLEMENTED BY
SECRETARIAT OF SIDS DOCK**

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**This Inception Report of the “Global Ocean Energy Project” was approved by the
Executive Council of SIDS DOCK at its tenth meeting
on 16 December 2021**

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LIST OF ABBREVIATIONS

ACRE	Stimson Center Alliance for a Climate Resilient Earth
AEA	Austria Energy Agency
AIS	Atlantic and Indian Ocean
AOSIS	Alliance of Small Island States
CARICOM	Caribbean Community
CCCCC/5Cs	Caribbean Community Climate Change Centre
CCREEE	Caribbean Centre for Renewable Energy and Energy Efficiency
CIEMAT	Centre for Energy, Environment and Technology (Spain)
COP26	UNFCCC Conference of Parties
COVID-19	Novel Coronavirus
CTCN	Climate Technology Centre and Network
CWG	Core Working Group
ECREEE	ECOWAS Centre for Renewable Energy and Energy Efficiency
EE	Energy Efficiency
EEC	Energy Efficiency and Conservation
EEZs	Exclusive Economic Zones
ETAF	UAE-IRENA Energy Transition Accelerator Financing (ETAF) Platform
EU	European Union
GCF	Green Climate Fund
GEF	Global Environment Facility
GHG	Greenhouse Gas
GN-SEC	Global Network of Regional Sustainable Energy Centers
GOEA	Global Ocean Energy Alliance
GWNET	Global Women’s Network for the Energy Transition
IIASA	International Institute for Applied Systems Analysis
IEA	International Energy Agency
ILIN™	Island Life Information and Knowledge Network
IRENA	International Renewable Energy Agency
IWON	Island Women Open Network
KM	Kilometres
LDCs	Least Developed Countries
LOKMI	UNIDO/SIDS DOCK Liaison Office on Knowledge Management and Innovation
MFA	Ministry of Foreign Affairs
MS	Members States
MW	Megawatt
NDCs	Nationally Determined Contributions
OAS	Organization of American States
OEDP	Ocean Energy Development Platform
OEP	Ocean Energy Platform
OTEC	Ocean Thermal Energy Conversion
PCREEE	Pacific Centre for Renewable Energy and Energy Efficiency

PICs	Pacific Island Countries
PPPs	Public-Private Partnerships
PSC	Project Steering Committee
RE	Renewable Energy
RECs	Sub-Regional Economic Communities/Organisations
ROI	Return on Investment
S.A.M.O.A. Pathway	SIDS Accelerated Modalities Of Action
SDGs	Sustainable Development Goals
SIDS	Small Island Developing States
SIDS DOCK	Small Island Developing States Dock
SPC	Secretariat of the Pacific Community
SPREP	Secretariat of the Pacific Regional Environment Programme
STP	São Tomé and Príncipe
TOR	Terms of Reference
TRL	Technology Readiness Level
UAE	United Arab Emirates
UK	United Kingdom
UN	United Nations
UNFCCC	United Nations Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
UNOHRLLS	United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and the Small Island Developing States
USP	University of the South Pacific
UWI	University of West Indies
VEF	Vienna Energy Forum

EXECUTIVE SUMMARY

The aim of this Inception Report is to provide guidance to the operationalisation of the project, and to set up the project structure. The Inception Report is based on the Contract No. 3000093247 signed between the United Nations Industrial Development Organization (UNIDO) and the Small Island Developing States Dock (SIDS DOCK). Given the period between preparation of the project documents and realization of the project, some information in these documents needed updating and other refinement.

This Inception Report updates the information given in the project documents; presents a time schedule for the entire project period; describes the institutional linkages and management and coordination mechanisms; updates change in the project environment and risks; presents the detailed budget and some of the indicators of success for the outcomes of the project. Activity sub-activity details are described in the report together with institutional responsibilities, budget and the time schedule for implementation.

The project activities carried out in the project inception phase, which lasted for three (3) months, from September 2021 to November 2021, are also listed in this Inception Report. This Inception Report describes the results of this process and aims at supporting the project to sustainably transition to the next phase, which includes the launch of the Global Ocean Energy Alliance (GOEA) in Lisbon, Portugal, in 2022, and the development and deployment of the first Floating OTEC Platform in Sao Tome and Principe, in 2024.

1. BACKGROUND INFORMATION AND INCEPTION PHASE

SIDS are experiencing increasingly significant negative social, economic and environmental damages from changes in climate related to increasing concentration of greenhouse gases (GHG) in the atmosphere, and that given the general high level of economic vulnerability of SIDS to global events, there is need to link renewable energy uptake to climate resilience and more effective disaster recovery, in order to protect their population. Further, SIDS isolation is not immune from the COVID-19 pandemic, which has caused SIDS Governments to modify their budgets and spending and recognising the major impact on the all-important tourism sector which is the economic lifeblood of the majority of SIDS. Countries are starved of foreign exchange to service debts and meeting socio-economic obligations as well as to pay for the import of fossil fuels.

In the case of the Pacific, these countries have some of the world's highest fuel costs, which are also volatile due to fluctuations in international markets. On average, fuel consumption accounts for more than 10 per cent of Pacific Island Countries' (PICs) national income. PICs have committed to ambitious renewable energy targets - many are aiming to achieve 100 per cent renewable energy between 2025 and 2030. Many PICs have increased the ambition of their renewable energy targets in response to the United Nations Convention on Climate Change (UNFCCC) 2015 Paris Agreement, noting that these targets could be ramped up significantly should international assistance be provided. Each PIC has developed a National Energy Roadmap, to guide the required investments to empower this transition.

The transformation of the energy sectors of the various SIDS to be low-carbon, energy efficient, and primarily based on renewable energy sources represents a unique opportunity to help achieve sustainable development as well as generating financial resources to invest in adaptation to climate change and continued national development. Ocean energy has the potential to bring about massive reduction in greenhouse gas emissions, and represents the most available, and likely the largest potential source of renewable energy in SIDS. SIDS now import, annually, more than 200 million barrels of petroleum, which cost U.S. billions, annually, and is a major cause of debt in SIDS. The SIDS maritime Exclusive Economic Zones (EEZs) are very large (especially in the Pacific), and extend to approximately one-sixth of the earth's surface. Collectively, SIDS Oceans (EEZ and extended continental shelves) make them 15 times the physical size of the European Union (EU) – SIDS are Large Ocean States. In this system, the tropical ocean acts as a giant solar energy collector for the estimated 25,000 to 35,000 barrels of oil equivalent that contacts the surface of the ocean.

Indeed, SIDS reside amid the largest area of renewable energy on the planet. Because the oceans contain a huge amount of energy, changes in salinity, thermal gradients, tidal currents or ocean waves can be used to generate electricity using a range of different technologies. These could provide reliable, sustainable and cost-competitive energy. Each kind of kinetic or thermal resource has unique site requirements, characteristics, and challenges. Some forms are available for periods of time during the day, while others are continuously available. Ocean thermal energy, which is based on converting incoming solar radiation into electricity, is continuously available in almost

all ocean locations between the tropics, and therefore represents an unlimited source of baseload electricity for the blue-green economy.

1.1 Introduction and Background to the Project

Pursuant to a decision from Heads of State and Government that are members of the SIDS DOCK Organization and the Alliance of Small Island States (AOSIS), the SIDS DOCK Secretariat was mandated in September 2016, as contained in document A/3/10, during the third session of the Assembly of SIDS DOCK, to achieve in the shortest timeframe, the commercial-scale deployment of ocean-based energy technologies that are appropriate to the demands in Small Island Developing States (SIDS), for the development of a low carbon economy with emphasis on generating sustainable gender-equity employment to replace those that will be lost due to the negative impacts of climate change. In response, the Secretariat of SIDS DOCK accelerated its work on the establishment of partnerships to support the mandate.

The United Nations General Assembly resolution A/RES/69/15 dated 15 December 2014, entitled, “SIDS ACCELERATED MODALITIES OF ACTION [S.A.M.O.A.] Pathway,” the outcome document of the Third International Conference on Small Island Developing States, held from 1 to 6 September 2014 in Apia, Samoa, reaffirmed that Small Island Developing States remain a special case for sustainable development in view of their unique and particular vulnerabilities and that they remain constrained in meeting their goals in all three dimensions of sustainable development. For the Third Conference on SIDS, leaders aimed to have Partnerships - and the ways in which these partnerships are addressing SIDS priorities of climate resilience, energy security, economic development and sustainable livelihoods - serve as the cornerstone of the event, with the “*strengthening of collaborative partnerships between SIDS and the international community*” as a crystalizing focus with which to address the emerging challenges and opportunities for the sustainable development of Small Island Developing States.

Partnerships allow SIDS DOCK to play a strategic role in promoting sustainable energy and its paramount importance in the context of resilience and adaptation to climate change; partnership development continues to be the guiding principle for building the capacity of the SIDS DOCK in the spirit of the SAMOA Pathway. In September 2014, during the Third Conference on SIDS, a Memorandum of Understanding was signed between the Federal Ministry for European and International Affairs of the Republic of Austria, SIDS DOCK, and the United Nations Industrial Development Organization (UNIDO) on the Establishment of Regional Sustainable Energy Promotion Centres for Small Island Developing States (SIDS). In 2015, the Caribbean Centre for Renewable Energy and Energy Efficiency (CCREEE) was established in Barbados, and in 2017, the Pacific Centre for Renewable Energy and Energy Efficiency (PCREEE) was established in the Kingdom of Tonga. The ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE), located in Cabo Verde, maintains a SIDS Desk for island nations.

In line with the SAMOA Pathway, UNIDO aims to boost SIDS-SIDS cooperation on sustainable energy island solutions in the context of a green COVID-19 recovery and the combat of climate change. Currently, there is a lack of international institutional capacity to promote triangular cooperation between SIDS on energy and climate issues. Therefore, it is intended to strengthen the

cooperation between two relevant global initiatives, namely the Global Network of Regional Sustainable Energy Centers (GN-SEC), hosted by UNIDO, and SIDS DOCK, the Small Island Developing States (SIDS) Sustainable Energy and Climate Resilience Organisation.

The partnership will strengthen the capacities of the GN-SEC Secretariat to facilitate SIDS-SIDS cooperation between the relevant GN-SEC centres (e.g., CCREEE, ECREEE, PCREEE). Apart from Singapore, Maldives and Timor-Leste, the GN-SEC covers all SIDS (38 according to the UN definition). The partnership is of mutual benefit. In this moment, the capacities of SIDS DOCK to implement relevant triangular cooperation programmes is limited. On the other hand, the GN-SEC Secretariat has currently limited human capacities to support SIDS-SIDS programmes.

UNIDO and SIDS DOCK have agreed on a strategic partnership to promote south-south and triangular cooperation in SIDS within the Global Network of Regional Sustainable Energy Centers (GN-SEC). Under the partnership, UNIDO and SIDS DOCK will support the GN-SEC SIDS Centres in the development and implementation of triangular SIDS-SIDS energy and climate programmes and projects. There will be strong emphasis on creating synergies and exchange of best practice, lessons learned, tools and approaches. Relevant knowledge management activities will be promoted through the GN-SEC (www.gn-sec.net) and SIDS DOCK (www.sidsdock.org) web portals.

1.1.1 Establishing an Ocean Energy Platform (OEP) for Blue Economies in SIDS under the GN-SEC

One GN-SEC initiative under the UNIDO-SIDS DOCK partnership aims at the establishment of an Ocean Energy Platform (OEP) for Blue Economies in SIDS. The platform is intended to bridge industry and researchers, needing to test ocean energy systems in various climates and contexts with cooperation from governments, who desire access to technology and expertise. Currently, the opportunities for interaction, partnership formation and information exchange among these actors are extremely limited as many operate in geographic silos. Due to the early-stage of commercialisation of the technology, there are hardly concessional finance and risk mitigation instruments for demonstrations in SIDS accessible.

To have more impact, the OEP will adopt a regional approach and many activities will be implemented through GN-SEC centres. It will provide services related to policy advisory, knowledge management, qualification and certification, as well as investment facilitation and match-making. UNIDO and SIDS DOCK organized several joint events on the platform (e.g., VEF 2021). Further information is available at: <http://ocean.gn-sec.net>. As a first step it was decided to establish a virtual information and communication platform of the OEP.

Special interest in the platform comes from the members of the SIDS DOCK organization, who are highly dependent on importation of costly fuel as mentioned earlier, and have very limited land area where competition for land for biological diversity, freshwater production, food production and infrastructure are constantly increasing, a situation that is further aggravated by coastal erosion and saltwater intrusion that is forcing relocation of population and reduction in food production areas.

The SIDS or large ocean states whose EEZ gives them jurisdiction over vast areas of the tropical ocean and facing threats to their future existence as viable states, see ocean energy as game changer for them. Despite the vast thermal energy in the tropical ocean, and the great need for sustainable energy, remains untouched and no plan for its development, despite the vast potential for helping SIDS address critical areas of vulnerability to changing climate such as fresh water and food security, and providing the foundation for the Blue Economy in SIDS.

1.1.2 Ocean Thermal Energy Conversion (OTEC) Pilot Project in São Tomé and Príncipe (STP) to be developed under the OEP

Under the platform, a first Ocean Thermal Energy Conversion (OTEC) pilot project is being developed in partnership with SIDS DOCK, private developers (Global OTEC Resources) and investors, as well as the Government of São Tomé and Príncipe (STP). The feasibility of the OTEC technology has been demonstrated in various locations (e.g., Japan). The envisaged pilot project would provide STP with 1.5 MW of baseload power in the first instance and then increasing to 10 MW within four years. Through the OEP, and based on the already available concept design of a suitable system, UNIDO will partly co-support the development of the required feasibility assessments through the OEP.

The objective is to validate the suitability of its design to STP's geographic and marine properties. The efforts are supported by the Global Environment Facility (GEF) and Green Climate Fund (GCF) funded UNIDO projects, "Strategic program to promote renewable energy and energy efficiency investments in the electricity sector of São Tomé and Príncipe" and, "Building institutional capacity for a renewable energy and energy efficiency investment programme for Sao Tome and Principe." Both projects foresee support for the development of innovative renewable energy investment projects, including ocean energy, and assist the country to position itself as a hub for technology demonstration. The project will become an important demonstration within the GN-SEC "Makerspace¹".

STP simultaneously faces challenges of affordable energy, energy security and climate change mitigation/adaptation. The population's greatest need is access to affordable, reliable and sustainable energy services. Energy is a basic human right. The STP National 2030 vision places a strong emphasis on integrating renewable energy into its energy mix and moving away from dependence on imported diesel for power generation. The OTEC plan would complement the efforts to up-scale other renewable sources, particularly small hydro power development and solar PV. Due to biodiversity and grid stability concerns, both technologies have some limitations. The 160,000 km² exclusive economic zone (EEZ) around STP is an untapped solar heat battery. Ocean Thermal Energy Conversion (OTEC) plants could supply carbon-free, baseload power. Moreover, OTEC has a strong link to multiple productive uses within the blue economy.

1.2 Objectives of the Project

¹ https://www.gn-sec.net/sites/default/files/documents/files/050321_gn-sec_presentation.pdf
Inception Report 2022 – Global Ocean Energy Project

In this context, the overall objective of the partnership is to accelerate green COVID-19 recovery and climate change mitigation/adaptation in SIDS through regionally adopted sustainable energy solutions. In line with the established project documents (PCREEE, CCREEE, GN-SEC global, GEF/GCF STP), UNIDO contracts SIDS DOCK to execute a number of activities related to the GN-SEC platform and the OEP.

The objective of the project, will be achieved through the following outputs:

- Output 1: Establishment of the SIDS DOCK Liaison Office on Knowledge Management and Innovation, Vienna, Austria, in 2022
- Output 2: Three (3) IWON Project Proposals prepared for submission to the GEF and GCF by 2022 and 2023
- Output 3: SIDS DOCK Children’s Programme Project Proposal for upscaling SIDS Day in Schools prepared for submission to the GEF and GCF by 2022 and 2023
- Output 4: Organisation of three (3) training sessions of the GN-SEC Online Capacity Building Program on sustainable energy solutions for islands in partnership with UNIDO, CCREEE, PCREEE, ECREEE and CIEMAT: (a) The Need for a SIDS Ocean-Marine Sustainable Energy Programme; (b) The Most Appropriate Ocean-Marine Technologies for SIDS; (c) Demonstration and Applicability of the Most Appropriate Ocean-Marine Technologies for SIDS
- Output 5: Development of two (2) UNIDO project concept notes for triangular SIDS programs to be jointly implemented by UNIDO, SIDS DOCK and the GN-SECs
- Output 6: Development of two full-scale UNIDO project proposals for capacity building and resource assessments for triangular SIDS programmes, to be jointly implemented by UNIDO, SIDS DOCK and the GN-SECs
- Output 7: Preparation of GOEA Slide Pitch Deck and follow-up of proposals.
- Output 8: Development of a project document on the first operational phase of the OEP and fund raising for the initiative
- Output 9: Development and launch of the virtual Ocean Energy Platform Version 1.0.
- Output 10: PDF reports documenting the geotechnical, bathymetric and MetOcean conditions of a proposed deployment location for floating OTEC in Sao Tome and Principe.
- Output 11: Technical notes assessing the design of the OTEC platform and the cold-water pipe against the incident environment conditions in Sao Tome and Principe.

In addition, public awareness activities and stakeholder consultations across the SIDS GN-SECs will be cross-cutting along the overall course of this project therefore, the Ocean Energy Platform is expected to enhance general awareness and knowledge on ocean energy, climate change-related issues in SIDS, and help into taking them into account in the process of national planning and policy and helping to achieve the Sustainable Development Goals (SDGs) and Nationally Determined Contributions (NDCs) under the UNFCCC Paris Agreement.

1.3 Inception Phase

The project's inception phase marks the launch of implementation of the "Promoting South-South and Triangular SIDS-SIDS Cooperation Under The Global Network of Regional Sustainable Energy Centres (GN-SECs)" Project, and covers approximately an eighteen (18)-month time period from mid-September 2021 to mid-March 2023, beginning with the project team's recruitment. In case of unforeseen delays (e.g., COVID-19), UNIDO and SIDS DOCK can agree on an extension of the contract duration (without a budget increase).

This Inception Report is based on the analysis of the current situation in SIDS in the field of ocean energy. It details and adjusts the project activities based on the findings and recommendations gathered during the inception phase. It includes a project 18-months work plan, annual budget among other documents. This report has been prepared by the Secretariat of SIDS DOCK for the consideration of UNIDO and the Executive Council of SIDS DOCK Project Steering Committee.

The objectives of this Inception Report are:

- a. To provide guidance to the operationalisation of the project, and to set up the project structure.
- b. To update some information in the project documents and update change in the project environment and risks.
- c. To present a time schedule and budget for implementation for the entire project period.
- d. To describe the institutional linkages and management and coordination mechanisms.
- e. To present the detailed budget and some of the indicators of success for the outcomes of the project. To describe activities and sub-activities in detail together with institutional responsibilities.
- f. To define the expertise, services and equipment needed for the project implementation.
- g. To prepare a plan for monitoring and evaluation of the programme.

In preparing this programme and in order to ensure commitment and ownership of the project, the key partners were involved in the early stages of project planning. This had the added benefit that it pooled together the knowledge and experience of stakeholders, helping to ensure that the programme is as robust as possible.

The following activities have been carried out from the project's inception until the submission of the final report.

- a. UNIDO and SIDS DOCK signed the Project Agreement on 21st September 2021.
- b. The Agreement designated the Secretariat of SIDS DOCK as the Project Executing Agency and UNIDO the Project Implementing Agency.
- c. The Secretariat has identified consultants as of 22nd September 2021.
- d. Heads of State and Government Call To Action! for the Establishment of the Global Ocean Energy Alliance (GOEA), Sixth Session of the Assembly of SIDS DOCK, 28 September 2021.
- e.

- f. Call To Action! for the Establishment of the Global Ocean Energy Alliance (GOEA), SIDS DOCK, UNIDO, Stimson-ACRE, UNFCCC COP 26 Side Event, 11 November 2021, Wood House, Glasgow, Scotland, UK.
- g. Launch of the Ocean Energy Platform for Blue Economies in SIDS, powered by SustainChain^{TM2}; SIDS DOCK, UNIDO, Stimson-ACRE, UNFCCC COP 26 Side Event, 11 November 2021, Wood House, Glasgow, Scotland, UK.

The project activities carried out in the project inception phase, which lasted for three (3) months, from September 2021 to November 2021, are also listed in this Inception Report. This Inception Report describes the results of this process and aims at supporting the project to sustainably transition to the next phase, which includes the launch of the Global Ocean Energy Alliance (GOEA) in Lisbon, Portugal, in 2022, at the UN Oceans Conference, and the development and deployment of the first Floating OTEC Platform in Sao Tome and Principe, in 2024.

2. THE SIDS HEADS OF STATE AND GOVERNMENT INITIATIVE: THE 2023 STRATEGY FOR THE COMMERCIAL-SCALE DEPLOYMENT OF OCEAN-BASED SIDS-APPROPRIATE ENERGY TECHNOLOGIES

Heads of State and Government that are members of the SIDS DOCK Organization and the Alliance of Small Island States (AOSIS), mandated the SIDS DOCK Secretariat to achieve, in the shortest timeframe, the commercial-scale deployment of ocean-based energy technologies that are appropriate to the demands in Small Island Developing States (SIDS) for the development of a low carbon economy, with emphasis on generating sustainable blue-green gender-equity employment to replace those that will be lost due to the negative impacts of climate change. The rate of deployment has been significantly slower than anticipated by some investors and policymakers.

To meet this goal, financial resources in the amount of USD 300,000 is being sought to complete the development and implementation of: *The 2023 Strategy for the Commercial-scale Deployment of Ocean-based SIDS-Appropriate Energy Technologies*. The 2023 OTEC Strategy is also in support of achieving the SIDS DOCK Goal of 25-50-25 by 2033: *Island Energy for Island Life*; the Sustainable Development Goals (SDGs), and in particular, *SDG 14 - Conserve and sustainably use the oceans, seas and marine resources for sustainable development*, as well as the commitments under the United Nations Framework Convention on Climate Change (UNFCCC) Paris Agreement, which cites, “Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience...” as a priority for strengthening the global response to the threat of climate change.

Small Island Developing States (SIDS) are blessed with an abundance of renewable energy resources and recognise that a diverse range of renewable power systems, including ocean, hydro, wind and solar, can provide a reliable, flexible infrastructure that more than meets our needs. **An Ocean Thermal Energy Conversion (OTEC) plant produces electricity all the time and that we can rely on.** That’s baseload power, provided by reliable sources such as an OTEC power

² <https://www.thesustainchain.com/app#/landing>
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plant. Baseload stations supply electricity around the clock - electricity cannot be stored, and must therefore be used as it is generated. The ocean is SIDS largest renewable resource and SIDS play major roles as custodians of the oceans and seas. While relatively small in landmass, SIDS govern over and serve as the “Blue Guardians” of their Exclusive Economic Zones (EEZs), vast ocean territories extending up to 200 nautical miles from their coastlines. As such, oceans and coasts play a disproportionately large role in the lives and livelihoods of island populations. Together, the SIDS have rights to govern ocean areas more than 15 times the size of the European Union land mass and represents their largest natural resource endowment.

The major bottleneck to the deployment of OTEC systems has been the high capital costs, which overshadow operational characteristics of low maintenance, high availability, multiple products streams to generate revenue, and, which at scale of 10 MW and above becomes competitive with diesel plants, and employment generation potential³.

Many promising technologies have died a slow death because the vested interest parties could not organize and effectively advocate for support or make the convincing case. Island Nations cannot allow this. SIDS outsourced OTEC development since the Second UN Conference in Mauritius, and nothing happened. The urgency of the need was revived at the Third UN Conference in Samoa, and with the establishment of SIDS DOCK. Since Samoa, there is much more visibility about OTEC and ocean energy in general; feasibility studies are on the way in one SIDS, but that should be seen as additional, not our main effort or adequate effort. For SIDS struggling to address issues of debt along with lingering social and environmental problems and now experiencing the debilitating impacts of a changing climate, OTEC represents the best-known option for long-term viability and the SIDS have made it known that it is a high priority.

2.1 Activities and Sub-Activities

2.1.1 Mission Transforming Island Lives! The Network of Regional Sustainable Energy Centres for Small Island Developing States (SIDS), 27 September 2019

The high-level luncheon event “Mission Transforming Island Lives! The Network of Regional Sustainable Energy Centres for Small Island Developing States” was organized under the umbrella of the Global Network of Regional Sustainable Energy Centres (GN-SEC), by the United Nations Industrial Development Organization (UNIDO) together with SIDS DOCK - the Small Island Sustainable Energy and Climate Resilience Organization, and the United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and the Small Island Developing States (UNOHRLLS). The event took place on the margins of the High-Level SAMOA Pathway Midterm Review on 27 September 2019, at United Nations Headquarters.

At the Third International Conference on SIDS, held in September 2014, in Apia, Samoa, UNIDO and SIDS DOCK launched a SAMOA Pathway Partnership⁴, which aimed at the establishment of

³ More detailed information will be forthcoming from the InterAmerican Development Bank on the Barbados Full Feasibility Study, when it is released later this year.

⁴ <https://sustainabledevelopment.un.org/partnership/?p=7639>
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a network of regional sustainable energy centres for SIDS in the Atlantic Ocean, Caribbean, Pacific and Indian Ocean. Laudable progress has been achieved and the network has become fully operational. The Caribbean Centre for Renewable Energy and Energy Efficiency Centre (CCREEE)⁵ is operating in Bridgetown, Barbados, and the Pacific Centre for Renewable Energy and Energy Efficiency (PCREEE)⁶, in Nuku'alofa, Tonga. The ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE)⁷, based in Praia, Cabo Verde, acts as a hub for Atlantic Ocean SIDS. The network receives technical support from UNIDO and financial assistance from the Governments of Austria, Norway and Spain.

The high-level luncheon event reviewed the progress of the SAMOA Pathway Partnership on the Network of Regional Sustainable Energy Centres for SIDS. Each regional centre got the opportunity to “pitch” its transformative vision and at least one innovative regional priority programme to the participating high-level delegates for discussion and consideration. The SIDS Centres will be playing a key supporting role during the course of the project.

2.1.2 Joint Webinar: Ocean Energy Technologies for Blue Economies in Small Islands and Low-lying Developing States (SIDS), 30 November 2020

The United Nations Industrial Development Organization (UNIDO), together with SIDS DOCK - the Small Island Developing States Sustainable Energy and Climate Resilience Organization, the Climate Technology Centre and Network (CTCN), and the Global Network of Regional Sustainable Energy Centers (GN-SEC), hosted a webinar titled *Ocean Energy Technologies for Blue Economies in Small Island Developing States (SIDS)*. The Webinar took place virtually, in conjunction with the Caribbean Community (CARICOM) Energy Month. Held on the same week as the annual Ocean Energy Europe Conference and Exhibition, the Webinar contributed to the ongoing SIDS-SIDS Partnership on Sustainable Energy for Blue Island Economies.

The webinar’s principal aim was to contribute to the envisaged *Ocean Energy Platform for Blue Economies*, advocated by UNIDO and SIDS DOCK, in close coordination with the Global Network of Regional Sustainable Energy Centers (GN-SEC). The goal of the platform is to build a bridge between the industry and research players, which need to test new solutions in various climates and contexts, and the interest of SIDS and coastal developing countries to get access to technology and expertise. Currently, the exchange on these future-oriented issues is limited. The platform will raise awareness on different ocean energy technologies, and their potential to help SIDS in addressing issues such as lowering energy cost, employment generation, reducing the negative trade balances due to petroleum imports, and new challenges posed by changing climate (reduction in freshwater, reduction on fish catch due to warming oceans and bleaching of coral, generating alternate industries to replace those that will be negatively such as farming). The platform will also create awareness on the potential contribution of ocean energy to the implementation of Blue Economy Strategies of SIDS.

⁵ www.ccreee.org

⁶ www.pcreee.org

⁷ www.ecreee.org

The platform would be action-oriented and provide a practical “maker-space” between private industry and Governments. It would focus on practical implementation and demonstration issues and mobilise funding for project and concrete activities. The implementation would be undertaken through the regional centres of the GN-SEC. The platform will nicely interlink with the International Renewable Energy Agency (IRENA) collaborative framework, which is focusing on high-level dialogue. As a next step, technical working groups involving SIDS, coastal low-income countries, industry experts and international partners, would be created. A baseline report and project document will be developed. If feasible, both would be discussed during the envisaged side-event at the 2021 Vienna Energy Forum.

2.1.3 Ocean Energy and the Fourth Industrial Revolution in the Blue Economy, Vienna Energy Forum, 6 to 7 July 2021

Vienna is a location that brings with it the strongest institutional ties to SIDS DOCK, both in focus, sustainable energy, and financing partnerships, in the form of UNIDO, and the deep interest and firm support shown by the Government of Austria, in the transformation of the SIDS Energy Sector through the establishment of the SIDS Regional Centres, in partnership with SIDS DOCK and UNIDO. Since 2015, SIDS DOCK has been participating in the VEF. Most recently, in partnership with UNIDO and the US-based Stimson Alliance for a Climate Resilient Earth (ACRE), SIDS DOCK and its partners staged a Side Event, “*Establishing an Ocean Energy Platform as a Marketplace to Support SIDS and Coastal Developing Nations,*” at the VEF 2021, held in July 2021.

The VEF 2021 Side Event, conducted on 6 July 2021, discussed the role of sustainable ocean energy solutions in the context of Blue Economy Strategies of SIDS. Ocean energy covers a broad range of renewable energy and energy efficiency solutions, which are using marine resources and space, or are serving traditional or emerging blue economy sectors (e.g., fisheries and aquaculture, desalination and freshwater production, coastal protection and waste treatment, biotechnology, ocean intelligence and observation, coastal and maritime tourism, shipping and ports). The event also discussed a first deliverable of the Ocean Energy for Blue Economies Platform (OEP), which facilitates south-south and triangular cooperation between Small Island Developing States (SIDS), coastal nations, academia, industry players and financiers. Ocean energy is the largest source of sustainable energy on the planet and will be the catalyst for sustainable development across SIDS.

The outcome of this side event created an agreement on a virtual Ocean Energy Development Platform (OEDP), which would become part of the Ocean Energy Platform for Blue Economies (OEP). The virtual platform would provide the infrastructure for building “*Compacts*” between national leader, private investors, bilateral development partners, and academic institutions and specialized energy institutions, to advance the deployment of ocean energy systems.

There was also a Side Event and Training Session on “*Capacity Building Program on Sustainable Energy for Islands*” (<https://training.gn-sec.net/course/index.php?categoryid=1>), also conducted on 6 July 2021. The Side Event promoted the Online Training Programmes, and featured perspectives of expert presenters and panellists on capacity needs, challenges and projections for the new generation of sustainable energy experts and professionals, and the gaps in digital capacity

building programmes; e-learning programmes in renewable energy; variable renewable energy and electric vehicle integration, (battery) storage and ocean energy, among other topics.

Global shocks, such as the COVID-19 crisis and climate change, have underlined once again the urgent need of SIDS in the Caribbean, Atlantic and Indian Ocean and the Pacific, to diversify their economies and to become more independent. To decouple from expensive fossil fuel imports, most of them have set ambitious goals regarding renewable energy and energy efficiency. Over the next decade, a rapid shift towards decentralized, flexible and integrated island power and electric mobility systems is needed. This requires leapfrogging to new technologies, solutions and business models, including battery storage, electric vehicles, ocean energy, green hydrogen, and industry 4.0 and digital driven solutions.

The magnitude of change will require major investment in infrastructure and human capacities. A critical mass of young, certified energy professionals will need drive and sustain the transition in the long-term. However, currently many young islanders have only limited access to qualification and certification programs or cannot afford to study abroad. Brain drain is another major issue connected to the latter. Locally, many SIDS lack of training institutions and quality programs, which respond to the particular needs and priorities of islands. Recently, there are efforts to establish regional qualification and certification schemes and digital infrastructure through the regional universities, such as the University of West Indies (UWI) and the University of the South Pacific (USP).

To address these challenges and in support regional and national efforts, UNIDO, SIDS DOCK, CIEMAT and several centres of the Global Network of Regional Sustainable Energy Centers (GN-SEC), developed the Online Capacity Building Program for Small Islands, which was launched in December 2019. The programme includes nine (9) online modules, which describe and analyse the following technologies and energy issues: Solar Photovoltaics, Solar Thermal and Ocean Energy technologies, Bioenergy, Energy Efficiency and Thermal Optimization in buildings, Mini-grids and Energy Storage in Insular Power Systems, E-mobility and an overview on Energy, Climate Change Mitigation and Resilience in island regions. Learning takes place in an e-learning platform and delivery can be done either in self-study or through trainers. It can be accessed through www.gn-sec.net. The programme is available free of charge, in English, Spanish and Portuguese, and aims to strengthen the capacities of national training institutes in islands by providing them with a comprehensive online training program, which can be integrated into their sustainable energy curricula.

The Side Events were supported by the Governments of Austria, Norway, Spain, and other international partners.

2.1.4 SIDS Heads of State and Government *Call To Action! for the Establishment of the Global Ocean Energy Alliance (GOEA)*, sixth session of the Assembly of SIDS DOCK, 28 September 2021

In his Opening Statement, on behalf of His Majesty's Government and the people of the Kingdom of Tonga, and for the first time as Prime Minister and President of the sixth Assembly, the

Honourable Rev. Dr. Pohiva Tu'i'onetoa, Prime Minister of the Kingdom of Tonga, announced a *Call To Action! to support the Global Ocean Energy Alliance (GOEA): Ocean Energy For Climate Resilient Economies*, which SIDS DOCK and its Partners, led by the Kingdom of Tonga, planned to launch at the 26th session of the Conference of the Parties (COP 26) to the United Nations Framework Convention on Climate Change (UNFCCC), scheduled to be held in Glasgow, United Kingdom, in November 2021.

“Tapping into the wealth our oceans, would give us that boost to not just enter the “Race to Climate Resilience,” but to stay in the Race, he said. There is the little-known fact that, according to the United Nations Educational, Scientific and Cultural Organization (or UNESCO), the bacteria used to detect the presence of COVID-19 is found in the depths of the ocean. There are also vast amounts of minerals that reside at the bottom of the ocean that are destined to play a role in the Fourth Industrial Revolution (Industry 4.0), as promoted by SIDS DOCK’s Institutional Partner, the United Nations Industrial Development Organization (UNIDO).

The Prime Minister noted that while all the leadership of Small Island Developing States (SIDS) and low-lying developing states and coastal cities have been pre-occupied with combating the COVID-19 virus, they have not lost sight of the fact that almost all SIDS are ninety percent (90%) dependent on the importation of fossil fuels, which requires SIDS to spend tens of billions of dollars in foreign exchange annually, to import petroleum fuels. SIDS need to replace some ten thousand (10,000) megawatts of fossil fuel-powered electricity generating plants, over the coming decades, plants which consume more than \$5 billion dollars’ worth of fuel, annually. Ten thousand megawatts represent the vast majority of existing generating capacity in the SIDS. However, because the majority of these plants have reached or exceeded their economic life and are no longer efficient users of fuel, we in SIDS must ensure that we take collective action to replace these generators with Ocean Energy Systems.

SIDS face a huge dilemma as they consume diesel, which is expensive and dirty. Before COVID-19, the cost of electricity in Tonga was thirty-seven cents (0.37) per kilowatt hour, which is about three times more compared to the United States (U.S.) at ten cents (0.10) per kilowatt hour. A year later, today, Tongans are paying about forty cents (0.40) per kilowatt hour, and climbing, and prices won’t be coming back down anytime soon.

The Prime Minister asked development partners to answer the Call To Action! and join the Global Ocean Energy Alliance to help protect and conserve the oceans and support the development of the SIDS Ocean Energy Work Programme. “We are seeking partners and we are looking to our oceans and in particular, ocean energy, as a principal source of energy to help a number of islands survive and thrive. This is the only true option we have left,” he said.

2.1.5 *Call To Action! for the Establishment of the Global Ocean Energy Alliance (GOEA), SIDS DOCK, UNIDO, Stimson-ACRE, UNFCCC COP 26 Side Event, 11 November 2021*

The Honourable Rev. Dr. Pohiva Tu'i'onetoa, Prime Minister of the Kingdom of Tonga, and in his capacity as President of the sixth session of the SIDS DOCK Assembly, gave an impassioned

Call To Action! for ocean energy for resilient economies, referring to ocean energy “as the greatest chance to help meet the 2050 goals for net zero emissions and climate resilience in Small Island Developing States (SIDS), coastal developing cities and Least Developed Countries (LDCs).

Prime Minister Tu’i’onea amplified the Call To Action! during his virtual keynote address, delivered on 11 November 2021, at the SIDS DOCK Side Event on the margins of the 26th United Nations (UN) Climate Change Conference of the Parties 2021 (COP26) on the Call To Action! for the Establishment of the Global Ocean Energy Alliance (GOEA), held at Wood House, in Glasgow, Scotland. The Side Event was chaired by His Excellency Mr. Ronald Jumeau, Ambassador and former Permanent Representative of the Republic of Seychelles to the UN and Chair of the Executive Council of SIDS DOCK, and the newly-appointed SIDS DOCK Roving Ambassador for Oceans.

SIDS DOCK and its partners, the United Nations Industrial Development Organization (UNIDO) and Stimson Center Alliance for a Climate Resilient Earth (ACRE), will cooperate to establish the Global Ocean Energy Alliance, mobilise resources, facilitate partnerships with the private sector aimed at the effective transfer of ocean energy knowledge, technology and investments, and to put the appropriate institutional framework in place for an Ocean Energy Industry. The partners also introduced the “Ocean Energy For Blue Economies Platform,” powered by SustainChain™, a marketplace to facilitate science and technology exchanges necessary for advancing ocean energy technologies and in particular, the commercial-scale deployment of ocean-based energy technologies that are appropriate to the demands in SIDS. The decreasing technology costs and maturity for some ocean energy technologies makes ocean energy capable of helping SIDS and coastal cities with the goal of reducing long-term energy cost, generating employment, reducing trade imbalances resulting from the more than USD 25 billion payment for fuel imports, and challenges arising from climate change (reduction in freshwater, reduction of fish catch due to warming oceans and bleaching of coral).

Prime Minister Tu’i’onea was supported in the Call To Action! by the two Vice-Presidents of the sixth session of the SIDS DOCK Assembly, the Honourable Rev. Wavel Ramkalawan, President of the Republic of Seychelles, and the Honourable John Briceño, Prime Minister of Belize, respectively, along with Dr. The Honourable Ralph Everard Gonsalves, Prime Minister of Saint Vincent and the Grenadines and former Vice-President of the third session of the Assembly of SIDS DOCK. They were joined by the Honourable Dr. Jorge Lopes Bom Jesus, Prime Minister of the Democratic Republic of São Tomé and Príncipe, where the first floating Ocean Thermal Energy Conversion (OTEC) Platform, being developed in partnership with the United Kingdom (UK) company Global OTEC, is expected to be deployed in 2024, helping to unburden the people of Sao Tome and Principe from importing expensive and dirty fossil fuels, and provide a demonstration for scaling up across small islands, coastal developing cities and Least Developed Countries (LDCs) and help achieve the Sustainable Development Goals (SDGs).

UNIDO intends to contribute to the building up of ocean energy project pipelines promoted through the Global Network of Regional Sustainable Energy Centers (GN-SEC). The various centers cover most of the thirty-eight (38) SIDS, and accelerates the energy transition by creating spill-over effects, economies of scale and joint learning. The government of the United Arab

Emirates (UAE) also invited the international community and the private sector to join the UAE in its support for the Call to Action! for ocean energy and the GOEA. In her remarks, Her Excellency Dr. Nawal Al-Hosany, Permanent Representative of the UAE to the International Renewable Energy Agency (IRENA), Permanent Mission of the UAE to the United Nations, announced that the new UAE-IRENA USD 400 million global climate finance facility, the Energy Transition Accelerator Financing (ETAF) Platform, will include financing for ocean energy, where in 2023, at COP28, in Abu Dhabi, the UEA hopes to showcase support for the first ocean energy projects. The ETAF was launched at COP26.

The Prime Minister of Tonga announced that the partners will officially launch the GOEA at the UN Oceans Conference, scheduled for July 2022, in Lisbon, Portugal, and asked the international community and the private sector to answer the Call To Action! and join the Global Ocean Energy Alliance to help protect and conserve the oceans and support the development of the SIDS Ocean Energy Work Programme. “We are seeking partners and we are looking to our oceans and in particular, ocean energy, as the principal source of energy to help a number of islands survive and thrive. Ocean energy is the big game changer to turn the tide on climate change and get to Net Zero. This is the only option left for our children’s survival and our future,” he said.

2.2 Strengthening the SIDS south-south and triangular cooperation within the GN-SEC

The United Nations Industrial Development Organization (UNIDO) is a specialized Agency of the United Nations having its headquarters located at Wagramer Strasse 5, A-1220 Vienna, Austria. Its mandate is to promote and accelerate sustainable and inclusive industrial development in developing countries and countries in transition. Further information is available at: <http://www.unido.org>.

SIDS DOCK, the Small Island Developing States (SIDS) Sustainable Energy and Climate Resilience Organisation, is a United Nations (UN)-recognised international organisation established in 2015, with all the rights and privileges for addressing climate change, resilience, and energy security in small islands. SIDS DOCK represents 32 small islands and low-lying developing states across the globe, and is so named because it is designed as a “DOCKing station,” to connect the energy sector in SIDS with the global markets for finance and sustainable energy technologies. The organisation’s work is coordinated by the Secretariat, in Belmopan, Belize.

In 2010, UNIDO established the GN-SEC, an innovative south-south and triangular multi-stakeholder partnership to accelerate the energy and climate transformation in developing countries, in partnership with sub-regional economic communities/organisations (RECs) and their Members States (MS). Currently, there are eight (8) operating centres covering 108 countries, including most LDCs and SIDS. The GN-SEC is a platform for joint coordination, learning, projects, campaigns, tools, knowledge sharing, and fund raising.

SIDS DOCK is the only partner to have established two centres with UNIDO – the CCREEE and the PCREEE.

2.2.1 Advocacy, lobbying and technical support for the establishment of the SIDS DOCK Liaison Office on Knowledge Management and Innovation (LOKMI) in Vienna, Austria; jointly promote the GN-SEC on UN levels as a hub to promote regional and SIDS-SIDS cooperation on common energy issues and solutions

The proposal of establishing a Liaison Office in Vienna, were based on discussions in May 2017, during the Fifth Vienna Energy Forum, in Vienna, for a full-time presence of SIDS DOCK in Vienna, which is an international energy hub. At the VEF 2017, the Honourable Enele S. Sopoaga, Prime Minister of Tuvalu and President of the third session of the Assembly of SIDS DOCK, was invited to deliver a keynote address. This was a seminal forum, as it directly addressed implementation of the SDGs and the Paris Agreement. It was at the VEF 2017, that SIDS DOCK and UNIDO jointly announced an agreement with SIDS DOCK and the Government of Austria for the establishment of a UNIDO/SIDS DOCK Liaison Office on Knowledge Management and Innovation. The Office is intended to coordinate information exchange between SIDS and with the Network of Energy organizations housed in the City of Vienna, becoming part of the Vienna Energy Hub, and to provide SIDS governments and regional organizations with information, and coordination of technology transfer and research among the regional energy centres in SIDS.

The Government of Austria and UNIDO generously offered to host the presence of SIDS DOCK in Vienna. This is a unique opportunity afforded to SIDS DOCK that would support the development of programmes and partnerships. Staffing levels in Vienna reflects technical capacity. Technical staff will be required to conduct technical work in Vienna, as well as to support other SIDS DOCK technical work to support members, which will include inter alia preparation of proposals, interventions at meeting, and identify opportunities to develop. There is also an administrative position to support the Deputy Secretary-General who will run this Office.

At the third session of the SIDS DOCK Assembly, on 27 September 2017, the Assembly agreed with the establishment of the liaison office in Vienna and further mandated the Executive Council in collaboration with the SIDS DOCK Secretariat to begin the process of setting up the office, and to provide the Assembly with updates. In June 2020, the formal process began with a follow up letter to the Director General for UNIDO, about next steps, and also included four activities which the Secretariat requested support from UNIDO in the form of technical and other support:

- (a) Establishment of the SIDS DOCK Liaison Office on Knowledge Management and Innovation (LOKMI) and joining the Vienna Energy Hub, Vienna, Austria.
- (b) Support and strengthen the institutional capacity of the SIDS DOCK for the preparation of four GCF Readiness Proposals: The IWON Botanical/Herbal Project; Establishment of Renewable Energy and Energy Financing Facility; Management of Waste for Energy to Provide Employment and Ocean Protection; and Ocean thermal energy commercial demonstration project for the Caribbean and Pacific Islands.
- (c) Support to develop two (2) GCF Readiness Proposals to provide specific institutional strengthening and capacity building support to the two SIDS Regional Centres,

enabling them to become accredited to the GCF and to support implementation of regional and national projects.

- (d) Support to develop a pipeline of project proposals that reduces greenhouse gas (GHG) emissions and improves industrial competitiveness, e.g., e-mobility and ocean energy.

In July 2020, UNIDO responded with full support and further discussions took place on the development and scope of the proposal for the Vienna Office. In December 2020, UNIDO and SIDS DOCK jointly prepared a Final Draft Concept Note for the Establishment of the SIDS DOCK Liaison Office on Knowledge Management and Innovation (LOKMI). It is a three-year project, with an expected start-up grant of 550.000 Euro, provided by the Austria Ministry of Foreign Affairs (MFA), with assistance provided by UNIDO, and involvement and support of International Institute for Applied Systems Analysis (IIASA), technical backstopping partnership with Austria Energy Agency (AEA) and the International Energy Agency (IEA).

Due to the COVID-19, discussions stalled, however, it is expected that with the implementation of this project, the Vienna Office will become a reality before or by March 2023.

2.2.2 Support the organisation of three (3) training sessions of the GN-SEC Online Capacity Building Program on sustainable energy solutions for islands in partnerships with UNIDO, CCREEE, PCREEE, and ECREEE

The training sessions will be organized to be delivered virtually. The preparation of the curriculum will be a collaborative undertaking comprised of the SIDS DOCK Secretariat, the UNIDO GN-SEC, regional and national universities based in the SIDS with existing interests in ocean energy technology and training. It is anticipated that the CCREEE and the PCREEE will have coordination responsibilities for the ocean energy curricula and the SIDS DOCK Secretariat will have responsibilities for the waste-to-energy curricula.

A curriculum group is proposed, comprised of the volunteers from the GN-SEC and internationally recognised tertiary institutions such as Saga University, Japan and the University of Hawaii, USA. Additionally, experts from leading research and development institutions and policy research institutions will be recruited to support curriculum development. Private sector partners will be asked to contribute their unique knowledge of the market to address the challenges of technology deployment.

2.2.2.1 Training Session: Ocean Thermal Gradient Energy Systems

There are three critical components of ocean thermal energy systems - the energy cycle, the cooling cycle, and ocean engineering. The training session will introduce the participants to the science of the energy cycle on which Ocean Thermal Energy Conversion (OTEC) technology is based. Training material will cover Carnot and other thermal cycles available for extracting electricity from relatively small temperature difference resource. Participants will gain knowledge about heat exchange and efficiency of heat exchangers, which is at the centre of transferring heat from the thermal resources into liquids, with low boiling point to generate high pressure vapour. Participants

will be exposed to the different designs for Vapour turbines and the maintenance requirement for effective generation of electric power. Participants will learn about the Cooling cycle, driven by cold ocean water which is pumped from a depth of about 1,000 feet, and condenses the low boiling point liquid so it can be recycled. Critical environmental safeguards and the economics of thermal gradient and site selection will comprise the rest of the training. Of particular importance for participants will be the site selection criteria.

2.2.2.2 Training Session: Ocean Kinetic Energy Systems

Participants will learn about the three forms of ocean kinetic energy (waves, tides, and current) and characteristics of the locations that makes it possible to produce electricity from the kinetic resource. Participants will be introduced to the different technological systems to convert the kinetic energy in waves, current and tides into electricity. Thermal gradient energy dependent of transforming a chemical from a liquid to vapour, kinetic energy conversion are mechanical processes, the energy in an incoming flow of a column of seawater moving at a relatively slow speed relative to wind, results in shaft rotation. When the shaft is connected to an electrical generator the resulting rotation produces electricity. Participants will be introduced to economics and environmental issues related to the production of electricity from mechanical turbines using ocean kinetic energy, and how to assess the resources for energy potential.

2.2.2.3 Training Session: Waste-to-Energy (WtE)

Participants will gain knowledge on how to classify waste and identify the appropriate systems for the conversion of the waste into fuels and then into thermal or electrical energy, i.e., waste which can be used to produce fuel for simultaneous use or stored for later consumption. The key properties of waste that can make it usable for producing fuel is its carbon chemical composition. Participants will be provided with tools to perform waste characterization. Participants will also be introduced to the socio-economic and environmental problems that are consequences of poor waste management, as well as the policy environment that will support development of waste to energy industries, and how to perform the cost benefit analysis to identify potentially viable projects.

2.2.2.4 Promote the UNIDO train the trainer workshops of the online capacity building programme (<http://training.gn-sec.net>)

This activity is planned for 2022 by online means and by facilitating contacts to relevant research centres in SIDS and supporting the UNIDO call for trainees through SIDS DOCK channels.

2.2.3 Development of two (2) UNIDO project Concept Notes and two (2) Concept Papers for capacity building and resource assessments for triangular SIDS programmes to be jointly implemented by UNIDO, SIDS DOCK and the GN-SECs

SIDS currently lack the capacity to implement and manage an Ocean Energy Industry and will need to build capacity at the institutional and individual levels necessary for the deployment of appropriate ocean energy systems, inclusive of OTEC, DSW and wave. The concept note and

paper will focus on how to help close the capacity gap, and the timeframe. The Concept Note and Paper for conducting an ocean energy resource assessment would recommend a pilot assessment of the 14 countries that currently have pre-feasibility reports conducted by SIDS DOCK and the Japanese.

2.2.3.1 Building Institutional Capacity in SIDS for the Deployment of Appropriate Ocean Energy Systems

The concept note is intended to initiate the process of getting the governments in the ocean energy resource rich countries to recognize the value of the resources and the challenges posted to its development due to limited institutional capacity. The concept note provides baseline information on the state of ocean energy technologies, the resource endowment, the type of expertise required for the planning and development of ocean energy industry and build resilience to the impacts of climate change. The concept note will be shared with countries for reactions and indication of interest in participating in the capacity building programme that is being developed.

The concept paper will build on the note incorporating the responses and recommendations from the governments and generating an initial capacity building programme to meet the needs of national institutional capacity. The Concept Paper will be circulated for comments to governments and then to development partners, to mobilize resources and develop partnerships.

2.2.3.2 Industrialization 4.0 Supporting Ocean Energy Resources Assessment as the Foundation for the Blue Economy

Ocean energy resources exist in different forms ranging from thermal to kinetic and depending on geographical location. While energy is the principal economic product focus there are multiple other goods and services that can be derived from both the warm and cold ocean water which provides a vast resource for the development of industries along coastal zones. The concept note will provide information on the potential industries, the availability of the requisite technological systems and documented performance, as well as the type of ocean resources that can be utilized. Potential products range from desalinated water, mari-culture, lithium recovery, cosmetics, hydrogen, to fertilizers.

The concept note will be circulated for comments and reactions as well as indication of interest by governments and the type of industries of most interest. The reaction from governments will inform the concept paper content, which will be the instrument to identify potential partners and prioritize follow-up actions and areas for resource mobilization to undertake detailed assessment of resources to provide inputs into the studies that will be the starting points for new industries.

2.2.4 Joint advocacy and lobbying for GN-SEC proposals submitted to bilateral donors and climate funds, as well as in the context of the 2022 UN Oceans Conference

The partners will jointly advocate and support ocean energy projects proposals prepared by GN-SEC members to bilateral donors and climate funds. The support will be in line with the goals of the Global Ocean Energy Alliance and the development of an Ocean Energy Industry in SIDS.

The partners will also jointly promote the GN-SEC proposals at the 2022 UN Oceans Conference and include these projects in the GOEA pitch deck presentation seeking financing from investors and development partners.

2.2.5 Preparation of a Global Ocean Energy Alliance (GOEA) Slide Deck Pitch and follow-up of proposals

The intention is to use the Concept Paper for the Establishment of the GOEA to develop a pitch deck presentation (slides) seeking financing from investors and development partners. One version will be with a lot of text and information which will be shared with people electronically. The other version will be the pitch deck that will be presented to investors in person/virtually with more visuals. This presentation is planned to be delivered at the UN Oceans Conference in Portugal, in July 2022.

Investors spend the most amount of time reviewing the slides concerning financials, the team, and competition. In the case of the GOEA, the partners are seeking to raise \$20 to 40 million in the first round of financing from investors to support technical and feasibility studies and capacity building, informed by the pre-feasibility studies, resource assessments and capacity building needs to be conducted under this project. The GOEA is attractive to investors looking to transform or disrupt the energy industry and have the potential to fundamentally help reshape the way consumers interact with a market. The pitch will outline the market growth for ocean energy and OTEC in the past, and the future potential growth, so that investors can quantify the upside and potential return on investment (ROI) on their investment.

OTEC is no longer an “idea.” On the technology readiness level (TRL) scale, with a value of one (TRL-1) referring to technology at the conceptual stage based solely on desktop studies, with higher numbers indicating systems that are already commercially available from different suppliers and technologies with documented records of field operations considered to have reached TRL-9, evidence available in the public domain indicates OTEC systems using ocean thermal resources have achieved the TRL-7 level. Investors are looking for a team that is headed by strong leadership, with a track record and can execute, and a defining characteristic that makes the team so unique to execute on its mission and vision. For these reasons, for investors, idea is ten percent (10%) and ninety percent (90%) is from execution.

The GOEA team is a unique public-private partnership of a coalition of 32 small islands and low lying developing states, development partners, and private sector companies and organisations, forged in the spirit of the SAMOA Pathway. The GOEA Concept Note, notes that the *Call to Action!* for the GOEA was initiated by the SIDS DOCK Secretariat, along with its partners the United Nations Industrial Development Organization (UNIDO) Global Network of Regional Sustainable Energy Centres (GN-SEC)⁸ and the U.S.-based Henry L. Stimson Center, Alliance for a Climate Resilient Earth (ACRE), who have formed a GOEA Core Working Group (CWG). Led by the SIDS DOCK Secretariat, the GOEA CWG is intended to promote and increase the

⁸ Particularly, CCREEE, PCREEE, ECREEE, EACREEE, SACREEE, CEREEAC and RCREEE
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awareness about the potential of ocean energy to bring about massive reduction in greenhouse gas (GHG) emissions, as noted by several scientific and technical reports.

The CWG will be responsible for completing the formation of the GOEA, and its launch in 2022. Whereas SIDS DOCK will bring its strong knowledge and expertise in SIDS, UNIDO and the GN-SEC will bring in its expertise from its global energy networks. Stimpson Centre/ACRE brings together industries from across the private sector, universities, national laboratories, financial institutions, insurance and reinsurance companies, national security think tanks, environmental organisations, multilateral development banks, and UN connected networks, and encourages collaboration and innovation between its member-organisations and creates Public-Private Partnerships (“PPPs”) as called for in UN Sustainable Development Goal (SDG) 17 – Partnerships for the Goals: Strengthen the means of implementation and revitalise the global partnership for sustainable development.

The Core Working Group will report to a *GOEA Bureau*, by providing regular reports to the Bureau, and by communicating any emerging issues to the Bureau, which is intended to be the main GOEA policymaking entity, headed by the President of the Assembly of SIDS DOCK. The Core Working Group also reports to the SIDS DOCK Executive Council, by providing a written report of its activities and by giving verbal reports at Executive Council Meetings.

The GOEA will enable partnerships and collaborations that will minimise the competition for resources for ocean energy development and deployment in SIDS. The drive is to help raise capital to support private sector partners engaged in the development and deployment of SIDS-Appropriate ocean energy technologies and to support the public sector in the development of an enabling environment with the appropriate policy framework and regulations in place for the uptake of ocean energy. Compared to other institutions engaged in executing an ocean energy programme, the GOEA is a public-private business enterprise that will have a business model for investor buy-in, which will clearly differentiate us from the rest. UNIDO is focused on industrial policies that trigger structural change and enhance capability building that set the foundations for inclusive and sustainable industrialization. UNIDO will support governments throughout the industrial policymaking cycle with advice, capacity building and facilitation.

4. ESTABLISHMENT OF AN OCEAN ENERGY PLATFORM (OEP) FOR BLUE ECONOMIES IN SIDS TO SUPPORT THE GLOBAL NETWORK OF REGIONAL SUSTAINABLE ENERGY CENTERS (GN-SEC)

The Ocean Energy Platform had a soft launch at the SIDS DOCK COP26 Side Event, in Glasgow, Scotland, on 11 November 2021. The Platform is currently being powered by SustainChain. The aim is to transition the Platform to the SIDS DOCK ILIN™ (Island Life Information and Knowledge Network: <https://ilin.sidsdock.org/>).

The ILIN™ is the virtual knowledge network to facilitate meetings and conferences, project execution and implementation, and to exchange learning and sharing of relevant knowledge about technologies and best practices related to renewable energy (RE) and energy efficiency and conservation (EEC), applicable in the SIDS member countries. The ILIN™ will reduce “data

poverty” surrounding EE and RE by using the Internet and other Information Technologies (IT) to build the knowledge management capabilities within SIDS Member Countries and that will support the SIDS DOCK™ platform of:

- a. Capacity Building;
- b. Projects Pipeline Technology Transfer;
- c. National Project Financing;
- d. Policy Harmonization;
- e. Public Education and Awareness.

Based on ongoing discussions with UNIDO focused on the Vienna LOKMI, the ILIN when fully developed will be based at the LOKMI, which will also be coordination operations of the GOEA. This will be addressed under the establishment of the Vienna LOKMI with support from the Government of Austria.

4.1 Activities and Sub-Activities

4.1.1 Development of a project document on the first operational phase of the Ocean Energy Platform (OEP) to be implemented by UNIDO, SIDS DOCK and the GN-SECs

The OEP concept was developed by the SIDS DOCK and UNIDO and served as the background paper for the VEF 2021, Side Event in July 2021 on Ocean Energy for the Blue Economy. The Concept paper was well received and was the basis for the decision to proceed with the establishment of the ocean energy platform, in the context of the formation of a Global Alliance. A global alliance was identified as the mechanism necessary to catalyse global action to supplement the dispersed activities that now characterize Ocean energy, in order the increase investment and interest in ocean energy. The draft of revised Concept paper operational phase of the OEP will provide the information for the preparation of the project document for the first operational phase of the OEP for building of the Blue economy as part of Industrialization 4.0.

3.1.3 Development and Launch of the Ocean Energy Platform for Blue Economies, COP26, Glasgow

In the first operational phase, the Platform was launched with four (4) “members”, and there has been no additions since then as the Platform is not being promoted as it is still a work in progress. This completion of the first operational phase will now facilitate implementing the feedback received from the launch presentation in Glasgow and other stakeholders, to enhance the Platform’s use to raise awareness about the Platform among the GN-SECs and to demonstrate how to access and utilise the Platform. In the longer-term (2024), the Platform should be able to transition to the Island Life Information Network (ILIN) and also serving the GN-SECs.

3.1.3 Ocean Energy Platform (OEP) Implementation Phase I: Establishing the Infrastructure for Information Sharing, Capacity Building and Identifying Potential Partners

Implementing the first phase required partnerships that provided quality access to a credible web platform that has United Nations recognition, has a wide environment of users, and compatible with the IT systems in the GN-SEC regional centers. Based on the discussions at the VEF in July 2021, the Ocean Energy Platform was launched at a Side Event during COP 26, in Glasgow, Scotland, on 4th November 2021. The launch provided valuable information to SIDS, coastal cities, and other national leaders to increase their awareness of ocean energy and the potential contributions to national challenges.

The OEP is a virtual market space for ocean energy where interested parties can initiate conversations on the challenges to ocean energy investments which require industry, researchers, and investors to collaborate with government on solutions, particularly in making the business case for ocean energy, and generate ideas on how the Platform can enlist the critical mass of personnel and organisations to help the SIDS and other interested nations undertake the necessary research and development. This is accompanied by an enabling policy and regulatory regime to attract investments into ocean energy projects. In this context, there is an urgent need to mobilise financing for resource assessments, technical feasibility studies and technology demonstrations in SIDS to validate the viability of the ocean energy technology market. Operational pilot facilities strengthen the ocean energy business case and requires priority support/investments.

3.1.4 Ocean Energy Platform (OEP) Implementation Phase II: Institutionalization of the Ocean Energy Platform

The guidance for this phase of the Ocean Energy Platform will come from a cohort of twenty (20) ocean energy professionals, influencers and thought leaders identified during and after the VEF event of July 2021, and the Call to Action! Side event at COP 26 in November 2021. Their collective responsibility is to champion the establishment and effective operation of the platform, working in partnership SIDS DOCK and UNIDO GN-SEC and other partners, to ensure that the necessary functions are incorporated.

Critical actions to be completed to facilitate effective operations of the platform include finding an institutional host for the for the OEP; preparation of workplan and budget form the first operation period and a process for evaluating the performance and making modifications to the platform to improve efficiency in its support of the GOEA development.

5. OTEC PILOT IN SÃO TOMÉ AND PRÍNCIPE (STP) TO BE DEVELOPED UNDER THE OEP

On 2 July 2021, SIDS DOCK and the United Kingdom (UK)-based Global OTEC Limited, signed a Memorandum of Understanding (MoU) to collaborate on developing and deploying Floating Ocean Thermal Energy Conversion (OTEC) Technology Concept in SIDS. The possibility of using ocean energy offers one of the most promising opportunities, not just for development of a competitive sustainable energy sector in island states, but for the construction, installation and operation of the first Floating OTEC Power Plant, to be named “Dominique,” in partnership with the Government of the Democratic Republic of Sao Tome and Principe. The Pilot Project for the Floating OTEC Platform will be developed under the Ocean Energy Platform.

4.1 Global Environment Facility (GEF) and Green Climate Fund (GCF) funded UNIDO projects “Strategic program to promote renewable energy and energy efficiency investments in the electricity sector of São Tomé and Príncipe” and “Building institutional capacity for a renewable energy and energy efficiency investment programme for Sao Tome and Principe”

The project is intended to support Sao Tome and Principe’s energy sector transition, and will provide funding to undertake resource assessments of the renewable energy resources, and prepare pre-feasibility studies, support policy review to provide an enabling environment for private sector investment in the sector. Additionally, the project will support institutional capacity building to ensure effective oversight and management of the Sao Tome and Principe energy sector transition.

4.2 Activities and Sub-Activities

4.2.1 Supporting the development of a pilot project to provide Sao Tome and Principe with 1.5 MW of baseload power in the first instance and then increasing to 10 MW within four years

Global OTEC and its partners have planned a discrete and coherent project to develop a highly efficient, renewable energy platform that uses Ocean Thermal Energy Conversion (OTEC) in São Tomé and Príncipe (STP). The project brings together skills from marine engineering, industrial design, Small Island Developing States (SIDS) energy policy, gender policy, local consulting, entrepreneurial knowhow, natural capital and sustainability analysis.

This project will produce a ‘shovel ready’ detailed design of a first-of-a-kind OTEC Platform for a market where there is a significant need for alternative renewables. The system design must consider the technical and socio-economic features of its intended market in great detail. Essential scientific and technical knowledge will be obtained to develop the OTEC Platform for this geography. This project will also explore the use of natural and social capital techniques to boost ecological and economic returns thereby attracting broader stakeholder buy-in. STP will be the area of focus for this industrial research project with a view to deploying a prototype demonstration system.

4.2.1.1 GeoTechnical Desktop Study on OTEC Plant in Sao Tome and Principe

The Geotechnical study will assess a range of open source and publicly available (free) data sources pertaining to the geotechnical, geophysical and bathymetry properties around STP. This will include, but is not limited to analysis on soil types around the deployment location, thermographic and salinity data, notable underwater physical features and general bathymetry. As well online databases, universities (or other research institutions) may be contacted to improve contrast of findings. Analysis will be compiled into a comprehensive document and propose options for anchoring types/mooring systems suitable for the OTEC platform in this environments.

The Geotechnical report will validate whether the OTEC platforms base-case mooring is appropriate for this environment, or highlight the need for alternatives. This will influence the

studies preliminary cost model. This report will be useful for assessing the feasibility of other floating systems around STP, and what anchoring systems should be considered.

4.2.1.2 MetOcean study on OTEC Plant in STP

The MetOcean report will assess a range of open source and publicly available (free) data sources to model the relevant wave heights, current speeds/patterns and wind speed spectra around STP. Probability models and maximum significant values will be reported for a number of return periods such as 1-yr, 10-yr, 50-yr etc. This report will quantify the offshore weather conditions and sea state around STP, validating the base case design of an OTEC platform's structural design, mooring system and piping design. This study will form the inputs for a subsequent mooring and riser analysis which will simulate the operational and survivability limits of the platform. This report will be useful for mooring analyses of other moored systems around STP.

4.2.1.3 Mooring Analysis of OTEC Platform

The mooring analysis produce a technical note based on a simulation and evaluation of the performance of the base case OTEC platform design against the reported MetOcean conditions around STP. It is needed to validate the operational and survivability limits of the platform around STP. It may also suggest design changes on the basis the design is over or under engineered to survive in this environment, influencing the cost model. Its use is specifically relevant to this project. Redactions in publicly available documents could be made to protect intellectual property.

4.2.1.4 Riser Pipe Analysis of OTEC Platform expert Preliminary Proposal for OTEC Project

The riser pipe analysis will produce a technical note based on a simulation and evaluation of the performance of the base case riser pipe design, and its connectivity to the floating OTEC platform design, against the reported MetOcean conditions, particularly the current profile around STP. It is needed to validate the choice of riser pipe design, including the wall thickness, length and joint connection. This may influence the cost model. Its use is specifically relevant to this project. Redactions in publicly available documents must be made to protect intellectual property.

4.2.2 National Validation Workshop For The Floating OTEC Platform Pilot Project to Provide Sao Tome and Principe with 1.5 MW of Baseload Power

SIDS DOCK, UNIDO and the Government of Sao Tome and Principe, plan to launch a consultative preparatory process for the development and deployment of the OTEC Platform to provide Sao Tome and Principe with 1.5 MW of baseload power by 2024. The Project Document was approved by the Government of Sao Tome and Principe in July 2021, with the signing of the MoU between SIDS DOCK and Global OTEC, and was last discussed by the partners, at the SIDS DOCK COP26 Side Event, in Glasgow, in November 2021. The preparatory process includes geo-technical and met-ocean studies, mooring and rise pipes analyses, among other technical assessments. The project document also lays out the technical and institutional design of the OTEC Platform.

The aims of the national validation workshop are to review and approve the technical design, studies, assessments, and the institutional set-up of the OTEC Platform Pilot Project in Sao Tome and Principe, to confirm the project site, and to have energy experts and specialists from Sao Tome and Principe and elsewhere attending the national workshop successfully validate the project.

The national workshop falls under the umbrella of the Ocean Energy Platform and the intention is to livestream the workshop proceedings on the UNIDO GN-SEC network and the CTCN Platform. It was agreed to submit the final OTEC Platform project document for consideration at the UN Oceans Conference in July 2022, as the major ocean energy project pitch under the Global Ocean Energy Alliance, in support of Sao Tome and Principe. The Validation Report will play a key role in making the financing pitch to investors and development partners.

The National Validation Workshop was not foreseen during the budget-making process, and this activity, estimated at 30,000 euros, is a supplemental activity agreed to by UNIDO, and will be noted as such in the project budget.

6. MANAGEMENT AND COORDINATION

Management seeks to achieve co-ordination through its basic functions of planning, organizing, staffing, directing, and controlling. Co-ordination is the essence of management and is implicit and inherent in all functions of management, bringing harmony in carrying out the different tasks and activities to achieve the project objectives efficiently. The aim is an orderly arrangement of efforts that coordinates action to achieve successful execution of the Ocean Energy Project.

6.1 Governance

The governance of the Ocean Energy Project was agreed upon during preparatory meetings organised between the SIDS DOCK Secretariat and UNIDO during the introduction of the Ocean Energy Platform, during the Vienna Energy Forum (VEF) in July 2021. It was decided to establish a project coordination mechanism termed “Project Steering Committee,” a committee of the SIDS DOCK Executive Council. The overall Steering Committee Terms of Reference⁹ have been finalized and approved by the Executive Council on 16 December 2021, and submitted to UNIDO, in Vienna.

The Executive Council is the governing body of the project.

6.2 Project Management and Coordination

The SIDS DOCK Secretariat is the leading executing agency for all issues related to the project. UNIDO is the implementing agency for the project. The project organisation structure (summarized in the Figure 1 below) will consist of the SIDS DOCK Bureau, the Executive Council of SIDS DOCK, a Project Steering Committee (a committee of the SIDS DOCK Executive Council), and UNIDO. Roles and responsibilities are described below.

⁹ Draft Terms of Reference Global Ocean Energy Project Steering Committee [EC/10/ 2], 16 December 2021
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6.2.1 Management Arrangements

During the inception phase, the composition of the Ocean Energy Project team was finalised. This was done in close consultations with UNIDO, and Sao Tome and Principe, the beneficiary country. The Project Director who is the Secretary-General of SIDS DOCK, is in constant dialogue with UNIDO, the project partners and stakeholders. When needed, short and long-term technical consultants will assist in the implementation of activities of each technical component. The SIDS DOCK Secretariat Project Team will ultimately consist of:

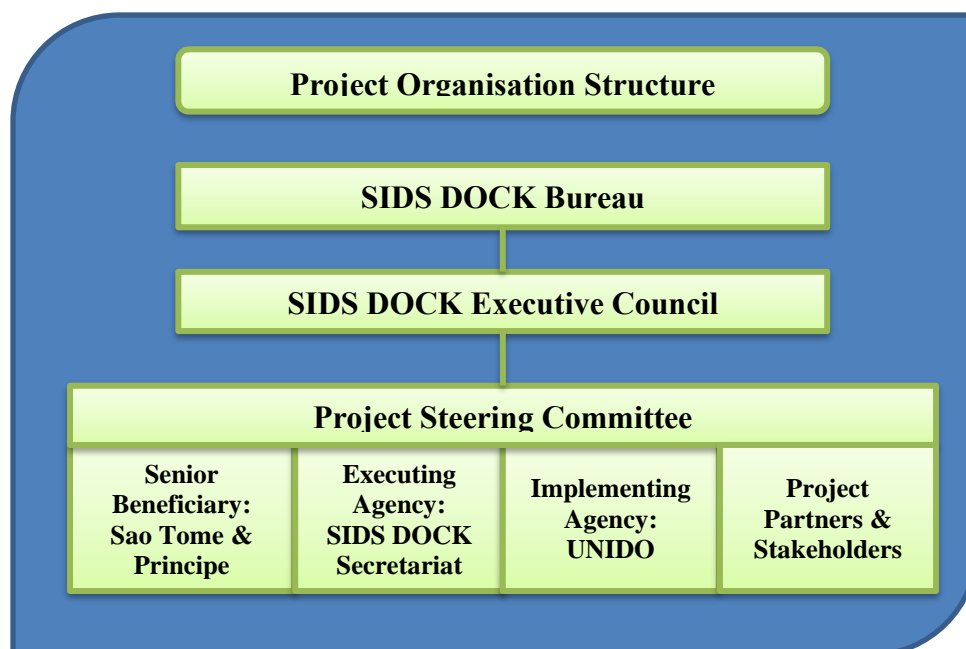
Technical experts:

- Sustainable energy
- Ocean energy
- Climate resilience
- Gender and youth
- Project Management
- Information & Knowledge Management
- Training and Development
- Public relations and promotion
- Translator

Project management:

- Project Director
- Project Development Expert with gender and youth expertise
- Research Officer
- Consultants

Figure 1: Project Organisation Structure: Ocean Energy Project



6.2.2 SIDS DOCK Bureau

The Assembly is the supreme organ of the SIDS DOCK, and is composed of all members of SIDS DOCK. It is led by a Bureau consisting of the President and two Vice Presidents, with regional representation from the Pacific, Caribbean and Atlantic and Indian Ocean (AIS). The Executive Council shall submit annual project reports to the Assembly and keep the Bureau informed of project progress and for key decisions and guidance.

6.2.3 SIDS DOCK Executive Council

The SIDS DOCK Executive Council is responsible for governance of the SIDS DOCK organisation, and is responsible for the overall direction, operation, and functioning of the SIDS DOCK and its Secretariat, including its activities, work programmes and projects and shall discharge its responsibilities in a fair, equitable and transparent manner as fiduciaries. The Executive Council may form committees of the Council, which shall be comprised of the Chair and or one or both Vice-Chairs, and may include Experts or others, as the Executive Council deems appropriate to carry out specific mandates of the Council.

The Project Steering Committee shall report to the SIDS DOCK Executive Council. Members of the committee shall be appointed by the Council.

6.2.4 Project Steering Committee (PSC)

The SIDS DOCK Executive Council is the body established under the Statute Establishing the SIDS DOCK (2015) and governed by the Assembly of SIDS DOCK, which is responsible for overall policy and direction and for providing oversight and advice for the development of the institution. The Executive Council delegates responsibility for day-to-day operations to the Secretary-General and committees.

The SIDS DOCK Executive Council has established a Project Steering Committee (hereinafter called “the Committee”) to provide oversight for the project: *Establishment of the Global Ocean Energy Alliance (GOEA) and the Ocean Energy Platform (OEP) for Blue Economies in Small Island Developing States (SIDS) [the “Global Ocean Energy Project”]*, implemented as a partnership with the United Nations Industrial Development Organization (UNIDO), with support from the Stimson Center Alliance for a Climate Resilient Earth (ACRE), and others.

The “Council Rules¹⁰” note that under Rule 15 Establishment of subsidiary organs, the Executive Council may, in accordance with Article VII, Section 4 of the Statute, establish such committees or other subsidiary organs as it deems necessary for the performance of its functions. In establishing such organs, the Executive Council shall also agree on their terms of reference, membership, number of members, tenure, and deliverables. When determining the membership, the Executive Council shall consider fair and equitable geographic distribution and gender balance.

¹⁰ Rules of Procedure of the Assembly and the Executive Council [A/2/6]; Second Session of the Assembly of SIDS DOCK, 24 September 2016
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Subsidiary organs should be periodically reviewed by the Executive Council to determine whether they should be continued, or their terms of reference modified.

This Project Steering Committee Terms of Reference (“the TOR”) defines the purpose, authority and responsibility of the Committee. In addition, the TOR is intended to assist the Executive Council in fulfilling its fiduciary responsibilities. The Project Steering Committee (PSC) is appointed to assist the Executive Council in reviewing, overseeing and monitoring the Oceans Project.

The roles and responsibilities of the Committee include:

- a. Monitoring the progress in the implementation of the Ocean Project.
- b. Examining from time to time the development of project documents and proposals and make recommendations to the Executive Council on the implementation of such proposals.
- c. Keeping under review on an ongoing basis the Oceans Project Work Plan and make recommendations on adjustment mechanisms to facilitate speedier and smoother implementation of the project.
- d. Developing of strategies to address delays in the implementation of the project.
- e. Reviewing development of the São Tomé and Príncipe Floating OTEC Platform Project, which is part of the efforts to promote ocean energy in SIDS and achieve deployment of Ocean Thermal Energy Conversion (OTEC) Technology.
- f. Making such recommendations as relevant with a view to enhancing the operations and performance of the Executive Council and the SIDS DOCK organisation, in general.
- g. Perform such other functions as assigned by the Executive Council.

6.2.5 Participation in the GN-SEC Steering Committee

The majority of UNIDO GN-SECs support nations that have significant ocean energy resources which are not be actively evaluated or subject to ongoing resources assessment. During implementation it is essential to a successful outcome to have interactions with the GN-SEC Steering Committee to ensure that priorities are jointly identified, and actions integrated into the GN-SEC and build capacity.

5.3 Monitoring, Review and Evaluation

Monitoring arrangements for the identified activities will be described during the planning phase, and progress monitored made against the activities agreed to by the partners. For the purposes of this project, we will measure the agreed to outcomes and not establish a new set of indicators. Progress reports will be prepared in line with the project agreement, and these reports will be used

to evaluate impact. The purpose of the evaluation is to show how the Secretariat is delivering against the agreed activities and implementing the plans.

5.3.1 Reporting

Reports will be in line with UNIDO requirements as spelled out in the Agreement signed on 21 September 2021. SIDS DOCK will organise regular coordination meetings with UNIDO by online means. Progress reports will be provided in line with the agreed payment schedule. The reports will include all relevant technical and financial information including a documentation of all payments (e.g., invoices, signed per die roster of funded workshop participants, copies of boarding cards, invoice for flight bookings). The short reports can be provided in English in digital form. The reports should include also digital photo documentation for free use by UNIDO. A final report, upon completion of the work describing all the works performed under the contract and project documentation, shall be submitted to UNIDO after 18 months.

Based on the Agreement with UNIDO, and findings of the inception phase, four levels of reporting for the project have been agreed to:

Table 1: Levels of Reporting for the Global Oceans Energy Project

Report	Frequency
Inception Report to UNIDO with work plan with time-activity diagram and description of the deliverables	Start of Project
First Progress Report to UNIDO	Nine (9) Months after project start
Final Progress Report to UNIDO	Eighteen (18) Months after project start
Report to the Assembly of SIDS DOCK	Annual Assembly meetings (September)

These reports will be consolidated by the Project Director for submission to the members of the Project Steering Committee.

6.4 Linkages

Special attention will be paid to linkages between the three project components/outcomes:

- a. Outcome 1: Strengthening the SIDS south-south and triangular cooperation within the GN-SEC.
- b. Outcome 2: Ocean Energy Platform (OEP) for Blue Economies in SIDS.
- c. Outcome 3: Sao Tome and Principe (STP) Ocean Energy Studies.

The table below highlights possible areas where linkages between the components will be aimed at:

Table 2: Possible areas where linkages between Outcomes/Components will be aimed at

Technical Components	Cooperation
Outcome 1: Strengthening the SIDS south-south and triangular cooperation within the GN-SEC	Capacity building and training workshops will be co-organised between the three components since the outputs applies equally to the entire ocean energy project.
Outcome 3: STP Ocean Energy Studies - GeoTechnical Desktop Study on OTEC Plant in STP	This activity will be achieved in line with the needs of the Organised Private Sector [e.g., Joint advocacy and lobbying for GN-SEC proposals submitted to bilateral donors and climate funds (e.g., GCF, GEF)]

6.5 Sustainability

The sustainability measures have been embedded into the project design. The key to ensuring sustainability is the special emphasis that will be placed on demand creation by raising awareness and engaging the private sector and public sector on ocean energy issues and the establishment of the Global Ocean Energy Alliance (GOEA) and the Ocean Energy Platform for Blue Economies in SIDS (OEP). Planned technical assistance will include a Capacity Building Programme on sustainable energy solutions for islands in partnership with the GN-SEC to ensure that they are prepared to participate in the ocean energy transition and to identify a cohort of professionals and stakeholders to contribute to the sustainability of the efforts to create an ocean energy industry in SIDS.

To secure the longer term sustainability of the ocean energy programme, the project approach is to develop two (2) UNIDO ocean energy project proposals for triangular SIDS programmes to be jointly implemented by UNIDO, SIDS DOCK and other partners. Last but not least is the design of the project which will ensure that the technical assistance is delivered at three levels: policy, institutional and enterprise level.

6.6 Gender: Addressing the Nexus between Gender, Energy and Technology

One reason that economic growth has failed to translate fully into widespread socio-economic benefits is SIDS' dependence on fossil fuel imports. The island economy is highly susceptible to oil price shocks, with oil imports accounting for five percent of gross domestic product (GDP) in 2017, and in many SIDS, in excess of 100 percent of exports, resulting in the SIDS being 10 of the 14 most indebted countries in the world. SIDS DOCK research and studies indicate that domestic renewable energy development can reduce economic vulnerability due to reliance on fossil fuel imports, and that there is significant potential to create jobs to tackle the unemployment rate of women in SIDS and improve the standard of living.

The achievement of equal opportunities for men and women may necessitate specific women empowerment activities, and this is reflected in the Ocean Energy Project. The goal of gender mainstreaming is to achieve gender equality, which is the participation of both sexes in all spheres

of public and private life without discrimination. More specifically, gender equality involves “equality under the law, equality of opportunity (including equality of rewards for work and equality in access to human capital and other productive resources that enable opportunity), and equality of voice (the ability to influence and contribute to the development process)”¹¹. Women perceive global warming as a more dangerous threat than men as they are more vulnerable to the impacts - globally, natural disasters such as droughts, floods and storms kill more women than men, and tend to kill women at a younger age¹². Women are not only victims of climate change, but also effective agents of change in relation to both mitigation and adaptation. Women have a strong body of knowledge and expertise that can be used in climate change mitigation, disaster reduction and adaptation strategies. Women’s responsibilities in households and communities as stewards of natural resources has positioned them well for livelihood strategies adapted to changing environmental realities.

The impact of the Coronavirus (COVID-19) pandemic has been crushing for women, according to a recent United Nations (UN) Policy Brief on the Impact of COVID-19 on Women¹³. Almost 70 per cent of the people affected globally, are women; in SIDS, this is important, as women represent 51 per cent of head of households. Further, the pandemic has brought increased gender-based violence, unimaginable “lockdown” sexual abuse of women and girl children, unpaid care for work, economic devastation, and adverse impacts on sexual and reproductive health services. COVID-19 has profoundly different outcomes for men and women – and not just in terms of their health. For a virus that infects people indiscriminately, gender has an effect, especially financially. These impacts and others, the UN warned, have the ability to undermine social cohesion and devastatingly reduced institutional capacity and services. The COVID-19 Pandemic has amplified and heightened all existing inequalities.

Governments, worldwide, have all been negatively impacted by the COVID-19, but it has been much more severe for the SIDS, as isolation has not made us unattackable nor inviolable. The women of SIDS are natural innovators and entrepreneurs, and now SIDS have the opportunity through the development and deployment of ocean energy systems to diversify our economies and focus on implementing sustainable livelihoods for Island Women, recognising the economic grip that tourism has on our earning capability is unraveling and slipping away in a most dramatic way, and the important fact that we have generous, durable and willing Partners, who are standing by the SIDS and keeping their commitments during this most abnormal of times. UNIDO was the first partner and donor to support the SIDS DOCK Island Women Open Network (IWON), and its soft launch at the Third Conference on SIDS, in Samoa, in 2014. Over the past seven (7) years, UNIDO has consistently contributed to building the capacity of the IWON through support for training of women (e.g., waste-to-energy) meetings and conference support, project development and promotion of the IWON to the GN-SEC, and has significantly contributed to its sustainability and relevance.

¹¹ World Bank Policy Research Report 2001, Engendering development: through gender equality in rights, resources, and voice

¹² <https://www.who.int/globalchange/GenderClimateChangeHealthfinal.pdf>

¹³ Policy Brief The Impact of COVID-19 on Women, 9 April 2020. Available at:

<https://www.un.org/sites/un2.un.org/files/policy_brief_on_covid_impact_on_women_9_april_2020.pdf>

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The SIDS DOCK Island Women Open Network is an informal network with an IWON Unit within the Secretariat of SIDS DOCK, responsible for overall management and coordination of network activities. The SIDS DOCK Assembly, Executive Council and the SIDS DOCK Secretariat will provide strategic guidance and direction to the network and its activities. The SIDS DOCK IWON can further rely on a group of technical advisors at the Caribbean Community Climate Change Centre (CCCCC/5Cs), the Caribbean Community (CARICOM) Secretariat, the Secretariat of the Pacific Regional Environment Programme (SPREP), the Secretariat of the Pacific Community (SPC) and the SIDS Network of Regional Centres, along with the wider Global Network of Regional Sustainable Energy Centres (GN-SEC) and GWNEN, the Global Women's Network for the Energy Transition, who can support the network's activities at the international, regional and national levels on a demand-driven basis.

Women in SIDS play important roles as, amongst other things, food producers, income earners, nurturers, and managers of natural resources, although their efficiency in executing these roles is conditional on the degree to which they are entitled to factors of production. Women are the backbone of the rural economy in SIDS and have one thing in common across regions: they have less access than men to productive resources and opportunities. The gender gap is found for many assets, inputs, and services – land, livestock, labour, education, extension and financial services, and technology – and it imposes costs on the local community, the broader economy and society, as well as on women themselves. Closing the gender gap would generate significant gains for the SIDS economy and for society. For example, if women had the same access to productive resources as men, they could increase yields on their farms by 20 to 30 percent. This could raise total agricultural output by 2.5 to 4 percent.

6.6.1 Activities and Sub-Activities

Now, with increasing frequency of financial, energy and food crises, the competition is or can become very tough for SIDS and requires innovative and efficient practices to remain relevant in the globalized economy. SIDS are therefore increasingly aiming to become less reliant on a single or limited economic sector by diversifying and becoming more resilient to external shocks by reducing dependency on high foreign exchange expenditures such as imported energy. SIDS are typically small enough that they can be considered micro-economies and are severely limited by their size in the range of activities that their economies can support. SIDS rely heavily on environmental services and trade to drive growth, hence the volatility of their growth. Promoting diversification and innovation in SIDS economies is relevant as the majority of SIDS depend heavily on the tourism sector, which accounts for 25 percent of GDP and upwards of 70 percent of foreign exchange earnings used to purchase petroleum fuels.

Climate change is projected to have a devastating impact on biodiversity, coastal environments and freshwater resources in SIDS, substantially impairing the tourism sector's ability to generate foreign exchange. Promoting diversification in SIDS economies into new sustainable energy-related industries, as well as encouraging greater education and understating of the critical role of the energy sector in helping to address issues of waste management, freshwater resources, employment generation, agricultural diversification, biodiversity conservation, sustainable land use, and high energy inputs into tourism, will help to offset the predicted negative impacts on tourism and other economic sectors.

6.6.1.1 Promote the implementation of three online campaigns related to the Island Women Open Network (IWON)

The IWON targets vulnerable women, who are on the frontlines of the Climate Change Battle, every single day – fighting for survival. Risks associated with climate change threaten to reinforce gender inequalities and even erode progress that has been made towards gender equality in several SIDS. Poor women’s limited access to resources, restricted rights, limited mobility and voice in community and household decision-making can make them much more vulnerable than men to the effects of climate change. This is unfair and can lead to unfortunate consequences for all, as women play a unique role in the stewardship of natural resources and support to households and communities. Women are viewed as a critical and valuable resource in achieving the SIDS Energy Transformation and helping to achieve the Sustainable Development Goals (SDGs), and in particular, Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all. The recent “Tracking SDG7: The Energy Progress Report 2019”, shows that we are not on track to achieving SDG7 by 2030, and in many cases are falling further behind.

The SIDS DOCK IWON Committee will also provide project oversight, and through its diverse regional membership with multi-disciplinary skills and a gender balance, this will help ensure that the needs of women and men are addressed in this project. His Excellency Dr. Vince Henderson, Ambassador and Permanent Representative of the Commonwealth of Dominica to the United States and the Organization of American States (OAS), serves as the Patron for the SIDS DOCK IWON. The current Chair for the IWON Steering Committee is Her Excellency Ms. Keisha McGuire, Ambassador and Permanent Representative of Grenada to the United Nations, whose term ends in 2022. The Ocean Energy Project will support the promotion of three (3) IWON Project-related Campaigns, that are contained in the SIDS DOCK IWON Operational Plan 2019-2023¹⁴:

- a. **Promote the SIDS DOCK Heads of State & Government OTEC Initiative 2023: Bring Dominique Home** - To assist with promoting Ocean Energy. Based on classification as a renewable energy technology, OTEC is the most unique system and the one most suited to developing the vast potential of SIDS’ oceans and seas in a sustainable manner. Ocean Thermal Energy Conversion (OTEC) technology is uniquely fitted to addressing challenges in SIDS, as it is a multi-product technology with potentially economic viable income streams. OTEC uses the thermal and biological resources of the ocean to generate energy, desalinated water, mari-culture products (abalone, lobsters, crabs, fish and high value seaweed), as well as the recovery of Lithium. OTEC plant produces electricity all the time and that we can rely on. That’s baseload power.
- b. **Promote the Pilot IWON Initiative For The Development Of A Global Sustainable Botanical/Herbal Supplier Market From SIDS DOCK Member States** - To 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 Pilot Herbal/Botanical Initiative in SIDS is an innovative social enterprise with

¹⁴ SIDS DOCK IWON Operational Plan 2019-2023 [EC/6/CRP2], 22 July 2019
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the mission to achieve sustainable, scalable impact at the nexus of women’s empowerment, energy, poverty and climate change. Key areas of development of the Initiative are its capacity building and institutional strengthening, advisory and technical support, science and technology transfer, and communication and outreach activities.

- c. **Promote the Pilot IWON Sustainable Energy Financing Facility: Supporting Financing for Project Preparation, Feasibility Studies and Business Plans for Energy Efficiency Projects** - To support Financing for Project Preparation, Feasibility Studies and Business Plans for Energy Efficiency Projects and Mobilize Seed Funding for the Design and Resource Mobilization for a Women’s Sustainable Energy Financing Facility.

6.7 SIDS DOCK Children’s Programme

The SIDS DOCK Children’s Programme had a soft launch at the Third Conference on SIDS in Samoa, in 2014. The aim of the programme is to support the Children of SIDS who want to develop and advocate for partnerships to implement the “SIDS Accelerated Modalities of Action (SAMOA) Pathway.” The Children’s Programme is being coordinated in partnership with the Republic of Seychelles, Ministry of Environment, Energy and Climate Change, in partnership with the Ministry of Education and Human Resources Development. The programme targets children at the primary and secondary levels.

6.7.1 Promote the SIDS Children’s Programme “SIDS Day in Schools” and @islandchildrenoftheocean:

- a. **“SIDS Day in Schools” and the SIDS Children Call for Climate Action! Video III: Ocean Energy in SIDS: Introducing Super Ocean Energy Champions:** SIDS Day in Schools is about getting the children engaged in scientific projects and promoting their participation in the SIDS Blue Economy, and to developing a programme to nurture and foster a cadre of young people who will provide the future leadership - SIDS need their own scientists who will guide climate resilience building. Succession planning is critical to our survivability as SIDS have one of the youngest and most vulnerable populations in the world. For example, during a previous SIDS Day in Schools in Seychelles, children learned how to test water quality and monitor water in schools and showing the results of their findings and sharing with their classmates. Through learning, competitions in song, dance and poetry, and learning about the culture of other SIDS, the aim is to increase environmentally sustainable actions and behaviours among students, staff and school community, to manage and conserve energy and resources at primary/elementary public school facilities by using education and the implementation of energy saving devices, renewable energy sources, and the exploration of new practices and technologies, like ocean energy, in order to reduce energy use by 5-15% among participating schools, and to publicize energy costs and savings - when people know how much it costs to power their school, they can see why it’s worth some extra effort to avoid waste.

Through artful expressions, the Children of SIDS will demonstrate the beauty, power, value and usefulness of our oceans – and even its power to destroy. The video will highlight artwork from the Children of SIDS from Tonga, Seychelles and Belize, showcasing their expressions of the oceans. The video will also convey facts about the ocean and its importance to humanity. Through a Workshop, the children will be taught about the SIDS “Blue Economy,” which is all about using ocean resources for economic growth, improved livelihoods and jobs, while preserving ocean and coastal ecosystem health.

It is proposed to display the original artwork on the walls of the planned SIDS DOCK Liaison Office on Knowledge Management and Innovation (LOKMI) [Project Outcome 1] located in Austria. The SIDS DOCK LOKMI would provide The Children of SIDS with a Platform for their Voice, an international hub that is interested in investing in their future by providing them with resources, and to view them as Partners in our efforts to achieve the Sustainable Development Goals (SDGs) and for the young people to prosper from Island Energy For Island Life! The Ocean Energy Project will support the development and production of Video III, to be screened during the UN Oceans Conference in Portugal, in July 2022.

- b. **Developing a social media presence through Instagram to promote Ocean Energy and the Children of SIDS:** Using social media such as Facebook, WhatsApp, Instagram and others, provides free access to online communication and information. Today, both social media and technology have become an indispensable part of our lives. Every individual who is above 13 years old will have their account on any of the popular social media networks such as Facebook, SnapChat, TikTok, Instagram, etc. The biggest advantage of social media is better communication. A student can connect with anyone at any point in time. They can use such platforms via their smartphone, tablet or computer, and learners can exchange questions, make phone calls or video calls. It is usually observed that students are bored of reading and writing, however, the internet and social media provide plenty of online information which often students are more inclined to read, especially if these pieces of information include eye-catching animations.

Instagram was selected as the first-choice social media, due to resource constraints in hiring a full time social media person. Research shows that Instagram moves much quicker than it did a year or two ago in terms of content. Instagram has been undergoing an evolution by transitioning from its roots as a photo-sharing app to focus on creators, videos, messaging and, perhaps most of all, shopping¹⁵.

To create content that our audience will love, it is planned to develop a comprehensive Instagram strategy in place and use data to create more successful content. The strategy will introduce Instagram Stories, one of the major avenues to not only connect with our

¹⁵ <https://www.forbes.com/sites/forbescommunicationscouncil/2021/10/18/how-to-use-instagram-to-build-a-successful-social-commerce-strategy/?sh=46175ced23f6>
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audience on social media but also to drive traffic, increase engagement and spread awareness about SIDS issues and those specific to children. The Instagram @islandchildrenoftheocean, has been in test mode from October 2020 to April 2021, and during that period of experimentation, we were able to figure out what performs the best among the audience. That means under the Ocean Energy Project, we will be able to ramp up our content production and post more frequently. Publishing to Instagram at least once a day is within the platform's best practices, major development agencies and similar programmes post up to three times per day (if not more often). As we roll out more content focusing on ocean energy, it's crucial to squeeze more engagement out of our following by understanding the best times to post on Instagram.

6.8 Communication

The communication strategy for the Global Ocean Energy Project will draw on the SIDS DOCK Pilot Public Education Programme (PEP), which was launched at the Third Conference on SIDS in Samoa in 2014. The objective of the *SIDS DOCK PEP* is to promote, publicize, and facilitate education of the benefits of a low carbon economy in SIDS - 25-50-25 by 2033, for the purpose of encouraging the public to reduce the use of fossil fuels, increase the use of alternative energy sources and increase energy efficiency and conservation. A public education and awareness effort will be required to help educate key public and private sector officials and the general public about transforming the current SIDS economy to a low carbon economy.

Citizen participation is an important element for a successful transition to a low carbon economy. It is also essential in building community and national resilience to the impacts of climate change. Involving citizens in the development and implementation of the SIDS DOCK goal of 25-50-25 by 2033, helps them understand how the strategy would benefit them as individuals and the communities they live in. It also encourages input of citizen ideas and increases public confidence and support in the SIDS DOCK goal of 25-50-25 by 2033. Educating the public about the benefits of a low carbon economy is intended to help them make wise consumer choices and provide the political environment to bring about needed policies and key interventions on the part of government, and this is critical to the success of the effort.

The communication and visibility strategy for the Global Ocean Energy Project aims at:

- a. Ensuring project ownership by all stakeholders.
- b. Promoting and advocating the project and its results among project beneficiaries, stakeholders, development partners and a wider audience, thereby increasing impact and visibility for the project itself, and UNIDO as the donor agency, and the SIDS DOCK Secretariat as the lead implementing agency.
- c. Disseminating information on project activities to react to, support and benefit from current and new developments and programmes and initiatives on ocean energy in SIDS in a timely manner and build synergies with other projects and initiatives when possible.
- d. Translate specific technical information into simple language that can be easily understood and readily accepted by the audience.

- e. Explain in basic terms, the nature and relevance of ocean energy systems and OTEC in particular, to SIDS, partners, beneficiaries, stakeholders, and the general public.
- f. Popularize the Call To Action! for the Establishment of the GOEA theme as a discussion point among policy makers using captivating visual and oral messages (interactive and enduring).
- g. Increase support among key partners for positive advocacy on the GOEA. The Global Ocean Energy Project requires a captivating interface that encourages the different stakeholders to engage fully within their respective component areas in the Project operations.
- h. Facilitating project coordination and monitoring among stakeholders; this includes communications related to the operational aspects of the project and to its day-to-day management, as well as forward planning, strategic guidance, and navigation.
- i. Reference material and templates developed by UNIDO, and the GN-SEC could be made available so that the Global Ocean Energy Project communication and visibility will be harmonized.

6.8.1 Development of Tailored Communications on Ocean Energy to Relevant GN-SECs

The CCREEE will be designated as the focal point for communications and public relations for the project. As the ad hoc Communications Focal Point for the Global Ocean Energy Project, the CCREEE will take the lead with preparing a Project Communications and Visibility Plan, laying out the target groups and specific objectives, communication activities and tools to be used, and provisions for feedback.

The goals are to ensure communication contains consistent core messages used to present and introduce the project to any audience, e.g., ocean energy for climate resilient economies in SIDS and developing coastal cities; to ensure partner visibility of UNIDO, Sao Tome and Principe, SIDS DOCK, Global OTEC, Stimson-ACRE and other partners; and to help project partners publicize the fact that activities take place within the context of the “Global Ocean Energy Alliance and the Ocean Energy Platform for Blue Economies in SIDS.”

6.8.2 Development of Ocean Energy Project Information and Reference Materials and Templates

All relevant data and information generated by the project will be stored on the Ocean Energy Platform, where GN-SEC members can gain access. The relevant data and information could be made available to the GN-SECs for ocean energy activities related with the other ocean energy programmes so that the overall GN-SEC is harmonized.

7. FINANCIAL RESOURCES

7.1 Detailed Scope of Work, Deliverables and Budget

The total project budget is EUR 118,550 (Euro one hundred and eighteen thousand five hundred and fifty). The contracted UNIDO funding to SIDS DOCK amounts to EUR 82,730 (Euro eighty-

two thousand seven hundred and thirty) with co-financing of EUR 35,820 (Euro thirty-five thousand eight hundred and twenty). Before launching the work, SIDS DOCK will submit a work plan with a work- time diagram and a description of the envisaged deliverables/outputs to UNIDO for approval (see Annex II: Project Indicative Budget and Work Plan). This includes detailed tables of content of the envisaged OTEC studies in STP.

As noted earlier, the necessity for a National Validation Workshop for the OTEC Platform to be financed by UNIDO, has added an additional USD 30,000 euros to the original budget – the indicative budget is potentially EUR 188,550.

7.2 Project and Financial Management

The Project Director will be responsible for:

- a. Overall administration and technical assistance to develop the project implementation plans and to monitor its implementation.
- b. Administration of the implementation of project activities defined in the project document and ensures the compliance with UNIDO’s rules and regulations as well as the work plan and budget.
- c. Ensure the identification and the creation of necessary links with stakeholders to implement the project.
- d. Identify gaps in project outputs and make the necessary adjustments in compliance with the administrative requirements of UNIDO.
- e. Follow the use of funds and the implementation arrangements for full efficiency and effectiveness.
- f. Ensures all processes related to implementation meet and comply with UNIDO and rules and Regulations.
- g. Prepare TORs, evaluation reports, etc., for the project.

7.3 Indicative Budget and Work Plan

Appendix I Project Indicative Budget and Work Plan provides the schedule for implementing the Global Ocean Energy Project, over an 18-month period. The work plan lists the activities required, who will be responsible for each activity, when activities will need to be undertaken, and the amounts of human and other resources required to complete each activity.

The accompanying indicative budget is organised by Outcomes and Outputs, against standard accountancy budget lines, ensuring all costs will be accounted for, and also supports future financial management of the project. The budget reflects the expected costs and resource needs for carrying out the project over the 18-month period. The indicative budget and work plan will be updated on a regular basis.

ANNEXES

Annex I UNIDO Terms of Reference “Promoting south-south and triangular SIDS-SIDS cooperation under the Global Network of Regional Sustainable Energy Centres” Project

Annex II	Project Indicative Budget and Work Plan
Annex III	Indicative GeoTechnical Study Table of Contents
Annex IV	Concept Paper Ocean Energy Platform (OEP)
Annex V	Concept Paper Global Ocean Energy Alliance (GOEA)
Annex VI	SIDS DOCK Programme of Work - SIDS DOCK Heads of State and Government OTEC Initiative: The 2023 Strategy for the Commercial-scale Deployment of Ocean-based SIDS-Appropriate Energy Technologies: Bring Home Dominique
Annex VII	Concept Note Deployment of a Small-Scale Ocean Thermal Energy Conversion (OTEC) Offshore Platform Barge in Sao Tome and Principe – “Dominique” - with a 1.5MW System Providing Baseload Power
Annex VIII	Concept Note SIDS DOCK Liaison Office on Knowledge Management and Innovation (LOKMI)
Annex IX	SIDS DOCK Island Women Open Network (IWON) Operational Plan (2019-2023) for addressing Island Women’s Participation in the Transformation of the Energy Sector in Small Island Developing States (SIDS) - Island Energy For Island Life: 25-50-25 by 2033
Annex X	Terms of Reference Ocean Energy Project Steering Committee – a Committee of the SIDS DOCK Executive Council