

# PRACTICAL GUIDANCE FOR THE UN GLOBAL COMPACT **SUSTAINABLE OCEAN PRINCIPLES**

## **OCEAN RENEWABLE ENERGY**



**Sustainable  
Ocean Business**  
Action Platform



# TABLE OF CONTENTS

<b>1. THE UN GLOBAL COMPACT SUSTAINABLE OCEAN PRINCIPLES</b>	<b>03</b>
<b>2. THE GUIDANCE</b>	<b>04</b>
<b>OCEAN RENEWABLE ENERGY</b>	<b>06</b>
Contributors and consultative group	06
Scope of the sector	06
General considerations for the sector	06
<b>OCEAN HEALTH AND PRODUCTIVITY</b>	<b>07</b>
Challenges and opportunities of the sector	07
Reporting regimes and partnerships of relevance	08
Principle 1	09
Principle 2	10
Principle 3	11
Principle 4	12
<b>GOVERNANCE AND ENGAGEMENT</b>	<b>14</b>
Challenges and opportunities of the sector	14
Reporting regimes and partnerships of relevance	14
Principle 5	16
Principle 6	17
Principle 7	18
<b>DATA AND TRANSPARENCY</b>	<b>20</b>
Challenges and opportunities of the sector	20
Reporting Regimes and Partnerships of Relevance	20
Principle 8	21
Principle 9	22

**Note:** The Practical Guidance maps current regulations, business standards and best and emerging practices for a particular sector. Under the auspices of the UN Global Compact Sustainable Ocean Business Action Platform, the guidance has been mainly developed by companies operating within the sector.

The guidance is a dynamic working document. It will be reviewed on a regular basis to follow new legislation, best business practices, higher standards and market innovations. Input, feedback and comments from all stakeholders are welcome. If you would like to contribute, please contact: [ocean@unglobalcompact.org](mailto:ocean@unglobalcompact.org)

# GENERAL INTRODUCTION TO THE GUIDANCE DOCUMENT

## 1. THE UN GLOBAL COMPACT SUSTAINABLE OCEAN PRINCIPLES

The UN Global Compact has, in consultation with more than 300 stakeholders worldwide, developed the Sustainable Ocean Principles. The purpose is to promote the well-being of the ocean for current and future generations, as well as to emphasize the shared responsibility of businesses to take necessary actions to secure a healthy and productive ocean.

The nine principles cover three areas: ocean health and productivity; governance and engagement; and data and transparency. Signatories confirm their endorsement of the principles, setting out a framework for responsible business practices across relevant sectors and geographies. The principles build upon and supplement the overarching Ten Principles of the UN Global Compact, including the fundamental responsibilities in the areas of human rights, labour, environment and anti-corruption.

The principles are relevant for companies with activities that may impact ocean health and companies that are part of an ocean productivity value chain. The principles are, therefore, also relevant for land-based industries, including the financial sector. The principles are directed at company boards and executive management. They are designed as a tool for moving beyond minimum standards and towards excellence in sustainability. They can be used as basis for due diligence assessments and serve as a reference point for interaction between companies on sustainable uses of the ocean.

Companies should understand the broader environmental and social consequences of their activities. Companies should ensure that material ocean-related risks and opportunities are integrated in corporate strategy, risk management and reporting. They should ascertain that the ensuing responsibilities are clearly defined within the organization. The company board should effectively guide, monitor and review company management in these efforts.

The principles are not introducing a new set of reporting measures, but rather encourage companies to use existing mechanisms to disclose their practices.

**\*DISCLAIMER:** This guidance and the information contained therein are intended as a general guide to the issues addressed. They must not be considered a substitute for legal advice and questions regarding the legal interpretation and application of the information should be directed to appropriate legal counsel. Any actions taken or omissions or alterations made on the basis of this information are done at the user's risk.

The guidance was issued in September 2020 and will be updated on a regular basis to ensure that relevant developments, expectations, standards and requirements are properly reflected.

## 2. THE GUIDANCE

### WHAT?

This guidance document is complementary to the UN Global Compact Sustainable Ocean Principles and is intended to broadly outline ways to operationalize these nine principles to specific industry sectors. The guidance aims at guiding signatories on how they can deliver on the principles in practical terms.

### WHO?

First and foremost, the audience is set of companies operating in the sector targeted by the guidance. The guidance may also be used by financial institutions and insurers as a due diligence tool and to inform their decisions. The guidance may also support policymakers and civil society organizations to better understand the challenges, opportunities, regulations and standards of the sector.

### WHY?

The guidance aims at identifying shared challenges, common solutions, risks, opportunities, relevant partnerships and reporting frameworks needed to help operationalize the principles.

### HOW?

The document starts with an introduction presenting the authors and contributors, defining the scope of the document and general considerations for the sector, in line with the preamble of the Sustainable Ocean Principles.

#### **The guidance is organized in three sections: following the Sustainable Ocean Principles**

- **OCEAN HEALTH AND PRODUCTIVITY**
- **GOVERNANCE AND ENGAGEMENT**
- **DATA AND TRANSPARENCY**

For each of these sections, the guidance describes the main challenges and opportunities of the sector.

The document also highlights relevant reporting frameworks and partnerships which will help companies in the implementation of the principles.

Under each principle, the document seeks to provide clear and practical tools on how to implement the principles in business operations. In order to inspire companies, the document also identifies good practices from companies or initiatives.



## Sustainable Ocean Principles

The ocean is vital to the wellbeing and prosperity of humankind. To achieve the world community's ambitions as laid out in the Sustainable Development Goals, there is a need to expand our use of the ocean to produce food, energy, raw materials and transportation. Carrying out these activities in a sustainable manner will contribute to reducing global warming and environmental degradation. Ensuring a healthy ocean provides significant opportunities for business and global economic growth.

As described in Sustainable Development Goal 14 on Life Below Water, there is an urgent need to protect and restore the health of the ocean, which is rapidly deteriorating due to increasing temperatures, acidification, depletion of natural resources and pollution from land and sea. Businesses have a shared responsibility, alongside Government and civil society, to take necessary actions to secure a healthy ocean.

These Sustainable Ocean Principles provide a framework for responsible business practices across sectors and geographies. They build upon and supplement the Ten Principles of the United Nations Global Compact on human rights, labour, environment and anti-corruption. We, as signatories of these principles, recognize the urgency and global importance of a healthy ocean, and will take action to promote the well-being of the ocean for current and future generations. As relevant to their business, we believe that companies should:

### OCEAN HEALTH AND PRODUCTIVITY

**Principle 1:** Assess the short- and long-term impact of their activities on ocean health and incorporate such impacts into their strategy and policies.

**Principle 2:** Consider sustainable business opportunities that promote or contribute to restoring, protecting or maintaining ocean health and productivity and livelihoods dependent on the ocean.

**Principle 3:** Take action to prevent pollution affecting the ocean, reduce greenhouse gas emissions in their operations to prevent ocean warming and acidification, and work towards a circular economy.

**Principle 4:** Plan and manage their use of and impact on marine resources and space in a manner that ensures long-term sustainability and take precautionary measures where their activities may impact vulnerable marine and coastal areas and the communities that are dependent upon them.

### GOVERNANCE AND ENGAGEMENT

**Principle 5:** Engage responsibly with relevant regulatory or enforcement bodies on ocean-related laws, regulations and other frameworks.

**Principle 6:** Follow and support the development of standards and best practices that are recognized in the relevant sector or market contributing to a healthy and productive ocean and secure livelihoods.

**Principle 7:** Respect human-, labour- and indigenous peoples' rights in the company's ocean related activities, including exercise appropriate due diligence in their supply-chain, consult and engage with relevant stakeholders and communities in a timely, transparent and inclusive manner, and address identified impacts.

### DATA AND TRANSPARENCY

**Principle 8:** Where appropriate, share relevant scientific data to support research on and mapping of relevance to the ocean.

**Principle 9:** Be transparent about their ocean-related activities, impacts and dependencies in line with relevant reporting frameworks.

# OCEAN RENEWABLE ENERGY

## CONTRIBUTORS:

**Lloyd's Register** (J. Borkland);  
**Vattenfall** (Dr. E. Philipp); **Ørsted** (S. Hartfield Lewis and N. Nanuk); **Fred Olsson Renewables** (Dr. C. Heeps); **OffshoreWind.org** (R. Tyler)

## CONSULTATIVE GROUP:

**Lloyd's Register** (A. Calogiros, S. Johnson);  
**E.ON** (H. Matthiesen); **EDF-RE** (J. Philippe-Pagot);  
**MC-Power.co.jp** (K. Tanaka); **Tecnalía** (J.L. Villate);  
**Ocean Energy Europe** (L. Pirttimaa);  
**IUCN** (G. Carbone)

## THE SCOPE OF OCEAN RENEWABLE ENERGY (ORE)

The guidance outlined herein has relevance to all activities related to:

- The characterization of the ocean, ocean/atmosphere interface, and atmosphere over the ocean for the purpose of developing ocean renewable energy (ORE);
- The construction and operation of ORE project;
- The decommissioning of ORE projects; and
- The manufacturing, shipping, transport, and logistics handling of components, parts, personnel, or elements of ORE, including the supply chain; in both the coastal and offshore areas of the global ocean.

The guidance in this document has a strong focus on offshore wind, which is currently the most utilized and mature power generation technology in the ocean. This guidance is also applicable to less mature technologies, such as wave, tidal and floating solar, where potential is recognized, and development is encouraged, to add diverse solutions for clean sustainable ORE to the diverse communities and economies that exist in or by our ocean.

ORE can deliver on several of the Sustainable Development Goals including: Goal 7 (affordable and clean energy), Goal 8 (decent work and economic growth), Goal 9 (industry, innovation and infrastructure), Goal 11 (sustainable cities and communities), Goal 12 (responsible consumption and production), Goal 13 (climate action), Goal 14 (life below water).

## GENERAL CONSIDERATIONS FOR THE SECTOR:

- The ocean is critical to the health of the planet and all its inhabitants. ORE projects have a positive impact on the global energy footprint, helping create a more sustainable, cleaner, and healthier environment, and enhancing the health and productivity of the ocean. Unlike other energy generation technologies, ORE technologies do not generate greenhouse gases during power generation.
- Determining the sustainability profile of the technology remains a challenge even today and requires more research and collaboration to truly understand the carbon footprint of ORE technologies. While ORE is clean energy, the construction of ORE projects have the potential to impact the ocean and its local environment.
- Marine spatial planning is critical. ORE projects have the potential to overlap geographically with other users of the sea, including fishing, mining, shipping, transportation, safety & security users of the ocean.
- Ocean renewable entities operate globally. Most projects are proximal to the land-based electric load demands of the populations they serve. Onshore grid systems must be updated to produce ocean energy that is efficiently transmitted to users. In Europe, an offshore high voltage transmission system is being developed to allow for a larger amount of ORE and interconnectors for wider distribution of energy.
- The industry operates under national and international legislation and regulation. Projects are subject to a complex legal and regulatory landscape, and consideration of the impacts of such projects to the ocean, the environment, and other users of the ocean is critical to ensure efficacy and sustainability. This topic is further addressed in the report: Mapping Ocean Governance and Regulations (2018). [View the report here.](#)
- The value chain is often multi-tiered and complex, and, therefore, it is important to maintain transparency in all operations and activity, including through the range of project supply chains.

# OCEAN HEALTH AND PRODUCTIVITY

## CHALLENGES AND OPPORTUNITIES WITHIN THE ORE SECTOR

ORE activities, by their nature, represent an overwhelmingly significant benefit to the environment as well as to the health of the ocean and the planet. Ocean energy contributes to the decarbonization of the energy system by replacing fossil fuels with electricity from carbon neutral sources. It does not only reduce CO<sub>2</sub> emissions but also the need for marine transportation of gas or petroleum, preventing the risk of harmful spills. Replacing fossil fuel power generation with renewable energy will greatly reduce emissions across the supply chain of power generation.

However, the placement of large physical structures in the ocean can have impacts on the ocean environment, particularly when considered in the context of all other ocean uses. Impacts can be generated throughout the lifecycle of the asset within and near the installations; along the transport routes of vessels involved in construction; operation and maintenance; decommissioning of the structures; and along the connection route(s) that transmit the electricity. While generally much lower than its energy counterparts — the manufacturing and fabrication of renewable energy installations have a CO<sub>2</sub> and resource footprint themselves. Potential impacts of ORE projects on sustainability include:

- Environmental disturbance during site assessment and installation
- Effects on the natural habitat and migration routes for fish, marine mammals, endangered species and birds
- Effects on fisheries, including potential impacts on fish populations and possible difficulties imparted on those persons that rely on the resource for their livelihood
- Inadvertent introduction of invasive species — which could negatively impact native species ability to sustain themselves
- Inadvertent impacts to cultural or historically significant resources in the ocean or coastal areas within or proximal to ocean energy development areas
- CO<sub>2</sub> emissions, resource use, ecological impacts — especially during component manufacturing
- Positive impacts include marine reserve and artificial reef effects

## MARINE SPATIAL PLANNING AND STAKEHOLDER MANAGEMENT

Lack of an industry-wide, coordinated and clear approach to spatial planning and stakeholder management has led to confusion in the industry, hindered progress of the industry, and led to a lack of acceptance from local communities and Indigenous Peoples. Most required Environmental Impact Assessments (EIAs) include a mandatory stakeholder consultation. This should be as robust as the situation requires. It is recommended that solutions be put forward to create an environment where all stakeholders are considered and engaged to ensure a more harmonious integration and co-existence of the asset throughout its lifecycle. (see guidance for Principle 4)

## SUSTAINABLE BUSINESS OPPORTUNITIES

The practice of incorporating renewable energy into the energy mix promotes sustainability. Nevertheless, placement of structures into the ocean has impacts — negative and/or positive. Signatories conducting ocean renewable energy projects should mitigate negative impacts and are encouraged to proactively identify means and methods to manage impacts and promote sustainability. This will enable them to contribute in restoring, protecting, maintaining and enhancing the health and productivity of the ocean and those whose livelihoods depends on it.

## LONG-TERM SUSTAINABILITY

Adherence to industry practices that avoid environmental or ecological harm, promote the safe, decent and equitable use of labor, respect history and artifacts, result in a cleaner and more productive ocean, and involve as many stakeholders as appropriate. This supports the long-term sustainability and use of the ocean.

- ORE projects are encouraged to undertake proper planning and pre-development assessment aligned with relevant science of impacts and mitigation opportunities — these will assist in promoting sustainable and viable use of the ocean for renewable energy.
- Careful, safe, and clean use of the ocean environment leads to a synergistic affect.

ORE activities may have an impact on coastal and marine resources, (for example sound impacts during geophysical and geotechnical data collection, habitat impacts during project construction, and ecological impacts during operations or decommissioning). Some impacts come from time-limited construction activities, and others come from operations. There is a need, prior to development activities, to fully assess the potential impact of a project and identify possible mitigation actions. In some cases, compensatory mitigation may be a tool.

Wind farms are erected in portions of the ocean where commercial fishing is active, leading to potential conflicts of use of space. Opportunities to address the challenge include fishing industry projects assigning a fisheries liason (a former or current fisherperson) to interface with the fishing industry and find common ground and compromises. To date, no collision with marine animals has ever been observed by any of the monitoring programs put in place when installing ocean energy devices.

## REPORTING REGIMES

Regulatory regimes for the ocean renewable marketplace require input and approval prior to initiation of any investigatory or construction activities. Detailed descriptions of the site selection process, installation methodology and expected maintenance procedures and relevant EIA of the planned activities should be reported. They should be reported in advance of the relevant activities to the appropriate regulatory bodies which will decline, request modification or give approval before any activities take place. In wave and tidal developments, which have to date been limited in deployment, adaptive management approaches should be implemented to allow installation while reducing uncertainties by monitoring potential impacts.

*(A list of Reporting Regimes can be found in the Data and Transparency Section - page 20)*

## PARTNERSHIPS OF RELEVANCE

Partnerships, institutional collaborations, and inter-country collaborative arrangements exist to assist the ocean renewable industry. Notable among these:

- |   |   |
|---|---|
| ■ National Renewable Energy Laboratory (NREL-US)                      | ■ Deltarus (NL)   |
| ■ Department of Energy (DOE-US)                                       | ■ Global Wind Organization (GWO)                        |
| ■ POWER-US (US Research & Academic Institution Collaborative for OSW) | ■ Ocean Energy Systems (OES)                            |
| ■ CATAPULT (UK)   | ■ DG MARE (European Commission)                         |
| ■ Fraunhofer Inst (DE)  | ■ WindEurope  |
| ■ Univ at Strathclyde (UK)  | ■ Ocean Energy Europe                                   |
| ■ Carbon Trust (UK)   | ■ EERA JP Wind and EERA JP Ocean                        |
|   | ■ International Union for Conservation of Nature (IUCN) |

Examples of International Classification Societies and Standards Organizations:

Lloyd's Register, DNV GL, ABS, UL provide publications, guidance, standards, and certification/verification/authorization support.



## PRINCIPLE 1.

### ASSESS SHORT- AND LONG-TERM IMPACTS OF COMMERCIAL ACTIVITIES ON OCEAN HEALTH AND INCORPORATE IMPACTS INTO STRATEGY AND POLICIES.

#### GUIDANCE

- Present a clear environmental ambition statement and policy from the CEO and/or governing board with voluntary enforcement.
- Identify and prioritize company activities that contribute to ocean health, in line with targets under SDG 14
- Develop planning documents through the project life cycle that clearly articulate environmental and ecological goals, aligned with relevant science.
- Develop policies of continuous business improvement, incorporating lessons learned and best practices into the daily business structure to direct better business performance based on sustainable models of development
- Conduct a preliminary Environmental Impact Assessment (EIA) to assess cumulative effects for already existing or future projects and operations in close proximity, including also non-renewable activities
- Establish plans and methods to mitigate disturbance to ocean ecosystem throughout planning, installation and operation — e.g. using floating lidar instead of installed met ocean masts.
- Set KPI's in order to track and monitor performance related to
  - emissions throughout supply chain and life cycle (e.g. optimized maintenance)
  - Marine life incidents, disturbance of habitats and ecosystems
- Include stakeholders and utilize local expertise into the monitoring, planning, review and assessment process with the aim of taking a precautionary and adaptive management approach
- Clear reporting of (non-proprietary) information and data to grow the body of knowledge and enhance the database of information in the industry (see guidance for Principle 8 and 9)

#### GOOD PRACTICE EXAMPLES

- **Ireland's Electricity Supply Board (ESB):** is actively working to reduce environmental impacts from operations through focused feasibility and route/site selection, EIA screening, formal scoping, mitigation and monitoring.
- **RWE Renewables Japan G.K and Kyuden Mirai Energy:** have combined efforts to conduct a full-scale feasibility study for offshore wind development, based on Offshore Wind Promotion Law and EIA processes.

## PRINCIPLE 2.

**CONSIDER SUSTAINABLE BUSINESS OPPORTUNITIES THAT PROMOTE OR CONTRIBUTE TO RESTORING, PROTECTING, AND MAINTAINING OCEAN HEALTH, PRODUCTIVITY, AND LIVELIHOODS DEPENDENT ON THE OCEAN.**

### GUIDANCE

- Routinely conduct non-invasive EIAs
- Conduct full EIAs of dismantling operations
- Employ, to the extent possible, construction and management practices that promote and encourage sustainability considerations (e.g. scouring protection fixtures around the seabed fixtures can provide artificial reefs and over time, may contribute to the enhancement of habitat of certain marine life)
- Maintain long-term environmental impact studies aligned with the relevant science to learn and to disseminate information on any long-term impacts of the ORE projects and programs
- Engage with relevant stakeholders to gather input, determine impacts on both directly and indirectly impacted entities, and seek consensus on development pathways that take into consideration the range of users, impacted parties, and the ocean environment

### GOOD PRACTICE EXAMPLE

- **Wave Dragon, Seaweed Energy Solutions and BELLONA:** are working together on a combined wave and aquaculture (seaweed) project. The seaweed farm will benefit from calmer water behind the devices. This enables them to grow in areas which would not normally be viable, producing sustainable and renewable biomass to meet the demands of a growing population.

## PRINCIPLE 3.

### TAKE ACTION TO PREVENT POLLUTION AFFECTING THE OCEAN, REDUCE GREENHOUSE GAS EMISSIONS IN OPERATIONS TO PREVENT OCEAN WARMING AND ACIDIFICATION, AND WORK TOWARD A CIRCULAR ECONOMY.

#### GUIDANCE

The ORE industry is encouraged to report all accidents and activities related to any ocean site that unexpectedly damage ocean health to the appropriate regulatory authorities; and provide reports with evidence that sufficient clean-up and/or mitigation activities and actions have taken place.

- Consider the adoption of continuous improvement quality assurance, health and environment processes that positively impact the company's reduction of the potential for accidents and emissions
- Require training in both safety procedures, accident avoidance, emergency cleanup, and appropriate response to minimize the potential for releases, accidents, or spills; and to maximize response to reduce impacts
- Manage accidental risk and environmental impacts, assess hazardous substances, energy efficiency and CO<sub>2</sub> emissions of their own operation and within the supply chain using lifecycle assessment aligned with the relevant science
- Conduct safe practices, including life cycle assessments, regular inspections, assessments, and reviews for project activities, processes and procedures
- Follow a reporting and continuous improvement scheme that identifies near misses as well as accidents and uses the Heinrich accident pyramid to educate and empower its workforce to continuously reduce the potential for accidents, spills, and releases, and improve safety, security, and environmental and ecological stewardship
- Adopt continuous reduction of greenhouse gas and CO<sub>2</sub> emissions from direct project operations as well as from transportation activities and the manufacturing components for projects
- Contribute to improved circular economy by assessing recycled content and recyclability, working on the recyclability of composites and supporting R&D in this area

#### GOOD PRACTICE EXAMPLES

- **Bockstigen:** is the first offshore wind farm to receive partial repowering which will extend the windfarm and components lifespan.
- **Carbon Trust Vessel Emissions Program:** European Developers EnBW, Equinor, innogy, Ørsted, RWE, Scottish Power, Shell, SSE, and Vattenfall partner to advance technology for fuel consumption and emission reduction from crew transfer vessels used for offshore wind farm operations.
- **Ørsted:** Plans to be the first major energy company to reach net-zero emissions, setting target for carbon neutrality in energy production and operations by 2025 and in full supply chain by 2040.
- **Ørsted:** Co-designed new offshore wind service vessel to desalinate seawater, reducing plastic waste by 8000 bottles per trip.
- **Collaborate with bodies such as the IEC on life extension standards (IEC 61400-28:** through life management and life extension of wind farms) of assets to increase the longevity and operational lifetime of the asset.

## PRINCIPLE 4.

**PLAN AND MANAGE USE OF, AND IMPACT ON, MARINE RESOURCES AND SPACE IN A MANNER THAT ENSURES LONG-TERM SUSTAINABILITY; AND TAKE PRECAUTIONARY MEASURES WHERE ACTIVITIES MAY IMPACT VULNERABLE MARINE AND COASTAL AREAS, AND THE COMMUNITIES THAT ARE DEPENDENT UPON THEM.**

### GUIDANCE

- Consider marine spatial planning and identification of impacts and mitigation activities for ocean renewable projects aligned with the relevant science
- Assess associated environmental impacts and risks using the relevant and applicable legislation within the local market, such as EIA

Developers and stakeholders across the supply chain are encouraged to seek advice from the relevant agencies and local regulators to ensure knowledge and awareness of the dependencies on the region and environment. Activities could include:

- Review reports and analyze existing information concerning site conditions, vulnerabilities, sensitivities, and environmental and ecological stressors prior to planning projects. Conduct initial desktop studies to frame existing conditions, identify data gaps, and plan future data gathering activities and investigations
- Consider developing models of the existing conditions and overprinting the models with proposed activities to identify impacts
- Develop appropriate mitigation measures based on modelled and measured inputs. Mitigation measures should be assessed and implemented, where applicable
- Use data collected from similar locations as a reference for environmental impact studies as much as possible
- In some cases, it may be appropriate to consider the use of compensation for impacts that cannot be avoided or mitigated or reduced to acceptable levels
- Thorough review of data and information available from multiple sources concerning site location and conditions
- Consideration of complementary activities that could be beneficially linked into renewable resources plans as part of the spatial planning process. (e.g. aquaculture with ocean thermal energy conversion)
- Synthesize information from desktop review into model of overall existing site conditions. Evaluate vulnerabilities and environmental and ecological concerns
- Demonstrable full compliance with local regulations and ongoing tracking
- Demonstration of the use of leading, cutting edge engineering solutions and technologies to meet stringent regulations in different countries that are aimed at reducing potential impacts

### GOOD PRACTICE EXAMPLE

- **Alpha Ventus:** pioneered the interplay between offshore wind farms and the marine environment to assess impacts on marine life.

# GOVERNANCE AND ENGAGEMENT

## CHALLENGES OF THE SECTOR

ORE activities are ocean-based and dependent on the ability to co-exist with the multiple users of the ocean and coastal waters.

The industry is evolving and maturing into an industrial sector with most infrastructure based offshore and export cable connection(s) to landfall. There will be infrastructure requirements onshore for connection and transmission, along with facilities to support project construction and long-term operations and maintenance activities.

The industry can bring significant and sustainable socio-economic benefits to coastal communities (including Indigenous People) providing opportunities for regeneration and diversification, for example by using the same infrastructure and supply chains that service traditional maritime industries.

## REPORTING REGIMES AND PARTNERSHIPS OF RELEVANCE

In areas where renewable projects operate, general standards have been established by authorities on an international, national or project specific level. It should be noted, however, that where the renewable energy business is in nascent stages or where offshore operations take place outside territorial limits, these may not exist. In such circumstances, individual companies or industry organizations should implement recognized industry sustainability practices together with the relevant authorities to ensure safe and environmentally sound performance

### Example of relevant standards and references:

- International Finance Corporation (IFC) performance Standards, Voluntary Principles on Security and Human Rights (VPSHR)
- International Organization for Standardization (ISO) Standards: 14001 (environmental management), 50001 (Energy efficiency)
- UN Global Standards — Human Health & the Environment
- US Code of Regulations – Environmental — 29CFR1410
- US OSHA Standards — HSE — 29CFR

### Examples of relevant authorities include:

- Bureau of Ocean and Energy Management - BOEM (United States)
- Bureau of Safety and Environmental Enforcement (BSEE-United States)
- Crown Estate (United Kingdom)
- BSH-Bundesamt für Seeschifffahrt und Hydrographie / Federal Maritime and Hydrographic Agency (DE)
- Danish Energy Agency (DK); Netherlands Enterprise Agency (NL)
- International Union for Conservation of Nature (IUCN)
- Energy Act (NO)
- Ministry of Economic Affairs Bureau of Energy (TW)
- Australian Agency for International Development and ASTAE (AU)
- State Planning Commission (CN)
- Central Electricity Authority (CEA) and Ministry of Power (MOP)-(IN)
- Global wind organization (GWO; safety and trainings)
- G+ Global Offshore Wind Health and Safety Organization
- DG MARE (European Commission)

### Example of relevant partnerships include:

- Wind Europe sustainability working group (Europe)
- Global wind organization (GWO; safety and trainings)
- G+ Global Offshore Wind Health and Safety Organization, Ocean Energy Europe (Europe).
- GWO training standard to ensure safety and avoid accidents

*(A list Reporting Regimes of can be found in the section Data and Transparency on page 20)*

## PRINCIPLE 5.

### ENGAGE RESPONSIBLY WITH RELEVANT REGULATORY OR ENFORCEMENT BODIES ON OCEAN-RELATED LAWS, REGULATIONS AND OTHER FRAMEWORKS.

#### GUIDANCE

- Maintain a consistency of approach whether the business is interacting directly as a principle developer, as a subcontractor, supply chain entity, or through a professional organization with regulatory authority
- Ensure compliance with mandatory rules and regulations; applicable codes, guidelines and standards recommended by the International Maritime Organization (IMO), administrations, classification societies and maritime industry organizations are taken into account
- Meet reporting requirements set out in lease documentation, or under any local legislative requirements (see also Guidance under Principle 9)
- Seek to contribute to any relevant state/local initiatives that are providing an industry-wide perspective
- Engage responsibly with policymakers, which includes: identify the risks, opportunities and influences on policies; align internal practices and external messages; and report publicly

#### GOOD PRACTICE EXAMPLES

- **Japan:** drafting new rules and frameworks setting clearer targets and objectives to facilitate development of offshore wind sites.

## PRINCIPLE 6.

**FOLLOW AND SUPPORT THE DEVELOPMENT OF STANDARDS AND BEST PRACTICES THAT ARE RECOGNIZED IN THE RELEVANT SECTOR OR MARKET CONTRIBUTING TO A HEALTHY AND PRODUCTIVE OCEAN AND SECURE LIVELIHOODS.**

### GUIDANCE

- Proper and prompt dissemination of information is critical in building confidence between the industry and stakeholders
- Promote best practices to ensure safety of operations and minimize impacts on the environment, including from contractors. Where relevant work with country authorities to promote adoption of good safety and environmental practices by all involved. Harmonized regulations can help to ensure transparency and planning security for projects
- Contribute to the promotion of sound practices for operations and benchmark performance of other actors, both from the renewable energy sector and other industries
- Share best practices in international conferences and publications

### GOOD PRACTICE EXAMPLES

- **U.S. BOEM:** undergoing a workshop to develop best management practices for offshore wind, solicit stakeholder feedback, and identify "lessons learned" from UK Experience.
- **Scottish Government:** works with local fishery communities and developers to establish productive sharing of ocean space.
- **Crown Estate:** publishes Marine Research Report on the impacts of offshore wind farms on the well being of the ocean and the surrounding communities.

## PRINCIPLE 7.

**RESPECT HUMAN, LABOR, AND INDIGENOUS PEOPLES' RIGHTS IN OCEAN RELATED ACTIVITIES, INCLUDING: EXERCISE APPROPRIATE DUE DILIGENCE IN SUPPLY-CHAIN DEVELOPMENT; CONSULT AND ENGAGE WITH RELEVANT STAKEHOLDERS AND COMMUNITIES IN A TIMELY, TRANSPARENT AND INCLUSIVE MANNER; AND ADDRESS IDENTIFIED IMPACTS.**

### GUIDANCE

- Appoint dedicated and experienced practitioners to ensure full and effective communication and engagement with local communities, including Indigenous Peoples, to minimize impacts, realize opportunities and benefits
- Recognize and respect the rights of Indigenous Peoples, under applicable international, national and local law, and best practice measures
- Develop Project Stakeholder Matrix
- Develop and implement a range of consultation methodologies that have relevance and meaning to different groups. Provide sufficient time to facilitate participation and contribution to the dialogue. This includes: Early and regular consultation to ensure that stakeholders are identified, project information is disseminated and exchanged; and stakeholders are provided with opportunities to contribute
- Seek to understand and consider how best to integrate stakeholder views, aiming to achieve consensus and create opportunities for further long-term participation
- Consider the need for Community Benefits Schemes and partnerships throughout the project lifecycle, working with relevant local organizations and interest groups to identify appropriate and meaningful actions
- Work with supply chain stakeholders and academia to identify regional and local training and workforce development requirements and opportunities
- Take steps to understand supply chains, identifying salient human rights and labour rights risks, and assessing potential human rights and labour rights violations
- Build the capacity of partners and suppliers in their efforts to ensure decent working conditions in their operations, giving special consideration to the needs of SMEs, and improve the knowledge of workers on their fundamental rights
- Undertake efforts to enhance the positive social and labour effects of operations to achieve decent work for all, taking into account the Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy (MNE Declaration)
- Require major business partners along their supply chain to have anti-discrimination policies on the basis of gender, age, ethnicity, sexual orientation, race, disabilities, religion or membership of a union



## GOOD PRACTICE EXAMPLES

- **Statkraft Hitra Windfarm:** created open dialogue with the local municipality and local stakeholders from the onset to encourage comments and recommendations to reduce potential conflicts which were then disseminated through local news outlets.
- **RWE:** monitoring socio-economic impacts of Gwent y Môr windfarm in North Wales, UK.
- **Iberdrola:** liaises with local business as well as contributes funding to local fishing projects around a planned offshore wind farm in Brittany.
- **Orsted:** Proactively communicates and collaborates with fishermen affected by offshore wind projects to achieve co-existence.

# DATA AND TRANSPARENCY

## CHALLENGES AND OPPORTUNITIES OF THE SECTOR/RELEVANCE

### Share Data and Support Research

This aspect covers typical environmental baseline studies, EIAs and environmental monitoring during operations. Significant amounts of relevant scientific data are often generated during such studies. This data builds the foundation for sustainable operational decisions as well as ocean knowledge and awareness in general. It also provides invaluable information in relation to reducing future impacts and seeking appropriate new sites for offshore generation.

A centralized database could be created to share research and monitoring data for regulators and developers, where both can check information about similar projects and evidence of environmental impacts. Authorities have a role to play in providing and maintaining suitable data storage platforms and services to ensure collection, storage and distribution of collected data.

## PARTNERSHIPS AND INITIATIVES OF RELEVANCE

- I-Atlantic
- Biodiversity networks
- The Crown Estate's Marine Data Exchange in the UK
- MARLIN platform (BSH, Germany)
- GEOSEA
- EMODNET

## REPORTING REGIMES AND PARTNERSHIPS OF RELEVANCE

- UN Global Compact Communication on Progress
- Inter-American Development Bank Guidance
- Global 100, CDP Climate Change score
- Bloomberg's ESG rating
- CEO call to action (Europe)
- Wind Europe sustainability working group (Europe)
- CFAS (composites)
- IMO Standards
- National Marine Fisheries (US)
- National Oceanic and Atmospheric Administration (US)
- US Army Corps of Engineers (US)
- International Energy Agency (IEA)
- Natural Resources Defence Council (NRDC-US).
- Site and Ocean Property Owners and Site Managers
- Bureau of Ocean and Energy Management - BOEM (US)
- Bureau of Safety & Environmental Enforcement (BSEE-US)
- Crown Estate (UK)
- BSH-Bundesamt für Seeschifffahrt und Hydrographie / Federal Maritime and Hydrographic Agency (DE)
- Danish Energy Agency (DK)
- Netherlands Enterprise Agency (NL)
- Energy Act (NO)
- Ministry of Economic Affairs Bureau of Energy (TW)
- Australian Agency for International Development and ASTAE (AU)
- State Planning Commission (CN)
- Central Electricity Authority (CEA) and Ministry of Power (MOP)-(IN)
- Global wind organization (GWO; safety and trainings)
- G+ Global Offshore Wind Health and Safety Organization
- DG MARE (European Commission)
- World Bank Guidance: environmental standards for project development

## PRINCIPLE 8.

**WHERE APPROPRIATE, SHARE RELEVANT SCIENTIFIC DATA TO SUPPORT RESEARCH ON, AND MAPPING OF, RELEVANCE TO THE OCEAN.**

### GUIDANCE

- Make the data available to relevant stakeholders and shared with the scientific community to the extent possible. Further consideration can be given to interested parties (NGOs and research bodies) that would otherwise have no access to such valuable data
- Share data in prescribed formats and collected and stored in line with the requirements of the agencies in the relevant market
- Confirmed with the appropriate stakeholder forums for data sharing, whether this be strategic groups, global datasets and or country specific databases

In undertaking ocean data management, developer or project promoter should engage stakeholders in establishing the full complement of relevant data to be used and shared.

Data from the following activities/studies should be publicly available:

- Environmental baseline collection
- Ongoing and post-construction monitoring studies
- EIAs
- All data should be in an agreed format to local requirements to include meta data

### GOOD PRACTICE EXAMPLES

- **Carbon Trust:** released finding from the Floating Wind Joint Industry Project (JIP).
- **Equinor and Masdar:** have joined forces with ORE Catapult to share floating offshore wind data via a data sharing platform.
- **Orsted:** makes meteorological data from offshore wind farms available to facilitate research and education in renewables.

## PRINCIPLE 9.

### BE TRANSPARENT ABOUT OCEAN-RELATED ACTIVITIES, IMPACTS AND DEPENDENCIES IN LINE WITH RELEVANT REPORTING FRAMEWORKS.

#### GUIDANCE

- Timely reporting to appropriate authorities of all accidents, spills, releases of pollutants, and/or HSE incidents
- Report on activity as well as results from environmental and health and safety monitoring
- Publicly share results of environmental monitoring studies
- Reporting (against a baseline established prior to project inception) of an improved or deteriorated marine environment on a pre-set timeline and routine basis builds trust between the industry, regulators and stakeholders
- Engage with local experts concerning regulatory requirements and local stakeholders concerning potential conflicts and synergistic positive outcomes as part of the planning process
- Continuous monitoring of activities from planning through operation and decommissioning enables project advocates to ensure compliance, present environmentally and ecologically positive outcomes, and contribute to the body of knowledge in a particular geography or regulatory framework

#### GOOD PRACTICE EXAMPLE

- **Moray East Windfarm:** allows public access to its online document library including Environmental Statements.

