International Renewable Energy Agency (IRENA)

Input to 2022 Report of the Secretary-General on oceans and the law of sea,

mandated by United Nations General Assembly resolution 76/72

The International Renewable Energy Agency (IRENA) acknowledges the mentioning of renewable energy in the UN RES 75/72 para 303: *Welcomes the increasing attention being focused on oceans as a potential source of renewable energy, and notes in this regard the summary of discussions of the Informal Consultative Process at its thirteenth meeting, in 2012.*

IRENA furthermore welcomes the mentioning of renewables in the 2021 Report of the Secretary-General on oceans and the law of sea.

As an intergovernmental organisation, IRENA is working closely with over 167 members and 17 states in accession to strengthen the momentum of a global energy transformation driven by the **widespread adoption and sustainable use of all forms of renewable energy, including ocean energy.** IRENA supports **international cooperation, capacity building and knowledge exchange** to accelerate the deployment of offshore renewables in a way that also **protects and preserves the marine environment**. Developing countries are key beneficiaries of its assistance and capacity building activities in this area.

Oceans are a source of abundant renewable energy potential, capable of driving a blue economy. Energy harnessed from oceans, through offshore renewables, can contribute to the **decarbonisation of the power sector**. **Renewable energy, including new innovative technologies, can also serve as a clean power source for shipping** (biofuels, green hydrogen, synthetic fuels) as an alternative to oil and **desalination of water, further fostering the blue economy.**

Offshore renewables can also provide significant **socio-economic opportunities** to countries with coastal areas and island territories, such as jobs creation, improved livelihoods, local value chains and enhanced synergies between blue economy actors. Ocean energy is **highly predictable**, making it very well suited to complement variable renewable energy sources such as wind and solar PV. Finally, this technology could specifically provide clean power and ensure energy security for **SIDS** and many of **LDCs.**

To put the world on a climate-safe pathway, 1.5°C scenario of IRENA's World Energy Transitions Outlook foresees a massive growth in offshore wind, ocean energy and floating photovoltaic in the coming decades.[1] Offshore wind for example would increase from **34 GW in 2020 to reach 380 GW by 2030 and more than 2,000 GW by 2050**. Ocean energy would represent additional **350 GW** of offshore renewable generation capacity by 2050.

Current IRENA activities in the area of ocean energy

International collaboration is critical to exchange lesson learnt, good practices and innovative solutions to address the issues listed above. IRENA has established the Collaborative Framework Offshore Renewables (CFOR) as a platform to facilitate such collaboration. In addition to the CFOR, IRENA has also joined forces with the Government of Denmark and the Global Wind Energy Council (GWEC) to establish the initiative Global Offshore Wind Alliance (GOWA.

[1] IRENA (2021), World Energy Transitions Outlook: 1.5°C Pathway, International Renewable Energy Agency, Abu Dhabi.

GOWA's vision, of a world in which offshore wind makes a significant contribution to the energy transition, is fully aligned with the Collaborative Framework. The aim is achieving a total global offshore wind capacity of 380 GW by 2030, with 35 GW of annual new capacity on average each year across the 2020s.

The G20 Italian presidency of 2021, acknowledging the importance of offshore renewables in the energy transition, commissioned IRENA to analyse and develop a proposed action agenda to foster offshore renewables deployment globally. Offshore renewables include offshore wind, ocean wave, tidal, thermal and salinity gradient technologies and floating solar PV. The report *"Offshore Renewables: An Action Agenda for Deployment"* published in July 2021 includes 50 concrete actions that G20 countries may consider while defining their national strategies for offshore renewables. Suggested actions include strengthening an oceans governance according to the UN Law of the Sea, the proper integration of offshore renewables in national Marine Spatial Planning, and the provision of public revenue support and early planning for the needed infrastructure (e.g. underwater cables and grid connections). The report was incorporated into the *Joint G20 Energy-Climate Ministerial Communiqué* of 23 July 2021 of the Energy Transition and Climate Sustainability Working Groups.

In addition to G20 discussions, the report has also informed other global multilateral discussions on climate change. For example, it was cited in the report from the United Nations Framework Convention on Climate Change (UNFCCC) on key emerging technologies titled *Draft technical paper on emerging climate technologies in the energy supply sector*. The report was also cited in various media outlets (e.g., Baltic Wind, Energy Central, Offshore Energy Biz, Modern Diplomacy, etc.). The analysis contained in the report also enriched the work of IRENA's Collaborative Framework on Ocean Energy/Offshore Renewables, co-chaired by the Kingdom of Tonga and Italy, at its 3rd meeting in June 2021. The Collaborative Framework meeting was attended by 74 participants from 33 IRENA Members.

Aimed at highlighting the plight of nations on the frontline of climate change as they grapple with rising sea levels, *Our Ocean Conference* took place in Palau in April 2022. IRENA Director General, Mr. Francesco La Camera spoke at a high-level panel discussion themed *Creating Sustainable Blue Economies*, Mr. La Camera said for SIDS and other vulnerable island nations, the development of the ocean economy holds considerable promise. "Offshore renewables can benefit all sectors of the economy, including tourism, shipping, aquaculture, agriculture, and water desalination."