

UNOOSA contributions to the Report of the Secretary-General on Oceans and the Law of the Sea

The United Nations Office for Outer Space Affairs, through its Programme on Space Applications contributes to the implementation of the General Assembly Resolution 74/19 with a range of initiatives.

Specifically, in response to A/RES/74/19 §11-13 (Section II. Capacity Building) that stress the importance of building national capacities taking into consideration and addressing local needs, UNOOSA has launched the Space Solutions for the Pacific project, with the generous support of the New Zealand Ministry of Foreign Affairs and Trade. The Project showcases the widespread interest and investment – at both the national and regional levels – in the use of space-based technology and data to accelerate sustainable development in the Pacific with a particular focus on marine issues, having identified and aiming to address local needs such as early warning and disaster risk reduction for climate change induced hazards (relevant to §200-202) and management and monitoring of coastal and marine ecosystems and resources (relevant to §192-194 and 196).

Noting the importance of international cooperation as acknowledged also in §15 as well as across Section XV, UNOOSA has established collaboration channels with local actors across the different governance levels and is pursuing the formalization of cooperation. In this regard, and to offer opportunities to its partners from the Pacific region to voice their needs and share their experiences, UNOOSA has supported participation of representatives to its international events, such as the United Nations/Austria Symposium “Space: A Tool for Diplomacy, Accessibility and Cooperation”, in Graz, Austria, from 2-4 September 2019. During the Symposium, a specialized session on “Space Accessibility: User needs – Space for Small Island Developing States (SIDS)” was organized with the participation of representatives from several SIDS, including the Pacific Islands, sponsored by UNOOSA.

In similar fashion, since 2018, UNOOSA has partnered with the Atlantic International Research (AIR) Centre in capacity-building efforts on marine issues. In the past six months, the Office participated and provided inputs to the workshop organized by the AIR Centre “Linking Earth Observation Data and Sustainable Development Across the Atlantic”, aiming at fostering the incorporation of Earth Observation (EO) and related in situ data products in the work carried out by researchers and stakeholders of coastal ocean and nearshore areas related activities, stimulating the development of new uses and engagement of new users of EO data products and services. The Office also provided inputs to the workshop “Tackling Observation Challenges in the Atlantic – the case for Small Satellite Constellations”, where potential baselines for constellations of small satellites and their sensors were discussed. The AIR Centre has also applied for permanent observer status to the Committee on the Peaceful Uses of Outer Space (COPUOS).

In addition, the Office and the AIR Centre, with the support of the Portugal Space Agency (PTSpace), have started to plan activities to contribute to the upcoming UN Ocean Conference originally scheduled to take place in Lisbon in June 2020. Even though the conference has been delayed, the partnership continues to raise awareness on the use of satellite-based data in support of ocean research and raise awareness on the aforementioned data and the linkages with the 2030 Agenda for Sustainable Development. UNOOSA’s partnership with the AIR Centre aligns with §14-15 of A/RES/74/19.

UNOOSA is also contributing significantly to the accumulation and dissemination of knowledge regarding the use of new space technologies for ocean affairs, supporting capacity-building in developing countries, in line with §33-37 and 218 among others.

While giving special attention to SDG 6 and the access to clean water and sanitation, the overall thematic focus of the Space4Water Portal lies in all water-related topics that can benefit from space technologies. So far UNOOSA has published a number of articles with space technologies used for improving marine-issues such as on marine litter and microplastics, harmful algal blooms, glacier and ice monitoring, and the indisputable role of ice in shaping the Earth's seas, as well as on marine management. The next article to be published will focus on coral reef bleaching. Furthermore, software and tools, as well as training material, which can be used for a broad range of thematic fields are introduced on the Portal. The Space4Water Portal has been made possible with the generous support of the Prince Sultan bin Abdulaziz International Prize for Water (PSIPW).

Similarly to the Space4Water Portal, the Knowledge Portal of UN-SPIDER (United Nations Platform for Space-based Information for Disaster Management and Emergency Response) aims to transfer lessons learned, highlight innovations and foster collaborative practices by systematically and continuously compiling the knowledge and available resources held by individuals and institutions. Among the thematic areas covered by the Knowledge Portal, Disaster Risk Reduction (DRR) and emergency response are prevalent, including instances of preparedness for and responses to tsunami, coastal floods, and cyclones. Existing tools and applications available for the monitoring of an array of marine issues (e.g. oil spills, algal blooms) are also presented in the Knowledge Portal (relevant to §238).

In addition to knowledge management, UN-SPIDER offers also a wide range of capacity-building services, particularly advisory ones, on DRR and emergency response. The programme equips member states with the tools to establish and autonomously maintain DRR institutions to mitigate the effect of and respond to climate change-related natural disasters, including tsunamis, cyclones, and sea-level rise). In the span of the past year, UN-SPIDER provided technical advisory support to Myanmar, Lao PDR, Peru, Ecuador, Cameroon, and Sri Lanka, among others.

Furthermore, acting as an entry point, UN-SPIDER provides access to the International Charter "Space and Major Disasters" and training on its use, effectively offering a unique tool to member states to assist them in monitoring major disasters free of charge. Such was the case of the Cyclone Idai in 2019, when UN-SPIDER facilitated activation of the International Charter to monitor its impact and support rescue and relief operations. UN-SPIDER activities are in line with §298 of the Resolution.

Lastly, UN-SPIDER has a long tradition of capacity building on tsunami early warning. Between 2013 and 2016 UN-SPIDER contributed to capacity building efforts conducted by the Intergovernmental Oceanographic Commission of UNESCO (UNESCO-IOC) on the topic of tsunami early warning systems, building on the previous links between UN-SPIDER and UNESCO-IOC dating back to 2003. Through this collaboration, UN-SPIDER staff contributed to the update of the UNESCO-IOC Guidelines on "Tsunami Risk Assessment and Mitigation for the Indian Ocean: Knowing Your Tsunami Risk - and What to Do About it", as well as joined and contributed to several capacity-building workshops on tsunami risk assessment, management and mitigation, such as the Design and Planning Workshop for IOC UNESCO project on

Enhancing Tsunami Risk Assessment and Management (Colombo, Sri Lanka, October 2013), Coastal Hazard Assessment: Applications in Risk Assessment, Management and Mitigation (Colombo, Sri Lanka, June 2015), and the Regional Training Workshop on Tsunami Risk Assessment and Mitigation, (Port Victoria, Seychelles, March 2016). These efforts allowed UN-SPIDER to maintain synergies with UNESCO-IOC and with the members of Working Group 1 of the Indian Ocean Tsunami Early Warning System, which was addressing the topic of risk assessment and risk management.