

**Concept note for the creation of the “Space4Ocean Alliance”,  
an International Alliance of space agencies and space organizations to contribute  
to the preservation, conservation and protection of the Ocean in view of UNOC3-2025**

**November 12, 2024**

The ocean covers 71% of the Earth’s surface. It represents the world’s largest biosphere, where about 80% of life are located. It produces 50% of the oxygen we breathe. It absorbs about 30% of the world’s CO2 emissions and 90% of the heat generated by these emissions. It is a vital element for life on Earth.

The ocean is a source of ecosystem solutions and services fundamental to the sustainability of humanity (food, energy, transport, communications, coastal urban attractiveness, etc.). It is now globally recognized that these activities must be carried out while maximizing all efforts to limit further anthropogenic pressures and mitigate their impacts on the marine environment.

Oceanography and Earth Observation from space have become major challenges to understand and model the mechanisms of ocean and coastlines evolution due to climate and biodiversity changes and due to the augmentation of anthropogenic pressure. Subsequently, 80% of the current indicators monitored by the IPCC (Intergovernmental Panel on Climate Change) are already provided by space applications.

But to meet major global agendas and international commitments, such as the United Nations (UN) 2030 Agenda for Sustainable Development and the Sustainable Development Goal No. 14 (SDG 14) which aims to conserve and sustainably use the ocean, seas and marine resources for sustainable development, the space community must take another step forward. Satellite data, often complemented by *in situ* reference measurements, now enable the development of solutions that are key for designing mitigation and adaptation strategies to the impacts of ocean change, particularly for frontline countries such as Small Island Developing States (SIDS), Least Developed Countries (LDCs) and Landlocked Developing Countries (LLDCs).

The United Nations Ocean Conference (UNOC) therefore provides a unique multilateral platform to assess whether these objectives are being met and can be improved with the help of the global space community under the aegis of the United Nations. As such and taking into account the continuous results of the ocean science community’s “Science for Action” framework<sup>(1)</sup>, where space actors already play a major role across various platforms, a UNOC “space special event” is essential to identify urgent needs and missing operational services that could be provided by the space community to leverage the use of satellite data by frontline communities on a global scale.

Recognizing the importance of the ocean for life and sustainable human presence on Earth, as well as the importance of data collected daily around the world by the space sector in relation to the ocean, the French space agency CNES ( “National Center for Space Studies”), following the recommendations of the French government, proposes to officially launch an initiative involving the space sector in favor of the ocean, namely the **“Space4Ocean Alliance”**, an Alliance of space agencies and space organizations to contribute to the preservation, conservation and protection of the ocean, on the occasion of the third United Nations Ocean Conference (UNOC) , which will take place in June 2025 in Nice (France).

<sup>(1)</sup> The terminology “Science for Action” brings together many initiatives shared by UN and non-UN platforms and brings together the efforts of the global scientific community to advance stakeholders awareness on the importance and role of science in political decision-making, particularly in the context of climate change (IPCC framework in particular). It was taken up for the UNOC3 One Ocean Science Congress (OOSC) side event in a generic way but goes beyond the framework of the ocean itself.

- **UNOC** is a high-level international conference on the theme of the ocean and organized by the UN since 2017 (UNOC1 at UN headquarters in New York in June 2017, UNOC2 in Lisbon in June 2022, jointly organized by Kenya and Portugal). In 2017, UN Secretary-General Antonio Guterres appointed a “Special Envoy for the Ocean,” Mr. Peter Thomson, from Fiji, to coordinate and strengthen the efforts displayed at UNOC1 and implemented during UNOC2, to guarantee the follow-up and allow the further development of actions in favor of “conservation and sustainability” in the field of the use of the ocean, seas and marine resources” (Sustainable Development Goal (SDG) 14). A “United Nations Decade of Ocean Science for Sustainable Development 2021-2030” was launched as part of these efforts.
- The main objective of UNOC3-2025, as declared by the United Nations General Assembly (UNGA), is to further support the implementation of UN SDG 14 by 2030. The state of the ocean urgently requires decisive, rapid and unified efforts to remedy its critical condition. Following up on the implementation of SDG 14 is based on specific objectives in terms of reducing marine pollution, protecting marine and coastal ecosystems, reducing ocean acidification, ending illegal fishing and overfishing, increasing scientific knowledge related to the ocean, enhancing respect of international standards, treaty and laws concerning the ocean, etc.
- UNOC3-2025 is jointly organized by France, as host country, and Costa Rica. The aim of the two countries is to reach consensus on a political declaration intended to strengthen efforts towards the achievement of SDG 14, this SDG receiving the least funding of all the SDGs. This declaration should define an action plan including voluntary contributions and financial commitments from member countries, the UN, international and regional entities, the private sector, as well as the mobilization of the global scientific community, civil society and all stakeholders.
- **Proposal to create the “Space4Ocean Alliance”, an Alliance of space agencies and space organizations to contribute to the preservation, conservation and protection of the ocean, with the aim to:**
  - 1- Collectively institute and support a multilateral forum of discussions gathering the space community around the theme of the ocean, through the signature of an International Pledge to be adopted during UNOC25 by space agencies and space organizations willing to participate.
  - 2- Establish an official Special Space Event at each UNOC to be organized by the hosting country and the United Nations.
  - 3- Collectively provide and share data and services, showcase and promote proven and operational applications and services related to the ocean, particularly towards emerging countries (LDC’s/LLDC’s/SIDS), in order to help them implement solutions addressing some of the main challenges they face notably with regard to the following key issues:
    - a. Coastal strips: enable a robust understanding and monitoring of coastal strips so that these territories can better monitor coastal erosion, plan consequent sustainable activities and take action to mitigate related impacts of climate change;
    - b. Illegal fishing: improve monitoring and control of IUU (Illegal, Unreported and Unregulated) fishing;

- c. Marine pollution: improve monitoring and control of natural and anthropogenic marine pollution; and
  - d. Marine protected areas: Improve monitoring and control of marine protected areas (MPA), whether coastal or beyond national jurisdictions (high seas).
- 4- *Strengthen and increase the capacity of the space community to address more operational needs by covering more and more precisely the main essential variables of the ocean. Therefore, CNES proposes that the Alliance be supported by new scientific missions in the field of Ocean observations. This vision, which is currently being implemented, will be proposed and shared within the space community in order to identify and fill gaps for better collective action.*

Through this operational prism, and with the support of the Committee on Earth Observation Satellites (CEOS), the “Space4Ocean Alliance” could participate in the definition and contribute to the "ocean health indicator", currently being prepared by an International Panel for Ocean Sustainability (IPOS), to be institutionalized at UNOC25.

### **The “Space4Ocean Alliance’s” core objectives**

- The “Space4Ocean Alliance” initiative aims to bring together space stakeholders (agencies, private and public operators, key end users, etc.) in order to set up a common forum for exchanges and discussions, in particular to present the latest space advances in ocean monitoring and the operational solutions that can result from them and that can benefit all.
- This initiative also aims to seek support from the international space community to plan new innovative or missing scientific missions, tools and concepts in the field of ocean observations in order to fill gaps in the field of space observations that are essential to better understand ocean issues and provide operational solutions to address them. This initiative aims to be recognized at the UN level in order to participate in international recommendations on ocean monitoring and understanding and be able to identify blocking points (technical, applicative, financial, legal, etc.), if any, for which the global space sector can bring solutions and contribute to the plenary discussions between UNOC members, in line with SDG14 supported by the UNGA.
- The “Space4Ocean Alliance” therefore aims for its exchange forum to be recognized as an official Special Space Event of the UNOC, so that its recommendations are part of the plenary sessions between Member States.
- Within this UN framework, the “Space4Ocean Alliance” will recommend giving priority to the development and operational use of space applications for countries that do not have space resources and in particular the least developed countries, small island developing states, .... with specific emphasis on the sustainable use of space for coastal strips observation, illegal fishing and marine pollution monitoring and for the preservation of marine protected areas including those envisaged in the framework of the BBNJ (Biodiversity Beyond National Jurisdictions) international agreement.
- It is proposed that this Special Space Event be repeated at each future UNOC with the support of the space agency or space organization of the State hosting the UNOC. This initiative may require a close coordination with the United Nations Office for Outer Space Affairs (UNOOSA) in consistency with its mandate and centrality to address sustainable development issues within the space community.

### **Space roadmap to UNOC3-2025: key milestones**

April 2024: “Space Symposium”, Colorado Springs, USA: early discussions with NASA & NOAA, JAXA, CSIRO, ISRO.

July 2<sup>nd</sup>, 2024: “**Ocean Space Forum 2**” (OSF 2), Monaco: first public announcement of the initiative.

July 2024: bilateral discussions with **JAXA and UAESA** and presentation to **COPUOS**.

July 2024: presentation to the **CEOS Coast WG** whose pilots are NOAA/ISRO and CNES in way to strengthen and amplify this initiative and inform about its integration into the UNOC roadmap.

September 17, 2024: Presentation to the **CEOS SITW** in Sydney during a side event/meeting or a plenary presentation.

October 15, 2024: « **International Astronautical Congress**” (IAC), Milano, Italy: side event to present the initiative and the first draft of the Pledge to the space community in order to gather first expressions of interests.

*December 18, 2024: **International meeting of Space actors in Paris** on the invitation of CNES to confirm first expressions of interest gathered at IAC Milan and to present the additional scientific missions proposed by CNES president Philippe Baptiste to reinforce ocean observation capabilities.*

December 2024 – May 2025: **International Pledge collective consultation and review with the space community**.

June 8 and 9, 2025: **Space Special Event & Side Event within UNOC3-2025, Nice, France**: official launching of the “Space4Ocean Alliance” with Heads of States, participation of space agencies & space organizations.

**Way-forward**: for further discussions, please contact:

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