

Collaborating for Ocean Sustainability: The Space4Ocean Alliance Vision

The Space4Ocean Alliance (S4O), initiated by the French space agency, CNES, is an action-driven coalition aimed at connecting the space sector with marine and maritime actors to enhance ocean preservation, conservation, and protection efforts. Grounded in science and leveraging space data, in-situ measurements, and advanced digital models, the Alliance addresses critical ocean and coastal challenges, thus contributing to global policy frameworks like the UN Sustainable Development Goals (SDGs), particularly SDG 14.

Key Objectives:

- **Strengthen collaboration** between the space community and marine, maritime, and other relevant stakeholders to effectively meet needs and priorities for management of ocean and coastal areas.
- **Address observational and operational gaps** through innovative space missions and applications.
- **Build capacities** by promoting best practices, expanding access to observation data, and fostering training initiatives, with a focus on empowering frontline countries such as Small Island Developing States (SIDS) and Least Developed Countries (LDCs).
- **Support the development of evidence-based local, regional and global ocean indicators** of the state and health of the marine environment, to guide decisions and policies.
- **Support and promote the delivery of operational services concerning the most critical ocean issues:**
 - **Marine Biodiversity Protection:** enhanced monitoring of Marine Protected Areas (MPAs) to safeguard ecosystems.
 - **Climate Change Impacts:** observation and assessment of ocean and coastal responses to climate change, natural disasters, and extreme events.
 - **Sustainable Blue Economy:** promotion of sustainable practices in fisheries, aquaculture, maritime energy, and decarbonized shipping.
 - **Pollution Control:** detection and mitigation of marine and coastal pollution.
 - **Coastal Zone Management:** development of tools to manage coastal ecosystems under increasing anthropogenic pressures.
 - **Maritime Security:** strengthened surveillance to combat illegal, unreported, and unregulated fishing activities.

The Space4Ocean Alliance provides an international platform for coordinated action, integrating space technology with ocean science to deliver impactful and sustainable solutions for the future. It does not constitute a new legal entity and will rely on existing international organizations for its operation.