

## → E04SD – EARTH OBSERVATION FOR SUSTAINABLE DEVELOPMENT

### Marine & Coastal Resources Management

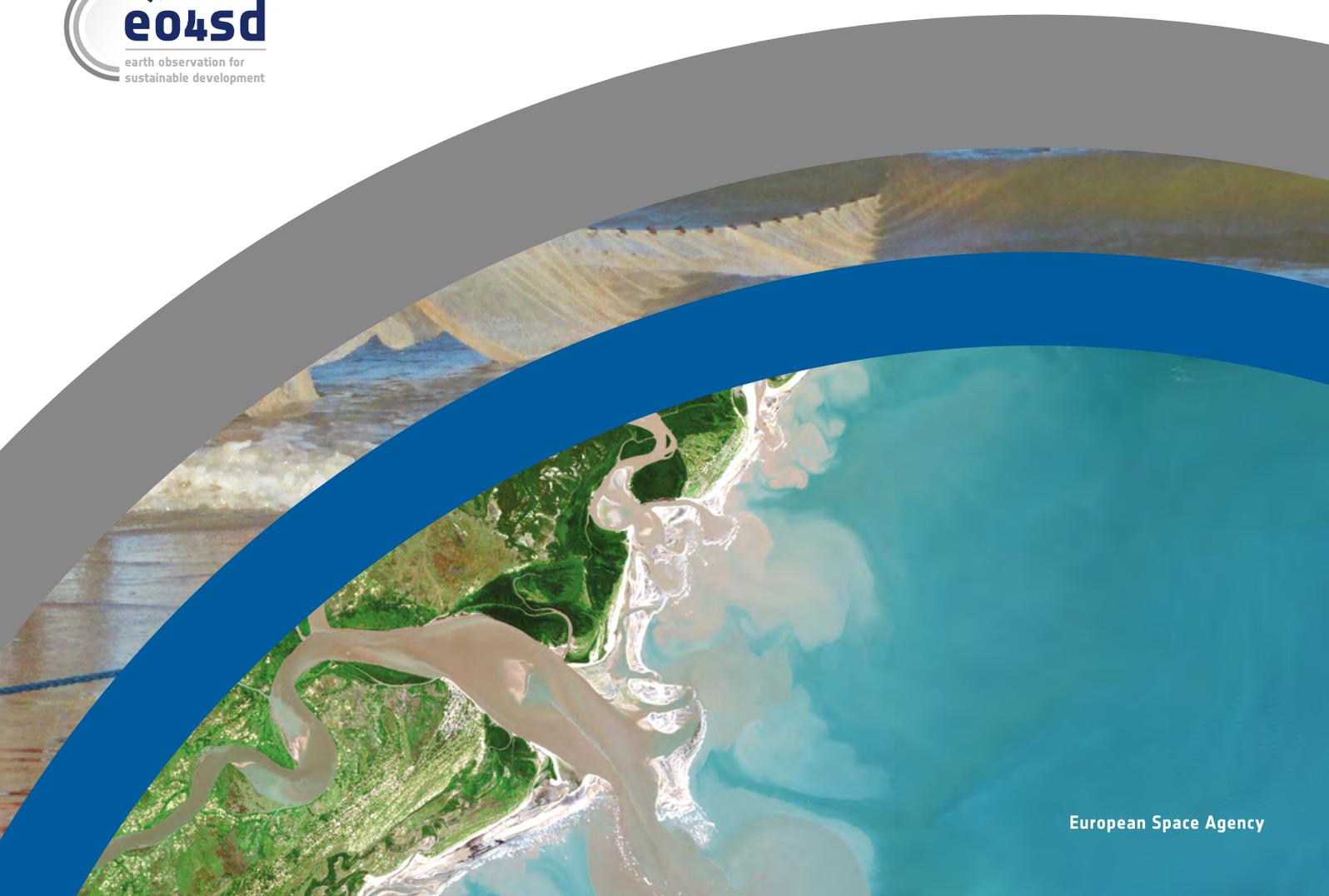
The world's oceans generate a wide range of goods and services and are essential to the global economy. The success of a sustainable ocean-based economy (and its contribution to social development and the wellbeing of dependent populations) is closely related to the state of the marine environment. Coastal and marine environments are often rich, with high levels of productivity and biodiversity; they are also vulnerable to climatic and anthropogenic pressures, affecting resilience of living resources and the services they provide.

Earth Observation (EO) data can support an unprecedented understanding of the global environment. They have a particularly vital role to play in the maritime regions: marine and coastal zones are expensive and challenging to measure and monitor using in-situ techniques. In many cases there are no viable alternatives for accessing information essential to decision making and management of these zones which face increasing pressures.

This project is working with a range of stakeholders in International Financing Institutions (IFIs) and their Client States to define and implement a large-scale demonstration of the application of EO derived information to support sustainable development activities in the marine and coastal environment. It will provide IFIs and Client States with an improved capability for accessing robust evidence-based information to underpin sustainable development and management activities. This capability will help partner countries to build a resilient marine and coastal socioecological system, and support their growing Blue Economies.

#### MAIN PARTNERS

- World Bank (WB)
- Asian Development Bank (ADB)
- Inter-American Development Bank (IADB)
- African Development Bank (AfDB)



## PROJECT ACTIVITIES COMPRISE

- Strategic planning, communication and stakeholder engagement to define user needs.
- Design and implementation of demonstration marine and coastal EO information services.
- Robust delivery and upscaling of a cluster of streamlined 'satellite to user' services in partnership with key stakeholders.
- Capacity building and mainstreaming to enable continued use of marine EO data beyond the timescales of this project.
- Impact evaluation and implementation review.

The expertise for delivery of the required EO services is drawn from some of the leading institutes, companies and individuals working in satellite oceanography, leveraging existing projects and activities wherever practicable.

## MAIN THEMATIC COMPONENTS AND EO-BASED INFORMATION

- › Hydrographic information (physical baseline and rates of change) e.g. coastal bathymetry mapping, coastline change mapping (sediment and erosion), coastal land cover/land use change.
- › Coastal environment information e.g. benthic habitat, water quality, coastal habitat status, Marine Protected Area (MPA) planning/management, invasive species.
- › Surveillance and monitoring information e.g. fisheries surveillance, marine pollution detection and monitoring, monitoring aggregate extraction and dredging, waste and pollution discharge from land.

- › Information to support development of the Blue Economy e.g. coastal infrastructure status, spatial planning support, aquaculture site selection, tourism/transport/energy, Environmental Impact Assessment (EIA).

This list will be expanded and refined through understanding the needs of the stakeholder groups.

## PRELIMINARY LIST OF CANDIDATE REGIONS

- Caribbean
- West Africa
- Western Indian Ocean
- Northern Indian Ocean
- East Asia Pacific

Specific countries will be selected in partnership with IFIs by December 2018.

## MAIN DEVELOPMENT PROGRAMS AND INITIATIVES

- › Global Partnership for Marine and Coastal Resource Management
- › West Africa Coastal Area Management Program (WACA)
- › West Africa Regional Fisheries Program (WARFP)
- › Western Indian Ocean Fisheries Governance and Shared Growth (SWIOFish)
- › Pacific Islands Regional OceanScape Programme (PROP)
- › Caribbean Regional OceanScape Programme (CROP)
- › Caribbean Ocean and Aquaculture Sustainability Facility (COAST)
- › Integrating Water, Land and Ecosystem Management in Caribbean SIDS (IWECO)



© ESA 2018



More info

ESA Technical Officer: Gordon Campbell – [Gordon.Campbell@esa.int](mailto:Gordon.Campbell@esa.int) | Project Lead: Amani Becker – [E04SD-marine@noc.ac.uk](mailto:E04SD-marine@noc.ac.uk)