- User: National and regional authorities, NGOs
- Challenge/Needs: Mangroves are critical ecosystems which provide coastal protection from storm surges, control floods, stabilize coastlines and enhance biodiversity. Furthermore, mangroves are a central component of the blue carbon ecosystem. Knowledge about mangrove extent, structure and dynamics is key to inform mangrove conservation and restoration planning and management.
- Initiative: Commercial product as a result of several years R&D
- Results: Applying supervised machine learning algorithms, mangroves are accurately mapped and characterized using high resolution satellite data. The mangrove extent product provides an accurate spatial delineation of areas covered by mangrove communities, while a detailed characterization product provides added information on species compositions and/or mangrove structures (e.g. height, density, or biomass).
- Service Provider: DHI GRAS

Target 6.6: By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.

Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

Target 15.1: By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.

Example: Combined mangrove extent and density data product (Delta Saloum National Park, Senegal).

Mangrove Density
Delta du Saloum National Park, Senegal

Sparse | Low | Medium | High

Reference: https://www.dhi-gras.com / http://maps.eo4sd-water.net/airbmp1 / https://www.dhi-gras.com/projects/eo4sdg/