Boskalis

Geospatial World Forum 2026

Hydrospatial Infrastructure & Blue Economy Seminar

Resilient Coastal Economy & Sustainable Marine Resource Management

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Introduction

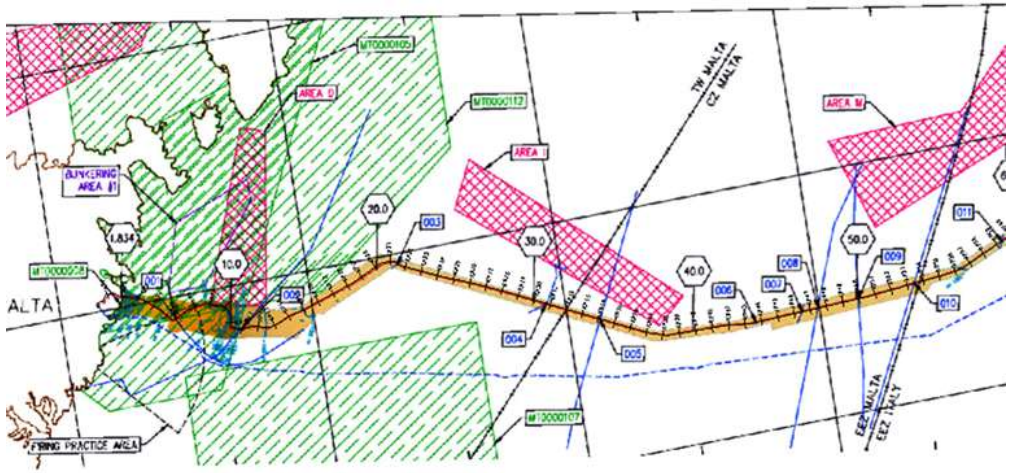
Jyoti Rohodia, Lead GIS Engineer, Boskalis Westminster Contracting Limited – UAE

Jyoti Rohodia is an Esri-certified GIS professional with over 10 years of experience across offshore energy, renewable infrastructure, and environmental sectors. She currently serves as a Lead GIS Engineer at Boskalis (UAE), supporting global offshore wind projects through spatial analysis, automation, and enterprise GIS solutions. Previously at Enel Green Power, she developed geospatial tools for environmental impact assessments and contributed to the planning and development of renewable energy projects worldwide. With expertise in GIS, BIM, LiDAR, and AI-driven geospatial technologies, she integrates spatial solutions with engineering and operational workflows to enhance efficiency, improve data-driven decision-making, and support sustainable project development.

Subsea Cable Burial - Responsible Methods

- When planning cable burial, we integrate spatial datasets—including turbine layouts, cable routes, buffer zones, and exclusion areas—with detailed seabed characterization data such as bathymetry, sediment classification, and identified geohazards.

- By overlaying key datasets—particularly **seabed condition layers and environmentally sensitive areas** (e.g., marine protected areas)—with proposed offshore wind farm layouts and cable routes, we enable early identification of high-risk zones. These may include potential unexploded ordnance (pUXO), biodiversity hotspots, soft sediments, and boulder fields.



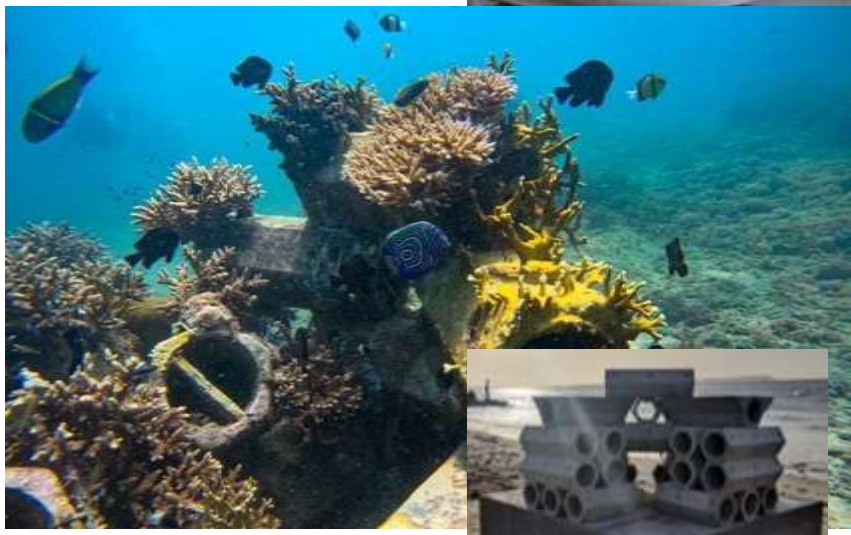
TENDER

Interconnector passing by a Natura 2000 site.

Burial method was change to preserve the site.

ARTIFICIAL REEFS

The goal of the Boskalis Artificial Reefs Program (ARP) is to provide solutions for environmental enrichment in our offering to clients by using artificial reef technology as an enabler for marine infrastructure or coastal protection works. Furthermore, artificial reefs can support the development and conservation of marine ecosystem cornerstone species such as corals, oysters and herbivorous fish.



- **What is an Artificial Reef?**
  - Hard structures ranging from simple to complex shapes and made from various materials (typically concrete, but not necessarily), designed to **attract and support marine life**. The design focuses on **surface texture and internal voids** to create suitable habitats for target species.
- **Why Artificial Reefs?**
  - **Ecological benefits**
  - Improvement of **local biodiversity**
  - Restoration of degraded ecosystems (e.g. corals, oysters)

GIS Support Tool – in development

Develop a **data-driven, Web based GIS-platform** to identify optimal locations for Artificial Reef deployment by integrating key:

- Environmental indicators
- Social considerations
- Regulatory constraints

Currently our sustainability team is leveraging advanced GIS tools to:

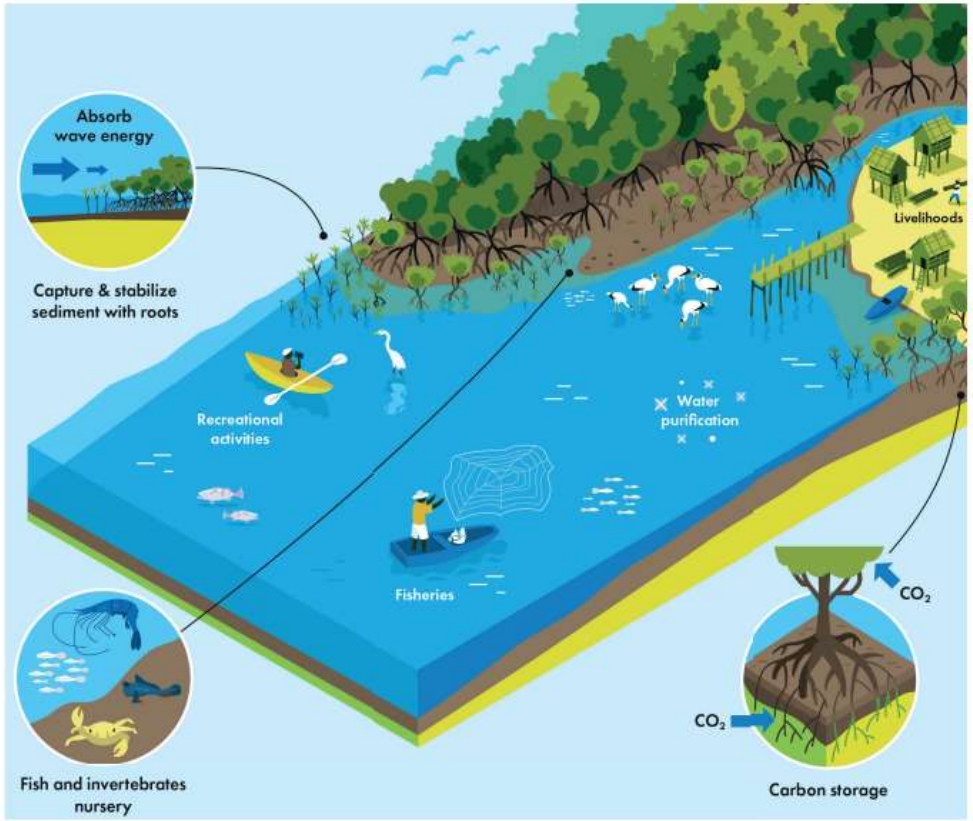
- Integrate multi-source spatial datasets
- Perform **multi-criteria suitability analysis**
- A few of the key data layers in consideration**:**
  - Water depths
  - Seabed characteristics
  - Existing biodiversity hotspots
  - Water quality parameters
  - Marine use & regulatory zones

As a GIS team we would support in creating **web-based global interactive suitability map** backed using **ArcGIS Enterprise and VertiGIS**.

Other Initiative with potential GIS Scope

Blue carbon Initiative:

- Royal Boskalis Westminster N.V. (Boskalis), a global dredging and marine contractor and Wetlands International, the global NGO dedicated to the safeguarding and restoring of wetlands, will intensify collaboration to enhance and restore coastal wetland habitats that not only support coastal protection and fisheries but store some of the world's largest quantities of carbon.
- Potential use of GIS technology:
  - Mapping and monitoring of
    - Mangroves
    - Salt marshes
    - Tidal flats
  - Classify habitat condition (healthy, degraded, lost) and potential sites of restoration
  - Mapping shoreline changes through change detection.



Thank you