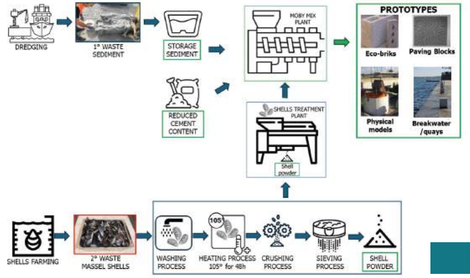
WHICH ARE THE MAIN ACTIONS FORESEEN BY GREENLIFE4SEAS?

GREENLIFE4SEAS will make it possible the realisation of four innovative by-products (i.e., shell powder, outdoor paving blocks, breakwaters, stabilised mass) for the building sector mainly made by the reuse of shells and dredged sediments (after decontamination, if polluted) and produced directly in-situ by an original mixing technology. The new products will prompt the development of a sound and viable business model for the in-situ collection and treatment of mussel shell and dredged sediments. A pivotal part of such model will be the prototypal technology of mobile plant that will realise the products directly in the port areas. GREENLIFE4SEAS will contribute to the overcome of the relevant regulatory barriers through the definition of specific authorisation protocols for the reuse of dredged sediments for engineering solutions, as the pilot by-products to be realised throughout the project.



Greenlife 4 seas

GREen ENgineering solutions: a new LIFE for SEdiments And Shells

Co-funded by the European Union

Project: 101114177 — LIFE22-ENV-IT-LIFE GREENLIFE4SEAS

GREen ENgineering solutions: a new LIFE for SEdiments And Shells
LIFE-2022-SAP-ENV

Coordinating beneficiary

Politecnico di Bari

Associated beneficiaries

ISPRA

Autorità di Sistema Portuale del Mare Adriatico Meridionale

VITONE ECO

SIMEM

Autorità di Sistema Portuale del Mare Adriatico Meridionale

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GREENLIFE4SEAS GREEN ENGINEERING SOLUTIONS: A NEW LIFE FOR SEDIMENTS AND SHELLS

WHAT IS GREENLIFE4SEAS?

GREENLIFE4SEAS is a courageous project that stems from the urgent need to find out sustainable solutions for two strong environmental concerns: the fate of 200 million of m3 of sediments, often contaminated, dredged in EU every year and the disposal of 490,000 tons/year of shells, as one of the most impacting EU aquaculture wastes.

GREENLIFE4SEAS will demonstrate the technical feasibility, full safety and commercial viability of breakthrough solutions for in-situ recovery and reuse of dredged sediments and shells, that will be used as secondary raw materials for the realisation of sustainable by-products by means of an optimised mixing technology.

WHERE GREENLIFE4SEAS ACTIONS ARE IMPLEMENTED?

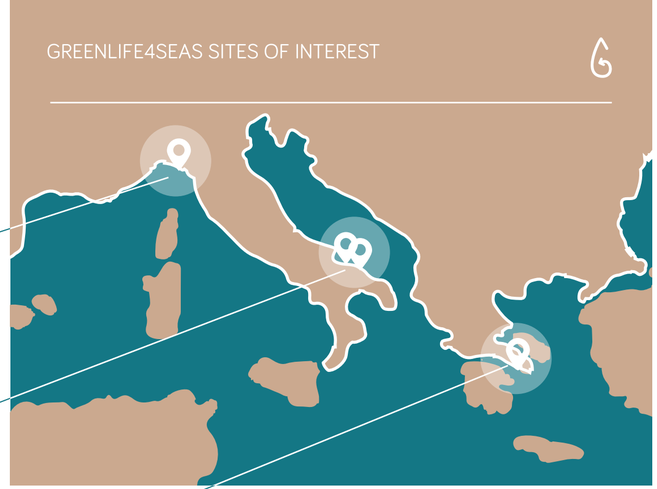
The activities of the project take place in four medium-large ports of the Mediterranean basin:
Port of Bari (IT) / Port of Barletta (IT) / Port of La Spezia (IT) / Port of Piraeus (GR)

Port of
La Spezia (IT)

Port System of
the Adriatic Sea (IT)

Port of
Piraeus (GR)

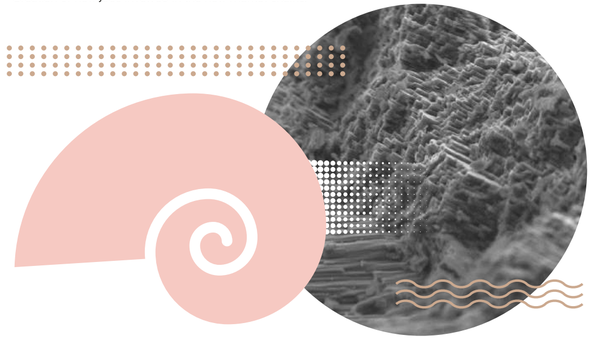
GREENLIFE4SEAS SITES OF INTEREST



GREENLIFE4SEAS is carried out by a triple-helix model of Consortium, where synergy among research capitalisation, industrial symbiosis and governmental partners as primary stakeholders is the key to innovation and sustainable growth in a knowledge-based economy.
The project results will epitomise a concrete contribution to improve the EU environmental policy for waste management, circular blue economy and aquaculture.

GREENLIFE4SEAS LONG TERM EFFECTS

- 2 innovative value chains (1 process: shell-mix with sediment-plant-products and powder shell chain).
- Industrialization and commercialization of GL4S mobile mixing plant.
- Industrialization and market uptake of the shell powder plant.
- Industrialization and commercialization of shell powder in different markets.
- Production and commercialization of 4 innovative products (paving blocks, breakwaters, stabilised mass and shell powder).
- Contribution for the updating of the national legislation on use of dredged sediments in Italy and Greece.
- Raising societal awareness on legal disposal of shells.
- Creation of new jobs involved in the new market chains.



GREENLIFE4SEAS IN NUMBERS

4 new sustainable products realised:
- shell powder
- outdoor paving blocks
- breakwater blocks
- mass stabilisation

2 prototype plants realised for shell and sediment treatment

4 port areas involved in the Mediterranean basin

9 partners involved from industry, university and research institutions, public bodies.

22 in-kind contributors involved from public and private industrial sectors, municipalities, networking organisations and research institutions worldwide.

- **450sqm** area paved by the new outdoor paving blocks in the port areas
- **30m** coastline covered by the new breakwater blocks

- **50 tons** of mass stabilised by means of the new sediment-shell based mixtures
- **120 tons** of shell powder produced
- **270 tons** of sediments treated and transformed
- **135 tons** of sediments decontaminated
- **43.9 tons** of reduced CO_2 emission due to the saved use of cement (replaced by shell powder)
- **50.9 tons** of reduced CO_2 emission due to the avoided transport of sediments
- **1.6 tons** of reduced CO_2 emission due to the avoided landfilling of sediments and shells
- **1.8 tons** of reduced CO_2 emission due to the avoided inert extraction and transport