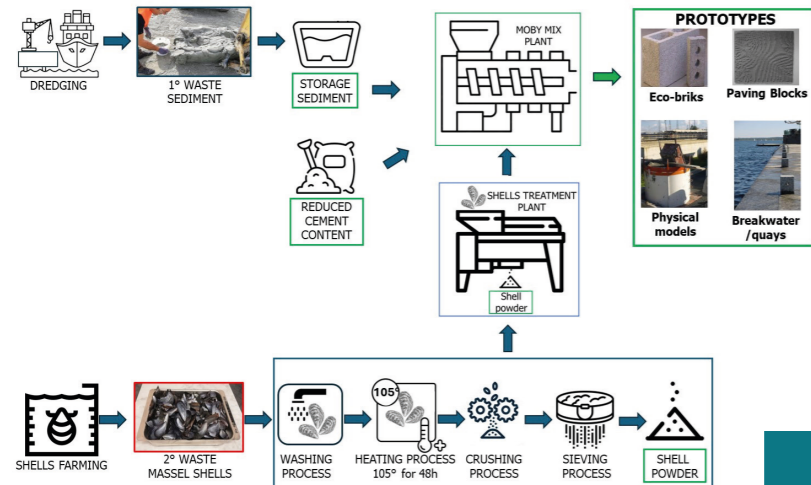


## WHICH ARE THE MAIN ACTIONS FORESEEN BY GREENLIFE4SEAS?

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



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Social



greenlife4seas

GLAS - GREENLIFE4SEAS - GREEN Engineering solutions: a new LIFE for SEdiments And Shells

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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 m<sup>3</sup> 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.

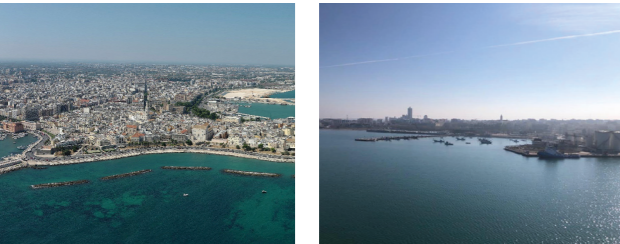
## WHERE GREENLIFE4SEAS ACTIONS ARE IMPLEMENTED?



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



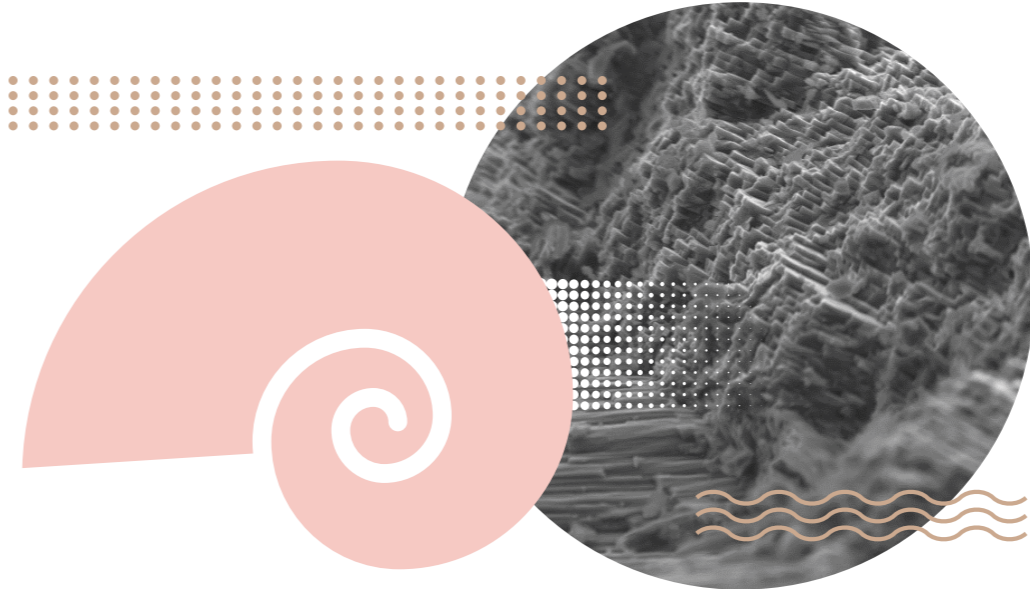
GREENLIFE4SEAS is carried out by a triple-helix model of Consortium, where synergy among research capitalisation, industrial symbiosis and governmental partners as primary stakeholders is the key to innovation and sustainable growth in a knowledge-based economy.

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<sub>2</sub> emission due to the saved use of cement (replaced by shell powder)

50.9 tons

of reduced CO<sub>2</sub> emission due to the avoided transport of sediments

1.6 tons

of reduced CO<sub>2</sub> emission due to the avoided landfilling of sediments and shells

1.8 tons

of reduced CO<sub>2</sub> emission due to the avoided inert extraction and transport