PORT GRIMAUD
VIVRE LA PROVENCE ET LA MER

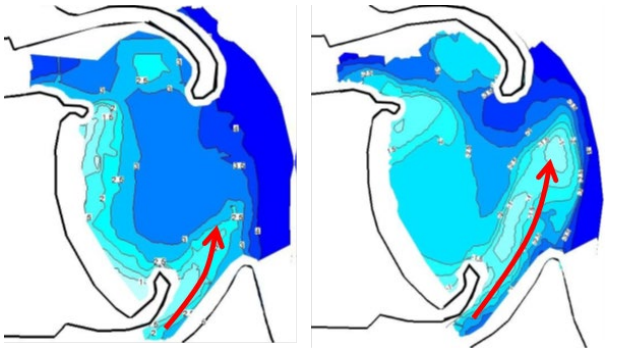
Preliminary studies, ensuring safety and environmental standards

SUMMARY SHEETS

The building up of sediment in the outer harbour

Background. The Port Grimaud entrance channel is subject to chronic sediment build-up due to deposits of sand/sandy-mud, mainly from flooding of the Giscle River.

The sediment accumulates in the outer harbour area and gradually moves towards the entrance channel, where it causes navigational difficulties.



Maintenance dredging has already been carried out in the entrance channel. These are authorised by a Prefectoral Order dating from February 2022, which authorises dredging of 4,500 m3/year for 10 years. Since 2023, 5,500 m3 have been dredged, at a cost of around €1.5 million. Since 2012, around 29,900 m3 have been dredged in the entrance channel.

With a commitment to the circular economy, sustainable development and optimising management methods, the port authority has undertaken pilot operations to reclaim sand from the outer harbour (road test beds, landscaped dunes, cycle paths, etc.), the feasibility of which depends on the physico-chemical quality and particle size (granulometry) of the sediment.

Pilot reclamation project supported by

agence de l'eau RHÔNE MÉDITERRANÉE CORSE établissement public de l'État

RÉGION SUD PROVENCE ALPES CÔTE D'AZUR

ADEME AGENCE DE LA TRANSITION ÉCOLOGIQUE

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Methodology. As part of the preliminary studies, bathymetric surveys, as well as laboratory sampling and analysis are used to assess the volumes and physico-chemical quality of the sediments to be dredged.

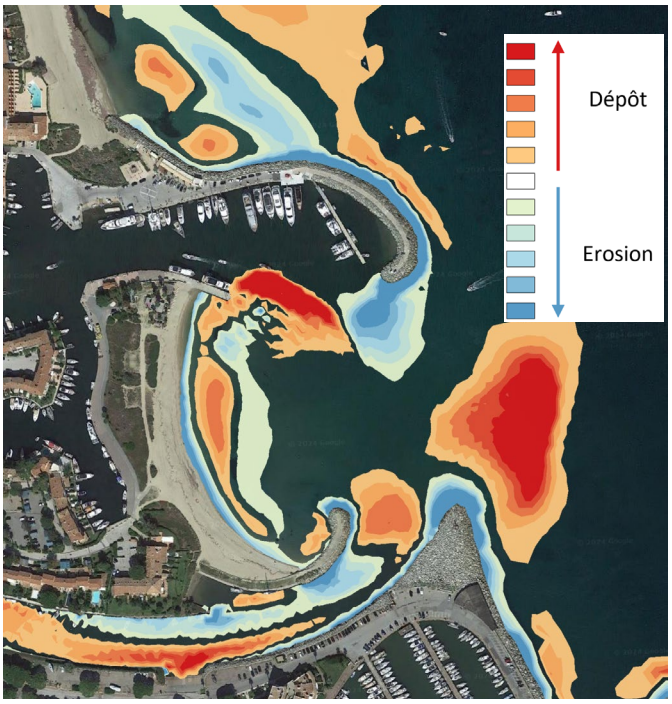
A digital hydro-sedimentary model that takes into account river flow, wind, tide and waves is also being used to improve the understanding of the processes, and to assess the effectiveness of development solutions in terms of limiting the building up of sediment.

Assessment. Analysis of the modelling results confirms that the origin of the sediment deposited in the outer harbour is mainly from the river, and enables flows to be quantified. The influence of waves in relation to the current configuration of the structures can also be used to understand the building up of sediment in the channel.

In addition, physico-chemical analyses of the sediment show that, overall, they are of good quality, which means that they can be recycled.

However, management costs remain high and a solution such as a sediment trap upstream of the Giscle River can only be considered as a complementary solution, given the volumes involved and the regulatory constraints.

Restructuring the entrance channel should limit the building up of sediment in the outer harbour and improve navigation.



Glossary.

Bathymetry: Measuring marine depths.

Granulometry: Measurement of the shape, size and distribution into different classes of particles in a granular material.

Project objectives

- Limiting the building up of sediment in the outer harbour to improve access and navigation
- Identifying sediment management scenarios, planning works and estimating their cost