



ECOMEDPORT WEBINAR

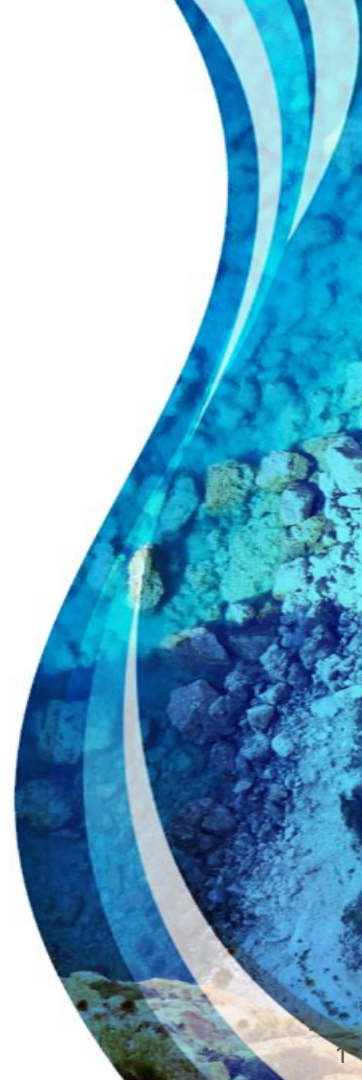
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SEDIMENTATION AND ENVIRONMENTAL ISSUES OF FISHERY PORTS IN TUNISIA

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Sediment quality in Harbours

Environmental concern

Control Components and strategies for environmental management plan (EMP) is required in each harbour activity. This control is important for environment quality and equipment security.

-The adequacy of equipments for handling oil and related liquid bulk spills and other emergencies should be assessed in the light of increased traffic since the facility was opened control

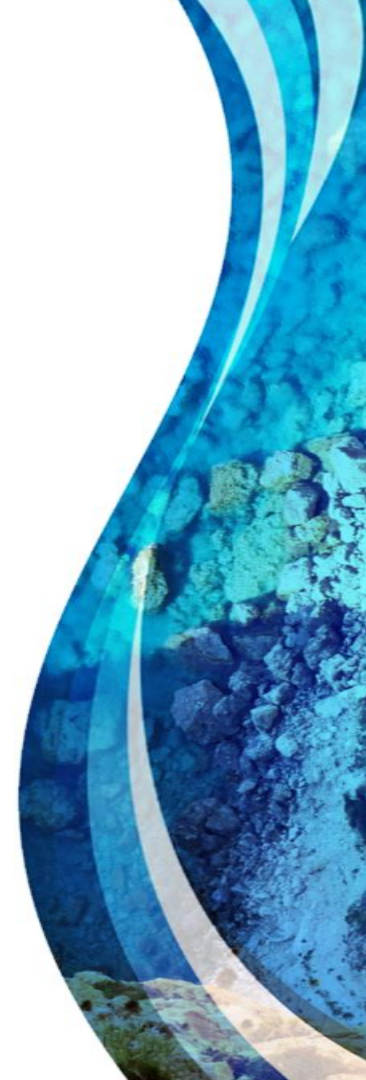
-Control pollutant concentration, various other considerations to control water and sediment quality in the port and harbour region.

Fishery ports in tunisia are widly affected by water and solid waste pollution:

- Discharges of untreated sewage and pollution from urban and industrial origin
- Recent assessment study show that use of plastics as packaging material in aquaculture food and fish conservation use is very .
- Pollution generated by fishing boats and hydrocarbon and trapped inside the port and accumulated in sediment.



Téboulba Harbour, Tunisia



- Téboulba Harbour is one of the most important fishery ports in Tunisia
- water waste and solid waste are very important in most part of the port



Téboulba Harbour

Dredged sediment quality

	Fe (%)	Al(%)	Mn (µg/g)	Pb (µg/g)	Zn (µg/g)	Cr (µg/g)	Cd (µg/g)	Ni (µg/g)
1	6,43	8,62	153	66	639	162	0,28	46
2	6,12	5,43	211	61	720	67	0,34	54
3	6,59	8,67	231	32	540	143	0,65	38
4	6,63	6,82	120	45	360	86	0,94	61
5	6,82	8,31	196	78	443	76	0,72	46
6	5,9	7,02	182	92	368	73	0,96	48
7	5,61	8,16	162	59	965	94	1,21	36
8	5,32	7,47	159	67	331	182	0,98	61
9	6,36	8,36	63	97	930	164	1,63	43

Aromatic hydrocarbons in sediments of Téboúlba fishing harbour contained a widerange of aromatic hydrocarbons concentrations from undetectable to highly contaminated levels with average value of 16000 mg/g (Jebali et al. 2014).

Trace element average value in dredged sediment were higher at the inside station compared to the entrance and intermediate stations for Mn and Cu. Moreover, Pb, Ni, Cr and Cd were higher than ERM sediment quality guidelines, with levels that can be evaluated for potential decontamination possibility for possible industrial use.



Sediment eco-conception

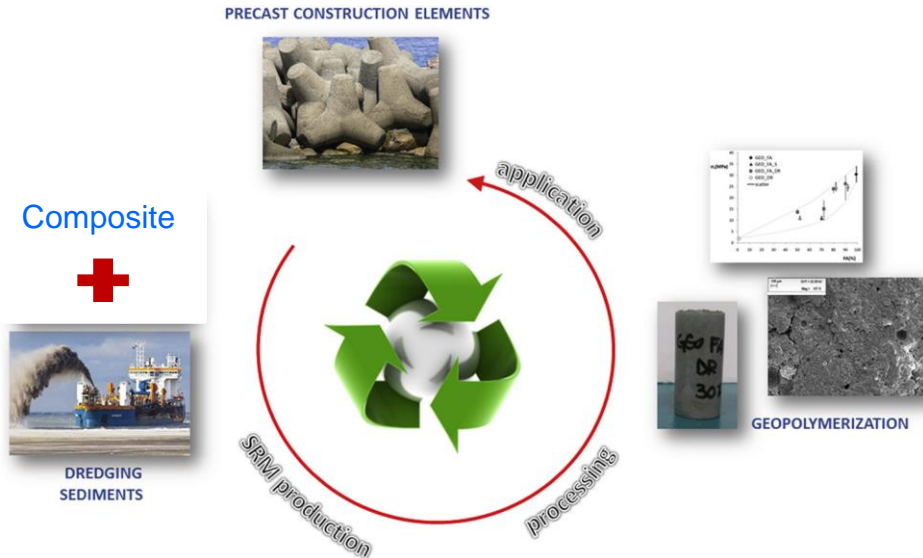
Dredged sediment use

- Use of dredged sediment as fill to cover part of the harbour.
- Processed or amended dredged material these beneficial uses of dredged material require manipulation of the wet salty sediment to make it suitable for disposal on land.



Sediment eco-conception

Dredged sediment quality and use



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-Sediment grain size are sandy in 80% that can be used for geopolymers synthesis that can be prepared by mixing harbour's sediments and industrial composite.

-Similar leaching compliance test classify the geocomposite as a non-dangerous material with control of biogeochemical parameters.

- The finer grain size 20% from surface reservoirs may be reused as nutrient source for agriculture after decontamination procedure.

Material eco-conception possibility (Lirer et al 2017 modified)



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Thank you for your attention

