

Dredging and sediment management in the Port of Lisbon: the environmental approach

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Abstract: The Port of Lisbon is located in the Tagus estuary, which is one of the largest and most sensitive estuaries of Europe, being the Tagus river one of the longest rivers of the Iberian Peninsula, flowing across Spain and Portugal.

Besides being an important estuary from the point of view of biodiversity and nature conservation, hosting several classified areas, both at the national and international level, the Tagus estuary is also located at the center of the most populated urban area in Portugal which includes Lisbon, the capital of the country.

The margins of the Tagus estuary have also been the place for an important industrial development in the past century, with the installation of large chemical and steel facilities and also shipyards. Even though most of these facilities have already been dismantled or have passed through a process of modernization, historical contamination of the estuary sediments is still a problem that can affect the port dredging activities.

To avoid conflict with the other interests and users of the estuary and to comply with requests of the Water Framework Directive, a strict management of the dredging operations is put in action in the Port of Lisbon, both for maintenance and for capital and construction dredging.

A five year dredging plan has been developed by the Port of Lisbon Authority in 2010 and has obtained the approval from the environmental agency dealing with the water management. This plan contains a detailed description of the previewed dredging needs in the five year period including maintenance and new dredging projects. It also contains the main environmental procedures for the characterization of the sediments to be dredged and for monitoring of the dredging and disposal operations.

Along with this plan, the Port of Lisbon has developed a study to select a new disposal site for slightly contaminated sediments, in order to reduce the operational costs of the immersion of such materials. The proposal of a new immersion site outside the estuary was presented to the environmental agency and approved in 2011.

The aim of this presentation is to give an overview of the environmental management procedures applied to the dredging activities conducted by the Port of Lisbon Authority. It will include a description of the

port and the main constraints and pressures on these activities. The most relevant items of the Port of Lisbon five year dredging plan will be outlined and the main studies undertaken in accomplishment of that plan will be presented. Emphasis will be put on the characterization and monitoring works.