

AWAM International Conference on Civil Engineering 2015 (eco-AICCE'15)  
9th – 11th September 2015  
Putra World Trade Centre, Kuala Lumpur, Malaysia

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## CM02

# Developing a DMS (Dredged Marine Sediments) Management Framework for Beneficial Reuse in Artificial Land Creation

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**Abstract.** Great quantities of dredged marine soils (DMS) have been produced from the maintenance of channels depth, anchorages and for harbour development. Most of the DMS are disposed in the sea and land. DMS have the potential to pose ecological and human health risks and it is also considered as a geowaste. Malaysia is moving towards the sustainability approach and one of the key factors to achieve it is to reduce waste. Backfilling is the basic phase for every construction therefore it shows the importance of creating artificial land in this study. Thus, this geowaste should be generated as a new resource to substitute soil for civil works such as for artificial land creation. Moreover, there is no proper guideline for beneficial reuse of DMS in Malaysia. This paper proposes a preliminary framework for beneficial reuse of DMS in artificial land creation. The reuse of DMS requires an understanding of the managing procedure from retrieval of DMS to on-site application. The key components involved are transportation, storage and treatment of the material. Most existing guidelines only highlights on the treatment process of contaminants which affects human health and environment. Nevertheless, having a well-managed transportation system to transfer the DMS and pre-treating it if necessary to work as a soil for civil works are important as well. It is therefore necessary to develop a DMS Management Framework that enables a systematic guideline of reusing DMS for artificial land creation in Malaysia.

**Keywords.** *Artificial Land Creation, Dredged Marine Soils, Management Framework*

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