

# SUMMARY

PIANC Report 102 'Minimising Harbour Siltation' was commissioned by MarCom and published in November 2008. Its working group scoured the world seeking experience of generic technologies for minimising/avoiding mud deposition in harbours and approaches. By 'generic' we mean solutions to problems at particular sites which, when tailored to local idiosyncracies, can be applied at self-similar sites wherever they occur. Consequently, these methods are especially valuable. The study spanned types of harbour configuration, mechanisms of transport and deposition, field measurement, mathematical and physical modelling, but focussed centrally on these 'anti-siltation' methods.

For each, the high economic and environmental benefit has been documented. Most of these have been pioneered in the world's biggest ports but an emerging trend since publication is a rapid increase in uptake rate at new and smaller ports focussed in the immediate timescale on Germany, Belgium, France, China, Brazil, with an emerging interest in the USA.

It grouped problems by port configuration: - impounded dock, ship lock entrance, semi-enclosed basin, channel, etc. and by solutions via three alternatives: KSO 'Keep Sediment Out', KSM 'Keep Sediment Moving', KSN 'Keep Sediment Navigable'.

Rigorous scrutiny led to five principal separate, proven technologies being recommended:

1.	Auto-flushing	(impounded docks and semi-enclosed basins)	KSM
2.	Entrance Flow Optimisation Systems (EFOS)	(semi-enclosed basins)	KSO
3.	Passive Nautical Depth	(fairways, entrances, semi-enclosed basins )	KSN
4.	Active Nautical Depth	(..... ditto ...)	KSN
5.	In-situ Conditioning	(... ..ditto....)	KSN