



## **Are the courts the place to solve questions about dredging?**

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The Port of Melbourne was not the first time that local protest groups obstructed a dredging project, and client and contractor had to defend themselves in court. And it probably won't be the last. Most recently the courts are being asked to intervene in the conflict between surfers and town government about beach replenishment projects at Palm Beach County in South Florida. On the other hand, the Dutch environmental group Milieudefensie just ended years of conflict, which threatened to land up in court, by signing an agreement with the Port of Rotterdam over the Maasvlakte 2 expansion plans.

“Is this dredging project worth it?” is a question that seems destined to arise over and over again. Are the deepening and development of ports and harbours necessary? Is the replenishment of beaches for coastal protection antithetical to responsible environmental policy? Do laying pipelines for gas and oil transport or building platforms for wind energy turbines help or hinder society? Where lies the balance between economics and environment?

The conundrum is this: Many of the concerns associated with dredging or dredged material placement are not based on conclusive evidence that these operations pose a meaningful risk to the environment. And yet in many cases the data to prove the absence of risk is lacking. Since the burden of proof seems to rest with the dredging industry, efforts have grown to define “Best Management Practices” in order to facilitate the decision-making process and guide stakeholders to solutions – out of court.

### **The Precautionary Principle – help or hindrance?**

The precautionary principle embodies a so-called “Management Practice” to err on the side of caution – that is, when in doubt, take as little risk as possible. Unfortunately this can have negative financial and logistic consequences which may not be warranted by the real-life situation. For instance, silt curtains are often constructed to mitigate turbidity when, in fact, their effectiveness is not proven. “Environmental windows” – seasonal restrictions based on marine life breeding cycles – are another such uncertain management practice that may drive up the costs, delay dredging operations and otherwise complicate the coordination of dredging projects without clear benefit.

Simply stated, sometimes a generally accepted management practice is just not good enough. The goal should be to find equitable solutions that combine sound environmental, social and financial policy. In this issue, *Terra* focuses on PIANC Envicom's newly released report which seeks to define “Best Management Practices” as opposed to merely “Management Practices”.

### **Best management practices vs management practices**

Distinguishing best management practices from the extensive range of management practices available will differ from project to project and will take time. But this is time well spent. Analysing best practices upfront, before the start of a project, will hopefully eliminate serious and costly delays and unreasonably expensive solutions. As the article points out, monitoring – before, after and during a project – is one such essential best practice toward ensuring a good outcome. Three types of monitoring are defined: Surveillance monitoring, i.e., before-after control impact (BACI); Feedback (as it is known in Europe) or adaptive (USA) monitoring – where forecasting models are compared with on-site circumstances; and Compliance monitoring – does the work meet contractual requirements.

Articles about two projects where these best management practices are evident – one in Saudi Arabia during the Manifa Causeway project connecting drilling islands, and one in the Netherlands at the expansion site of the port of Rotterdam, known as Maasvlakte 2. In both projects a comprehensive view of the project led to the consideration of alternative design concepts. In the case of Manifa, issues include sea level rise, earthquake risks, availability of rock and proper water circulation. In the case of Maasvlakte 2, its proximity to a legally protected Natura 2000 site resulted in many multi-dimensional studies. The study highlighted in *Terra* examines the effects of dredging on eider ducks if their source of food – shellfish such as cockles – is disturbed. So far the conclusion is that the interference will be minimal which is a great relief to all concerned.

Over a span of decades an increasing awareness of the need to protect the environment whilst conducting dredging projects has emerged. Still, clear choices are not always possible and the complexities in decision-making about environmental impacts require constant attention. The complex nature of the aquatic environment and the disruptions created by dredging related operations will continue to make it necessary to be alert and demand consultation with engineering and scientific experts as well as input from all stakeholders. Best Management Practices can help guide these deliberations and encourage ongoing dialogues which will foster mutual trust and, in the long run, keep everyone out of court.

To read more about the above-mentioned projects for Saudi Aramco and for the Maasvlakte 2 and to understand how best management practices contribute to successful dredging operations, see the March 2009 issue of *Terra et Aqua* which is available on request in hard copy and online at [www.terra-et-aqua.com](http://www.terra-et-aqua.com) and [www.iadc-dredging.com](http://www.iadc-dredging.com).

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*The current issue is available online at [www.terra-et-aqua.com](http://www.terra-et-aqua.com). Photographs are available upon request. Back issues of Terra et Aqua to 1995 are also available at the website.*

*Terra et Aqua is a technical journal published quarterly in March, June, September and December for professionals and others interested in “maritime solutions for a changing world”. The infrastructure projects and the technologies presented aim to inform port authorities, developers, engineers, the offshore industry and government agencies about the state-of-the-art possibilities offered by dredging and maritime construction.*

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