Monitoring at dredging sites for port expansion and maintenance is a necessary element in the planning and development process. It provides invaluable data for both the client and the contractor to minimise environmental impacts while simultaneously optimising the design. It also helps in communicating accurately with regulators, the public, and other stakeholders who may doubt the dredging process. But what and how to monitor continues to be debated, often to the detriment of gathering useful data.

In practice, a great deal of time is spent on compliance monitoring, far from the actual dredging site. Day after day data is assembled and the result of all this effort is vast amounts of information with little value.

Compliance monitoring will always be needed but it should be conducted in a smarter way, with a focus on relevant issues and uncertainties. ‘Adaptive monitoring’ can be a management solution that gives better long-term research results and increased credibility among all parties.

The dredging industry understands the need for monitoring and has done so for a long time. As a result it has invested in equipment and research to supply the required data to ensure dredging causes as little disturbance as possible. But how can we avoid monitoring for the sake of monitoring?

For most major dredging projects, five parties are involved: the government that issues permits; the owner, such as the port authority; the stakeholders;
Adaptivem onitoring helps port authorities and contractors to make this evaluation. It helps them prepare a comprehensive dredging plan, respond to a potentially detrimental situation before it becomes a serious threat and weigh the advantages and disadvantages of a port construction project and the financial consequences. It will, it is hoped, give transparency and thus establish a basis of trust and confidence in the project among all stakeholders.

Finally, a well-defined adaptive monitoring programme can be used to fill in the gaps in the knowledge of the ecosystem. In this way, risks can be properly assessed and accumulated data can be used for planning future projects.

Adaptive monitoring can help evaluate when and how much monitoring is appropriate and can help avoid spending money to prove something that previous scientific studies tell us is not really an imminent danger or has no real impact.

Not every dredging project needs the same extent of monitoring. Sometimes less will be more: more efficient, more cost-effective and more accurate. PH

IADC is the International Association of Dredging Companies
More info: www.iadc-dredging.com

Adaptivem onitoring tries to pinpoint where the potential problems lie

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