



## DHI CASE STORY

# MAKING SPACE FOR EVERYONE

## Supporting sustainable coastal development in Jakarta Bay

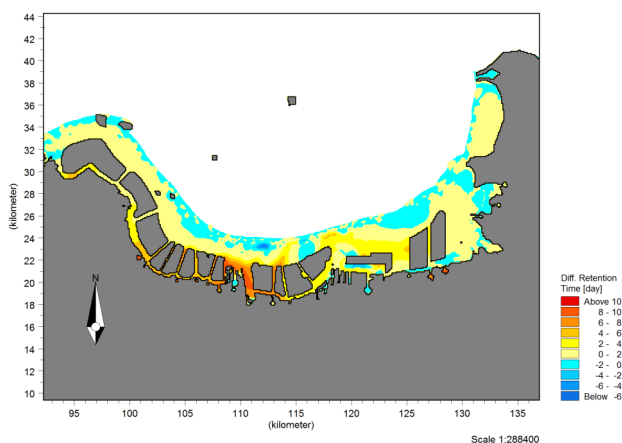
Jakarta Bay is a heavily utilised area for shipping, industry, fisheries and recreation. The coastline of the Bay is approximately 72 kilometres long and covers 13 cities in the Jakarta Metropolitan Area, giving home to approximately 28 million inhabitants, many of which rely on the Bay for their livelihood. Rapid recent economic development has heavily impacted the Bay and led to a number of land-use conflicts as well as environmental deterioration. Numerous coastal developments proposed or currently underway in the Bay add to the problem.

### BUILDING THE BASE OF A DEPENDABLE POLICY

Therefore, the Indonesian Ministry of Environment (KLH) decided upon creating a policy for the future port and coastal development in Jakarta Bay to ensure its sustainability. Part of this process was the preparation of a Rapid Environmental Assessment (REA) for the Bay, which will provide critical input to the policy document and can be used as a scoping paper for a full Strategic Environmental Assessment (SEA) of the area.

On behalf of KLH, Danida – the Danish International Development Agency - engaged DHI to prepare the REA. To begin with, DHI determined the existing baseline conditions through site visits and available secondary data. Extensive consultations and focus groups served to identify key strategic issues for the Bay.

Screening of these issues then helped to prioritise the key physical, chemical, biological and economic impact vectors for assessment in the REA. Finally, preliminary coastal and marine models of the Bay were used to identify critical environmental issues.



*Preliminary Model showing predicted change in flushing in Jakarta Bay as a result of the proposed coastal developments.*

### SUMMARY

#### CLIENT

Danida (Danish International Development Agency), on behalf of the Indonesian Ministry of Environment (KLH)

#### CHALLENGE

Developing a policy for a sustainable future port and coastal development in Jakarta Bay

#### SOLUTION

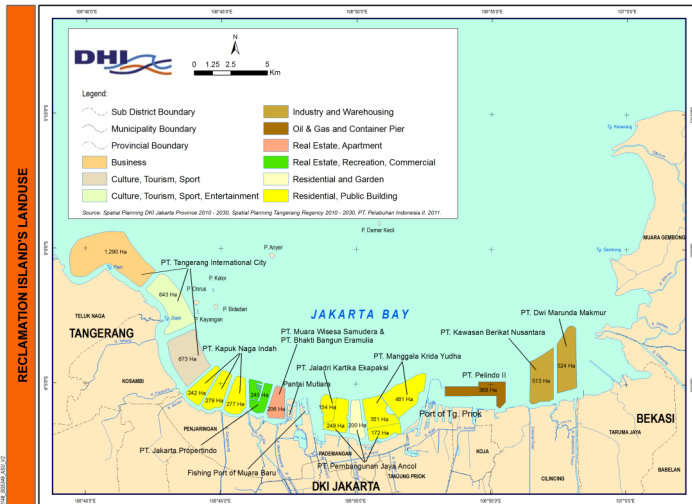
High-level expert assessment of the cumulative impacts of and conflicts between proposed developments, combined with preliminary marine and coastal models

#### VALUE

- Knowledge on conflicting developments
- Knowledge on the associated environmental issues
- Clear guidelines for sustainable development
- Critical input for policy makers
- Less delays in key reclamation projects
- Capacity building for local regulators, policy makers and managers
- Identification of opportunities to improve environmental condition of the Jakarta Bay and quality of living for the residents

#### LOCATION / COUNTRY

Jakarta, Indonesia



A large number of reclamation projects are planned or underway in Jakarta Bay, requiring diligent coordination and management to ensure their environmental and social safety.

**FACTS AND FIGURES ON IMPACTS AND CONFLICTS**

The REA highlights that the absence of a SEA and optimised development strategy has resulted in the following main areas of concern:

- Land use conflicts between existing uses and planned future uses
- Direct and indirect impacts to key existing infrastructure (pipelines and cables) and industries (power stations)
- Non-optimised reclamation profiles in terms of potential impacts to hinterland flooding, sedimentation and water quality
- Lack of focus on short-term construction phase impacts in AMDALs (Environmental Impact Assessments), for example release of contaminated sediments during dredging, sediment plumes, effects on navigation and fisheries

In addition to assessing these issues, the REA provided an assessment of the specific impacts associated with each proposed project. Generic terms of reference were also provided for:

- Assessment of construction phase impacts and coastal processes to support the existing AMDAL process
- Environmental Monitoring and Management (EMMP) of marine reclamation works
- Policy assessment required to ensure appropriate implementation of policy document and SEA when completed

Based on DHI’s assessment, the client was able to see which developments were in conflict, and what environmental issues needed to be addressed. The document provides critical input to the development of a policy for sustainable development in the Bay.

**MAKING A DIFFERENCE – FOR THE PEOPLE AND THE ENVIRONMENT**

Before commencing the REA project, KLH had halted all coastal developments in Jakarta Bay until the cumulative effects could be assessed and addressed. This included the delay of a number of major reclamation projects, including the much needed expansion of the Port of Tanjung Priok, Indonesia’s main port. Completion of the REA allowed some of these projects to proceed, and provided a clear indication of the issues that others needed to address before KLH would allow them to proceed. Significant land-use conflicts and short as well as long-term impacts on the Bay could thereby be avoided, and will be avoided in the future thanks to DHI’s clear listing of the issues and concerns.

Through its REA, DHI set new standards for the management of development projects in Jakarta Bay. For the first time, clear, practical and concrete recommendations were provided on how to fix the problems and allow the majority of the proposed reclamations to proceed without causing conflicts or further negative impacts to the environment. The project has also led to additional SEAs in the region as well as significant interest from several developers in Indonesia. Thereby, DHI is improving environmental outcomes of coastal developments and building the capacity of local environmental regulators to properly manage the environment. Ultimately, this will improve the environmental condition of the Bay while at the same time improving the quality of life of the bay’s residents and allowing for key developments to continue.



Pollution as a result of increasing population is one of the main issues in Jakarta Bay.

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