

A river basin planning Decision Support System (DSS) for Myanmar

Sustainably developing the Ayeyarwady River basin



Increased understanding of the impacts of proposed developments



Improved communication with stakeholders



Development of an advanced planning tool to facilitate informed decision-making

Challenge

Before harnessing the vast potential of the Ayeyarwady River basin, Myanmar officials needed to assess the consequences of various river basin development scenarios. DHI worked closely with the Hydro-informatics Centre of Myanmar to develop a dedicated Decision Support System (DSS) and trained local experts to ensure its continued use. The objectives were to enable informed decisions and sustainable development of the basin.

With plenty of water available, Myanmar has many opportunities to increase the use of water resources in the Ayeyarwady River basin for irrigation, hydropower, navigation and so on. The installed hydropower capacity can potentially be increased by tenfold and lead to major changes in the river flow, water levels, sediment transport, water quality and more. It is important that the development is carefully planned to minimise any adverse impacts and that sufficient information is made available to stakeholders beforehand to enable sound decisions.

Solution

Working closely with the Hydro-informatics Centre of Myanmar, DHI developed a DSS to assess the environmental, social and economic consequences of scenarios for the river basin development, and to make the findings easily available to stakeholders.

MIKE HYDRO Basin models were developed to represent considerations such as hydropower dams, irrigation schemes, changes in land cover and predicted climate change. Based on the dynamics of sea water intrusion, sediment transport and flooding described in other models, different river basin development scenarios were defined, and the consequences derived.

The DSS was developed to extract key indicators on the potential impacts of the development and this information can then be provided online to stakeholders, along with water resources data from local and global sources and relevant reports.



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