



The government of the Philippines wants to operationalise Sustainable Development Goal 6.5: 'by 2030 implement Integrated Water Resources Management (IWRM), at all levels' and to enable adaptive investment decisions. The government and the World Bank asked Deltares to provide support through the further development and application of the IWRM approach in the Philippines. Deltares executed two projects for this purpose in 2017.

The IWRM framework and guidelines that Deltares developed in the first project provide a structure for river basin planning under uncertainty in the Philippines in line with international best practices, using the IWRM and adaptive management approaches. Specific attention was paid to the sustainability and ownership aspects of the plan. We incorporated innovative elements such as collaborative modelling and implementation arrangements in the framework.

During training workshops with national and local stakeholders, we discussed the practical application of the IWRM framework and accompanying guidelines. The Jalaur river basin was selected to demonstrate how the planning process can be improved. Two workshops were organised in which the entire planning cycle was followed. The experiences gained were consolidated in an update of the guidelines and the development

of a manual describing the steps to be followed in detail.


The guidelines are available to river basin planners making new IWRM plans and/or updating existing plans in the future to solve water issues in their basins. Deltares will make the guidelines and manual more generic in 2018 that they can be used in other countries as well.

In parallel with this activity, Deltares was involved in a second study to better incorporate uncertainty in decision-making about adaptation investments under the IWRM framework. We first described the methodology in detail to identify the rationale and the most effective use of different adaptive approaches for economic analysis under uncertainty using the IWRM framework. The approach was applied to three case study areas with a specific climate risk in the Philippines, one of which was the island of Cebu, where a looming water shortage is impacting economic development. Finally, a national investment planning document was established that complied with the IWRM approach and combined local and global data.

The key aim of this second study was to demonstrate the different steps in the IWRM approach in order to identify and prioritise current and future investment needs under uncertainty (in other words, involving different scenarios). In collaboration with a range of stakeholders, crucial information and process needs were identified for conducting a water

▲ Introduction to new approaches in river basin planning during training workshops



balance analysis correctly and for analysing the effectiveness of key adaptation options under uncertainty. The core objective of the document was to provide a 'proof of concept' for local practitioners and authorities for the identification of investment needs under uncertainty for water shortages using the extended IWRM approach and with limited data availability. 

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Further reading:

Philippines: Integrated Water Resources Management Planning Guidelines. World Bank, 2017