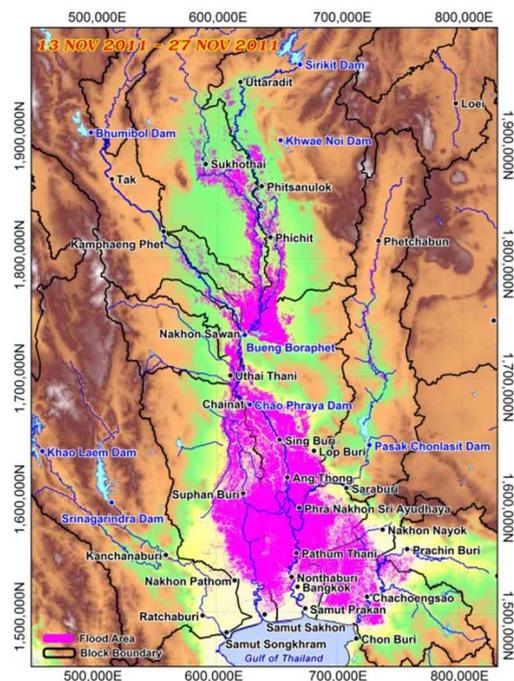


## Thailand - Water Resources Management review

### ADB's WRM support study

In August and September 2011 Thailand experienced exceptionally heavy rains causing the worst flooding in Thailand since 1942. Some 800 deaths were reported with widespread damage and losses to homes, factories, businesses, transport and energy infrastructure, social service facilities and agricultural crops and livestock.



Satellite processed flood map Chao Phraya Basin: November 13, 2011

Early 2012, long term Water Resources Management (WRM) master planning In Thailand was felt inadequate and proposed immediate solutions for the upcoming rainy season were considered rather ad hoc. Hence, The Asian Development Bank (ADB), through UNESCO-IHE, commissioned Deltares to provide support to the National Economic and Social Development Board (NESDB) of Thailand. This two-month support study largely focused on reviewing past reports and recommendations on water resources and flood management.

During the execution of the study it was agreed to also assist NESDB and the ADB in drafting an outline proposal for follow-up work on master planning. As such, ongoing support to NESDB can be assured and bridging towards new activities as initiated by the ADB can be realized.

In Thailand, WRM receives a great deal of attention by many Ministries and Agencies. However, it was the consultant's view that the organization is too fragmented to effectively cope with the various land and water management challenges that Thailand faces today and in the future, in particular in the light of climate change, sea level rise, ongoing land subsidence, population growth and economic growth.

The time horizon for existing plan efforts is often relatively short, and an integrated and inter-Agency approach including all relevant aspects of land and water management seems to be lacking. It was recommended that such long-term outlook should be supported by an Integrated National Action Plan Study in which various management options can be explored. Such a National WRM Action Plan study should provide timely, independent and authoritative, but well-tuned, directions to reduce the social and economic costs to the Kingdom of Thailand of recurrent flooding, drought and other water related issues like the increasing problem of waste disposal, water quality and erosion of the coastline.

Taking into account the great importance of adequate interaction between the involved governmental organizations and stakeholders, it was realized that there should be strong emphasis on the acceptance of the study results. For this reason, it was considered important that the various beneficiaries and other stakeholders are involved, that the plan and proposed structural and non-structural measures provide the best available way forward and that all relevant aspects and concerns will be addressed adequately. In other words, the Thai Government will not only have to deliver

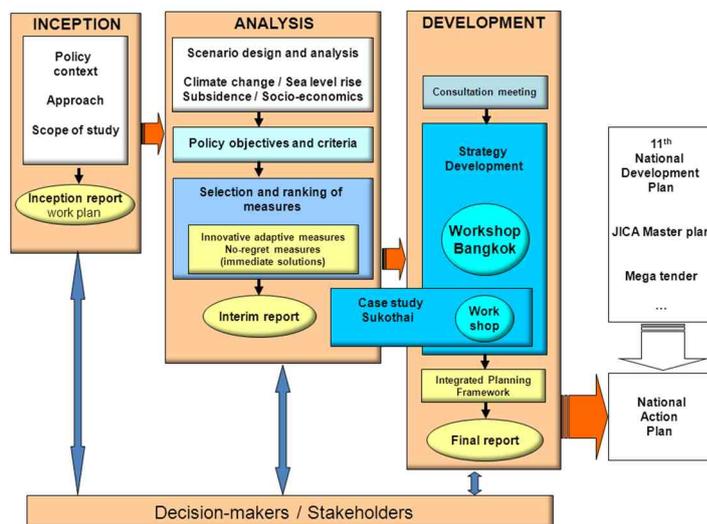
outstanding technical results, but will also have to disseminate the project results to the beneficiaries and other stakeholders in such a way that they agree that the project has provided a plan for safe and sustainable water management in Thailand, which is based upon the best available and non-biased expertise.

### Spin-off

As a follow-up of the ADB support programme the Dutch Government, through its Partners for Water program, granted a Technical Assistance project for a joint study with NESDB aiming to help develop a national action plan for the prevention of future flooding in Thailand. The Partners for Water study will work towards the best Flood Risk Management strategy given the uncertain future caused by climate change, sea level rise, ongoing land subsidence and various socio-economic developments (demographics, sector development and perspectives & values).

Adaptation to such future scenarios means dealing with uncertainties to define robust and flexible adaptation strategies for water management. The identification of robust and flexible strategies for adaptive flood risk management requires novel approaches in scenario analysis. It firstly requires integrated scenarios, in which e.g. climate-related pressures are related to socio-economic context, impact assessment is carried out against the changing socio-economic context, and the responses to these impacts in the course of time are considered. Secondly, it requires new concepts and tools to explore the range of possible futures, thereby considering the interaction between pressures - impacts and management responses in a dynamic way. This allows determining transition pathways towards new water management strategies.

Starting with addressing the necessary policy objectives and planning criteria the project will describe the steps towards the implementation of robust and flexible strategies, meanwhile identifying no regret measures for immediate implementation. A participatory approach will be followed to identify the optimal flood risk management strategy for the different hydrological river basins in Thailand. By doing so, related aspects as sustainable water resources management and socio-environmental conditions will be taken into account. Additional to this National Adaptive Flood Risk Management approach, the Partners for Water project will include a quick-win for the Yom River Basin and Sukothai through the set up of a Flood Early Warning System and will help support the Thai Government in institutional strengthening for flood management.



Towards a National Action Plan on Adaptive Flood Risk Management (outline of Dutch Partners for Water project)