

Tools and capacity building for climate proofing of  
integrated spatial planning and flood risk management



**Jakarta, 1 March 2011.** Under the flag of the International Delta Alliance, and within the programmatic framework of Knowledge for Climate, a research program is being prepared for Jakarta. In this document the main outcomes of the definition phase and the suggested agenda for contextual activities during the research phase are outlined by the team members. This document was elaborated in close cooperation with Delta Alliance Indonesia Wing, on the basis of the outcomes of the definition workshop that took place on 18 January 2011, to inform all contributing and network-partner organisations of the outcomes of the definition phase and to set the network-agenda for the research phase. The suggested agenda is closely related to the network-activities of Delta Alliance Indonesia Wing. Further information can be found in the two PhD-proposals, in the overarching research proposal, and in the progress report of the definition phase, soon available via Delta Alliance and the team members.

The Netherlands government intends to actively cooperate with other deltas worldwide, to collaborate in the protection against floods, and to cope with climate change adaptation. Within the context of this so called 'Water Mondiaal' policy, and the Memorandum of Understanding between Indonesia and The Netherlands to achieve a long-term programmatic approach for Indonesia's challenges in water management, the research program is prepared under the flag of the International Delta Alliance.



From January 2009 until now, Royal Haskoning SMC facilitated a definition phase, in which international and local alliances were established and a knowledge agenda for the program was prepared. This resulted in the joint research program 'Jakarta Climate Adaptation Tools', recently submitted to 'Knowledge for Climate' by VU University Amsterdam, Wageningen University, Gadjah Mada University Yogyakarta and Bogor Agricultural University. The very well embedded research by two Indonesian PhD candidates, and the application and exchange of newly developed tools, is planned to be carried out from now until December 2014.

**Climate Adaptation of Jakarta's spatial and water management:** *Developing tools for assessment, comparison, and optimisation*

The overarching goal of the project as a whole is to contribute to the development of tools to assess, compare and optimise options for climate adaptation of Jakarta as a Delta City. One tool will primarily be developed from a modelling background and aims at developing flood risk maps that give insight in the spatial distribution of risks as a function of hazards, exposure, and vulnerability. It sheds light on the effectiveness of flood risk reduction measures. Closely related, the research will develop a model to compare and optimise the costs and benefits of (combinations of) measures. Examples of adaptation options to be assessed with these models are forestation in the upper catchment areas, early warning systems, spatial zoning, drinking water reservoirs, and various options for coastal defence.

## Observations

- The problems on which the research projects will focus are widely recognised by the Jakarta government authorities and research institutes, and many research and policy initiatives are being initiated to tackle these;
- Future expected developments, such as climate change and further population growth, will aggravate the problems that Jakarta is facing in terms of water and spatial management;
- The importance of climate change in relation to the total magnitude of the problems is small in the current situation, but is expected to increase in the coming century.

## Viewpoints

- Current actions to tackle the spatial planning and water management problems in Jakarta can mainly be characterised as “reactive adaptation” – a more proactive attitude is necessary to provide sustainable solutions to Jakarta’s problems;
- Jakarta is – above all – a typical delta city facing similar opportunities, problems, and challenges as many other delta cities worldwide. Framing the problems and potential solutions as typical “delta-issues” helps in understanding and tackling these, and provides opportunities for sharing knowledge with deltas worldwide;
- The project partners are well aware of ongoing research and policy activities in the fields of water, management, spatial planning, and climate adaptation in Jakarta, and of the importance to tune their activities with these.

## Outline of outcomes of the definition phase

- The central outcomes are two well defined and elaborated PhD proposals that are well embedded in the Jakarta policy, practice, and research context;
- Close ties have been developed with essential bodies: LIPI-ICIAR, Jakarta DKI-PU, and Jakarta DKI-Bappenas. These expressed their commitment to the program through presentations by high level representatives, and explicit expressions of willingness to support the program by other representatives of these organisations. This will provide a sound basis for a well functioning science-policy interface;
- The Indonesian-Dutch academic research team has developed a good and shared understanding of the problems and their context, and the ongoing research and policy actions. This forms an excellent basis to start the research phase;
- The Indonesian-Dutch team has developed a spirit of cooperation within the team and with external research and policy partners;
- The workshop’s working formats provided an opportunity to share insights in the problems and visions on focussing the research and linking it to the policy and decision making context. This helps the team to focus the research projects on elements that are relevant to stakeholders in the policy and decision making fields;
- The idea of furthering international knowledge exchange and building of international delta networks by Delta Alliance and Connecting Delta Cities was supported by the participants in the workshop and the parties consulted throughout the definition phase. Many ideas for concrete knowledge exchange actions were expressed by the participants;
- One of the ideas expressed was to establish a Jakarta Delta Research Program in which ongoing delta research activities can cooperate and new activities can evolve, such as further PhD proposals.

# Jakarta Climate Adaptation Tools

a research program of the Delta Alliance

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## Agenda

- The project partners express the ambition to link the PhD projects to related PhD projects both in Indonesia and in other deltas, for example in Vietnam and the Netherlands;
- The project partners express the intention to develop new PhD projects in this field and find funding for these during the research program;
- The project partners express the intention to create a platform for regular internal and external communication about the project both within Indonesia and with other deltas and to strive to coincide team meetings with international delta meetings such as the Jakarta Delta Summit in 2011 and the Dutch Delta Design Conference in 2012;
- The project partners express the intention to communicate and share intermediate results, not only in scientific media, but also through avenues such as Delta Alliance and Connecting Delta Cities websites and events organised by these;
- The project partners will work in close contact with a special advisory committee - chaired by Prof. dr. Jan Sopaheluwakan (Delta Alliance Indonesia Wing and the Indonesian Institute of Science) - to guarantee the interface between scientific research and relevant branches for practical application and the exchange of newly developed knowledge and tools.

**The parties below fully support the outcomes and agenda outlined in this document**

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Outcomes program definition & agenda for the research

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