

Outcomes Jakarta Climate Adaptation Tools Session Delta Summit 2011

Jakarta Climate Adaptation Tools (JCAT)

Jakarta 23 November 2011

The **World Delta Summit**, initiated by Prof. Jan Sopaheluwakan of the Indonesian Institute of Sciences (LIPI), took place in Jakarta from November 21-23. Within the framework of this summit, the JCAT consortium and Royal Haskoning organised a workshop within the series '*Towards Adaptive Flood Risk Management of a Delta City*'. The other workshops in this series were on '*An Integral Framework for a Delta City*' and on "Public Private Partnerships for Climate Adaptation in Jakarta". In annex 1 you can find the main outcomes of a previous JCAT workshop, held in Jakarta on 18 September 2011. The programme for the present workshop is attached in annex 2.



The main aim of the workshop was to ensure that the work being carried out in the JCAT project is well embedded in on the ground problems and activities in Jakarta. It was attended by approximately 40 representatives from international government and research institutes, NGOs, and consultants. The workshop was highly interactive, and much lively discussion and exchange of ideas took place. The discussions were accompanied by several presentations (annex 2).

The Jakarta Climate Adaptation Tools (JCAT) Project

In 2011, Delta Alliance and Knowledge for Climate launched the research project '*Jakarta Climate Adaptation Tools (JCAT)*'. The goal is to contribute to the development of tools to assess, compare, and optimise options for climate adaptation and flood risk management in Jakarta. The research is being carried out by two Indonesian researchers, in collaboration with Gadjah Mada University Yogyakarta, Bogor Agricultural University, VU University Amsterdam, and Wageningen University. A definition workshop was held in Jakarta in January 2011 to discuss linkages with policy-makers and practitioners, creating a spirit of collaboration, and leading to an ambition to guarantee the interface between scientific research and relevant branches for practical applications.

Main Outcomes

Jakarta is a Delta City, meaning that it must co-exist with its 13 rivers, coastline, and other waterways, in a way that is sustainable and well managed. In general, the participants agree that the frequency and intensity of flooding in Jakarta are increasing. Therefore it is vital to adopt integrated approaches to flood risk management, and environmental regulations and strategic assessments are needed to reduce flood risks. In this regards, the following points could be distilled from the discussions.



1. Lessons learned from other countries and cities

Before conducting the research, lessons should be learned on how other countries are dealing with flooding and flood risk. The consortium already has direct access to knowledge on the Dutch system through the collaboration with VU University Amsterdam and Wageningen University. Next to this, there should also be attention to other international cities that have similar physical, environmental, social, and-or political settings, for instance Shanghai, Ho Chi Minh City, and Singapore. Moreover, similar issues exist in other delta cities of Indonesia, such as Surabaya and Semarang, which will also provide good sources for learning and knowledge exchange.

2. Problems in upstream areas

Flooding in Jakarta cannot be separated from problems in upstream areas. Since large portions of the upstream areas have now been deforested, the flood hazard from the rivers has increased in the last few decades, leading to increased flood risk in Jakarta. Hence, policies of three provinces forming "greater Jakarta", i.e. West Java, Banten, and DKI Jakarta, should be analysed, and moreover included as part of the cost-benefit analyses.



3. Social problems

The research should explore social aspects of the flood problem at the macro and micro level. For example, at the macro-level groundwater extraction by businesses is a large problem, leading to high levels of subsidence and therefore increased flood risk. At the micro-level, some programs involved with moving people from the riverbank could potentially reduce flood risk. However, this may be a difficult and expensive policy; for example the government should provide the people with new shelters or give them compensation. The relative costs and benefits of such programs in economic and social terms should be explored, and all relative stakeholders, such as the inhabitants of the riverbanks, should be involved.

4. Vulnerability emphasised

In terms of flood risk modelling and assessment in Jakarta, whereby risk is defined as the product of hazard, exposure, and vulnerability, the project should focus more on the latter two aspects. The flood hazard in Jakarta is already the focus of research in many projects, and the JCAT project should use these results. Much knowledge can be generated on the more social components, in particular vulnerability assessment.

5. Recent regulations

Some recent regulations and their impacts could be analysed in order to enrich the research. For example, the Jakarta Provincial Planning Board (Bappeda) have already published several regulations to reduce flooding, for instance, Perpres No. 54 (2009), and regulations to limit groundwater extraction. Nevertheless, these programs have not yet been evaluated.

Annex 1 Outcomes JCAT Definition Workshop, Jakarta, 18 January 2011

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.

Annex 2 Programme of the Jakarta Climate Adaptation Tools (JCAT) Workshop

WEDNESDAY, 23 NOVEMBER 2011

Jakarta: Towards adaptive flood risk management of a Delta City (DW5B) Continuation of Session DW 5A

Venue: Jakarta Convention Centre
Room: Kakatua **Facilitator:** Rob Bonte

Afternoon session 09.00 – 12.00

9.00 Welcome by Philip Ward, project manager of the Jakarta Climate Adaptation Tools project

9.05 Meet and Greet Getting acquainted and checking expectations on this session

9.20 – 9.50 Introductions

1. The concept of flood risk assessment and the JCAT project

Dr. Philip Ward

2. Flood Risk Assessment as a tool for adaptive flood risk management

Yus Budiyo, PhD candidate

3. Cost Benefit Analysis as a decision-making support tool

Pini Wijayanti, PhD candidate

9. 50 Focusing the research project

Interactive session in which the audience will be invited to share insights on the focus of the research project. The dialogue will be based on questions raised by the audience and prepared questions by the project team.

11.00 Sustainable urban planning of Jakarta

Sofian Sibarani (AECOM): Sustainability for Master Planning

11.10 Embedding the research projects in policy and practice in Jakarta

Interactive session how the research projects can be linked to projects and plans that are currently being prepared by the Jakarta Government.

11.40 Reflections by the JCAT research team

12.00 Closure