

Session DP FR 4.1: Smart Flood control in Deltas

Date and Time of Session: Thursday, 30 September, 15.15 – 17.00 h.

Short description of the session topic and the objective of the session:

Topic: Smart Deltas

Objective: To define what a Smart Delta is and to discover the latest Smart technology.

Session Agenda and Main Speakers

Sessions Chair:

Murray Starkel, NGP Global Adaptation Partners, USA

Main speakers:

- Smart Water Management: Michiel van Haersma Buma, Water board Delftland, the Netherlands
- Smart Delta Cities: Piet Dircke, ARCADIS, the Netherlands
- Smart Flood Control: Leo Zwang, Fugro, the Netherlands

Panelists:

- Speakers, including:
- Dan Hitching, ARCADIS, USA
- Djeevan Schiferli, IBM, The Netherlands

Most exciting insight, moment or outcome

More and more data will be available in the future. This means that there will be total transparency of water safety information. That the public will gain insight in the water safety issues, creating more awareness. On the other hand more information does not mean that we get smarter.

Main conclusions, themes, insights or messages

Michiel van Haersma Buma, Water board Delftland, the Netherlands: Smart Water management
Van Haersma Buma defines Smart as “the complete knowledge of the complex water system”. There are 3 trends that lead to Smart Water management:

1. Reliable and Cost-effective / -efficient government;
2. Water management is becoming more information management;
3. Cooperation and communication.

With a 3D presentation of model results Michiel shows how the public can become aware of flood risks.

Smart Delta Cities: Piet Dircke, ARCADIS, the Netherlands

Dircke gives a real comprehensive overview of Smart Delta Cities. Examples are Smart Dutch national flood protection, Smart Barriers, Smart Coastal reinforcement (combining a dike with a dune), Smart use of sediment, Innovative materials (BASF), levee testing facility, Smart urban water management solutions (green roofs, water plazas and under ground storage), Integrations of Coastal protection, Smart sharing of Knowledge, Smart climate adaptation in the San Francisco bay.

End question: How Smart will the future solutions be? Combining Flood control and Energy supply?

Smart Flood Control: Leo Zwang, Fugro, the Netherlands

Zwang talk about Smart Levee Control and starts with a cartoon of manager shouting to a IBM technician who is testing a to big to handle wave "Oke, and now back!" Smart Levee Control is a process of Data acquisition, safety assessment, risk mapping and monitoring.



Dan Hitching, ARCADIS, USA

Hitchings was a member of the Core of Engineers during and after Kartina and gives his insights: really think things though in advance and consider the consequents. More quality assessment and constant communication of hazards are important.

Djeevan Schiferli, IBM, The Netherlands

Schiferli takes us through a short history of the world wide web tot show how fast the information management has developed in last few decades. 1971 first e-mail, 1991 first web browser, 1993 600 websites, 2001 600 million and in 2013 1 trillion devices are expected to be connected to internet.

The questions is: how many people can handle an explosion of information?

Insight: People are sensors!

Round table discussion

- Should monitoring of levees be mandatory? -> it's only a question of time until this information is a standard. More data will be available in the future as well as smarter sensors. An example of a future smart sensor: People;
- Who should determine the normative flood protection standards? Engineers, accountants, the public or politicians? -> It should be a combination.
- 3D presentations of flood hazards creates awareness and insight;
- Is there an evacuation plan for The Dutch Randstad region? No, it's almost impossible to evacuate this region in a short time span. Completely reliable on the high protection level;
- What effect will total transparency have on the public? -> Knowledge and awareness, no panic.