Minutes of the 2nd RainGain National Observers Group meeting (NL)
Prepared by Tirza Molegraaf and Marie-claire ten Veldhuis

Date: Tuesday 12 March 2013
Venue: Provinciehuis Zuid-Holland, Landschapszaal

Purpose of the meeting:

- To give an update of activities and achievements in the RainGain project
- To discuss management of data provided by the dual pol X-band radar that is to be installed in Rotterdam and future use of the data by external parties
- To discuss opportunities for use of the high resolution rainfall data from the radar; what water management actions and insights can be better supported by high resolution data compared to the current situation

Present:

Name	Organisation	Job Title
Chris Verwijs	Province ZH, Water Department	Head of Water Management
Sieb de Jong	Province ZH, Water Department	Chair of NOG Meeting
Marie-claire ten Veldhuis	TU Delft	Coordinator RainGain project, partner RainGain
Tirza Molegraaf	Province ZH, Water Department	Policy advisor water management, programm manager partner RainGain
Daniel Goedbloed	Municipality of Rotterdam	Policy advisor environmental management, partner RainGain
Aart Overeem	KNMI	Climate researcher
Emilie Buist	TU Delft	Student Water management
Erik de Haan	Province ZH, Environment Department	Policy advisor climate change
Etta Meuter	Waterboard Hollandse Delta	Policy advisor watermanagement
Guenda Bruni	TU Delft	Urban hydrology researcher
Hidde Leijnse	KNMI	Climate researcher
Irene Poortinga	Hydrologic	Consultant
Jan Gooijer	Waterboard Noorderzijlvest	
Jeroen Rombouts	3TU Datacentre	TU Delft
Maarten Duijnisveld	TU Delft	Student Water management
Mechiel van Appeldoorn	HH Schieland en Krimpenerwaard	Policy advisor watermanagement
Regina Edoo	TU Delft	
Remco van de Beek	Meteoconsult	Consultant
Remko Uijlenhoet	WUR	Hydrology researcher
Ricardo Reinoso Rondinel	TU Delft	Hydrology researcher
Stefan Jansen	Waterboard Delfland	Policy advisor watermanagement
Wilco Terink	Futurewater	Consultant

Opening and welcome
Sieb de Jong opened the 2nd NOG meeting of RainGain.
Chris Verwijs (Head of Department Water Management at Provincie Zuid-Holland) welcomed everyone to the second NOG meeting. In his introduction, he stressed the importance of reliable rainfall information for urban water management, especially in highly urbanised areas such as Provincie Zuid-Holland.

Introduction to the RainGain project
Presentations by Marie-claire ten Veldhuis and Daniel Goedbloed (presentations will be available on the website: www.raingain.eu)

Marie-claire ten Veldhuis (TU Delft), coordinator of RainGain gave an update of activities in the RainGain project. She introduced the 10 pilot sites in the 4 participating countries (Belgium, France, the Netherlands and UK), that will be studied intensively in the project. She presented main characteristics of the pilots, in terms of dimensions, elevation differences and degree of urbanisation.

She also provided an overview of hydrodynamic models used in the pilot sites and of the organisational context. One of the aims of the RainGain project is to exchange data and models between the pilot sites. The FEWS platform has been identified as a good option to support this exchange, if all models can be linked to the platform.

Daniel Goedbloed (Gemeente Rotterdam), coordinator of the Rotterdam pilot in RainGain, explains the tender procedure for the dual pol X-band radar that is to be installed in Rotterdam. Bids received in the first round of the tender procedure were invalidated for formal reasons. The procedure has to be closed and reopened for a second round. This time, the procedure could be concluded successfully and SSBV Aerospace Technology was selected for construction and installation of the radar. The radar will be installed on the roof of the Nationale Nederlanden building (Delftse Poort building) in Rotterdam. Installation is expected to take place in November 2013.

PhD research in RainGain
(presentations and posters will be available on the website: www.raingain.eu)
Guenda Bruni and Ricardo Reinoso Rondinel, PhD students at TU Delft, presented objectives of their PhD research as part of the RainGain project. Ricardo's research will focus on radar scanning strategies and signal processing; Guenda's research will focus on the benefits that can be obtained from high resolution hydrodynamic modelling of urban hydrological systems based on the X-band radar rainfall input.
Research of other PhD students involved in RainGain was presented on posters in the meeting room.

Discussion session – radar data management
Introduction of the topic by Jeroen Rombouts (3TU Datacentre); presentation will be available on the website: www.raingain.eu.
Jeroen Rombouts presented the aims of the 3TU Datacentre; to support long term access to valuable research data, to provide discoverable and usable data collections and to provide access to tools for management of research data. The 3TU Datacentre has 3 core activities:

1. Data-labs: Collaboration platforms for research data (management) to enable exchange of data and other research material for collaboration and e.g. early review. The aim is to improve standardization & documentation and lower archiving threshold.
   Examples: OpenEarth and Zandmotor.
2. Data-archive: Multi disciplinary, multi institutional data archive to 'freeze' research data and data descriptions for future use. The aim is to improve long-term accessibility, usability and discoverability. Example: IDRA radar in Cabauw, collaboration between KNMI, WUR and TU Delft.
3. Data-services: Training, dissemination and research on data management topics with the aim to improve data management and data-sharing practice.

The 3TU Datacentre has recently started cooperation with RainGain in the framework of a national inter-universities project "Regie in the Cloud".
Jeroen presented several propositions regarding management of data from the X-band radar in Rotterdam that were discussed with the audience. One of the outcomes of the discussion was that there is certainly an interest among external parties to share data from the Xband radars. Further details about stage of preprocessing of the data, timing of data availability and cost coverage of data storage and management remain to be sorted out.

Discussion session – use of high resolution rainfall data in water management
Daniel Goedbloed and Tirza Molegraaf presented propositions for discussion:

Proposition 1: With the data from the RainGain rain radar and the weather forecasts resulting from it, drainage of surface water system by the waterboards are much less often necessary due to the possibility to predict a storm at a certain area.

Rainfall forecasts are useful for operational water management, especially management of storage facilities. Current information is too uncertain to do this properly. Rainfall forecasts should be available at least one hour up to one day in advance depending on the dimensions of the water systems that need to be managed (urban systems, typically hours; regional systems typically half-day to a day in advance).

Proposition 2: With the data from the RainGain rain radar and weather forecasts resulting from it, combined sewer overflows to surface waters will be reduced by half due to better control of the pumping stations.

Again, rainfall forecasts should be available at least one hour in advance. Nowcasting is already difficult, so forecasting is even more difficult. Maybe it isn't even necessary if you don't adjust the sewer system. It's all interdependent. Also the model should be very accurate and detailed. High resolution in time and space.

Proposition 3: With the data from the RainGain rain radar precipitation radar composites can be improved and be so accurate that the parameter 'precipitation' is no longer a sensitive parameter in the calibration of the models.

It's important to improve a model with above-ground measurements, and to make a better runoff and inflow models. The data could give more insight.

Accurate rainfall information is also important to improve calibration of urban hydrodynamic models, compared to rainfall input that is currently available.

Further information and next meeting
The next yearly NOG meeting will be organised in March 2014. Meanwhile, updates on RainGain activities will be posted on the RainGain website and in project newsletters. Press releases are to be expected for important milestones of the project, such as the start of the radar manufacturing process and installation of the radar in November.

Closure
Sieb de Jong concluded by thanking all participants for their contributions to the discussion and invited everyone for drinks.