

A photograph of a flooded urban street. The water is dark and rippled, covering the entire road surface. In the center, a person is floating on a yellow and orange inflatable ring. The street is lined with parked cars on both sides, including a dark van on the left and a silver car on the right. In the background, there are multi-story brick buildings with many windows. The overall scene depicts a significant urban flood event.

# RainGain

## International Workshop on Urban Pluvial Flood Modelling

Exeter, 6 October 2014

Marie-Claire ten Veldhuis  
Project coordinator RainGain



This project has received European Regional Development funding through INTERREG IV B.



INTERREG IVB



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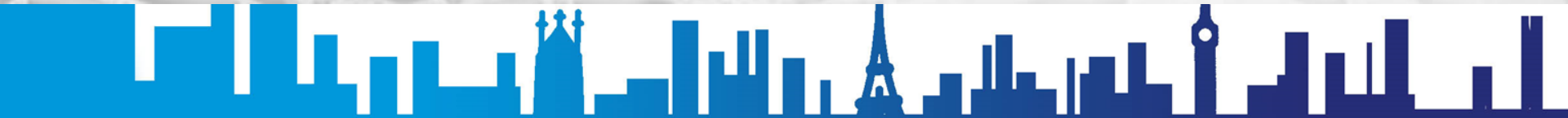


## Four cities gain rain

RAINGAIN is a transnational project aimed at improving the prediction of pluvial floods in our cities. The frequency and the damages of pluvial floods in urban areas are expected to increase as a consequence of climate change and urban development. New solutions are needed to cope with intense storms and to reduce the risks for populations and infrastructures. RainGain develops and tests innovative tools and practices based on the use of high resolution radars in four pilot cities: Leuven, London, Paris, Rotterdam. The project is funded by the European programme Interreg IVB NWE.

[Read More](#)

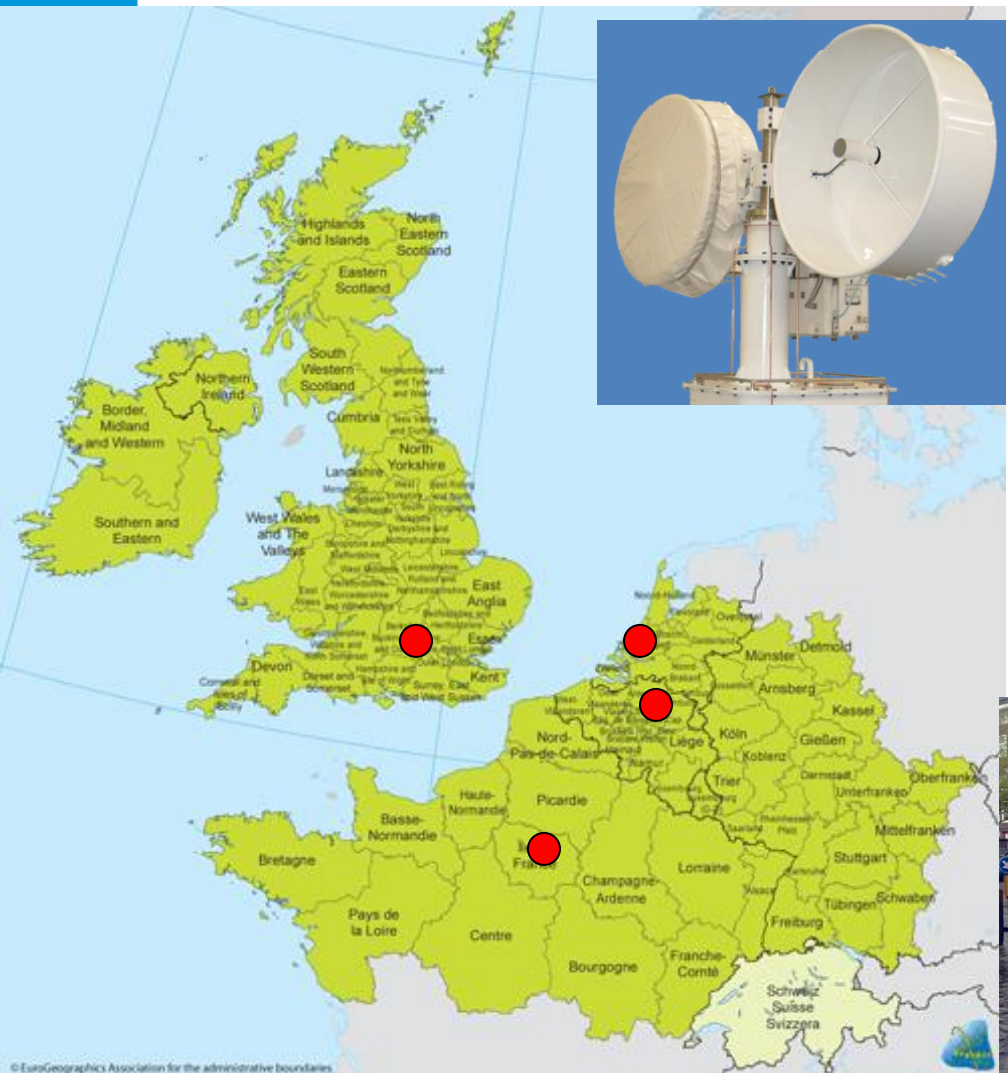
[www.RainGain.eu](http://www.RainGain.eu)





# RainGain

High resolution rainfall radar  
for urban flood modelling and prediction



Xband/Improved Cband radars in 4 Cities:

Rotterdam (NL)

Leuven (B)

Paris (F)

London (UK)



# To prevent:



Morée-Sausset, FR



Sucy-en-Brie, FR



Rotterdam,  
July 2012



Torquay, UK



Redbridge, UK





# RAINGAIN: 13 Partners

- 1) TU Delft (NL)
- 2) Zuid-Holland Province (NL)
- 3) Gemeentewerken Rotterdam (NL)
- 4) KU Leuven (BE)
- 5) Aquafin NV (BE)
- 6) Ecole des Ponts ParisTech (FR)
- 7) Marne-la-Vallée (FR)
- 8) Seine-St.-Denis (FR)
- 9) Météo France (FR)
- 10) Véolia (FR)
- 11) Imperial College London (UK)
- 12) Met Office (UK)
- 13) Local Government Flood Forum (UK)

## 4 Pilots:

Rotterdam (NL)

Leuven (BE)

Marne-la-Vallée (FR)  
Seine-St.-Denis (FR)

Croydon (UK)  
Redbridge (UK)



➤ High resolution radars:

- Leuven: new algorithms existing Xband radar, single pol
- London: tests Xband radar, single pol; Cband network, dual pol
- Paris: new, dual pol Xband radar constructed, installation Autumn 2014
- Rotterdam: new, dual pol Xband radar constructed, installation Autumn 2014



*High resolution rainfall information for improved **flood** control in urban areas*

➤ Urban flood modelling:

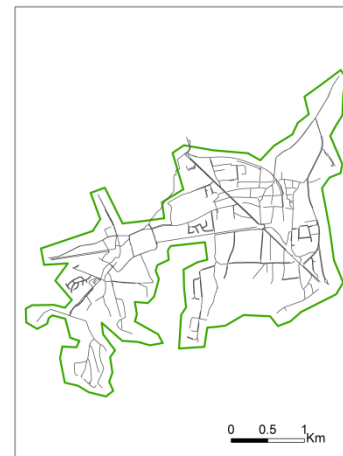
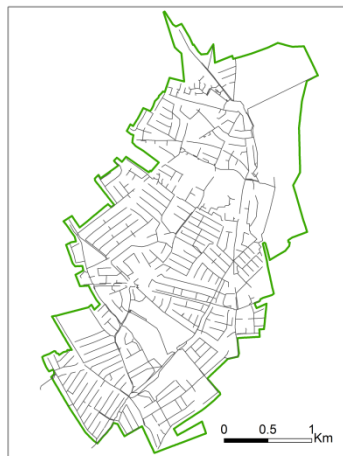
- Flood Models in 10 pilot locations in BE, FR, NL, UK
- International study, 4 pilots compared: response to fine-scale rainfall input (ongoing work)

Cranbrook (UK)

Morée-Sausset

Herent (BE)

Kralingen (NL)



## Solutions for urban flood control:

- Application of radar information and flood models in practice
- Local Authorities meeting: 23 October 2013  
Participants from FR, BE, NL and UK; exchange of experiences
- 2<sup>nd</sup> Local Auth meeting: 8 October, London)




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From 8 October 2014 To 8 October 2014

### RainGain 2nd Local Authorities Meeting in London

Grimond Room, Portcullis House, SW1 (9:00-10:45) &

Council Room, One Great George Street, SW1 (11:00-16:30)

> [CLICK HERE](#) for hotel recommendations in London.

#### Aim

The aim of the day is to build upon the Conference at MACVAL, Vitry-sur-Seine and develop the engagement of local government with the RainGain project.

Overview



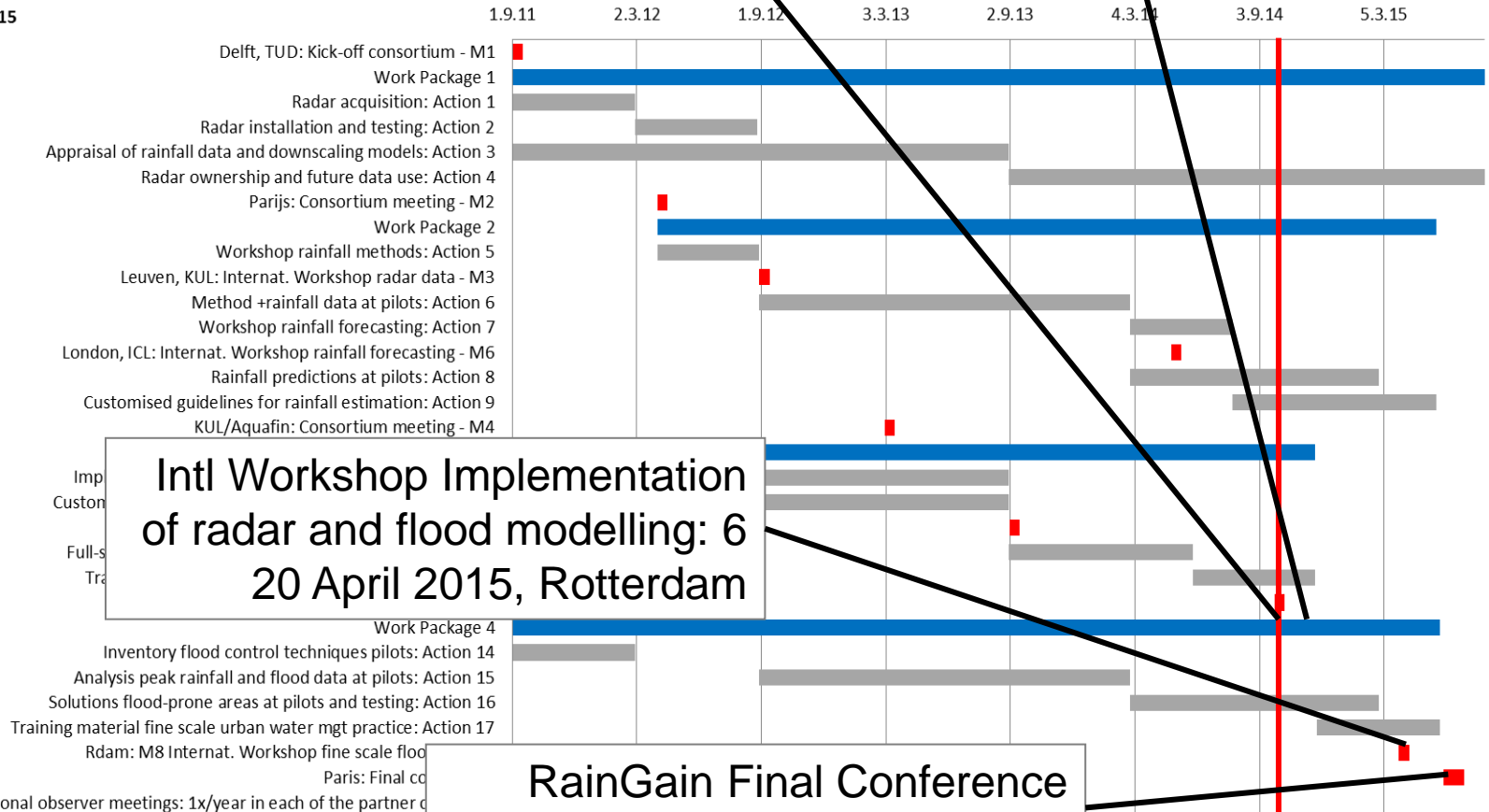


# RainGain Project Planning

Project consortium meeting  
7 October 14: Exeter

Intl Workshop Urban Pluvial  
Flood Modelling: 6 October  
2014, Exeter

Start date: 1 Sep 2011  
End date: 31 July 2015



Intl Workshop Implementation  
of radar and flood modelling: 6  
20 April 2015, Rotterdam

RainGain Final Conference  
Paris, summer 2015





Enjoy today's Workshop