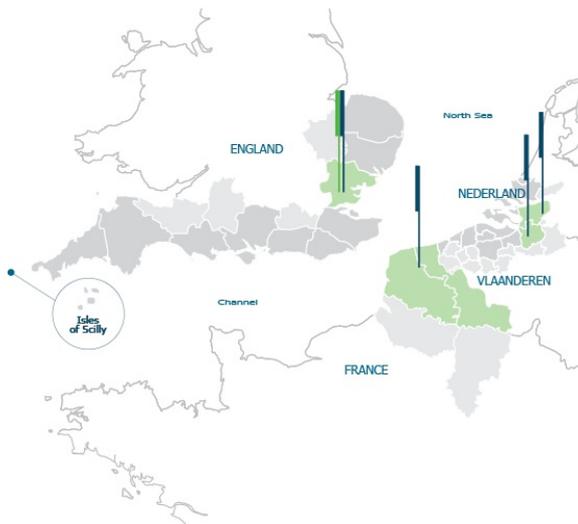


# FLOODCOM

## Positive water management in lowland areas facing climate change

### ■ Project summary



The FLOODCOM project gathers together 5 partners from the 2 Seas programme area with similar topography: lowland areas, affected by the North Sea with a possibility of flooding from inter-tidal and fluvial events or even severe rainfall events. Traditional flood defense methods, such as concrete canals and sea walls, are no longer fit to meet the increased threat of flooding. Therefore, new technical solutions and practical methods are required, with a shared objective to

make flood risk areas safer for living and working. FLOODCOM partners will share their experiences and expertise and create a toolkit to be used by all national environment agencies and local authorities. These approaches range from large-scale water storage (up and down stream) for communities in Breda and Chelmsford, to water flow management techniques in Antwerp and St Omer. The project will engage with communities, with a particular focus on young people, to increase their knowledge of FLOODCOM's aims and the effects of climate change on their environment, using new communication tools like social media and live web streaming.

### ■ Activities

#### What was the project trying to achieve?

The general aim of Floodcom was an improved outlook for vulnerable communities in the 2Seas programme area with regard to the risk of flooding. The main objective of Floodcom was to share a set of practical solutions with project partners and the wider 2Seas area for making flood risk areas safer for living and working. Implementation was to be achieved through 4 pilot flood alleviation schemes representing 2 different approaches to the problem of lowland flooding associated with climate change. The specific objectives were as follows:

- The project will share technical knowledge through exchanges of staff.
- All partners will contribute to the technical "toolkit" sharing information gained through the Floodcom project for the dissemination to others.
- All partners will participate in encouraging flood awareness and highlighting flood defence schemes to the public through using selected social media sites, an educative geocaching project involving local schools and by teacher/class exchanges.
- To

ensure that crucial information is available to partners in their own language if necessary (translations will be available in French and Dutch). • To advise and inform on self-help and resilience for flooding • For the lead partner to arrange, with the other partners, a joint conference to disseminate the technical toolkit and share lessons learnt. • All partners to contribute towards a tool kit to share information, learned experiences and practical advice.

### **What were the activities implemented?**

The FLOODCOM project consisted of three main activities: Activity 1: Urban water flow techniques This activity examined and implemented water flow techniques and techniques to monitor water levels to allow for pumping of water to keep regions flood free. The two flood alleviation schemes were as follows: W&Z undertook the construction of a pumping station at Hedwige-Prosper Polder site, covering over 4,000 hectares, near Antwerp to protect the hinterland with special attention given to architecture, technical solutions and fish migration. During heavy rainfall, a pumping station provides help by pumping the water into the Schelde. The station is located on the border of the project area and the Hertog Prosperstraat. In addition, this technical construction provides a fine vantage point for recreational users. Once the water level in the adjacent polder canals reaches a certain height, the installation pumps the excess water to the tidal nature area. Activity 2: Urban water retention techniques The purpose of this activity was to examine, plan, implement and share with partners and disseminate to communities directly affected by flood risk, new water retention techniques. Activity 3: Interactive Communication Techniques The community engagement programme for schools was completed by creating a bespoke education pack to enable children to understand the need for the construction of flood defences. Workbooks, case studies, quizzes, an interactive website and a flood detective game were also accompanied by a geocaching activity at the location of the flood defences for which the children designed geocoins. The Education website ([www.floodcom-education.eu](http://www.floodcom-education.eu)) was constructed to share information about the site projects to the school children across all of the partner locations. For the educators involved in the programme, a teacher toolkit has also been devised to accompany and facilitate the delivery of the activities. School exchanges were also carried out between Margaretting in the UK and the College Gaspard Malo in France with visits at both locations. A final conference was organised and held on 24th September 2014 in Antwerp to present the findings of the project and lessons learned as well as disseminate the final toolkit of information to relevant professionals, authorities and organisations.

## **■ Results**

### **What were the key results of the project?**

W&Z implemented a pumping station on site and made a study of comparable situations in which flooding risk exists to investigate if pumping is the only solution. They also implemented a geocache activity on site. Chelmsford: • Floodcom has enabled the detailed design work for the FAS to be completed, which will enable the project to go ahead at a later date. • Two technical exchanges were held, where 20 experts were able to learn from their partners about the schemes, including governance, funding, practical issues, and challenges. • The education pack was piloted by one school, before being rolled out to other partner schools. Two exchange visits were held between an English and French school, with a focus on flooding, flood

awareness and resilience. • Members of the Chelmsford team attended all steering group meetings, and involved other experts from inside and outside the organisation. • Two workshops were delivered at the final conference, in addition to participation in networking sessions. IIW: In late 2013, the corresponding services were transferred, after devolution as part of an open call for tender, to the EIFFAGE ENERGIE INDUSTRIE NORD / EDI-TP / TELAM group. New sensors have been installed in order to collect complementary information on the hydrological situation (rain gauge, level measurement...). In terms of communication, new technologies have been rolled out so as to gather real-time information and increase the responsiveness of the operators in case of incident. The automation has been replaced and new features have been developed to increase the reliability and performance of the equipment. New supervision stations have been made available to the facility managers to make the operation easier.

### **Did all partners and territories benefit from the results?**

W&Z: By implementation of the pumping station we reduced the risk of flooding for the local community of the Prosperpolder. Breda: There is be a lot information gathered. This information can be used for the further development of the Spinolaschans. Also parties realise that the problem around water retention must be seen in a broader perspective. Now the waterboard and the city of Breda are looking for a solution that will have an even more sustainable perspective. At the end the inhabitants but also companies in Breda will have lower costs and get a solution that will also contribute to more goals such as recreation and landscape. Chelmsford: • Partnership with Breda – sharing of technical expertise and advising on approaches to each other’s schemes. • All Floodcom partners – sharing of technical expertise advising on approaches to each other’s schemes. • Margaretting Primary School – an education pack to share messages on flooding and resilience, enhanced technology to enable participating in Floodcom, pupil exchanges to further explore the flooding message, and improve language skills and cultural awareness. • The wider community of Margaretting Primary School – teachers will continue to use the education pack in the future, after the close of Floodcom; parents have absorbed messages from their children and in some cases become involved with helping on the exchange and geocache events. • Other schools – will benefit from the education pack as it is disseminated more widely. • Technical experts from the partner countries – attendance at the final conference where the findings and outcomes of the Floodcom project were delivered, and receipt of the Floodcom tool kit. • Technical experts not attending the conference – a legacy with the website and tool kit information which will remain in place until 2025. IIW: All partners and localities benefitted. IIW: All partners and localities benefitted.

### **What were the effects / outcomes for the territories involved?**

#### **■ Distinctiveness**

#### **What was the real added-value of doing this cross-border project?**

There has been an exchange of knowledge between the partners on their experiences in flooding and how to prevent it. Learning that goes beyond Floodcom: It is refreshing to be given the opportunity to meet people from different countries and professional disciplines. It has

been indispensable to meet technical experts from other countries, who have specific project experience, and to translate that into the Chelmsford project. In addition, much has been learned that goes beyond Floodcom. It's been possible to have debates, exchange ideas and see practical examples of ideas in planning, urban design, landscape architecture, politics, ecology and culture and history. The partner site visits were particularly valuable in this respect.

### **Have any synergies been developed with other projects or networks?**

No, not specifically, although we have been aware of other programmes taking place. Networking took place at the final conference between partners, guest speakers and delegates. This included the following organisations: Essex Fire & Rescue, Antwerp University, CEPRI, local government, the Environment Agency, Bruxelles Environnement and flood industry experts.

### **What are the key messages , key lessons learned you would like to share?**

## ■ Project Information

<b>Title</b>	Positive water management in lowland areas facing climate change
<b>Total project budget</b>	€ 4 492 535
<b>ERDF</b>	€ 2 246 267
<b>Priority &amp; objective</b>	Priority 2 b. Develop activities to prevent and cope with natural, technological and human risks and to guarantee the quality of the environment
<b>Timeframe</b>	2010-02-01 - 2014-09-30
<b>Lead partner</b>	Essex County Council
<b>Project Coordinator</b>	Corina Hickman(daniel.chiswell@essex.gov.uk)

