Decentralised Integrated Analysis and Enhancement of Awareness through Collaborative Modelling and Management of Flood Risk [DIANE-CM]

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Team

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Regional partner: LSBG, EA, City council
Redbridge, Met Office, GLA

The main objective of DIANE-CM

- enhancing flood risk awareness by collaborative modelling and social learning
- to develop and to test the advanced methodology for enhancing the resilience of the local communities to flooding

Goals

- Improvement of flood hazard and risk maps and near real time flood forecast
- Introduction of innovative methods of risk quantification and communication in public dialogue for more informed and shared decision making with stakeholders
- Increased participation of local communities in flood risk management in order to enhance flood risk awareness
- Identification of good practise/recommendation based on results in selected case study areas in UK and DE
- Development of guidelines and advanced capacity building and dissemination

The methodological approach

- Improved flood risk maps for urban areas
- Near real time flood prediction
- Full scale participation of stakeholders
- Workshops for collaborative modelling assisted by web platform
- Train local champions
- Web platform and E-learning platform
- Evaluation

Work packages

WP 1: Stakeholder Analysis and vertical and horizontal interactions (Leuphana)

WP 2: Data, Modelling, Mapping and NRT forecasting for stronger involvement of the local champions (ICL)

WP 3: Development of a collaborative platform, creating of a set of flood risk management strategies and scenarios (IHE)

WP 4: Collaborative modelling for flood risk management and enhancing awareness (Leuphana)

WP 5: Enhancing Resilience through Training, Awareness Raising and Dissemination (ICL)

Working steps

- Stakeholder analysis, identification of horizontal and vertical interactions and local champions
- Create data base, flood hazard and risk maps and near real time flood forecast by combination of technical innovation and visual presentation understandable to general public
- Develop and use a collaborative web platform
- Set up an e-learning platform
- Workshop series with stakeholders and citizens assisted by collaborative platform for collaborative modelling in 2 case study areas

Working steps

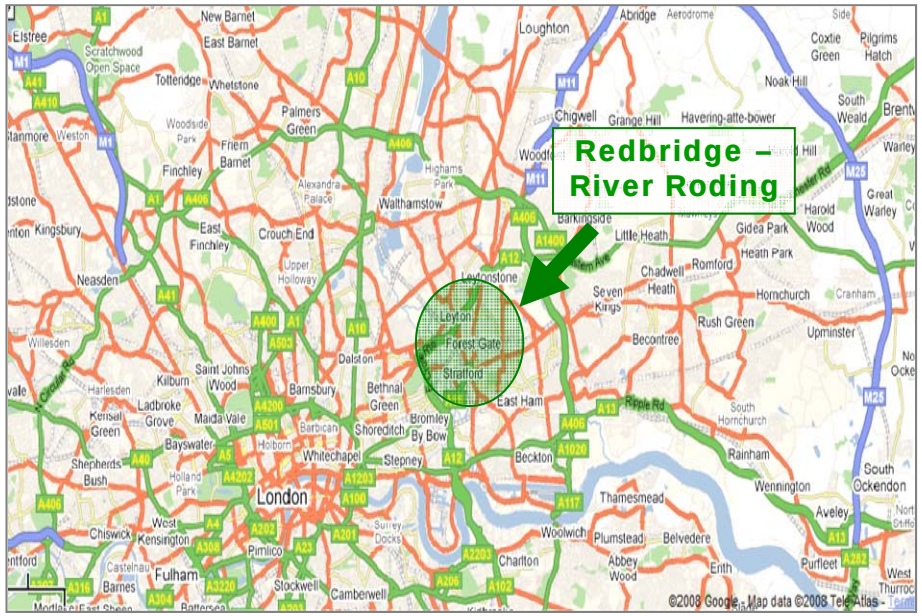
- Evaluation of what can the local institutions (communities) learn from improved understanding of risk communication approaches, tools and techniques
- Identification of possible barriers and identification of the requirements for successful collaborative modelling for enhanced resilience
- Dissemination of the results among the participants in case studies and other potential audiences in both event management and long term planning

Time schedule (main milestones)

Milestones	2009			2010												2011					
	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
Specification of the stakeholders and regional players (WP1)																					
Vertical and horizontal participation diagram (WP1)																					
Database creation and testing (WP2)																					
Trained Champions and Guidelines produced (WP2)																					
Socio-technical framework for merging social and technological aspects of FRM (WP3)																					
Set-up of the platform for the two case study sites (WP3)																					
Workshops conducted in each case study site (WP4)																					
Develop e-learning modules (WP5)																					
Upload of material on the platform and (test) run (WP5)																					

2 Test sites

River Roding (Redbridge/UK)

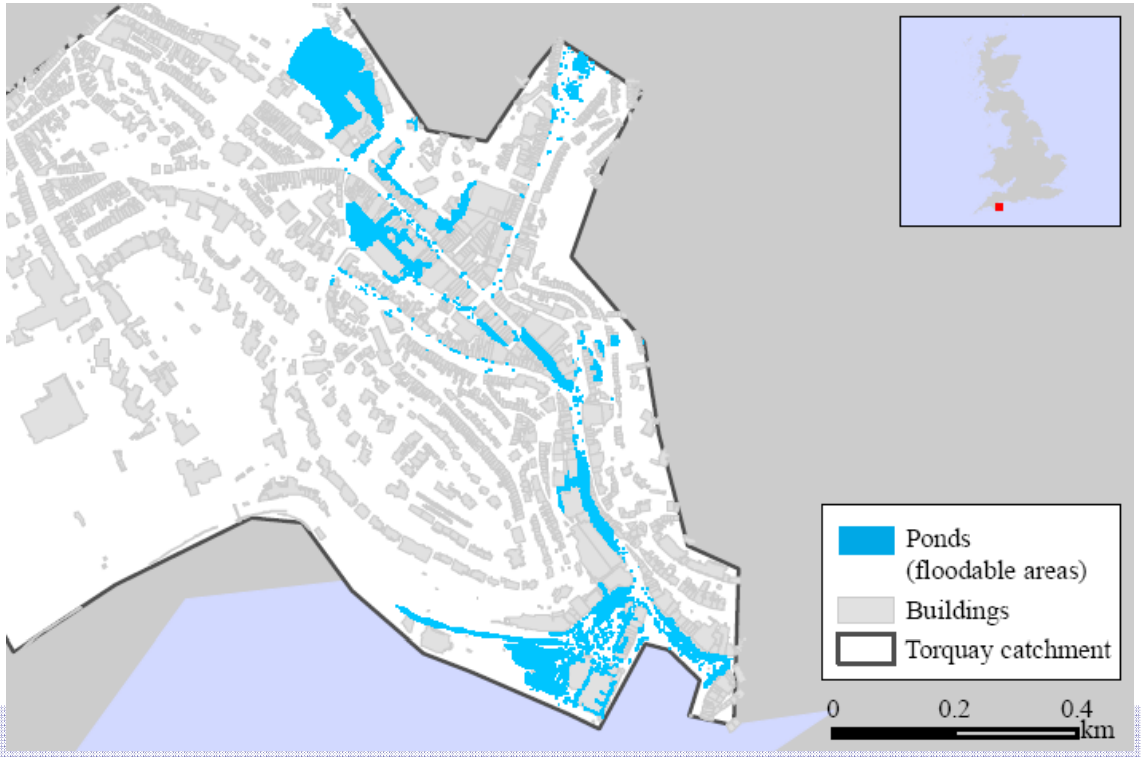


River Alster (Hamburg/Germany)

River Alster in the City of Hamburg

Improved flood risk maps

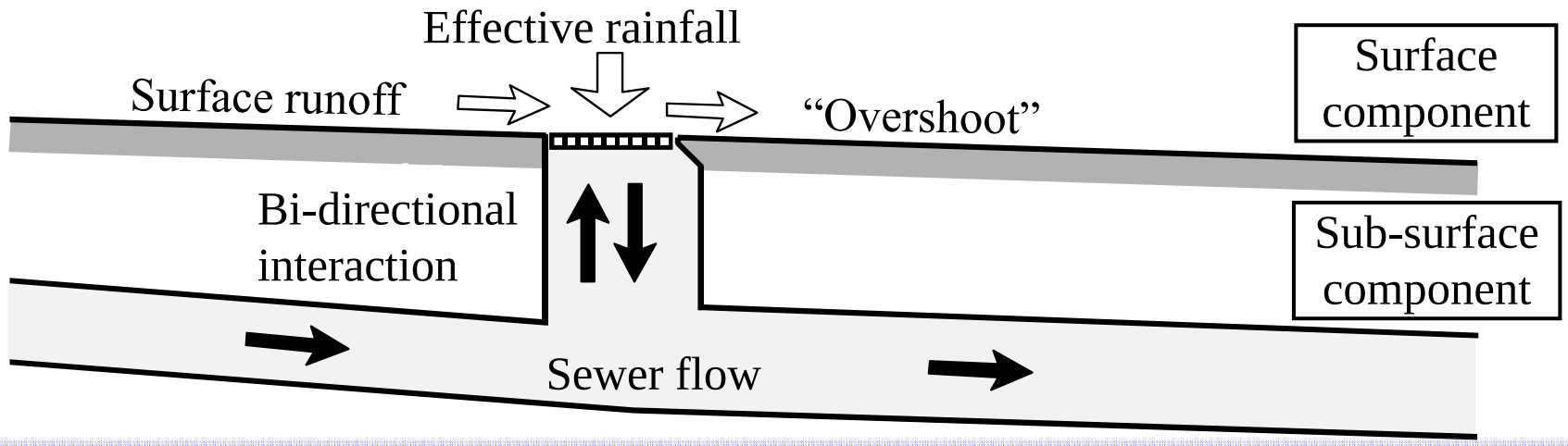
- Dual drainage model concept
- Modelling and prediction



Dual drainage model concept

Approaches in surface flooding analysis:

- Distributed modelling (surface only)
- Interaction physically based surface runoff with flow in sewers
- Approximate surface delineation or
- Spatial approximation dependent on DTM/ land use




Elmvale Row
30 July 2002
1800 hours

Collaborative Modelling (CM) (1)

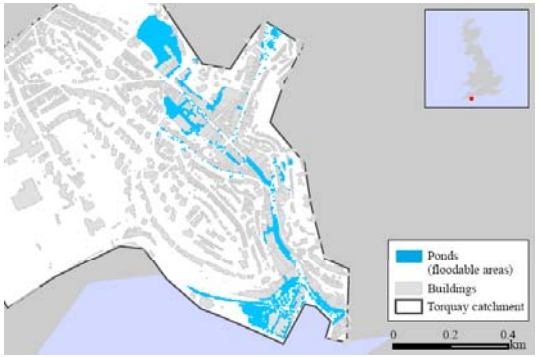
- Problematic: awareness of flood risk – heuristics in thinking
- Needed:

  - Reliable and understandable data

  - Authenticity of information

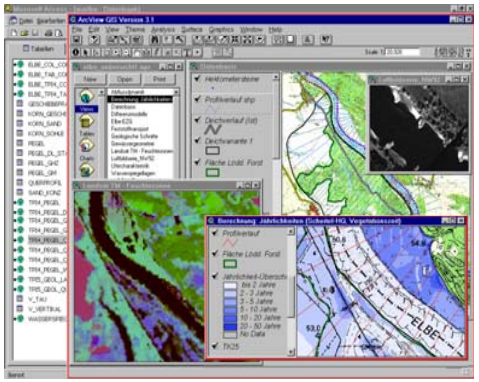
  - Learning processes
- Interactive and social learning processes

  → “enlarge room of actions”

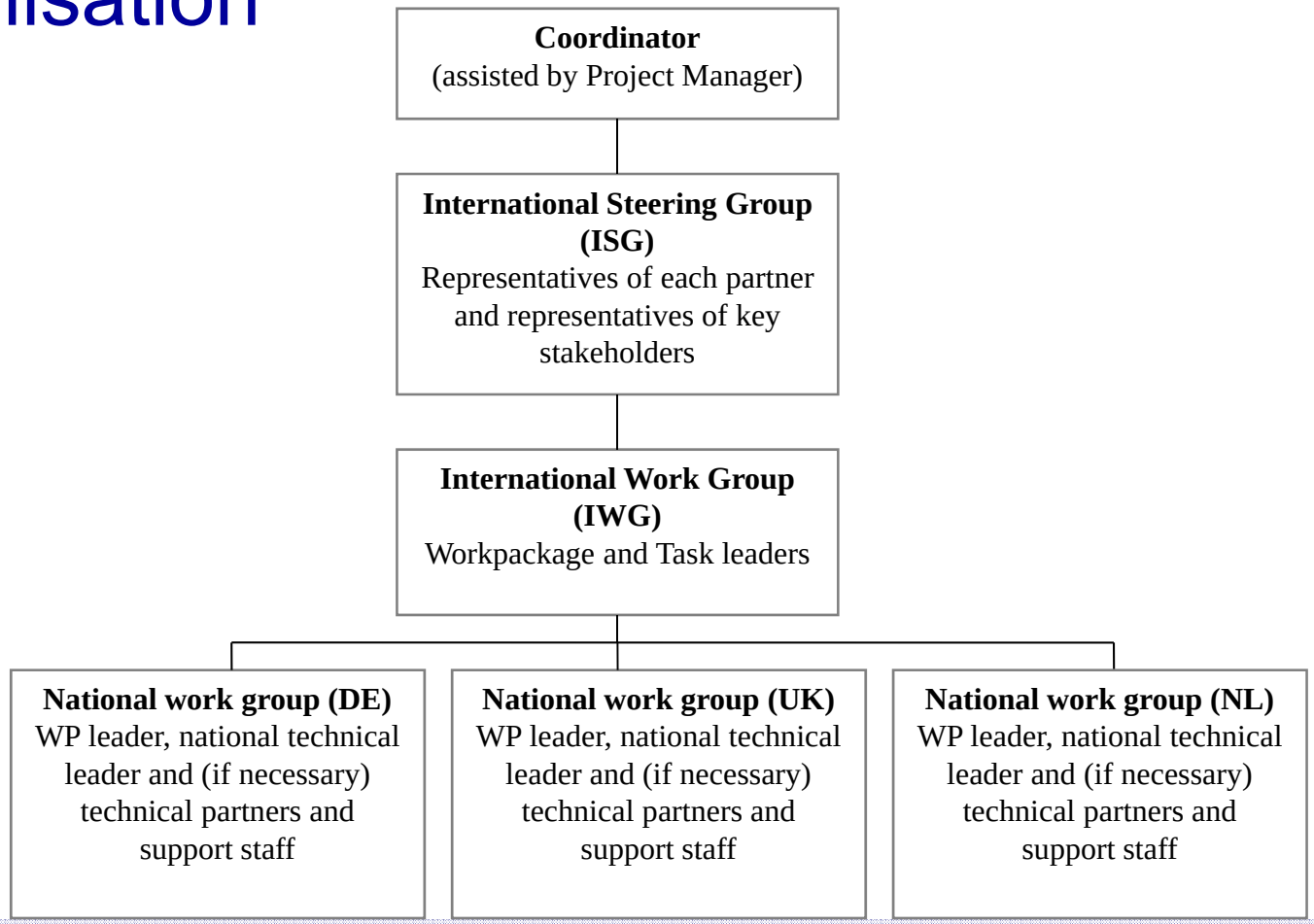


Collaborative Modelling (CM) (2)

- Shared decision making
- Start with the modeling process, integrate narrative knowledge
- Collaboration → intensive iterative and interactive process
- Use different learning methods/cycles → experiencing, thinking and testing [KOLBs learning cycles]



Organisation



Thank you for your attention!