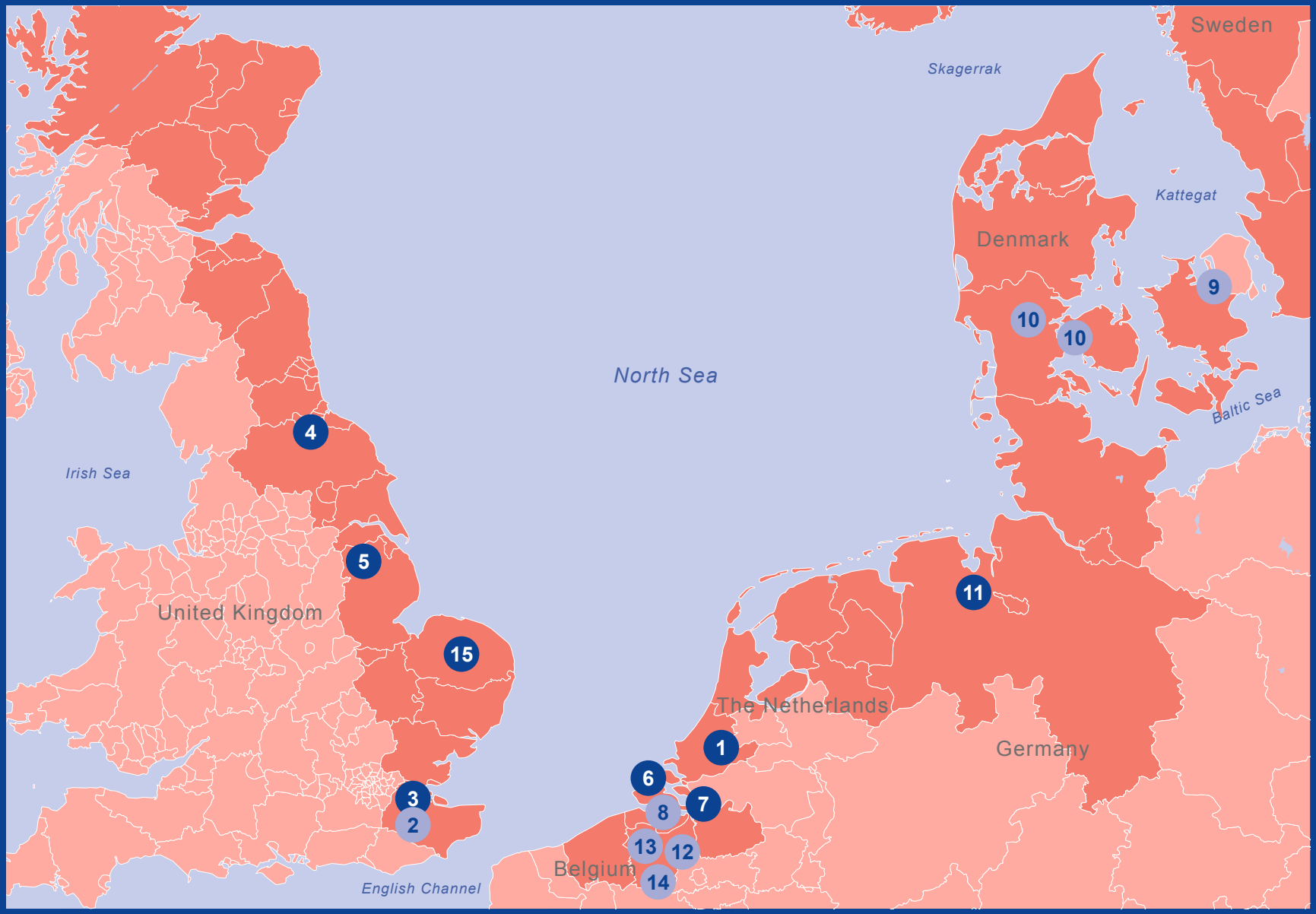
FRAMES pilots



Interreg North Sea Region FRAMES
European Regional Development Fund
EUROPEAN UNION

Pilots

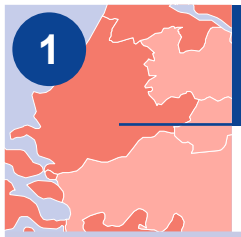
- WP3
- WP4

1. **Alblasserwaard (NL)** Provincie Zuid-Holland
2. **Kent (UK)** Kent County Council
3. **Medway Catchment (UK)** The Rivers Trust, National Flood Forum
4. **Lustrum Beck (UK)** The Rivers Trust, National Flood Forum
5. **Southwell (UK)** The Rivers Trust, National Flood Forum
6. **Floodproof electricity grid Zeeland (NL)** Provincie Zeeland
7. **Reimerswaal (NL)** Provincie Zeeland, Rijkswaterstaat
8. **Sloegebied (NL)** Provincie Zeeland
9. **Roskilde (DK)** Danish Coastal Authority
10. **Vejle & Assens (DK)** Danish Coastal Authority
11. **Wesermarch (DE)** Jade Hochschule, Oldenburgisch-Ostfriesischer Wasserverband
12. **Ninove South - Burchtdam (BE)** Provincie Oost Vlaanderen
13. **Denderleeuw (BE)** Universiteit Gent
14. **Geraardsbergen (BE)** Provincie Oost Vlaanderen, Universiteit Gent
15. **Butt Green Shield (UK)** National Flood Forum

190301186

Benefits MLS for national climate adaptation strategies

	National Adaptation Strategy (NAS)	How can MLS improve the NAS and local/regional/national activities
BE	The National Adaptation Strategy describes the main climate change impacts, the existing adaptation responses, a roadmap to a future National Adaptation Plan (NAP) and policy guidelines for adaption.	Resilience will become a main political chapter in the White Paper on Spatial Planning of Flanders. MLS is the central concept of the Flemish river basin management plans such as the Sigma plan (a plan to reduce the risk of floodings in the Schelde region).
DE	The Federal Government adopted the German Strategy for Adaptation to Climate Change. The implementation of the EU Floods Directive according to federal states working group on water related issues (LAWA) is based on the holistic concept of risk management, including preventrion, emergency management and aftercare.	MLS is already considered as the base for flood risk management under a changing climate. Activities in FRAMES will emphasize the importance of focusing on the 2nd to 4th layer with the same priority as layer 1, fostering the integrative aspect.
DK	The Ministry of Environment and Food implements the EU Floods Directive, performed by the DCA. Central to climate change adaptation efforts is a strong interaction between state and municipalities. Municipality plans include a flood risk mapping and priorities for the local climate change adaptation measures.	The DCA are responsible for the appointment of flood prone areas and the preparation of flood hazard and flood risk maps. Municipalities that have designated areas of potential significant flood risks are responsible for the formulation of risk management plans. As MLS considers the same three focus areas as the flood risk management plans (protection, spatial planning and emergency response) the FRAMES project harmonises with the EU Floods Directive and shows parallelism to flood risk management.
NL	The National Waterplan comprises climate adaptation strategies to protect the Netherlands from (coastal and river) flooding, to work towards climate resilient urban areas and to ensure adequate supplies of freshwater for generations ahead. The Waterplan is implemented by the National Deltaprogramme.	The National Water Plan states that the measures required to comply with the updated flood safety standards must be realized before 2050. The National Water Plan's preferred strategy for achieving the flood safety standards is the MLS approach.
UK	The Water Framework Directive and the Habitats Directive as well as the Climate Change Act and national Flood Risk Management Policy and Strategy all consider different aspects of MLS as well as wider issues such as Climate Change and are overseen and delivered by different combinations of National Government (including the Environment Agency), Local Government and private sector partners (including charities).	Expanding current approaches to include catchment planning and emergency planning (level 2 – spatial planning) and community resilience (level 4) will enable a more sustainable approach to flood risk management and more effective working between different partners. Adopting all levels of MLS will enable future investment to deliver multiple benefits and contribute to the delivery of other priorities including biodiversity and climate change and create opportunities to further apply and develop learning from existing partnerships, programmes and projects.



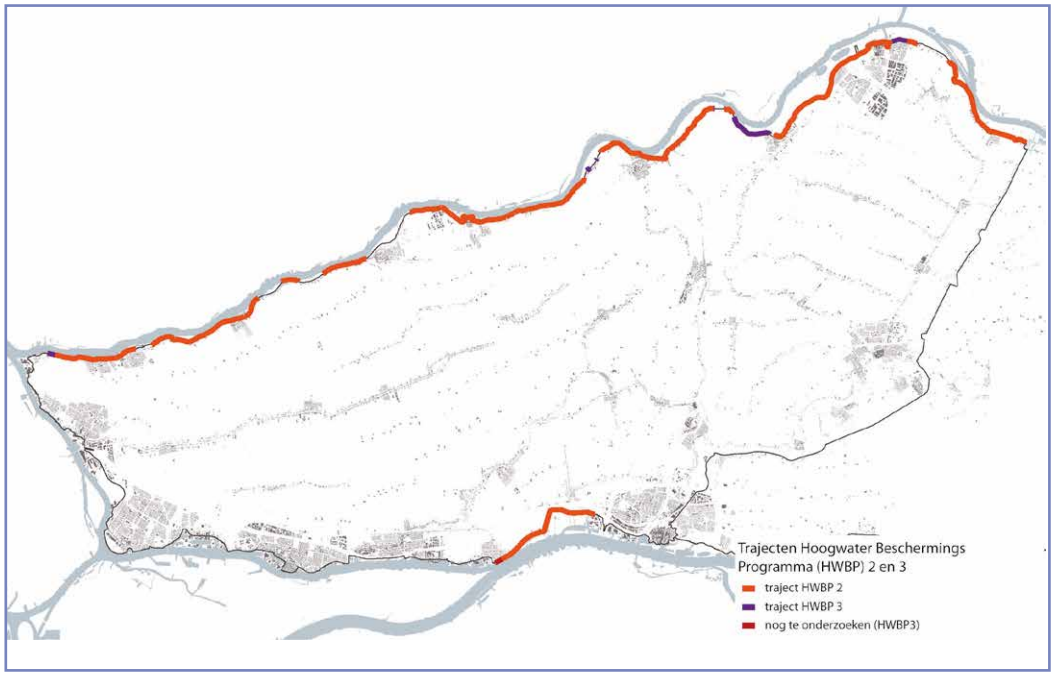
1 Alblasserwaard (NL)

Provincie Zuid-Holland

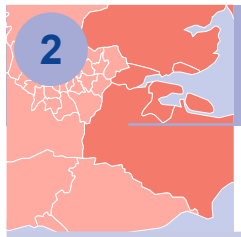
WP3 A3
Catchment management

Transnational focus group
Danish Coastal Authority
Rivers Trust
Jade Hochschule

- Combining spatial/economic planning with reduction of effects of flooding
- Adopt evacuation models



Resilience targets: 1 - 300.000 inhabitants
2 - 10 communities



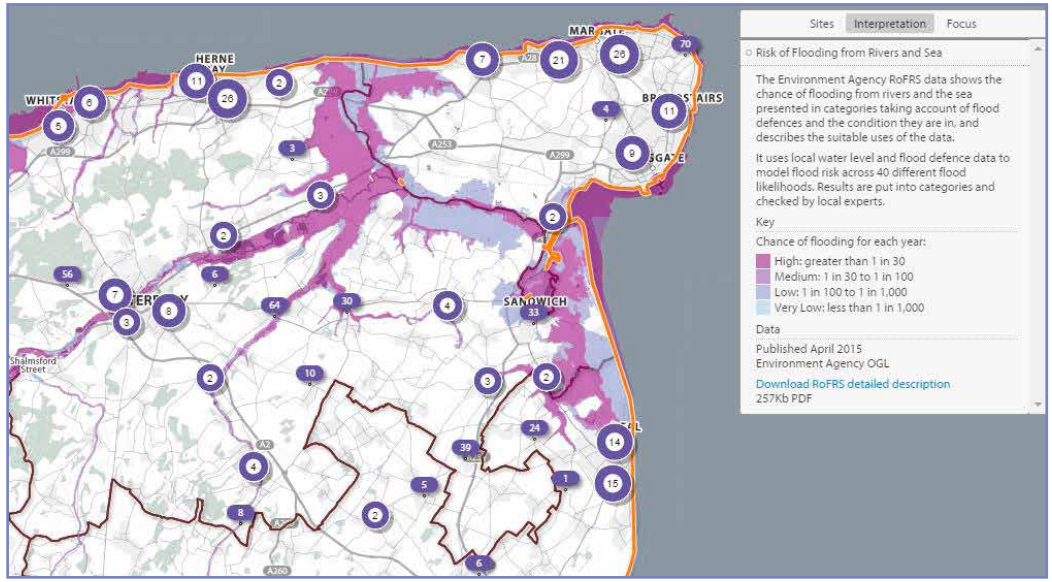
2 Kent (UK)

Kent County Council

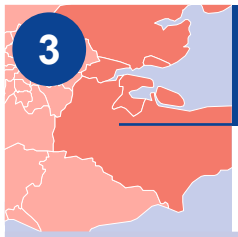
WP4 A4
Applying MLS to Critical Health and Social Care Infrastructure and Service Delivery

Transnational focus group
Universiteit Gent
Veiligheidsregio Zeeland
Rijkswaterstaat

- Mapping critical health/social care infrastructure
- Stress test on health/social care infrastructure and service delivery (layer 2, 3 and 4)
- Joint qualitative assessment and adjustment of health emergency resilience plans and measures
- Adoptable health/social care flood resilience model



Resilience targets: 1 - 100 inhabitants
2 - 260 social/health care stakeholders



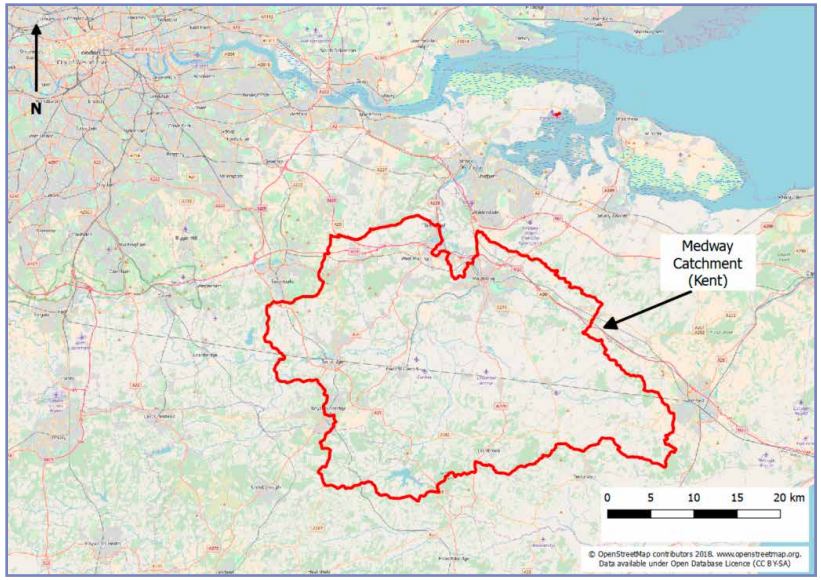
3 Medway Catchment (Kent)

South East Rivers Trust, National Flood Forum

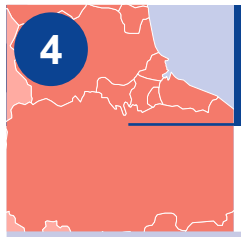
WP3 A3
Catchment management

Transnational focus group
Provincie Oost-Vlaanderen
Universität Oldenburg
Provincie Zuid-Holland

- Modeling and mapping of potential natural flood management solutions
- Develop solutions with landowners, communities and partners
- Design and deliver solutions to reduce risk
- Develop flood groups and local action plans



Resilience targets: 1 - 1.000 inhabitants
2 - 10 NG-stakeholders targeting 700 inhabitants



4 Lustrum Beck

The Rivers Trust, National Flood Forum

WP3 A3
Catchment management

Transnational focus group
Provincie Zuid-Holland
Danish Coastal Authority
HZ University of Applied Sciences

- Modeling and mapping of potential natural flood management solutions
- Develop solutions with landowners, communities and partners
- Design and deliver solutions to reduce risk
- Develop flood groups and local action plans

Lustrum Beck Catchment (trib of Trees)

Resilience targets: 1 - 19.010 inhabitants
2 - 20 NG-stakeholders and 500 inhabitants

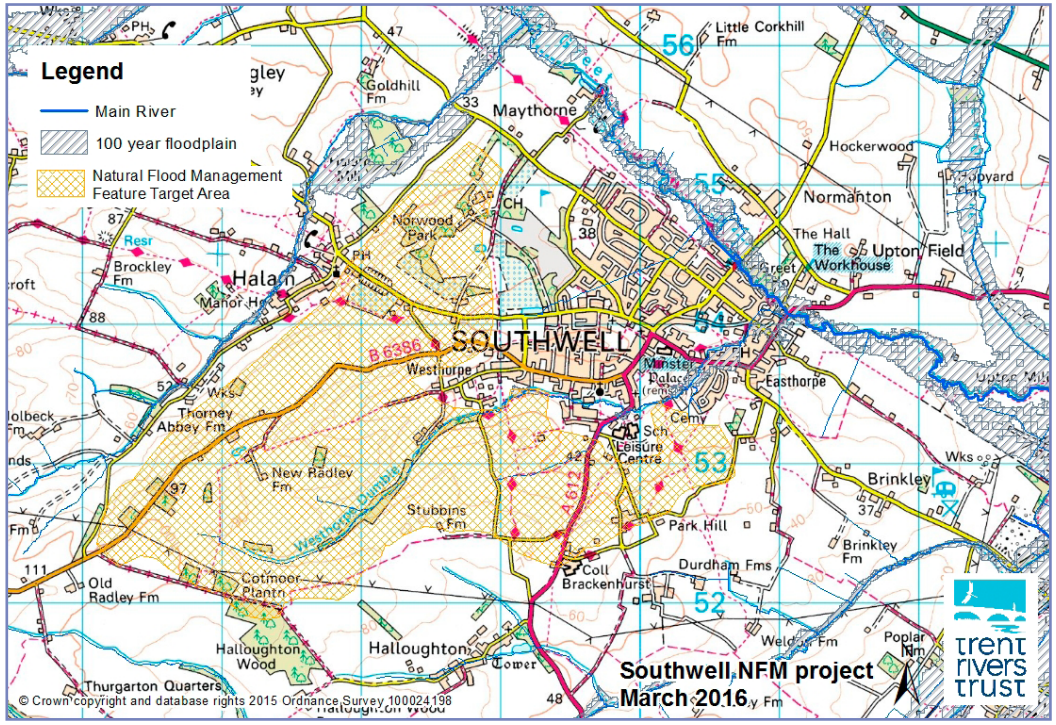
5 Southwell

The Rivers Trust, National Flood Forum

WP3 A3
Catchment management

Transnational focus group
Provincie Zeeland
Universiteit Gent
Jade Hochschule

- Modeling and mapping of potential natural flood management solutions
- Develop solutions with landowners, communities and partners
- Design and deliver solutions to reduce risk
- Support existing flood group to develop local action plan



Resilience targets: 1 - 6.000 inhabitants
2 - 8 NG-stakeholders targeting 500 inhabitants

6 Flood proof electricity grid

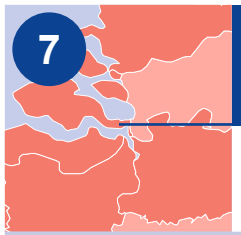
Provincie Zeeland

WP3 A4
Pilots vital infrastructure

Transnational focus group
Danish Coastal Authority
Provincie Oost Vlaanderen
Jade Hochschule
HZ University of Applied Sciences
Veiligheidsregio Zeeland

- Inventory of requirements for a flood proof electricity grid
- Flood proof grid spatial planning measures (layer 2)
- Duplicable spatial measures model for resilient NSR electricity grids

Resilience targets: 1 - 381.182 inhabitants
2 - 1 electricity grid operator

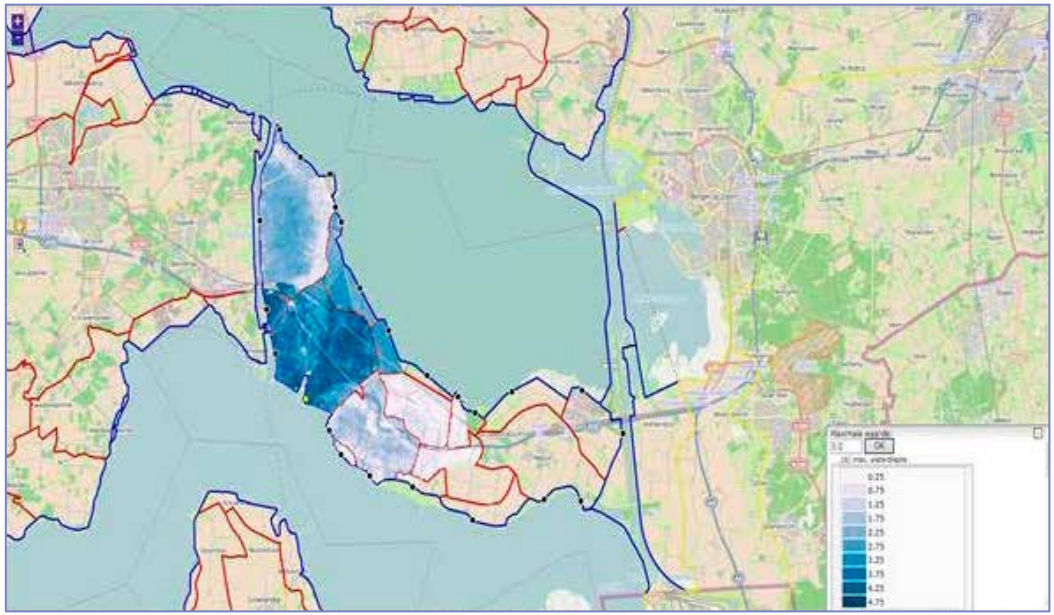


Reimerswaal
Provincie Zeeland, Rijkswaterstaat

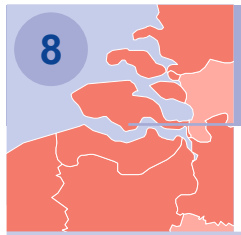
WP3 A4
Pilots vital infrastructure

Transnational focus group
Kent County Council
Danish Coastal Authority
Universitat Oldenburg
HZ University of Applied Sciences
Veiligheidsregio Zeeland

- Mapping of vital infrastructure (roads, rail, electricity) that submerges during a flood
- Inventory of submergence preventive spatial measures - cost/effectiveness - (layer 2)
- Adoptable (GIS) tool with submergence preventive measures for flood prone regions



Resilience targets: 1 - 22.260 inhabitants
2 - 2 infrastructure operators



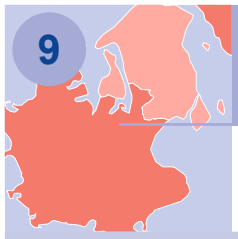
Sloegebied
Provincie Zeeland

WP3 A4
Pilots vital infrastructure

Transnational focus group
Danish Coastal Authority
Rivers Trust
Universiteit Gent
HZ University of Applied Sciences
Veiligheidsregio Zeeland

- Mapping of industrial zone and workshops with businesses on consequences of flooding
- Exploration of use as area as evacuation area for nearby residential area
- Evacuation model that combines industrial and residential areas

Resilience targets: 1 - no inhabitants - industrial
2 - 10 companies



9 Roskilde

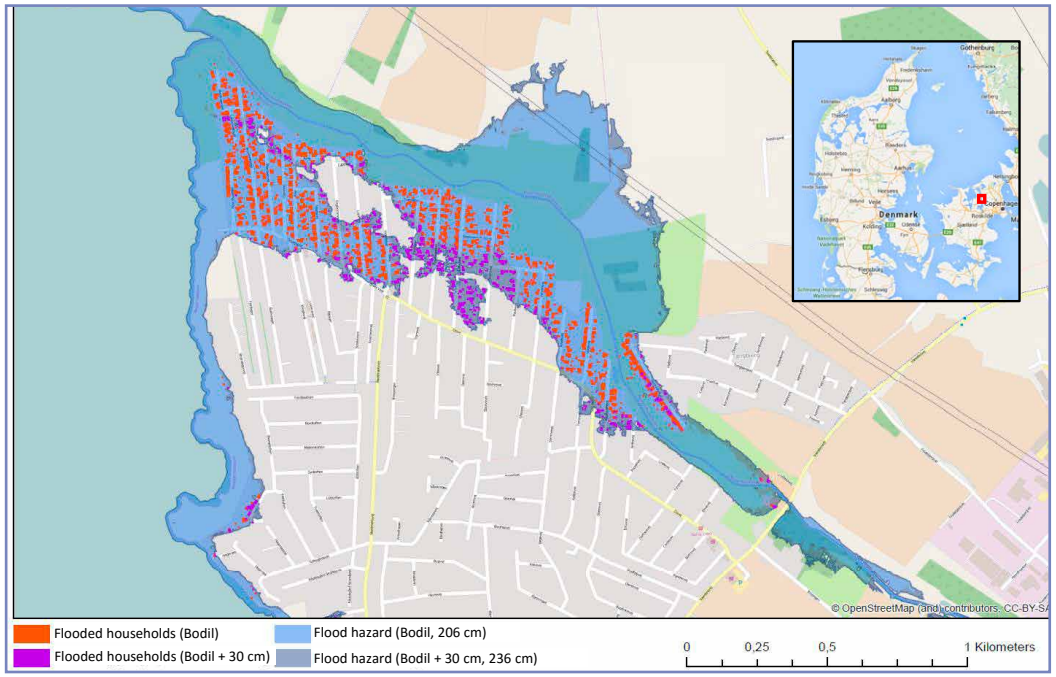
Danish Coastal Authority

WP4 A6
Recovery after severe flooding

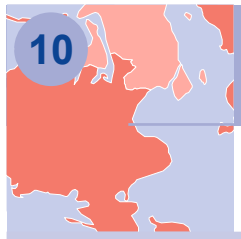
Transnational focus group
Kent County Council
Rivers Trust
HZ University of Applied Sciences

- Analysis of stakeholder recovery capacity after severe flooding
- Improvement of stakeholder flood recovery process to reduce costs/resources (layer 4)
- Adaptable flood recovery model that provides cost-effective best practices for flood prone areas

Flood Hazard in Jyllinge Nordmark, Roskilde during the stormsurge Bodil, 5th-7th Dec 2013



Resilience targets: 1 - approx. 600 inhabitants
2 - 11 homeowners associations



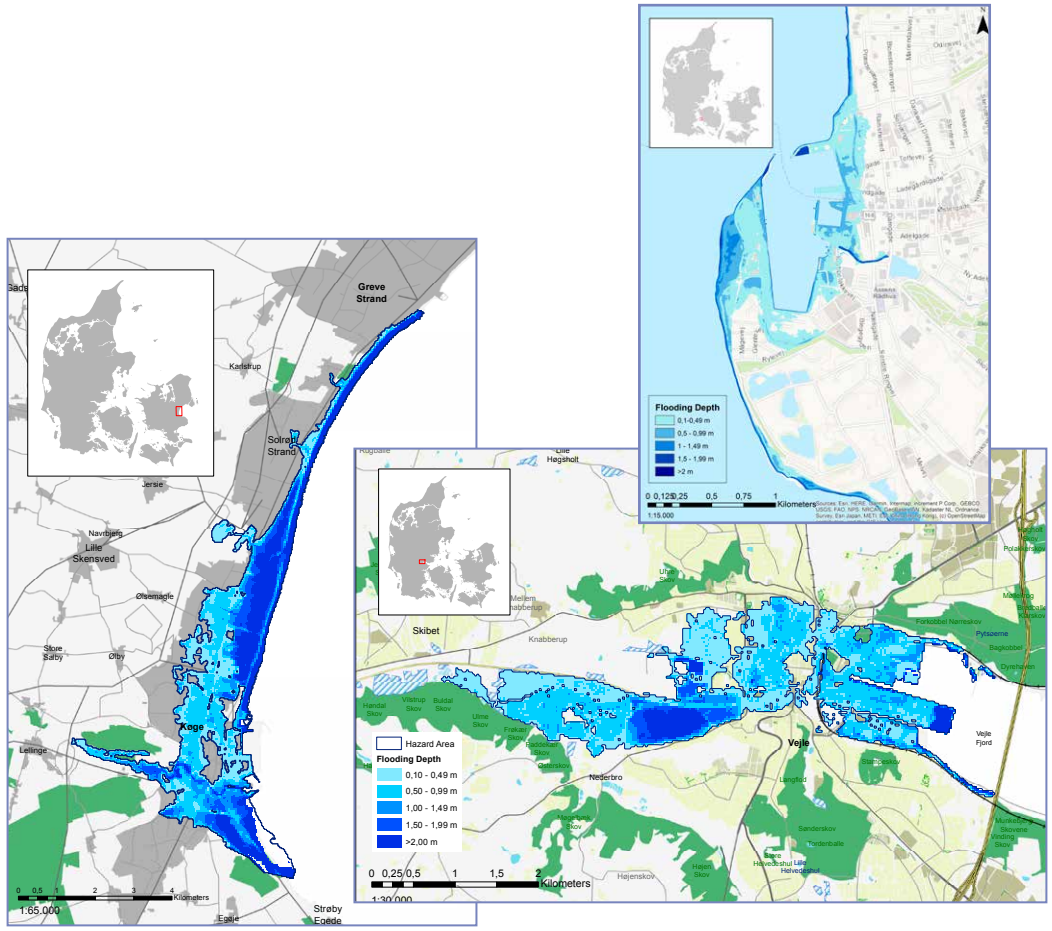
10 Vejle & Assens

Danish Coastal Authority

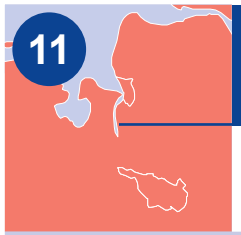
WP4 A5
MLS concept applicability in areas without conventional flood protection

Transnational focus group
Kent County Council
Rivers Trust
Universität Oldenburg

- Apply Adaptive Dynamic Pathways Policy to test applicability of MLS for flood prone areas without conventional protection (layer 1)
- Guidance and workshops for communities in region



Resilience targets: 1 - 25.000 inhabitants
2 - 40 businesses



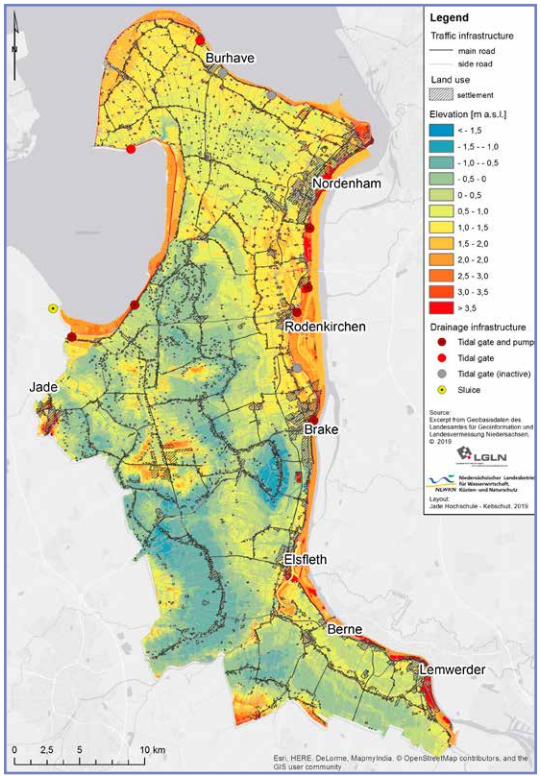
Wesermarsch Jade Hochschule, Oldenburgisch-Ostfriesischer Wasserverband

WP3 A2
Contingency exercises and planning

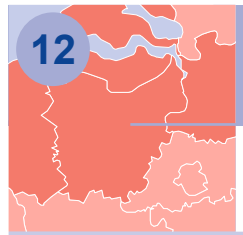
Transnational focus group
Provincie Zeeland
Danish Coastal Authority
HZ University of Applied Sciences

- Contingency planning workshops with regional stakeholders (layer 2 and 3)
- Spatial planning in flood prone areas
- Creating new spatial information based on geo data analysis
- Smart linking of urban and rural drainage

FRAMES – Pilot Areas Jade Hochschule (Wesermarsch Region)



Resilience targets: 1 - 89.000 inhabitants
2 - 4 regional fora, 16 stakeholder meetings



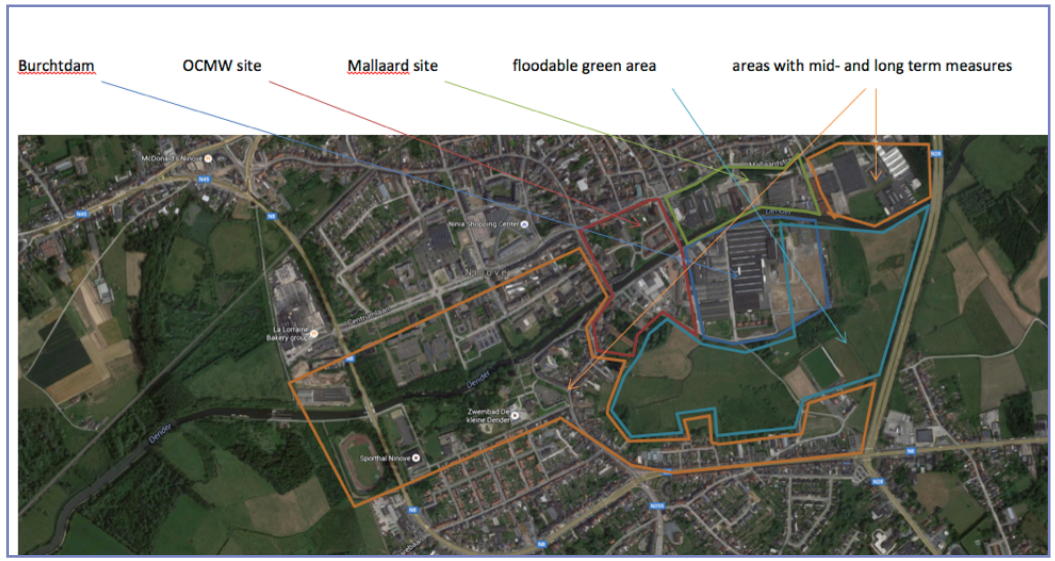
Ninove South-Burchtdam
Provincie Oost-Vlaanderen, Universiteit Gent

WP4 A3
Pilots community resilience workshops

Transnational focus group
Provincie Zuid-Holland
Danish Coastal Authority
Kent County Council

- Inventory of effective MLS measures in urban flood prone area
- Incorporating spatial, evacuation and recovery measures at Burchtdam site (layer 2,3 and 4)
- Community resilience business cases for flood prone urban areas

Burchtdam



Resilience targets: 1 - 3.000 inhabitants
2 - 10 public stakeholders

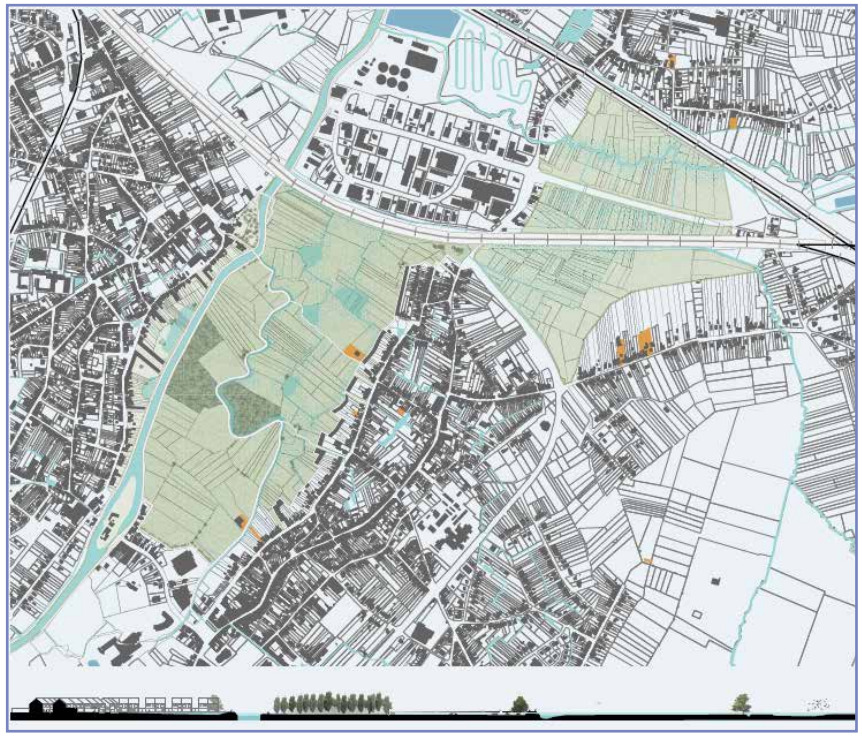
13

Denderleeuw
Universiteit Gent

WP4 A3
Pilots community resilience workshops

Transnational focus group
National Flood Forum
Danish Coastal Authority
Kent County Council

- Identification of key stakeholders for self-reliant water management
- Realisation of shared stakeholder method for self-reliant water management (layer 3 and 4)
- Adoptable model of bottom-up flood prone area as a living lab approach
- School Workshops



Resilience targets: 1 - 15.000 inhabitants
2 - 100 workers / 15 stakeholders

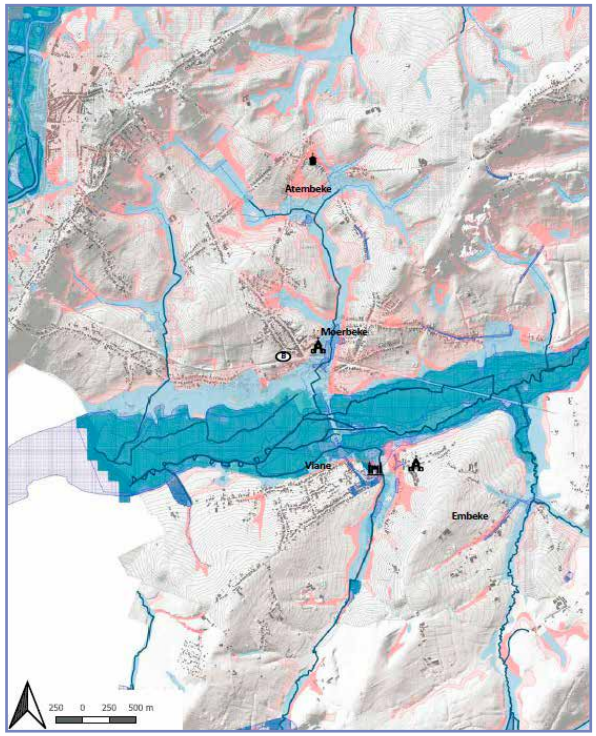
14

Geraardsbergen
Provincie Oost-Vlaanderen

WP4 A3
Pilots community resilience workshops

Transnational focus group
Provincie Zuid-Holland
Danish Coastal Authority
Kent County Council

- Researching solutions by design to reduce flood risk
- Mapping and developing potential flood management solutions
- Supporting existing flood group to develop local action plan
- Community resilience business cases for flood prone areas



Resilience targets: 1 - 4650 inhabitants
2 - 10 public stakeholders

15

Butt Green Shield
National Flood Forum

WP3 A3
Catchment Management

Transnational focus group
Provincie Zuid-Holland
HZ University of applied Sciences
Province of East Flanders
Ghent University
Kent County Council

- Innovative solutions to localised flooding instead of major infrastructure investment
- Community led approaches
- Designed solutions
- Retrofitting households
- Comparing approaches
- Work with local flood groups and action plans Citizen engagement

Resilience targets: 1 - 500 water retention systems
2 - 50 properties

Observer letter

METROPOLREGION NORDWEST

Metropolregion Nordwest, Bahnhofstr. 37, 27749 Delmenhorst

Metropolregion
Bremen-Oldenburg
im Nordwesten e.V.

1. Vorsitzender
Landrat Jörg Bensberg

Geschäftsführerin
Dr. Anna Meincke

Geschäftsstelle
Bahnhofstraße 37
27749 Delmenhorst

Telefon 04221 99-1901
Telefax 04221 99-1900
info@metropole-nordwest.de
www.metropole-nordwest.de

To whom it may concern

Contact:
Dr. Anna Meincke
04221-99 1904
23/06/2015

Observer letter – FRAMES project

Dear Sir or Madam,

In my capacity of managing director of Metropolregion Bremen-Oldenburg im Nordwesten e. V., I support the FRAMES project proposal, being developed by the Province of South-Holland (lead beneficiary) for submission under the first call for applications of 2015 of the Interreg V B North Sea Region Programme.

The proposed project activities and results are relevant for our organisation. We will support the project through our participation in project activities like workshops and visits and we are prepared to review the project throughout the project execution.

Yours sincerely,

Metropolregion Bremen-Oldenburg im Nordwesten e. V.

Anna Meincke

Dr. Anna Meincke

Vereinsregister-Nr.
VR 201105
Amtsgericht Oldenburg

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IBAN DE692915 1700 1110 0444 66
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Letter of support

The Senator
for Environment, Urban Development and Mobility

Free
Hanseatic City of
Bremen

The Senator for Environment, Urban Development and Mobility
Contrescarpe 72 • 28195 Bremen

Jens Wunsch
Fon +49 421 3 61-54 79
Fax +49 421 4 96-54 79
E-mail
jens.wunsch@umwelt.bremen.de

To whom it may concern

Bremen, Germany, 24 / 02 / 2016

Letter of support – FRAMES project

Dear Sir/Madam,

In my capacity of project manager for Flood Risk Management of the Department for Flood Protection of The Senator for Environment, Urban Development and Mobility, I support the FRAMES project proposal, being developed by the Province of South-Holland (lead beneficiary) for submission under the second call for applications of 2016 of the Interreg V B North Sea Region Programme.

Bremen has to face potential threats from both, flood waters from inlands and storm surges from the North Sea. In the area of Bremen, 515,000 inhabitants, which equals 80% of the total amount of inhabitants, are potentially endangered by floods. To my knowledge this figures are unique for an individual site within the European Union.

Following the European Flood Directive, many sites have been reviewed in terms of flood risk. Being the directive a good instrument for larger scales, certain details fall through the cracks of being not relevant in terms of significance. On the other hand, Bremen follows the principle of an integrative approach to flood protection and therefore try to take the subject a step further. At present one of our aims is to create deeper knowledge of all activities, whether recreational or commercial, taking place in areas without or with lower level flood-protection infrastructure, such as allotment gardens and sport fields, and the possibly arising risks regarding to health and environment.

The proposed project activities and results are relevant for our organization. We will support the project through our participation in project activities like workshops such as the "FRAMES days", where required Stakeholder Meetings and visits. We are prepared to review the project throughout the project execution and we are willing to provide input whether trough experiences of a major city and its potential resources or any other inputs that might be helpful to the project.

Yours sincerely,

Signature: _____ Place: Bremen, Germany Date: 24 / 02 / 2016

Name: Jens Wunsch
Position: Project Manager Flood Risk Management
Company name: Free Hanseatic City of Bremen,
The Senator for Environment, Urban Development and Mobility