

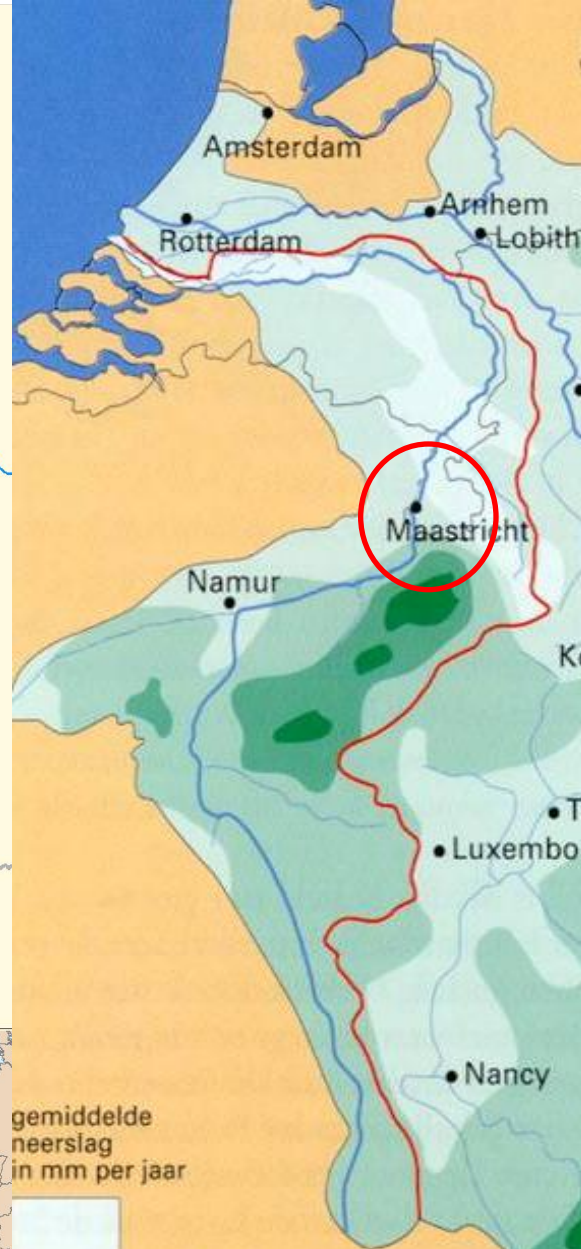
Case study:

international cooperation in Meuse river basin



Fred van den Brink, province of Limburg
JASPERS networking platform 18-09-2013

Meuse River Basin: focus and flood generation



Catchment area:
34,500 km²

5 countries:
9 million inhabitants

Rain-fed river
Mean discharge:
350 m³/s
Max discharge:
13.000 m³/s



REGIONAL
NT FUND

Institutional levels in Meuse project group

Regional level

- Province of Limburg (NL)
- Waterboard Roer en Overmaas (NL)
- Directorate General of Region Walloon (W)

National level

- Rijkswaterstaat/Waterdienst (NL)
- Groupe Transversale Inondations (W)

International level

- International Meuse Commission (NL, Fl, W, F, D, L)
- Bilateral Netherlands-Flanders Commission (NL, Fl): Common Meuse
- Trilateral river commission Geul, Jeker, Voer, Berwine

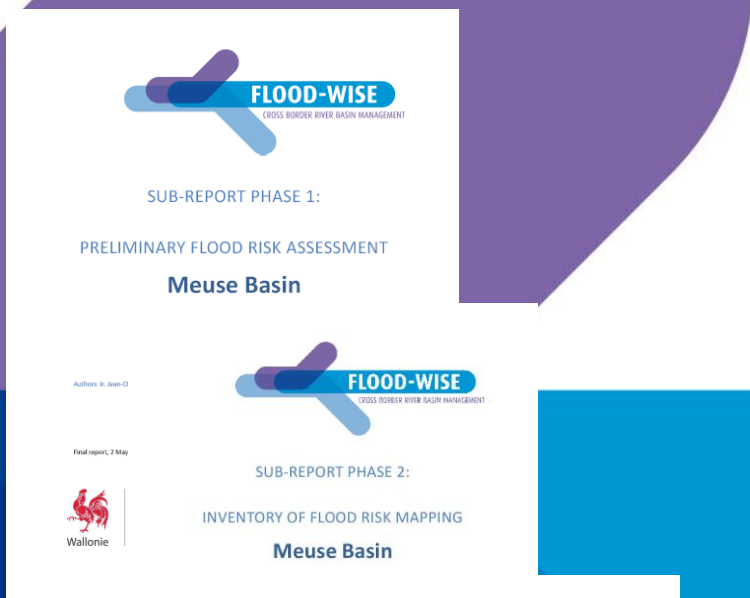


Actions

- Comparison of methods: flood risk assessment, mapping, management plans (pilot Gueule)
- Confrontation with demands Flood Directive
- Identification and exchange of good practices
- Recommendations (practical, technical, policy)
- Regional partner meetings: exchange of ideas, inventory reports
- Yearly conferences: workshops, political forum



Results: Inventory Reports



SUB-REPORT PHASE 1:
PRELIMINARY FLOOD RISK ASSESSMENT
Meuse Basin



SUB-REPORT PHASE 2:
INVENTORY OF FLOOD RISK MAPPING
Meuse Basin



SUB-REPORT PHASE 3:
INVENTORY OF FLOOD RISK
MANAGEMENT PLAN
Meuse Basin

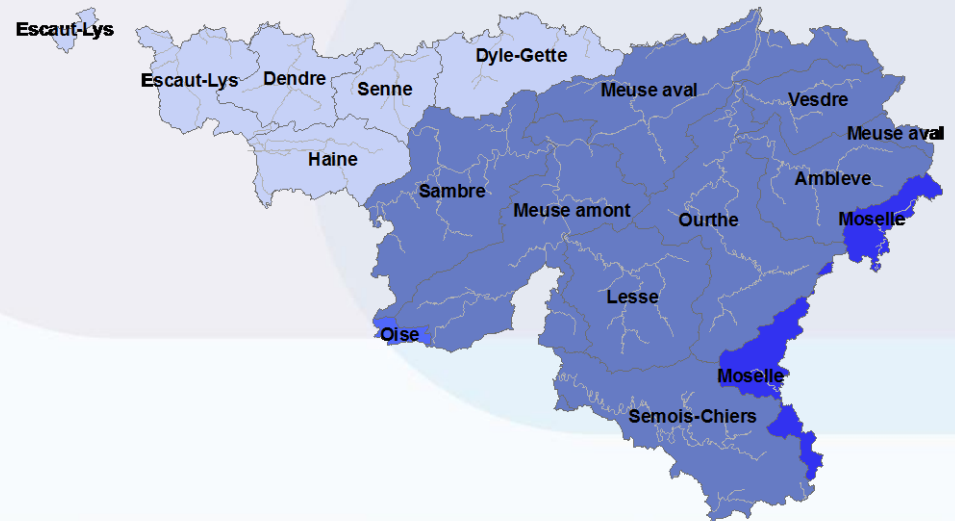
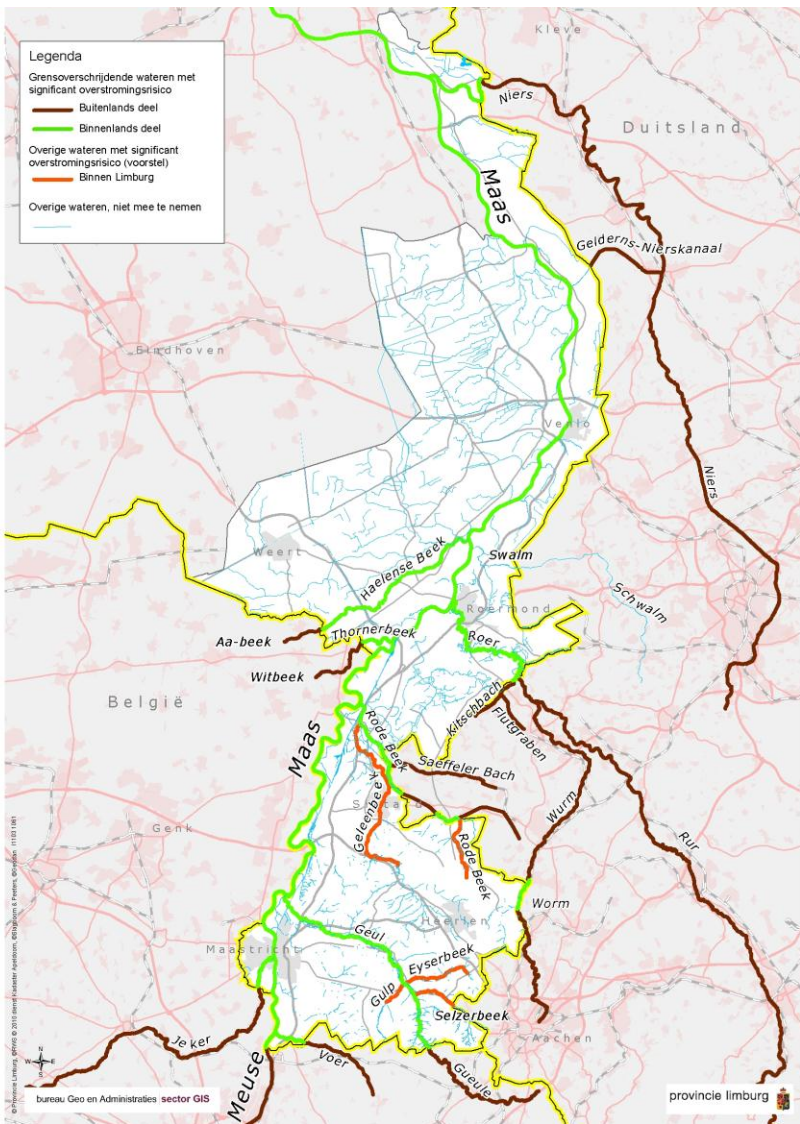
1. PFRA-phase: Inventory of water bodies which are at risk
2. FRM-phase: Cross-border flood hazard/risk maps
3. FRMP-phase: Inventory of goals and measures for management plan

Water bodies at risk: river Meuse and tributaries

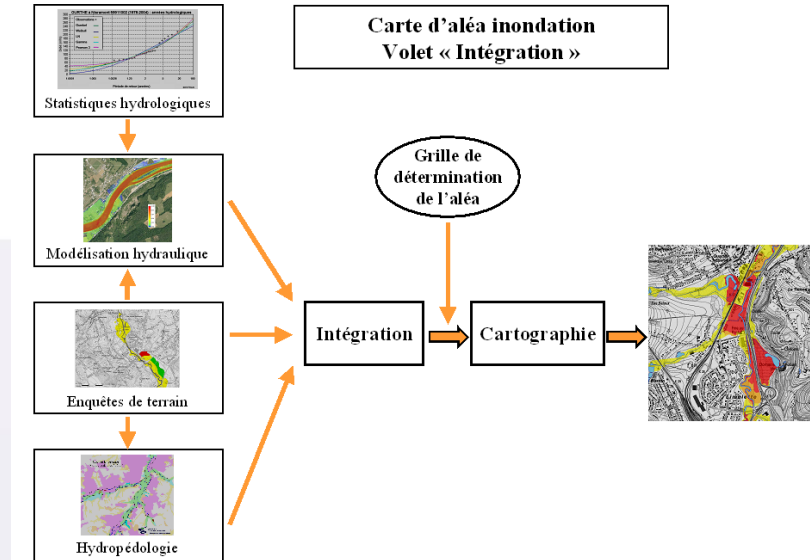
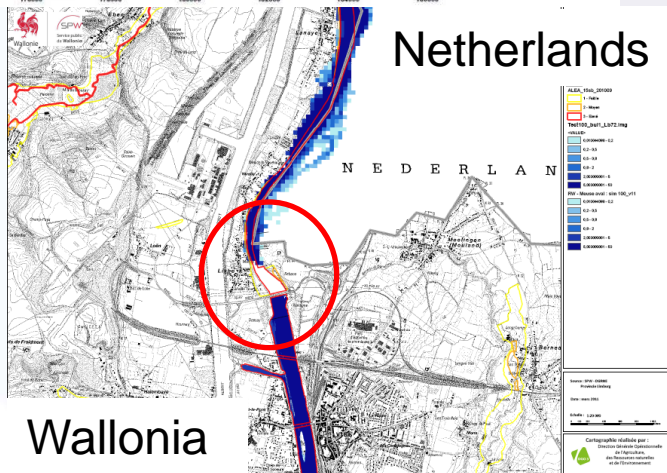
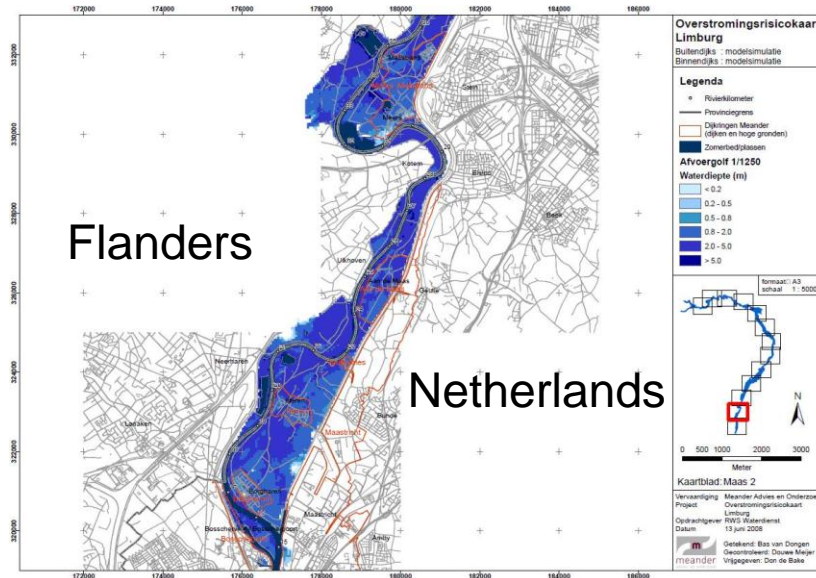


1. Assessment: RIVERS WITH SIGNIFICANT FLOOD RISKS

1. Meuse river: based on historical floods
2. Inventory of additional tributaries at risk: upstream-downstream rule in Germany and Limburg. In Wallonia all non-navigational water bodies.



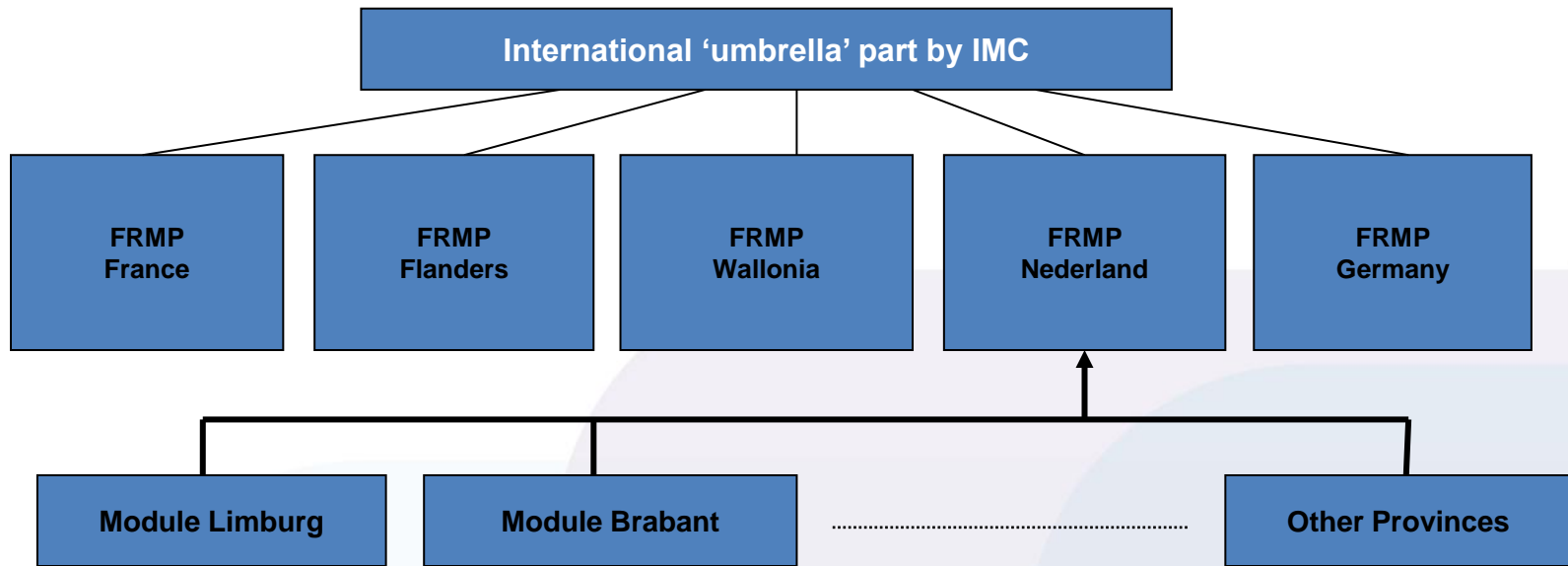
2. Mapping: CROSS BORDER FLOOD HAZARD MAPS



Cross-border mapping involves adjustment of coordinates, and agreement on risk-levels, water depths, models, etc.

Methods: Hydrological modeling and soil maps

3. Planning: building blocks for FRMP



Existing flood management plans are used as a starting point:

- International Flood Action Plan Meuse
- National and regional water policy and water management plans
- Calamity plans
- Plan PLUIES
- Limburg Module for national FRMP

FRMP-Protection: examples Limburg

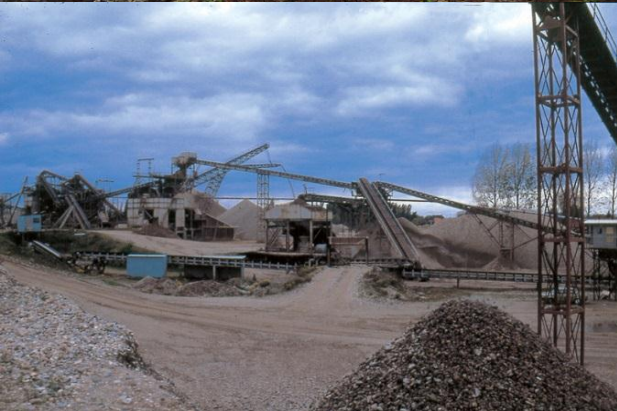
Goals

- 1:250 safety level behind primary dikes along river Meuse
- Different safety levels along tributaries

Measures:

- River widening via the project “Meuse works”: Common Meuse and Sand Meuse
- Dike improvement within Meuse works and further on
- Further river widening for
 - reducing dike improvement
 - compensation for the effects of climate change
 - regional development
- Water storage and river widening along tributaries

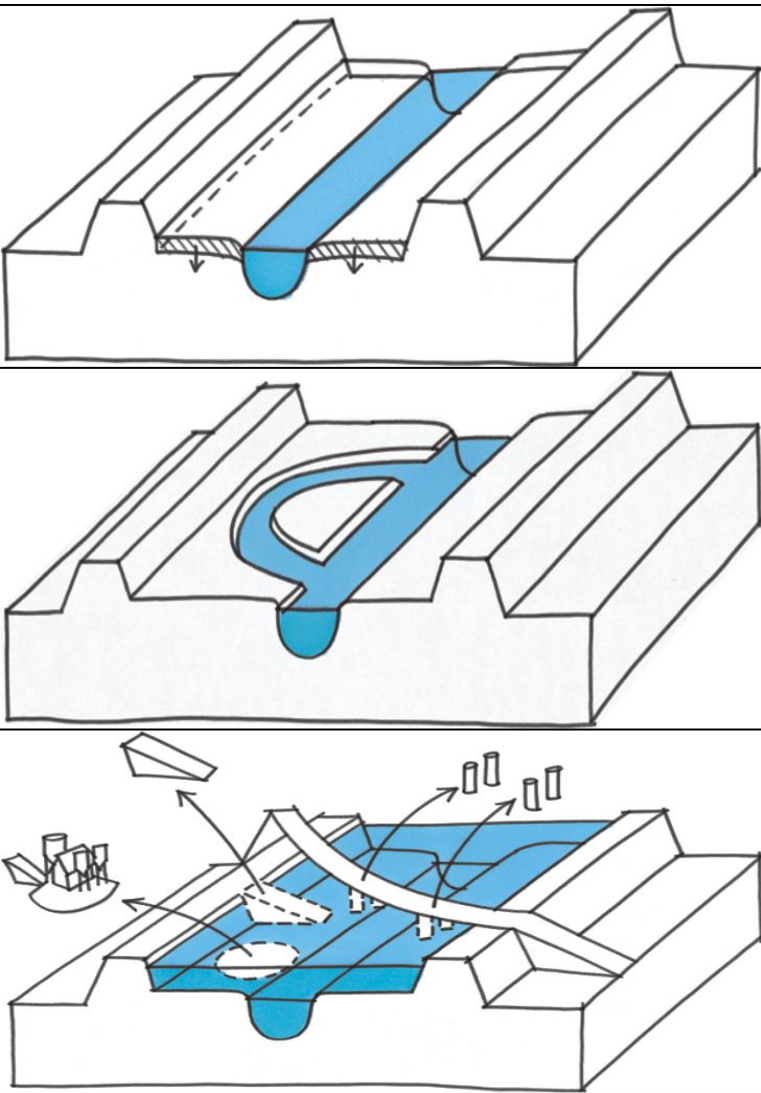
Strategy Room for the River Meuse 1



- Integrated and sustainable approach: people, planet, profit
- Flood protection: reducing the flood risk level to 1/250 (now 1/50)
- Increase in biodiversity (NATURE 2000): 1600 ha extra
- Gravel extraction: 50 Million ton gravel
- Common Meuse: cost neutral
- Total project costs: Sand Meuse and improvement shipping route: 1.0 Billion Euro



Strategy Room for the River Meuse 2



- Lowering and broadening of floodplain
- Restoration of side channels
- Removal of barriers
- Replacing of dikes
- Dike improvement where necessary
- Cross-border investment

Measures taken



Strategy tributaries



- Water storage and river restoration
- Restoration of sponge function of wetlands
- Ecological targets: WFD + N2000
- Conservation of nature and landscape

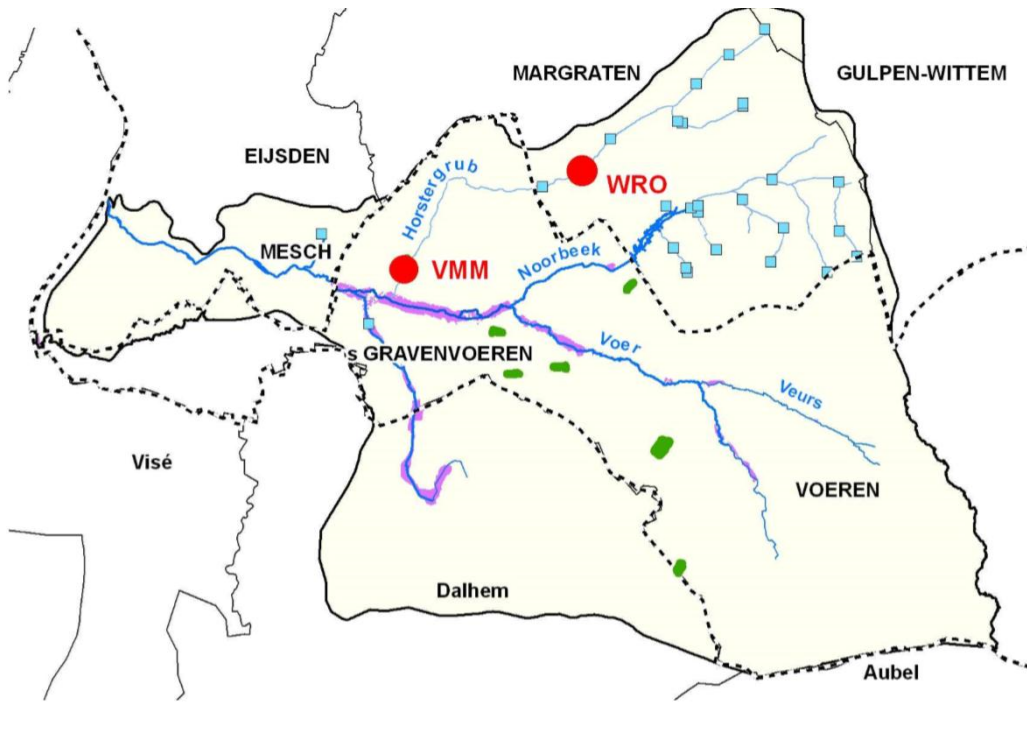


Strategy tributaries

- Additional retention and source orientated measures in hilly areas



Cross-border investments



- Investments in retention basins in small tributaries in border region: 0,5 M€
- Investments in compensatory measures in Border Meuse: 20 M€

Possible considerations for group discussion

Topic	Discussion Point
> Cross-border cooperation	> Is cross-border cooperation needed when developing flood management plans? Even if there already exist such plans? Is harmonization of plans possible?
> Multi-purpose approach	> Are integrated solutions preferable above single-targeted ones? Despite the fact they are more time-consuming?
> Cross-border challenges	> How to overcome challenges like language and cultural difficulties, institutional and methodological differences? What is the best approach to start cross-border cooperation?
> Cross-border investments	> Should cross-border investments of measures be regarded and under what conditions?



For info or further questions on this presentation, or on the activities of the JASPERS Networking Platform please contact:

Massimo Marra
JASPERS Networking Platform Officer
ph: +352 4379 85007
m.marra@eib.org

www.jaspersnetwork.org

jaspersnetwork@eib.org