Vlaanderen
is milieu

Moelingen/Mouland and the Berwijn/Berwinne after 3 floods in 6 years: surrender or resilience?

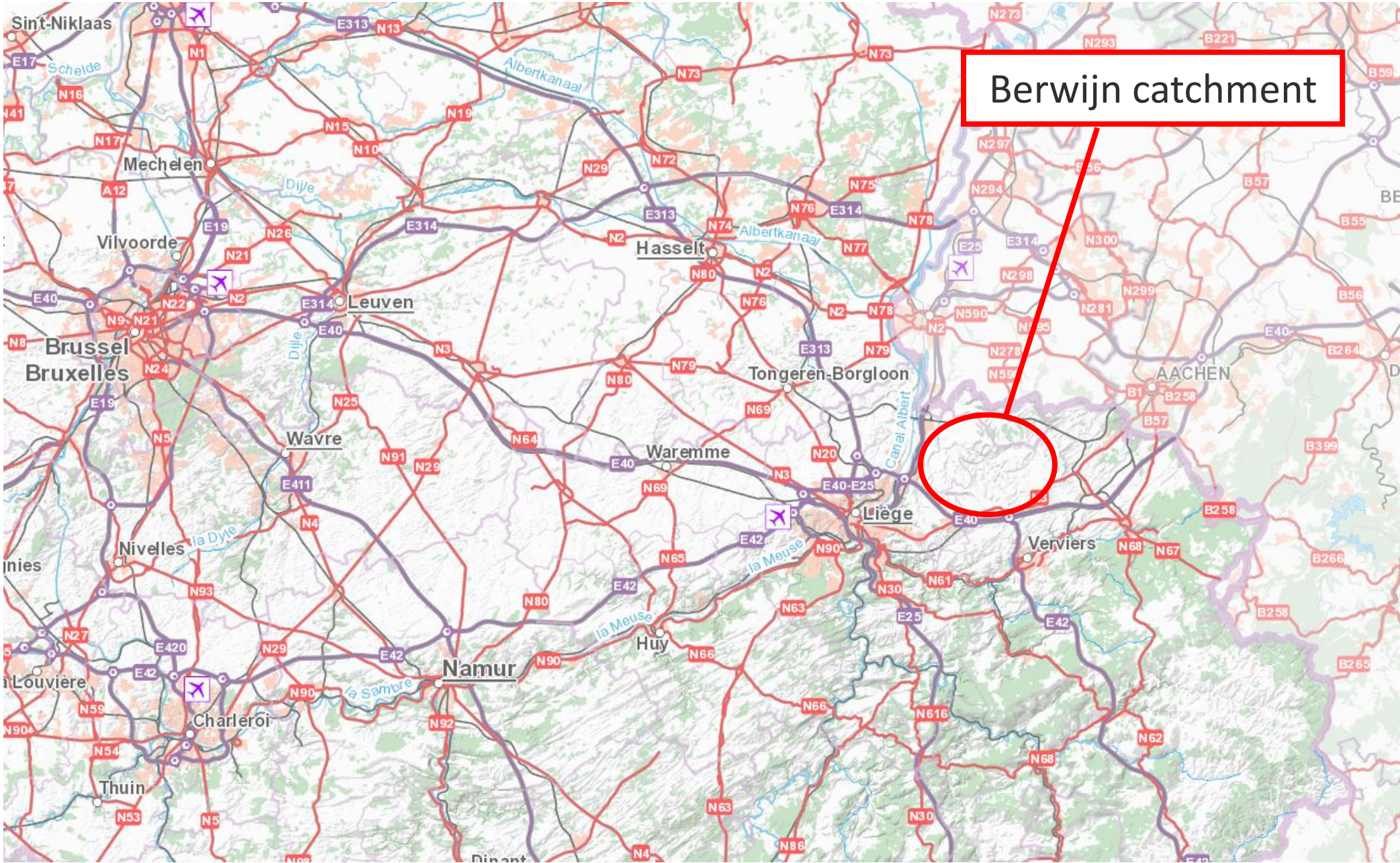
Stijn Rombauts
Flemish Environment Agency (VMM)

12th International Meuse Symposium 2026

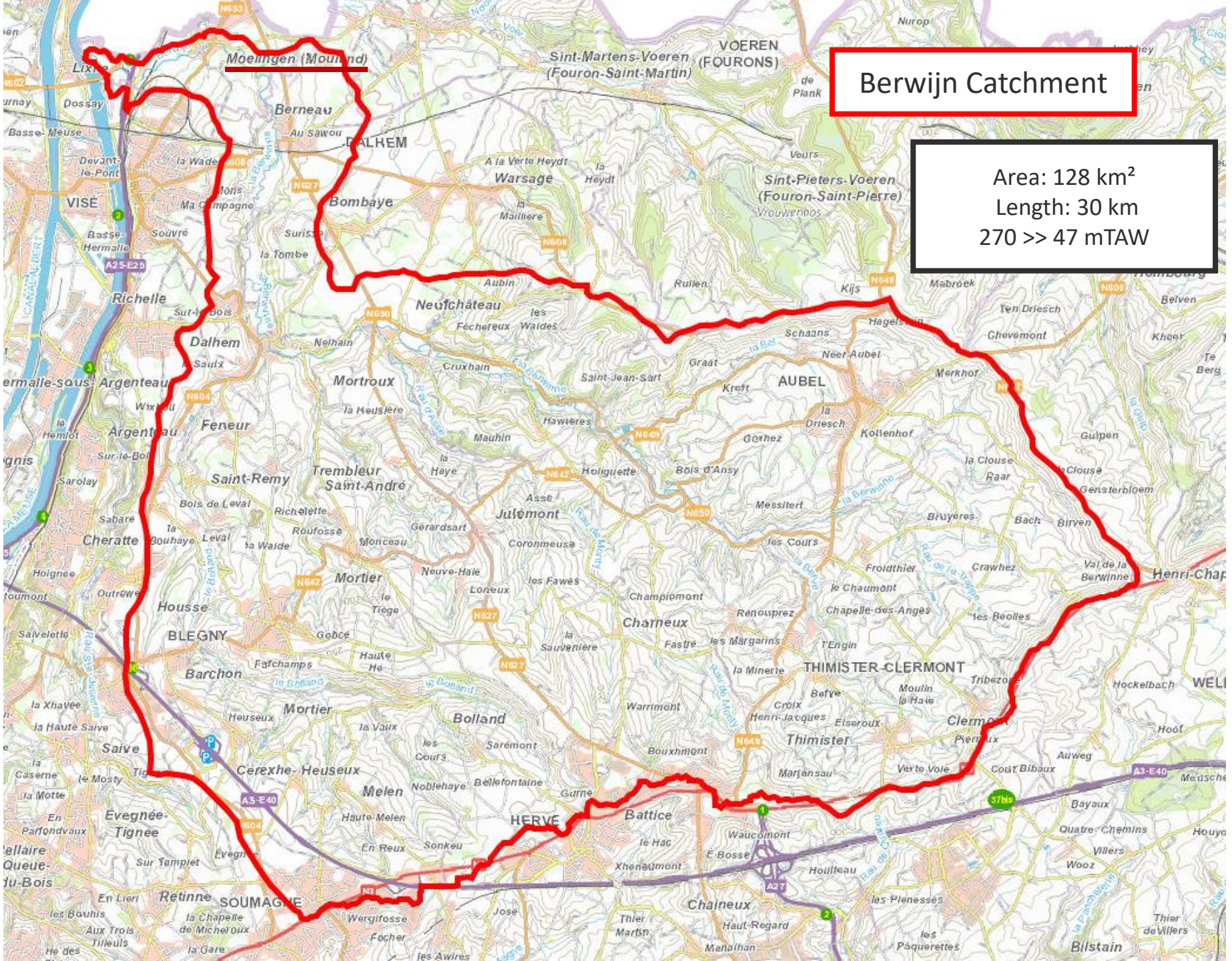
INTERNATIONAL MEUSE SYMPOSIUM

VLAAMSE
MILIEUMAATSCHAPPIJ

Where?


Berwijn catchment
Sint-Niklaas
Mechelen
Vilvoorde
Brussel
Bruxelles
Leuven
Hasselt
Tongeren-Borgloon
Wavre
Waremme
Liège
Verviers
AACHEN
Nivelles
Charleroi
Namur
Huy
Thuin
Louvière
Schelde
Dijle
Albertkanaal
Canal Albert
la Dyle
la Meuse
la Sambre

Where?


Berwijn Catchment
Area: 128 km²
Length: 30 km
270 >> 47 mTAW
Moelingen (Mouland)
Berneau
DALHEM
Bombaye
Warsage
Sint-Martens-Voeren (Fouron-Saint-Martin)
VOEREN (FOURONS)
Sint-Pieters-Voeren (Fouron-Saint-Pierre)
VISÉ
Richelle
Dalhem
Argenteau
Feneur
Mortroux
Neufchâteau
AUBEL
Saint-Remy
Trembleur
Saint-André
Julemont
Cheratte
Housse
BLEGNY
Barchon
Mortier
Bolland
Cerexhe-Heuseux
Melen
Evegnée-Tignée
Saive
HERVE
Battice
Charneux
THIMISTER-CLERMONT
Thimister
Clermont
SOUMAGNE
Retinne
Chaineux
Bilstain
Henri-Chapelle

What happened?

3 severe floods in 6 years

- June 2018: 60 m³/s (T25)
- July 2021: 75 m³/s (T50)
- May 2024: 150 m³/s (T500?)

In between (once or twice a year) several minor or almost floods without damages

Drone image 2021 © VMM

Old footbridge (2018)

The aftermath (2024)

Downstream of village (2018)

Village centre (2018)

2024

© Tom Palmaers

© Tom Palmaers

© VTM nieuws

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What's the consequence?

- Physical damage:
  - → 2018: € 1,0 million
  - → 2021: € 5,4 million
  - → 2024: € 9,9 million

  https://www.assuralia.be/nl/klimaatschademonitor
  https://www.assuralia.be/fr/moniteur-dommages-climatiques
- Psychosocial impact:
  - → Some people stay and improved the protection of their house
  - → Some people stay but still live in a 'mess'
  - → Other people left and sold their house / others are waiting for the right moment to sell
  - → New people move in, perhaps without really knowing the risk
  - ➔ The village community is changing
  - ➔ The relationship with the river has changed

What has been done?

- 2022: Widened the river bed in and downstream the village
  → The river's flow capacity has increased from 25 to 35 m^3/s

What has been done?

- 2024: Infrabel: railway across the valley downstream of the village
  → Heightening critical infrastructure and railway
  → Additional conduits underneath the railway
- 2025: Aquafin: water treatment plant
  → Heightening critical infrastructure (which caused power cut in the village)

What is happening?

- Individual protection of the houses
  - → Evaluation of the necessary measures by a consultancy firm (paid by VMM)
  - → Initiative of owner/inhabitant with a € 1500 grant of the municipality
  - → Initiative of VMM (to take the burden off the residents) with a contribution up to € 5000 (additional cost must be borne by the owner/inhabitant)

What is happening?

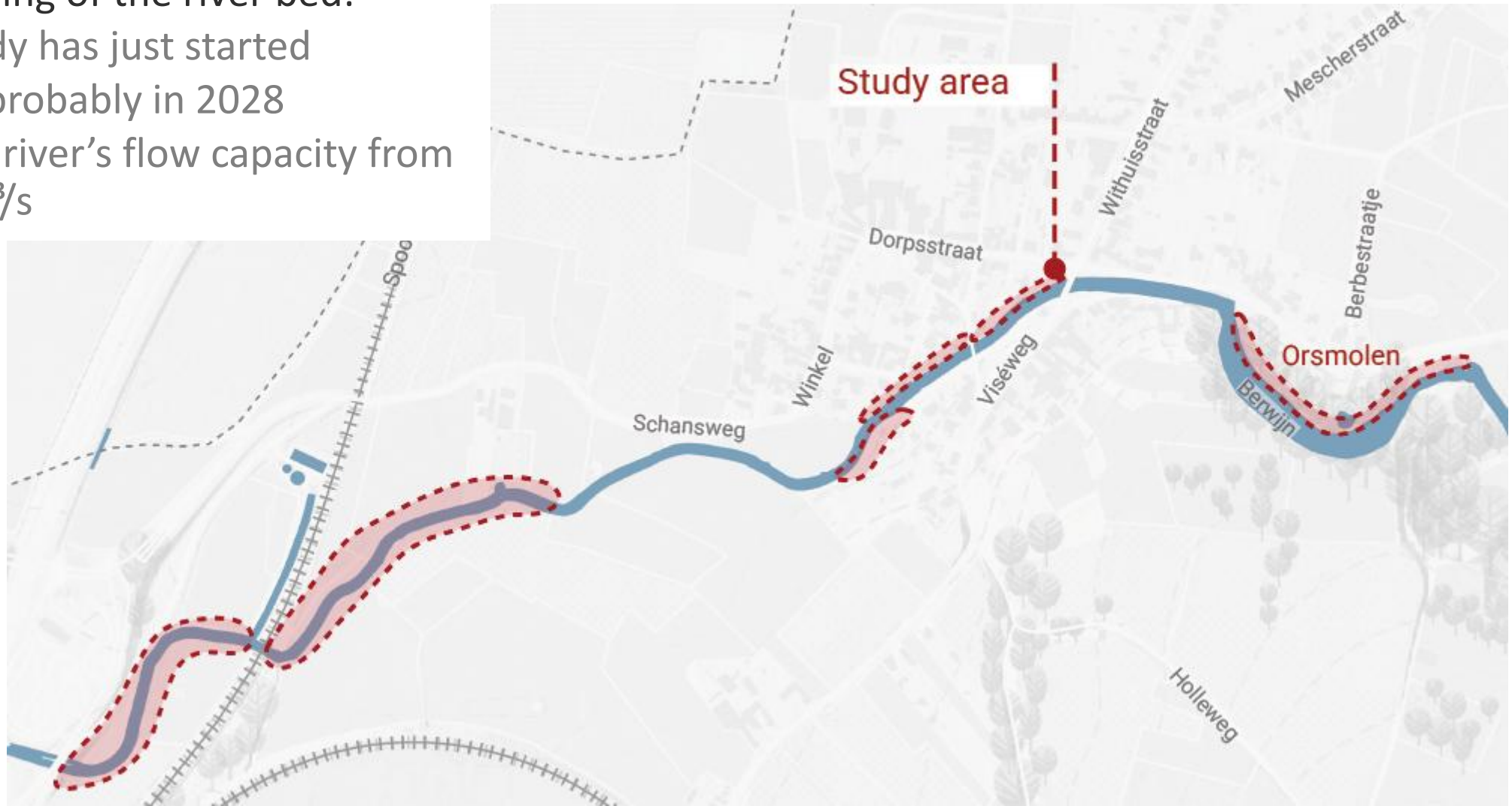
- Tearing down houses close to the river
  - → Only if owner wants to sell
  - → No expropriation

Torn down

Bought

What will be done?

- Further widening of the river bed:
  - → Design study has just started
  - → Execution probably in 2028
  - → Increase in river's flow capacity from 35 to 40 m³/s



Moelingen development vision: design research

- The study aims to draw up an integrated, climate-resilient development vision for Moelingen through design-led research, resulting in a concrete action programme for the redevelopment of the village
- In addition to site-specific interventions and individual protection measures, the focus is on a long-term vision that links safety, spatial quality and a strengthened relationship with the flood dynamics of the Berwijn
- Thematic spatial analyses:

Housing and the urban fabric

Mobility

Living environment and leisure

Ecology and climate challenges

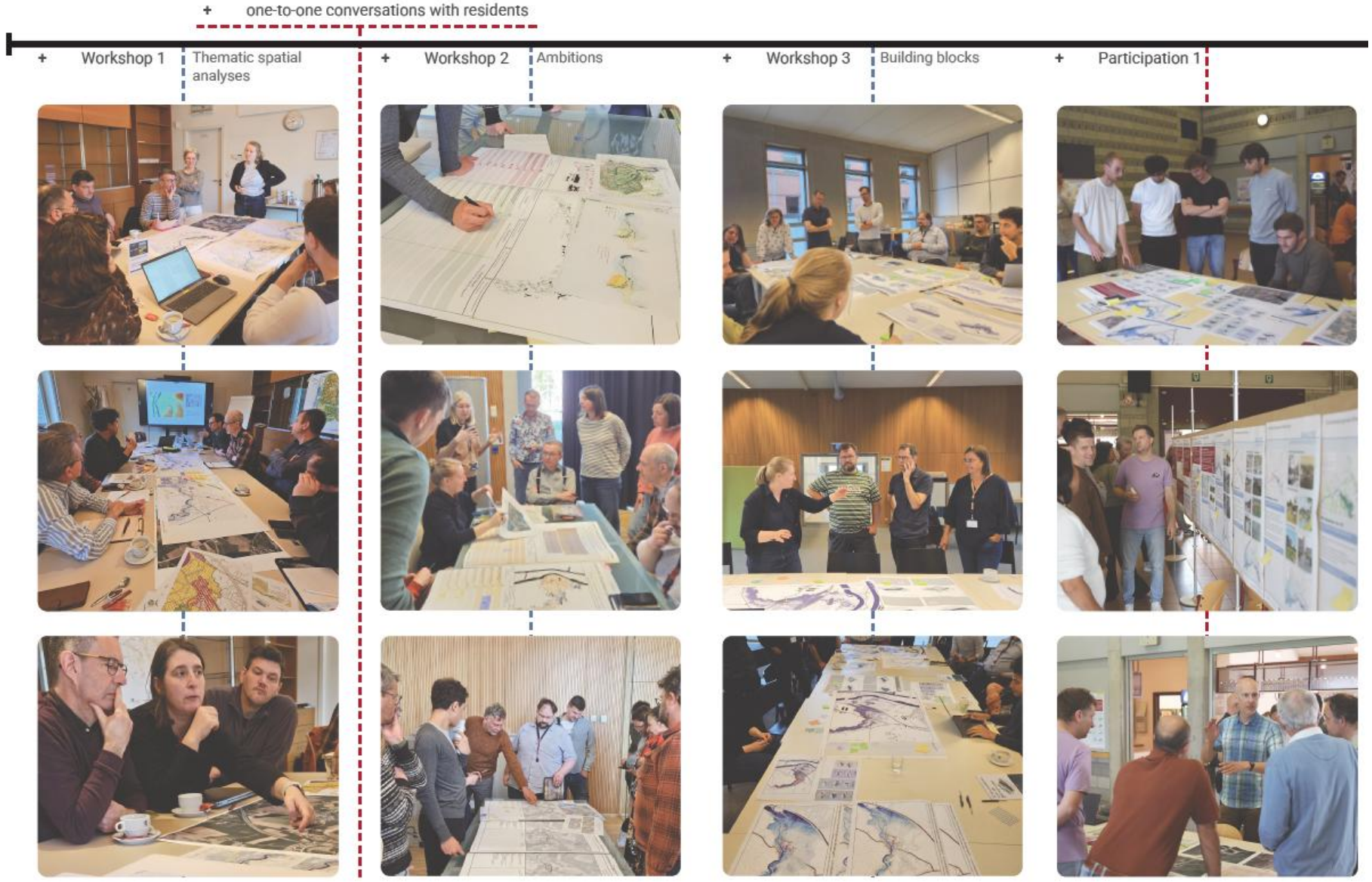
Agriculture

- Involved:
  - → Spatial planning
  - → Flemish environment agency
  - → Municipality Voeren

atelier horizon

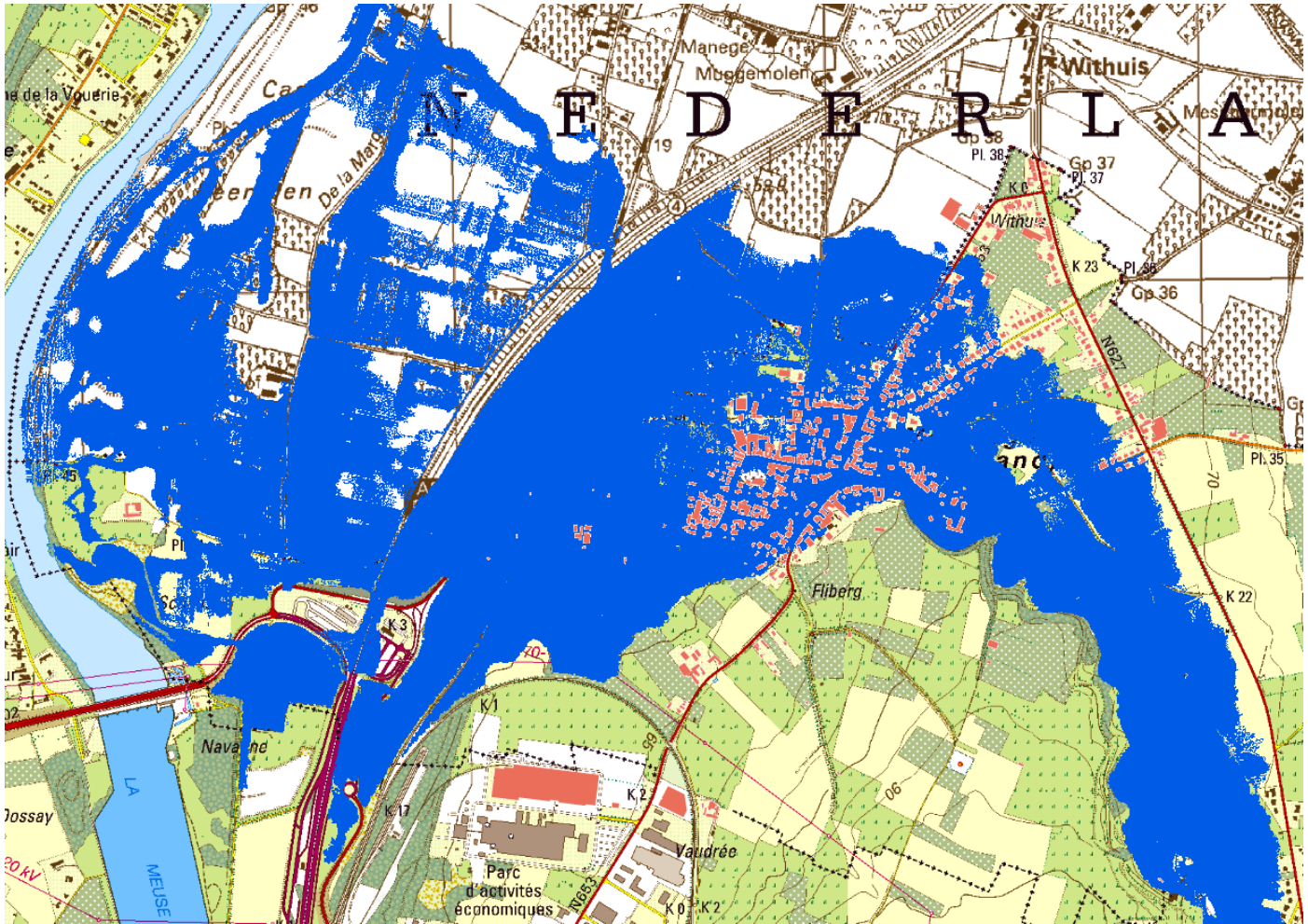
anteagroup

Moelingen development vision: design research



Moelingen development vision: design research

- Timing: early 2026 – mid 2027
- Goal (with regard to floods): T100 with climate change = 200 m³/s



Moelingen development vision: design research

- How:

TO BE CONTINUED…