

Floods of the Summer 2021 in Wallonia

Lessons learned and challenges

Brussels, 04/05/2022

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Floods management in Belgium

- Regions are responsible for risk management and alerts (floods directive)
 - Federal state and local authorities (municipalities/provinces) are responsible for emergency planning and response
- ➔ Implies a strong collaboration and exchange of information before, during and after a flood event

Floods management in Wallonia

CYCLE DE GESTION DES INONDATIONS



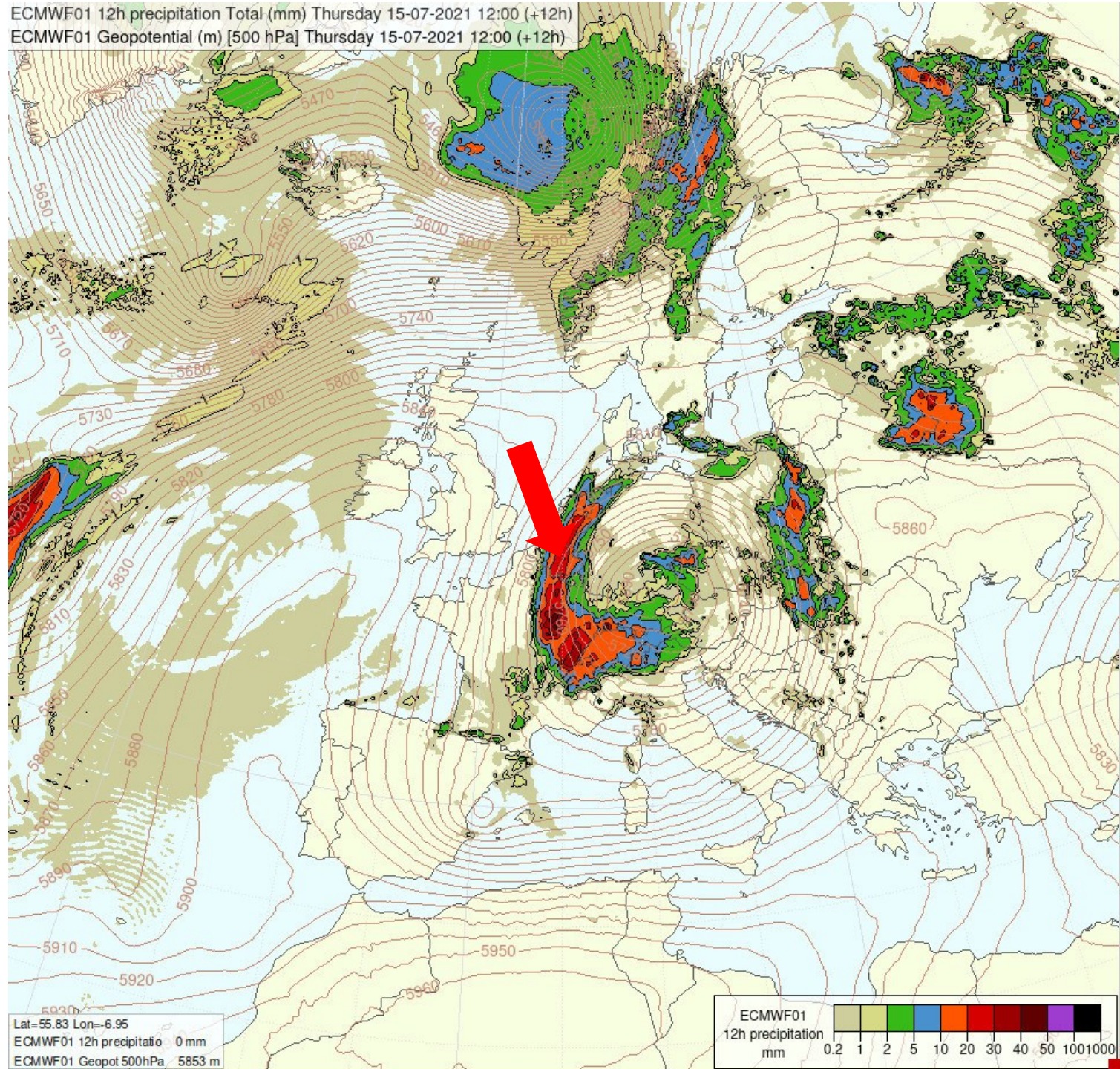
Floods management in Wallonia

- Hydrology = prediction (models)
- Regional Crisis Centre = alerting partners and coordinating experts
- Watercourses management = prevent and manage during the event
- Dams = maintaining capacities for softening the floods

Floods of the summer 2021

- Meteorological and Hydrological situation
- Emergency management
- Recovery and reconstruction

- 13-14-15/07 quasi-stationary low over Germany, causing huge amounts of precipitation over the eastern part of Belgium.
- Low-pressure blocking with sustained rainfall over the same regions for many hours (or even more than a day) leading to extreme rainfall totals.

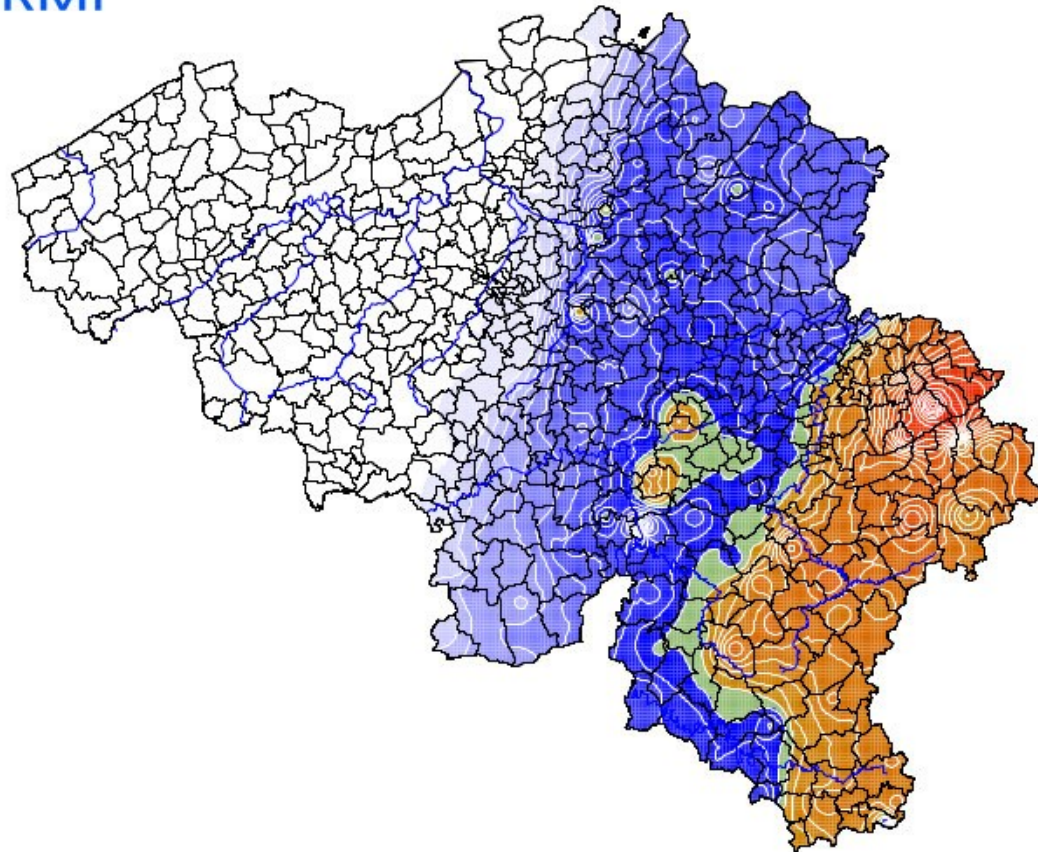


Meteorological situation



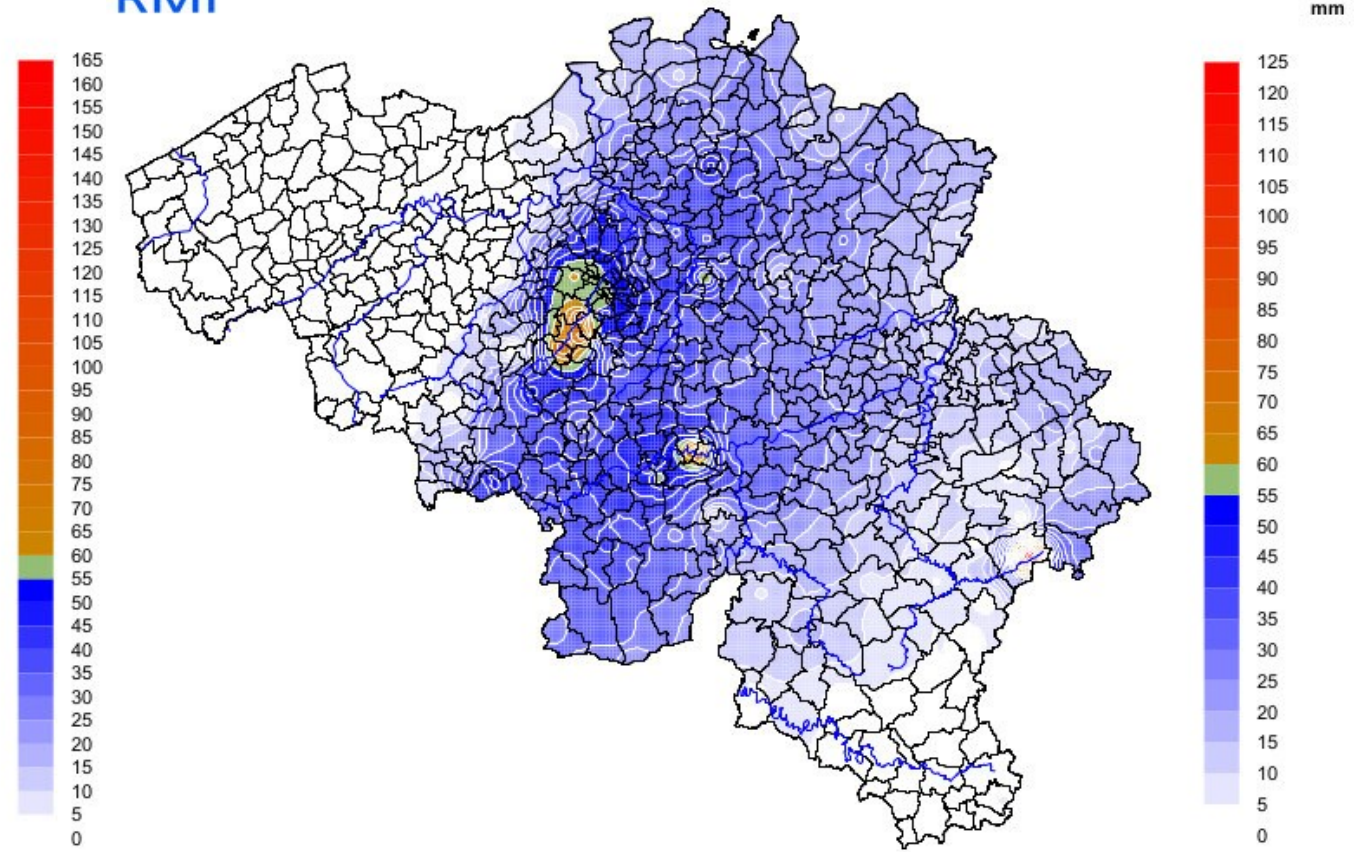
Maximum 24-h precipitation quantities (with climato. stations)

2021071406 to 2021071506

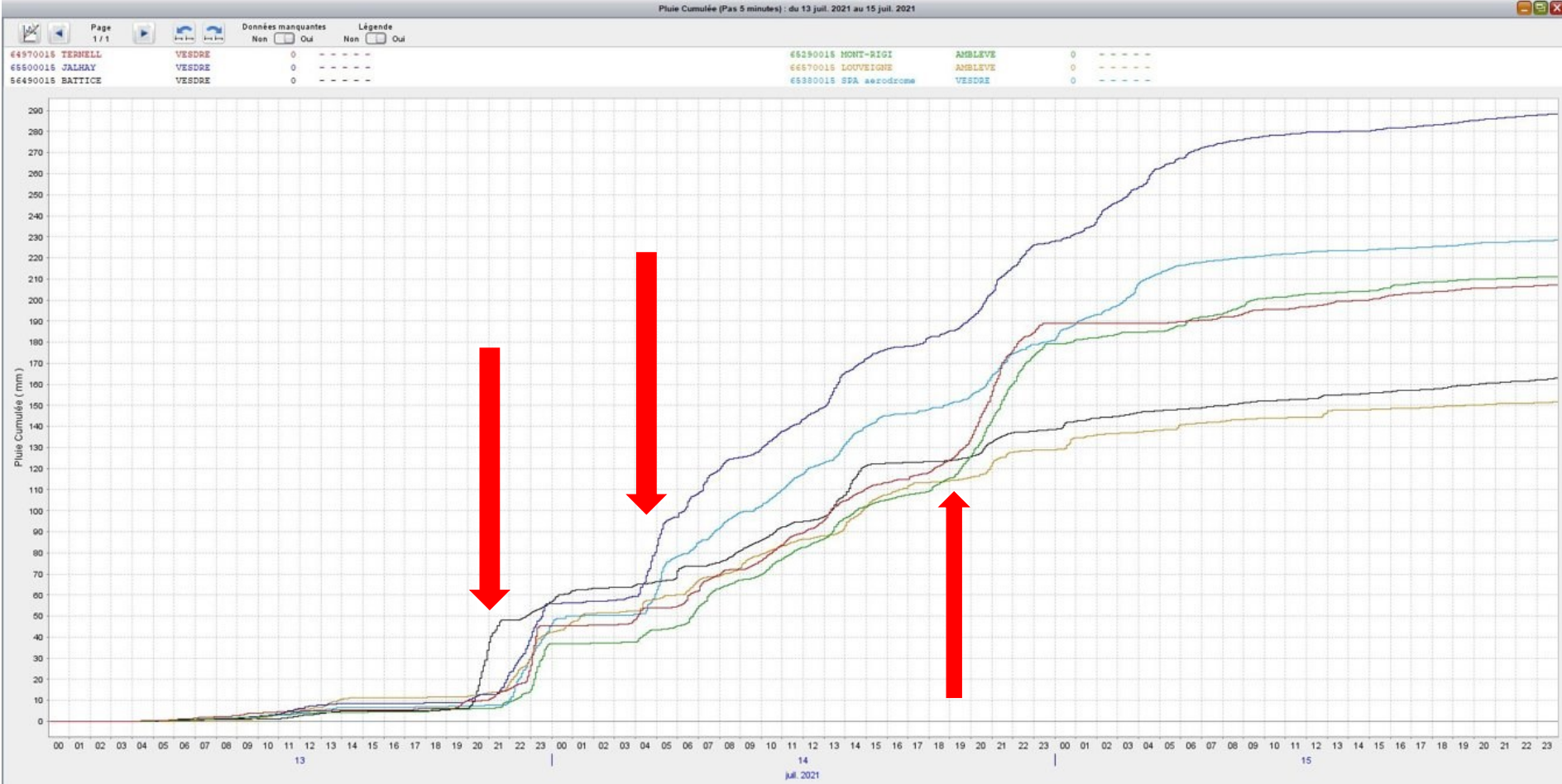


Maximum 24-h precipitation quantities (with climato. stations)

2021071506 to 2021071606



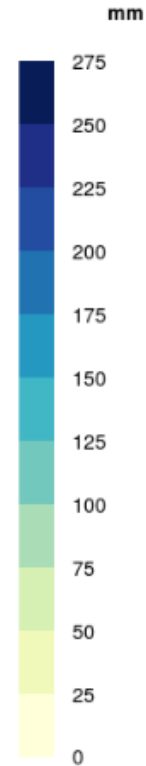
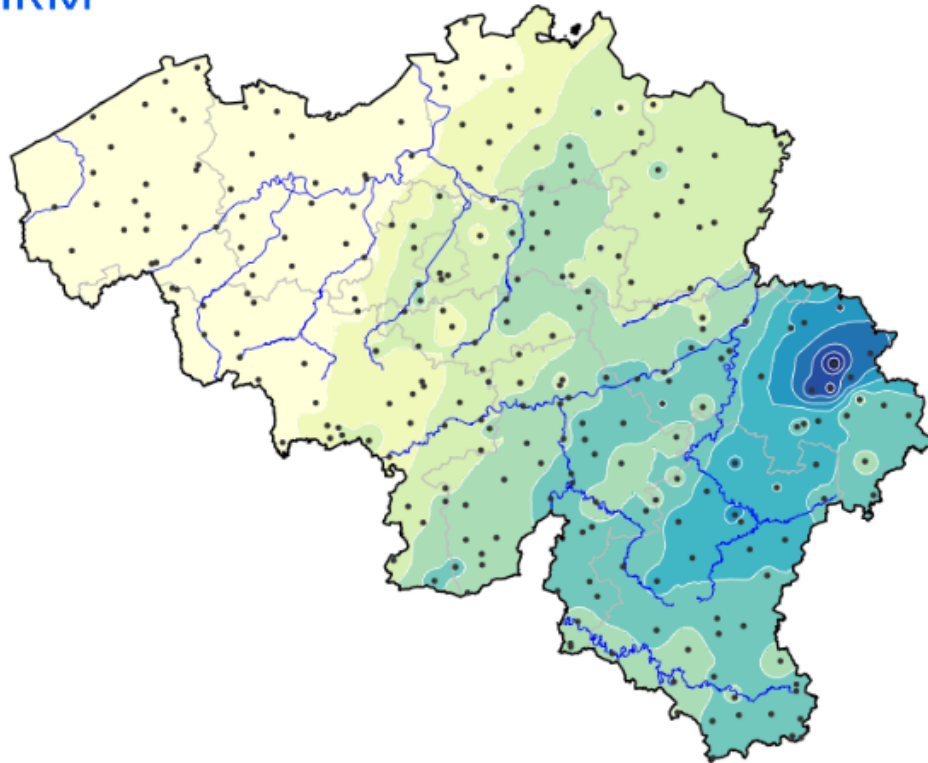
Meteorological situation



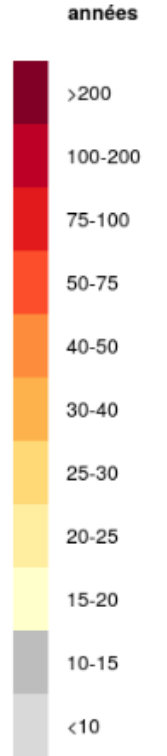
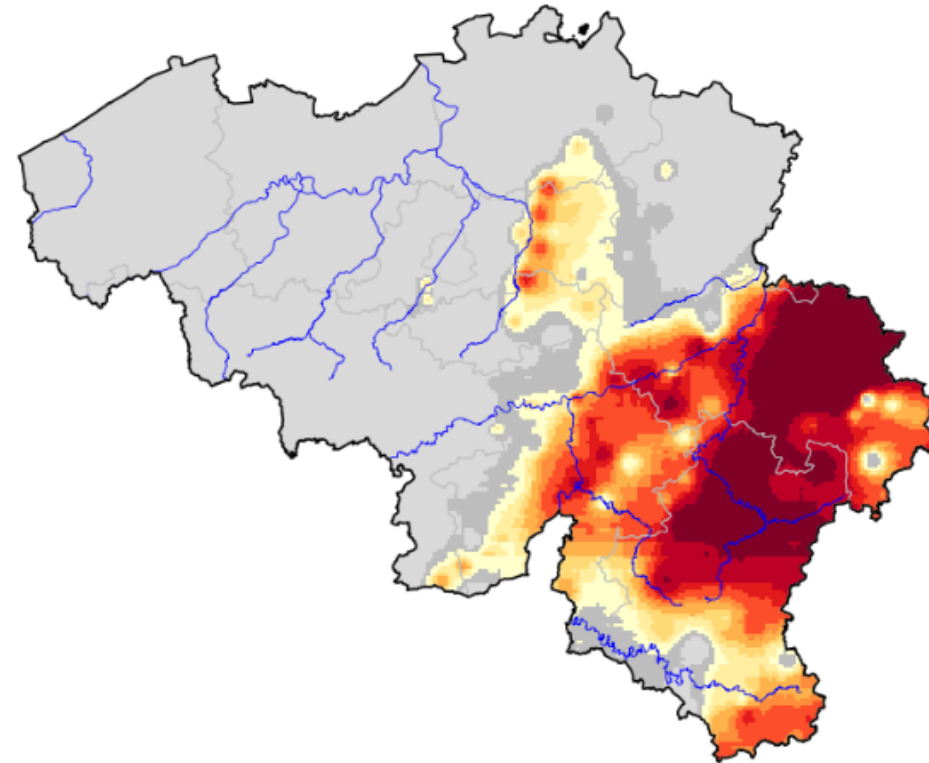
Meteorological situation



Cumul pluviométrique maximum sur 48h
entre le 13 juillet à 08:00 et le 16 juillet 2021 à 08:00

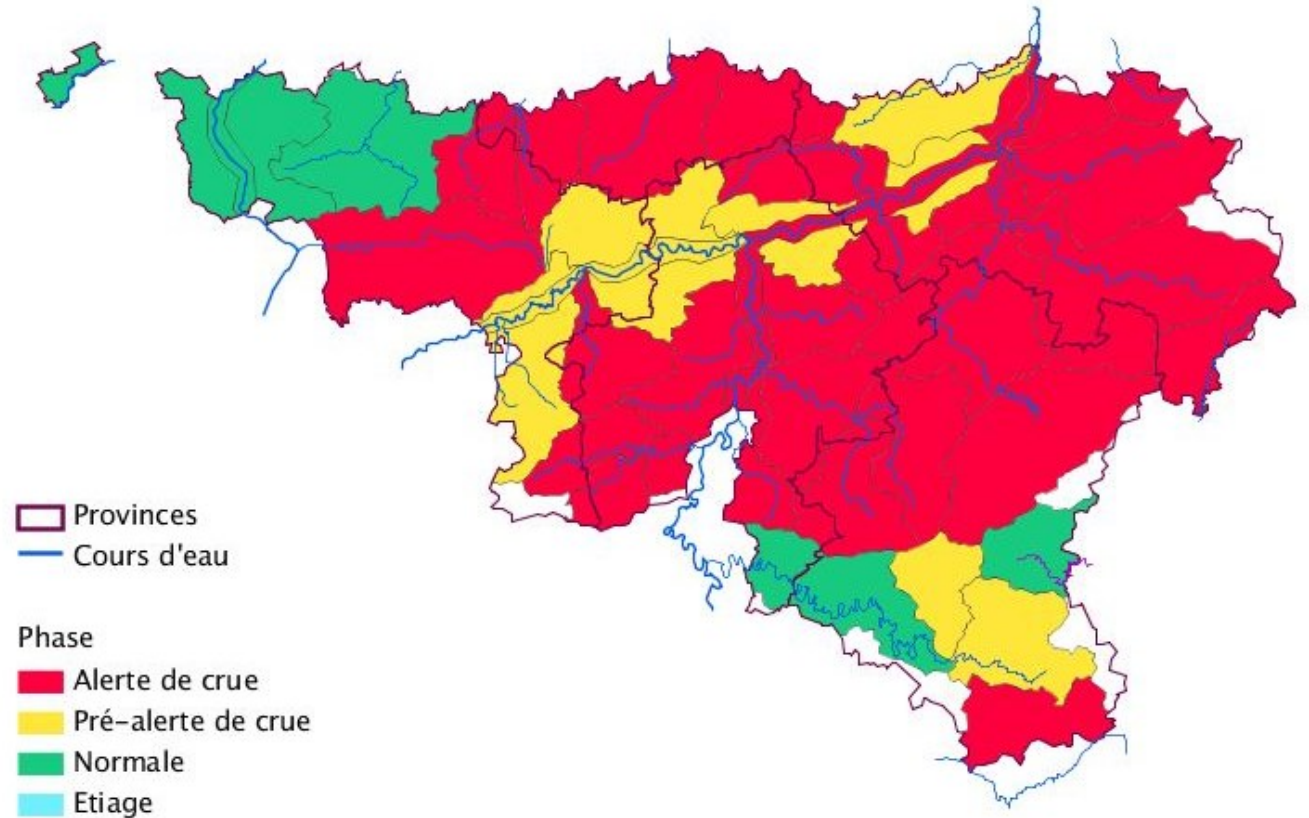


Période de retour associée

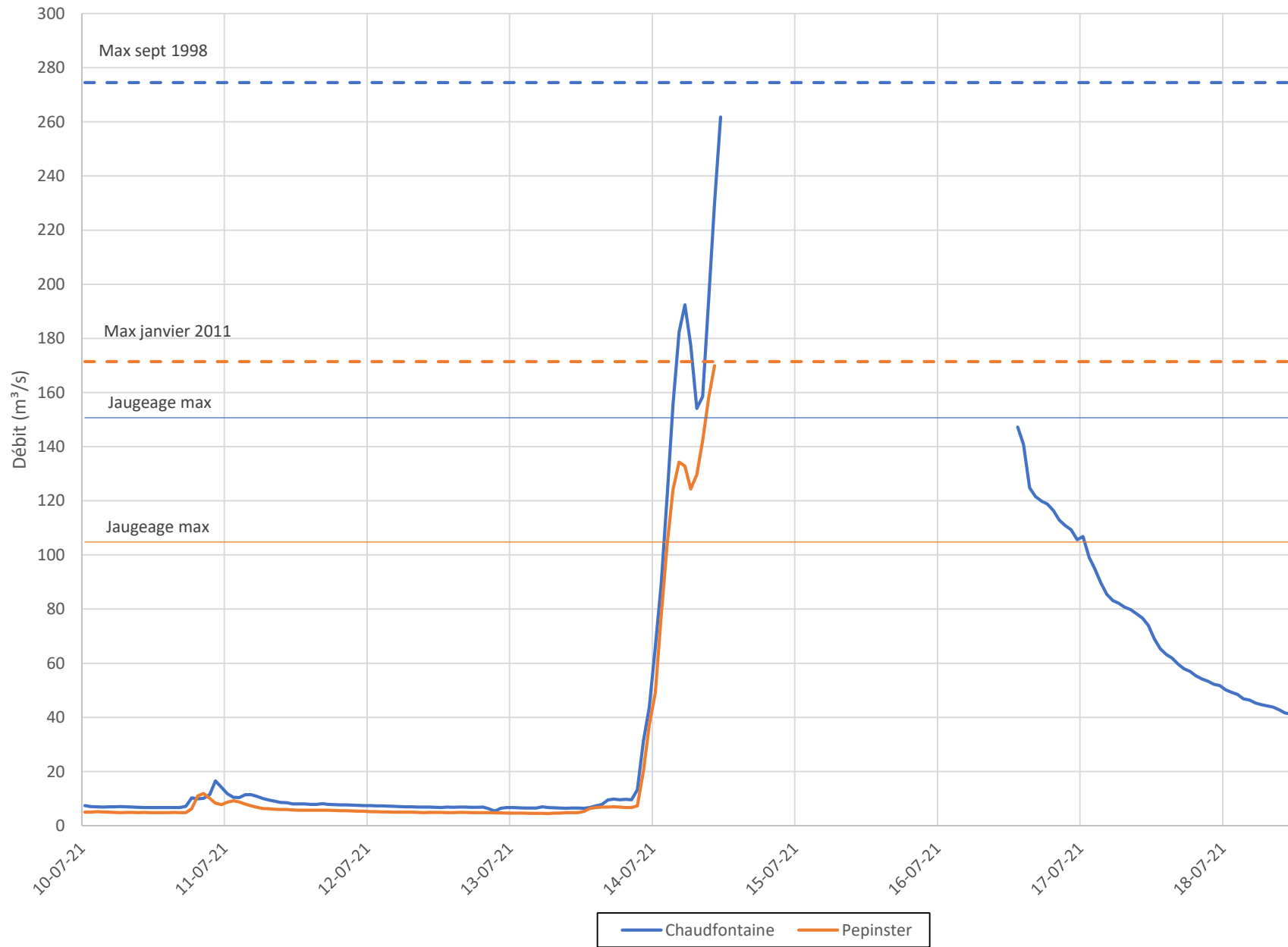


Hydrological situation

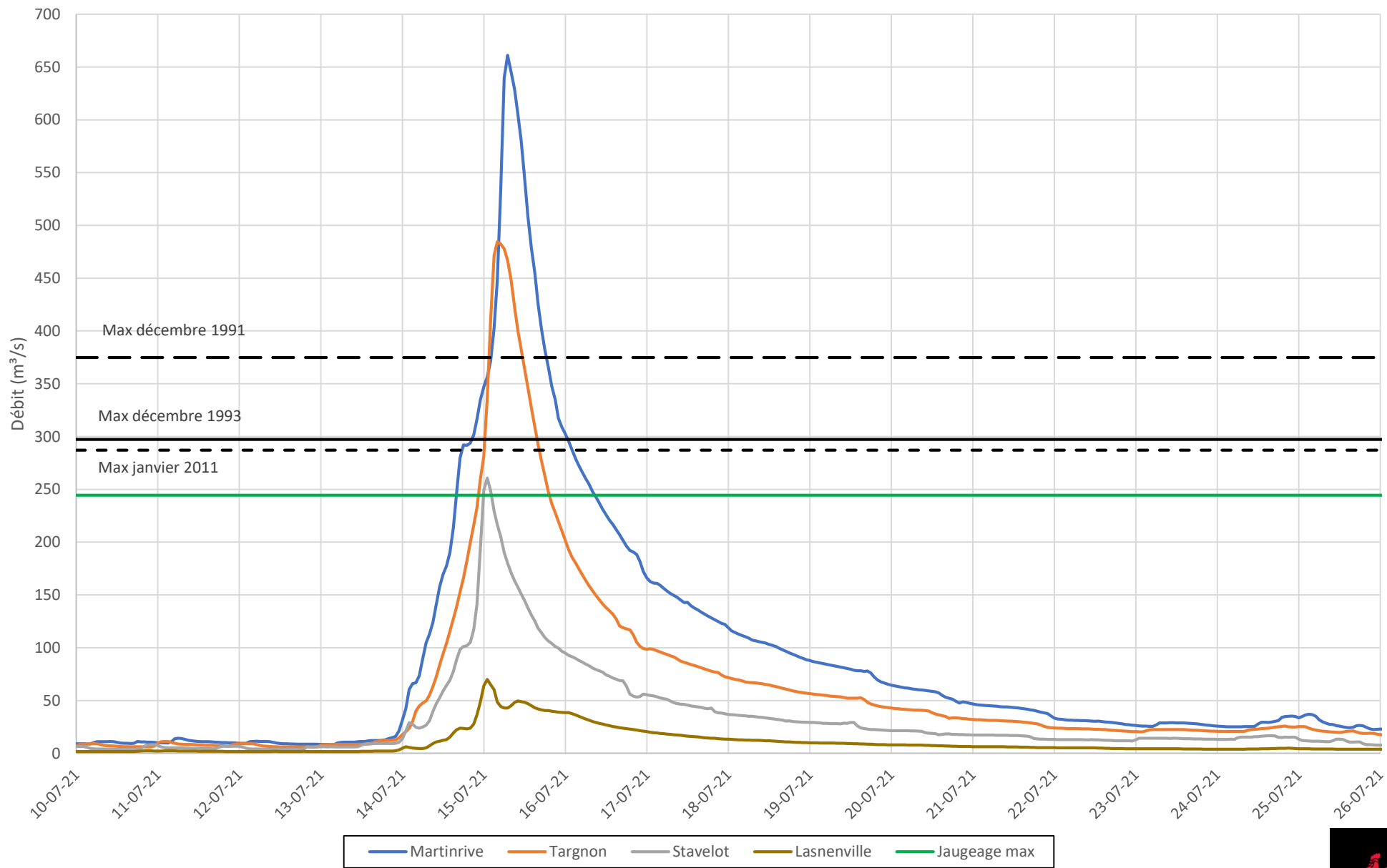
- 8 basins in the pre-flood warning phase
- 27 basins in flood warning phase



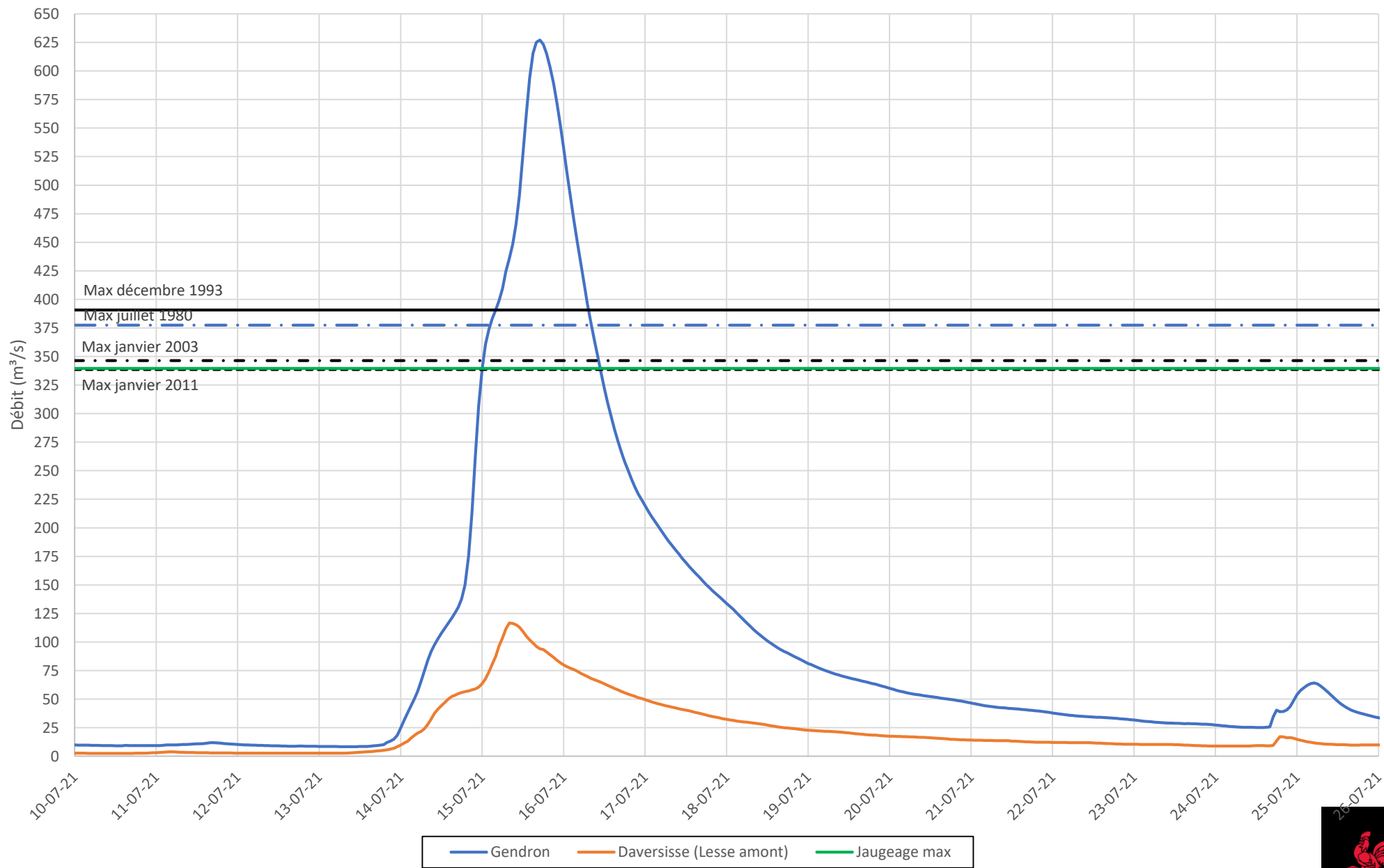
Vesdre - crue de juillet 2021



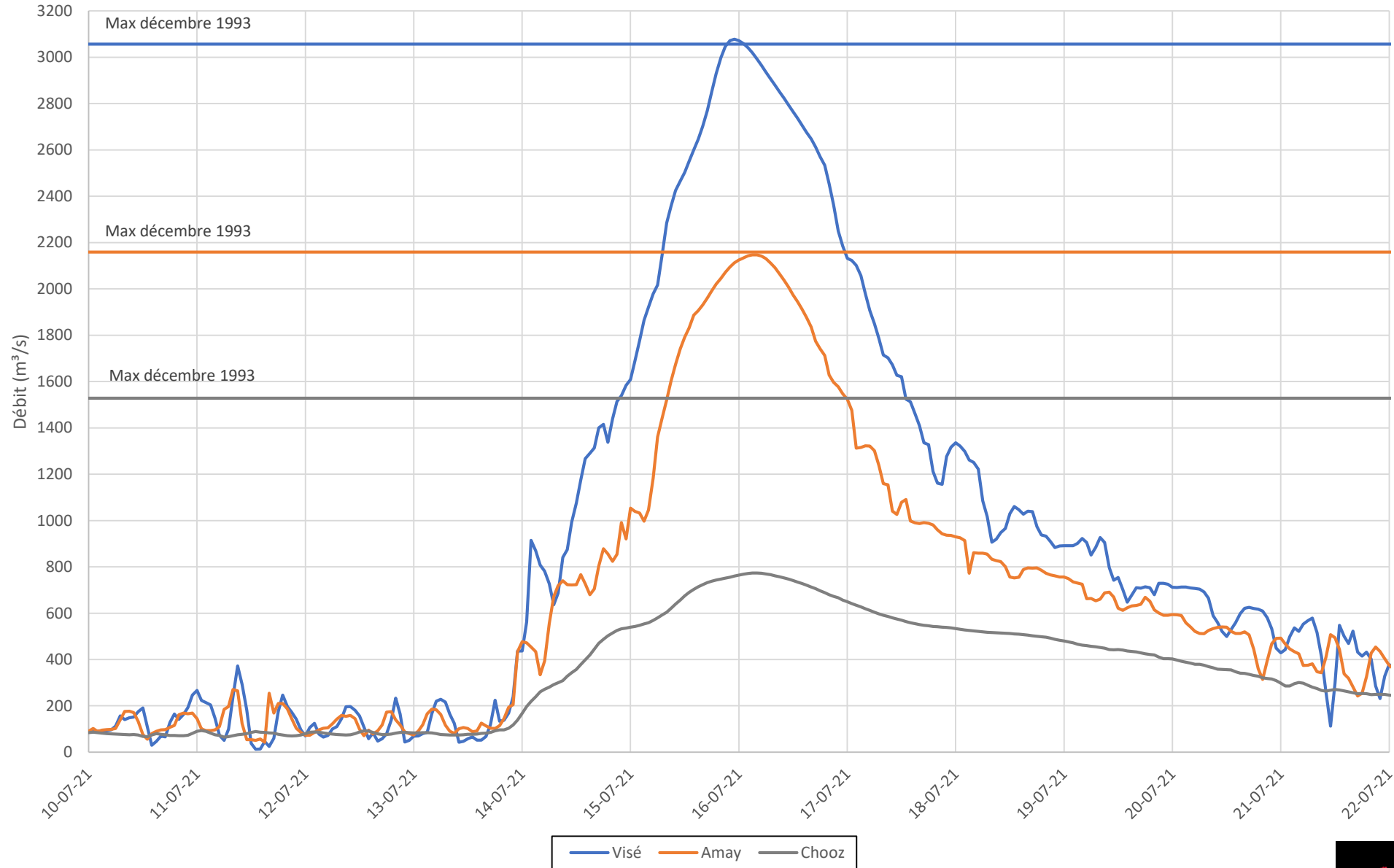
Ambève - crue de juillet 2021



Lesse - crue de juillet 2021



Meuse - crue de juillet 2021



The Dam (river Vesdre in Eupen)



Hydrological situation / dam of the Vesdre

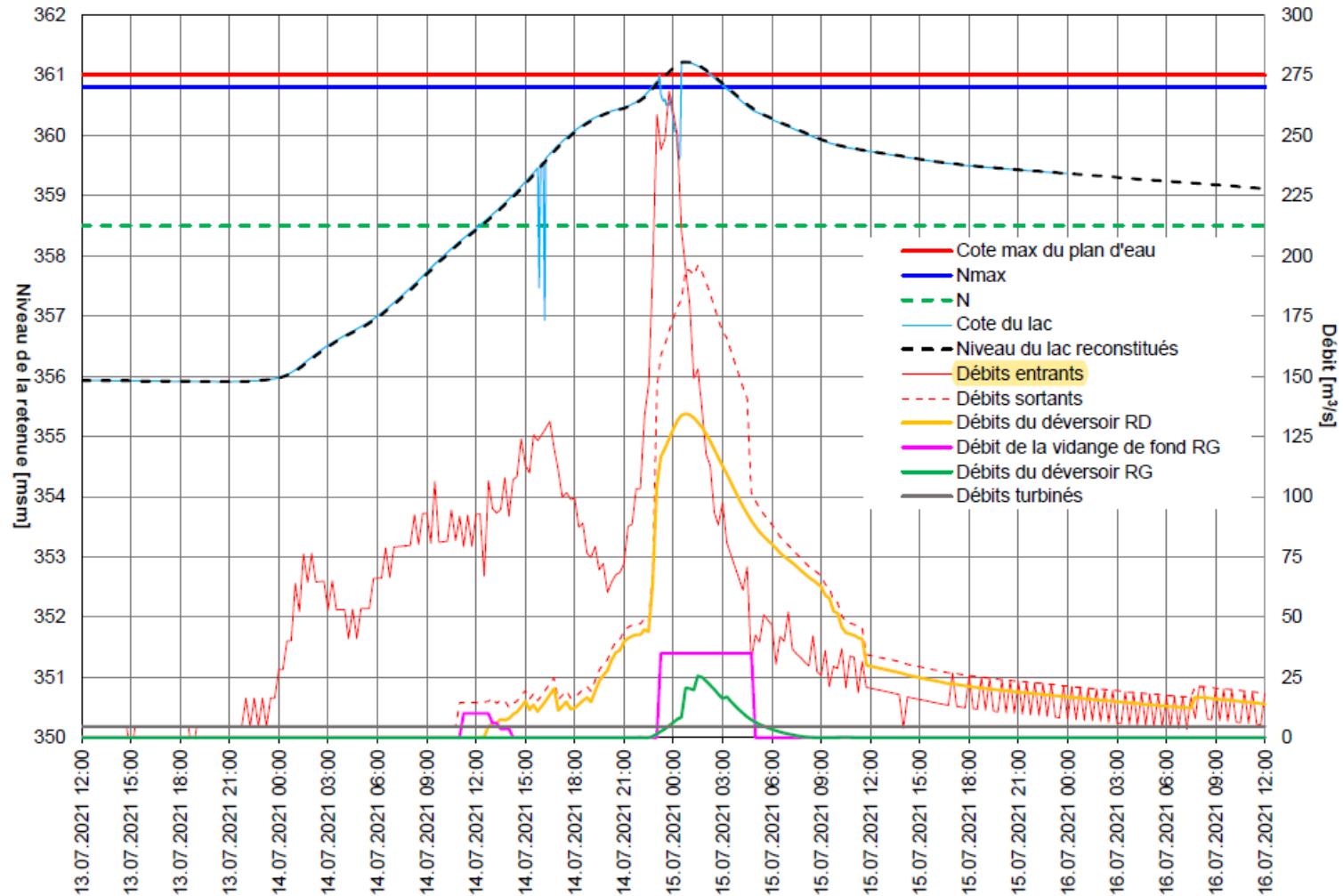


Figure 5-51 : Evolution du niveau du lac mesuré au barrage d'Eupen, des débits entrants reconstitués et des débits sortants calculés lors de la crue du 14 juillet 2021

Hydrological situation / conclusions

- Exceptional / 100-year floods
- Extreme violence in the basin of the Vesdre and its tributaries:
 - Narrow valley, very rapid rise in water level
 - Reported "wave" phenomena: logjams, dam?
- End of floods on 18/07



Crisis management

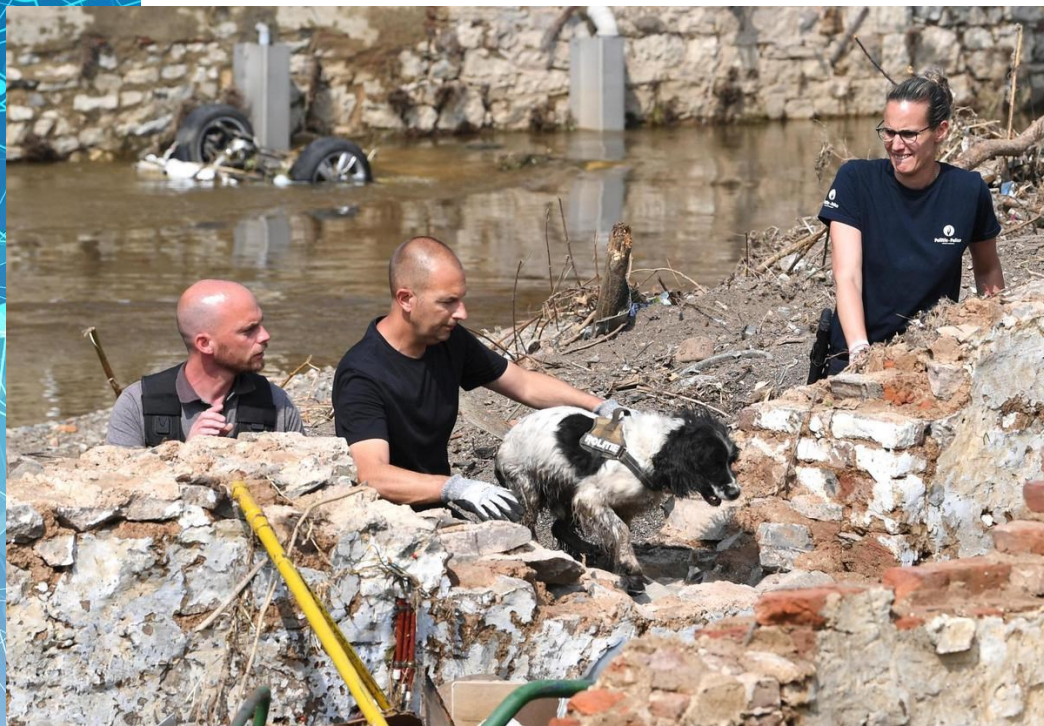
- First, the municipalities took charge of the incidents
- From 14 July, crisis management by the provinces
- From 15 July, management by the federal government



Crisis management / rescue



Crisis management / search of victim



Waste management



Impact

- 39 casualties
- Several billion € of damage
- "natural disasters" status recognized 209 municipalities
- A devastated ecosystem (riverbanks, biodiversity)

Recovery and reconstruction

- Creation by the regional government of a ‘Special Commission for Reconstruction’
- Support from a federal unit for urgent measures (works, civil engineering)
- Full mobilisation of regional administrations

Recovery and reconstruction

- Reaction :
 - Meeting primary needs: food, heating, hygiene, etc.
 - Provide functional public services
 - Coordinate the psycho-social system
 - Ensuring the recovery of infrastructure and impetus
 - Coordinate waste disposal and cleaning
 - Redeploying the economy and tourism
- Reconstruction and prevention :
 - Rebuilding the territory quickly and resiliently
 - Anticipating and preventing new crises

Housing



Rehabilitating watercourses



Launch of studies and plans

- Expected impacts of climate change
- Hydraulic studies
- Resilient land reconstruction
- New standards for land use planning
- ...

Recommendations of the Parliament

- For 6 months, the Regional Parliament examined the facts and heard witnesses of the floods
- Recently, the Regional Parliament issued 161 recommendations that should be implemented in the next months

Recommendations of the Parliament

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Prepare for future extreme events

- Reduce the risks and potential impacts of floods (Flood Risk Management Plans)
- Anticipate dangerous phenomena and prevention measures (sheltering, evacuation)
- To complete and disseminate the hydrological information needed to help decision-making in times of crisis

Conclusions

- An exceptional and intense phenomenon
- Significant number of victims and damage, requiring an unprecedented mobilisation of public services
- Rethink flood prevention in all its dimensions and crisis management at all levels

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