

## FAQ

### Shipping during high water on the Meuse

Update: 31-8-2021

#### Shipping during high water on the Meuse

##### **The Meuse as a shipping link**

The Meuse Route 1 is an important shipping link in Europe as a part of the Rhine/Meuse-Main-Danube corridor. The canals in Brabant and the Belgian waterways are also connected via the Meuse. The Meuse Route runs from Maastricht to the Meuse-Waal Canal near Weurt, alternating between the stretch of the Meuse with weirs and the Juliana Canal and Lateraal Canal, which are parallel to the Maas. Ships move through a number of locks to bridge differences in the water levels between the river and the canals. A fixed water level is maintained along the entire Meuse Route for most of the year so that shipping is not affected by low discharges.

During periods with high river discharges, the weir level can no longer be maintained and the water level rises. The weirs are opened so that shipping can pass through. This happens when discharge levels are between 1000 and 1500 m<sup>3</sup>/s. A drawback of higher discharges for shipping is that there is less headroom under bridges so that container shipping has to reduce the number of layers of containers on board.

##### **The effects of climate change**

Climate change may lead to more frequent high discharges, and higher discharges. The European Commission also recognises that inland shipping is vulnerable to climate change (resulting in both high and low water), and the policy objective is to make the sector more resilient to climate change.

The Dutch Climate-Resilient Networks programme conducted research into the effect of climate change on headroom on the Meuse. It emerged that the effect of more frequent high water (on more days per year) is limited but that higher levels of high water lead to a stronger reduction in headroom(see Figure).

---

<sup>1</sup> <https://www.rijkswaterstaat.nl/water/waterbeheer/bescherming-tegen-het-water/maatregelen-om-overstromingen-te-voorkomen/maaswerken/maasroute>

## FAQ

Update: 31-8-2021

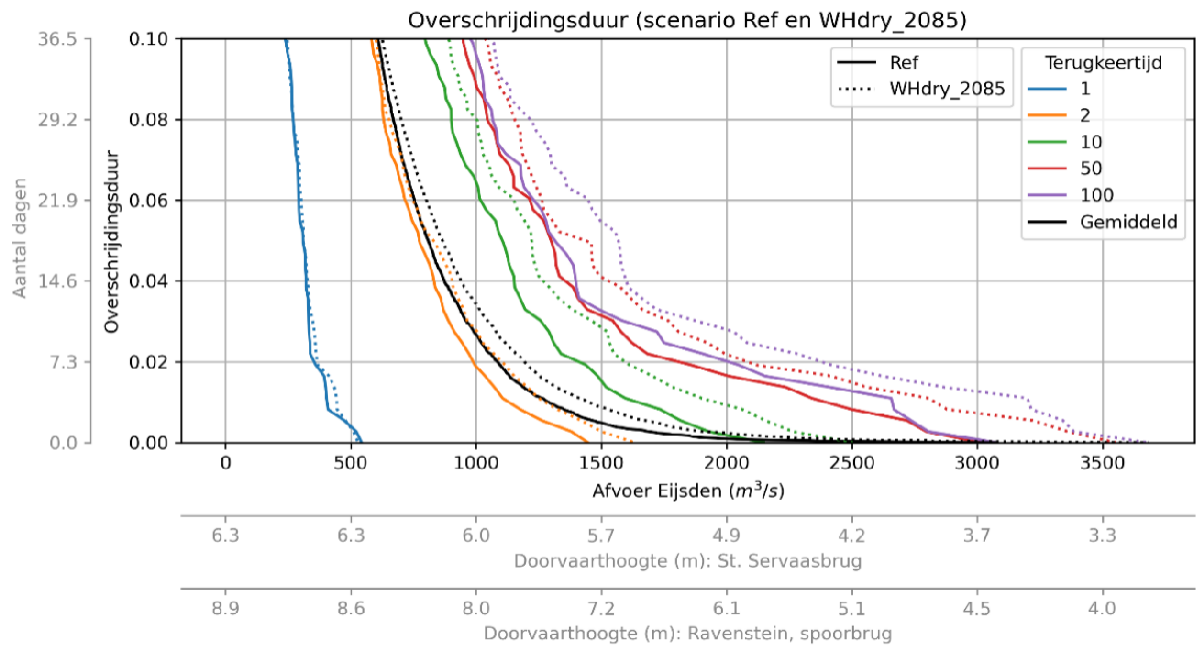


Figure: The exceedance duration (stated as the number of days a year) for the Meuse discharge for different repeat times in relation to the headroom under the St. Servaas bridge (Maastricht) and railway bridge at Ravenstein (near Grave). For the current climate (Ref) and in the case of rapid climate change (WHdry 2085).

[In Figuur:

Linker as: Number of days Exceedance duration

Onder: Discharge Eijsden

Headroom (m): St. Servaas bridge

Headroom (m): Ravenstein, railway bridge

In Figuur zelf: Return time

Average

Boven: Exceedance duration (Ref and WHdry\_2085 scenarios]

If the discharge increases further, the open links between the Meuse and the canals are closed. The Heumen (Meuse-Waal Canal) and Limmel (Juliana Canal) floodgates close when discharges reach 1400 and 1800 m<sup>3</sup>/s respectively. Because there is no longer a lock at Limmel, traffic from the Juliana Canal to Maastricht and further south is affected.

### The impact of the high water in 2021 on shipping

During the high-water wave of July 2021, the danger represented by floating debris led to the blockage of commercial shipping on the entire Meuse. Recreational shipping had already been prohibited given the high flow rates and difficult manoeuvring, and the

## FAQ

Update: 31-8-2021

prohibition was still in place because floating debris has more of an impact on recreational shipping.

Repair work at the Sambeek weir meant that traffic was also blocked here.