

# Howden Re Event Response

## Central European Flood – September 17<sup>th</sup>-20<sup>th</sup>

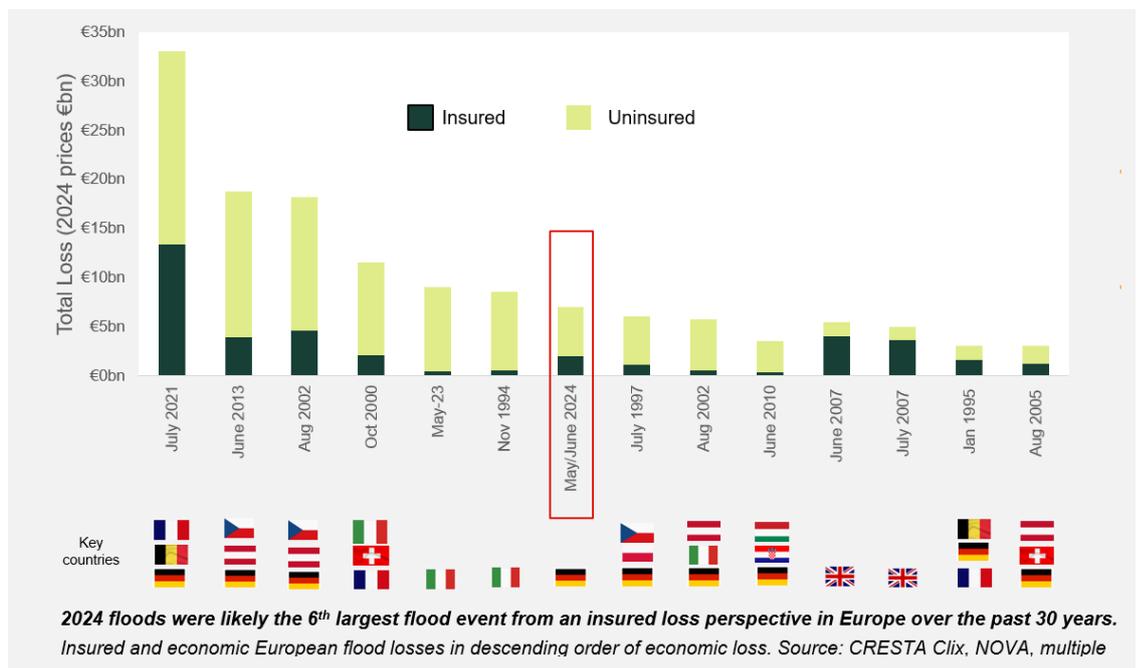
Building level resilience in the form of enhanced preparedness and alerting, allied to continued water-course management and building of flood defences appear to have made a significant difference for this event. Moreover, while floods have always occurred in the region, changes in weather-patterns continue to present challenges however and emphasise the importance of continued investment into enhancing societal resilience. Howden Re can assist with refining your view of risk to take these factors into account.

**Meteorological conditions –** elevated sea-surface temperatures in the Mediterranean and Adriatic allied with continued warmer then wetter atmospheric result in repeated episodes of extreme summer flooding over central Europe.

Driven by abnormally warm water surface temperatures in the Mediterranean and Adriatic a 'Vb' weather pattern, starting on 11<sup>th</sup> of September brought extreme precipitation across large parts of Austria, Czechia, Poland and Slovakia. In lower Austria, the 7-day precipitation totals surpassed the 400 mm-mark with the Danube River running close to the 100-year flood mark. Several locations in the Czechia recorded more than a month's rainfall in less than a day.

In Austria, the Perschling reached at its peak a discharge of 270 m<sup>3</sup>/s., more than double of its 100-year flood discharge. As of yesterday, 18<sup>th</sup> of September, the highest river levels had passed Vienna and were pushing into Hungary, as well as the Czech-German borders. In Poland the Oder river has flooded extensively though currently, it seems likely that the water levels will remain slightly below the extreme flooding event in 1997.

**Historical loss context –** reference events include 1997 and 2010 (€0.5 to €1.5bn, insured, on-levelled) although insurance penetration has more than doubled from 1997 in Czechia. Notice all reference events occur in summer.

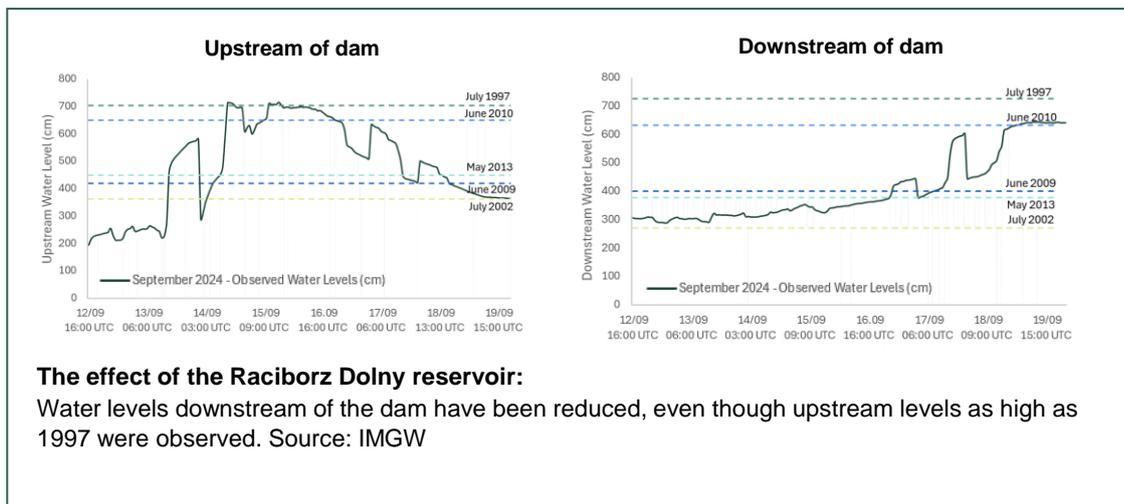


## Howden Re view of risk resilience measures have shown to mitigate the impact

**Defence measures—**  
Significant investment by a number of Central European countries on flood defence measures since 2002 has had a major impact in ameliorating the consequences of this extreme event

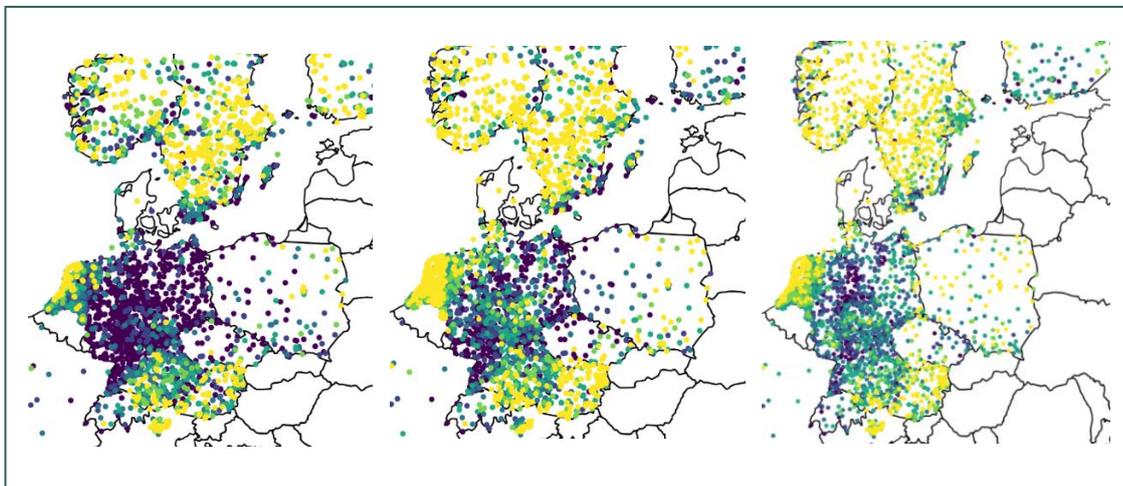
The construction of the Raciborz Dolny flood control reservoir on the Oder river, has been proved a success story for Poland. With a capacity of 185 million m<sup>3</sup>, covering an area of 26 km<sup>2</sup>, and dam lengths of over 20 km, it has began impounding as of the 15th of September, and has successfully managed to flatten the peak of the incoming flood wave.

The event taking place has been widely compared against the 1997 floods where 40% of Wroclaw was inundated. Nonetheless, investments in flood defences since the 1997 and 2002 floods have substantially improved the impact of the heavy precipitation and river flooding.



## Howden Re view of risk Extending models to include recent years' of climate data

**A clear time-trend is observed with European rainfall patterns – some regions see increases, some a decrease**



**Areas in blue show a decrease, in yellow an increase.**

Percent Change in Mean Daily Precipitation in Summer Months (5,6,7,8) between 1951-1975 (1961-1975 for Czechia) and 2019-2024 (left), 1975-1997 and 2019-2024 (centre) and 1951-2008 and 2008 - 2024 (right). Source: DWD

Howden Re's analysis of both precipitation and gauge data across Central Europe has highlighted a clear observed time-trend with European rainfall patterns. Taking this into account Howden Re has developed a climate-conditioned view of European flood risk to stress test portfolios and assess the impact of these shifting trends.

Extratropical cyclones of type Vb develop over the western Mediterranean and move north-eastward, leading to heavy precipitation over central Europe typically in the summer months. Changes in climate are expected to affect the number of Vb systems that develop in Europe, with a reduction in frequency expected by the end of the century due to a northward shift of cyclone track, yet, with more extreme Vb events expected.