Adaptation of logistic chains for low-water situations from an industry perspective

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The critical gauge for BASF on the Rhine is Kaub in the Rhine valley. 
~80% of the transport volumes from and to Ludwigshafen have to pass the bottleneck in Kaub.
BASF adapts its logistics chains for future low water periods to be prepared for a dryness period as seen in 2018

- **Digital Tools**
  - Development of new digital tools to provide more accurate longer-term forecasts of Rhine Water levels.

- **Barge Transportation**
  - BASF has secured barges with improved tonnage capacity that can still operate even at lower water levels (Time Charter).
  - Development of an own design for a specialized low-water carrier.

- **Multi-Modality**
  - Increased use of alternative transportation modes, especially via Rail.

- **Infrastructure**
  - „Abladeoptimierung Mittelrhein“

  Activities with federal, state and political bodies for the purpose of implementing infrastructure measures that ensure the navigability of the Rhine in the long term.
Rhine water level forecasts are highly useful to better prepare for an extreme event (e.g. in July/August 2022)

- Since 2018 operational forecasting system established for Rhine water levels together with The German Federal Institute of Hydrology (BFG).

- We do not know how the Rhine Water Level will evolve eventually, but we give a robust quantification of probabilities and risks for low water levels.

- A reliable forecast is a huge lever to prepare for an approaching low water level event!
  - manage inventories and build-up of stock range
  - leadtime for alternative modes of transport
  - securing barge capacity (e.g. timecharter)
Implemented measures after 2018 to build a low-water vessel fleet for BASF have proved their effectiveness in July/August 2022.

Various implemented measures **doubled the number of available barges** for BASF in the extreme low-water situation in July/August 2022:

- **Timecharter Basefleet** – permanently chartered barges
- Additional low-water barges, on-demand at Kaub <120cm
- **Newbuilding of specialized low-water barges**
The roadmap "Niedrigwasser Rhein" is an important milestone. Prioritize the implementation of the infrastructure measures!

„Abladeoptimierung Mittelrhein“

- Ongoing infrastructure measure with a very long planning horizon (>2032)

- Essential part of the BMVI's 8-point plan supported by BASF and various other parties

- The integration of ecology and economy, as well as the support from political bodies and the general public is of high importance for the success of the project.

- Acceleration of approval processes for key infrastructure measures required