

Challenges and Visions for the Elbe Estuary from a User's Perspective

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Based on unfavourable hydromorphological developments in around 2004, when dredging necessities increased from averagely 2 Million cubic meters up to more than 8 Million cubic meters in Hamburg, combined with the need to implement tightened ecological requirements resulting from the Habitats Directive, the Hamburg Port Authority accepted the challenge and developed a future orientated concept for the sustainable development of the Tidal Elbe River as an artery for the metropolitan Region of Hamburg and beyond.

The concept is based on three milestones derived from extensive investigations including an innovative 3D hydromorphological model: 1. dissipation of the incoming tidal energy by hydraulic engineering constructions especially in the mouth of the estuary, 2. establishing flooding areas in and around Hamburg, and 3. optimising the sediment management considering the whole system.

Consecutive planning and first steps of implementation have already achieved a first positive result: dredging went down to 5 Million cubic meters. But this is only the start. The concept is ready to gain far more than just reduced dredging necessities. It is made to subsequently change the tidal estuary into a prosperous and valuable region for all the stakeholders: economy, nature, fishery, flood risk management, climate change adaption and recreation are all concerns having the chance to benefit from the concept over the next century and beyond.

For more information:

www.Hamburg-Port-Authority.de
www.Tideelbe.de