MSc-graduate project(s)

## **Holland Barrier**

The additional storm surge barrier concept

Samen Sterk/Stronger Together aims to enhance flood protection in the Dutch lower rivers area threatened by rising sea levels. The key innovation is the addition of the Holland Barrier alongside the existing Maeslant Barrier, rather than replacing it as per current policy. This dual barrier system significantly reduces the risk of failure, lowers water levels, improves water management on the south side, and allows for continuous barrier operation during maintenance. This approach saves costs on dike improvements, maintains vital sea connections for shipping and ecology, and promotes future waterfront development, including unembanked port industry, offices, housing, and more.







Further research should quantify these benefits for varying sea level rise scenarios and explore the interaction between the Holland Barrier, dike enhancements, unembanked areas, pumping systems, and river measures. A user-friendly decision-support interface should be developed to align these findings with stakeholder concerns and preferences. Relevant discussion themes include shipping, alternative flood defense strategies, environmental impacts, societal consequences, energy considerations, and climate-neutral solutions.

Additionally, three critical aspects have been identified for further investigation:

- 1. Maintainability
- 2. Reliability in conjunction with the Maeslant Barrier
- 3. Structural design

Further discussions can expand on these aspects and explore additional possibilities.

## **Contact person:**

To be determined, depending on the project scope

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