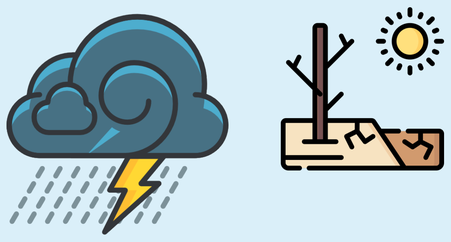
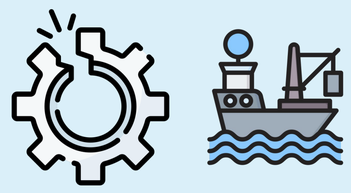
Climate-Resilient Waterborne Multimodal Transport Corridor



Extreme weather

Due to climate change



Disruption

Logistics & Supply Chain

Negative impact

Economic & social

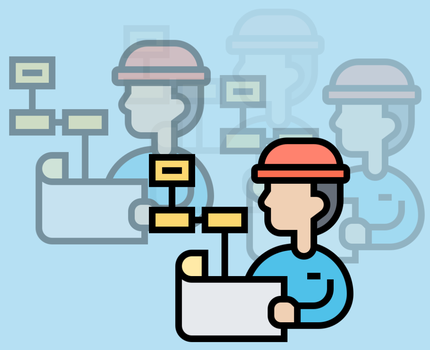
Solutions via the transdisciplinary approach for **soft** resilience strategies & interventions

Integrating logistics planning and water management to build an adaptive and resilient multimodal corridor

Systematic Literature Review

- 120 papers on resilience strategies are analyzed to inform the development of the resilience toolbox.

Paper 1



Evaluated by Practitioners

- Input from a consortium of six public and private partners and knowledge institutions is used.

Input from parallel research activities

Corridor Digital Twin

Integrating relevant corridor variables for holistic analysis

Coordinated logistics planning

Resilience Toolbox

Extreme event prediction

Optimizing water resource allocation

- Water loss during **lock operations**
- **Water level** management of canal sections

Empirical research using the Twente Canal case study

Paper 4

Approach

Modeling coordinated logistics operations using a multi-commodity flow network under dynamic hydrological conditions.

Paper 3

Input from parallel research activities

Approach

simulation of vessel traffic and its effects on sectional water levels

Paper 2

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Funded by TKI DINALOG + Ministry of Infrastructure & Waterways

TKI DINALOG Dutch Institute for Advanced Logistics

Rijkswaterstaat Ministry of Infrastructure and Water Management

UNIVERSITY OF TWENTE.