

An aerial photograph of a high-speed train crossing a large, multi-arched stone viaduct. The train is white with blue accents and is moving from left to right. The viaduct is made of light-colored stone and has several arches. Below the viaduct is a river, and the surrounding area is lush with green trees and vegetation. In the background, there are some buildings and a road.

# Climate Change Adaptation Program SNCF Réseau

Europe's Rail – Rail4EARTH

European Workshop on « Railways adaptation to climate change »

June 3, 2026



Viaduc de Cize-Bollozon

# SNCF RESEAU'S ADAPTATION STRATEGY

## SNCF Reseau's adaptation strategy validated in 2024 by the Board of Directors - available online:

- **Advance knowledge** based on the official French trajectory (TRACC) – Vulnerability studies
- **Develop partnerships** with territories and industry
- **Implement prioritised actions** (see illustration) without forget human aspects

## Industrial program formalised by a road map:

- **Involve all SNCF Reseau** in the adaptation
- **4 people** attached to the department of strategy
- **A dozen projects**
- **Program committee** with internal departments

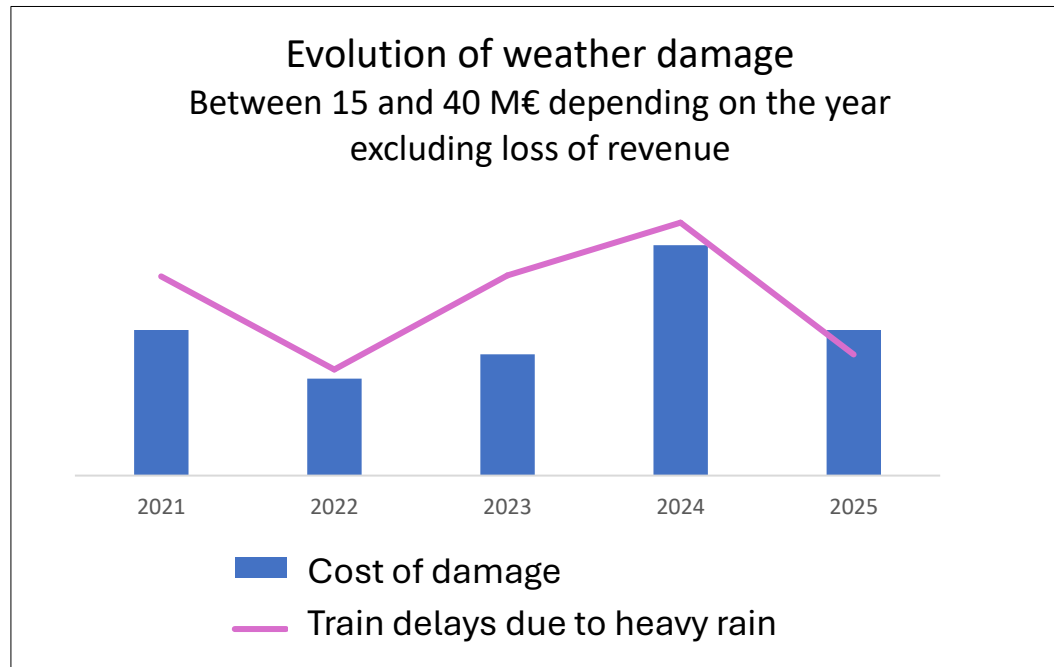
Adaptation  
maintenance and monitoring



Adaptation  
network operations and  
functionalities

Adaptation  
of assets

# COST ESTIMATION OF WEATHER DAMAGE



## Difficulty in obtaining data:

- Accounting tools not originally designed to track weather damage.

## Expert's estimates:

- Selection of damage accounts most related to weather incidents

⇒ GREATLY VARIATION WITHOUT OBVIOUS TREND

⇒ CORRELATION WITH RAINFALL

⇒ EMBANKMENTS, EXCAVATIONS, HYDRAULIC AND DRAINAGE SYSTEMS very affected by rainfall with damage often very costly

Ex: 2024 strongly marked by mudslides and erosions of embankments

# RESILIENCE TO HEAVY RAINFALL

**Several actions to improve the resilience of embankments, excavations, drainage and hydraulic systems**

Examples:

- ⇒ INVENTORY of existing hydraulic systems, to restore or resize
- ⇒ TOUTATIS PROJECT : rainfall remote monitoring and alert system on sensitive embankments or excavations (shift from correction to prevention)
- ⇒ HYDRAULIC TRANSPARENCY : flood-resilient design of new railway lines in risk areas



Viaduct-type opening interrupting an embankment to give hydraulic transparency (CNM, Vidourle plain)

# THANK YOU!

Christophe Le Dantec

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