

## **Position Paper**

Brussels, 18 February 2026

# **A climate-resilient railway for Europe's future: Priorities for the new European climate resilience framework**

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# **A climate-resilient railway for Europe's future: Priorities for the new European climate resilience framework**

## **Summary**

**As Europe's most sustainable transport mode, rail is central to the Green Deal's 90% emissions reduction target by 2050, yet faces escalating risks from extreme weather like recent heatwaves, storms and floods, which have caused months of critical line closures, and estimated damages exceeding €2 billion across EU networks in 2024-2025. The Community of European Railway and Infrastructure Companies (CER) calls for an integrated EU framework prioritising resilience-by-design from the outset across the entire railway system (infrastructure, vehicles, operations). This includes dedicated funding for legacy assets, harmonised Copernicus-based scenarios, and interoperable standards – echoing the European Environment Agency findings that adaptation strengthens competitiveness.**

## **1. Introduction**

The new European framework for climate resilience should explicitly address the rail system as an integrated whole comprising rail infrastructure, rail vehicles, and operating and maintenance assets. The climate resilience of the rail system does not result from the robustness of individual facilities, but from the interaction of all subsystems and their ability to operate safely under extreme conditions and be quickly restored after incidents. Resilience measures, risk assessments, and financing instruments should therefore be designed systemically and also include rolling stock, maintenance capacities, personnel, and operational dependencies.

CER welcomes the Commission's initiative "European climate resilience and risk management – integrated approach" and submits its contribution with this Position Paper and response to the public consultation. An effective European framework must reflect the reality of long-lived assets (infrastructure, rolling stock, technical equipment, buildings, plants, etc.), addressing operational safety, existing networks, standard dynamics, clear responsibilities, and feasible financing alongside scenarios/analyses. For rail, climate resilience means not only preventing damage but ensuring safety, availability, and basic social services under increasingly severe climatic conditions.

## **2. Rail system's key policy priorities**

Climate-proof rail keeps critical supply chains moving when roads and airports fail during extremes. Urban/regional rail provides cooling and storm-resilient mobility for vulnerable populations. This supports the EU competitive economy, making resilience investment in rail a Union-wide priority. Adopt a system-wide integrated approach to the interdependence of infrastructure, rolling stock, and component lifecycles. Resilience must extend beyond physical tracks to encompass climatic resilience of rail vehicles and their stringent maintenance requirements under extreme environmental conditions.

## 2.1. Dedicated funding and enhanced co-financing

Current funding mechanisms fall short of the needs for adapting "brownfield" assets, which are technically complex and capital-intensive.

- **Prioritise existing infrastructure:** Funding allocation must be strictly needs-based, with a primary focus on upgrading and modernising the current network. As retrofitting existing assets (e.g., bridges, drainage, track beds) is significantly more costly than new builds, these projects require higher financial support to ensure effective, long-term climate resilience.
- **Sector-specific eligibility criteria:** Eligibility for enhanced co-financing must mandate resilience-by-design, based on rail-specific technical standards rather than methodologies that create unnecessary administrative burdens.
- **Significantly higher co-financing rates:** Match EIB's 50% precedent for TEN-T retrofits (bridges, tracks, drainage). Funding allocation should be strictly needs-based, prioritising existing 'brownfield' assets and critical corridors (e.g., flood-prone or high-heat sections) with significantly higher co-financing rates.

## 2.2. Standardised climate data and methodologies

Shift from historical to forward-looking scenarios for long-life assets, such as the railway system. Faster access to high-resolution climate data would support railway companies' GIS-based planning.

- **EU-wide scenarios:** Joint baselines drawing from standardised Copernicus climate projections to 2100 using multiple simulation models (aligned with IPCC RCP/SSP). These common baselines aim to harmonise cross-border planning, ensuring consistency at network interfaces and avoid fragmented national methodologies.
- **Harmonised mapping:** Identify gaps in current standards vs. resilient railway targets. Harmonised CEN/CENELEC standards for temperature/flood resilience.

## 2.3. Integrated governance and regulatory simplification

Coherent EU/national obligations must integrate climate resilience into transport/land-use planning with regulatory simplification and fast-track approvals (nature/water/regional laws) for resilience retrofits.

- **Coherent strategies:** Legally binding EU/national obligations integrating resilience into transport/land-use plans.
- **Regulatory simplifications:** Fast-track approvals for resilience retrofits, integrated with TEN-T permitting and CSRD reporting, via a dedicated framework ensuring realistic timelines.

## 2.4. Innovation in physical and digital resilience

EU-level support targets European harmonization of climate resilience criteria for cross-border transport—through dynamic adaptation of technical standards and standardised recording of climate-induced damage—alongside predictive maintenance algorithms and satellite-based geotechnical monitoring ensuring digital resilience across the entire railway system (infrastructure, vehicles, operations, maintenance).

- **Smart monitoring:** Sensors for real-time detection/preventive maintenance.
- **Resistant materials:** R&D for higher temperature/moisture tolerance.

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### 3. Economic instruments and risk sharing

The framework should leverage private capital and innovative insurance products to spread the financial burden of climate risks.

- **Climate resilience securitisation:** Facilitate new securitization products and standardised reporting for Insurance-Linked Securities (ILS) to attract private investors. EU Climate Resilience Labelling could be developed for rail projects compliant with TEN-T climate-proofing, unlocking EIB/NDICI terms.
- **Insurance incentives:** Explicitly link physical resilience investments to lower insurance premiums, ensuring that infrastructure managers are rewarded for proactive risk mitigation.

### 4. Conclusion

Building a climate-resilient railway is not a cost, but a vital investment in Europe's security, competitiveness, and environmental future. CER remains a committed partner to the EU institutions in shaping a framework that supports the rail sector's efforts to adapt to the practical challenges of a changing climate.

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#### About CER

The Community of European Railway and Infrastructure Companies (CER) brings together railway undertakings, their national associations as well as infrastructure managers and vehicle leasing companies. The membership is made up of long-established bodies, new entrants and both private and public enterprises, representing 78% of the rail network length, 81% of the rail freight business and about 94% of rail passenger operations in EU, EFTA and EU accession countries. CER represents the interests of its members towards EU policy makers and transport stakeholders, advocating rail as the backbone of a competitive and sustainable transport system in Europe. For more information, visit [www.cer.be](http://www.cer.be) or follow us on [LinkedIn](#).

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