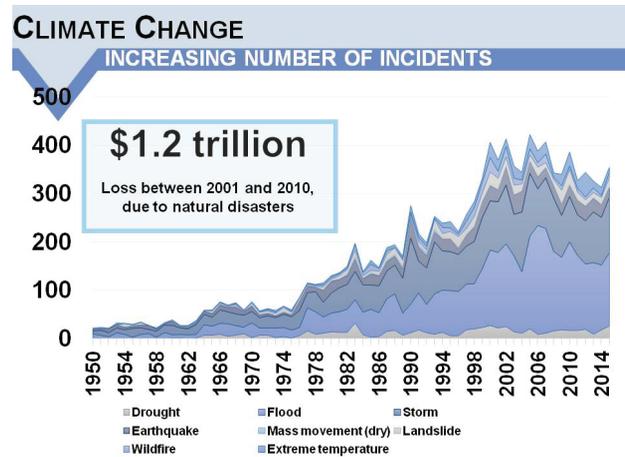


# Building a resilient railway : UIC RailAdapt project



INTERNATIONAL UNION  
OF RAILWAYS

UIC members have experienced the impacts of extreme weather events in recent years. As well as the costs of damage (every year natural disasters cost the global economy around \$1.2 Tn) railway organisations are aware of permanent loss of traffic and damage to reputation. CEOs will therefore be interested in the UIC initiative 'RailAdapt' which is designed to provide UIC members with a strategic framework to build long-term resilience. RailAdapt will bring rail and other experts together to share good practice and develop guidance on optimising cost effective resilience, prioritising resilience activity, sourcing funding for the investment and making connections with funders (e.g. development banks).



World Bank

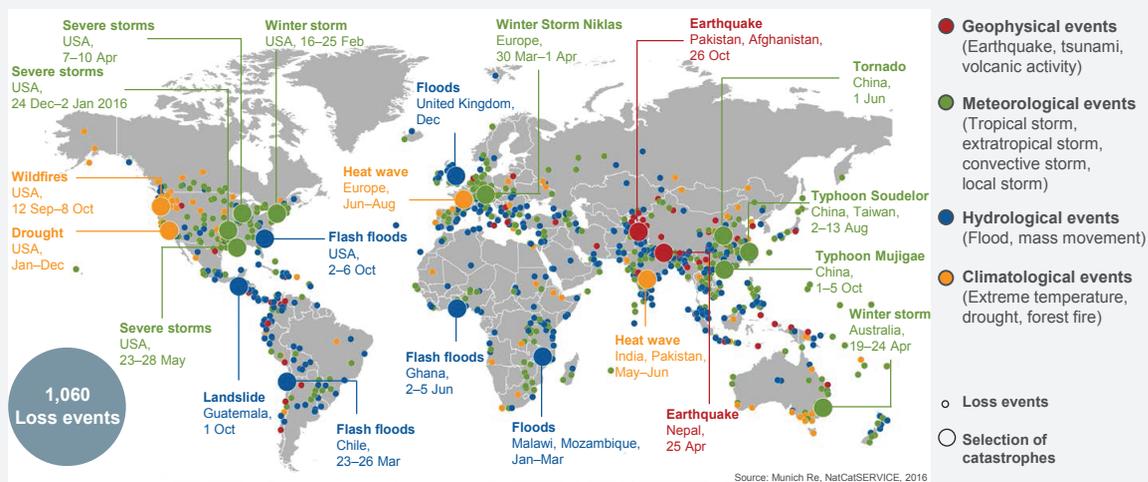
*“Your support is vital, this work will support UN goals, National Policy and transport commitments made at UN COP 22 in Marrakech, which call for strong, early resilience-building action.”*

## Background

NatCatSERVICE

### Natural loss events worldwide 2015 Geographical overview

Munich RE

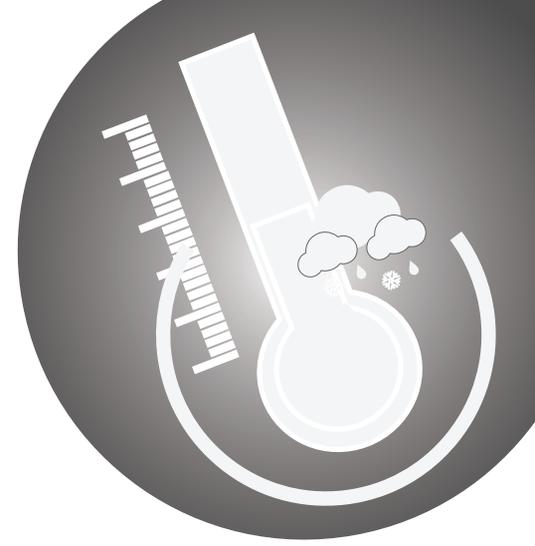


© 2016 Münchener Rückversicherungs-Gesellschaft, Geo Risks Research, NatCatSERVICE – As at February 2016

Economic losses from extreme weather have been rising decade by decade since the 1950s (data from Munich Re). The increased development of countries and regions around the world mean that individual events now impact more people and have greater effects than ever before (see 2015 natural catastrophes map), and these will continue to increase as more people live in vulnerable areas such as flood plains and coastal cities. In addition the number of events is increasing and thus natural catastrophes are becoming a concern in every region. Whatever the cause, it is clear that the impact of extreme weather will continue to grow and these impacts need to be addressed by all parts of society.

Cities and regions rely on modern rail transport both internally and as links to elsewhere and therefore the disruption caused by extreme weather is acutely felt both economically and socially. The failure of a critical piece of infrastructure can cost millions of dollars to replace in an emergency (See Box), the economic and reputational damage to the regions and companies involved cost millions more. The WEATHER project estimated that railway damage costs to Europe alone are an average of €300 million per year, with the largest part (€175 million) borne by operators, and that 80% of the damage is due to major floods.

Building a resilient railway is not just about concrete defences it is just as much about working practices, training and preparations. The MOWE-IT project summarised good practice for railway undertakings in the guidebook, dividing it into preparation (before), reaction (during) and recovery (after) phases against various different natural hazards. These practices need to be embedded into the daily operation of railways and building resilience needs to be something that undertakings consider in every aspect, from new construction through to renovation and renewal. In this way resilience will be built into the fabric of the railway just as safety is.



The remains of super typhoon Nepartak made landfall in China's eastern Fujian province July 2016, bringing high winds and heavy rain, and forcing the relocation of hundreds of thousands of people.

*At least 420,000 people in four cities including the capital Fuzhou have been urgently relocated, state news agency Xinhua reported. More than 300 high speed trains, almost 400 flights and nearly 5,000 buses have also been canceled.*

## How can UIC help?

Members face their own unique challenges with extreme weather and the task of adapting for the future can be daunting. The UIC RailAdapt project is designed to assist members by providing a strategic framework to help rail to adapt, with guidance on prioritising issues, locating existing knowledge and sourcing funding for their develop needs.

## The Big Ask...

To do all this we need your help to identify where railways have developed new ideas; to get your input on what the greatest needs are; and to verify that the framework meets your situation.

What we are looking for are the contact names of the people in your organisation who understand disruption and how to cope with it, and those who can make a difference. They might be regional asset engineers, local operations managers or very senior national directors, or those responsible for long term planning, economics and finance. These key personnel could help us by showing willingness to engage at different levels - corresponding with us, reviewing our documents and /or attending the events we are arranging. Regional workshops will bring us together and we would like to invite these people to join us to build a toolkit that is valuable to everyone. We are also seeking UIC members who can also consider hosting such a workshop?

We hope that you recognise the value of this to your railway and look forward to hearing from you.

### Contact

Nick Craven

Manager of Unit - Sustainable Development

[craven@uic.org](mailto:craven@uic.org)

