Adapting Rail Infrastructure to a Changing Climate – Public private collaboration

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UIC: The International Union of Railways
200 members worldwide website: www.uic.org
Railways actions – from 2010 to 2012

- In 2010, the UIC ARISCC project reported on integrated weather event and natural hazard management and CC Adaptation – see www.ariscc.org

- We found many good examples of weather warning, vulnerability mapping, and risk assessment, but few examples of future climate models being used

- In just two years the position has changed and in 2012 many more railways are developing detailed adaptation plans, using the latest climate model info.

Austria – weather warning system
Switzerland – rock fall prediction map
CLIMATE CHANGE FOR A SUSTAINABLE MOBILITY OPERATOR
CLIMAT D-RAIL PROJECT

First Studies

- Oct 2011: Identification of CC impacts, Vulnerability and adaptation schedule
- Jan 2012: Adaptation alternatives vs. impacts
- March 2012: Scenarios towards the future (social, economic, environment, mobility, …)

Operative
- June 2012: Plans for each division and global governance
Case Study – Network Rail

Proposed Programme

The proposed work will be sponsored by RSSB’s Research Programme – currently this is subject to approval.
Case Study – JR East

JR East’s strategy

Long-term Tendency

Climate Change

Possibly. But difficult to specify what, where, when, how often.

Natural Hazards

- Some disasters can be predicted. But we cannot predict accurately enough.
- It is important to take measures based on possible scenarios of damage.
Conclusions – Public Private Partnership

- The modern rail sector is a varied mix of private operators, public service franchise contracts, and nationally owned companies

- A key requirement is strong cooperation on climate forecasting:
  - Adaptation of infrastructure needs detailed information about impacts at the local level
  - Rolling stock has a long lifetime, so manufacturers need to know the operating conditions for 30, 40 even 50 years ahead

- The broader issue is making the railways resilient to climate change
  - Updated standards are needed for new infrastructure. A greater challenge is existing infrastructure which may be over 100 years old!
  - Railways are now working on detailed, costs and plans for adaptation, and additional investment may be required

Adaptation to Climate Change, OECD, 11 May 2012
Thank you for your kind attention

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