United Nations
Framework Convention on
Climate Change

Private Sector Initiative
actions on adaptation

Title of case study	**Tomorrow's railway and climate change adaptation**
Name of organization(s)	**Network Rail Infrastructure Limited**
Business sector	Transport and Logistics
Region(s) relevant to case study	☐ All regions ☐ Africa and the Arab States ☐ Asia and the Pacific ☐ Caribbean and Central America ☒ Europe ☐ Least Developed Countries ☐ North America ☐ Polar regions ☐ Small Island Developing States ☐ South America
Country(s) relevant to case study	United Kingdom
Adaptation sector(s) relevant to case study	☐ Business ☐ Education and training ☐ Food security, agriculture, forestry and fisheries ☐ Human health ☐ Oceans and coastal areas ☐ Science, assessment, monitoring and early warning ☐ Terrestrial ecosystems ☐ Tourism ☒ Transport, infrastructure and human settlements ☐ Water resources ☐ Other (please specify):
Adaptation activity	It is considered likely that the predicted incremental changes in the climate as well as increased frequency of extreme weather events will impact on the components of the rail system. Network Rail has managed a project, Tomorrow's railway and climate change adaptation (TRaCCA), funded by the Rail Safety and Standards Board (RSSB) that assesses a

	range of likely climate impacts on railway infrastructure and operations across the whole of Great Britain's railway network. TRaCCA has assessed the risk of heat and solar energy, precipitation, wind and sea level rise on railway assets and operations using a methodology that combines assessment of climate hazards and the vulnerability of railway infrastructure to them. As a result the following major impacts have been identified: - An increase in the number of days required to monitor track buckling and an increase in the frequency of speed restrictions as a result; - A reduction in productivity for maintenance workers, due to heat stress; - A small projected increase in sag of overhead line equipment; - An increase of passenger heat stress; - Increased river and localised flooding leading to scour and flooding of bridges, embankment scour, culvert washout, depot flooding and track and lineside equipment failure; - Sea level rises and storm surge increases requiring improved railway flood defences.
Cost-benefit	TRaCCA has a budget of approximately £750,000 and is being used to help identify policy changes that will reduce the potential for billions of pounds of losses in terms of railway performance and damage that would be incurred without any adaptation. TRaCCA has already led to changes in Drainage and Bridge Specifications to cater for climate change impacts for these 'long life' assets.
Click for the TRaCCA Phase 1 Report Click for the National Rail Adaptation Report for Government Click for further information on the RSSB	

Disclaimer: These business cases have been cited to raise awareness about the engagement of the private sector in climate change adaptation. The information in the business cases has been provided either directly by the organization or obtained from a public source. The UNFCCC secretariat has not verified the information and takes no responsibility for it. Users are therefore advised to verify the information before they take any action relying on the information provided in the business cases.

Extreme flooding - Summer 2007 at Adlestrop near Moreton-in-Marsh
Source: National Rail Adaptation Report for Government (link above)

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