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Extreme weather impacts on European networks of transport

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The EWENT project addresses the European Union (EU) policies and strategies related to climate change, with a particular focus on extreme weather impacts on the EU transportation system. This project is funded by the Seventh Framework Programme (Transports, call ID FPT7-TPT-2008-RTD-1).

EWENT Work Package 1 (WP1) focuses particularly on identification and definition of extreme weather events within the European transport system. In the context of the EWENT project, the following definition for extreme weather events related to transport systems was used: “Extreme events are generally rare events. The events cause the exceeding of maximum values and/or pre-existing (measured) high (low) thresholds of certain weather parameters and generate impacts that are harmful to any part of the transport system (infrastructures, operations, vehicles, passengers or cargo)”.

Weather has major impacts on transportation. EWENT WP1 used three different approaches to assess the impacts and consequences extreme weather phenomena cause to the transport system. Firstly, an extensive traditional review of the professional literature has been carried out. Secondly, media mining has been done in order to obtain more empirical data and assess which transport modes in different parts of Europe seem to be most affected. Thirdly, a compilation of specific case studies on past extreme incidents has been prepared, helping to assess the specific consequences of certain phenomena.

EWENT WP1 introduces a review of extreme weather phenomena and identifies their impacts and consequences on European transport system. All modes of transport are covered. Critical threshold values for most relevant weather phenomena that affect different transport modes have been established. The related impacts and consequences result in deterioration in the service level of transportation system. A dozen different impact mechanisms have been charted.

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