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# EWENT

## EWENT Work Package 2: Challenges

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## EWENT WP 2

### Probabilities: Estimation of probabilities of extreme weather in changing climate and different scenarios

→ To develop a first comprehensive climatology of extreme weather events relevant to transport system to support socio-economic and technical research and decision making

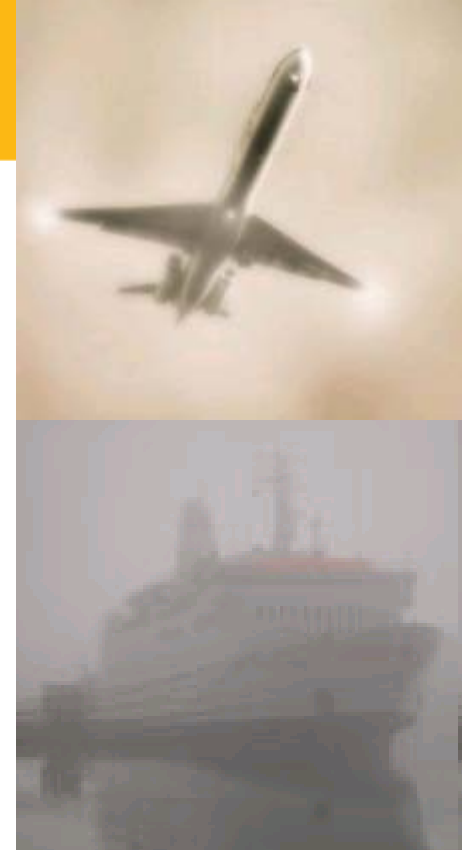
→ To estimate the changes in extreme weather event intensities and frequencies of occurrence in Europe from 1950 until 2020 and beyond (the 2050s)



## POOR VISIBILITY (fog ,sandstorms etc.) AFFECTS ALL TRANSPORT MODES

Poor visibility due to fog increases accident risk, causes delays and cancellations

- Observational data for airports, but how representative for road, rail and inland water transport
- Fog data for marine areas?
- Data for sandstorms?
- How do climate models perform?
- Can we construct scenarios?





## Points of discussion: OBSERVED DATA

- Gridded data (ERA, E-OBS) reduces point-value extremes
  - How severely? (area reduction factor)
  - How large are the spatial/temporal differences?
- ESWD for small scale extremes (thunderstorms, tornadoes, downbursts, hail, etc.)
  - Good coverage over many regions but not all Europe
  - Temporal trends?
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## Points of discussion: CLIMATE MODEL SIMULATIONS

- Consistency vs. full use of information on climate change
  - Calculation of scenarios from a fixed set of RCM simulations
  - but, how to utilise other relevant work (e.g. ECCONET)
- Description of uncertainties, criteria for development of ...
  - **Quantative scenarios**
  - **Qualitative scenarios / Sensitivity studies**