Risk resilient adaptation

The private sector

Understanding the Climate Risk

Factors influencing the future loss situation of Germany's insurance industry

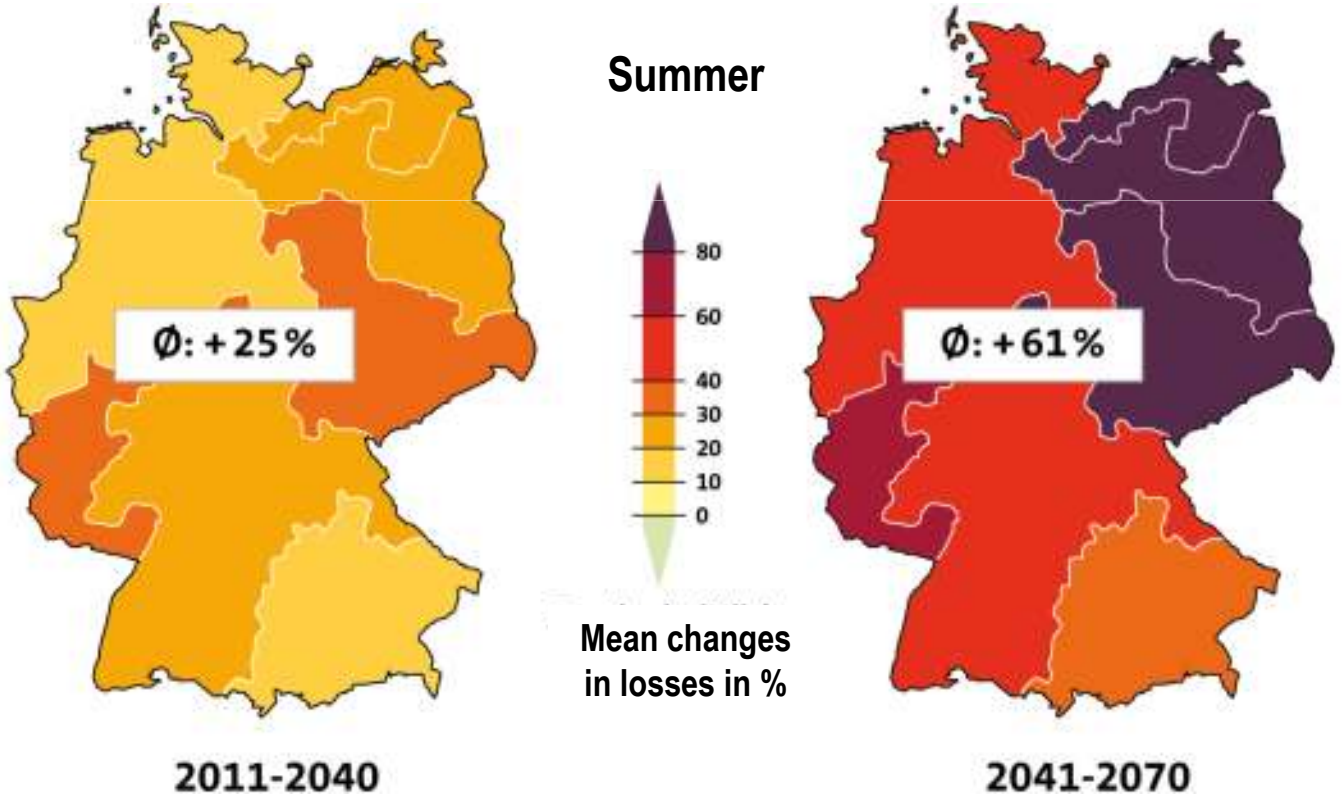
Oliver Hauner
German Insurance Association (GDV)

GDV
DIE DEUTSCHEN VERSICHERER

2010: Loss scenarios

PIK: statistical loss model for storm/hail

- Spatial distribution of loss ratios and their changes in the A1B scenario when compared to 1984-2008; mean values for a 30-year time period

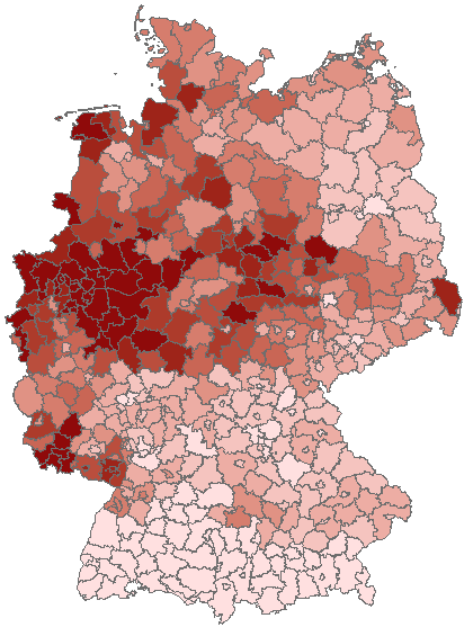


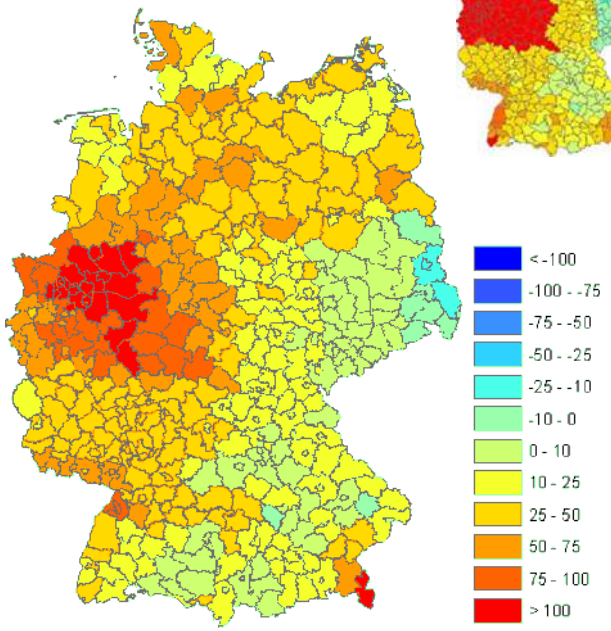
2010: Loss scenarios

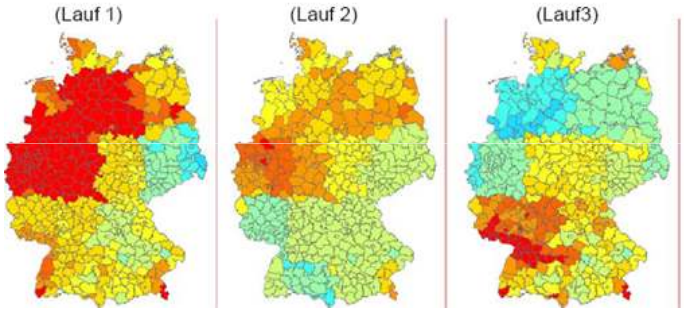
Freie Universität Berlin

FU Berlin: dynamic storm loss model

- Statements of future changes in winter storm losses are now possible
- Relative changes in 2071-2100 under the A1B scenario when compared to simulated loss ratio 1961-2000
- Changes compared to today: by up to 100 %







global climate model ECHAM5

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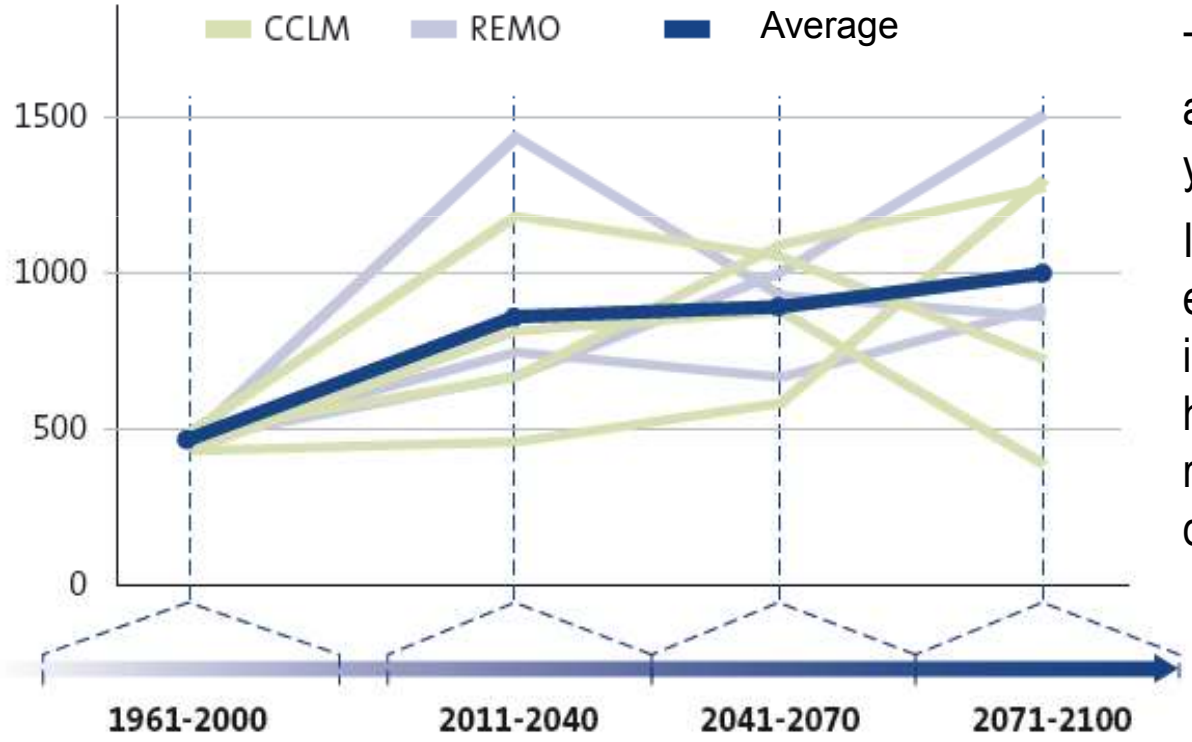
2010: Loss scenarios

PIK: flood loss model

- Development of a long-term loss level: hydrological modelling in different scenarios based on CCLM bzw. REMO climate data. Data in m €



Today we calculate with an average loss of 500 m € per year caused by floods.

In the future this loss expectation should increase considerably. But here are considerable ranges of potential developments possible too.

2010 Conclusions

Impacts of an A1B-scenario due to the loss situation of the Geman insurance industry

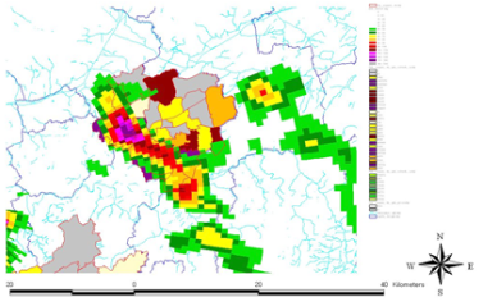
- Winter storms
  - Shortening of the return periods: A 50-year events could turn into a 10-year event in the future
  - Intensification of individual extreme storms at otherwise relatively unmodified storm events
  - Storm losses could increase by more than 50 % until 2100
- Floods
  - Heavy rain, floods and flash floods will increase
  - A 50-year event could turn into a 25-year event in the future
  - Flood losses can be twice or three times as much until 2100

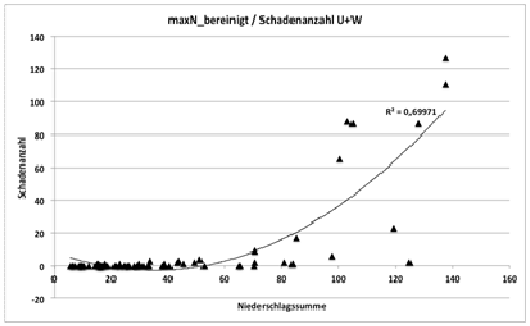
2011 – 2012: Broadening the approach

Feasibility study „Torrential Rain 2050“

with the German Climate Service Center (Helmholtz-Center Geesthacht)

- Is there a correlation between measured meteorological data on precipitation and torrential-rain-losses of the insurance industry?
- Do we gather enough information by the meteorological weather stations or do we need another technology to monitor the events (e.g. radar)?
- Is now the time for a multi-year main study on torrential rain and losses?





CSC Climate Service Center Germany

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2011 – 2012: Broadening the approach

Study “Storm surge Germany – North- and Baltic Sea coast”

with the AON Benfield

- Which storm surge scenarios can we expect now and in the future?
- Will a catastrophe like the 1962 storm surge in Hamburg happen again in the near future?
- Is there an economically feasible way to insure the peril “storm surge” in Germany?

AON BENFIELD

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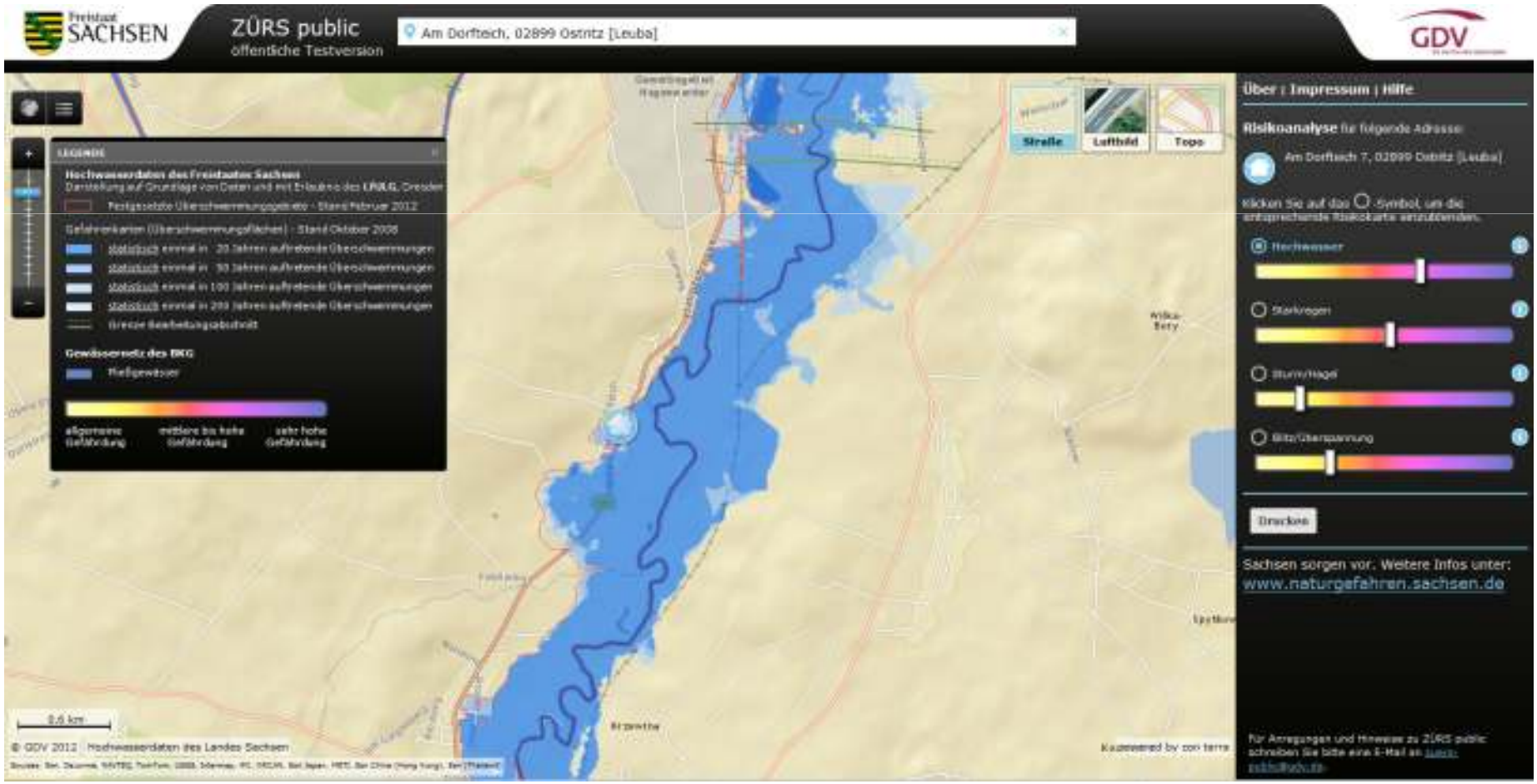
2011 – 2012: Broadening the approach

Freistaat Sachsen
Staatsministerium für Umwelt und Landwirtschaft

Public NatCat prototype GIS-platform “ZÜRS Public”

with the government of Saxony



2011 – 2012: Broadening the approach

Study “Stormy Times – Climate Change and Natural Disasters”

with DKKV and Dialog Basis

- No “number crunching”…
- No “extreme value statistics”…
- No “loss predictions”…

…but Society, Politics, Adaptation, Mitigation…

…and recommendations for many stakeholders…

Stormy Times…

DKKV
Deutsches Komitee Katastrophenvorsorge e.V.

DIALOG BASIS

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Thank you for your attention!

Oliver André Hauner

Head of Property Insurance / Engineering / Loss Prevention / Statistics

German Insurance Association

Wilhelmstraße 43 / 43G, 10117 Berlin, Germany

phone +49 / 30 / 2020 – 5350

fax +49 / 30 / 2020 – 6350

email o.hauner@gdv.de

web www.gdv.de

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