GEFÖRDERT VOM
Bundesministerium für Bildung und Forschung

Universität Potsdam

DKKV
Deutsches Komitee Katastrophenvorsorge e.V.
German Committee for Disaster Reduction
within the International Strategy for Disaster Reduction (ISDR)

United Nations/Germany Expert Meeting on Space Technologies for Flood and Drought Risk Reduction

Bonn, Germany, 5-6 June 2014

Assessment of coping capacities relating to the 2013 floods in Germany

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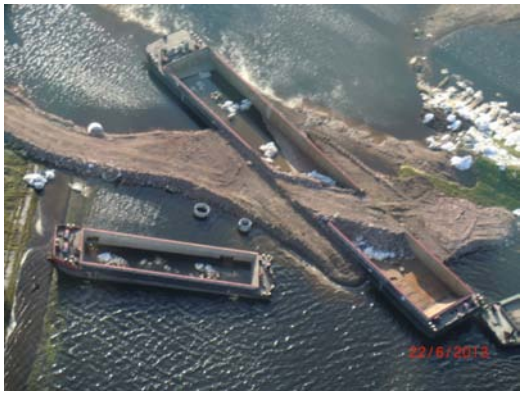

Overview - Project Data

Source: Administrative District of Stendal

- Duration: Oct. 2013 until Sept. 2014
- Head of Project: Prof. Dr. Annegret Thieken, University of Potsdam
- Part 1: Potential and actual damage reduction through prevention and early warning
- Part 2: Coping Capacity of German federal states and aid agencies in comparison to the flood of 2002

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Flood in Germany 2013…

Source: Berufsfeuerwehr Bremen

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…water as far as the eye can reach…

Source: Bundespolizei Flugdienst

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…at least not alone…

Source: Berufsfeuerwehr Bremen

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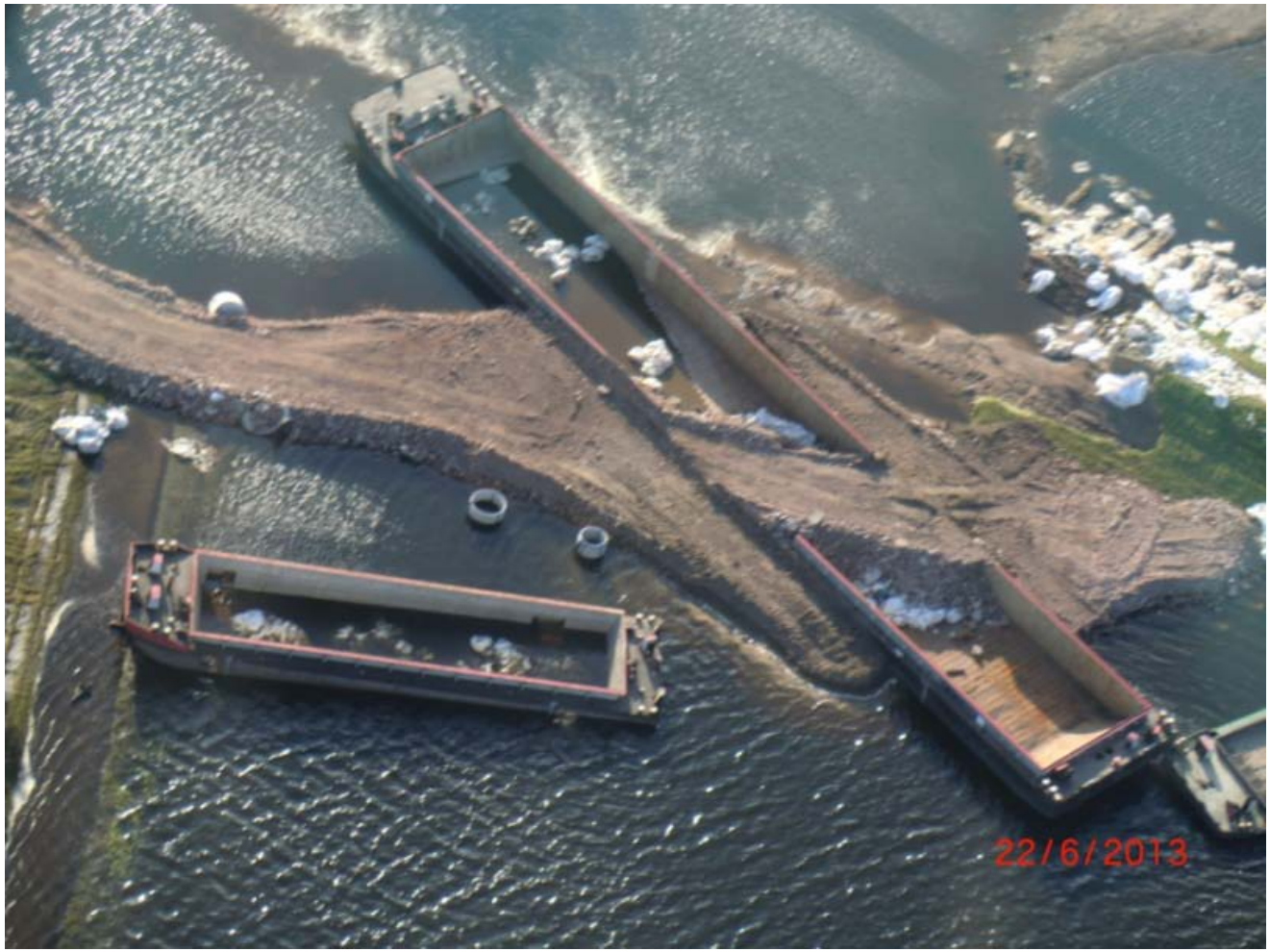
…and imaginative!



Source: Administrative District of Stendal

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Methodology

- Reconstruction of Flood Event
- Questionnaire
- Expert Interviews
- Mission Reports
- Workshops

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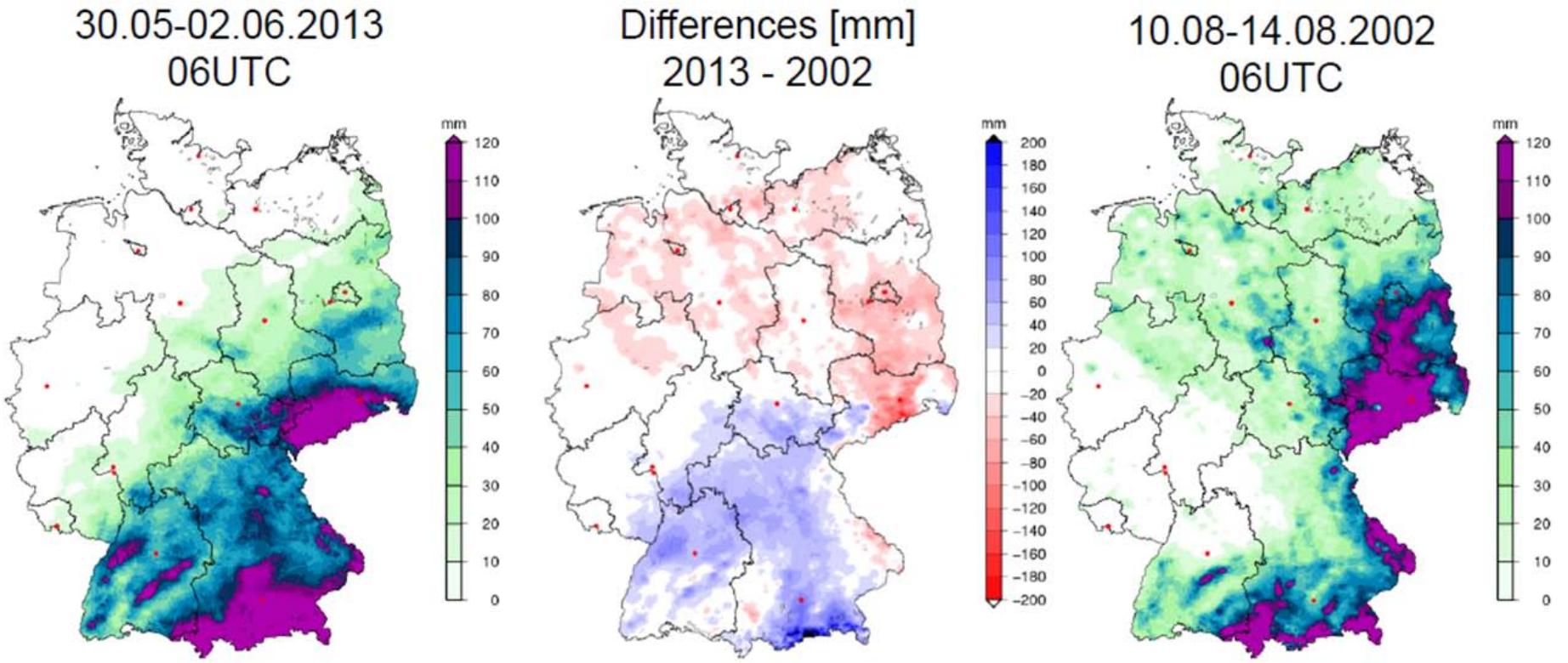
…but why…? Precipitation Events Causing Floods:



Source: CEDIM Forensic Disaster Analysis Group (FDA): Juni-Hochwasser 2013 in Mitteleuropa - Fokus Deutschland. Bericht 1 – Update 2 (20.06.2013)

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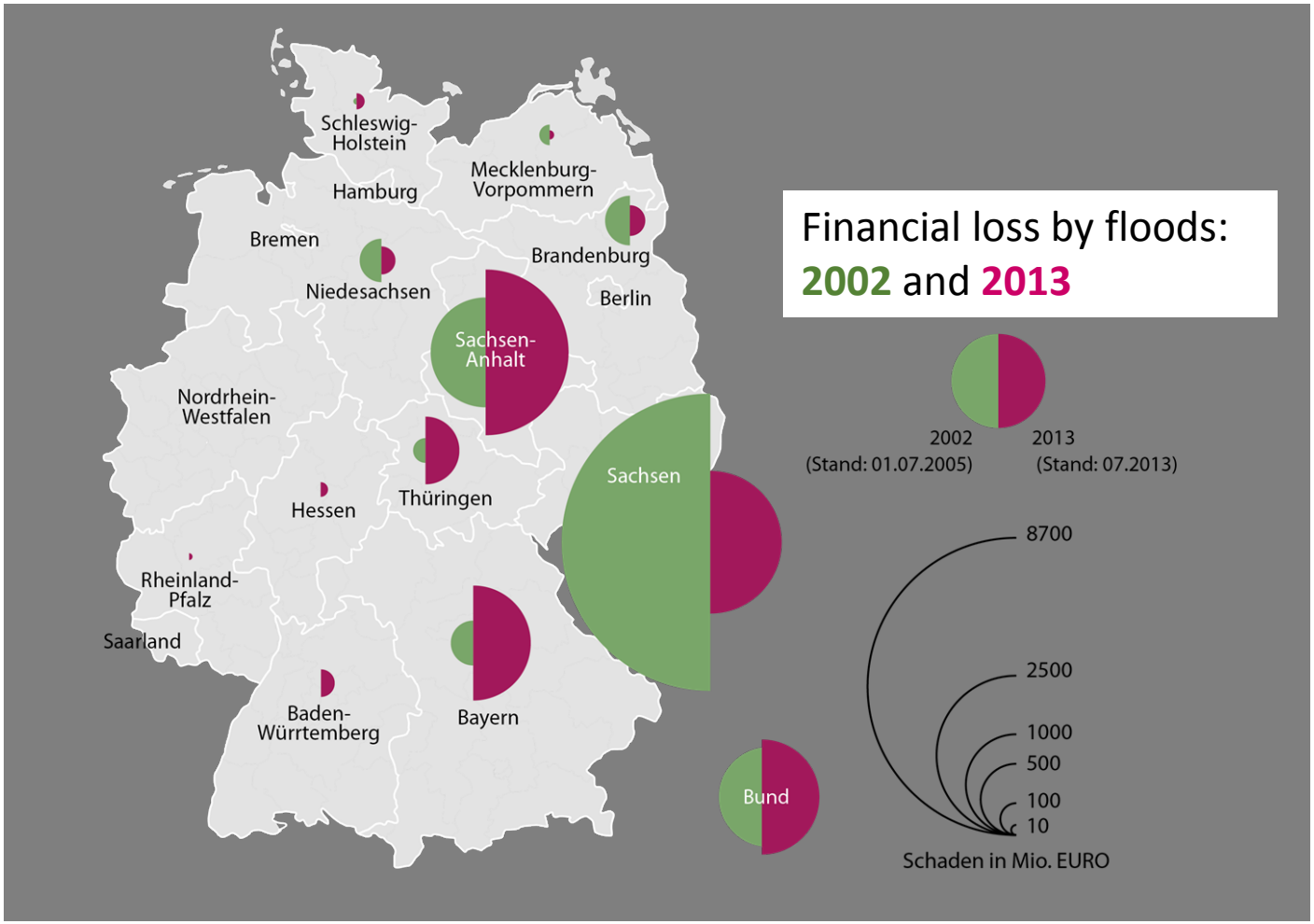
Total damage compared



Source: edited to own draft of Annegret Thieken

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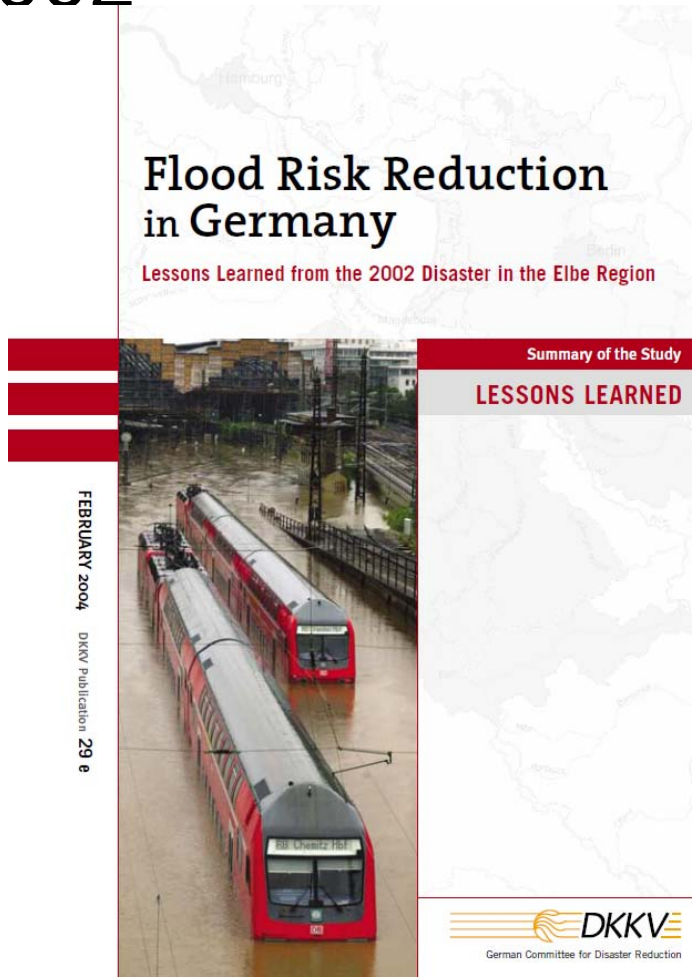
DKKV 2003 – Aftermath of 2002

- Extensive Case Study Analysis
- Identification of Deficits
- …Recommendations

- Revisions of a Statue
  - Flood Protection
  - EU-Flood Action Programme

- Research Programme
  - Horizon 2020



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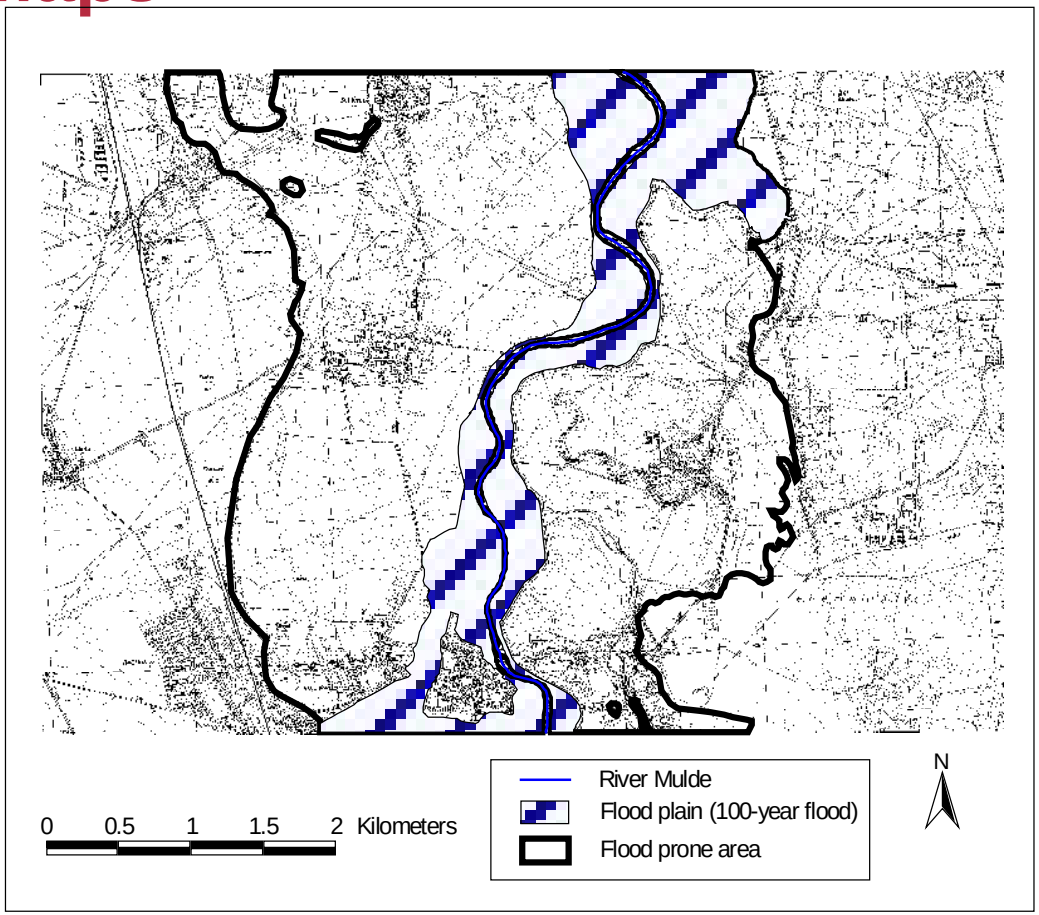
Flood Area Management: Risk Maps

State of the Art 2002:

- Few Szenarios ("HQ100")
- Data not accessible
- **Good One**:

  IKSR-Rheinatlas

http://www.rheinatlas.de/



Quelle: Petrow et al. (2006). Environmental Management 38: 717-732

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EU-Flood Action Programme (2007/60/EC)

Goal:

Framework for assessment and management of floods in order to limitate negative aspects of human health, environment, cultural heritage and economic activities

Progress:

- 22 Dec. 2011: Identification of areas with high risk potential
- 22 Dec. 2013: Risk and Hazard Maps
- 22 Dec. 2015: Flood Management Plans

- **Update every 6 years**

Transfer to national law: **Federal Water Act**

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Map Requirements

Probability of Occurrence

- Flood with low probability (extreme)
- Flood with moderate probability (HQ100)
- Flood with high probability (HQ10/20)

Specific Data

- Flood plain
- Water depth
- Velocity

Potential negative results shown on risk maps

Sebastian Pisi: Assessment of Coping Capacities relating to the 2013 Floods in Germany

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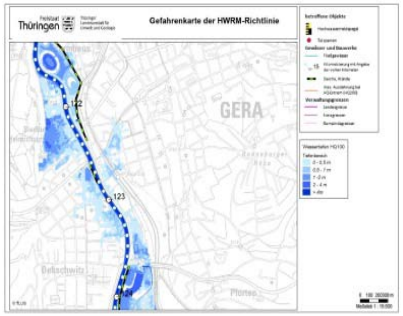
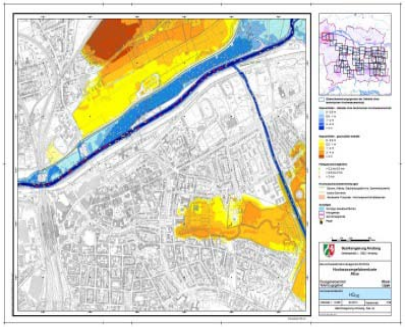
Analysis of Current Hazard Maps

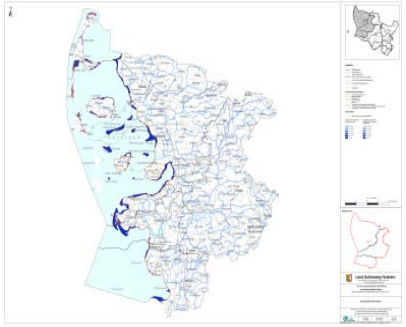
- Hazard Maps in all federal states for HQ100 and HQ200
- No consistency in representaion of frequent floods
- Variety of research options for WebGIS applications – or not



Thüringen

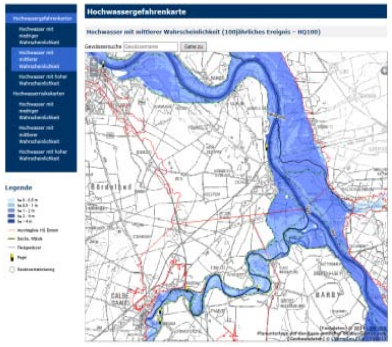


Nordrhein-Westfalen

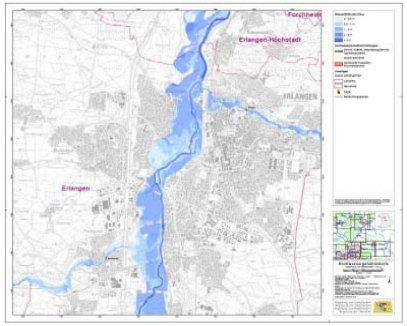


Schleswig-Holstein

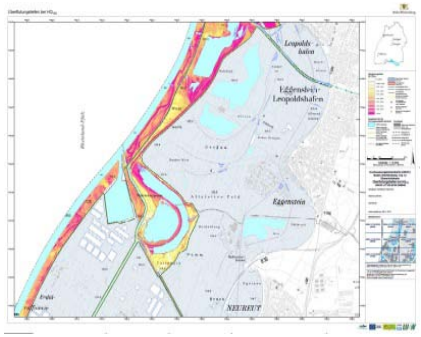
Sachsen



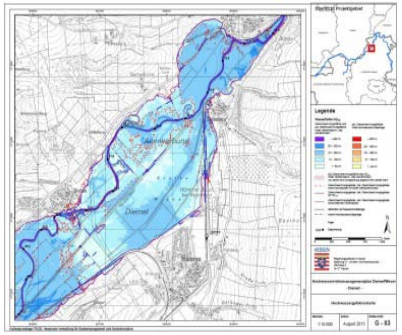
Sachsen-Anhalt



Bayern



Baden-Württemberg



Hessen

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Key Recommendations – end user needs

- Public hazard maps in all federal states available
- Comprehensibility for private households to be explored
- Comprehensive and consistent structure of data required
- Remote sensing and WebGIS-applications for public purposes to be promoted
- Biggest threat in emergency is uncertainty
- Importance of early warning systems to be emphasised
- Reduction of potential damage has top priority
- Transnational cooperation
- Encourage sensitivity

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Thank you very much!

Don‘t hesitate to contact me:

Sebastian Pisi, German Comitee for Disaster Reduction

pisi@dkkv.org, +49-228-6191289