

German experiences in the provision of Climate Services

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Deutscher Wetterdienst,





Overview

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Overview

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Examples

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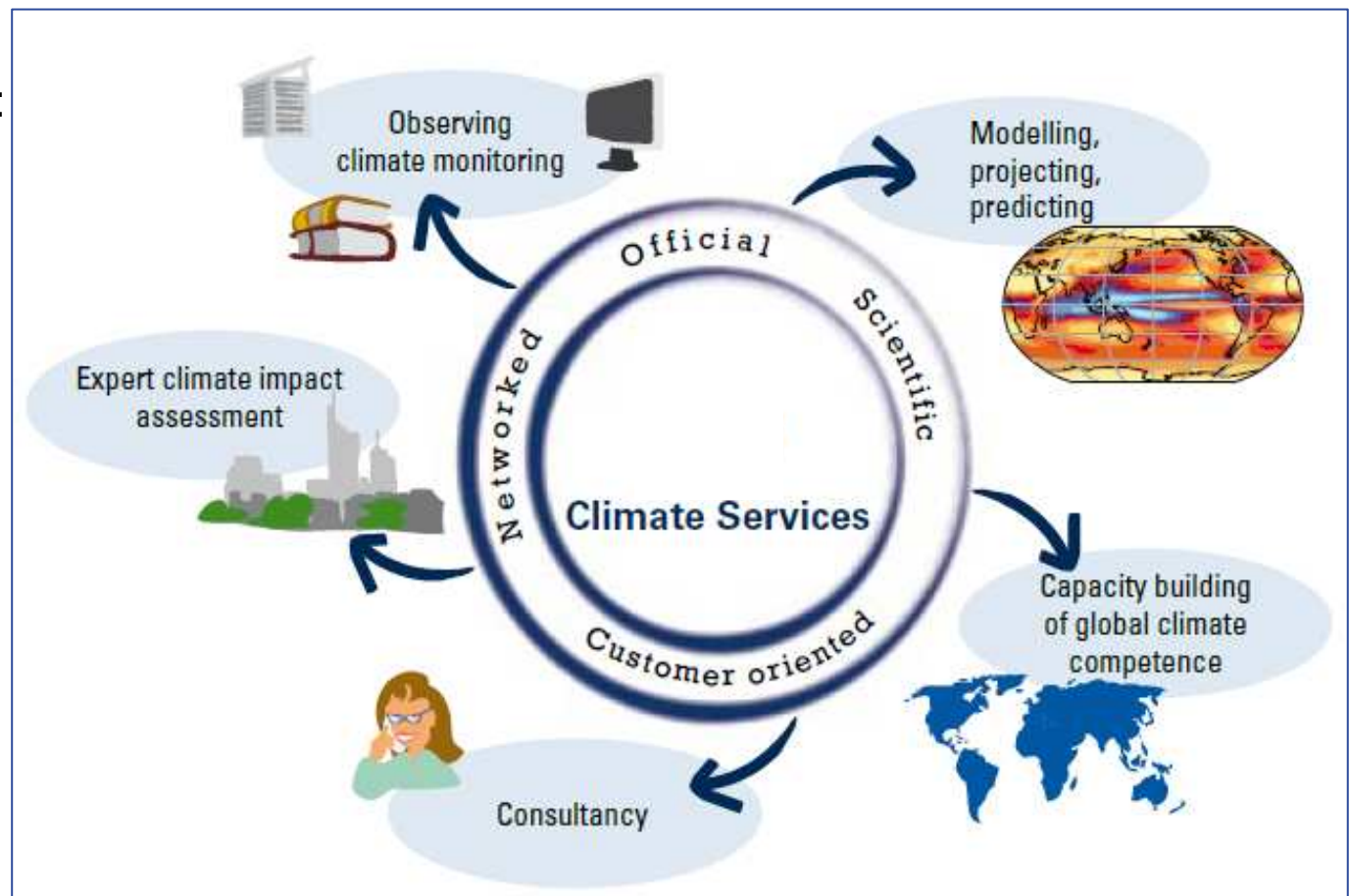
The German Heat-health Warning System

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Other climate services of the DWD

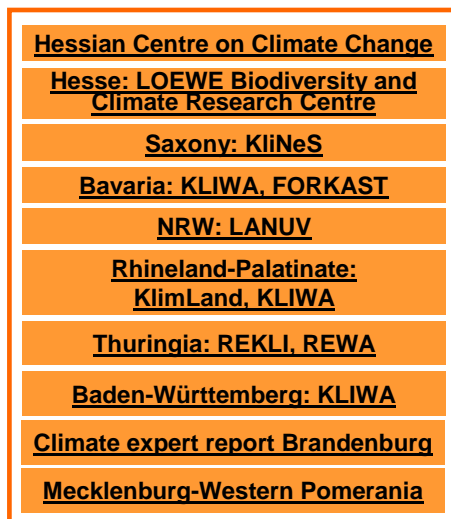
Overview

- Definition „Climate Service“:
- **Climate information prepared and delivered to meet a user's needs**
- Report of the high-level Taskforce for the Global Framework for Climate Services (WMO-No. 1085)

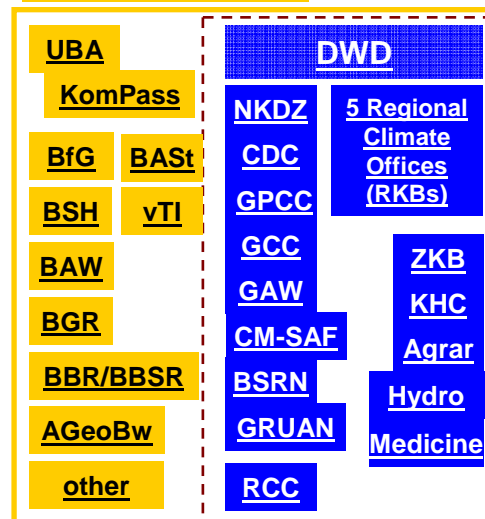


The German Climate Research Landscape

German states (examples)

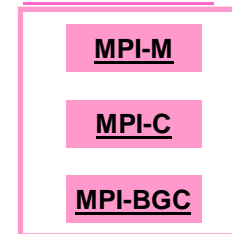


Federal authorities

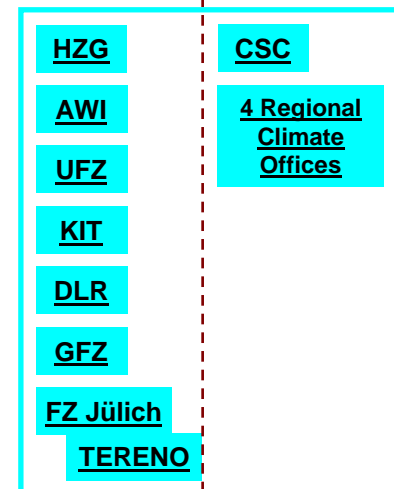


Source: DWD, 2011

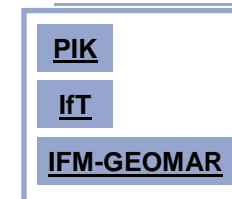
Max Planck Association



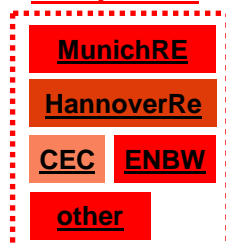
Helmholtz Association



Leibniz Association



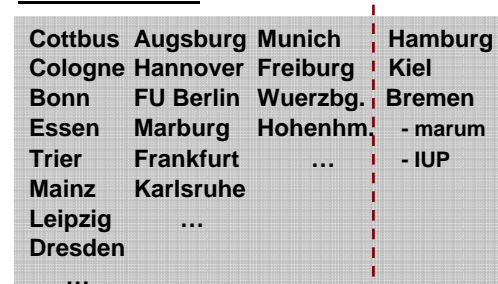
Business companies



Co-operation facilities



Universities



DKK e.V. (and other members)





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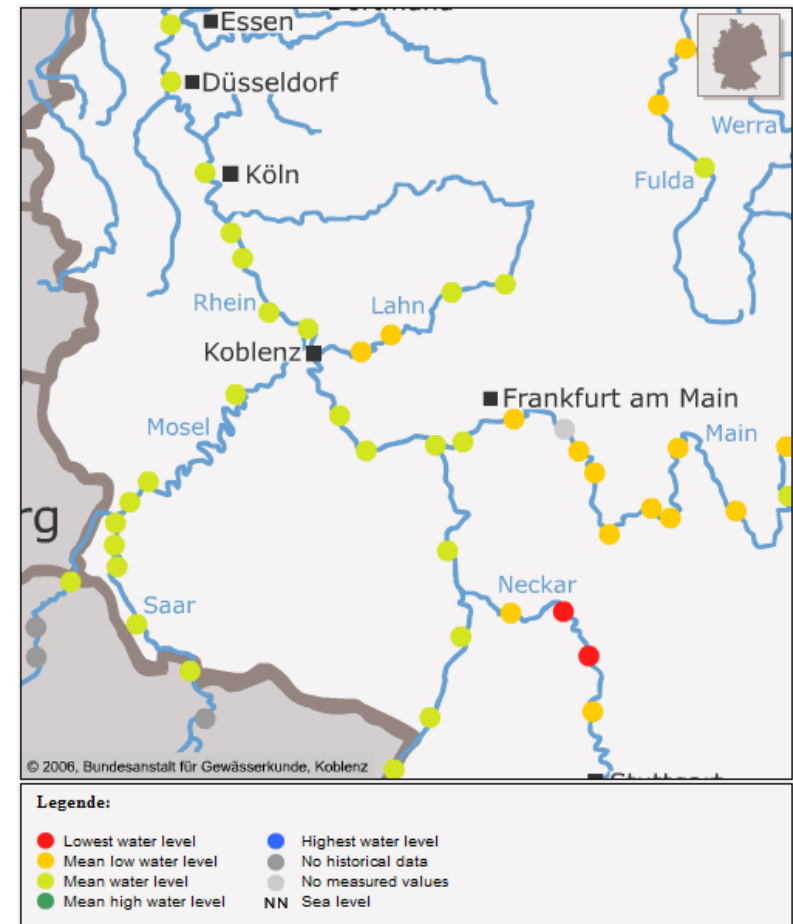
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Other climate services
of the DWD

Examples –Hydrology (1/3)

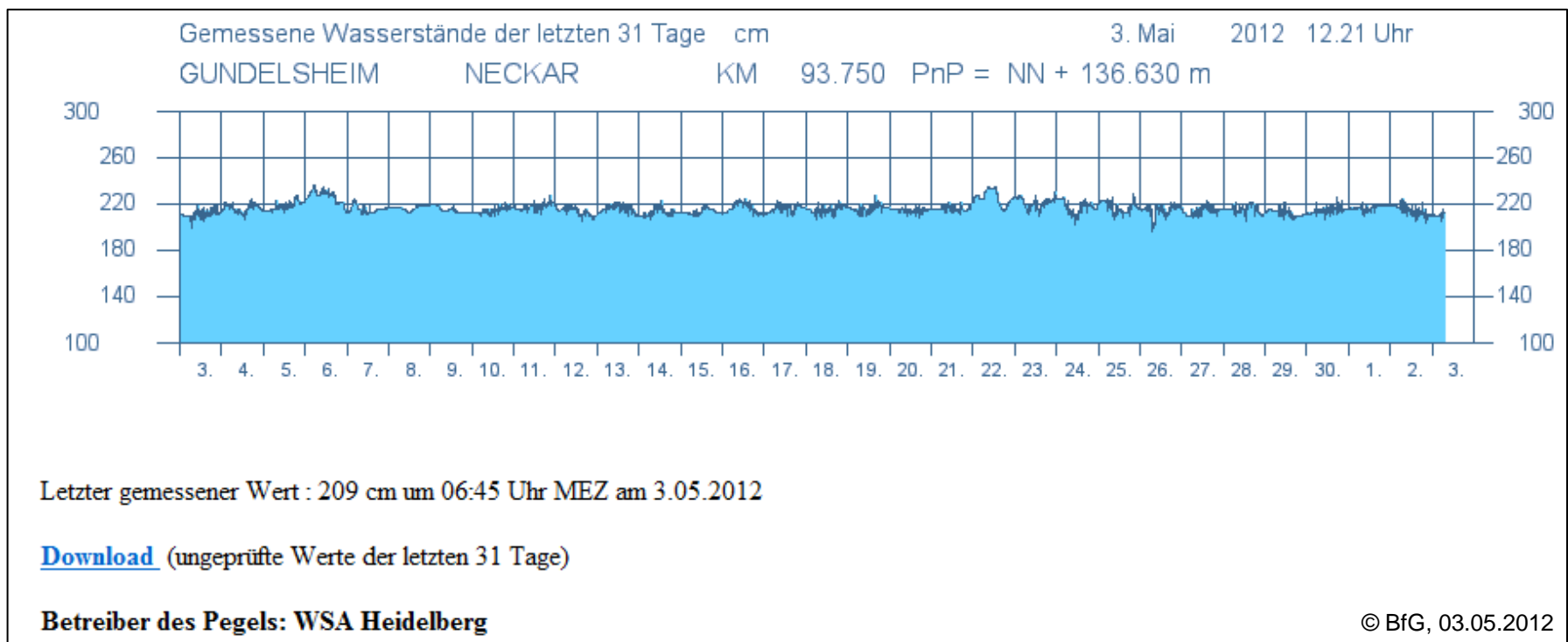
- **Federal Institute of Hydrology (BfG)**
- Water levels – data from selected gauging stations on German federal waterways
 - service for the general public
 - for commercial or private use
 - data have not been plausibility-checked.



Examples – Hydrology (2/3)

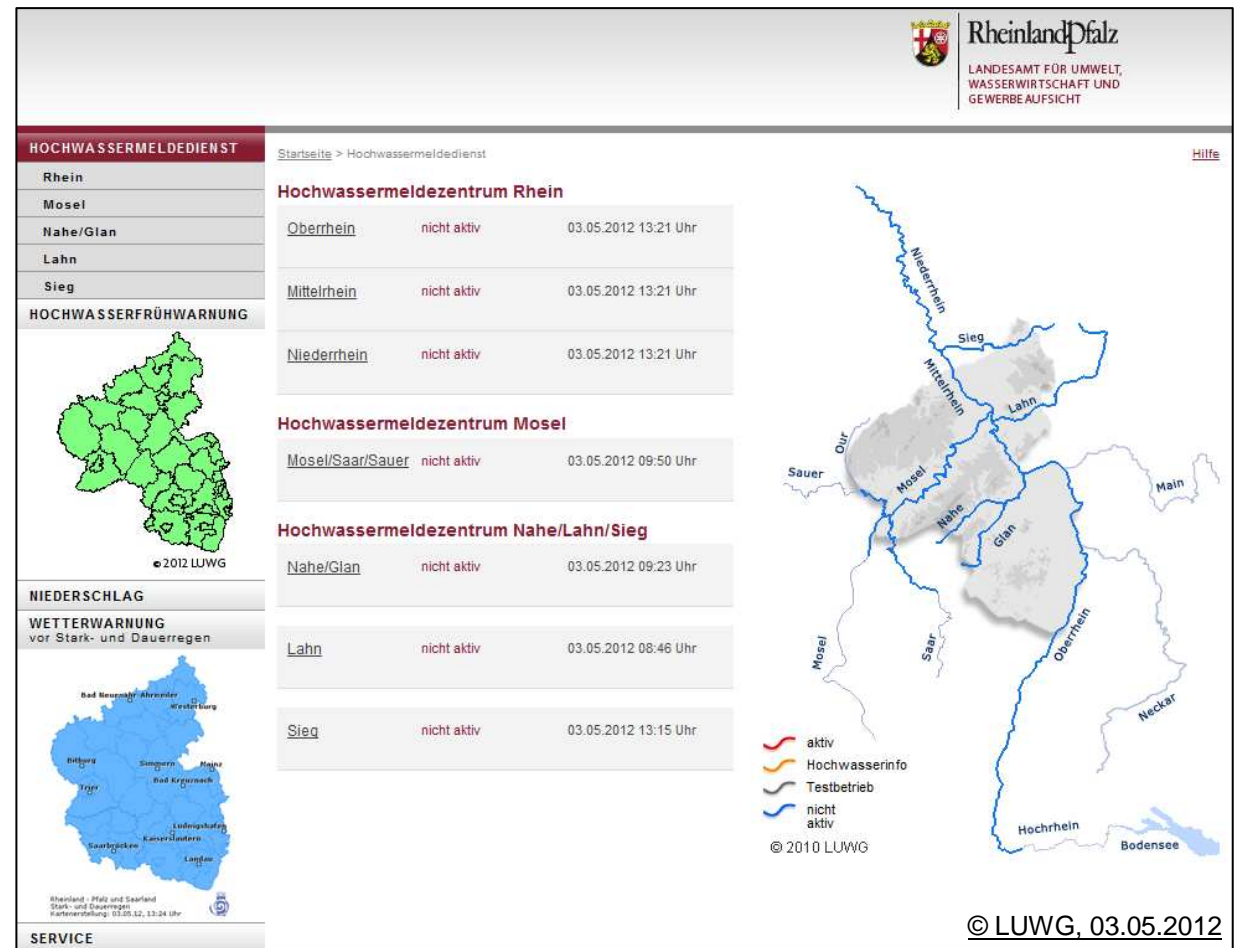
→ Federal Institute of Hydrology (BfG)

→ Observed water levels of past 31 days, un-checked data



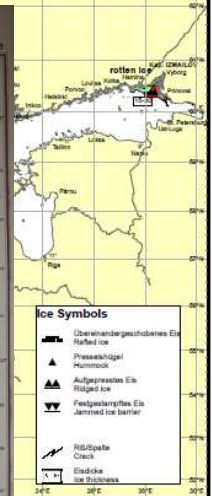
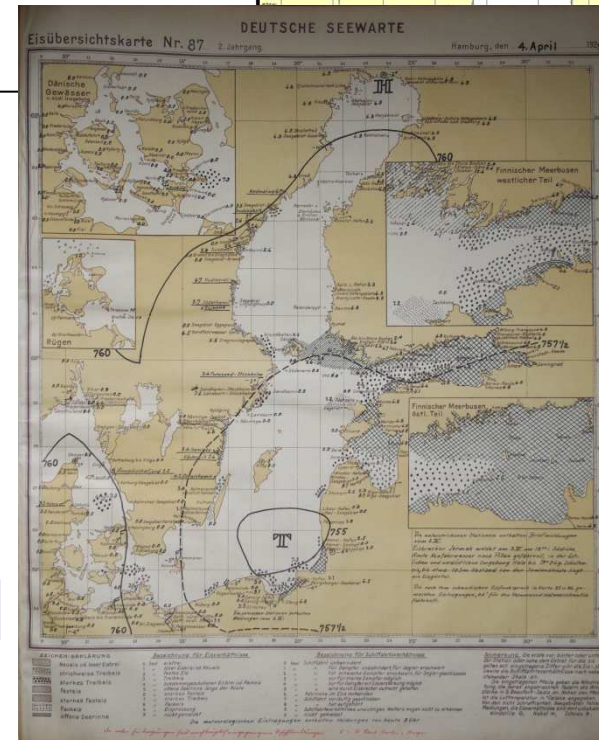
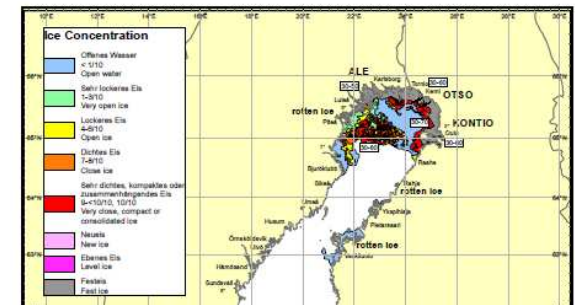
Examples – Hydrology (3/3)

- Each federal state is responsible for issuing hydrological warnings



Examples – Ocean (1/2)

- Federal Maritime and Hydrographic Agency (BSH)
- Ice Report for North and Baltic Sea
- Archive of ice maps since 25.10.1927



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Übersicht

Das Eis auf See in der Bottenvik treibt langsam SO-wärts.

Overview

The ice at sea in the Bay of Bothnia is slowly drifting southeastwards.



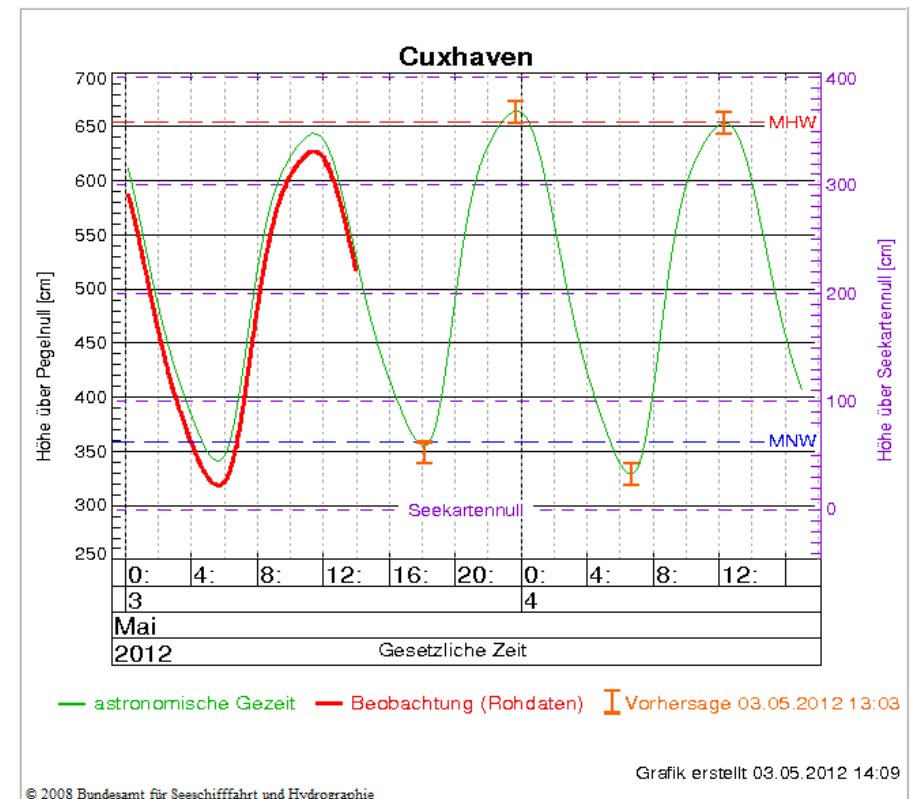
Examples – Ocean (2/2)

- Federal Maritime and Hydrographic Agency (BSH)
 - Storm surge forecasts with climatological information included

Sturmflutwarndienst

gemäß Seeaufgabengesetz § 1 Abs. 9, zertifiziert nach DIN EN ISO 9001

Aktueller Pegelstand und Vorhersage



Es ist möglich, dass auf Grund technischer Probleme die Pegelstände nicht aktuell sind. Die Messwerte werden dem Bundesamt für Seeschifffahrt und Hydrographie (BSH) freundlicherweise von der Wasser- und Schifffahrtsdirektion zur Verfügung gestellt. Es handelt sich um ungeprüfte Rohdaten. Das BSH übernimmt für die hier wiedergegebenen Informationen keine Gewähr!

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Examples - Environment

→ Federal Environment Agency (UBA)

- Competence Centre on Climate Impact and Adaptation (KomPass)
 - coordination of national adaptation strategy
- German Emissions Trading Authority (DEHSt):
the competent national authority to implement
the market instruments of the Kyoto Protocol





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**The German Heat-health
Warning System**

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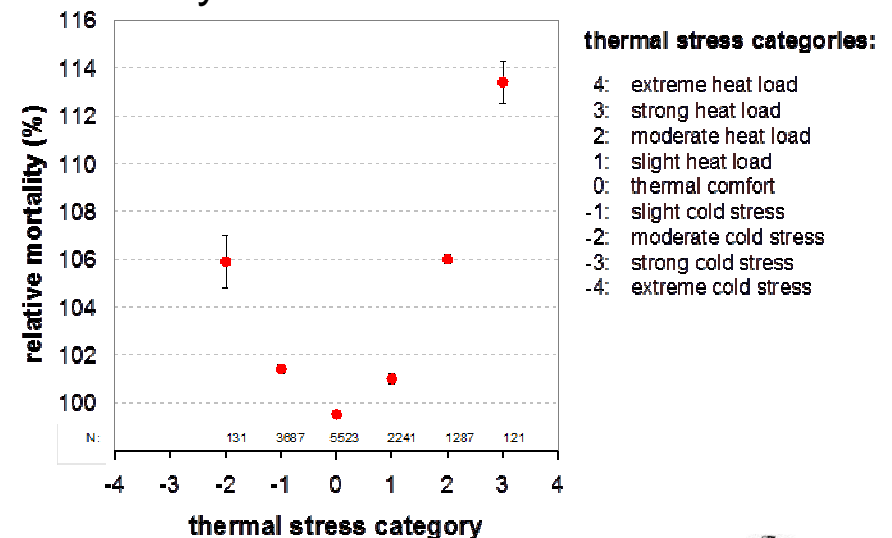
Other climate services
of the DWD

The German Heat-health Warning System (HHWS)

→ Deutscher Wetterdienst (DWD)

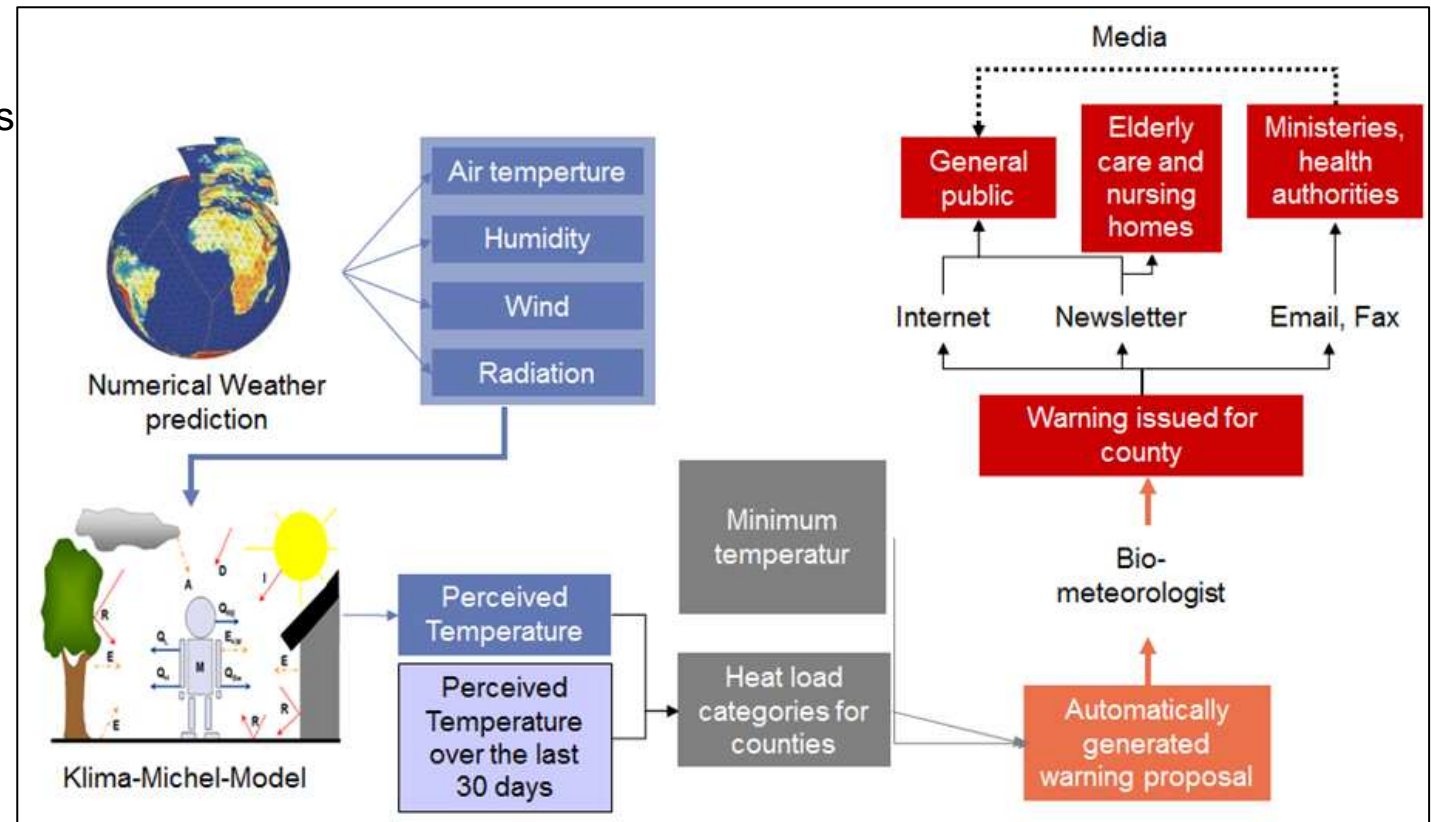
→ Scientific Challenge

- Identify a heat load indicator that is related to human health impacts,
- and a threshold to trigger intervention actions
- Link meteorological statistics with the mortality data
- Estimate excess mortality as a function of the heat load
- Avoid warning-fatigue due to too frequent warnings



HHWS (2)

- **Operational Issues**
- Warnings issued for all rural and urban districts (295 + 110) across Germany during warm season (~May to September)
- 6 different altitude categories
- following the general warning strategy of DWD
- also accessible via the multi-lingual Meteoalarm platform



HHWS (3)

→ Administrative Challenges

- Activities of the DWD are based on the national Law on the Deutscher Wetterdienst
- Duties - §4(1)1: “the provision of meteorological services for the general public or for individual customers and users, especially in the fields of ..., public health, ...”
- Remuneration - §6(2): “The Deutscher Wetterdienst shall charge a remuneration for the provision of its services.”
- The aim was to provide the HHWS free of charge
- HHWS is now an essential product and part of DWD’s Global Data Set (GDS)

HHWS (4)

→ Administrative Challenges (cont.)

- Federal structure of Germany
 - taking action is the responsibility of the Laender
 - Public health intervention has to be triggered by the health system of the Laender
 - Negotiate cooperation agreements with all 16 Laender individually
- DWD can only influence the effectiveness of the meteorological component of the HHWS
- Distribution of the warnings through DWD's newsletter system
- A few interfaces in the Laender, who are responsible for further distribution, receive the warnings still via fax



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**Other climate services
of the DWD**



Other climate services of the DWD

- Health care – pollen monitoring and warning
- Urban planning for liveable cities
- Hydrometeorological advice – indispensable for water management and protection
- Agrometeorological advice – the basis for environmentally compatible agriculture
- Disaster control and protection
- Renewable energies
- Advices to various economic sectors



**Thank you very much
for your attention**

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