

For our environment

Umwelt
Bundesamt 

KomPass 
Kompetenzzentrum
Klimafolgen und Anpassung

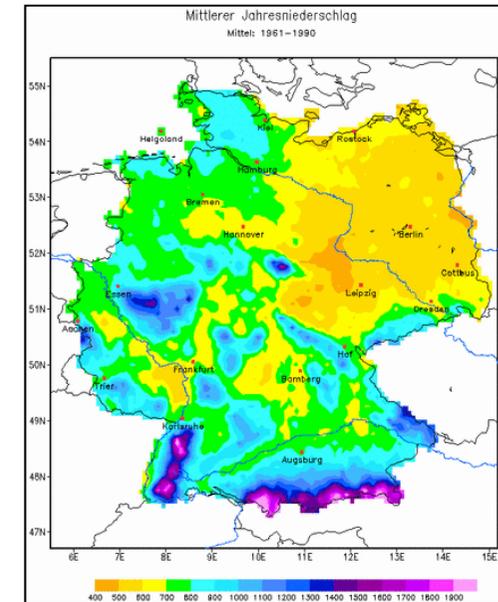
NAP Expo 2014

Experience and lessons in integration from the German Adaptation Strategy

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Projected Climate Change in Germany

- Temperatures rise ↑
2021-50: 0.5-2.5°
2071-2100: 1,5 -4.5°
- Precipitation: decrease in summer ↓
(20% in certain areas up to 40%)
- Precipitation: Increase in winter ↑
(up to 40%, in certain areas even up to 70%)
- Extreme events likely to occur more frequent and on a larger scale
(flooding, extreme rainfall, heat wave)



IPCC A1B / DAS 2008 / DWD

Particularly Vulnerable Regions

- Central eastern Germany, north-east German plain, south-east German basin:
increasingly affected by reduced water supply
- Hill country on both sides of the Rhine:
increase in precipitation (agriculture, flood control)
- Rhine rift valley:
more frequent heat waves, flooding
- Alpine regions :
retreating glaciers and snow cover (water, tourism)
- Coastal areas:
Increasing risk by SLR and changing storm climate



DAS 2008 / UBA

National Adaptation in Germany

Documents

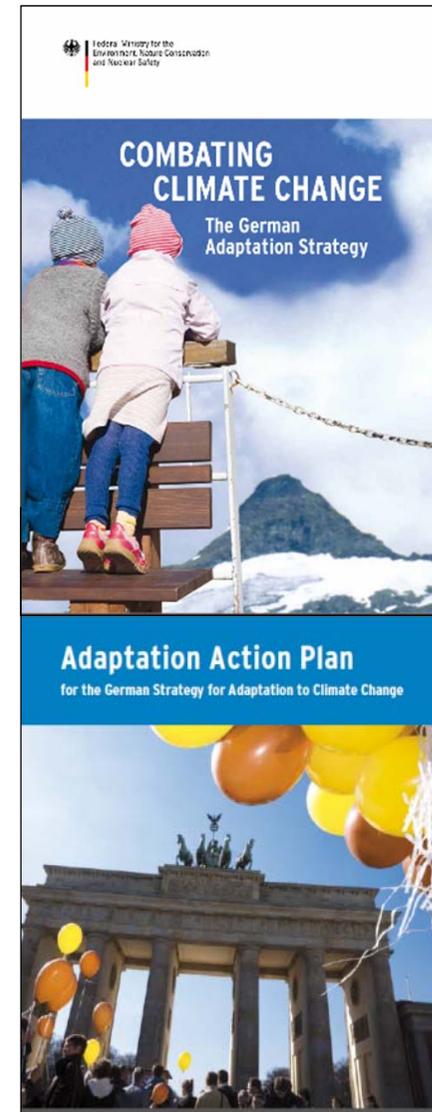
- Strategy in 2008
- Action Plan in 2011
- Progress report 2015, incl. second Action Plan

Setup

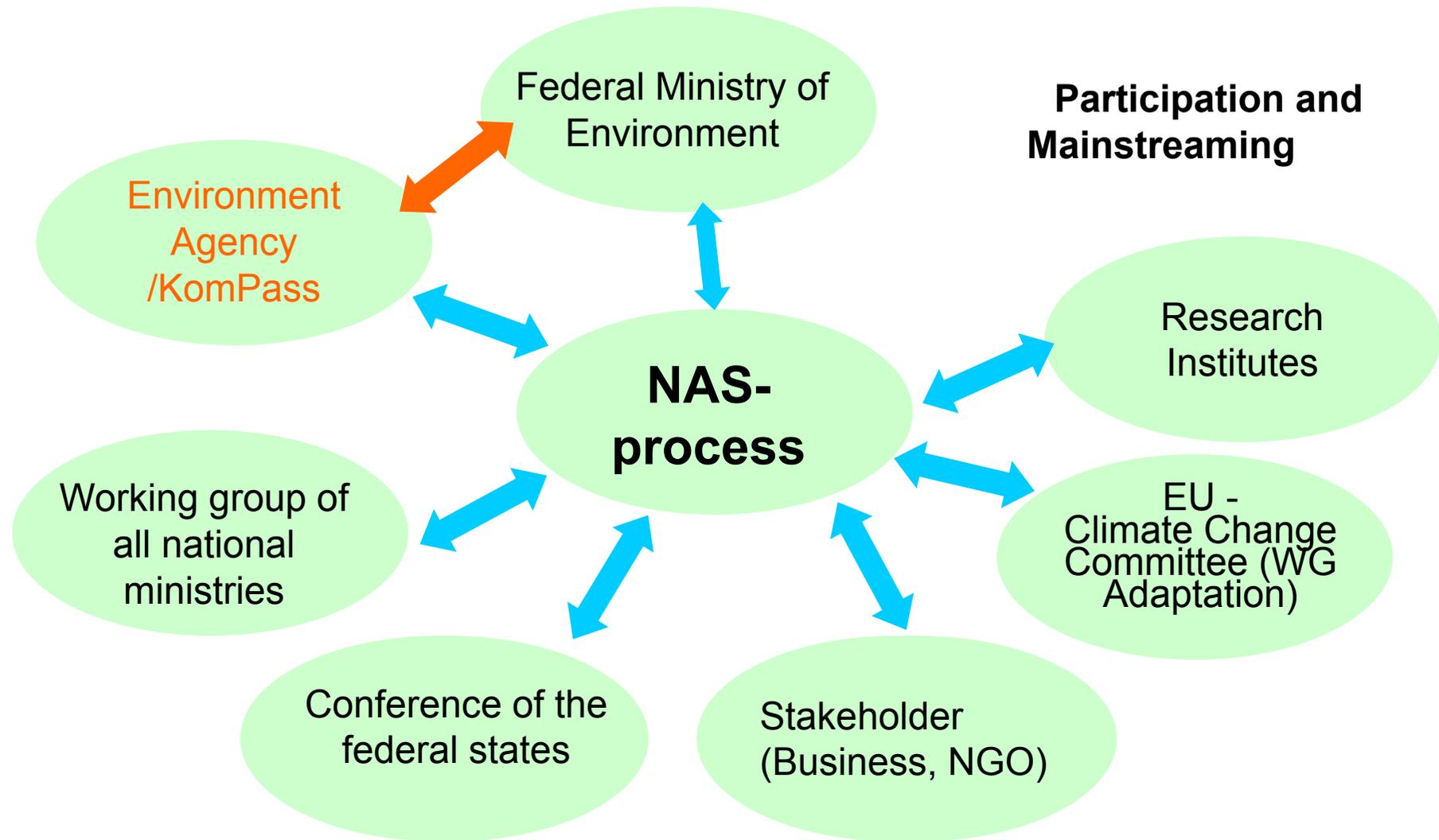
- Steering group with all relevant Ministries
- Lead-managed by Ministry of Environment

Role of the Environment Agency (UBA)

- Policy advice on the NAS, drafting
- Research (assessments, methods, tools)
- Provision of information on adaptation
- communication
- steering of participation process



Governance Structure Adaptation



Action Fields of National Adaptation Strategy

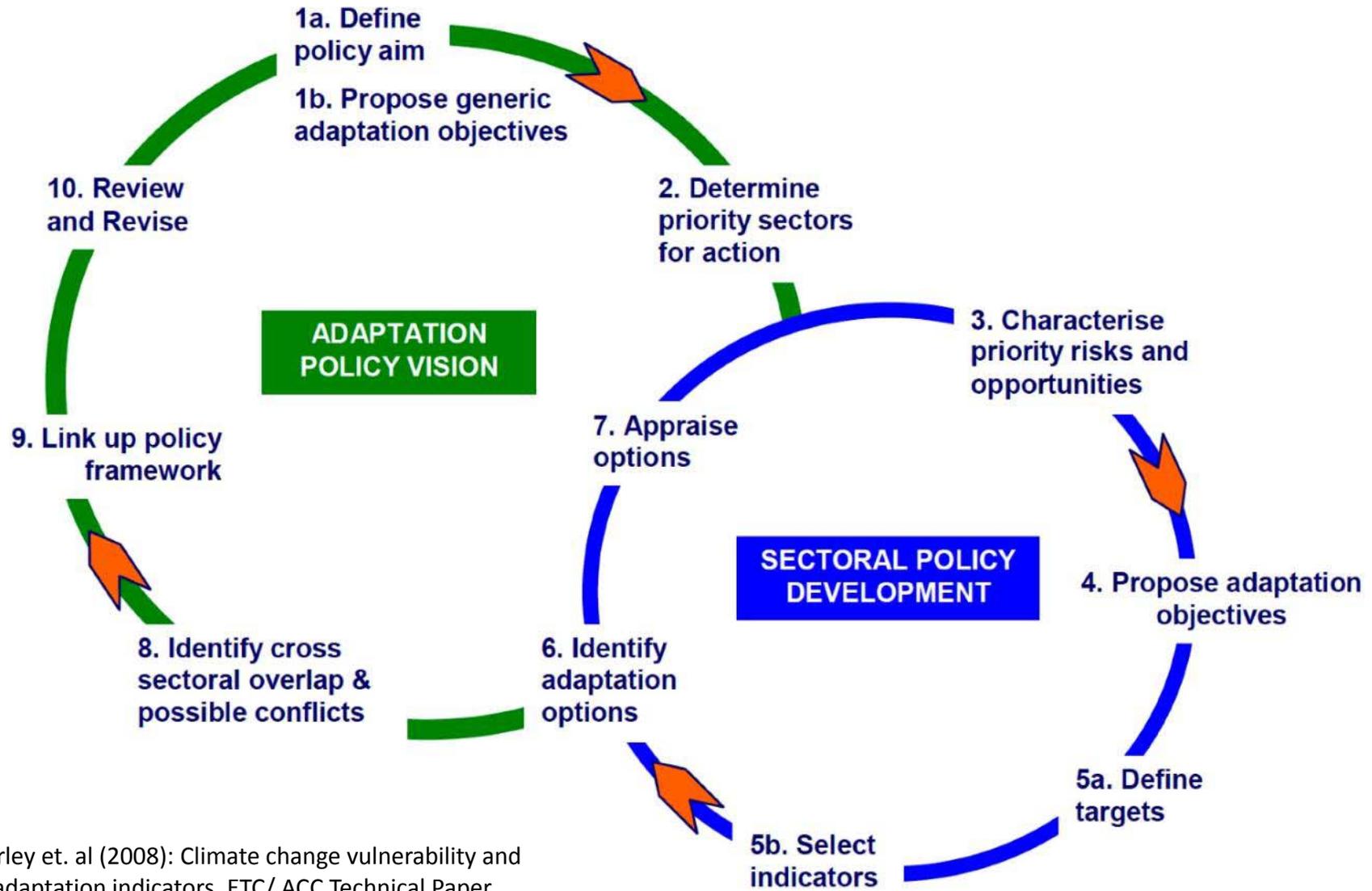
A broad field of society, environment and economy are considered in the German strategy

- **AGRICULTURE, FORESTRY AND FISHERIES**
- **WATER MANAGEMENT/ FLOOD PROTECTION**
- **ENERGY**
- **BIODIVERSITY**
- **SOIL**
- **PUBLIC HEALTH**
- **TRANSPORT, INFRASTRUCTURE**
- **TOURISM**
- **INDUSTRY**
- **COMMERCE**
- **FINANCE**

spatial planning and urban land use planning as well as civil protection are identified to be relevant cross cutting issues

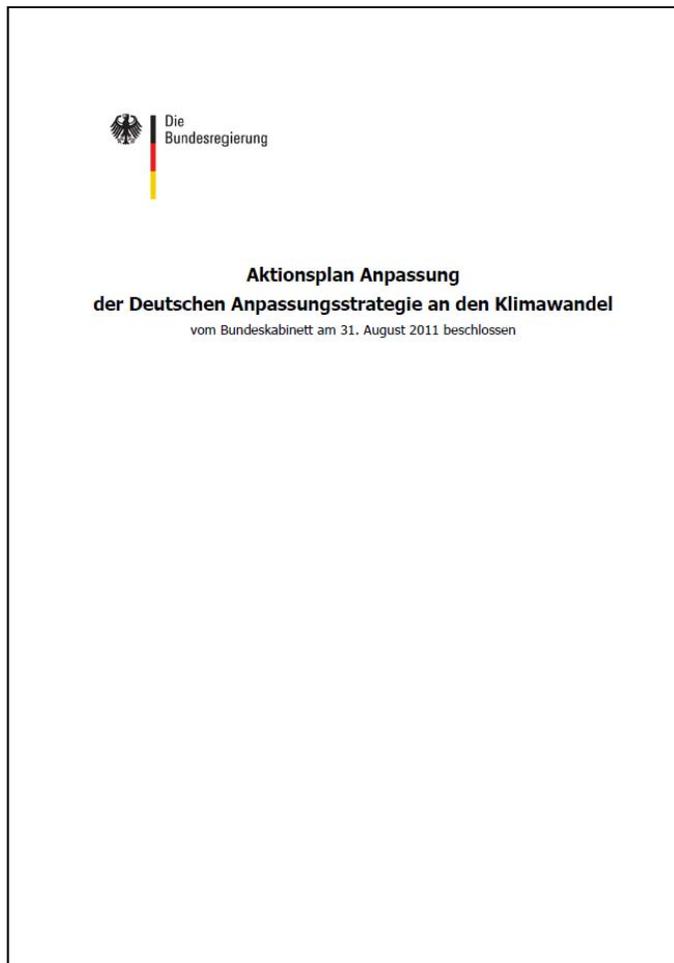


POLICY CYCLE



Harley et. al (2008): Climate change vulnerability and adaptation indicators. ETC/ ACC Technical Paper,

Action Plan for Adaptation (APA)



Adopted by Federal Cabinet
Summer 2011

- Measures at the federal level:
 1. Providing knowledge, enabling
 2. National policy framework
 3. Direct federal responsibility
 4. International responsibility
- Common measures of the federal and the state level
- Links to other federal strategies (biodiversity, high-technology, etc.)

Outlook: Adaptation Progress Report 2015

UBA has set up three actions to gain a more advanced and better integrated next step of the NAS in 2015

Network Vulnerability

- “adaptation needs”
- network of national agencies
- Common understanding
- Quantitative assessments
- based on climate and socio-economic scenarios
- identify hot spots, regions§ors

Policy Mix

- Process measures and instruments
- Propose set of decision criteria
- Tool for multi criteria assessment
- Suggest ambitious second actions plan
- Foster discussion with and between ministries

Monitoring Adaptation

- Draft Indicator report
- Impacts and response
- Agreed by all ministries
- Starting point for regular monitoring

Network Vulnerability

- Consists of **16 federal agencies from 9 ministries**,
- Supported by a **scientific team** (adelphi, plan & risk consult, EURAC, IKU)
- Analyses **the pattern of vulnerability in Germany** based on existing knowledge from regional and sectoral vulnerability assessments,
- To create a **new, consistent vulnerability assessment** for all of Germany (regionalised) and all sectors of the DAS until End of 2014

V-Approach for the DAS

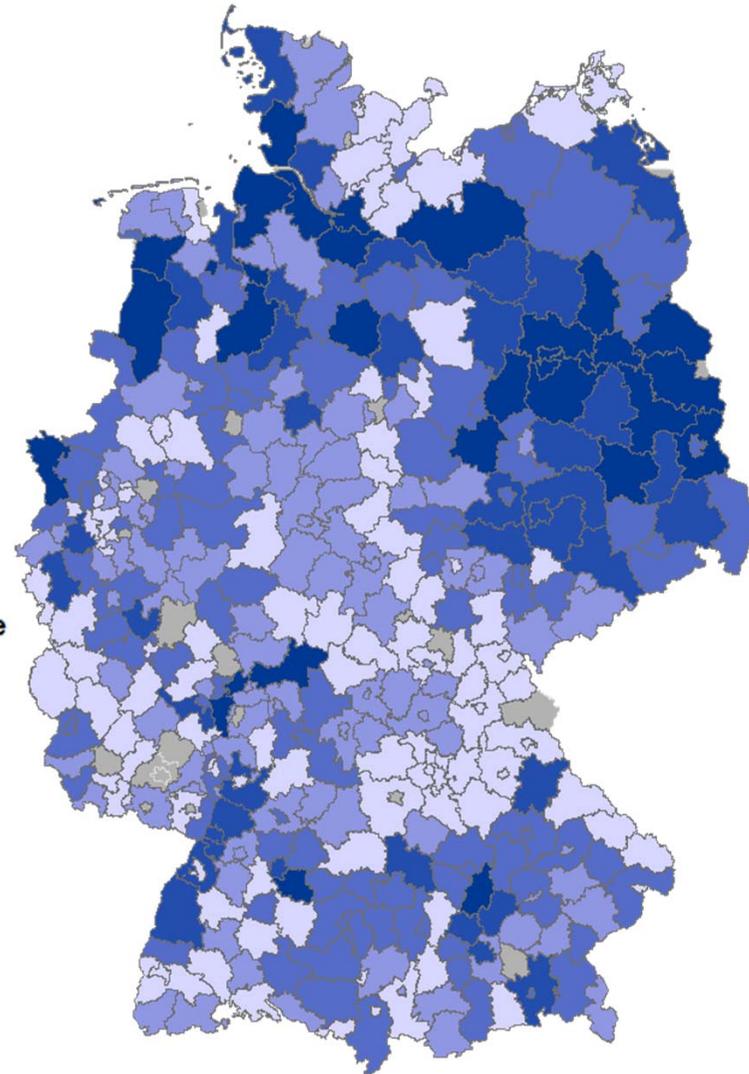
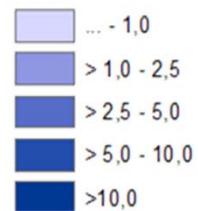
- Quantitative assessments (based on indicators and models), with semi-quantitative elements
- Use current and projected data, based on climate and socio-economic scenarios
- Use causal relations as basis for indicator development (based on cause-effect chains)
- Create maps (regional to local spatial resolution) and graphs
- Will identify (regional and sectoral) hot spots

Potential Flooded Build Areas [km²]

- Potential damages at buildings and infrastructures by floods
- Today
- NUTS2 Level

Legende

Überschwemmte Siedlungs- und Verkehrsfläche
in km²



Indicator Based Monitoring

Requirements on monitoring:

- cover the 15 action fields of DAS
- existing data, immediately implementable
- Impact and response indicators

Requirements on the process:

- Transparency of the selection process
- Scientific and political acceptance,
to be guaranteed by processes of commitment

.. Broad Acceptance Needed

by the scientific part:

- small expert groups, intensive bilateral consultations, workshops
- almost 400 people were involved

by the political part:

- all the federal ministries and Länder were invited to comment on the detailed indicator proposals

Additional involvement of non governmental institutions

Every indicator agreed (scientific/political level)

Process of political commitment: 18 month





Lessons Learned

Future is and will be uncertain

- > iterative policy process

Adaptation requires multilevel-governance

- > local and regional level most important for implementation of measures

Mainstreaming is a key issue

- > integration into different sectoral policies

Adaptation needs broad commitment/participation

- > involvement of different governmental and non governmental actors essential for success of the strategy and their implementation

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