

# German National Committee on Global Change Research Tasks & Activities

## Organisation

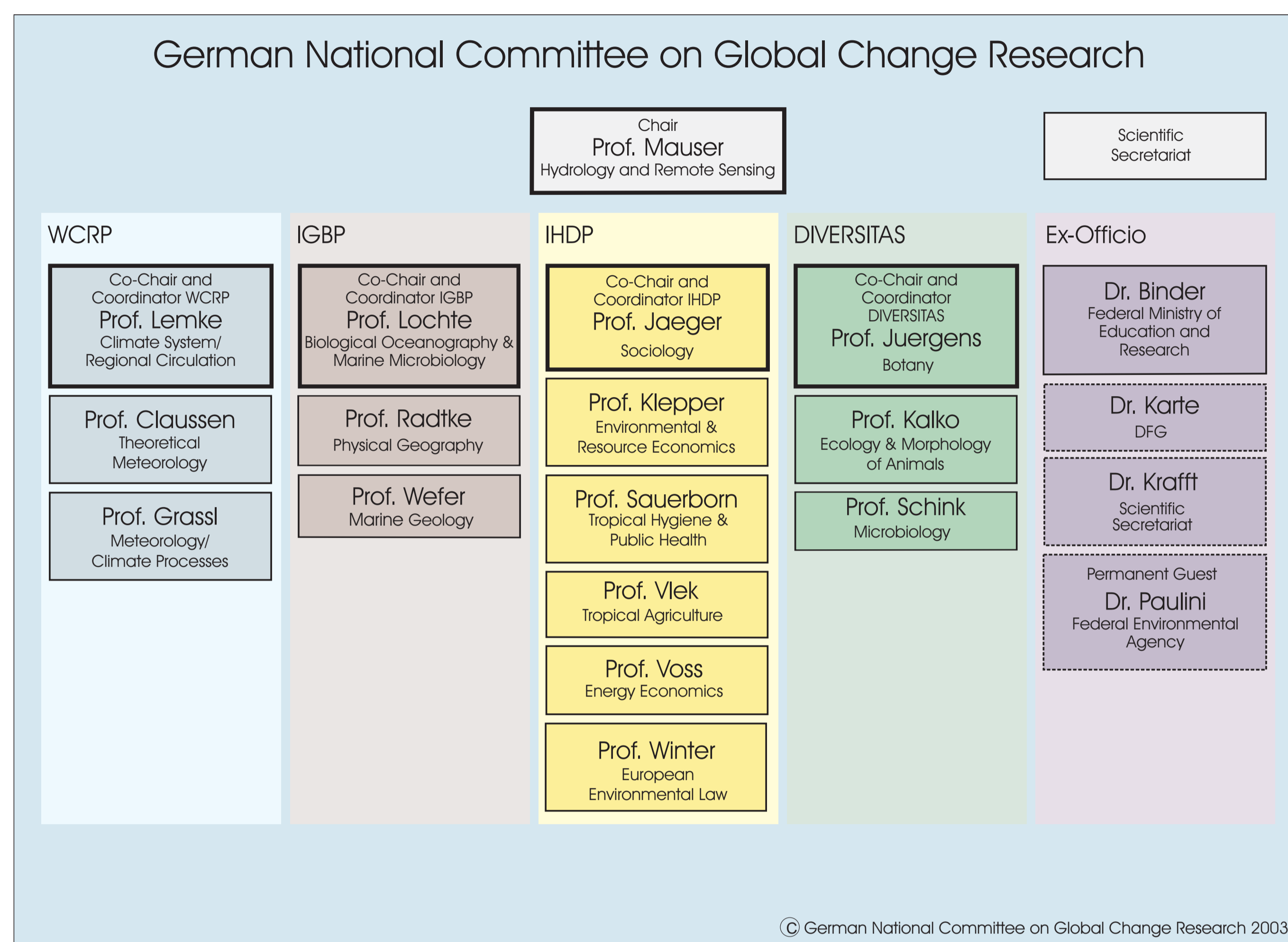
The German National Committee on Global Change Research (NKGCF) was constituted in October 1996 by Germany's major research funding agency, DFG, in close collaboration with the Federal Ministry of Education and Research (BMBF).

As a scientific advisory committee to the DFG and the BMBF the German National Committee plays a significant role in the process of identifying research priorities and in stimulating German contributions to the four international programmes on global change research.

Bringing together scientists from all fields of Global Change Research and from the four international programmes under the umbrella of one committee Germany has anticipated early the need for close collaboration of all scientific disciplines for global change research within the framework of the Earth System Science Partnership. This organisation enables the National Committee to efficiently support the Earth System Science Partnership and to contribute to the development of the new joint projects.

### NKGCF:

- **Scientific Secretariat** in Munich as national contact point and co-ordination office
- Four regular **Committee meetings** per year
- **Ad hoc working groups** to discuss and review innovative research initiatives
- **Scientific workshops** to develop new methodologies and scientific programmes
- **National Colloquiums** to discuss achievements and future needs of the Global Change Research Programmes



## Examples of German Contributions to DIVERSITAS

### Biodiversity, the Living Resource: Research Strategy of the German National Committee on Global Change Research

The National Committee on Global Change Research developed a strategy on biodiversity research which forms a German contribution to the international DIVERSITAS programme.

**I Basic paradigms**

1. position: Biodiversity forms an essential **precondition for human life** on earth.
2. position: Due to the rapid expansion of human civilisation a **"restructuring" of the biosphere** is taking place, which is imposing numerous changes and a general decrease of the limited and valuable resource of biodiversity.
3. position: Biodiversity research should be planned in parallel to international **global change programmes** and should include a consideration of a larger spatial scale, international integration and long-term processes.
4. position: The change of biodiversity can only be analysed successfully, if nature sciences and socio-economic sciences develop suitable **interdisciplinary and integrated approaches**.
5. position: The Federal Republic of **Germany**, a country relatively poor with respect to the natural resource biodiversity, but a highly developed industrial country, technically and scientifically much advanced, export-orientated and depending on continuous innovative product development, must have a multiple interest in co-operative international biodiversity research.
6. position: International co-operation will only develop successfully, if new international agreements provide a new basis for **new forms of international co-operation** in the fields of biodiversity conservation, sustainable use of biodiversity, development of the economic potential of biodiversity and share of the economical profits of Biodiversity.

**II Main elements of biodiversity research**

1. **Assessment** of the resource
2. **Origin** of the resource
3. **Change** of biodiversity
4. **Value and function** of biodiversity
  - Ecosystemary functions
  - Economic value and specific and unspecific uses
5. **Social organisation of sustainable use and conservation** of biodiversity

This strategy on biodiversity research forms a German contribution to the international DIVERSITAS programme and its structure including three major core projects:

**DIVERSITAS Draft Science Plan**

### BIOTA Biodiversity Monitoring Transect Analysis in Africa

In accordance to the strategy of the German National Committee on Global Change Research, the BIOTA network is developing research on sustainable use of biodiversity in Africa, which is also aiming at a new model of international co-operation.

The programme is based on the following characteristics:

**International integration**  
The project is seen as an international contribution to modern biodiversity research, i.e. the Convention on Biodiversity (CBD), the Johannesburg Plan of Action and the international DIVERSITAS programme.

**Focus: Africa**  
Three regional project clusters, BIOTA Southern Africa, BIOTA West Africa and BIOTA East Africa develop basic and applied knowledge as a basis for sustainable use and conservation of biodiversity on the African continent.

**Multilateral co-operation priority**  
BIOTA Africa is defined as a network of African and European scientists in a jointly developed and jointly implemented programme.

**Focus: Effects of land use on biodiversity (and vice-versa)**  
Land use practices, as controlled by natural resources and socio-economic side conditions, and subject to economic globalisation effects, form one of the foci of research. For this purpose, the change of biodiversity is measured and analysed in standardised biodiversity observatories, which are located in sites which are subject to different land use practices. Based on their analysis and an understanding of the socio-economic driving forces, model-based predictions are developed. Simultaneously, new tools are developed which will enable land users and decision makers to take practical steps towards more sustainable use and conservation of biodiversity.

**Establishment of long-term infrastructures**  
As change of biodiversity and involved degradation processes are often slowly creeping changes, long-term infrastructures are established, which nevertheless shall be maintained beyond the duration of the projects (2009). These are standardised biodiversity observatories of square kilometer size, equipped with climate stations, sensors, and a detailed programme of standardised monitoring techniques including remote sensing techniques and data on soil fertility and agricultural indicators.

**Human capacity development**  
The programme includes several layers of capacity building, ranging from academic to local environments (para-ecologists).

**Community involvement / local integration**  
At the sites of most biodiversity observatories local communities are actively integrated and goals are developed in a participatory approach.

**Data exchange**  
Exchange of data within the network is based on a data exchange protocol, which guarantees access to and mutual use of all data to all partners.

**Overarching project themes (2004-2006)**

1. **Natural dynamics in space and time**  
Continued monitoring at observatories
2. **Understanding natural processes of change**  
Functional interactions: plant functional types, food webs, pollination, dispersal, molecular aspects of processes, ...
3. **Understanding human use, value and impact in space and time**  
Analysis of land use effects (e.g. degradation gradients and processes, role of erosion, role of soil seed banks...)
4. **Interventions (strategies, tools, techniques) for sustainable use of biodiversity and biodiversity management**  
Experimental restoration and rehabilitation of degraded biodiversity, alternative uses, sustainability tools...
5. **Inform policy on local, national, and international level**  
Information transfer and feedback on transformation
  - Capacity building
  - Participatory approach

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## NKGCF Publications

