Six Helmholtz-Centres are joined in the TERENO initiative:

FZJ Research Centre Jülich
UFZ Helmholtz Centre for Environmental Research
FZK Research Centre Karlsruhe
HMGU HelmholtzZentrum München
DLR German Aerospace Center
GFZ German Research Centre for Geosciences

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TERENO
TERRESTRIAL ENVIRONMENTAL OBSERVATORIA

*TERENO is an multi-disciplinary observation platform for terrestrial research that is open for collaborations with other research institutions. The effective cross-linking to international research networks is essential part of the TERENO research strategy.*

*www.tereno.net*

# TERENO

## Terrestrial Environmental Observatoria

*All photographs by TERENO*

*except*
*Microlite – Photography by Andre' Künzelmann (UFZ)*
*Observation well – Photography by Norma Neuheiser (UFZ)*

HELMHOLTZ ASSOCIATION

# Terrestrial Environmental Observatoria

**Climate change and land use changes are key factors of global environmental change which have to be managed by the society in the next decades. Global changes in terrestrial systems take place on different spatial and temporal scales. The challenges for environmental research are immense. Therefore, long-term operated „Global Change Observatories“ for monitoring, analyzing and predicting changing state variables and fluxes within different environmental compartments are of special importance. The infrastructure activity TERENO, a research initiative of the Helmholtz Association, aims to establish an observation platform linking observatories in different climate and management sensitive regions.**

Long term observation data of hydrosphere, biosphere, pedosphere, lower atmosphere, and anthroposphere covering multiple spatial and temporal scales

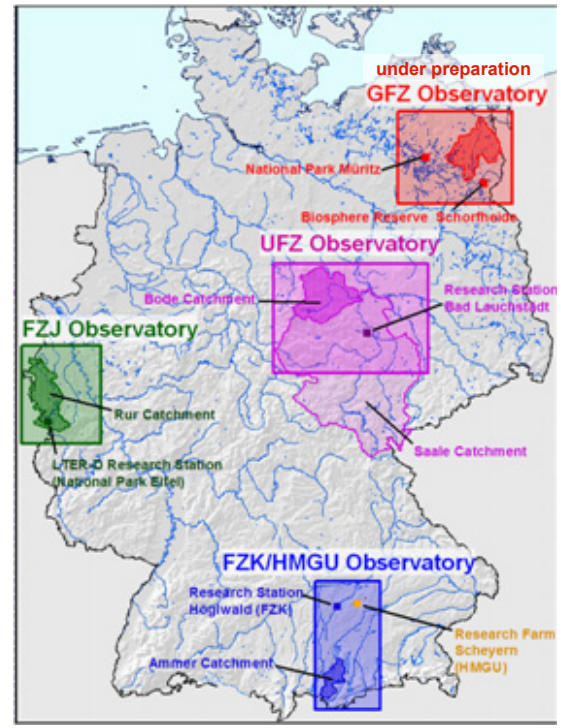
Development and application of ground based, airborne and spaceborn observing systems and sensors

Validation, advancement and integration of regional earth system models for:

- Surface and subsurface hydrology
- Regional climate and land surface-atmosphere interactions
- Biodiversity and biosphere-atmosphere interactions
- Forest, agronomy and soils
- Air quality
- Socio-economy


Monitoring of:

- Water, matter and energy fluxes in terrestrial systems
- Hydrometorological and biogeochemical state variables
- Ecological and microbiological parameters and proxies
- Demographical and socioeconomical dynamics




The TERENO-observatories