



GLOBAL
RESEARCH
ALLIANCE

ON AGRICULTURAL GREENHOUSE GASES

**CROPLANDS RESEARCH GROUP:
Germany Country Update**



CRG representative: Heinz Flessa

New Climate Protection Law in Germany (10/2019)

- Total GHG reduction: -55% until 2030 (reference year 1990)
- Obligatory GHG reduction aims for all emission sectors
- Agriculture: Minus 31-34% until 2030 (reference year 1990)
 - Reducing emissions of N_2O and NH_3 ; increasing N use efficiency
 - Biogas production from slurry and manure, optimized biogas production
 - Increasing area with organic farming
 - Reducing GHG emission from livestock production
 - Increasing efficiency of energy use in agriculture
 - Increasing organic carbon stocks in soils and vegetation
 - Protection and conservation of permanent grassland
 - Restoration of drained peatland, reduction of peat usage
 - Reducing food waste

Inventory of agricultural soils

First national soil inventory is complete

Topsoil (0-30 cm)

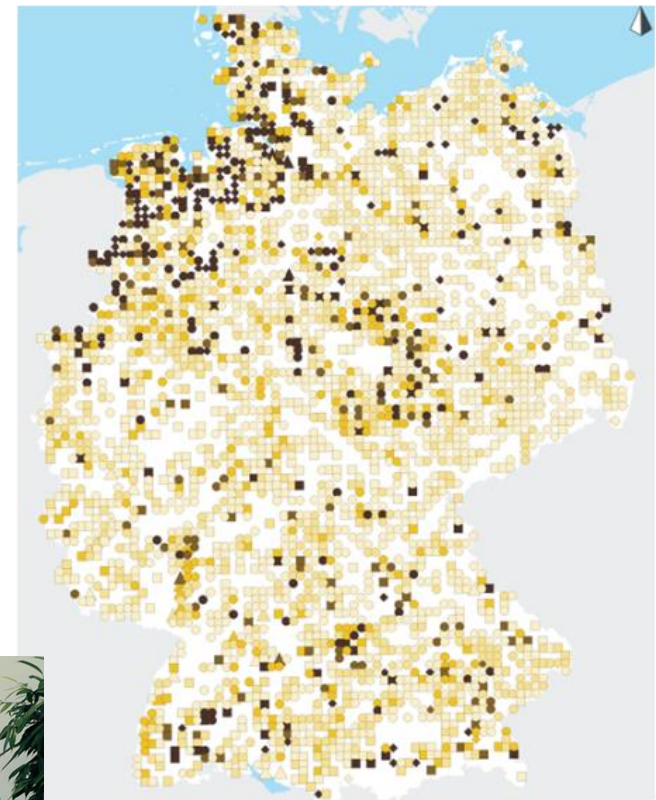


- field
- grassland
- △ special cultures

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- < 30
- 30-50
- 50-70
- 70-90
- >90

Subsoil (30-100 cm)



CLIFF-GRADs fellows

- Bo-Wen Zhang, China: Modelling pH effects on N₂O emission
- Pierre Eke, Cameroon: Soil organic matter sensitivity to land management

SPACES 2 Science Partnerships (BMBF)

- Capacity building, training of southern African students, technicians



Short Course on Agent-Based Modeling & Simulation



Eddy Covariance Flux Measurements Winter School

German Research Programm: Mitigation of GHG emissions from agriculture and adaptation to climate change (BMEL)



cropland



soils



livestock

- 33 joint projects are founded (start 1/2019 for 3 yrs)
- Total funding (EUR): 36 million (BMEL) + 5 million (companies)
- Cropland: N efficiency, new diseases and pests
- Soils: soil organic matter, remote sensing, NO_2 and NH_3 reduction
- Livestock: feeding strategies, slurry management, new pathogens