Biomass Pilot

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Description of the Biomass Pilot

Evaluate the environmental impacts in bioenergy use which are related mainly to emissions of burning biomass, use of cooling water, solid waste generation, land use changes, changes in trace gas emissions like CH\textsubscript{4}, NO\textsubscript{2}, and CO\textsubscript{2}, changes in albedo due to land use changes, deforestation, agricultural changes in fertilization, humus reduction, increased erosion and desertification.

Models used for providing energy crop specific and dynamic vegetation modeling:
- EPIC (IIASA)
- BETHY (DLR)
- G4M (IIASA)

Methodology

The output of biomass models (BETHY/DLR, EPIC, G4M) is used as input for energy scenario models (REMix, TASES, GLOBIOM)

Regional Study areas: Europe, Pakistan

Data

- Time series of Leaf Area Index (LAI) SPOT/VEGETATION
- Soil type map IIASA/FAO
- Meteorology ECMWF
- Elevation model SRTM/NASA
- Land Cover SPOT/VEGETATION
- Crop Management Data CENSUS
- Crop Calendar CENSUS
- Initial Forest Biomass FAO
- Protected land area WDPA

Biomass energy potential

The theoretical energy potential for 2010 as computed with BETHY/DLR, including forest, agriculture, and grassland.

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