Services based on remote sensing and climate data

In the framework of a forestry project DELPHI IMM has adapted a regional biomass model, which combines time series of remote sensing data, climate data, biological data and soil data.
As a result of the model different geo – services are available.
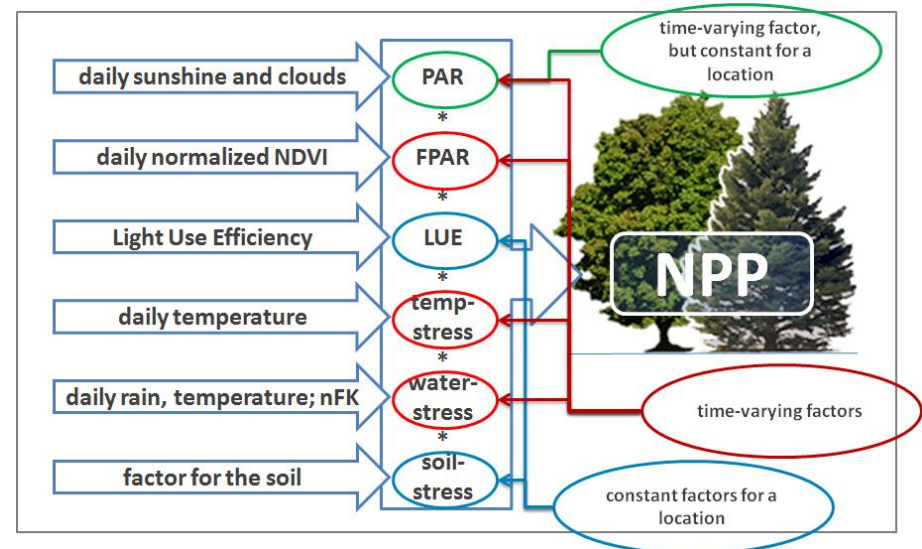
contact:

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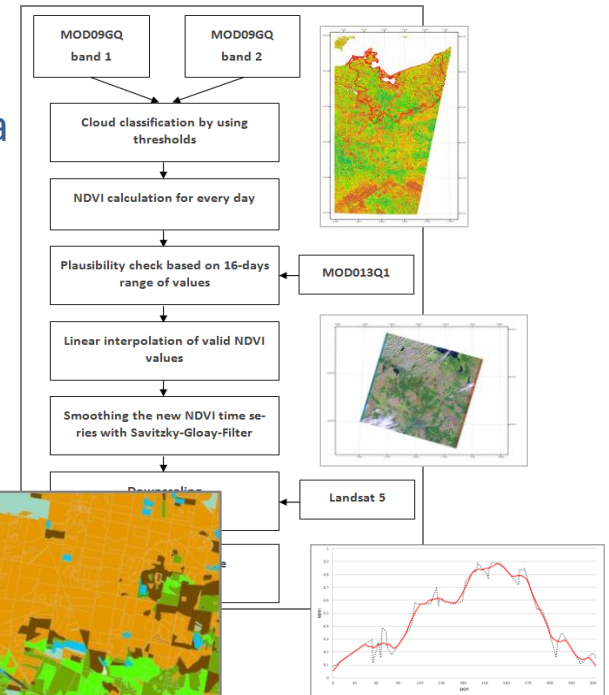www.delphi-imm.de
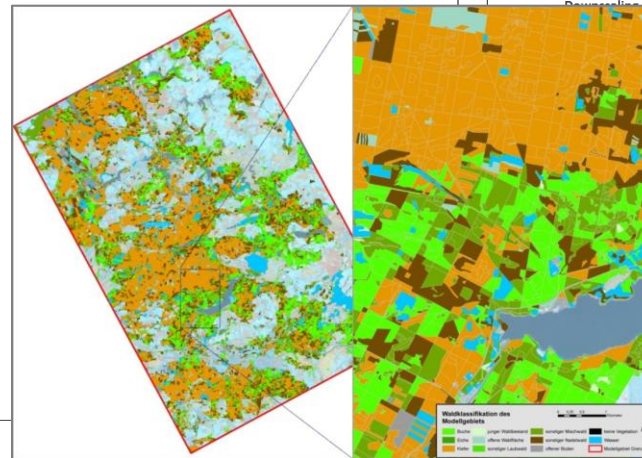info@delphi-imm.de

Remote Sensing based Geo - Services

- ## High Quality NDVI - Time Series

  NDVI time series of MODIS often are not usable for at least few days due to clouds. DELPHI IMM has developed a method to substitute these values with realistic values for these days.

- ## Light Use Efficiency Map

  DELPHI IMM has developed a map for the light use efficiency of plants using classified remote sensing data and / or existing cadastre.
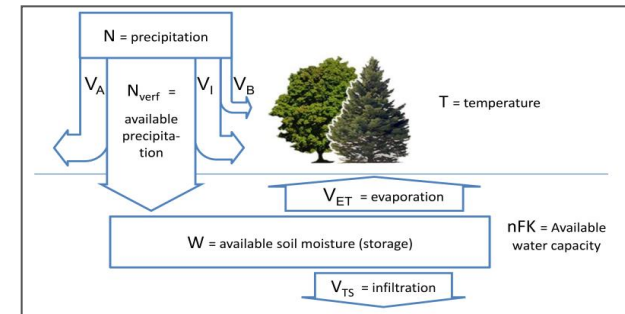
ONE SURFACE
ONE GEOWAY

Special Geo – Services for the forestry

- ## Soil Water Balance

    Using regional climate data, regional soil conditions and knowledge of water consumption of trees DELPHI IMM calculate time series of soil water balance in a high resolution scale.

Diagram labels: N = precipitation; V_A; N_{verf} = available precipitation; V_I; V_B; T = temperature; V_{ET} = evaporation; nFK = Available water capacity; W = available soil moisture (storage); V_{TS} = infiltration

- ## Net Primary Production of the Forest

    DELPHI IMM can calculate time series of the net primary production (NPP) as an indicator for yearly wood growth. Depending on the quality of the input data the results can vary between global scale for statistical statements up to regional scale for the monitoring of the individual forest sites.

dry year 2003 — normal year 2004 — moist year 2007

Net Primary Production in [gC/m^2]: 0 100 200 300 400 500 600 700 800 900 1000 1100 1200

Rivers — Inland Water — Templin ▲ — Angermünde ● — Eberswalde ■ — 0 5 10 20 30 km