

Groundbreaking GIS Remote Sensing

# CONSERVATION MANAGEMENT, MONITORING AND MAPPING World wide

- Species modeling
- Habitat mapping
- Natura 2000 mapping
- Monitoring system
- Biodiversity assessment
- World Heritage Sites

# Selected Projects on the WEB

Malaysia Maliau Basin; Lithaunia Natura 2000; Malaysia Peat Swamp Forest; Senegal Ferlo Faunal Reserves; Tanzania Alpine Grass Land; Tanzania Coastal Foerst; Latvia Water Directive; Malawi Mt Mulanje; IGAD Protected Areas

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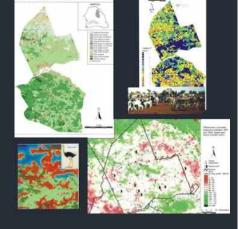
# CONSERVATION, MONITORING AND MANAGEMENT

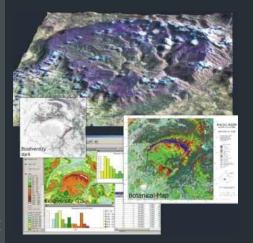
Our groundbreaking habitat and species analysis are commonly an integrated part of larger nature management projects. Our analysis and findings have lead to new discoveries and conservation of areas - such as coastal forest and alpine grass land in Tanzania. We have established several monitoring systems for management of protected areas - from local to national programs - we make integrated solutions which included the full suite of information needed for sustainable management including climate issues. Our information is so detailed that policy can be formulated or negotiation with local community can be initiated. Down listed cases give a brief impression - more details are available on the web.

#### SENEGAL / SAHEL

In Senegal we produced a compleate suite to manage biodiversity in the 11.000 km² Ferlo fauna reserves. From field data we constructed regression models which was integrated with Landsat and NOAA data to produce maps of avian diversity. We mapped bore holes and resource utilization and related it to degradation patterns from NOAA data.

We produced a monitoring system to assess biodiversity and degradation which has prospects for the entire Sahelian region





### **MALAYSIA Rainforest management**

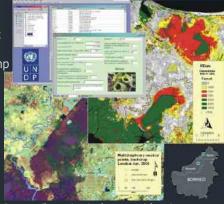
We mapped and analyzed the 'unknown' Maliau basin by classifying Landsat data into record high 12 botanical classes which was used to model the general biodiversity of the conservation area. We established a biodiversity GIS to analyse habitats of rare species. Furthermore, we provided capacity building and many other maps for the management plan of the area.

# **MALAYSIA Conservation of Peat Swamp Forest**

For UNDP we made a compleat site investigation and establishment of a monitoring system for two peat swamp reserves in Sabah and Sarawak.

From satellite data we made land cover / use maps including forest type and analysis of 20 yr deforestation. The study included changes in land use and revealed dynamics of selective cutting, burning and shifting cultivation.

The result was related to settlement pattern and land use indicated specific deforestation and degradation problems for each site. For future management we established a GIS monitoring system to trace changes in fauna, flora, hydrology and land use.





# **LITHUANIA - NATURA2000**

On a national scale we have mapped NATURA 2000 habitats based upon digital satellite and GIS analysis.

More than 20 habitat classes have been assessed on a national scale. The result was used to interpret national spread of habitats and their quality. Area statistics were applied to the national Natura2000

We further developed an internet based decision support system to manage PAs protected N2K sites (SPA & SAC). The system is designed to collect enough information to evaluate if the management practices meet the requirements defined for the Pas.