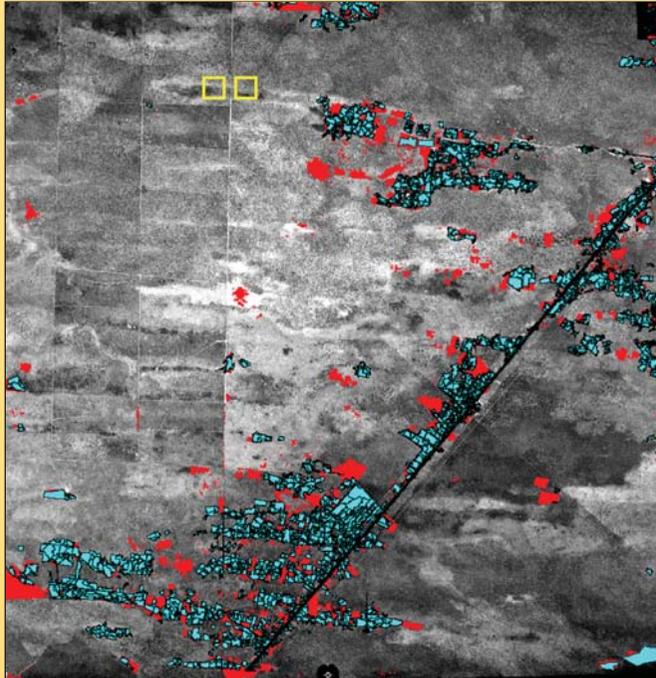


BIOTA Southern Africa makes field data available and downloadable from its web-site ([www.biota-africa.org](http://www.biota-africa.org)). The multi-disciplinary datasets are subject to the data sharing policies of BIOTA AFRICA. Data are administrated in a databank system with archives in each of the three countries.

Change Detection and Human Impact at Mile 46 / Mutompo.



Remote sensing technologies generate spatial data at full earth coverage with short repetition intervals. In BIOTA Southern Africa remote sensing is an important tool for monitoring changes to the earth's surface, and for discussing sustainable management strategies. Observatory Mile 46 / Mutompo Settlements and Fields 1997 Settlements and Fields 2000

#### Major themes

- Assessment of biodiversity, its structural features and spatial patterns.
- Effects of anthropogenic land use and climate change.
- Interdisciplinary experiments for the restoration of degraded systems.
- Development of analytical and predictive tools for decision-making.
- Capacity Development for action for participatory-based sustainable management practices.



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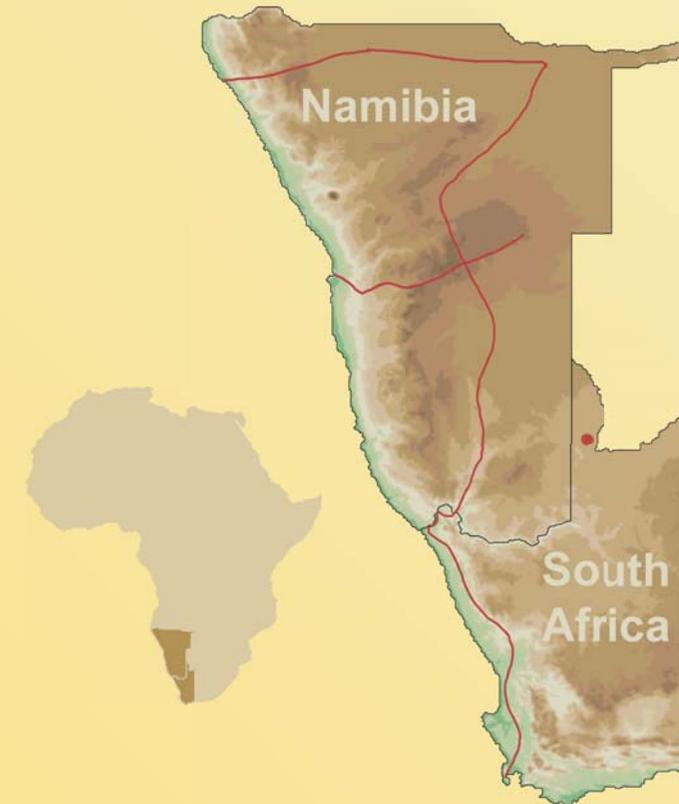
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BIOdiversity Monitoring Transect Analysis in Africa

## BIOTA Southern Africa



BIOTA Southern Africa conducts biodiversity research along the main rainfall gradient, from the winter rainfall Cape Region to the summer rainfall regions of northern Namibia.

The aim of the research initiative is to provide adequate data and to develop scientifically sound concepts for the conservation and sustainable utilisation of biodiversity in southern Africa.

[www.biota-africa.org](http://www.biota-africa.org)

December 2006

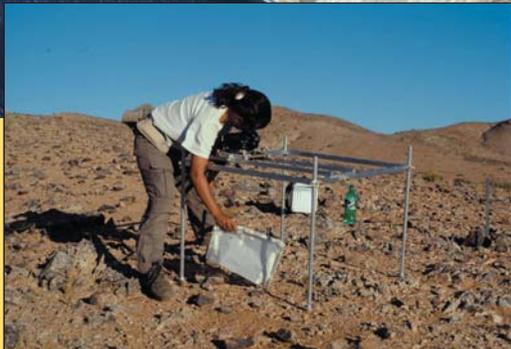
**BIOTA Southern Africa** works at multiple scales. Multi-disciplinary and multi-scaled scientific data are being continuously obtained from the numerous biodiversity observatories.

The project provides the data to all scientists who work in accordance with the scientific needs as defined by the Namibian and South African scientific community and responsible institutions.

**BIOTA Southern Africa** conducts research at various spatial and temporal scales. The data will allow for a better insight into changes of biodiversity as controlled by climate and land use.

The research initiative also involves measures to support capacity development on the basis of raising ecological awareness, training para-ecologists, and discussing biodiversity restoration techniques.

A false colour image derived from the Landsat TM5 satellite from a distance of 705 km above the Central Namib Desert.



In search of lichens from a height of only a few centimeters.

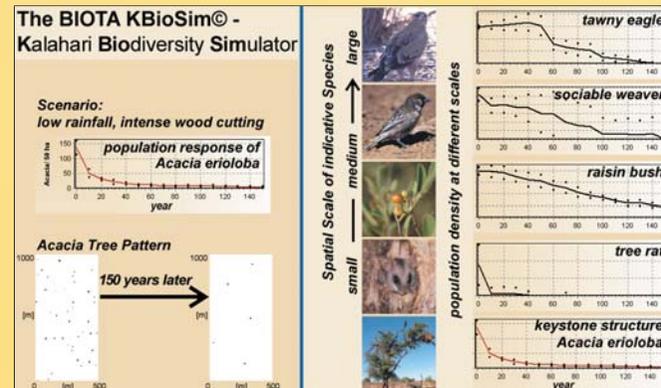
**BIOTA Southern Africa** is a multi- and an interdisciplinary project. The following disciplines are involved: botany, climatology, modelling, mycology, remote sensing, social and cultural anthropology, socio-economics, soil science, and zoology.

The comparison of various land tenure systems and land use intensities will enhance the knowledge about the human impact on biodiversity.



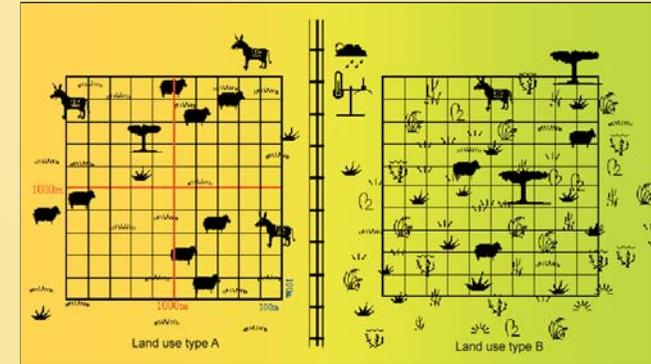
Within **BIOTA Southern Africa** indigenous environmental knowledge plays a major role in the assessment of biodiversity.

KBioSim© integrates empirical data of different disciplines into a non-profit educational and management tool. The set of models improves our understanding of complex responses of indicative species to possible climate and land use changes in the southern Kalahari.



Sample result of KBioSim showing the simulated response of indicative species to intense, commercial wood cutting.

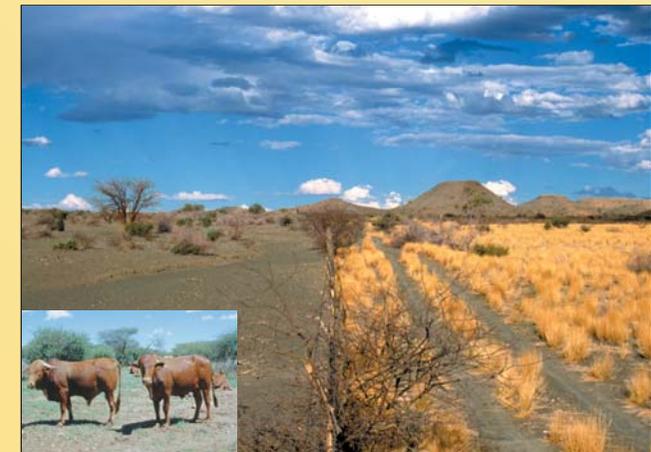
**BIOTA Southern Africa** uses a standardised methodology in standardised research areas, the so called "Biodiversity Observatories"



Scheme of a typical pair of 1 km<sup>2</sup> large Biodiversity Observatories.

The major advantages of this research approach are the standardisation and comparability of scales, applied methods, and data, as well as the integration of different disciplines in a defined research area.

This ensures the comparability of the research sites within the project, and allows the distinction of the impact which different land use intensities have on the environment.



Different grazing intensities in communal and commercial farming areas have obvious effects on biodiversity and the regeneration potential. Over-exploitation can result in severe land degradation.