

Our natural capital: Ecosystem service delivery

4th Biennial Conference



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South Africa's Biodiversity – our natural capital –



Ecosystem services – benefits for people



Crop
production



Firewood



Education



Carbon
sequestration



Fish/Fresh
water



Aesthetic value



Flood
mitigation



Livestock
production

Focus areas



Designing
multifunctional
landscapes



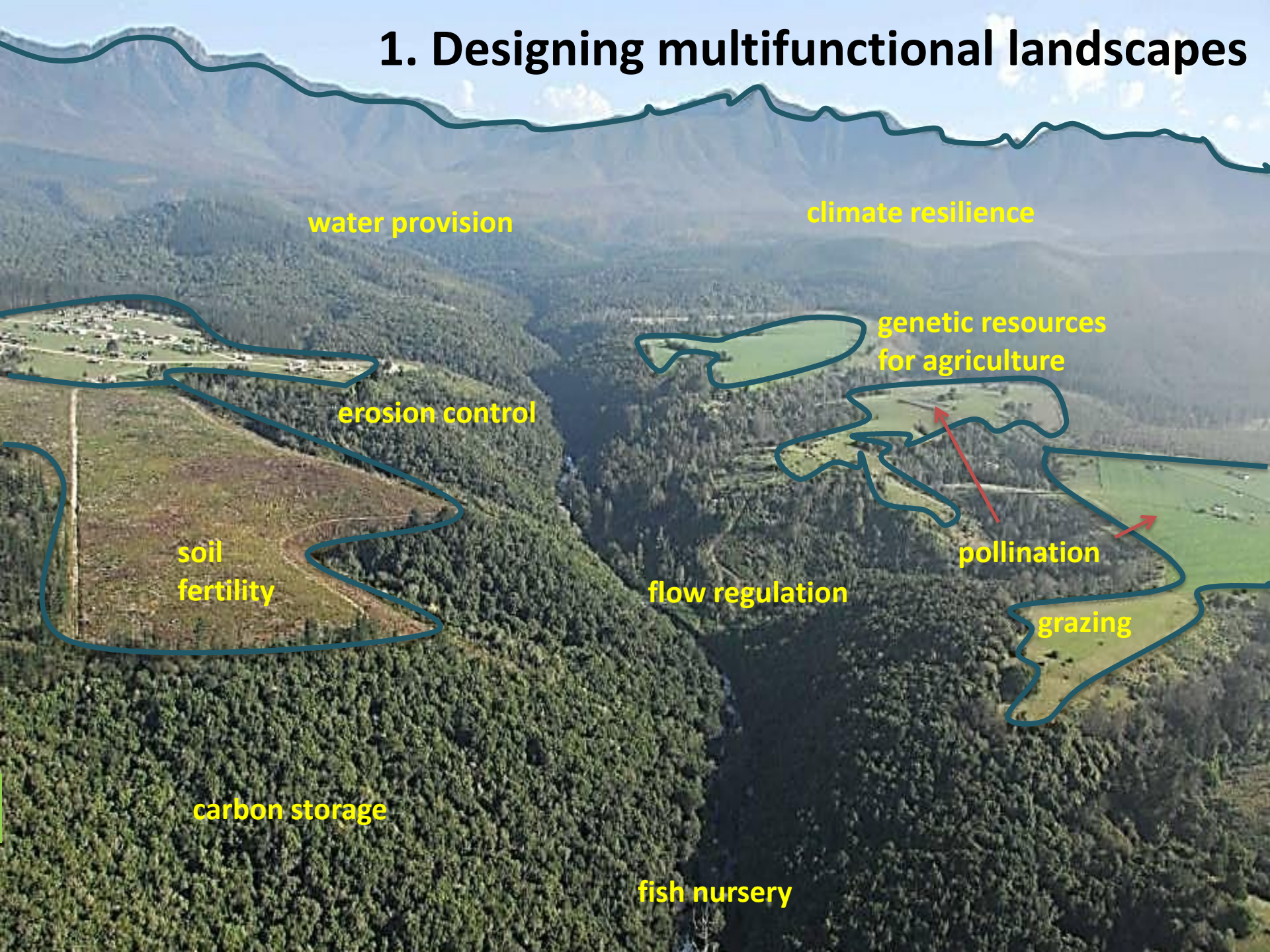
Enhancing
ecological
infrastructure



Ecosystem
services for
poverty
alleviation

Ecosystem service science for policy support

1. Designing multifunctional landscapes



water provision

climate resilience

genetic resources
for agriculture

erosion control

soil
fertility

pollination

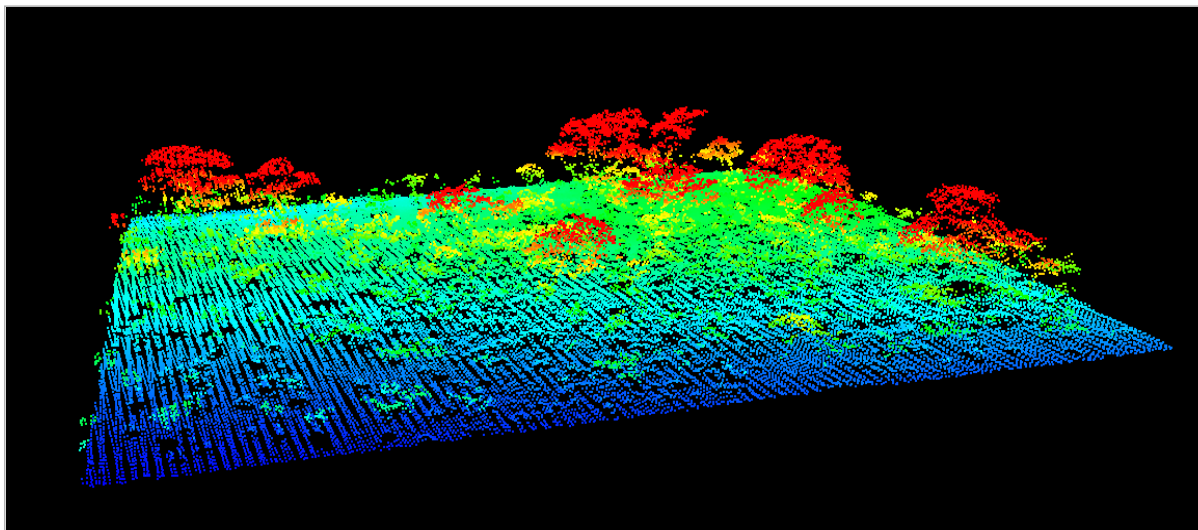
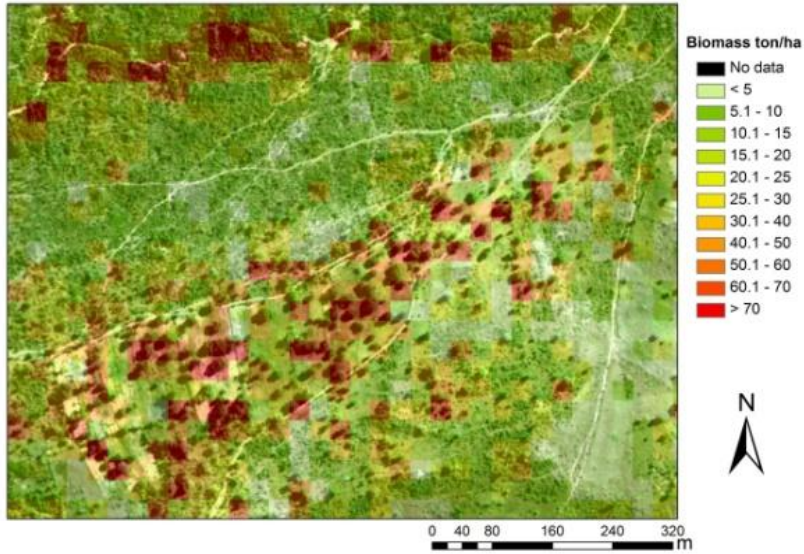
flow regulation

grazing

carbon storage

fish nursery

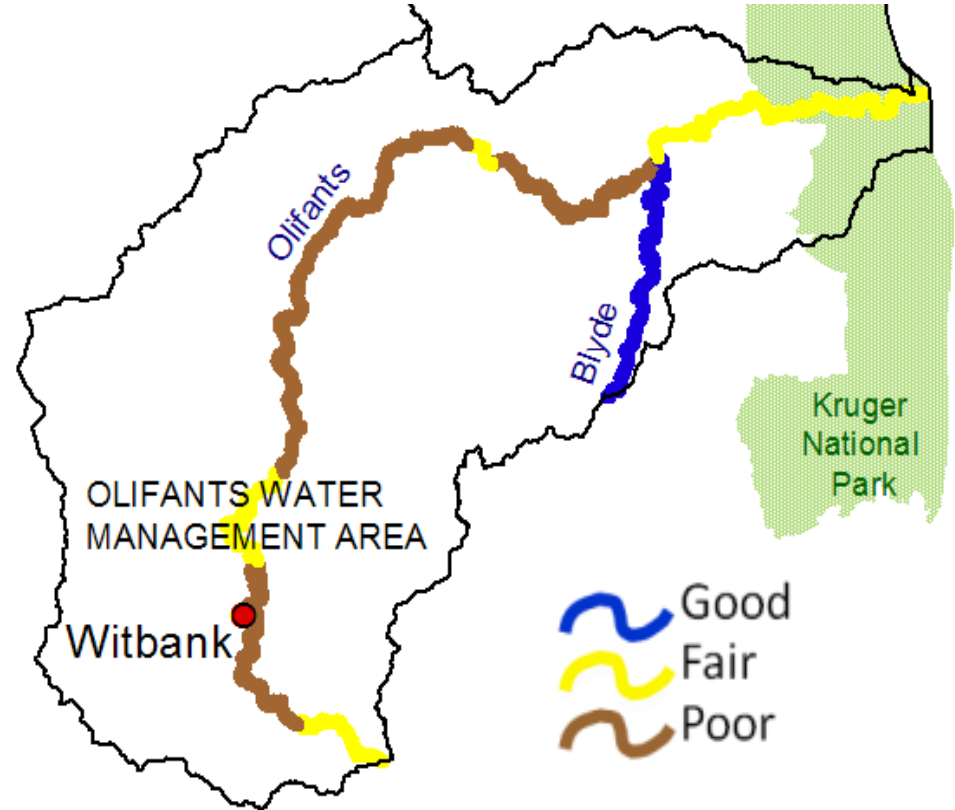
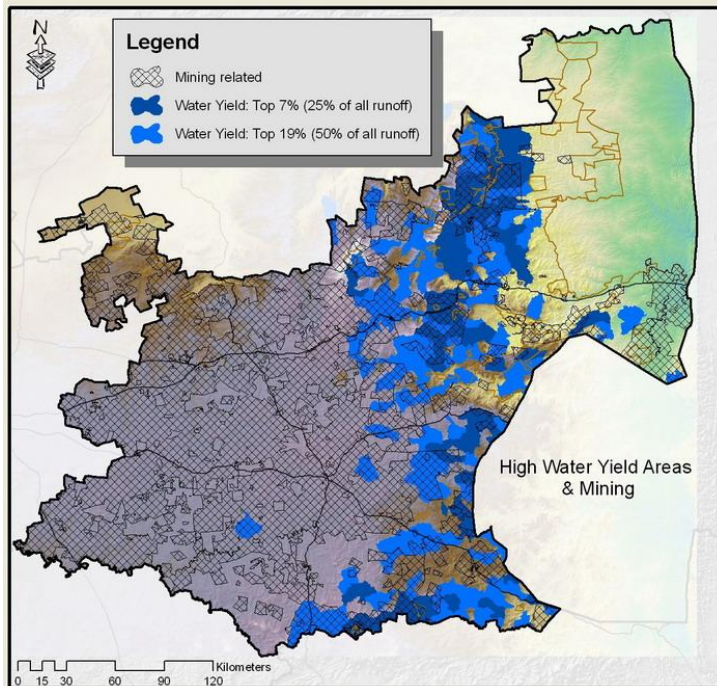
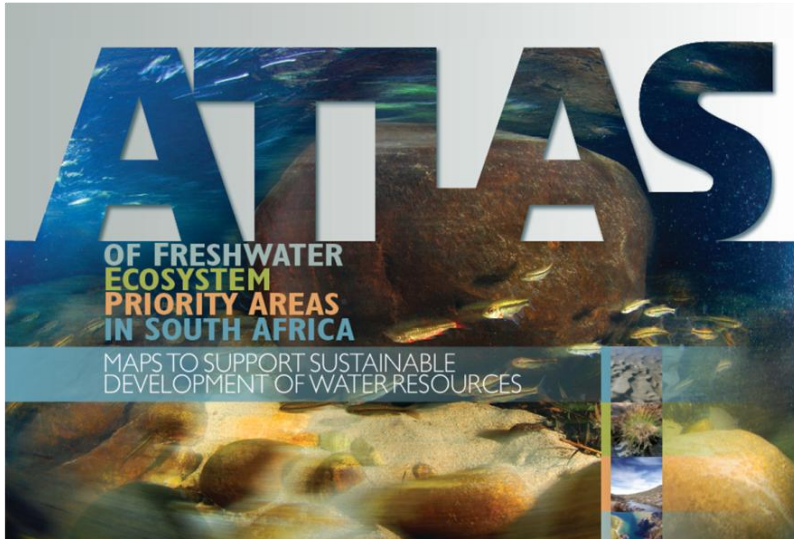
Lidar CAO tree height and biomass maps



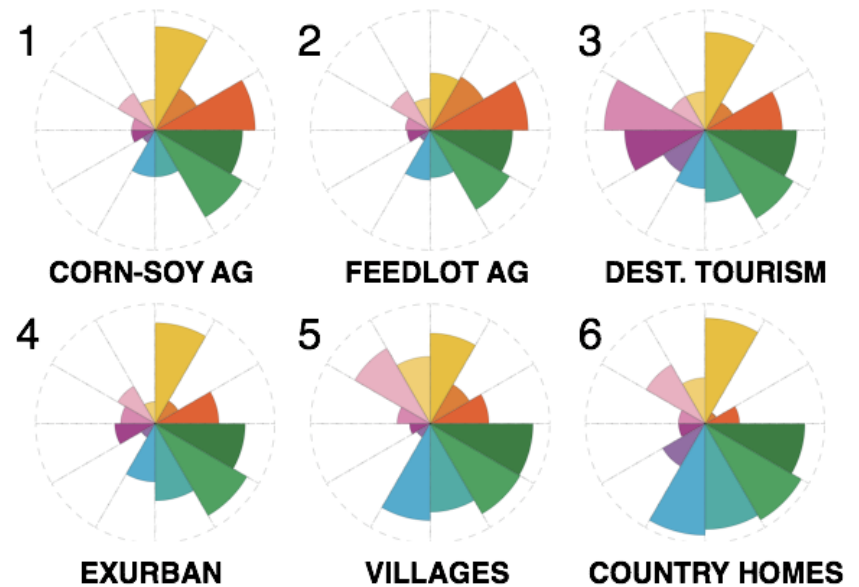
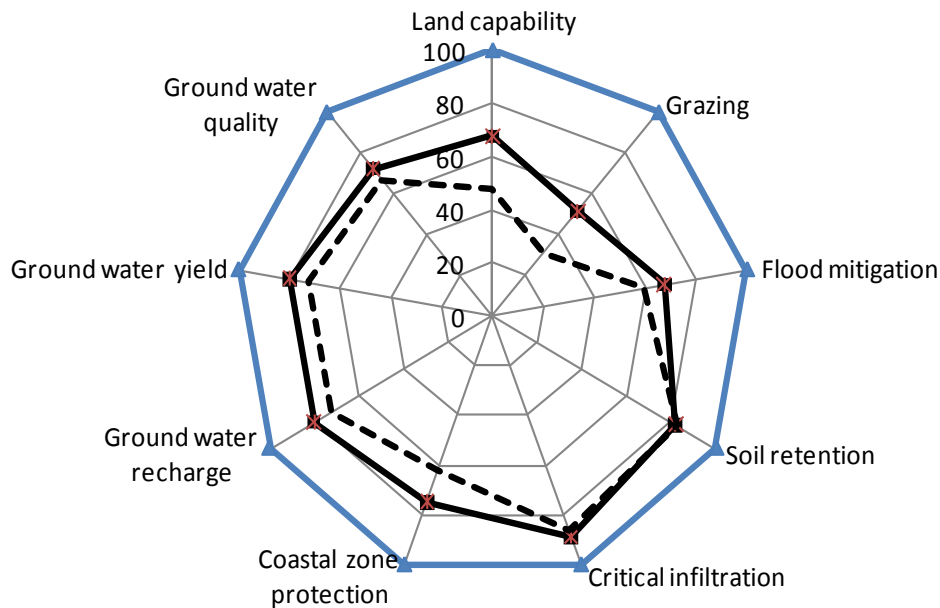
CHANGE DETECTION

Bush encroachment
Rangeland productivity

Planning healthy & resilient landscapes



Assessing trade-offs between development options



Raudsepp-Hearne, et al 2010

2. Enhancing ecological infrastructure

Engineered infrastructure



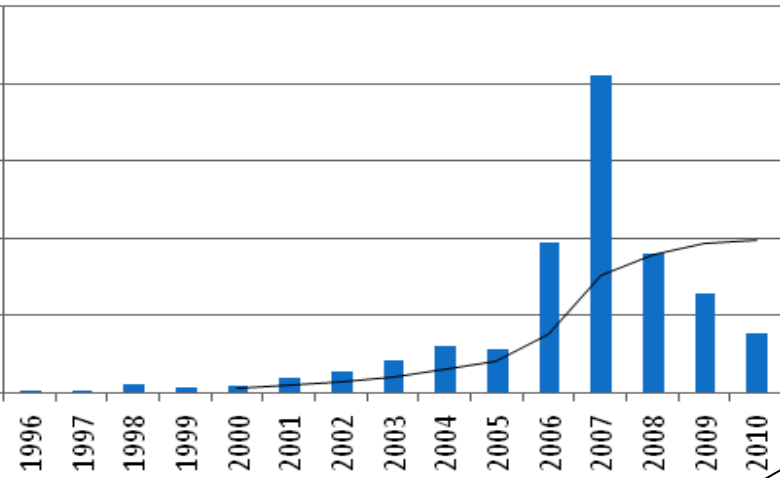
Healthy ecosystems



Degraded ecosystems



Risk and disaster management in Eden



Insurance claims



Eden District Municipality

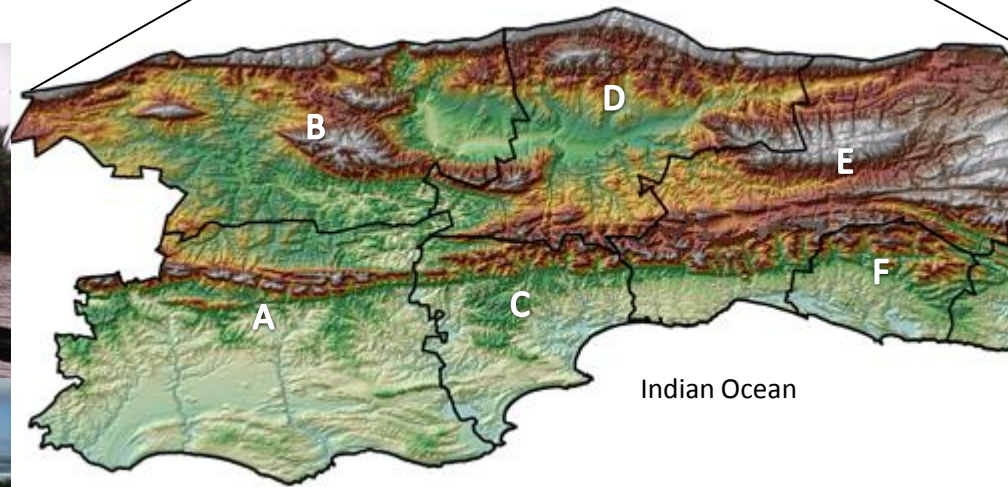
□ Municipal boundaries

Elevation

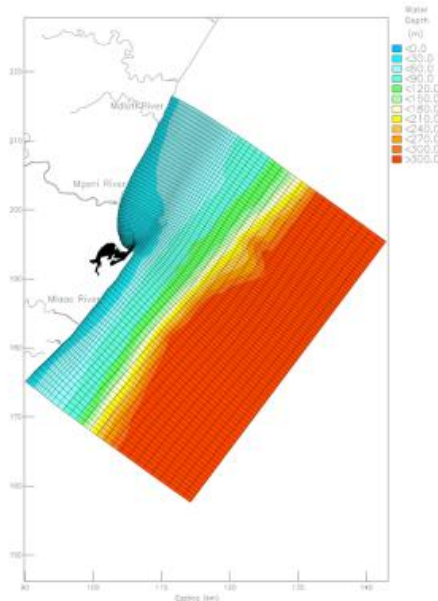
Value

High : 2333

Low : 1



Indian Ocean



Private-public partnership



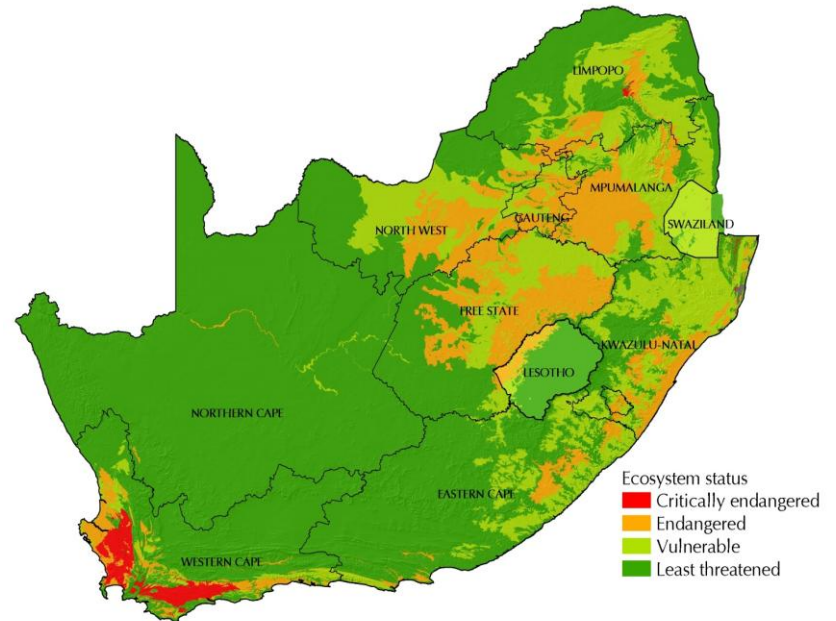
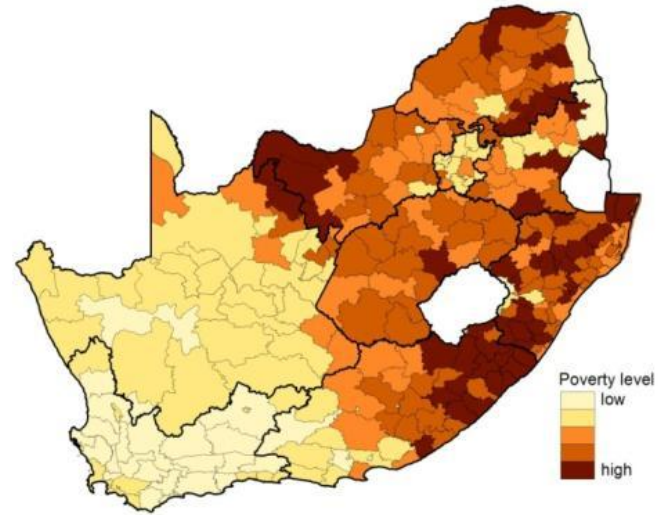
INSURANCE IN A CHANGING RISK LANDSCAPE LOCAL LESSONS FROM THE SOUTHERN CAPE OF SOUTH AFRICA

A report by the research partnership between the Santam Group, the University of Cape Town, the Council for Scientific and Industrial Research & the WWF

Endorsed by the United Nations Environment Programme Finance Initiative



3. Ecosystem services for poverty alleviation





Invasive alien plant control – water/biodiversity/jobs



Thicket restoration



Charcoal production




Livestock production

d) Ecosystem service science support for policy





Project Sites

 **TRINIDAD TOBAGO**

Implemented by Univ. W. Indies

Nariva Swamp, Ramsar Site
Northern Range, SGA site
Buccoo Reef

 **CHILE**


Implemented by CEAZA

San Pedro Atacama, Salt flat closed watershed in the Andes

 **VIETNAM**

Implemented by ISPONRE

Ca Mau Province, mangrove forests of 70 000 ha

 **SOUTH AFRICA**

Implemented by CSIR and SANBI

Municipal - Eden
Grasslands – Oliphants
Transboundary - Lesotho



Ecosystem service science for international policy support



SA delegation during IPBES plenary, 4/2012



Our understanding of South Africa's ecosystems is essential to addressing national priorities of poverty alleviation, unemployment, enhancing ecological infrastructure and improving service delivery in multifunctional landscapes

Thank you

