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Policy applications of ecosystem accounts: **Emerging examples from South Africa**

2nd Forum on Natural Capital Accounting for Better Policy
22-23 November 2017

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Ecosystem accounting work in South Africa

Initial ecosystem accounts as part of
Advancing Natural Capital Accounting (ANCA), 2014-2015

United Nations Statistics Division

UNEP

Convention on Biological Diversity

NORWEGIAN MINISTRY OF FOREIGN AFFAIRS

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Ecosystem accounting work in South Africa

Two sets of pilot accou

- National River Eco
- Land and Ecosy for one province

eports available at

http://biodiversityadvisor.sanbi.org

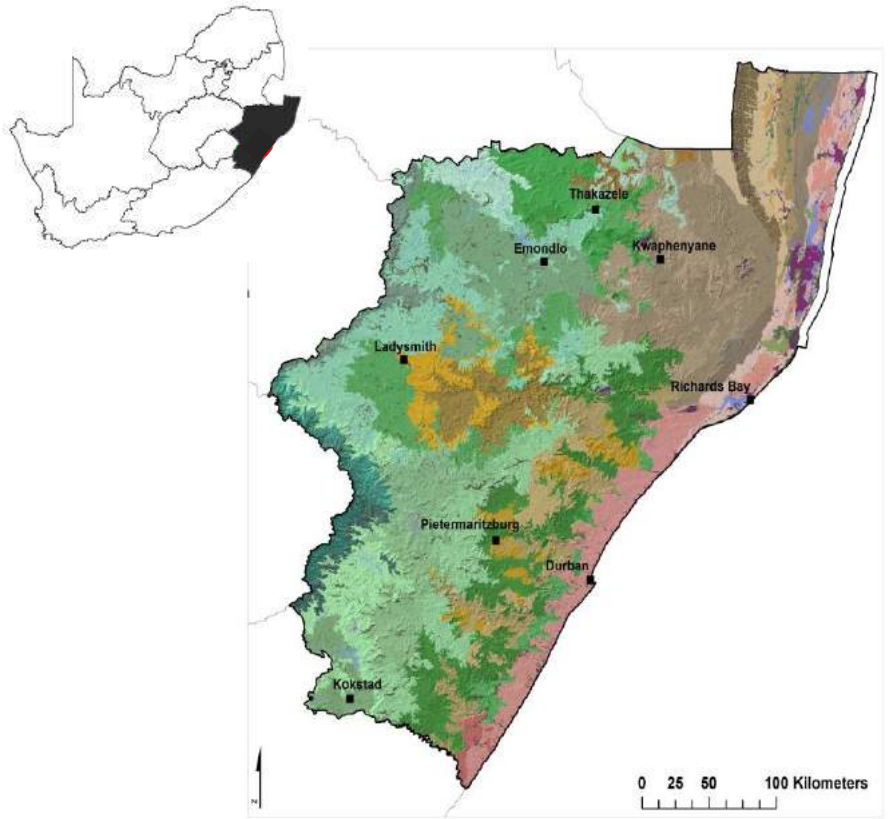
(under “Planning and Assessment” section)

Now building on this with EU-funded project
Natural Capital Accounting & Valuation of Ecosystem Services

Four promising policy applications for ecosystem accounts

- Spatial planning
  - Strategic national level
  - Municipal land use planning
- Water security
- Investment in ecosystem restoration
- Protected area expansion

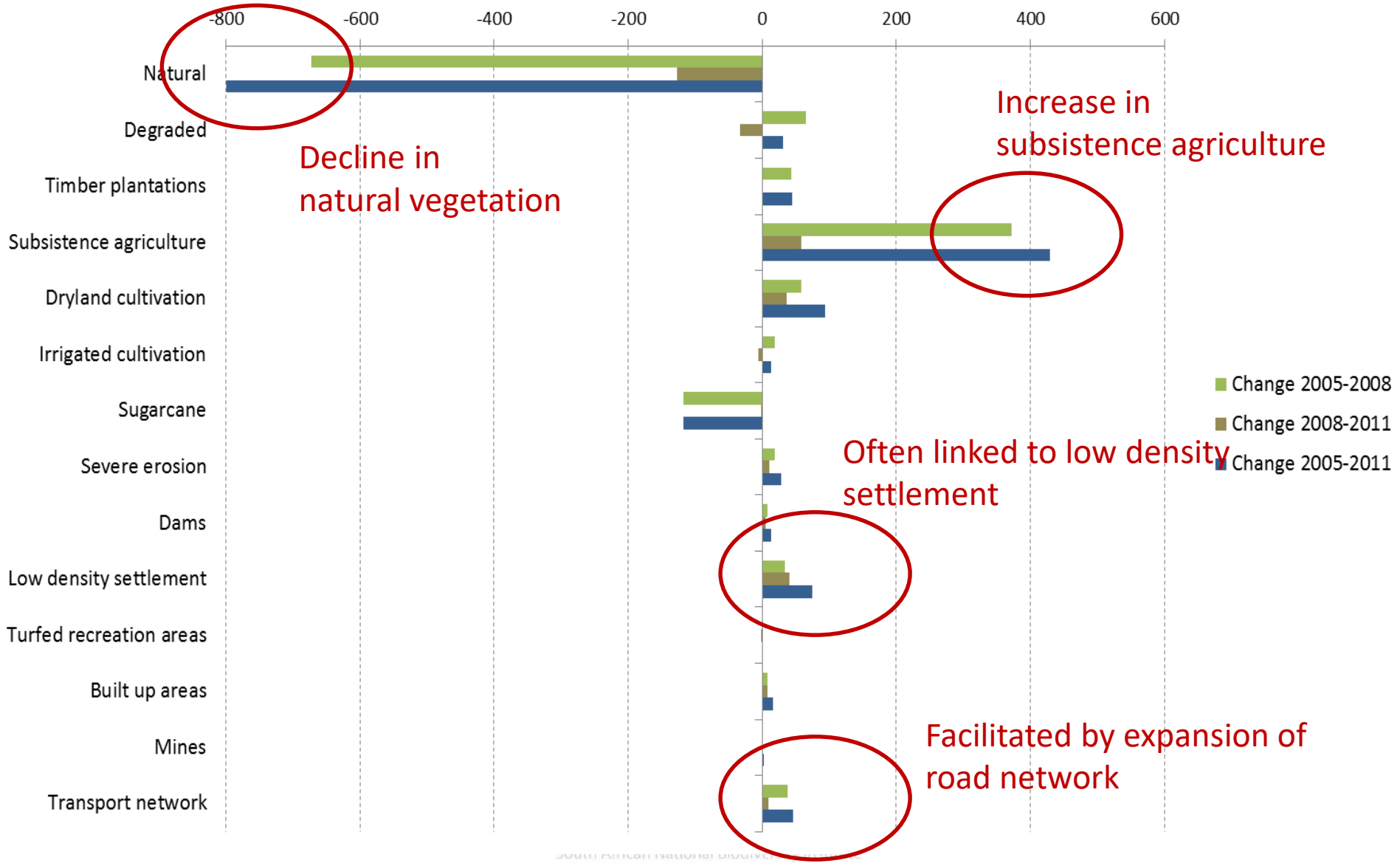
Pilot: Land and ecosystem accounts for KwaZulu-Natal province



Ecosystem types
(~100 – mapped at a fine scale)

Land cover
(2005, 2008, 2011)

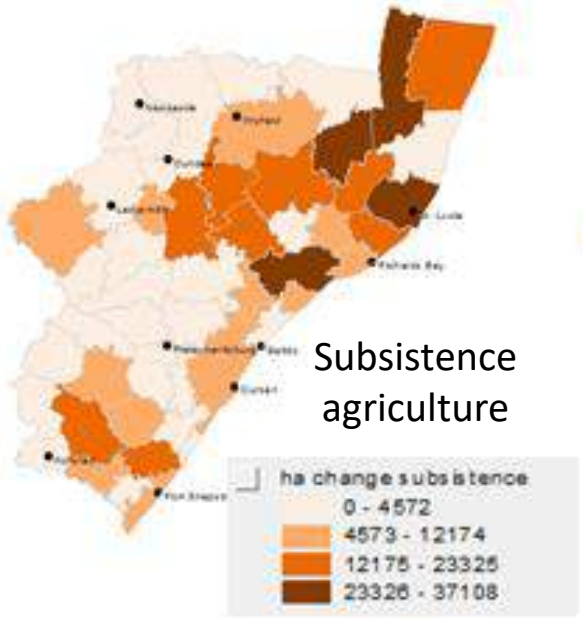
What key changes are taking place in the landscape?



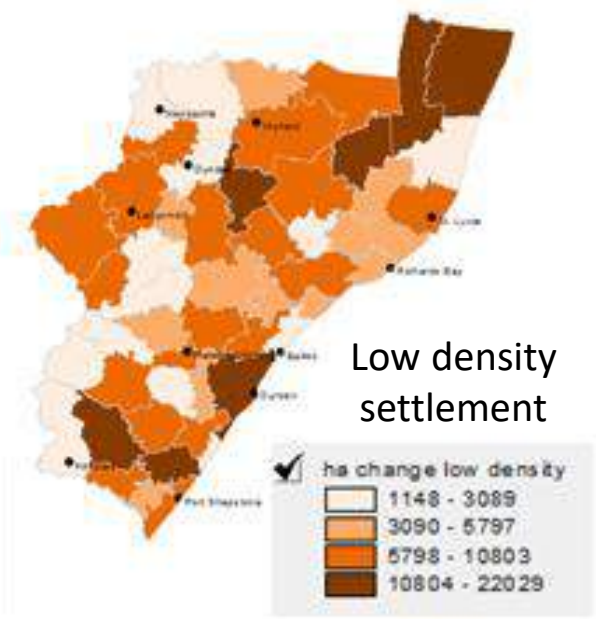
Subsistence agriculture

Photo: John Craigie, Ezemvelo KZN Wildlife

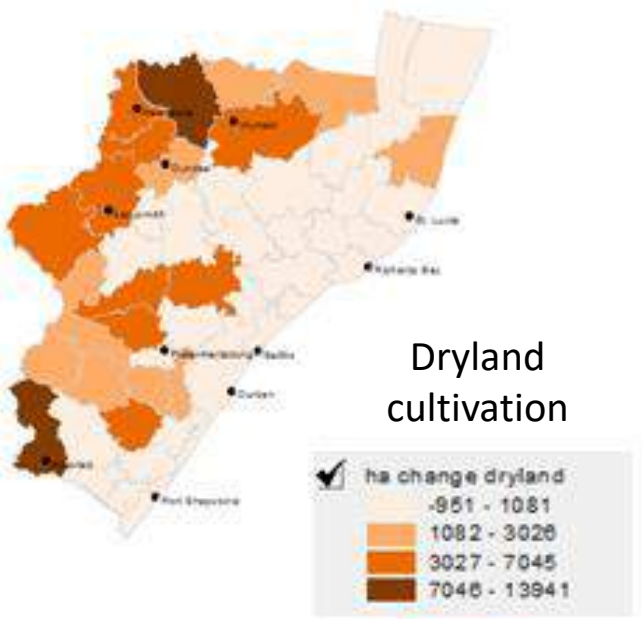
Which municipalities are most affected?



Subsistence agriculture

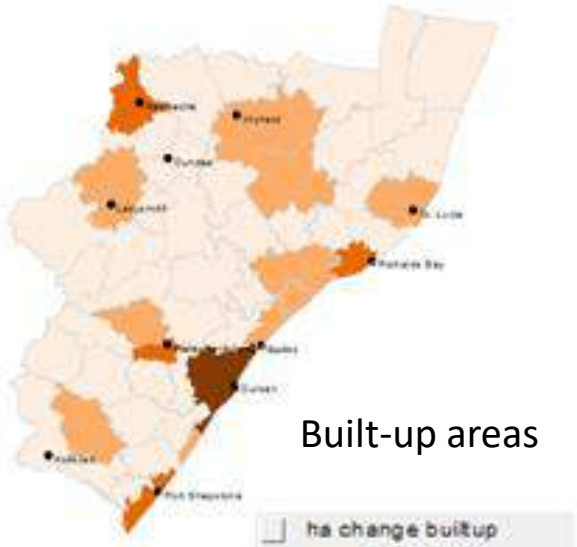


Low density settlement

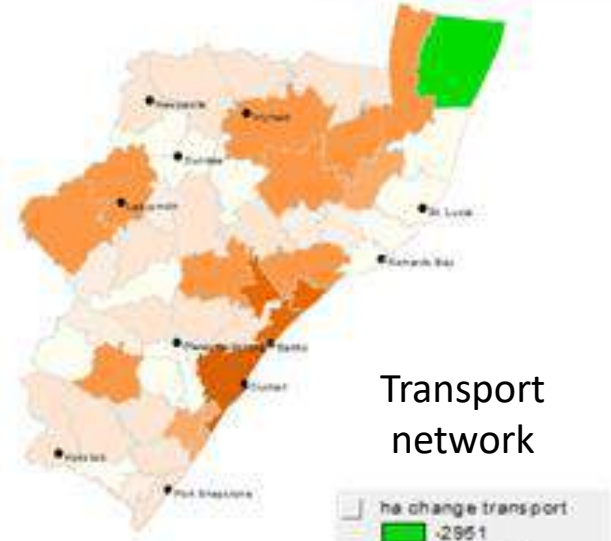


Dryland cultivation

Sugarcane

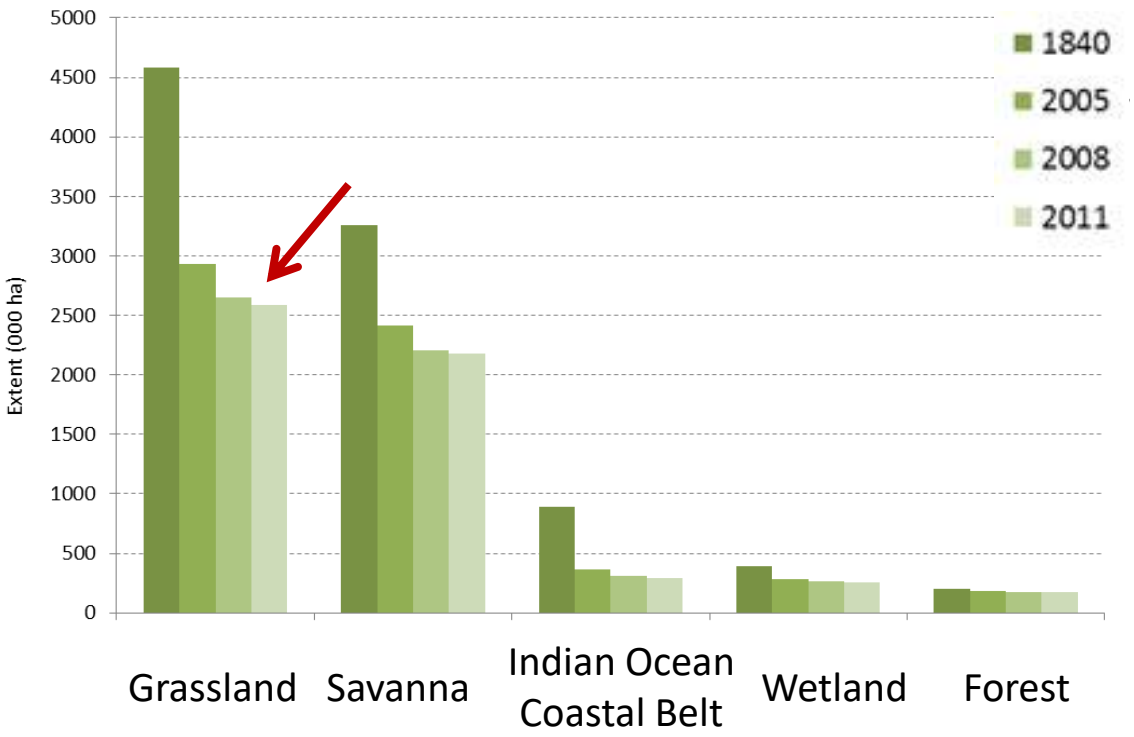


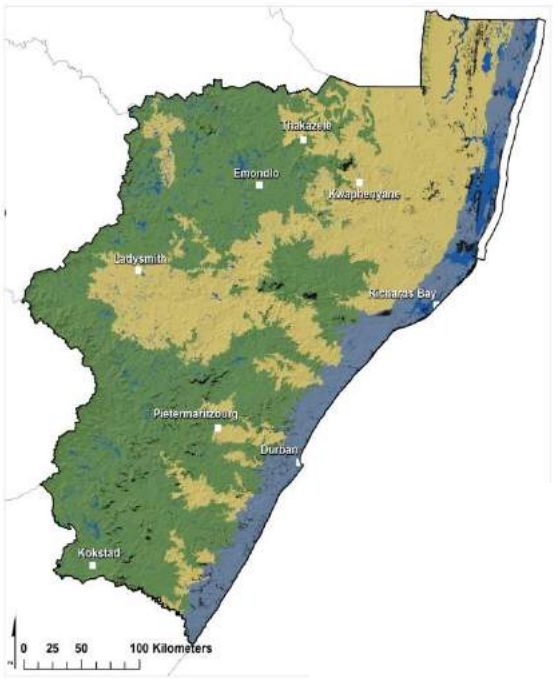
Built-up areas



Transport network

Which biomes are most at risk?





Biomes

- Forests
- Grassland
- Indian Ocean Coastal Belt
- Savanna
- Wetlands

- Largest decline in extent – Grassland biome
- Important role in water provision, also rangelands

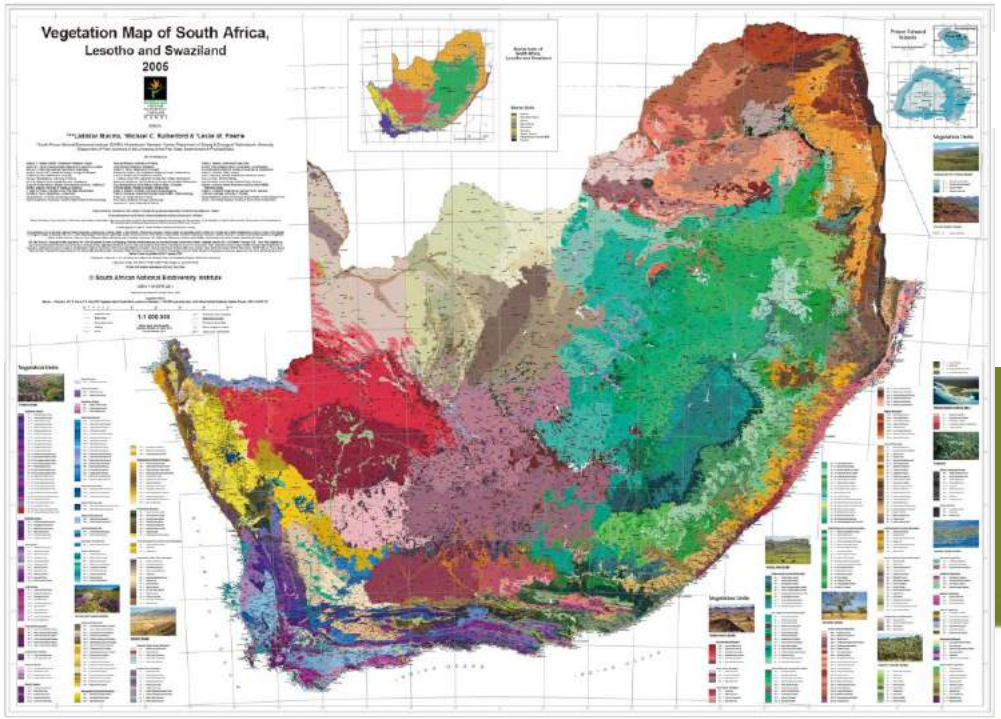
Which ecosystem types are most at risk?

A few examples – clear links to ecosystem services

Hectares		Increases (positive numbers) and decreases (negative numbers) from other land cover classes within each vegetat												
Vegetation type	**Biome**	Natural	Degraded	Fallow lands	Plantation	Subsistence agriculture	Dryland agriculture	Irrigated agriculture	Sugarcane	Rehabilitated mines	Severe erosion	Dams	Low density settlement	Turfed
Freshwater Wetlands	Wetland	-8336	1039	563	365	3104	2331	548	-1102	-193	-1873	2500	521	-59
Alluvial Wetlands	Wetland	-18363	-344	775	209	10066	5045	680	-2710	-1961	-7854	11512	1967	-68
Southern Drakensberg Highland Grassland	Grassland	-1053	895	0	50	1	30	0	0	0	-32	35	37	
Northern Drakensberg Highland Grassland	Grassland	-1744	1685	0	-13	-27	1	0	0	-68	64	-274	350	-2
Subtropical Dune Thicket	IOCB	-285	293	0	1	1	0	0	-11	0	0	-2	3	

- Conversion of **alluvial wetlands** (floodplains) and **freshwater wetlands** to subsistence agriculture, dryland cultivation and dams → Water quality impacts? Flood risk?
- Degradation of **Subtropical Dune Thicket** → Coastal storm risk?

Urgent priority: National land and ecosystem accounts



← National ecosystem types

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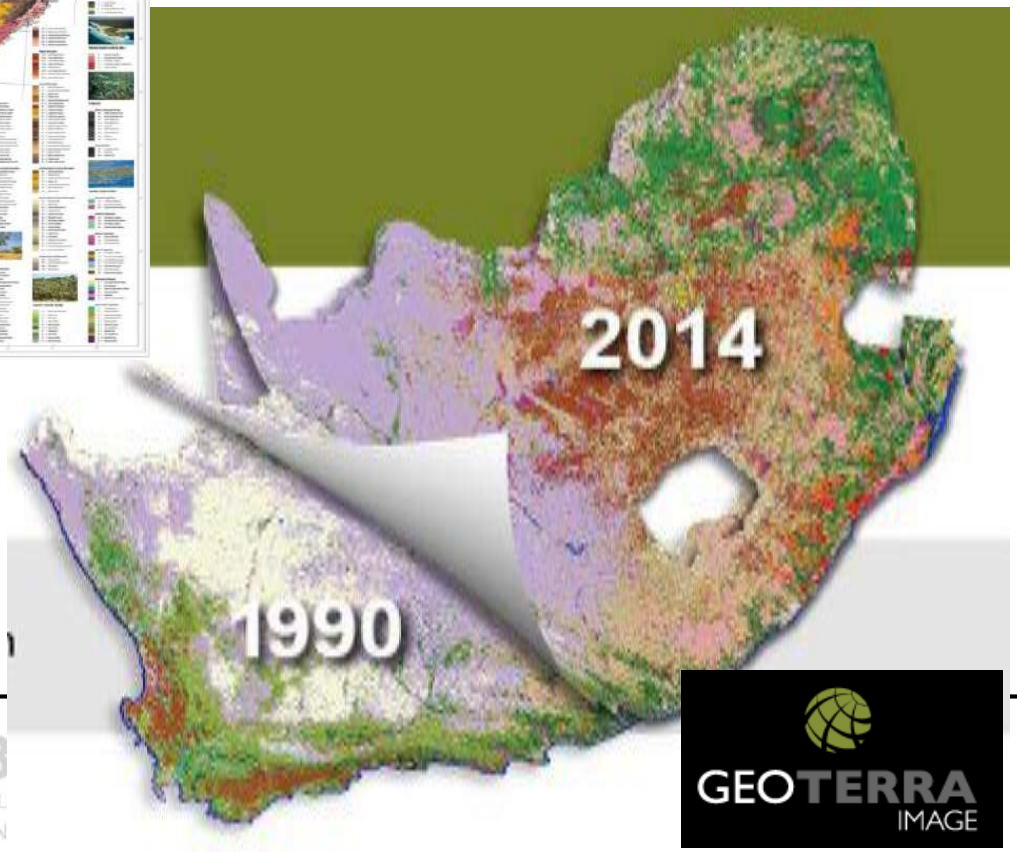

Time series national land cover now available →

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GEOTERRA IMAGE