

SANBI

Biodiversity for Life

South African National Biodiversity Institute



An initial assessment of biodiversity-related employment in South Africa

Mandy Driver & Fulufhelo Mukhadi
with acknowledgements to Morne Oosthuizen

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Objectives

- Establish a framework for defining biodiversity-related employment – Headline indicator of benefits of biodiversity
- Establish a systematic, repeatable method for measuring biodiversity-related employment
- Quantify current biodiversity related employment to establish a baseline

Alignment of the research to NBRES strategic objectives and priorities

NBSAP Strategic Objective and associated outcomes	Priorities to address the objective	Urgency of the evidence needs	
	<ul style="list-style-type: none"> the impact of allowing certain high intensity tourism activities. 		
	The impact of climate change mitigation and adaptation strategies: <ul style="list-style-type: none"> on people and organisations; on monetary savings; on energy/water consumption. 	□	□
	Incorporate new evidence into existing management plans: <ul style="list-style-type: none"> promote new protected areas for Strategic Water Source areas and the last remaining free-flowing rivers; Incorporate freshwater planning principles into the future design and expansion of national parks. 		□
1.4. Evidence is used to review specific biodiversity management plans	Evidence requirements for Biodiversity Management Plans for: <ul style="list-style-type: none"> African lion White rhino Bearded vulture Cycad 		□
Strategic Objective 2. Investments in ecological infrastructure enhance resilience and ensure benefits to society		Within 1 year	Within 2-5 yrs.
2.1. Interventions to mitigate biodiversity loss are evaluated	Assessment / evaluation of most effective interventions to mitigate biodiversity loss to <ul style="list-style-type: none"> Pollution (stormwater runoff, solid waste, air quality, recycling) 		□
2.2. The economic benefits of biodiversity infrastructure and interventions are understood	Assessing the contribution of investments in ecological infrastructure to jobs and livelihood.		□

Alignment of the research to SDGs

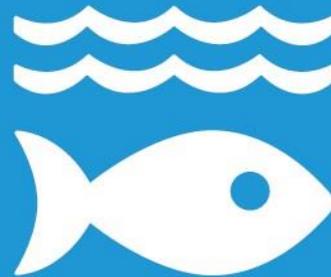


SUSTAINABLE DEVELOPMENT GOALS
17 GOALS TO TRANSFORM OUR WORLD

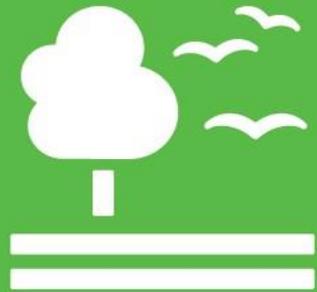
8 DECENT WORK AND
ECONOMIC GROWTH



14 LIFE
BELOW WATER



15 LIFE
ON LAND



Conceptual framework

Biodiversity-related employment

A. Conserving biodiversity
(sectors/activities that contribute actively to conserving or managing biodiversity)

1. Protecting and managing biodiversity assets

2. Maintaining and restoring ecological infrastructure

3. Research and professional services

B. Using biodiversity
(sectors/activities that depend directly on biodiversity)

4. Non-consumptive use of biodiversity

5. Extractive use of biodiversity that can be sustainable if appropriately managed

*Ideally we would like to include only those jobs that are related to sustainable extraction of biodiversity,

Method: measuring biodiversity-related employment

- 3 approaches pursued:
 - **Administrative data** (e.g. annual reports, registers, permits)
 - **National survey data – Quarterly Labour Force Survey** (from Stats SA)
 - **Existing sector estimates** (e.g. industry/sector researches, reports)

Results: comparing methods

BDE category	Administrative data	Existing sector estimates	QLFS by industry	QLFS by occupation
A1 Protecting & managing biodiversity assets	A1-2 20 007		9 000	21 000
A2 Restoring & maintaining ecol. infrastructure	36 420		1 000	3 000
A3 Research & professional services	4 650		38 000	A3 14 000
A: Conserving biodiversity	61 077	--	48 000	37 000
B4 Non-consumptive use of biodiversity			B4 86 000	36 000
B5 Extractive use of biodiversity		B5 248 930	15 000	89 000
B: Using biodiversity	--	248 930	101 000	125 000
Total	61 077	248 930	149 000	163 000

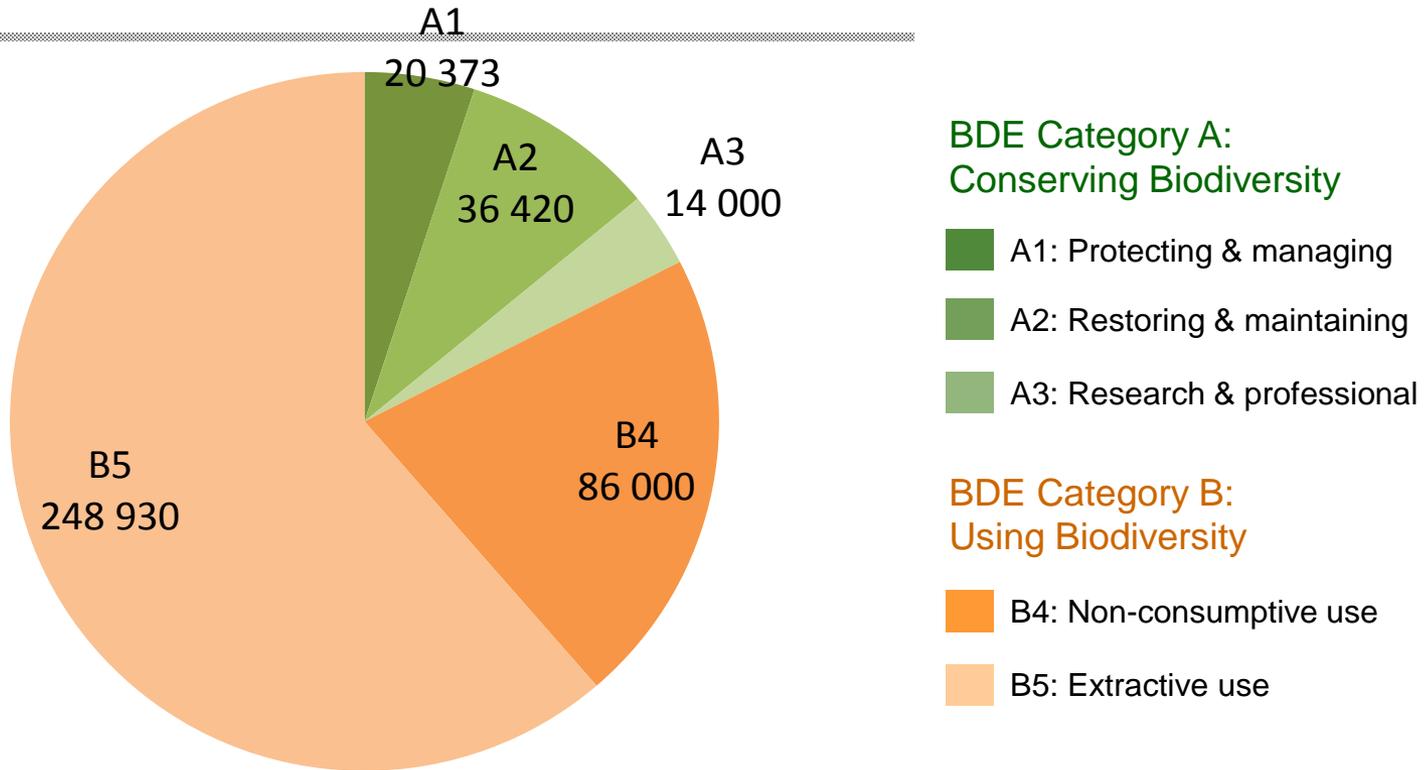
Includes:

65 000 jobs in game ranching & hunting
133 000 jobs related to traditional medicine

Made up mainly of:

59 000 jobs in hotels, camping sites & other short stay accom
25 000 jobs in sporting & other recreational activities

Overall estimate for 2014: 406 000 jobs

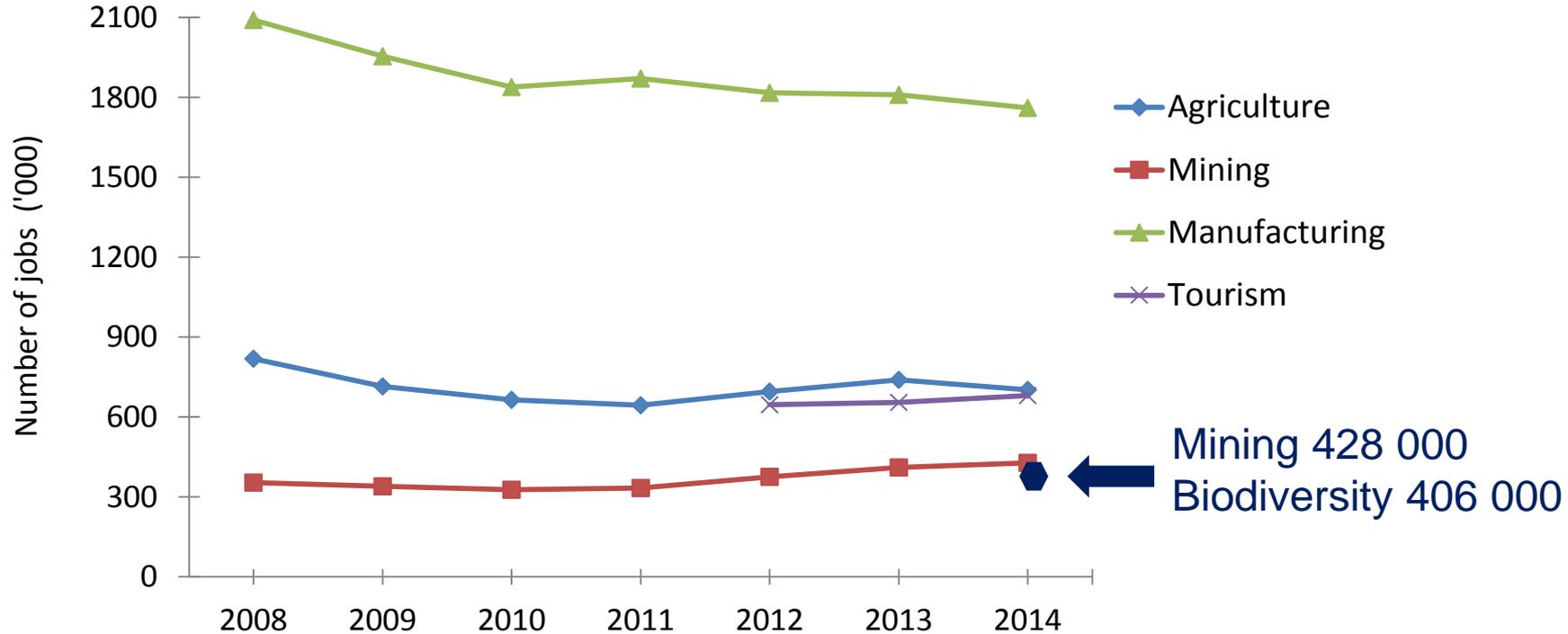


Ratio of Category A to Category B jobs is 1:5

For every job dedicated to conserving biodiversity, there are at least 5 jobs that depend directly on biodiversity

Comparison with other sectors

Employment trends by sector in South Africa, 2008 – 2014



Key policy implications

- For every job dedicated to conserving biodiversity, there are more than five jobs that depend directly on biodiversity
- Making the case for biodiversity
 - Investment in ecological infrastructure create jobs, support livelihood and contributes to economy
 - Investment in conserving biodiversity assets and ecological infrastructure (Category A) is worth it – public goods that can be leveraged for socio-economic development
 - Need for restoring and maintaining ecological infrastructure is ongoing – embed these jobs in e.g. municipalities, provinces, CMAs
- Many of these jobs (in A1, A2, B4, B5) are likely to be located outside major urban centres
→ potential to support rural development
- Many of the sub-sectors are labour-intensive, with substantial proportion of low-skilled jobs
→ contribute to labour absorption
- Greater potential for growth in Category B Using Biodiversity than traditional sectors such as manufacturing, agriculture and mining?

Way-forward

- Further work to identify additional sectors or sub-sectors for which estimates are available or could be developed would be worthwhile
- More comprehensive Category B estimates
 - Research to develop further sub-sector estimate
 - Collaboration with Stats SA e.g. to use QES data to confirm existing sector estimates
- Update the figures for benefits sharing component of the NBA to be released in 2018

Thanks

For any query please contact Fulufhelo
Mukhadi at f.mukhadi@sanbi.org.za

Descriptions of categories

Conserving Biodiversity

- **A1 Protecting and managing biodiversity assets**
 - Activities/jobs directly involved in conservation of the country's biodiversity assets, both ecosystems and species
- **A2 Restoring and maintaining ecological infrastructure**
 - Activities/jobs aimed at restoring the functioning of ecosystem to improve their ability to generate and deliver valuable services to people
- **A3 Research and professional services related to biodiversity**
 - Activities/jobs that contribute to knowledge of biodiversity, forming the foundation for effective management of biodiversity as well as innovation in the management and sustainable use of biodiversity

Using Biodiversity

- **B4 Non-consumptive use of biodiversity**
 - Activities/jobs that depend on the enjoyment of biodiversity but do not involve extraction or consumption of the underlying biodiversity asset
- **B5 Extractive use of biodiversity**
 - Activities/jobs that depend on the direct extraction or consumption of biodiversity or renewable resources, either for profit or subsistence. Can, at least in principle, be compatible with the long-term persistence of biodiversity if appropriately managed.