

National Indicator Initiatives in South Africa: Links to SEEA and SDGs



Expert Meeting on SEEA Indicators for SDGs and Post-2020 Agenda for Biodiversity
Cambridge, 12-14 February 2019

Natural Capital Accounting & Valuation of Ecosystem Services



Five pilot countries: Brazil, China, India, Mexico, **South Africa**

Building on previous project: Advancing Natural Capital Accounting (ANCA), 2014-2015



United Nations
Statistics Division



Convention on
Biological Diversity



NORWEGIAN MINISTRY
OF FOREIGN AFFAIRS

SANBI

Biodiversity for Life

South African National Biodiversity Institute



STATS SA

STATISTICS SOUTH AFRICA



our future through science



Conservation, Partnerships & Ecotourism



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA



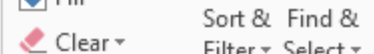
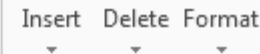
environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Overview

- Review of national indicator initiatives and links to SEEA
- Progress in reporting on SDG indicators
- Accounts to be produced in NCA&VES project
- National indicators that could be relevant to the global process

Reviewed 16 national indicator initiatives / frameworks using WCMC template



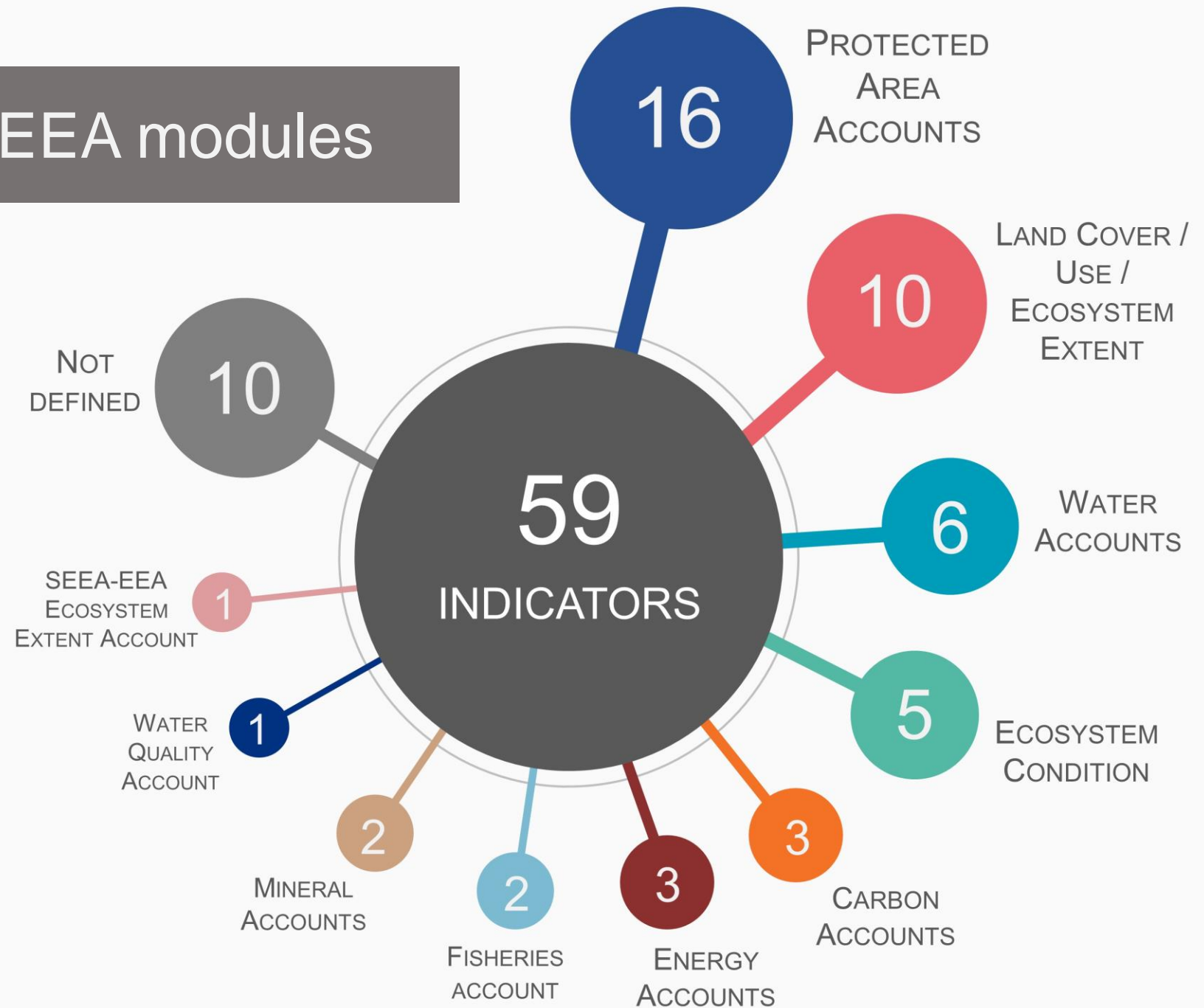
Editing

59 indicators identified:
filled in details for all of them...

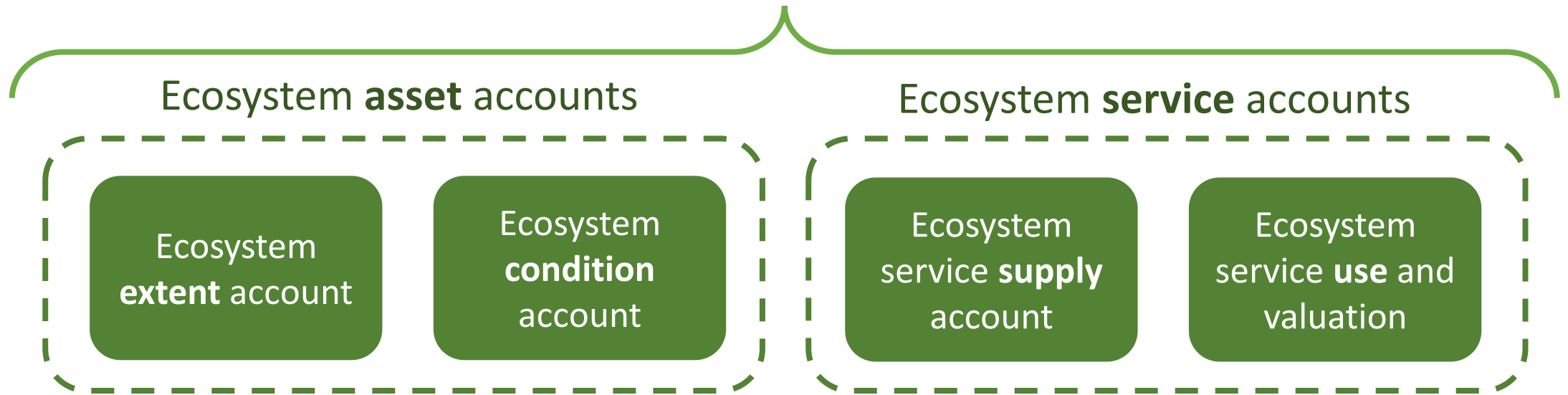
Indicators are easy and fun!



Links to SEEA modules



Core set of SEEA ecosystem accounts



Supplementary accounts



Sustainable Development Goals

Indicator Baseline report 2017 – South Africa



THE SOUTH AFRICA I KNOW, THE HOME I UNDERSTAND

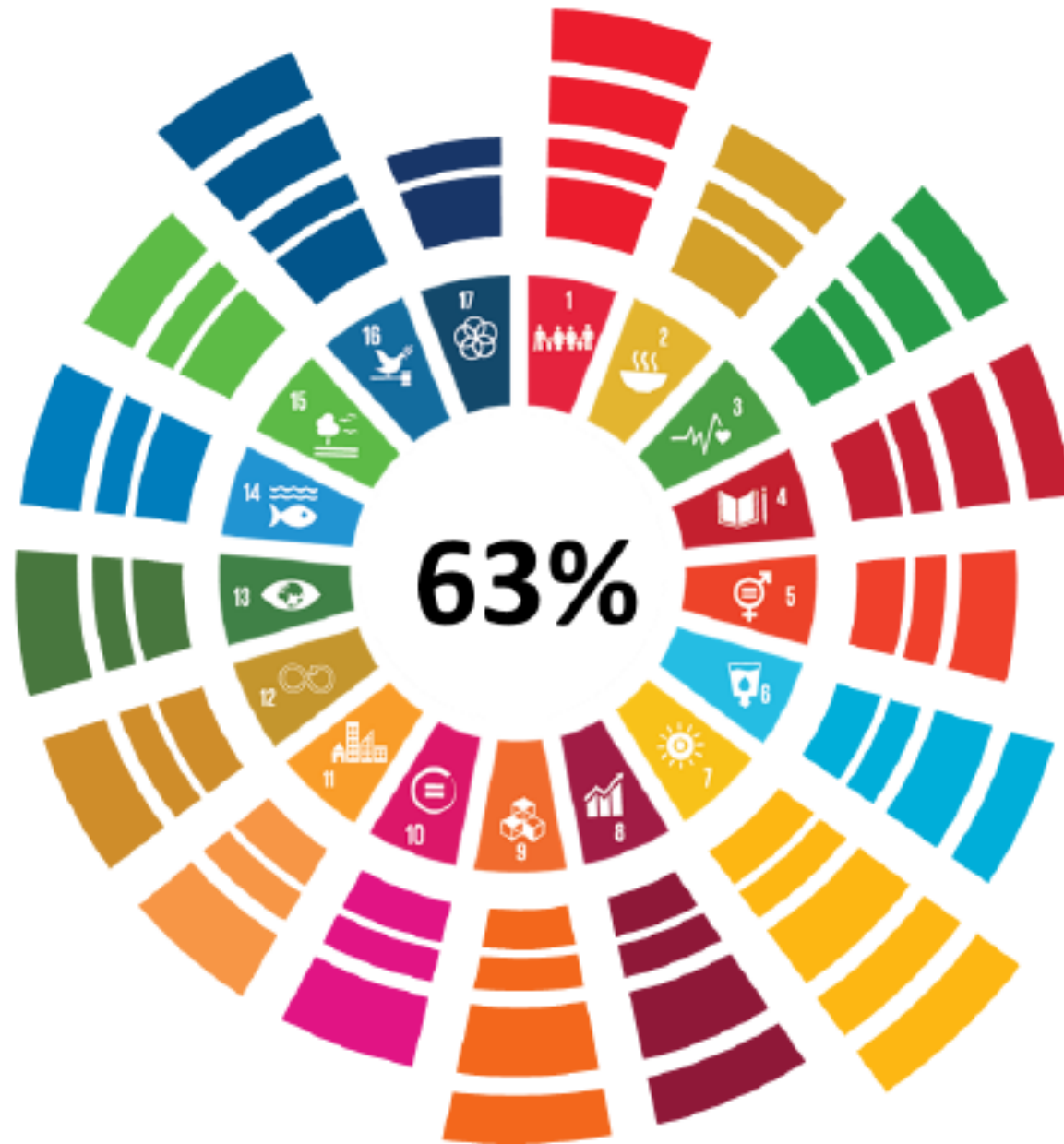
 **STATS SA**
STATISTICS SOUTH AFRICA



South Africa's Baseline Report on SDG Indicators, 2017

NOW:

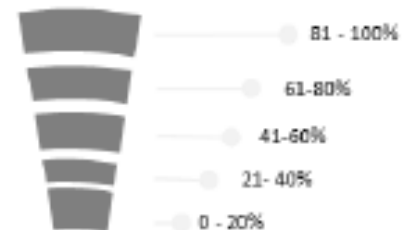
- Development of first full-scale country report underway
- Led by Stats SA
- Series of Sectoral Working Groups



Data availability for
Tier I and Tier II
indicators
in Baseline Report

98 out of 156
indicators reported on,
some domesticated

Data Availability



INDICATOR 14.5.1D: Percentage of marine and coastal ecosystem types that are well-represented in protected areas



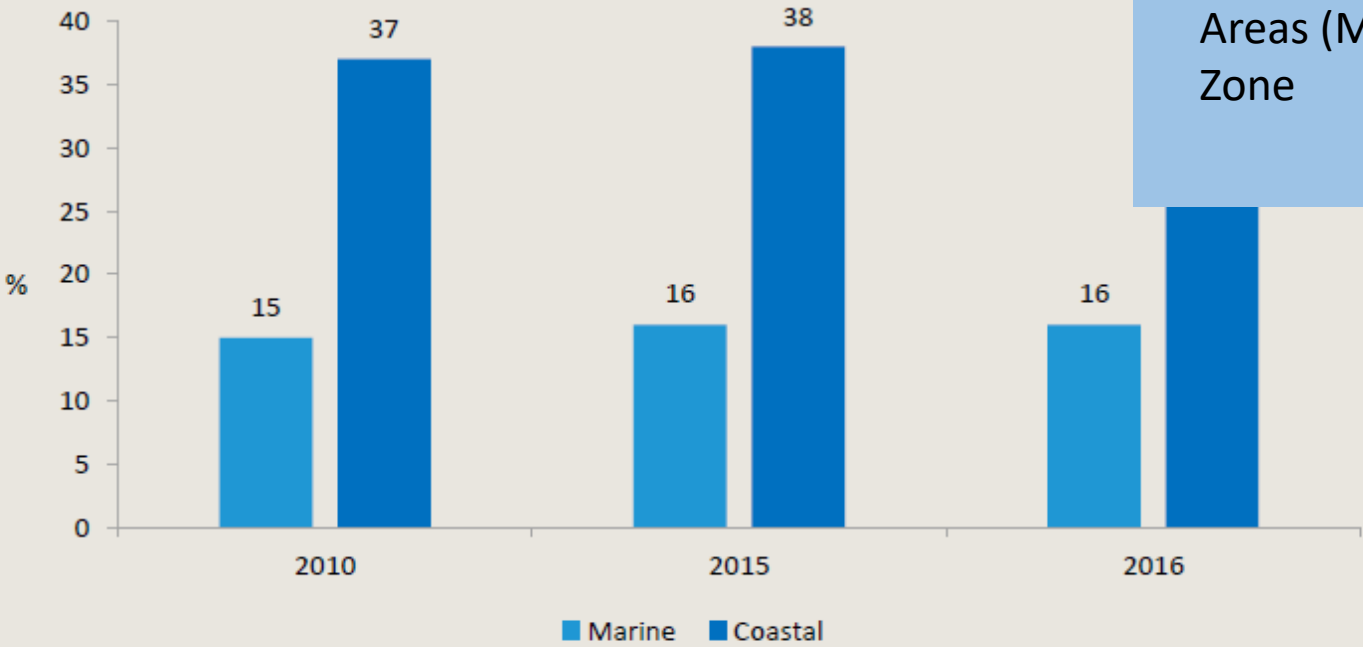
Indicator definition and method of computation (MoC)

DEFINITION: Percentage of marine (benthic and pelagic) and coastal (including estuaries) ecosystem types which are well protected (defined as- those ecosystem types for which the full biodiversity target falls within a protected area). Targets are set at 20% for marine and coastal ecosystem types.

MoC: The number of well-protected ecosystem types divided by the total number of ecosystem types multiplied by 100.

**Baseline indicator values: Coastal: 38%
Marine: 16%**

Percentage of marine and coastal ecosystems that are well protect



INDICATOR 14.5.1D: Percentage of marine and coastal ecosystem types that are well-represented in protected areas

INDICATOR 14.5.1A: South African Marine Protected Areas (MPA) as a percentage of total Exclusive Economic Zone

INDICATOR 15.2.1D: Percentage of the natural forest and woodland biomes within formally proclaimed protected areas

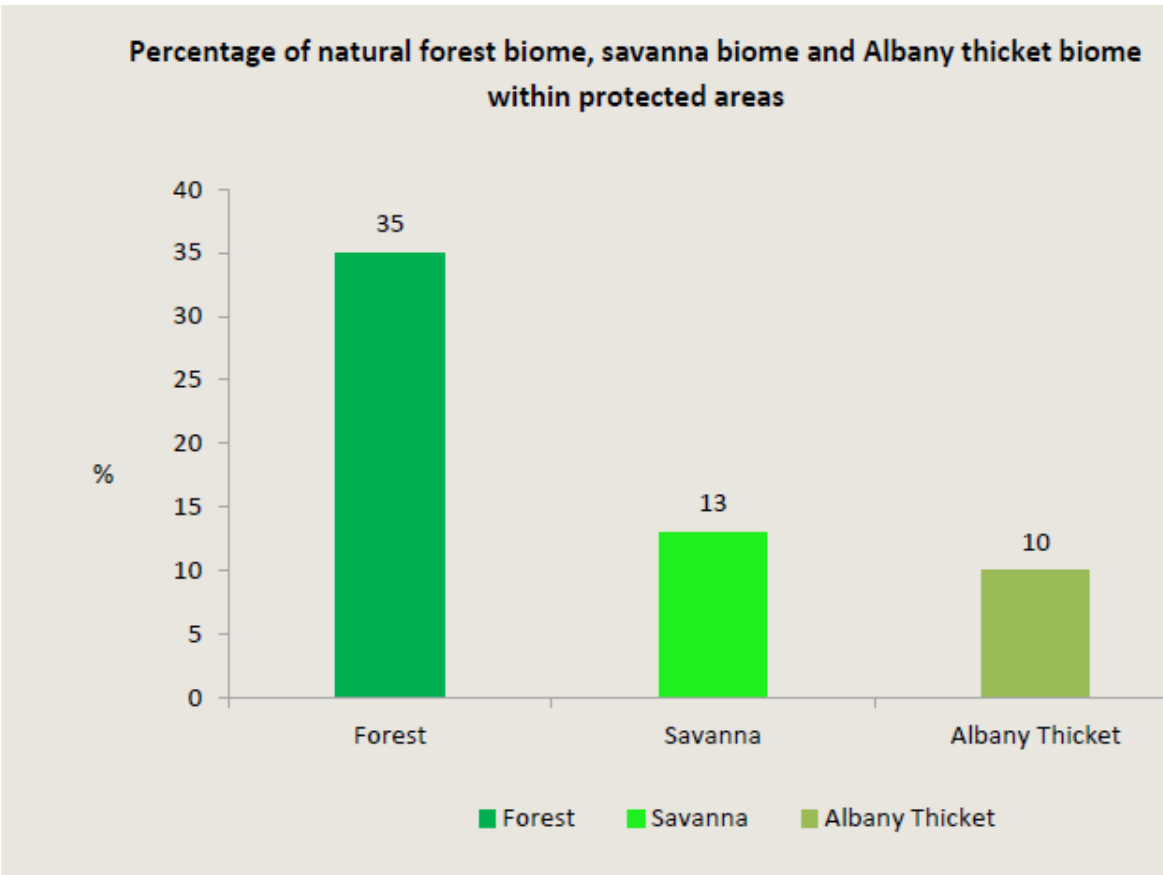


Indicator definition and method of computation (MoC)

DEFINITION: This indicator provides the percentage of the natural forest biome, savanna biome and Albany thicket biome (the three forest and woodland biomes) within formally proclaimed protected areas.

MoC: The hectares of formally proclaimed protected areas for each forest or woodland biome divided by the total area of each biome multiplied by 100.

Baseline indicator values:	Natural forest:	35%
	Savanna:	13%
	Albany thicket:	10%



INDICATOR 15.1.1D: Natural forest and woodland area as a percentage of total land area

INDICATOR 15.1.2: Percentage of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem types

INDICATOR 15.2.1D: Percentage of the natural forest and woodland biomes within formally proclaimed protected areas

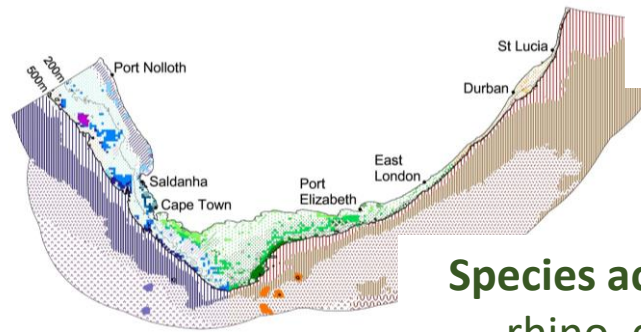
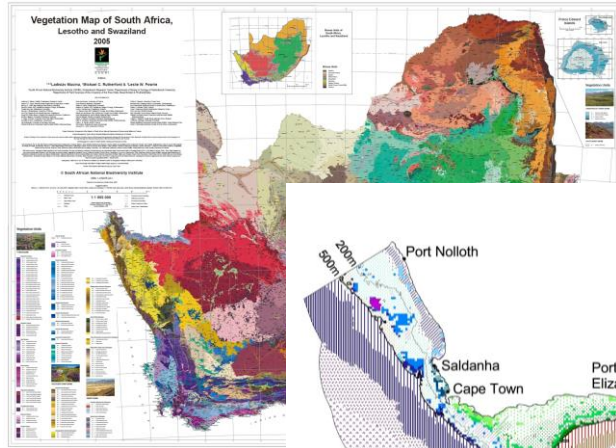
INDICATOR 15.4.1D: Percentage of mountain ecosystem types that are well-represented in protected areas

INDICATOR 15.a.1a: Official development assistance on conservation and sustainable use of biodiversity and ecosystems

Accounts to be produced in NCA&VES Project

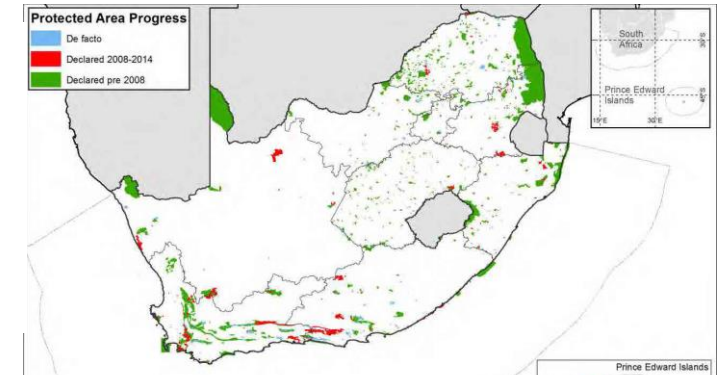
National

National
ecosystem
asset
accounts –
terrestrial &
marine,
extent &
condition

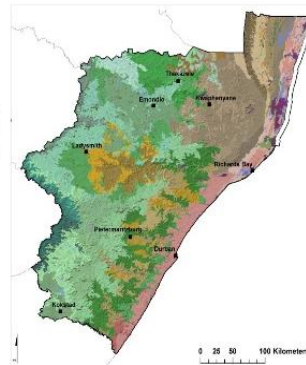
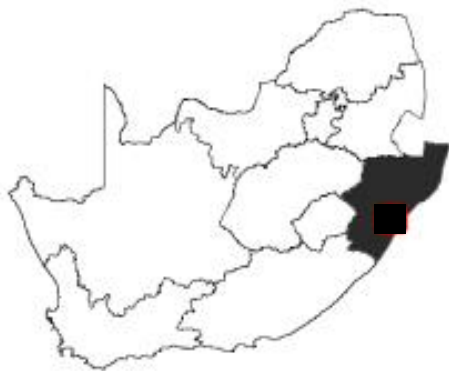


Species accounts –
rhino, cycads

Protected
area
accounts –
terrestrial &
marine



Sub-national



KZN: Full suite of
ecosystem asset
and ecosystem
service accounts

City-regions: land and
ecosystem accounts for
selected metros



Which national indicators may be relevant for the global process?

- Ecological Condition Index
- Protection Index

National River Ecosystem Accounts: Extent and condition of river ecosystem assets (done in ANCA project in 2014)

Based on data from two
detailed national
assessments by
Department of Water
& Sanitation

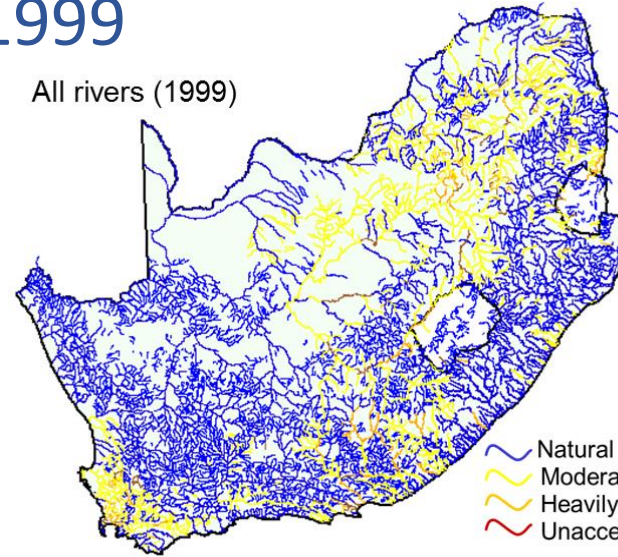


water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

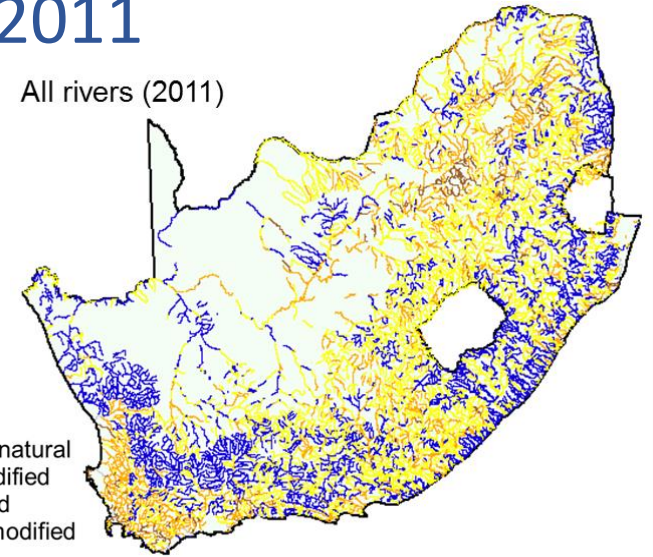
1999

All rivers (1999)



2011

All rivers (2011)



— Natural or near-natural
— Moderately modified
— Heavily modified
— Unacceptably modified

Ecological condition
indicators

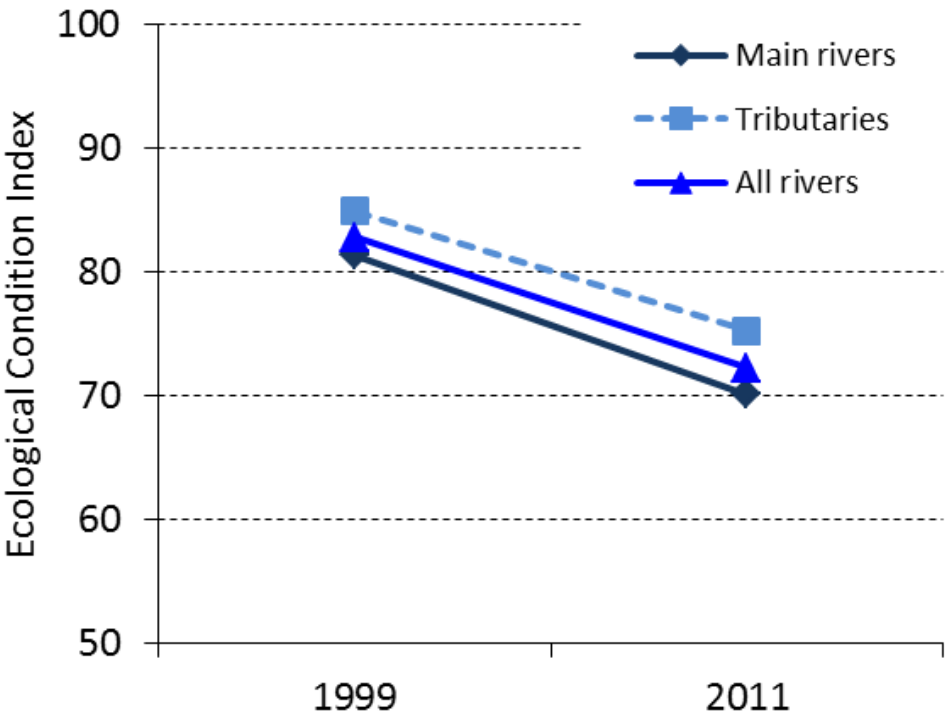
- Flow
- Water quality
- Instream habitat
- Riparian habitat

Aggregated
ecological
condition
category

Ecological
Condition
Index

Highest level summary of the Ecological Condition Account:

	Main rivers	Tributaries	All rivers
1999	81.3	84.9	82.8
2011	70.1	75.2	72.2
Change between 1999 and 2011	-11.2	-9.7	-10.6

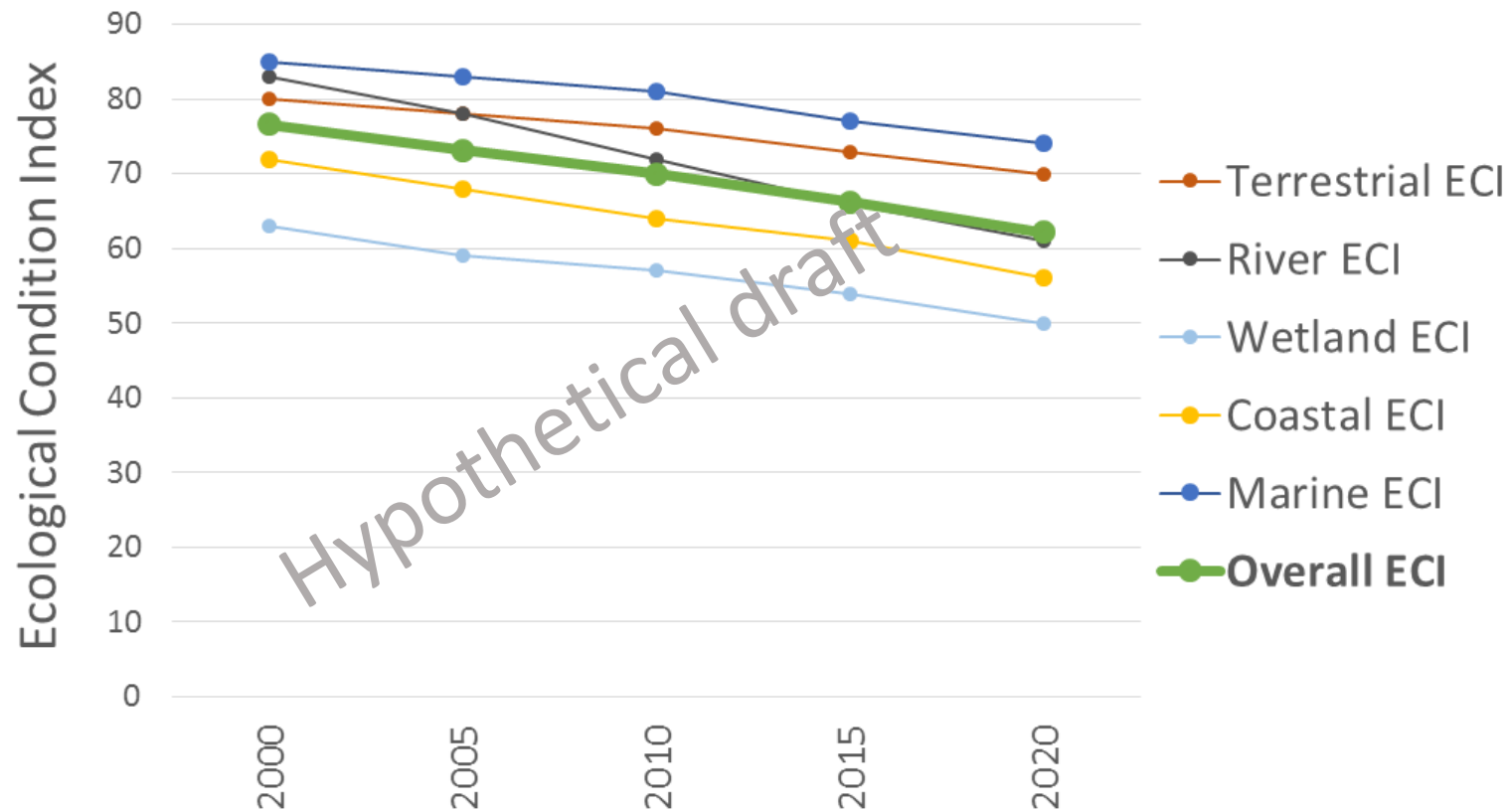


Overall
10% decline in
ecological condition
of rivers
1999 - 2011

Information for
national policies,
such as
**National Water
& Sanitation
Master Plan**

Now working towards an **Ecological Condition Index** for all realms, from terrestrial through to offshore marine

Hypothetical Ecological Condition Index for South Africa
(to be further populated in 2019)



ECI could be compared
against
critical thresholds for
ecological functioning,
and could be used to
set targets

National Development

ENVIRONMENTAL SUSTAINABILITY BIODIVERSITY

Development Indicators

85. MARINE BIODIVERSITY PROTECTION INDEX

Goal	To achieve the National Development Plan (NDP) - related national target contained in the Outcome 10 delivery agreement which requires the expansion of the continental mainland marine conservation estate from 4 710 km ² (0.4% of EEZ) (the 2010 value) to 32 156 km ² (3% of EEZ) by 2019 and the international Aichi Biodiversity Targets that requires that at least 10% of specified coastal and marine areas are conserved and properly managed by 2020.
Analysis	At present, South Africa is falling short of its national target:

ENVIRONMENTAL SUSTAINABILITY BIODIVERSITY

Development Indicators

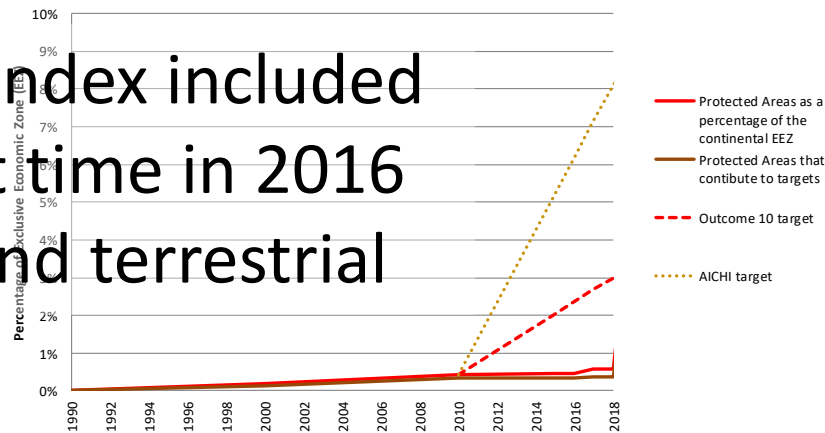
84. TERRESTRIAL BIODIVERSITY PROTECTION INDEX

Goal	To achieve the national target contained in the Outcome 10 delivery agreement which requires the expansion of the conservation estate to 12% by 2019 and the international Aichi Biodiversity Targets that
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Includes a focus on **representivity**, not just extent of PAs
 → How well does the protected area network represent different ecosystem types?

MARINE BIODIVERSITY PROTECTION

Marine Biodiversity Protection Index



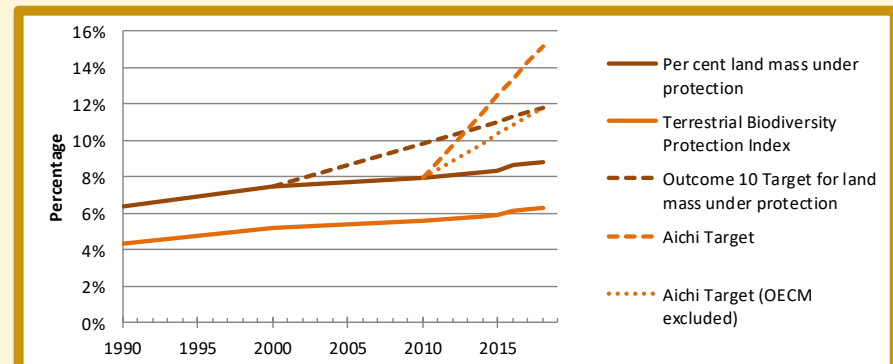
Definition

In previous years, protection level was measured by simply summing the total area of closed MPAs (where the harvesting of marine resources are prohibited) and open MPAs (where harvesting is allowed under a valid permit). Both of these values were then divided both by the size of the EEZ. By doing so we could determine the proportion of the EEZ that falls under closed MPAs and open MPAs. Unfortunately this was a rather simplistic method to determine the marine protection level and does not consider representivity. This is where the Marine Biodiversity Protected Index (MBPI) comes in. South Africa's Continental Mainland Exclusive Economic Zone (EEZ) is divided into various ecosystem types. Experts have set a biodiversity target for each marine ecosystem type. The MBPI is a new tool for measuring protection level in the marine environment. It looks at each marine ecosystem type that is protected (at each time point) and sums up their extent (area in km²). Once the biodiversity target has been reached for a particular ecosystem type, additional hectares will not added to the Index. MBPI and the total Marine Protected

simple area measure and will only improve if new protected areas include currently under-represented ecosystem types. There has been an encouraging recent upward trend in the Terrestrial Biodiversity Protection Index. Nevertheless, the current 6.3% value for the Terrestrial Biodiversity Protection Index still lags the required necessary 11.8% for 2018 in order to be on track to achieve the Outcome 10 and Aichi

TERRESTRIAL PROTECTED AREAS METRICS

Measure/Index	1990	2000	2010	2014	2015	2016	2017	2018	2019	
Per cent land mass under protection	6.4%	7.4%	7.9%	8.3%	8.3%	8.6%	8.7%	8.8%		
Outcome 10 Target for land mass under protection		7.4%	9.8%	10.8%	11.0%	11.3%	11.5%	11.8%	12.0%	
Terrestrial Biodiversity Protection Index	4.4%	5.2%	5.6%	5.8%	5.9%	6.2%	6.2%	6.3%		
Aichi Target			7.9%	11.6%	12.5%	13.4%	14.3%	15.2%	16.1%	
Aichi Target (OECM excluded)			7.93%	9.86%	10.34%	10.82%	11.30%	11.79%	12.27%	



Definition

The Terrestrial Biodiversity Protection Index is a biodiversity related indicator that measures how extensive South Africa's protected areas are, and how well they represent our ecosystem types.

Protection Index included
 for the first time in 2016
 - marine and terrestrial



THANK
YOU