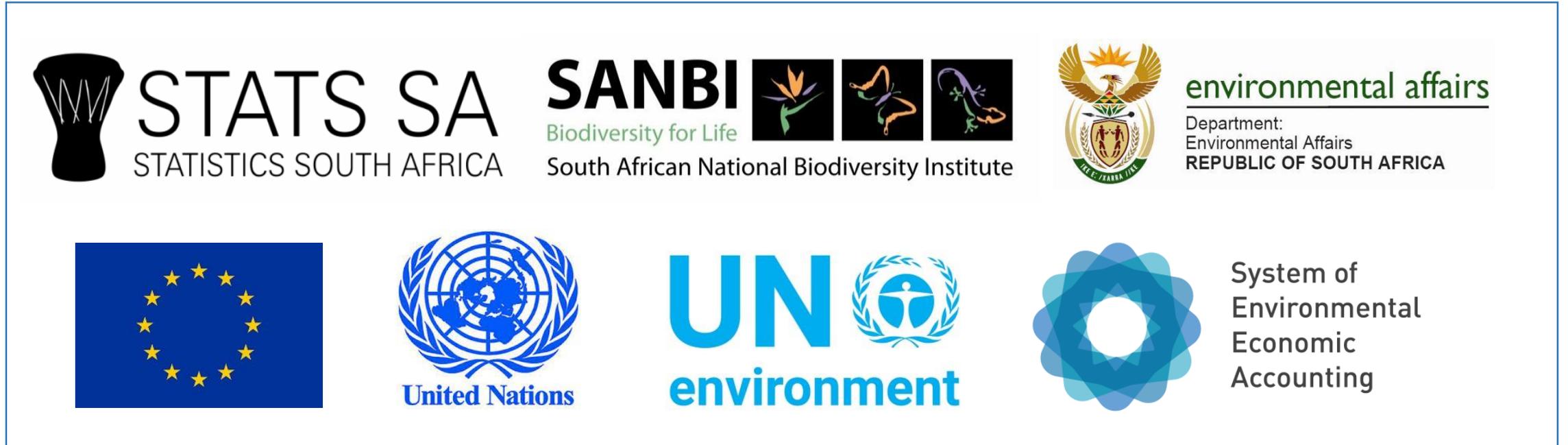


# National Indicator Initiatives in South Africa: Links to SEEA and SDGs



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**

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**CSIR**

our future through science



**EZEMVELO  
KZN WILDLIFE**

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

Priority	National framework / Initiative	Source of indicators proposed	Source of indicator set (number; with URL)	Web link
High	ANCA accounts for KZN	Land and ecosystem accounts	Province of KwaZulu-Natal (KZN) in South Africa	<a href="http://www.kznparks.com">http://www.kznparks.com</a>
High	National Biodiversity Assessment (NBA)	National Biodiversity Assessment	The National Biodiversity Assessment for South Africa	<a href="http://biodiversity.gov.za">http://biodiversity.gov.za</a>
High	SDG baseline reporting	Sustainable Development Goals	Indicators reported on in the SDG Baseline Report	<a href="http://www.sdg.gov.za">http://www.sdg.gov.za</a>
High	Mid-Term Strategic Framework (MTSF)	MTSF A	The National Development Plan (NDP) 2030	<a href="https://www.ndp.gov.za">https://www.ndp.gov.za</a>
High	National Water and Sanitation Master Plan: CDMP	Sanitation Master Plan	It sets out prioritised actions and investments	<a href="http://www.water.gov.za">http://www.water.gov.za</a>
Med	Water RDI Roadmap	Water Research Commission, Department of Water and Sanitation	Indicators relate to the National Water Research Institute	<a href="http://www.wrc.org.za">http://www.wrc.org.za</a>
Med	National Biodiversity Strategy and Action Plan	National Biodiversity Strategy and Action Plan	Indicator set in the NBSAP draws on indicators from various sources	<a href="https://www.ndp.gov.za">https://www.ndp.gov.za</a>
Med	State of Environment (SoE) Indicators	State of Environment Indicators	SoE is in the process of being reviewed. Uncertain if indicators will be updated	<a href="http://www.environment.gov.za">http://www.environment.gov.za</a>
High	Presidency's National Development Indicators	Department of Planning, Monitoring and Evaluation	National Development Indicators, developed by the Presidency	<a href="http://www.ndp.gov.za">http://www.ndp.gov.za</a>
Med	Department of Energy's National Energy Efficiency Scorecard	Department of Energy	Post 2015 National Energy Efficiency Scorecard	Energy indicators sourced from DoE's State of Energy Report
High	National Protected Areas Strategic Framework	Department of Environmental Affairs (2016) National Protected Areas Strategic Framework	Table 11 sets out the implementation plan for protected areas	Not finalized
Med	DEA Air Quality Indicators	DEA: National Environmental Management: Air Quality Act	Air quality indicators sourced from several departments	Various sources
High	NCA&S National Accounts	National Accounts	Based on the methods developed in KZN in the National Accounts	At least the three indicators developed in KZN are being reviewed
Med	SEEA Core Accounts	Stats SA	Mineral accounts for SA have been published	<a href="http://www.stats.gov.za">http://www.stats.gov.za</a>
Med	SEEA Core Accounts	Stats SA	Fishery accounts for SA have been published	<a href="http://www.stats.gov.za">http://www.stats.gov.za</a>
Med	SEEA Core Accounts	Stats SA	Water accounts for South Africa: i. First developed in KZN	<a href="http://www.stats.gov.za">http://www.stats.gov.za</a>
	Gap indicator		Indicators identified as gap indicators	

Reviewed 16 national indicator initiatives / frameworks using WCMC template

Clipboard: Cut, Copy, Paste, Format Painter

Font: Calibri, 12, Bold, Italic, Underline, Color, Background Color

Alignment: Wrap Text, Merge & Center, Text Alignment, Orientation, Indentation

Styles: Conditional Formatting, Format as Table, Cell Styles

Cells: Insert, Delete, Format

Editing: AutoSum, Fill, Clear, Sort & Filter, Find & Select

A60 Fisheries 02

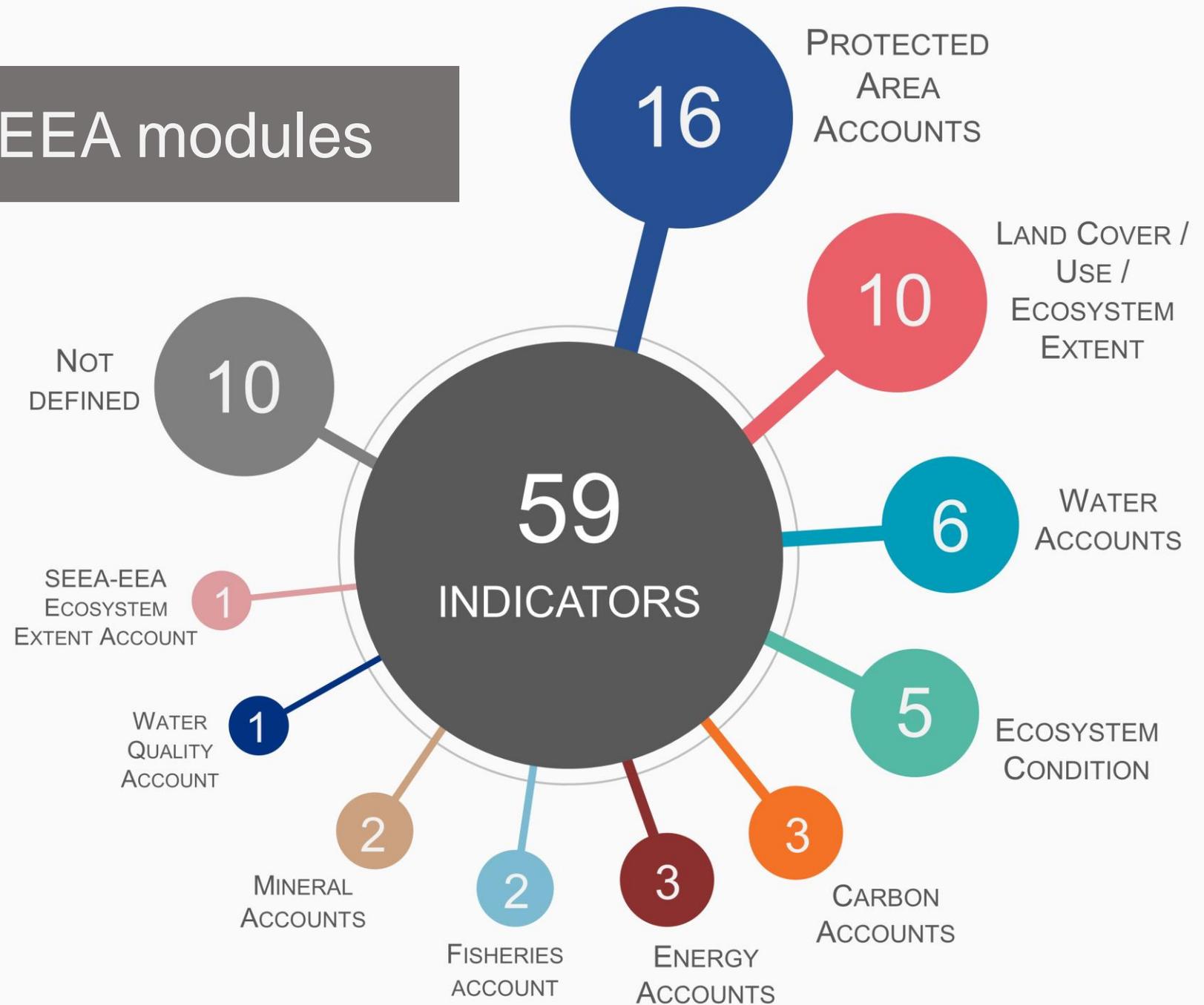
Indicator ID	National (Country ID First)	framework / Initiative	Special	SEEA Accounts	SEEA Account category	SEEA Account category	Project in SA?	Custodian Agency	Active development	Methodology for Specific Indicator	Source of methodology and Availability	Data Needs	Frequency of collection	SDG Target ID	Aichi Target Indicator	Target Indicator	Link to SDG Target
SDG 15.1.1D	SDG Indicator	Terrestrial land	Generated b	SEEA-EEA	Ecosystem Exten	Yes (identifie	Department	X	TARGET 15.1 By 2020	Statistics So	SANBI could provide basel	SDG 15.5.1	5	SDG 15.5.1			
SDG 15.3.1	SDG Indicator	Terrestrial land	Generated b	Ecosystem Condition	Yes (identifie	Department	X	TARGET 15.3 By 2020	Statistics So	SANBI SDG In	It is unlikely that a credibl	SDG 15.3.1	15	SDG 15.3.1			
SDG 6.6.1	SDG Indicator	Terrestrial land	Drawn from	Land Cover / Use / Ecosyst	Yes (identifi	Department	X	TARGET 6.6.1 By 2020	Statistics So	SANBI SDG In	It is unlikely that a credibl	SDG 6.6.1	11	SDG 6.6.1			
MTSF 02	MTSF	Terrestrial land	Generated f	Land Cover / Use / Ecosyst	Yes (identifi	Department	X	TARGET 6.6.1 By 2020	Statistics So	SANBI SDG In	It is unlikely that a credibl	SDG 6.6.1	11	SDG 6.6.1			
MTSF 03	MTSF	Terrestrial land	Generated f	Land Cover / Use / Ecosyst	Yes (identifi	Department	X	TARGET 6.6.1 By 2020	Statistics So	SANBI SDG In	It is unlikely that a credibl	SDG 6.6.1	11	SDG 6.6.1			
NPAES 01	NPAES	Terrestrial land	Generated f	Land Cover / Use / Ecosyst	Yes (identifi	Department	X	TARGET 6.6.1 By 2020	Statistics So	SANBI SDG In	It is unlikely that a credibl	SDG 6.6.1	11	SDG 6.6.1			
NPAES 02	NPAES	Terrestrial land	Generated f	Land Cover / Use / Ecosyst	Yes (identifi	Department	X	TARGET 6.6.1 By 2020	Statistics So	SANBI SDG In	It is unlikely that a credibl	SDG 6.6.1	11	SDG 6.6.1			
NBA 01	NBA (2018)	Terrestrial land	Generated f	Land Cover / Use / Ecosyst	Yes (identifi	Department	X	TARGET 6.6.1 By 2020	Statistics So	SANBI SDG In	It is unlikely that a credibl	SDG 6.6.1	11	SDG 6.6.1			
NBA 02	NBA (2018)	Terrestrial land	Generated f	Land Cover / Use / Ecosyst	Yes (identifi	Department	X	TARGET 6.6.1 By 2020	Statistics So	SANBI SDG In	It is unlikely that a credibl	SDG 6.6.1	11	SDG 6.6.1			
NDI 02	Presidency's	Terrestrial land	Generated f	Land Cover / Use / Ecosyst	Yes (identifi	Department	X	TARGET 6.6.1 By 2020	Statistics So	SANBI SDG In	It is unlikely that a credibl	SDG 6.6.1	11	SDG 6.6.1			
SDG 14.5.1A	SDG Indicator	Marine and coastal	Generated b	SEEA-EEA	Ecosystem Exten	Yes (identifie	Department	X	TARGET 14.5 By 2020	Statistics So	SANBI is well placed to pro	SDG 14.5.1	11	SDG 14.5.1			
SoE 03	SoE	Marine and coastal	Generated b	SEEA-EEA	Ecosystem Exten	Yes (identifie	Department	X	TARGET 14.5 By 2020	Statistics So	SANBI is well placed to pro	SDG 14.5.1	11	SDG 14.5.1			
NCA&VES 01	NCA&VES acc	Percentage land cover unchanged	This indicato	Land Cover / Use / Ecosyst	No	Department	X	TARGET 14.5 By 2020	Statistics So	SANBI is well placed to pro	SDG 14.5.1	11	SDG 14.5.1				
NCA&VES 02	NCA&VES acc	Percentage turnover in land cover	Directly calc	Land Cover / Use / Ecosyst	No	Department	X	TARGET 14.5 By 2020	Statistics So	SANBI is well placed to pro	SDG 14.5.1	11	SDG 14.5.1				
NCA&VES 03	NCA&VES acc	Percentage change in land cover classes with part	No, but does	Land Cover / Use / Ecosyst	No	Department	X	TARGET 14.5 By 2020	Statistics So	SANBI is well placed to pro	SDG 14.5.1	11	SDG 14.5.1				
MTSF 06	MTSF	Perc of coastline with full protection	Drawn from	Land Cover / Use / Ecosyst	No	Department	X	TARGET 14.5 By 2020	Statistics So	SANBI is well placed to pro	SDG 14.5.1	11	SDG 14.5.1				
MTSF 07	MTSF	Perc of coastline with partial protection	Drawn from	Land Cover / Use / Ecosyst	No	Department	X	TARGET 14.5 By 2020	Statistics So	SANBI is well placed to pro	SDG 14.5.1	11	SDG 14.5.1				
NDI 01	Presidency's	Terrestrial biodivers	Indicator of	Land Cover / Use / Ecosyst	No	Department	X	TARGET 14.5 By 2020	Statistics So	SANBI is well placed to pro	SDG 14.5.1	11	SDG 14.5.1				
SDG 14.5.1D	SDG Indicator	Percentage of marine and coastal ecosystem types that are well-represented	Generated b	SEEA-EEA	Ecosystem Exten	Yes (identifie	Department	X	TARGET 14.5 By 2020	Statistics So	SANBI is well placed to pro	SDG 14.5.1	11	SDG 14.5.1			
SDG 15.1.2	SDG Indicator	Percentage of important sites for terrestrial and freshwater biodiversity	Generated b	SEEA-EEA	Ecosystem Exten	Yes (identifie	Department	X	TARGET 15.1 By 2020	Statistics So	Source: South African Prot	SDG 15.1.2	11, 12	SDG 15.1.2			(1.4, 14.2, 1
SDG 15.2.1D	SDG Indicator	Percentage of the natural forest and woodland biomes within freshwater biomes	Generated b	SEEA-EEA	Ecosystem Exten	Yes (identifie	Department	X	TARGET 15.2 By 2020	Statistics So	Source: South African Prot	SDG 15.2.1	11	SDG 15.2.1			
SDG 15.4.1D	SDG Indicator	Percentage of mountain ecosystem types that are well-represented	Generated b	SEEA-EEA	Ecosystem Exten	Yes (identifie	Department	X	TARGET 15.4 By 2020	Statistics So	Source: South African Prot	SDG 15.4.1	11	SDG 15.4.1			
ANCA KZN 01	KZN land acc	Percentage land cover unchanged	This indicato	Land Cover / Use / Ecosyst	No	Department	X	TARGET 15.4 By 2020	Statistics So	Source: South African Prot	SDG 15.4.1	11	SDG 15.4.1				
ANCA KZN 02	KZN land acc	Percentage turnover in land cover	Directly calc	Land Cover / Use / Ecosyst	No	Department	X	TARGET 15.4 By 2020	Statistics So	Source: South African Prot	SDG 15.4.1	11	SDG 15.4.1				

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

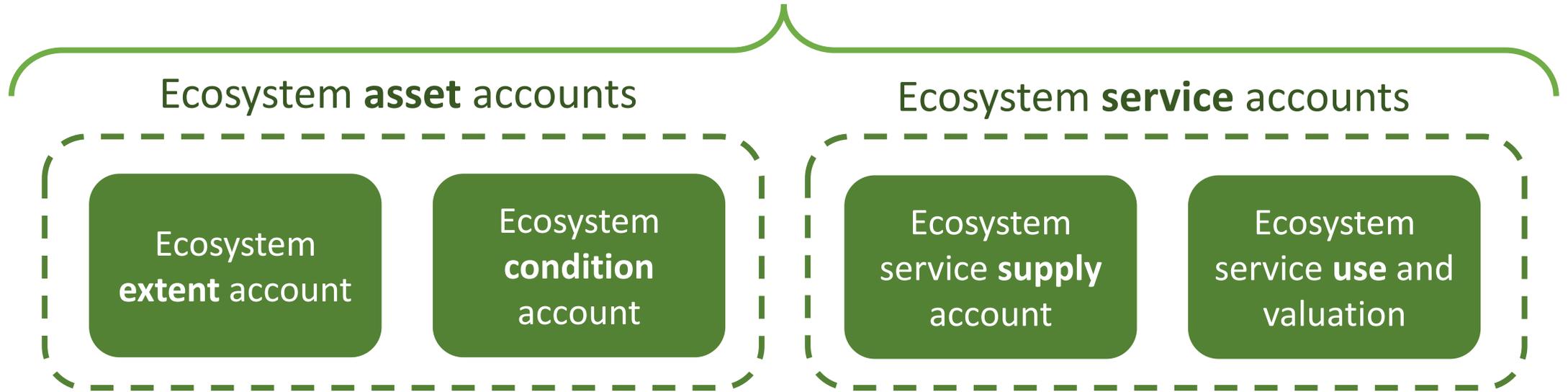


Indicators are easy and fun!

# 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

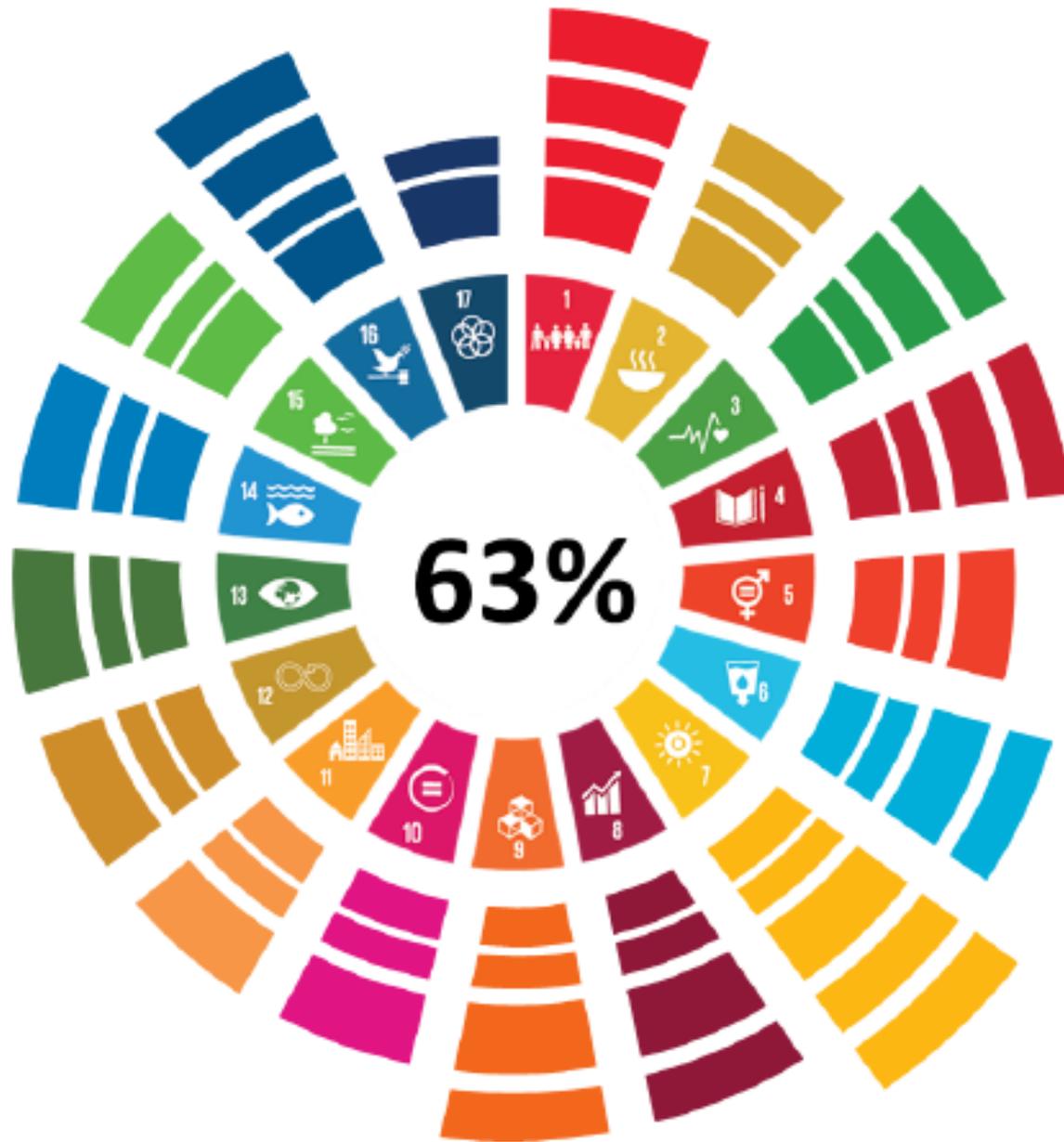
 **STATS SA**  
STATISTICS SOUTH AFRICA



# South Africa's Baseline Report on SDG Indicators, 2017

NOW:

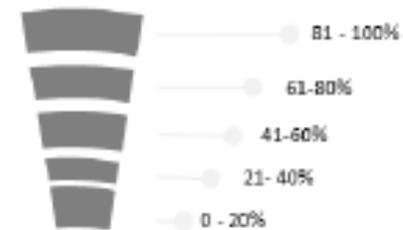
- Development of first full-scale country report underway
- Led by Stats SA
- Series of Sectoral Working Groups



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



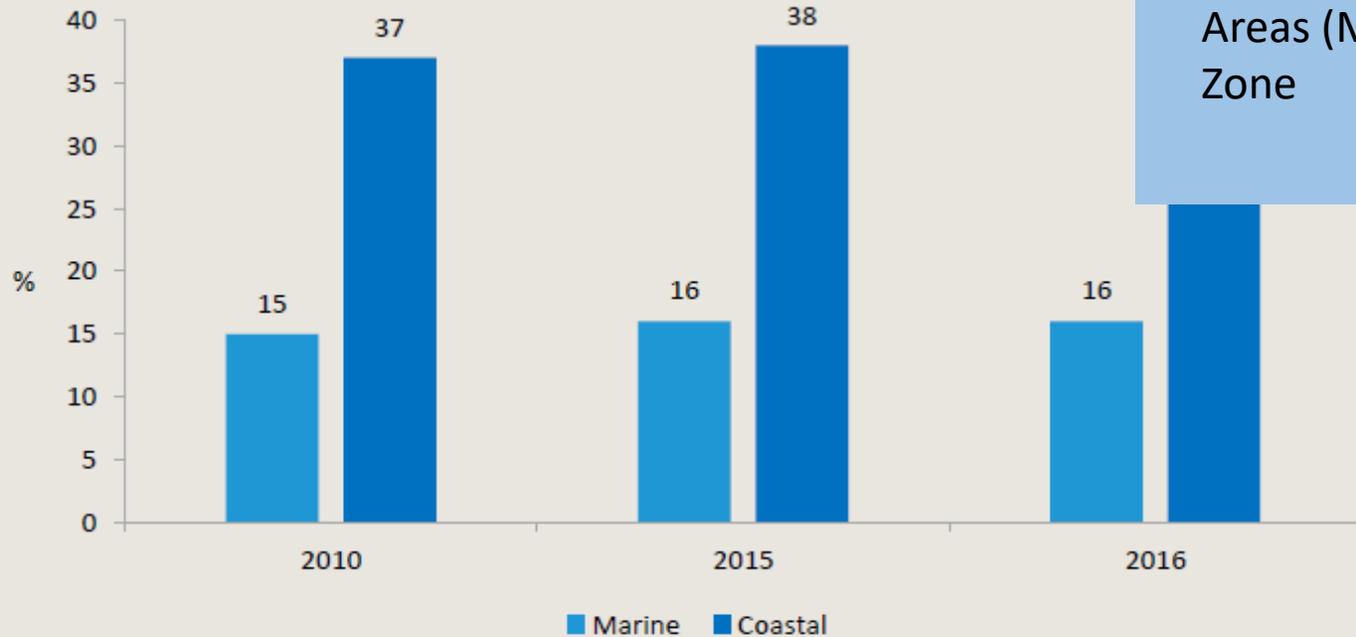
### Indicator definition and method of computation (MoC)

**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)

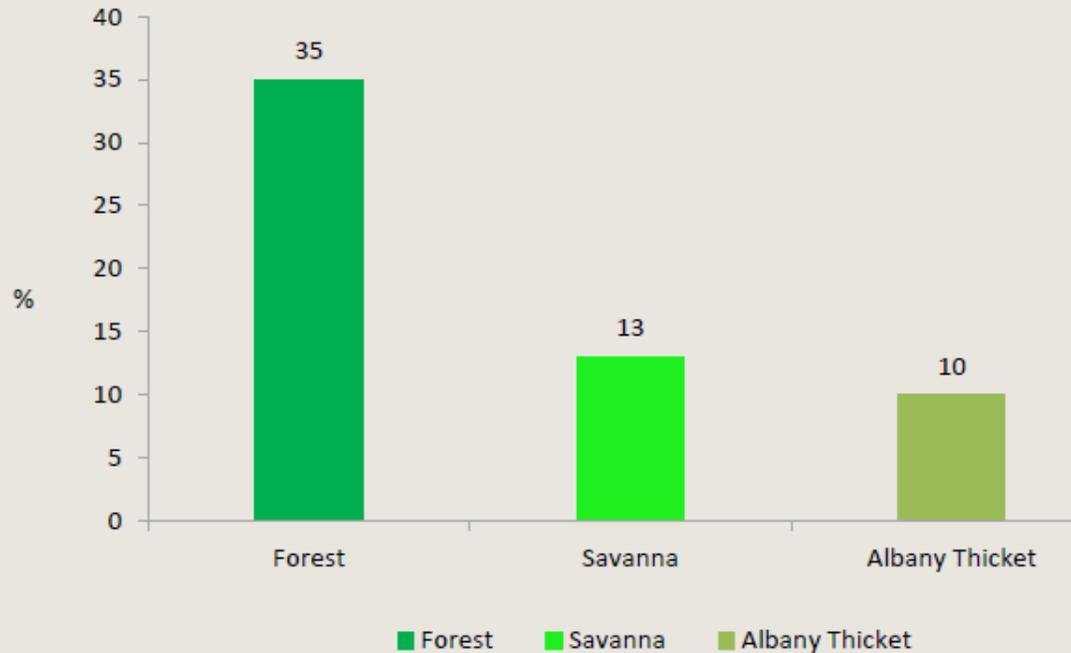
**DEFINITION:** This indicator provides the percentage of the natural forest biome, savanna biome and Albany thicket biome (the three forest and woodland biomes) within formally proclaimed protected areas.

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

**Baseline indicator values:**

Natural forest:	35%
Savanna:	13%
Albany thicket:	10%

Percentage of natural forest biome, savanna biome and Albany thicket biome within protected areas



**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

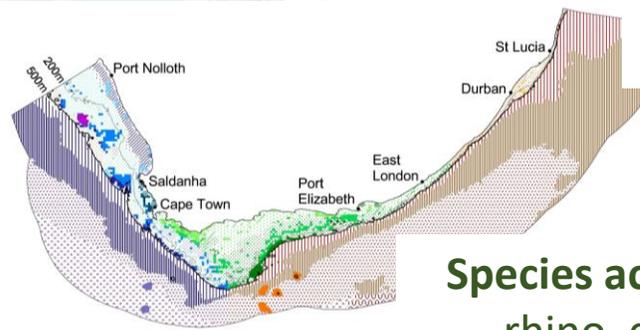
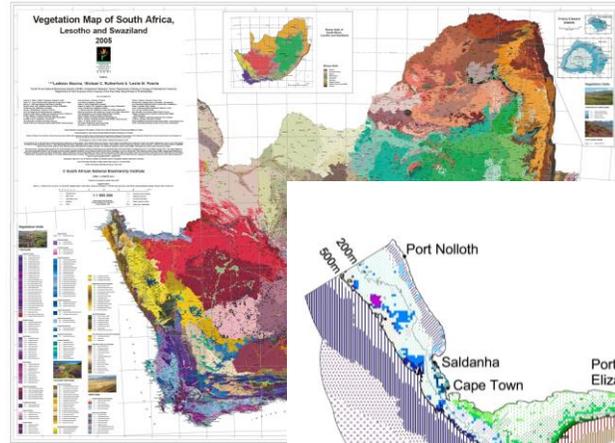
**INDICATOR 15.4.1D:** Percentage of mountain ecosystem types that are well-represented in protected areas

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

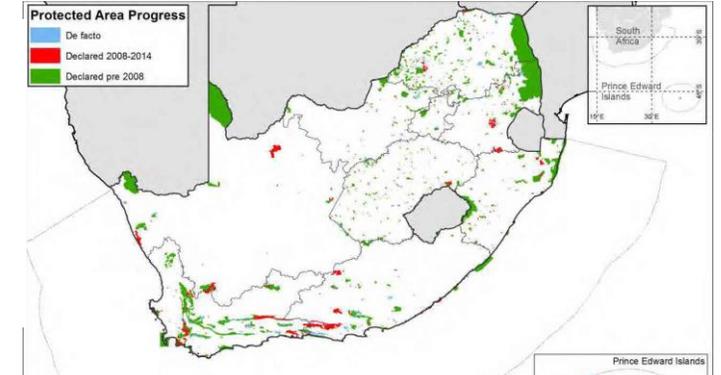
# Accounts to be produced in NCA&VES Project

National

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



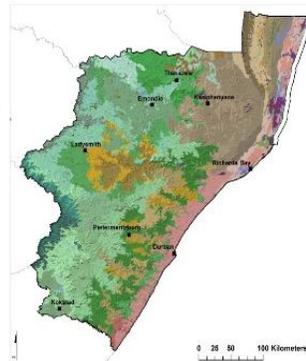
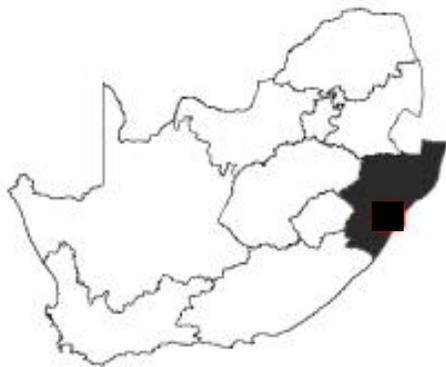
Protected area accounts – terrestrial & marine



Species accounts – rhino, cycads

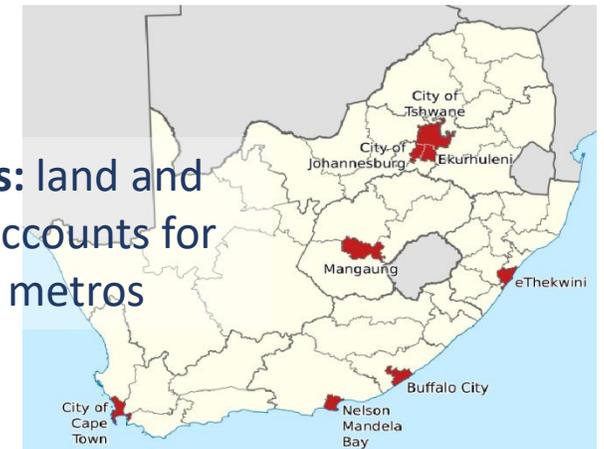


Sub-national



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

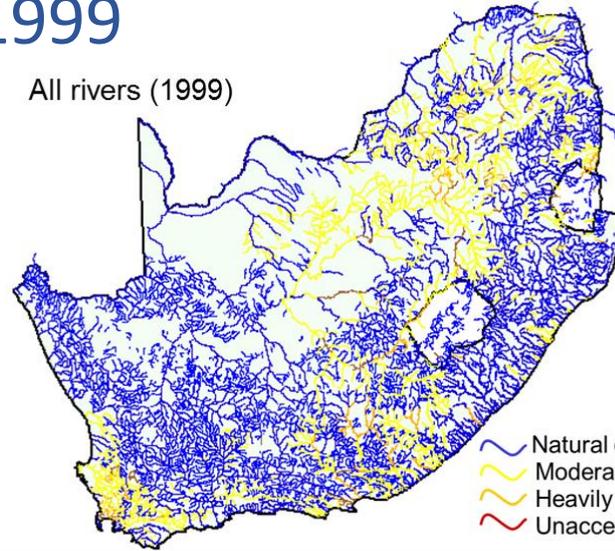


**water & sanitation**

Department:  
Water and Sanitation  
REPUBLIC OF SOUTH AFRICA

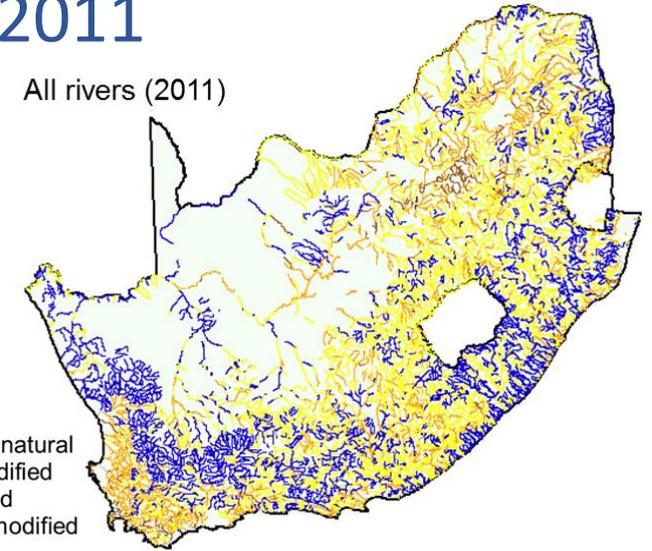
1999

All rivers (1999)



2011

All rivers (2011)



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

Ecological condition indicators

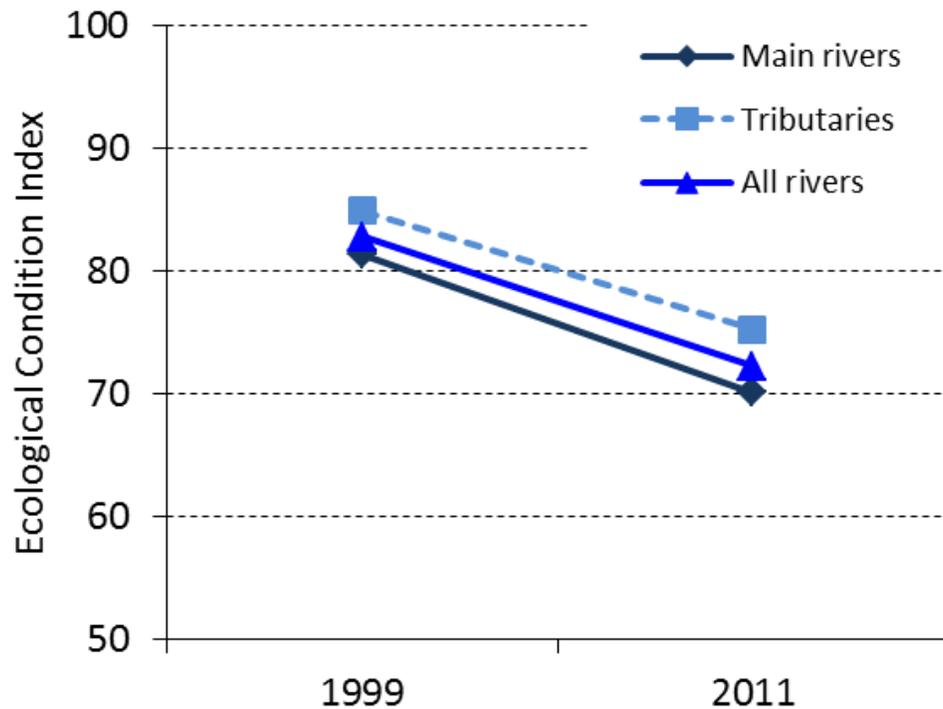
- Flow
- Water quality
- Instream habitat
- Riparian habitat

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

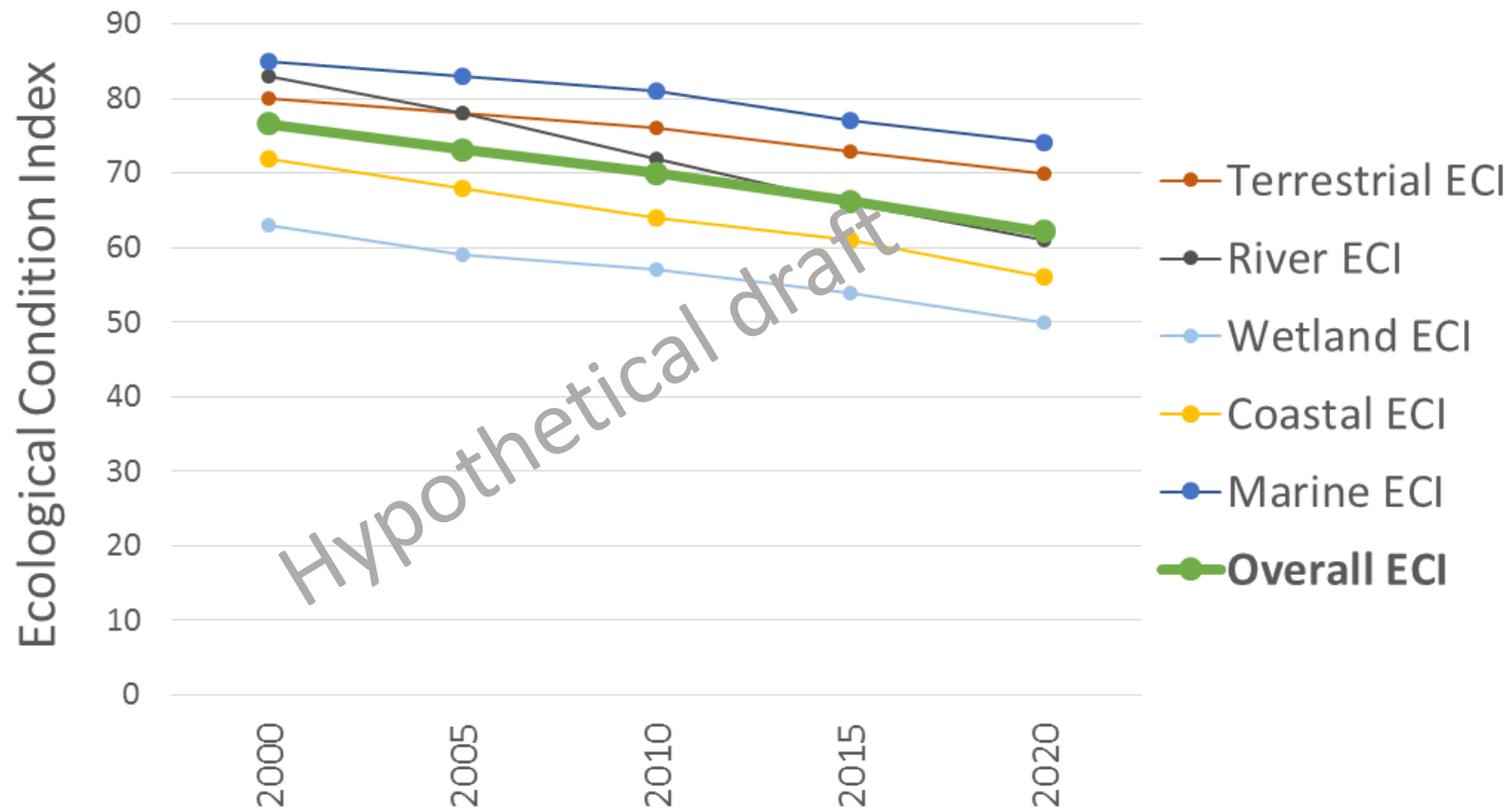


Overall  
**10% decline** in  
ecological condition  
of rivers  
1999 - 2011

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 <sup>2</sup> (0.4% of EEZ) (the 2010 value) to 32 156 km <sup>2</sup> (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

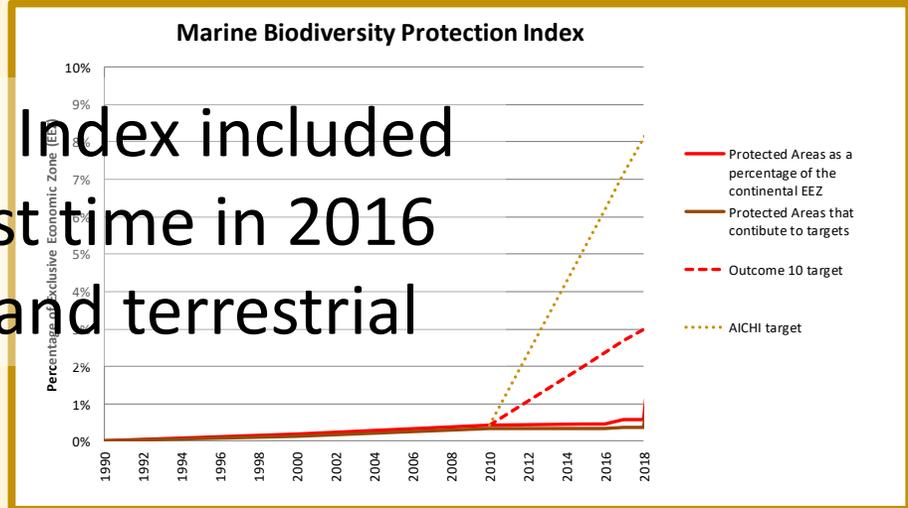
Development Indicators

### 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

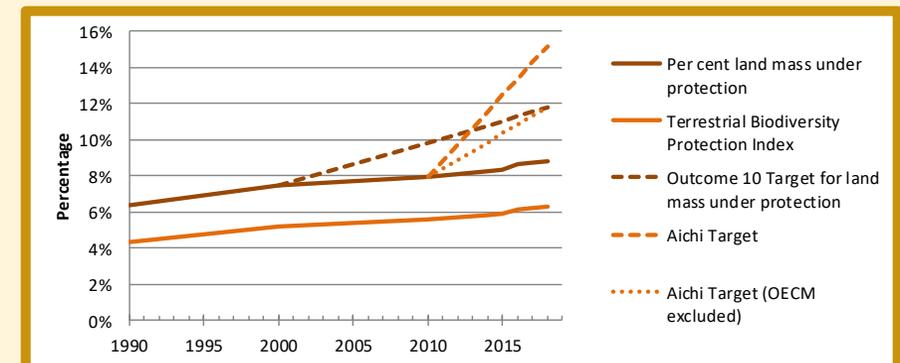


**Definition**  
 In previous years, protection level was measured by simply summing the total area of closed MPAs (where the harvesting of marine resources are prohibited) and open MPAs (where harvesting is allowed under a valid permit). Both of these values were then divided both by the size of the 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 km<sup>2</sup>). 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**