Natural Capital Accounts and mainstreaming biodiversity: Some reflections from South Africa

Mandy Driver
NCA Policy Forum
27 November 2018
Overview

• Ecosystem accounting as a mainstreaming tool in South Africa
• The two “sticky points” from yesterday morning
• Link between ecosystem accounts and biodiversity
Policy priorities in South Africa

• Economic growth
• Unemployment
• Poverty & inequality
• Rural development

Cadman et al, 2010
DEA, SANBI, UNDP
6 Strategic Objectives

SO 1 Manage biodiversity assets and enhance their contribution to the economy
- e.g. through wildlife ranching, nature-based tourism, bioprospecting

SO 2 Invest in ecological infrastructure to enhance resilience

Conserve, manage and sustainably use biodiversity to ensure equitable benefits to the people of South Africa, now and in the future.
Natural Capital Accounting & Valuation of Ecosystem Services (NCA&VES) Project (2018-2020)

KZN: Full suite of ecosystem asset and ecosystem service accounts

Ecological Infrastructure for Water Security Project (GEF6) (2018 – 2022)

Accounts for Strategic Water Source Areas – the 10% of land that delivers 50% of water

Demo catchments:
• Catchment-level water resource accounts
• Accounts for ecological infrastructure assets

National

National ecosystem asset accounts – terrestrial & marine

Sub-national

STATS SA
SANBI
Biodiversity for Life
South African National Biodiversity Institute

environmental affairs
Department of Environmental Affairs
Republic of South Africa

System of Environmental Economic Accounting

UN environment

United Nations

Biodiversity for Life
South African National Biodiversity Institute

Development Bank of Southern Africa

GEF
Growing momentum for ecosystem accounting in SA

• Statistics South Africa and SANBI working closely together, also with other key stakeholders
  → NCA unlocks collaboration between non-traditional partners
  → NSO has strong convening power

• Ecosystem accounts are translating our biodiversity science into an accounting framework
  → NCA enhances attention and interest

• Powerful platform for mainstreaming with other sectors
  → NCA opens up new conversations
    • For example with National Treasury
The two “sticky points”

• “NCA is about monetising nature”
• Is there a biodiversity equivalent of headline CO₂ indicators and thresholds for climate change?
Sticky point 1: “NCA is about monetising nature”
To counteract sticky point 1, it helps to emphasise that NCA is about formalising systems for keeping track of ecosystems, in the first instance in physical terms, in order to produce consistent, credible statistics.
Sticky point 2: Is there a biodiversity equivalent of headline CO\textsubscript{2} indicators and thresholds?
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

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:

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

<table>
<thead>
<tr>
<th></th>
<th>Main rivers</th>
<th>Tributaries</th>
<th>All rivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>81.3</td>
<td>84.9</td>
<td>82.8</td>
</tr>
<tr>
<td>2011</td>
<td>70.1</td>
<td>75.2</td>
<td>72.2</td>
</tr>
<tr>
<td>Change between</td>
<td>-11.2</td>
<td>-9.7</td>
<td>-10.6</td>
</tr>
<tr>
<td>1999 and 2011</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 persistence of species, and could be used to set targets
What are “biodiversity accounts”? 

Components of biodiversity

- Genetic diversity
- Species diversity
- Ecosystem diversity
How do ecosystem accounts relate to biodiversity?

Core set of ecosystem accounts

- Ecosystem extent account
- Ecosystem condition account
- Ecosystem service supply account
- Ecosystem service use and valuation

Some ecosystem accounts are directly related to biodiversity

- Protected area account
- Species accounts

Ecosystem accounts can help us understand the relationship between biodiversity and ecosystem services.

* “Accounting for biodiversity” rather than “biodiversity accounts”?