Biodiversity and ecosystem services data to support global initiatives: Experience from IPBES Southern African region

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Target 15
By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

Aichi Target 14
By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.
RESPONSE TO GLOBAL INITIATIVES

JRC SCIENTIFIC AND POLICY REPORTS

Indicators for mapping ecosystem services: a review

Benis Egoeh, Evangelia G. Drakou, Martha B. Dunbar, Joachim Maes, Louise Willemen

2012
Target 15
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Aichi Target 14
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CHAPTER 1: Setting the scene

CHAPTER 2: Nature’s benefits to people and it’s impacts on quality of life

CHAPTER 3: Status, trends of biodiversity and ecosystems underpinning nature’s benefits to people (past, present and future dynamics)

CHAPTER 4: Direct and indirect drivers of change in the context of different perspectives of quality of life (including positive drivers) (past, present and future dynamics)

CHAPTER 5: Integrated and cross-scale analysis of interactions of the natural world and human society (institutions and governance) (past, present and future dynamics)

CHAPTER 6: Options for governance, institutional arrangements and private and public decision making across scales and sectors (including lessons learned)
3.4.2. Status, Past, Current and Future Trends in Biodiversity and Ecosystems and the impact on people: East Africa (Amy Dunham, Harison Randrianasolo Teshome Soromessa)

3.4.3. Status, Past, Current and Future Trends in Biodiversity and Ecosystems and the impact on people: Central Africa (Jérôme Duminil, Amy Dunham, Bakwo Fils Eric Moise)


3.4.5. Status, Past, Current and Future Trends in Biodiversity and Ecosystems and their impact on people: Southern Africa (with same sub-sectioning as above) (Benis N Egoh, Lindsay Gillson, Mathieu Rouget, Gregory Dowo, (CA Graham Von Maltitz)

Southern Africa comprises Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe (IPBES)

Summary of southern African biodiversity: Status, trends and outlook
Data for IPBES assessments

- How much data has been gathered, processed, archived/stored in a manner that is enabling to decision making (discovery, mobilization and publishing)?

- How much data is accessible and valuable for decision making and future knowledge generation (research)?

- How can Africa organize itself and mobilize data to contribute meaningfully to IPBES assessments?
CHAPTER 3: STATUS AND TREND IPBES

Figure 3.1: Summary of trends in the ecosystem services covered in this study under the Patchwork scenario between 2000 and 2030. All services except nature-based tourism show significant declines under this scenario.
ECOSYSTEM SERVICES DATA NEEDS

http://www.sailorrest.com/content/river-bathing

http://www.edenhydroseeding.com/erosion.shtml
Figure 14.19: Vegetation and soil carbon storage projection.

Figure 14.20. African food production by region. Source: Cilliers et al. (2011).
## General information:

<table>
<thead>
<tr>
<th>Reference (hyperlink/ref)</th>
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<tbody>
<tr>
<td>1) What is the aim of the particular study?</td>
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<td>2) What is the governing context of the study (who asked for the assessment)?</td>
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<td>3) Which are the key themes upon which the study is focused? (E.g. Food-water-energy nexus, land degradation, invasive species, catchment-coast, conservation &amp; sustainable use, environmental health &amp; zoonotic diseases, foreign investment)</td>
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### Spatial scale

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<td>4a) What is the spatial extent (if known)</td>
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<td>4b) What is the governance scale (e.g. local, national, regional, global)</td>
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<tr>
<td>4c) What is the spatial resolution (if known)</td>
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| 5) On which location(s) is the study focusing? (e.g. which countries) |
| 6) What is the timeframe of the study (the period over which projections are made)? |
| 7) What phases of the policy cycle are addressed? (agenda setting, policy design, policy implementation, policy review) |

### Scenarios (of drivers or policy interventions):

| 8) What type of scenario, or combination of types, is applied? (exploratory, target seeking, policy screening, policy evaluation- see 3c report) |
| 9) What are the main indirect drivers of change addressed? (see 3c report) |
| 10) What are the main direct drivers of change addressed? (see 3c report) |
| 11) What are the main socio-economic assumptions made? |
| 12) What alternative policy or management interventions are considered (for target-seeking and policy-screening scenarios)? |
| 13) Where scenarios qual or quant or combined? |
| 14) Where scenarios participatory |

### Models (translating scenarios into expected consequences for nature or nature’s benefits):

| 15) Which models of impacts on nature are used? |
| 16) What type of model is used (e.g. empirical, process-based etc see 3c report) |
| 17) What biodiversity or ecosystem variables (indicators) are projected by these models? |
| 18) Are values identified? If, yes, what types of values? (e.g. economic, socio-cultural, biophysical, plural) |
| 19) Are critical thresholds (e.g. tipping points) addressed by these models? |
| 20) Are the models of nature or nature’s benefits used in this study qualitative or quantitative? |
| 21) Are cross-scale interactions considered in this modelling? |
| 22) Are trade-offs or synergies between different aspects of nature, or nature’s benefits, analysed explicitly? |
| 23) Are consequences of changes in nature, or nature’s benefits, for human well-being explicitly addressed? |
| 24) What other objectives or values (not directly mediated by nature or nature’s benefits) are considered in assessing human well-being, including values dealt with primarily across other sectors (e.g. energy, education). |

### Stakeholder involvement:

| 25) Which types of stakeholders were involved? |
| 26) Was Indigenous and local knowledge explicitly addressed? |

### Outcomes:

| 27) What were the outcomes of the study? |
| 28) What are the strengths of the approach |
| 29) What are the weaknesses of the approach? |
| 30) Uncertainties? |
| 31) Comments/observations |
CASE STUDY TEMPLATE

Name of case study:

Name of project if connected to larger project

Main author(s):

Contributing authors:

Ref/link to study:

Priority theme(s): (e.g. Food-water-energy nexus, land degradation, invasive species, catchment coast, conservation & sustainable use, environmental health & zoonotic diseases, foreign investment)

Description of case study:

Location
Scale (e.g. local/landscape (e.g. lake catchment), national, sub-national, continental))
Associated policy/policies
Priority ecosystem services
Biodiversity focus / issues
Key stakeholders
Contribution/links to human wellbeing

If relevant what did the case study show about:

Thresholds
Trade-offs between biodiversity, ecosystem services and human wellbeing
Cross-scale interactions
Scenarios
Transformation
Gender
Poverty
Rights/Access

Note of importance:
CHALLENGES

- Lack of expertise
- Mismatch in expertise
- Lack of information
- Mismatch in typologies
- Lack of clarity/language
- Time frames
- Lack of funding
- Lack of flexibility
RESPONSE: CAPACITY BUILDING

GLOBAL GOALS, AFRICAN REALITIES:
Building a Sustainable Future for ALL

Figure 13 Number of first authors per country

Figure 14 Number of case studies per country and region
CAPACITY BUILDING

- IPBES Values program
- Society for Conservation Biology
- IPBES Technical Support Unit
- CSIR/CST/SRC Collaboration

- Community of practice in Africa
- SCB Mentoring Program
- IPBES Research fellows
- Training exchanges
- African Section Regional Meeting
- Values workshop
- PhD Students
- Interns
- Exchanges
- GEOBON
VALUES WORKSHOP - MOROCCO

WORLD VIEWS

VALUES (ch.2)

Non-anthropocentric | Instrumental | Relational

Nature | Nature’s benefits to people | Good quality of life

VALUATION METHODOLOGIES AND APPROACHES (ch.3)

Biophysical | Social & Cultural | Economic | Health | Holistic

DATA AND KNOWLEDGE (ch.4)

New literature | Grey literature | Global and national database | Laws, norms and instruments | Arts, literature and material culture
ACCB 2016
3rd African Congress for Conservation Biology, 4—8 September 2016
El Jadida, Morocco

SCB Africa Section takes on Globalization

Globalization is sweeping through Africa at an unprecedented rate, causing profound and rapid social, economic, and environmental changes whose implications for conservation are variable, complex and little understood. The 3rd African Congress for Conservation Biology is aimed at bringing together 500 students, researchers, practitioners and visionary thinkers under one tent to explore together the multiple facets of this worldwide phenomenon and how it manifests itself on the continent in the study and practice of conservation biology. And to pinpoint appropriate strategies to leverage the benefits of globalization while minimizing its detrimental effects.

El Jadida, an old port town in Morocco

The Congress is being jointly organized by the Africa Section and the Faculty of Science of the University of Chouaib Doukkali, located in El Jadida, Morocco, where centuries of trade and cultural exchanges with Europe and the East exemplify the long and continuous process of globalization.

“We could not be more thrilled. At least 90% of the abstracts submitted so far are from students and researchers from African institutions and conservation organizations. It tells us that one key objective for this Congress could easily be met. The challenge, however, is making sure presenters get to El Jadida, even after we’ve accepted their abstracts.”

Tuyen H Mwampanja
SCB Africa Meeting Committee Chair

Sponsorship opportunities

- Tea & Coffee breaks ($3000 per day)
- Lunch breaks ($12,000 per lunch)
WHAT I DO

Economic valuation
Invasion biology
Restoration ecology
Ecosystem services
Conservation planning
Planning for biodiversity and ES
Including cost in planning
Planning for restoration
Quantifying restoration success using ES
Planning for ES
Mapping ES
Identifying indicators
Land use impacts on ES
Valuing ES
Economic valuation
Modelling distributions
Impact of invasive species on ES