BOOK OF ABSTRACT

I. SESSION DESCRIPTION

II. SESSION PROGRAM

III. ABSTRACTS

I. SESSION DESCRIPTION

ID: T1

Rapid ecosystem services assessment tools in Africa: where are we now and where are we heading

Hosts:

<table>
<thead>
<tr>
<th>Host:</th>
<th>Title</th>
<th>Name</th>
<th>Organisation</th>
<th>E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jean Hugé</td>
<td>Jean Hugé</td>
<td>ULB, VUB, University of Hasselt – Belgium</td>
<td><a href="mailto:jean.huge@ulb.ac.be">jean.huge@ulb.ac.be</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Luc Janssens de Bisthoven</td>
<td>Royal Belgian Institute of Natural Sciences,</td>
<td><a href="mailto:ljanssens@naturalsciences.be">ljanssens@naturalsciences.be</a></td>
<td></td>
</tr>
<tr>
<td>Co–hosts:</td>
<td>Anne–Julie Rochette</td>
<td>Royal Belgian Institute of Natural Sciences</td>
<td><a href="mailto:ajrochette@naturalsciences.be">ajrochette@naturalsciences.be</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Maarten Vanhove</td>
<td>University of Hasselt</td>
<td><a href="mailto:maarten.vanhove@uhasselt.be">maarten.vanhove@uhasselt.be</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jean–Didier Akpona</td>
<td>Université d'Abomey–Calavi</td>
<td><a href="mailto:ajeandidier@gmail.com">ajeandidier@gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>

Abstract:

While the concept of ecosystem services is now widely known among scientists in Africa and beyond, its practical use in support of sustainable ecosystem management is still hampered by a lack of knowledge among some managers and much of the general public, and by the lack of data and/or of actual measurements of ecosystem services generated by a given ecosystem or reserve. Performing large–scale comprehensive ecosystem services assessments requires a substantial amount of time, skills and financial investment. Faced with the urgency to act to protect threatened ecosystems, the challenges regarding time and resource availability led to the development of a particular kind of tools. These so–called “rapid assessment tools” aim at providing comparable and verifiable information regarding ecosystem services, without having to perform full–scale, exhaustive and long–term investigations. Depending on the needs of the management bodies and on the existing knowledge regarding ecosystem services in a particular region, specific tools can be selected. In order to ensure a reliable and systematic tool selection process, this session aims at bringing together practitioners, scientists and policy–makers who have been developing,
applying and comparing these tools. Participants will exchange best practices and reflect on the balancing act of quickly yielding management–relevant output while keeping scientific standards high. The organizers of this session are project promoters of the UNESCO and Belgian Science Policy–supported EVAMAB project ("Economic valuation of ecosystem services in Man and Biosphere reserves: testing effective rapid assessment methods in selected African MABs").

Goals and objectives of the session:
To present and critically assess the diversity of experiences with rapid ecosystem services assessment tools, and to discuss the selection and the relevance of these tools in an African context.

Planned output / Deliverables:
• Overview of applied rapid ecosystem services assessment tools in Africa, with their pros and cons
• Input for the development of a decision tree outlining how to select a rapid ecosystem services assessment tool in a particular context
• Stimulate discussion among ES practitioners regarding the scientific and management–relevance of rapid ecosystem services assessment tools

Related to ESP Working Group/National Network:
Thematic Working Groups – TWG 1 – ES Assessment frameworks & Typologies

II. SESSION PROGRAM

Date of session: Monday, 18 June 2019
Time of session: 15:30 – 17:30

Timetable speakers

<table>
<thead>
<tr>
<th>Time</th>
<th>First name</th>
<th>Surname</th>
<th>Organization</th>
<th>Title of presentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>15:30–14:35</td>
<td>Jean</td>
<td>Didier</td>
<td>University of Abomey–Calavi/LABEF</td>
<td>Quick introduction</td>
</tr>
<tr>
<td>15:35–15:50</td>
<td>Jean</td>
<td>Hugé</td>
<td>Vrije Universiteit Brussel &amp; Hasselt</td>
<td>Rapid ecosystem services assessment tools in African Man &amp; Biosphere reserves</td>
</tr>
<tr>
<td>15:50–16:10</td>
<td>Wito</td>
<td>Van Oijstaeijen</td>
<td>University of Antwerp</td>
<td>Willingness to contribute for water hyacinth control in villages around Lake Tana, Ethiopia: a contingent valuation study</td>
</tr>
<tr>
<td>16:10–16:30</td>
<td>Francisca</td>
<td>Kilonzi</td>
<td>Nagasaki University</td>
<td>A 4Rs–based stakeholder analysis of Aberdare Forest</td>
</tr>
</tbody>
</table>
### Timetable speakers

<table>
<thead>
<tr>
<th>Time</th>
<th>First name</th>
<th>Surname</th>
<th>Organization</th>
<th>Title of presentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30-10:40</td>
<td>Jean</td>
<td>Didier</td>
<td>University of Abomey–Calavi/LABEF</td>
<td>Quick introduction</td>
</tr>
<tr>
<td>10:40-11:00</td>
<td>Peter</td>
<td>Waweru</td>
<td>Kenyatta University</td>
<td>Quantifying and mapping land use changes and regulating ecosystem service potentials in a data–scarce peri–urban region in Kenya</td>
</tr>
<tr>
<td>11:00-11:20</td>
<td>Jean</td>
<td>Didier</td>
<td>University of Abomey–Calavi/LABEF</td>
<td>A systematic review of ecosystem services research on the Pendjari Biosphere Reserve: current state and the way forward.</td>
</tr>
<tr>
<td>11:20-11:40</td>
<td>Mohammed</td>
<td>Taha</td>
<td>Université Félix Houphouët–Boigny</td>
<td>Environmental assessment of the agriculture good practices introduced</td>
</tr>
<tr>
<td>11:40-12:00</td>
<td>Dustin</td>
<td>Wenzel</td>
<td>UN Environment</td>
<td>TEEB for Agriculture &amp; Food in Africa: assessing options to improve livelihoods</td>
</tr>
<tr>
<td>12:00-12:20</td>
<td>Jean</td>
<td>Hugé</td>
<td>Vrije Universiteit Brussel &amp; Universiteit Hasselt</td>
<td>Social–ecological assessment of coastal ecosystem services use and non–use value in Kenya &amp; Tanzania</td>
</tr>
<tr>
<td>16:30-16:50</td>
<td>Stephen</td>
<td>Kankam</td>
<td>Institute for Geography and Geosciences, Martin Luther University, Halle–Wittenberg</td>
<td>Implications of Spatio–temporal Land Use/Land cover Changes for Regulating and Provisioning Ecosystem Services in the Coastal Landscape of South–Western Ghana, West Africa</td>
</tr>
<tr>
<td>16:50-17:10</td>
<td>Luc</td>
<td>Janssens de Bisthoven</td>
<td>Royal Belgian Institute of Natural Sciences, CEBioS</td>
<td>Lake Manyara basin, assessment of a complex socio–ecological system through a multistakeholder approach</td>
</tr>
<tr>
<td>17:10-17:30</td>
<td>Jan Philipp</td>
<td>Schaeugner</td>
<td>European Commission, JRC</td>
<td>The Reference Information System (RIS) &amp; the BIOPAMA Project’s activities in Africa</td>
</tr>
</tbody>
</table>
III. Abstracts

The abstracts appear in alphabetic order based on the last name of the first author. The first author is the presenting author unless indicated otherwise.

1. Type of submission: Abstract

T. Thematic Working Group sessions: T1 Rapid ecosystem services assessment tools in Africa: where are we now and where are we heading

A systematic review of ecosystem services research on the Pendjari Biosphere Reserve: current state and the way forward

First authors: Jean Didier Tèwogbadé Akpona,
Other author(s): Rodrigue C. Gbedomon, Anne-Julie Rochette, Luc Janssens de Bisthoven, Jean Hugé, Maarten P.M. Vanhove, Romain Glele Kakaï
Affiliation: Laboratoire de Biomathématiques et d'Estimations Forestières
Contact: ajeandidier@gmail.com

The application of the ecosystem services concept in the UNESCO–Man and Biosphere reserves is of particular interest as biosphere reserves (BR) are meant to enhance a strong and harmonious relationship between people and protected areas. In this paper, we systematically reviewed the ES studies conducted on the Pendjari Biosphere Reserve in Benin with the aims to (i) provide a summary of the research effort on ES–Science in Pendjari, (ii) critically analyze the achievements in ES–science in PBR, and to (iii) identify the knowledge gaps and way forward in supporting ES research and its mainstreaming into policy decisions in Pendjari. Findings show a growing body of literature on ES studies in PBR with an average of 3.7 studies per year, resulting in 44 papers within the past twelve years. The focus of these studies lies on provisioning ecosystem services, including agricultural products, wild food, fish, oyster, fuels, material for construction, honey, medicinal plants, etc. In this presentation we will describe the results of the review, and we will identify practical challenges which limit the development of an effective uptake of ecosystem services research in Benin. We advocate for capacity development of stakeholders (researchers, park managers, local communities) in research and sustainable use; and we recommend the development and use of ES assessment tools that are adapted to local contexts.

Keywords: Ecosystem services; Review; Pendjari; Benin
2. Type of submission: Abstract

T. Thematic Working Group sessions: T1 Rapid ecosystem services assessment tools in Africa: where are we now and where are we heading

Environmental assessment of the agriculture good practices introduced in the cashew culture in the surrounding area of Comoé National Park (North East of Côte d'Ivoire)

First authors: Mohammed Taha Amiar
Affiliation: Université Félix Houphouët-Boigny, Abidjan, Côte d'Ivoire
Contact: taha.amiar@gmail.com

The Africa assessment report released by IPBES in 2018 stated that 62% of the rural populations in Africa depend directly on the nature’s contributions to people for their daily life. Côte d’Ivoire is a prominent world producer of cash crops but rural communities don’t really take advantage of it and most of them live below of the poverty line.

The Comoé NP (PNC) is both a biosphere reserve (1982) and UNESCO world heritage (1983) and stands for half of the surface of Bounkani region (11500 km² / 22500 km²), in the north east of Côte d’Ivoire. The PROFIAB II program of GIZ aims at supporting rural communities in the sustainable use of the available natural resources to increase meaningfully their revenues from agriculture, in line with the biodiversity conservation efforts in the protected areas. PROFIAB II focuses on innovative practices that achieve both an increase in the farmers’ revenues and support biodiversity conservation. In regards to the cashew production, some innovative techniques (BPA) to rehabilitate and to plant cashew trees should contribute to improve simultaneously the livelihoods and the biodiversity in the PNC area.

These BPA are all the more interesting as they contribute the ecosystemic services (provisioning, regulation, material and non-material) mutual cycles between the PNC and the cashew orchards. Their impacts were measured by collecting data (qualitative surveys) from the governmental institutions, the GIZ and its partners and through gathering comments and analysis from farmers and other stakeholders.

This study aimed to measure the impacts of the mutual ecosystem services on the development of the National Park of Comoé. In this context, my role was to assess the environmental impact of the innovations brought to the cashew tree culture on the biodiversity of this area (potential ecosystem services fostered towards the PNC).

Keywords: Ecosystem services, agriculture, buffer, protected areas, Comoé, Bounkani
3. **Type of submission:** Abstract

**T. Thematic Working Group sessions: T1 Rapid ecosystem services assessment tools in Africa: where are we now and where are we heading**

**Rapid ecosystem services assessment tools in African Man & Biosphere reserves**

*First authors:* Jean Hugé  
*Other author(s):* Anne-Julie Rochette, Bruno Verbist, Jean-Didier Akpona, Rodrigue Idohou, Koen Vanderhaeghen, Steven Van Passel  
*Affiliation:* Vrije Universiteit Brussel & Universiteit Hasselt  
*Contact:* jean.huge@ulb.ac.be

The increased recognition of the interconnection of human and natural components of social–ecological systems has led to a surge in interest in the management of UNESCO Man & Biosphere (MAB) reserves. Within the frame of the ongoing EVAMAB project, our research team focuses on the selection, application and evaluation of rapid ecosystem services assessment tools in African MAB Reserves. We will present a critical review of existing tools, based on a Delphi–survey among MAB practitioners and a thorough literature review, and we will reflect on the practical application of such tools in various African MAB Reserves in different biomes. We aim at providing MAB reserve managers and other stakeholders with guidance on which rapid ecosystem services assessment tools to apply in order to gather key data that will feed into the management of these reserves. We highlight the risks of neglect of local stakeholders’ perceptions and knowledge, and address recommendations to address this shortcoming by using participatory, systematic and robust assessment methods.

**Keywords:** tools, Biosphere Reserves, stakeholders, review, Delphi
4. Type of submission: Abstract

T. Thematic Working Group sessions: T1 Rapid ecosystem services assessment tools in Africa: where are we now and where are we heading

Social–ecological assessment of coastal ecosystem services use and non–use value in Kenya & Tanzania

First authors: Jean Hugé
Other author(s): Paula Tatiana Gonzalez Sanchez, Farid Dahdouh–Guebas, James Kairo, Mwita Mangora, Karolien Van Puyvelde, Nico Koedam
Affiliation: Vrije Universiteit Brussel & Universiteit Hasselt
Contact: jean.huge@ulb.ac.be

Within the frame of the projected Transboundary Conservation Area along the coasts of Kenya and Tanzania, we applied a mixed methods approach to map the use and non–use value of ecosystem services provided by these coastal systems to a range of stakeholders. We applied the Nominal Group Technique inspired by the TESSA–tool (Toolkit for Ecosytem Service Site–based Assessment), with organized groups from five villages to determine which coastal ecosystem services (ES) were prioritized, and how these are perceived to have changed. Semi–structured interviews allowed to explore the inclusion and views on non–use values of coastal ecosystems. Additionally, a Delphi survey evaluated Western Indian Ocean Regional experts’ opinion on the benefits and challenges of transboundary conservation (TBC). The results show that fisheries, ecotourism and carbon sequestration/trading are the most relevant ES reported, for the communities. All ecosystem services were perceived to have declined over the past five years, except for carbon sequestration/trading which has an increasing community awareness owing to a carbon–offset initiative from mangrove forest conservation and restoration (Mikoko Pamoja), and all who have been involved in the project. Traditions derived from the Mijikenda culture along the coastal region potentially maintain the spiritual values of certain elements within coastal ecosystems, but not for all ecosystems entirely. Finally, opinions of Delphi respondents highlighted the conservation of migratory species, the mediation of trans–boundary conflicts, and trade and economic opportunities as TBC benefits. By combining several deliberative tools, we have approached ecosystem services from a cultural perspective. We will also reflect on both the unique and the general policy guidance that can be generated by applying such practical tools on the field, and we will briefly introduce the overarching TRANSCOAST research project, in which Kenyan, Tanzanian and Belgian scientists collaborate to gain a better understanding of coastal social–ecological systems in eastern Africa.

Keywords: non–use value, TESSA, nominal group technique, Delphi, trans–boundary conservation
Lake Manyara basin, assessment of a complex socio–ecological system through a multistakeholder approach

First authors: Luc Janssens de Bisthoven
Other author: Luc Brendonck
Affiliation: Royal Belgian Institute of Natural Sciences– CEBioS
Contact: ljanssens@naturalsciences

This study, embedded within the framework of Drivers–Pressures–State–Impact–Response (DPSIR) and the Policy Arrangement Approach (PAA) combined several methods of knowledge collection to better identify future management priorities for the socio–ecological system of Lake Manyara sub basin (Tanzania). Focus group discussions with farmers and pastoralists allowed us to collect a comprehensive set of negative statements of the situation (corresponding to “DPSI” of the DPSIR framework) and somewhat less statements seeking solutions (corresponding to the “R”). These statements reflected the findings of the scientific literature well, which however was found to be more comprehensive than the data collected ‘live’. Community mapping illustrated the differences in spatial and resource allocation perceptions of the pastoralists versus the farmers. A participative mapping of ecosystem services, their sources and benefits, combined with a survey and interviews confirmed the excellent local knowledge of ecosystem services and indicated priorities to be focused on in the future: governance at general level (Land use rights, clear zonation, better integration of policies and decision chains, better control, better conflict resolution, anti–corruption fight, a comprehensive anti–erosion management) and at water management level (distribution, rights, water authorities). The lessons learned from this mixed methods approach to understand and feed into the management of Lake Manyara Biosphere Reserve, also yield relevant insights for other lacustrine systems in Africa.

Keywords: Lake Manyara– socio–ecological system–stakeholders– DPSIR
Coastal landscapes in South-Western Ghana face land use threats driven by oil and gas infrastructure development, agriculture expansion and artisanal mining. An assessment of two decades of land use pressures on the landscapes’ capacities to supply ecosystem services was conducted using remote sensing and benefit transfer approaches. Indicators for regionally relevant provisioning and regulating ecosystem services supplied by the landscape were selected from existing literature. Using the Africover classification scheme, land cover data spanning approximately a decade before and after the commercial production of oil and gas were used to generate typical land cover classes for a representative coastal landscape. The capacities of the coastal landscapes to supply food, fish, fuelwood and sequester greenhouse gases were quantified. Results of the assessment indicate a trend towards agricultural (food and perennial tree crop) expansion with concomitant increase in the coastal landscapes’ capacity to supply provisioning services over the period. However, coastal land use patterns are observed to have a net negative impact on regulating ecosystem services, such as carbon storage.

**Keywords:** Benefits transfer, land cover, ecosystem services, land use, coastal
7. Type of submission: Abstract

T. Thematic Working Group sessions: T1 Rapid ecosystem services assessment tools in Africa: where are we now and where are we heading

A 4Rs–based stakeholder analysis of Aberdare Forest Ecosystem: The need to go beyond co–management approach

First authors: Francisca Mutwa Kilonzi
Affiliation: Nagasaki University
Contact: franciscakarem@gmail.com

This paper reports the use of 4Rs framework in the analysis of 15 selected key stakeholders involved in Aberdare forest management. The 4Rs allows for the analysis of rights and responsibilities held by stakeholders as well as the revenues received and the relationships amongst for efficient forest co–management. Imbalances in stakeholder roles were identified with conflicting responsibilities, revenues obtained and rights that jeopardised organizations efforts to deliver. Community–based organizations (CBO) accrued most revenues through forest livelihood improvement policies, however, other stakeholders whose mandate is to ensure in–situ conservation felt such policies compromised forests sustainability. Government organizations had the most responsibilities while CBO had the most revenues and rights. CBO collaborative management proposals were often neglected by government organizations which compromised the organizations’ relationships. Based on these findings, we suggest that its necessary to go beyond the co–management aspect and assess the conflicting roles among stakeholders to improve on forest governance.

Keywords: Aberdare forest, co–management, stakeholder analysis, 4Rs framework

8. Type of submission: Abstract

T. Thematic Working Group sessions: T1 Rapid ecosystem services assessment tools in Africa: where are we now and where are we heading

The Reference Information System (RIS) & the BIOPAMA Project’s activities in Africa

First authors: Jan Philipp Schägner
Affiliation: European Commission
Contact: philipp.schaegner@web.de

The Biodiversity and Protected Areas Management (BIOPAMA.org) Programme aims at supporting countries, natures conservation agencies and protected area (PA) management boards at improving their management and governance of biodiversity, PA and natural resources. As part of the project, we develop the Reference Information System (RIS). The RIS
is an information/data portal and tool, which is built to support conservation outcomes by following the maxim: from knowledge to action. The RIS provides information that can be used to improve conservation outcomes in the following ways:

- Measure the state of biodiversity and PA
- Highlight pressures on biodiversity and PA
- Assess conservation policy impacts
- Monitor progress against policy targets and goals
- Identify conservation success and failure
- Support the formulation of new conservation policies, targets and actions

The supplied information is meant to address conservation practitioners, researchers and policy makers from local to supra national level. The unique selling point of the RIS is that it is a community-based tool, to which the conservation community can collectively contribute. It provides a framework for capturing and prioritizing policy targets and then linking those targets to robust indicators and knowledge from the data provider community. The key features of the RIS are:

- Up-to-date spatial data ranging from satellite imagery, community mapped data, land cover data, species data, pressure indicators, social media data etc.,
- Distributed content creation and workflow management
- Real-time alert system (forest fires, draughts etc.)
- Cutting-edge technologies to support custom cartography and rapid mapping
- Custom cloud computing reporting system to produce tailored maps and outputs using the knowledgebase

The presentation will give a life demo of the structure, available data and functions of the RIS.

**Keywords:** Biodiversity Conservation, Nature Conservation Policies, Protected Area, Management, Spatial Data Portal, Mapping tools
Willingness to contribute for water hyacinth control in villages around Lake Tana, Ethiopia: a contingent valuation study

First author: Wito Van Oijstaeijen
Other author(s): Daregot Berihun, Nega Ejigu, Enyew Adgo, Jan Nyssen
Affiliation: University of Antwerp
Contact: Steven.VanPassel@uantwerpen.be

Lake Tana is the most important source of fresh water in Ethiopia and by extension the Horn of Africa. Besides other pressures on water quality resulting from urbanization and deforestation, the invasion of the exotic water hyacinth poses new threats to the ecosystem. Water hyacinth or Eichhornia crassipes – endemic to South America – is widely considered as the world’s worst aquatic weed. In 2011, the weed appeared on the northern shores of Lake Tana. It rapidly expanded in north-eastern direction. The lake area covered by water hyacinths is currently estimated at 50,000 ha. Different methods (biological, mechanical and chemical) are known to reduce infestation. In Africa considerable amounts of money are spent on the control of the weed. Quantifying costs and benefits of counteracting this type of invasion aids policy decisions. In this research, the benefits of water hyacinth control for the rural population inhabiting the northern and north-eastern kebeles bordering Lake Tana, is investigated. In the areas studied, the population largely depends on farming and (less importantly) fishing. The assessment of total economic value to inhabitants of infested shores of Lake Tana is conducted through survey-based questionnaires. Willingness to pay was measured in labor or cash money. Contingent valuation methods were utilized to express this willingness to contribute. The study site selected contains one Kebele in each of the three Woreda (Dembiya, Gondar Zuria and Dera) where water hyacinths have appeared. A total of 240 households were interviewed in order to assess the value of water hyacinth control to the ecosystem services provided by Lake Tana. The willingness to contribute was questioned for two scenarios: status quo and improvement (complete removal of infestation). Nearly all respondents were willing to contribute labor or cash in order to control and improve the current situation. The mean willingness to pay was estimated at 440.9 ETB yearly (≈ €13.5) for the status quo scenario and 764.4 ETB yearly (≈ €23.4) for the improvement scenario. The mean willingness to contribute labor was estimated at 32.6 man–days yearly for the status quo scenario and 51.2 man–days yearly for the improvement scenario. The benefits of control obtained by the study can be compared with eradication costs to provide potential justification for decision–making.
10. Type of submission: Abstract

T. Thematic Working Group sessions: T1 Rapid ecosystem services assessment tools in Africa: where are we now and where are we heading

Quantifying and mapping land use changes and regulating ecosystem service potentials in a data-scarce peri-urban region in Kenya

First authors(s): Peter Waweru Wangai
Other author(s): Benjamin Burkhard, Felix Müller
Affiliation: Department of Environmental Studies & Community Development, Kenyatta University, Nairobi, Kenya
Contact: wangai.peter@ku.ac.ke

Recent scientific developments are advancing to link land use and land cover (LULC) change with ecosystem service (ES) potentials. Such links within peri-urban ecosystems are scanty due to methodological and expertise challenge, and data limitation. The study applies the ‘ES matrix approach’ to spatially display potentials for regulating ES in mainly overlooked data-scarce peri-urban areas, whereby LULC classes and qualitative ES values are the main data inputs. The LULC maps are based on LANDSAT satellite images from the years 1990, 2000 and 2010. ES potentials were assessed qualitatively on a relative scale ranging between 0 and 5 by use of interview data from local people. Results show that with exception of settlements, the area for all LULC classes decreased between 1990 and 2010. The ‘matrix approach’ successfully generated ES potential maps for the different LULC classes. Grasslands, forests and wetlands have comparatively high potentials for regulating ES, whereas settlements and ‘otherlands’ showed lower potentials. The main uncertainties of the study relate to study area selection, data accuracy and reliability, and ‘matrix approach’ adaptability. Results indicate that the potential of the area to provide regulating ES is declining over time. To realize suitable and reliable results, it is necessary to conduct data accuracy-check during and after the fieldwork exercise.

Keywords: Land use change, ecosystem service matrix, data scarcity, urbanisation, knowledge combination
11. Type of submission: Abstract

T. Thematic Working Group sessions: T1 Rapid ecosystem services assessment tools in Africa: where are we now and where are we heading

**TEEB for Agriculture & Food in Africa: assessing options to improve livelihoods**

*First authors:* Dustin Wenzel  
*Presenting author:* Harpinder Sandhu  
*Other author:* Salman Hussain  
*Affiliation:* UN Environment  
*Contact:* dustin.wenzel@un.org

Linked to the broader TEEB for Agriculture & Food project, this report focuses on the African region as part of its global analysis. It will showcase three country case studies (rice in Senegal, livestock in Tanzania, and agroforestry in Ghana and Ethiopia), and feature a regional narrative on agricultural systems, practices, products, and policy scenarios in Sub-Saharan Africa, with the overall aims of contributing to the 2030 Agenda for Sustainable Development and a wide range of Sustainable Development Goals. This report presents: (i) the socio-cultural and bio-physical context of predominant/relevant agrifood production systems in Africa and for the different case studies, (ii) the impacts and dependencies of agricultural systems and practices as per the TEEBAgriFood Framework, and (iii) a narrative on the theory of change, i.e. opportunities for capturing the value of nature in these case study examples.

*Keywords:* agriculture, food, livelihoods, framework, policy