



**NILE BASIN INITIATIVE**  
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# **Nile Basin Wetlands TEEB Synthesis Report**

**NBDF Economic Valuation of Wetland Ecosystem Services  
Webinar, March 15, 2021**

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# Introduction



According to wetland international report, currently about 131 million hectares of the African continent is covered by wetland areas and about 18.3 million hectares of wetland area is located in the Nile Basin.

Wetlands in different Nile basin countries have significant role for the hydrology of Nile River and the global community as well (Lisa-Maria & Matthew 2012).

Despite the fact that Nile has productive ecosystem, the Nile's land and water are underutilized and degraded at an alarming rate. The wetland areas in the basin are one of the most degraded parts of the Nile, which covers 5% of the basin and vulnerable to various problems,

Infrastructure development close to water resources,

Conversion to agricultural land,

Increasing population,

Overexploitation of wetland resources,

Expansion of invasive species,

Extraction of minerals and oil, and climate change.

# Introduction



- The Nile Basin TEEB synthesis report has two components.
  - The first component of this report is concerned with **reviewing the existing knowledge base on wetland ecosystem values, the Nile basin economies, wetland ecosystems, examples of wetland case studies in the Nile basin, identifying key river basin planning and management priorities where valuation could play a key role in guiding or informing decision-making, and thus defining the purpose, focus, approach and methodology of the Nile Basin Wetlands TEEB study.**
  - The second component of the TEEB synthesis report ‘the main TEEB study’ is based on a **series of site-level economic valuation case studies** in priority Nile Basin wetlands.
  - The main goal is **to support wetland conservation measures, management plan and development options to enhance wetland ecosystem services benefits** related to food access, regulation of micro climate, energy security, social and economic values, and sustainable society, environment and economy.

## 2. Review of Economic Valuation Studies in the Nile Basin: the current state of knowledge on the value of wetland ecosystem services in Nile Basin countries



More than 300 published studies were identified and collected, including articles, book chapters, technical reports, working papers and policy briefs. These were screened for technical credibility and methodological robustness, after which 209 'useable' studies were selected to be part of the review.

But currently 232 useable studies were identified



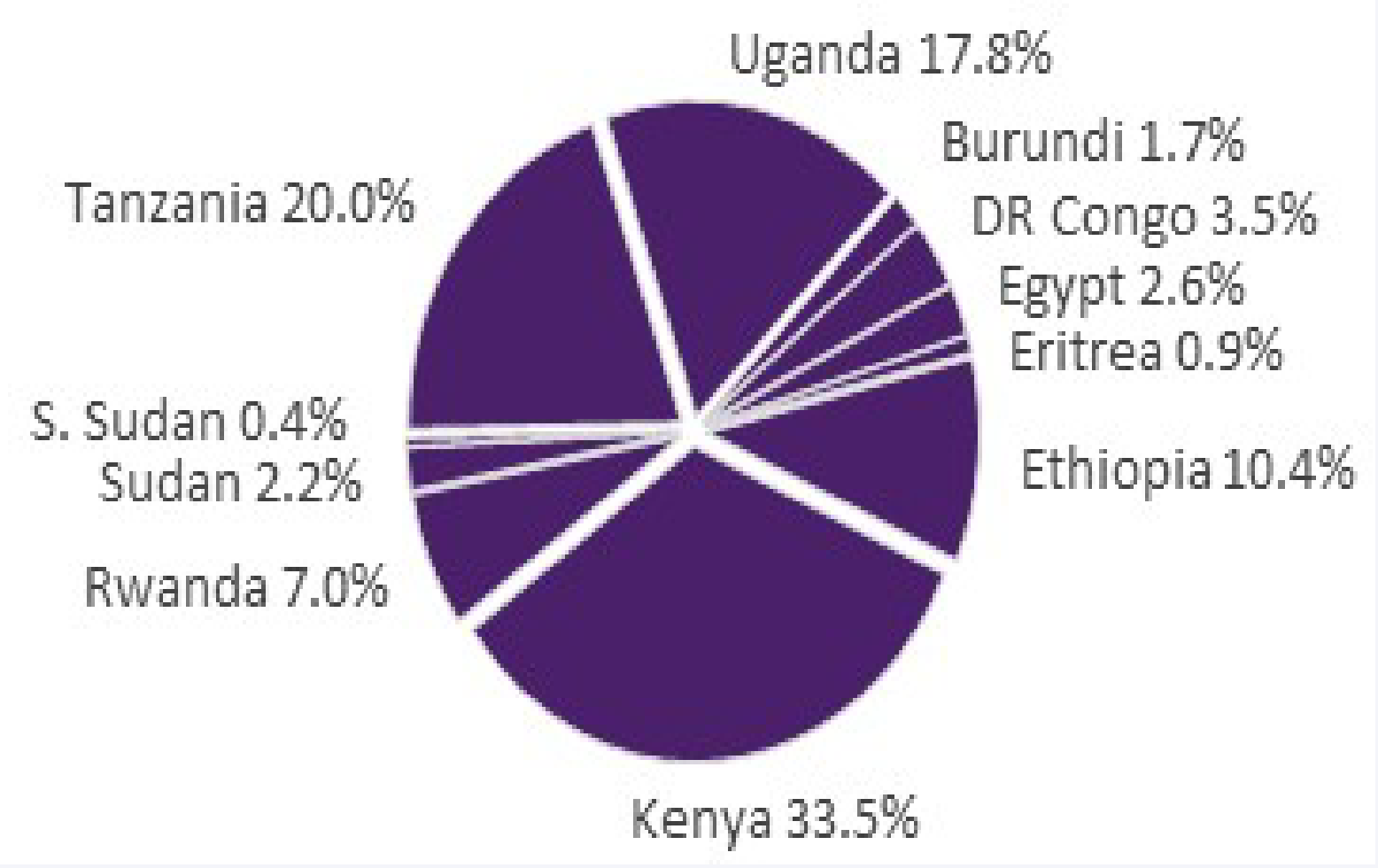
### peer review

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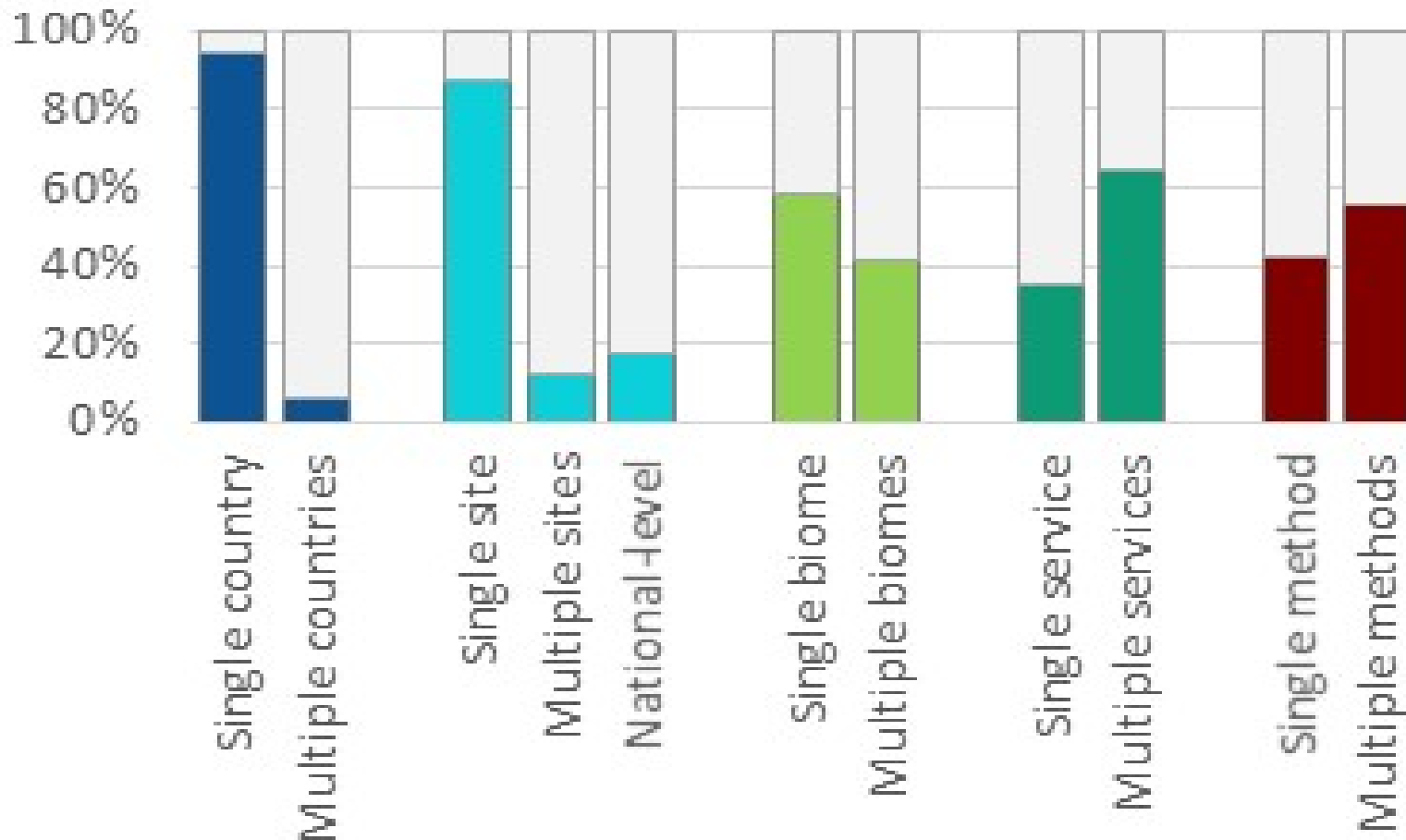
*noun*

1. evaluation of scientific, academic, or professional work by others working in the same field.  
"we submit our findings to rigorous peer review"

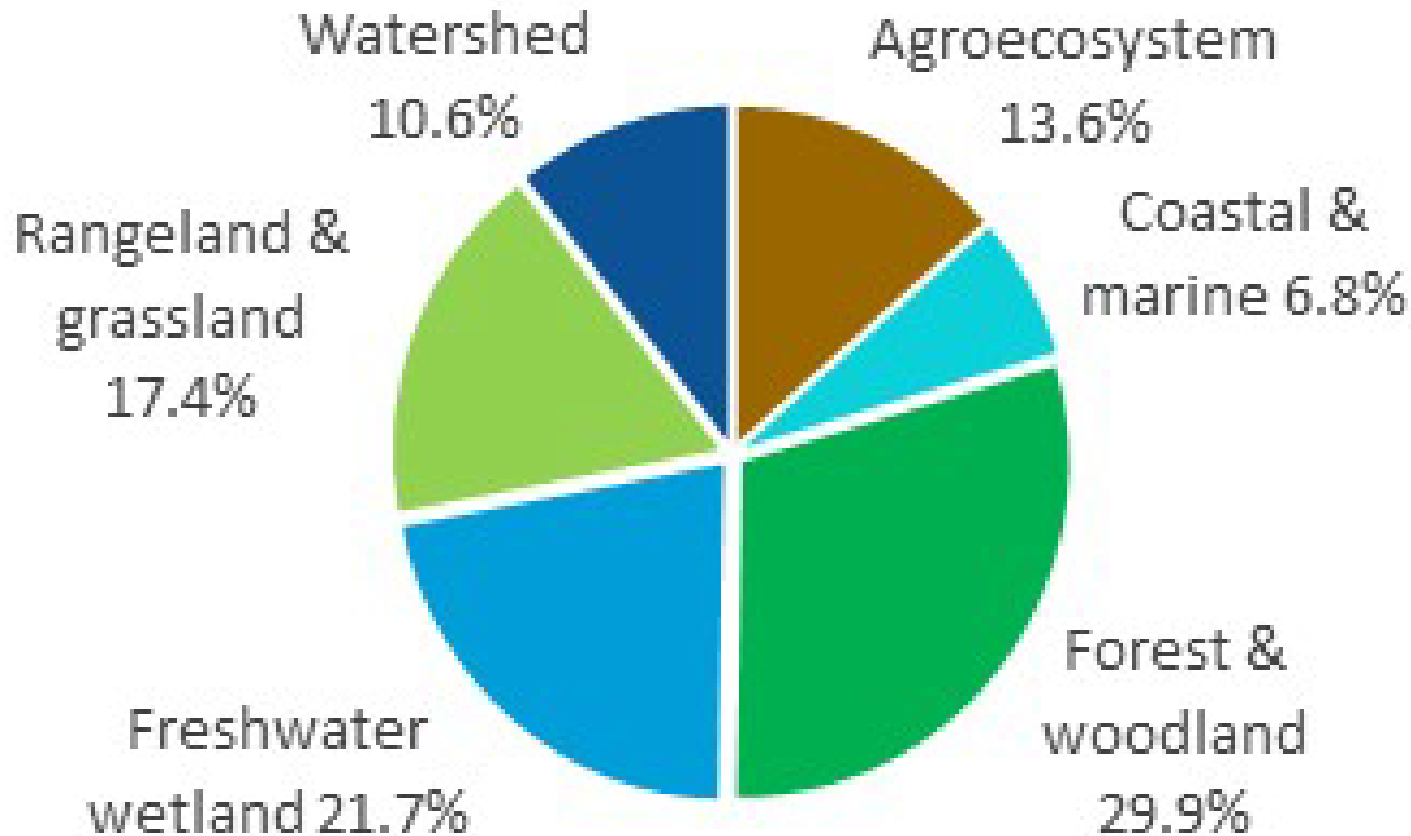
# Geographical, ecosystem and methodological spread



# Scope of ecosystem valuation studies

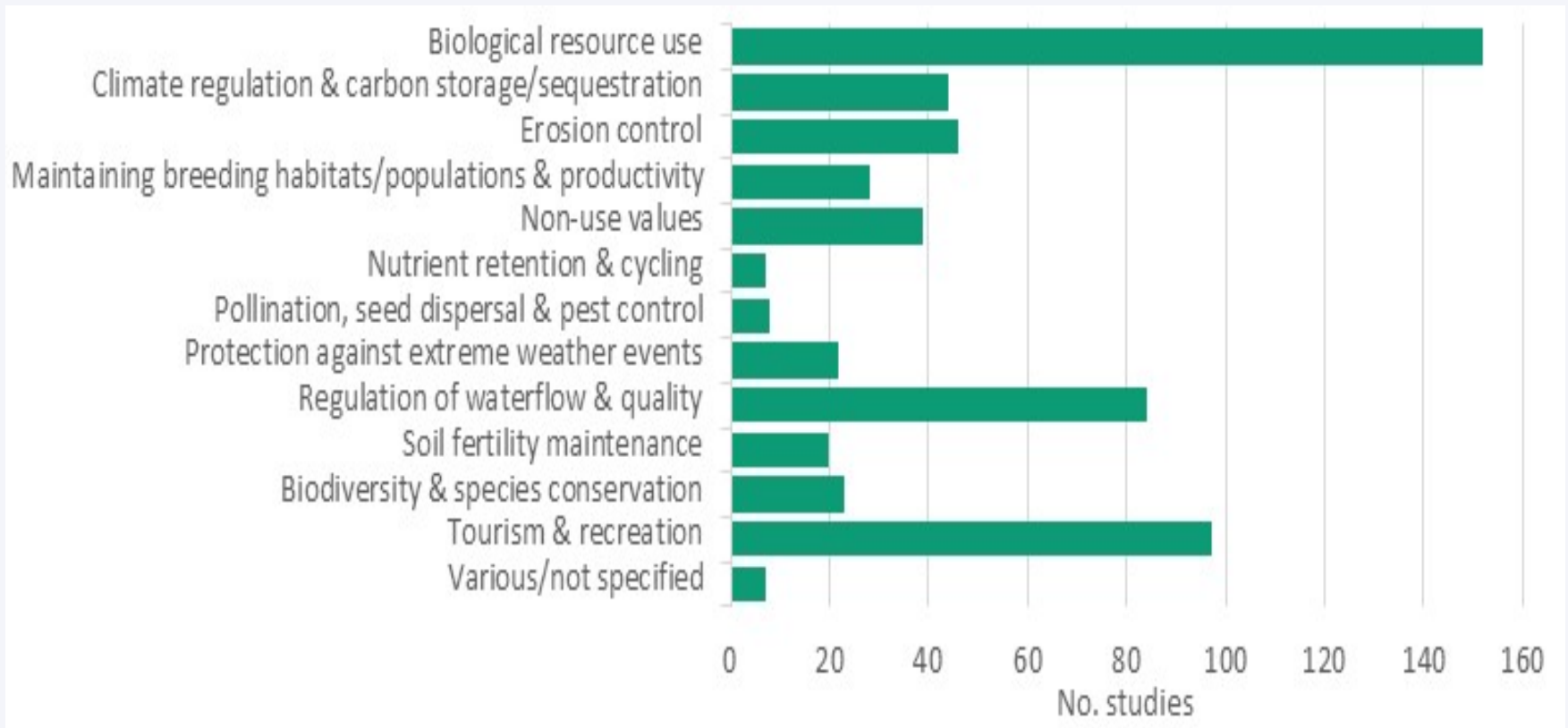


# Distribution of ecosystem valuation studies between different biomes

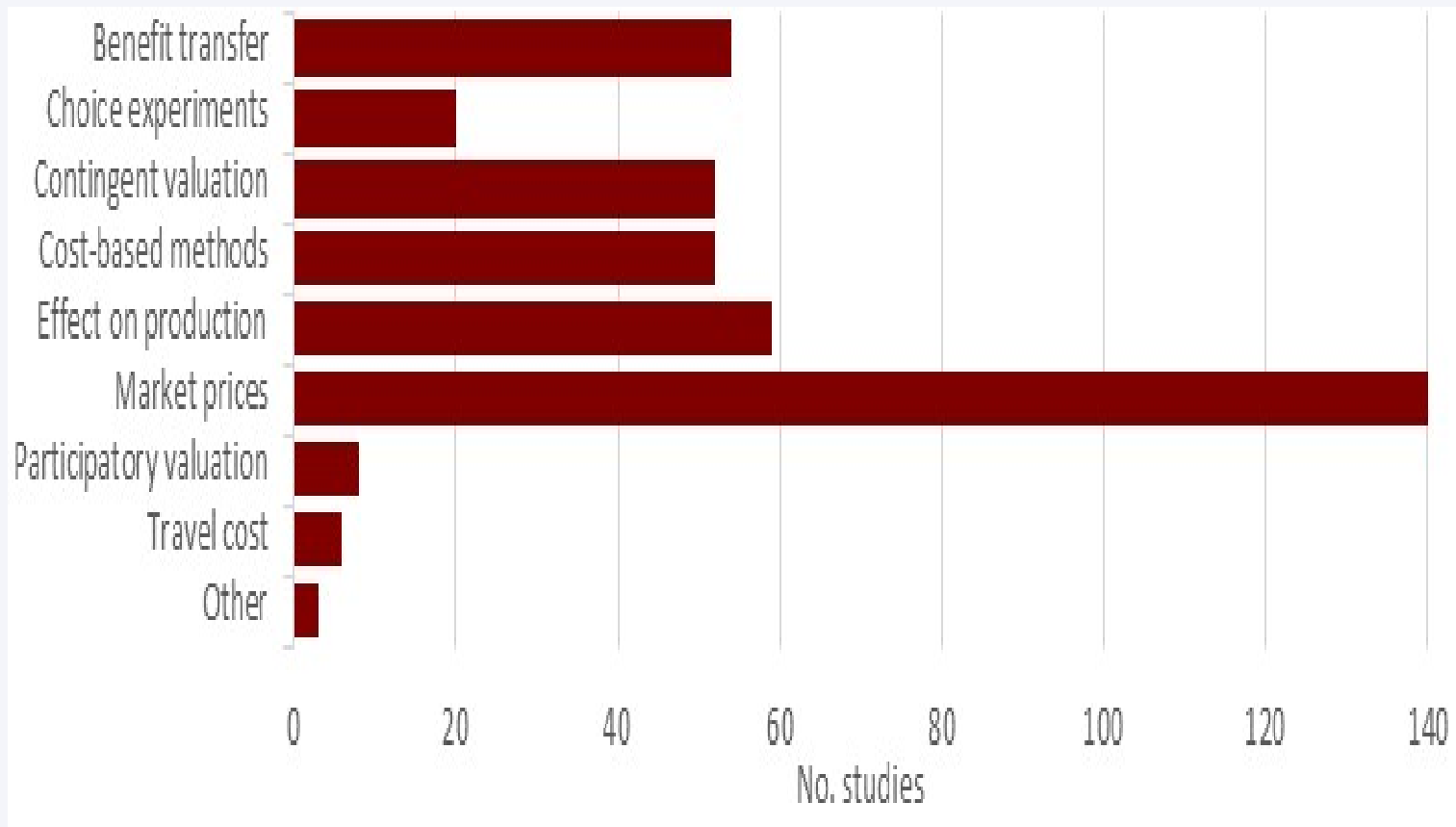




# Ecosystem service focus of valuation studies



# Application of different ecosystem valuation methods



# Remarks from the Review:

- Key knowledge gaps
- Skewed geographical coverage
- Data and assumptions
- Decision making impacts

# 3. Economies, Wetland Ecosystems and TEEB Case Studies in the Nile Basin



- Biophysical features of the Nile River Basin
- Socio-economic and development setting
- Wetland ecosystems and their services
- Examples of TEEB Case Studies in the Nile Basin
- Biodiversity and ecosystem threats and challenges and

## 4. Scoping TEEB in the Nile Basin

- Valuation as a means to an end
- Nile Basin decision-making issues, priorities, themes and topics
- Policy and practical purposes of wetland ecosystem valuation
- Valuing and investing in wetlands as natural water infrastructure
- Towards the Nile Basin Wetlands TEEB main study

**goal:**

strengthen awareness and actions on the economic importance of wetland ecosystem services to Nile Basin regional, national, sectoral and local-level development processes in order to facilitate more effective, equitable and sustainable river basin decision-making

**policy purpose:**

build the economic case for wetland conservation & wise use

**specific focus:**

assessing & capturing the socio-economic value of wetlands as 'natural' water infrastructure

**decision influence:**

help to leverage financing & other resources for sustainable wetland management

**entry points:**

demonstrate socio-economic & development advantages of investing in wetlands

identify opportunities for improving conservation funding & incentives

**target audience:**

river basin planners & water infrastructure investors

wetland conservation planners & managers

**main report & summary for policy-makers:**

communicate evidence & solutions on the value of harnessing wetland ecosystem services as natural infrastructure for river basin development

**site-level case studies:**

assess socio-economic/financial viability, cost-effectiveness & return on investment of green infrastructure measures for particular sector(s)/group(s)

## Contribution to NBI/project goals & place in NBW TEEB study

**Sio-Siteko wetlands**  
(Kenya/Uganda),  
**Semliki Delta**  
(Uganda/DRC)



conduct economic  
assessments of wetland  
ecosystem services as an **input**  
**for development of wetland**  
**management plans**

**Rweru-Bugesera**  
wetlands (Rwanda/Burundi),  
**Sudd wetland & Machar marshes**  
(South Sudan)



bring the economic value of wetlands  
and water related ecosystems services  
into **integrated wetland management**  
**planning** and **overall river planning** and  
**development decision-making**



*Contribute as case studies to NBW TEEB by demonstrating how wetland ecosystem valuation approaches can be applied in the Nile Basin management context*

# 5. Building the Economic Case for Wetland Conservation & Management Plan



- Five wetlands have been selected:
  - Semliki Delta trans-boundary wetland in Uganda and the Democratic Republic of Congo
  - Sio-Siteko Transboundary Wetland in Kenya and Uganda
  - Sango Bay Minziro Transboundary Ecosystem in Uganda and Tanzania
  - Rugezi Marsh in Rwanda
  - Mara Wetlands in United Republic of Tanzania
- Transboundary nature or their conservation and management requires collaboration between more than one country.
- The valuations explicitly show that the wetlands have huge benefit.



# 5. Building the Economic Case for Wetland Conservation & Management Plan



- Classic management plans - description of the site, evaluation of the status and threats, management goals and strategies, operational action plan, annual work plan, and budget – Semliki Delta and Sango Bay Minziro.
- Important lessons – restoration practices in Rugezi and the valuation scenarios for Sio-Siteko wetlands.
- The role of institutions and their integration at different levels is crucial component of WMPs – formulation of proper laws.
- The development WMPs is instrumental in averting delayed actions on the conservation of wetlands.

# 5. Building the Economic Case for Wetland Conservation & Management Plan



- Wetlands should be managed to meet a wide range of interacting environmental, social and economic objectives.
- Since the plans have financial plans and budget needs for each management actions, that could serve as an economic justification for the case of conservation endeavours.
- The management plans could also help to attract funds from development partners since the latter prefer target specific plans and interventions.

# 6. Assessing Wetland Development Options

- Five wetlands:
  - Sudd wetland in South Sudan
  - Virunga National Park in Democratic Republic of Congo (DRC)
  - Machar Marshes Wetland in South Sudan
  - Kano Floodplain of the Nyando River Basin in Kenya
  - Rweru Bugesera Wetlands Complex
- The studies in South Sudan and DRC emphasized the importance of peace and security.
- Boosting the immediate benefits while maintaining the ecological integrity is important.
- Important to increase the provisioning services from the wetlands.

## 6. Assessing Wetland Development Options

- Increasing the productivity of crop, livestock and fishery could reduce the pressure on the wetlands.
- The green (sustainable) development path has been explicitly highlighted in the studies for the Wetlands in both South Sudan and DRC.
- The development options proposed for the wetlands have left a portion of the option for external actors – some services have public good character.
- The development options for the wetlands cannot be a standalone approach.

## 7. Conclusions and Recommendations

- **Building the economic case for wetland conservation and management plan**
- Understanding the full value of the ecosystem services provided by the wetlands is a first step in preparing and implementing specific management activities and wise use of the wetlands.
- WMP should be tailored to the unique challenges and opportunities of the wetlands and the communities around them.
- Conservation is cheaper than restoration and often avoids costly coping mechanisms
- For wetlands of transboundary nature, coordination of efforts and programs is essential for successful execution of management plan preparation and implementation.

## 7. Conclusions and Recommendations

- **Development Options for Wetlands**
- Accounting for the economic value of wetlands ecosystem services as well as costs and benefits of wetland development scenarios, before proposing any development option, is important for coming up with a plausible development option proposal.
- Even if piecemeal approaches could be used to address immediate and site-specific challenges, sustainable change could be achieved by integrating development of wetlands with the development agenda of the countries.
- The wise use and the green developments paths have been the most commonly proposed development options to the wetlands.

# 7. Conclusions and Recommendations

- **Mainstreaming TEEB into Planning**
- Following the GIZ (2012) publication, we proposed a six procedure for mainstreaming TEEB into planning:
  - **Step 1:** Defining the scope of assessment and setting the stage
  - **Step 2:** Screening and prioritizing ecosystem services
  - **Step 3:** Identify ecosystem service conditions, trends and trade-offs
  - **Step 4:** Appraising the institutional and cultural framework
  - **Step 5:** Preparing better decision making
  - **Step 6:** Implementing change – setting up implementation strategy and operational workplan.



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**THANK YOU!**