The MRV capacity-building approach

to promote the use of biodiversity data for decision-making

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17 OCTOBER 2022

Belgique
partenaire du développement

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Capacities for Biodiversity and Sustainable Development

Need for biodiversity monitoring

Global biodiversity crisis!

- Knowing to better protect (information!)
- Understand its evolution and propose solutions
- Develop monitoring programmes to understand its trends

→The **indicators are essential** to :

- Measure changes in biodiversity over time
- Assessing progress in conservation and sustainable use
- Establish conservation priorities
- Develop national reports on international agreements (CBD, SDGs)

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Science

Policy

By Frits Ahlefeldt

Measuring, reporting and verification (MRV) of biodiversity

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The MRV concept

- The concept comes from the **climate** sector

	MRV in the climate context	MRV for biodiversity
M	"**Measuring (M)** emissions, mitigation and support related to climate change. "	Collect policy-relevant data on biodiversity drivers, pressures, states, impacts and responses.
R	" **Report (R)** by compiling this information into inventories and other standardised formats to make it accessible	Transform data into databases, indicators, trends and communicate them to decision makers
V	"**Verify (V)** assessment of the information to establish its completeness and reliability.	Review the indicators developed and adapt them if necessary.

- CBD **biological indicators** to monitor general objectives
- Strongly linked to the concept of **indicators**
- Learning process, **not yet well known**
- National **scale** not always possible, local scale also important!

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The CEBioS-MRV approach

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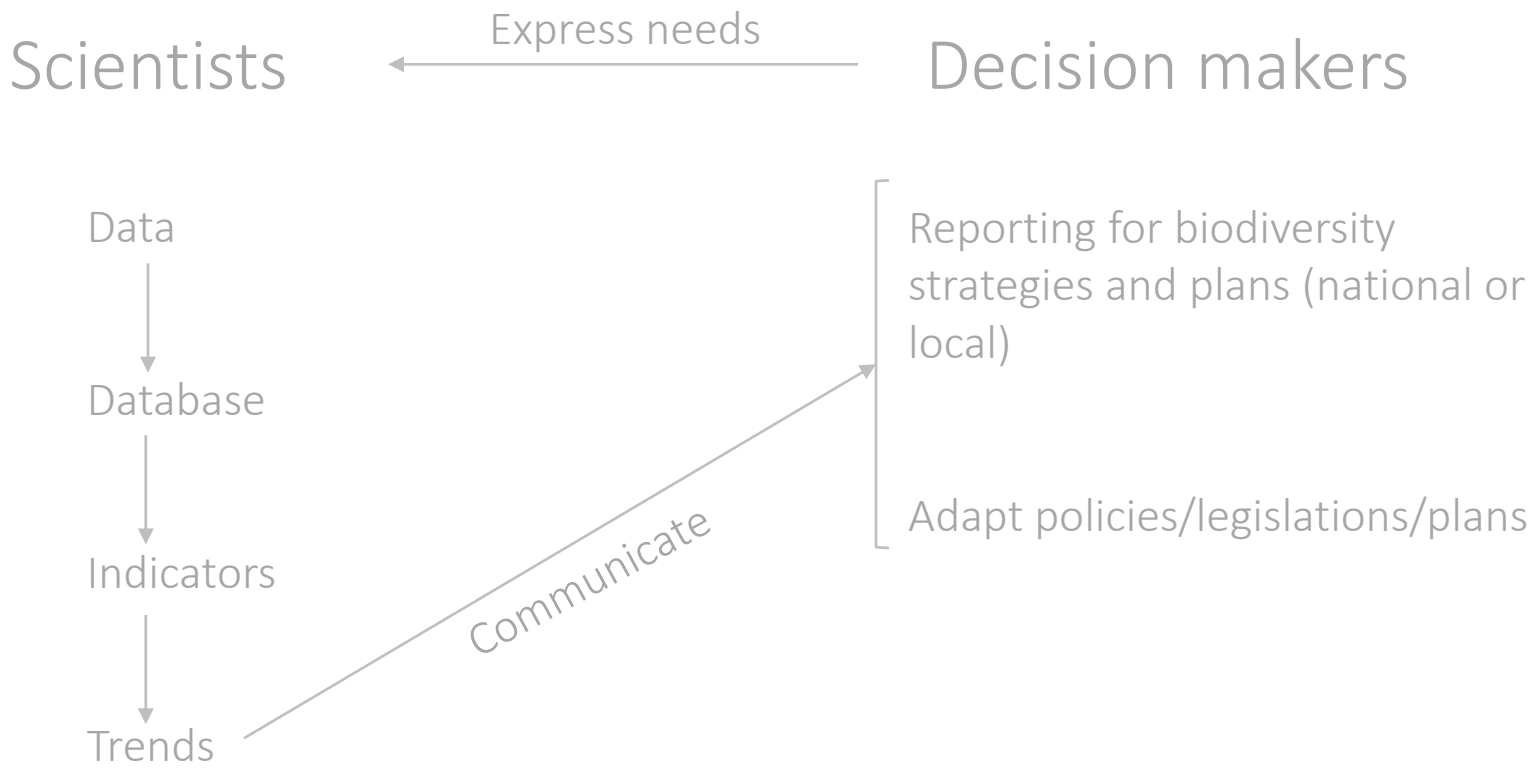
The CEBioS-MRV approach



1 partner for the **scientific** aspect:
collection and processing of data

1 partner for the **policy** aspect:
coordination, implementation and reporting

Common MRV project

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Cycle of MRV projects

Call for MRV projects

Selection

Formulation/ training workshops

Resubmission and selection

Implementation of projects

Closing workshops

- *Exchange of best practices*
- *Trainings*
- *Common productis*

Awareness projects

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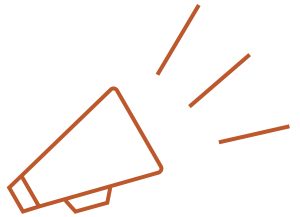

Calls for projects

- Objective: developing policy-relevant **biodiversity indicators**
- **"Tandem" approach (scientists-decision-makers)** enabling decision makers to express their needs for policy-relevant data
- Learning by doing + distance support
- **Key themes** about the sustainable use of biodiversity: protected areas, bushmeat, fisheries, charcoal

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Calls for MRV projects

	Call 2015	Call 2016	Call 2018	Call 2019	Call 2020
Country	Benin, Burundi, DR Congo, Morocco	DR Congo	Ghana, Kenya, Uganda, Palestine, Rwanda, Tanzania	Follow-up of 2015 & 2016 - Benin, Burundi, DR Congo, Morocco	Follow-up of 2018 - Uganda, Palestine, Tanzania
#	5	11	10	9	5
Themes	• National Indicators • Medicinal plants • Selected ecosystems and species	• Charcoal • Bushmeat • Fishing	• Charcoal • Bushmeat • Fishing in protected areas	• Medicinal plants • Charcoal • Bushmeat • Fishing • Forest cover	Sustainable use of natural resources • Fisheries • Shea nut • Protected areas

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Formulation/training workshops

Pre-projects presentations

↓

Training by CEBioS and African experts

↓

Group work with the experts to improve the proposals

↓

New improved proposals

- MRV approach
- Developing policy-relevant biodiversity indicators
- Database management
- Science Policy interface
- Biodiversity governance
- Mainstreaming of biodiversity in policy sectors
- Online biodiversity data portals
- Project management

→ South-South cooperation
→ Exchange of experience
→ Building a network

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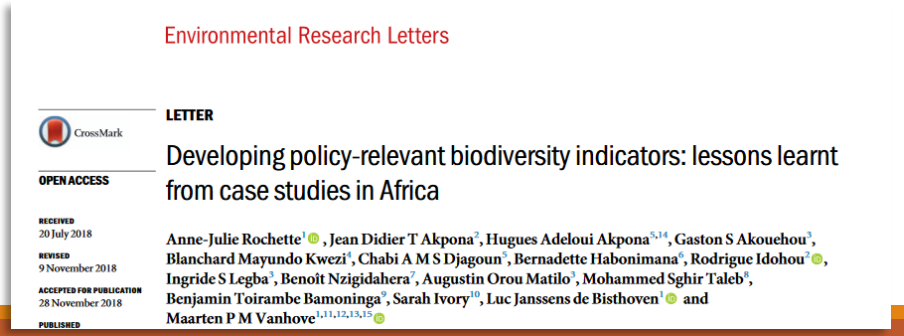
Closing workshops

- Projects presentations
- Exchange of best practices
- Training about:
  - Communication towards policy-makers and different target groups
  - Creation of policy briefs
- Common publications
  - Policy briefs to share key results and recommendations
  - Scientific papers to share lessons learnt



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Follow-up projects: awareness

Need expressed at the closing workshops: awareness raising on

- the results of the MRV research, and/or
- good practices and legislation related to the theme

  for

  - the local population
  - authorities in the research area

Examples:

- **Posters,** leaflets, flyers…
- M**eetings** with the local population
- I**nformation session** with decision-makers;
- **Radio or TV** programme

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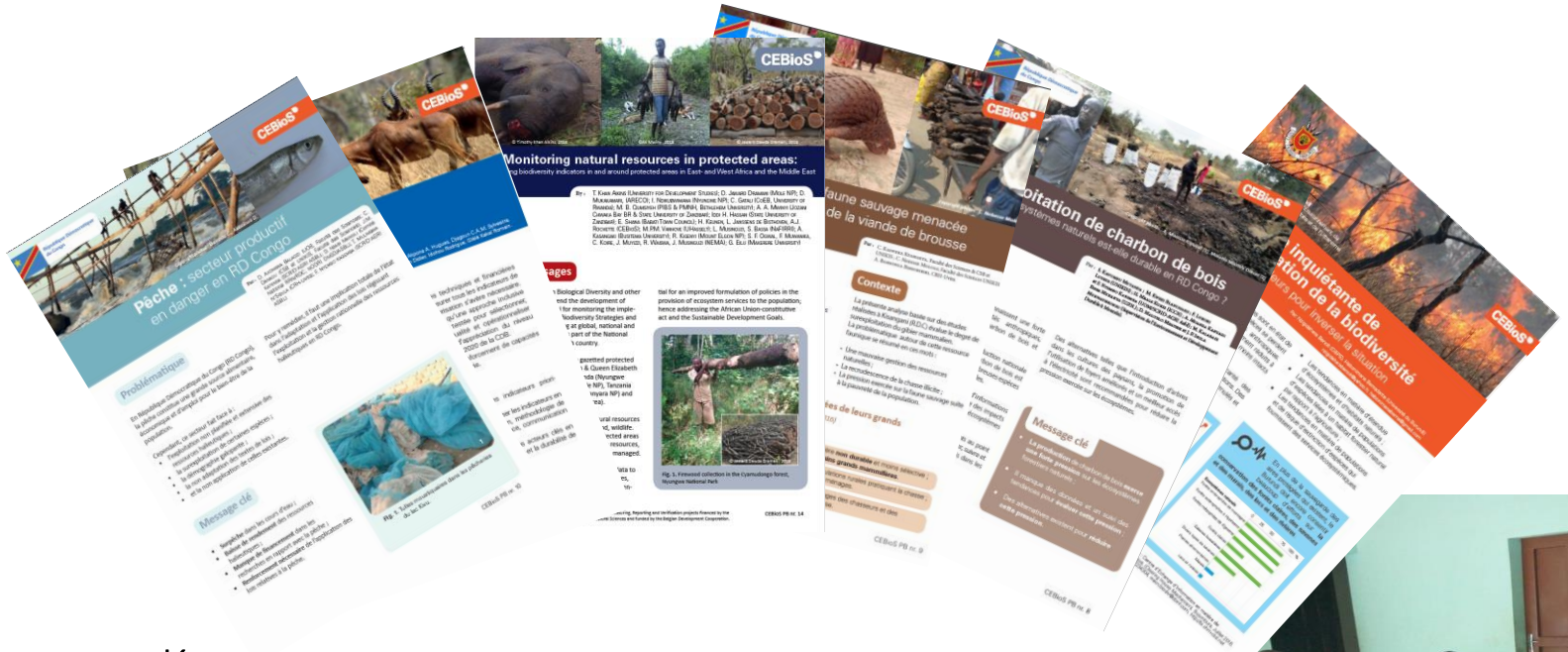
Policy briefs

Co-creation during closing workshops or during awareness projects



- Key messages
- Simple and visual
- Importance of the dissemination strategy!

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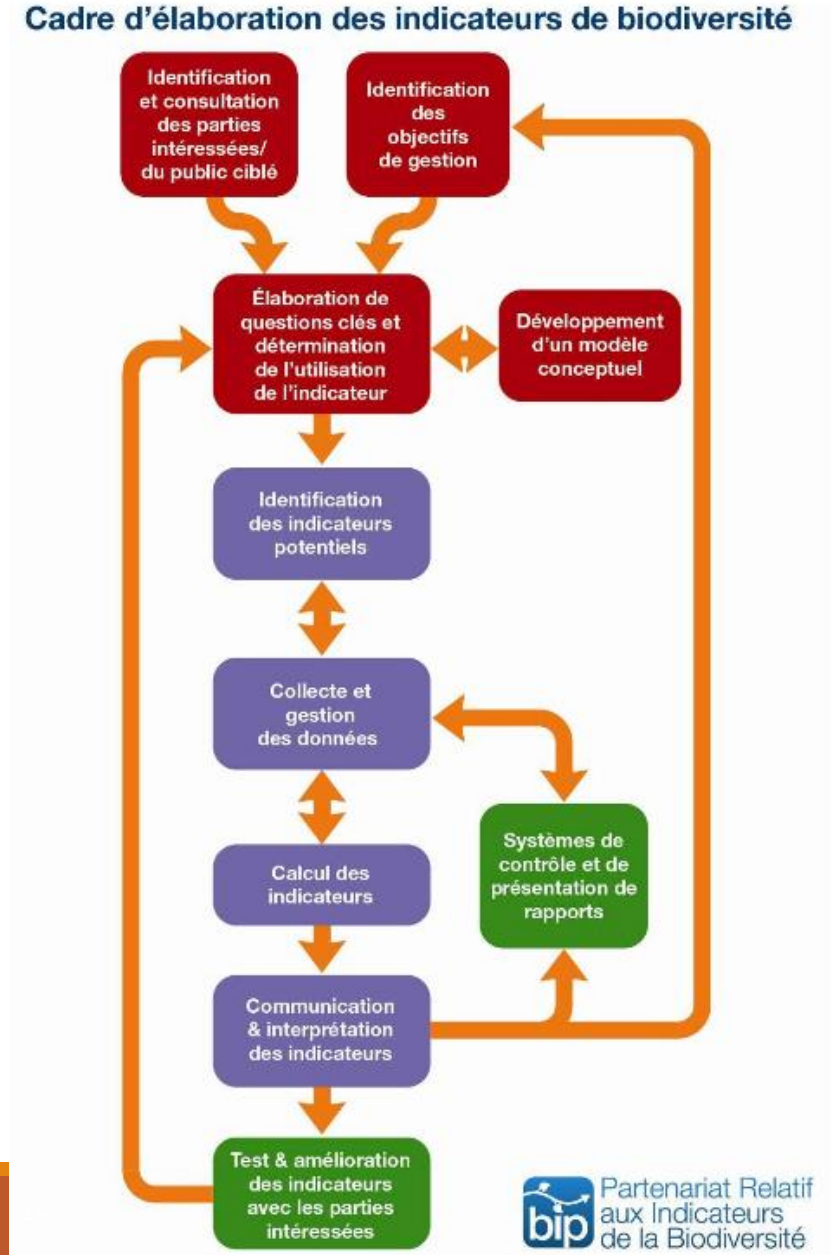
Biodiversity indicators



Biodiversity Indicators Partnership

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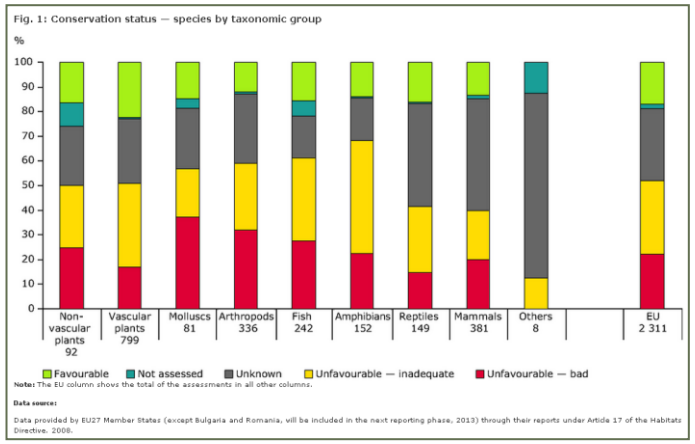
Biodiversity indicators

"'Measure based on verifiable data that conveys information about more than just itself' (BIP)

- A measure of something (size, quantity)
- Communicates information (estimates, trends, changes)
- Can be expressed in different ways



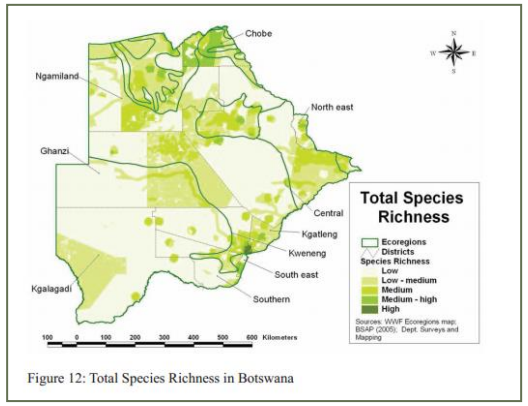


Figure 12: Total Species Richness in Botswana

Biodiversity Indicators Partnership
www.bipindicators.net/

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Biodiversity indicators

- Track progress in achieving targets
  →such as those set in NBSAPs, management plans or sustainable development strategies

- Guide policy design & implementation
  - *Highlight where action is needed*
  - *Adaptive management*
  - *Provision of alerts and early warning!*

- Build support:
  - *Communicate simple messages*

= Communication tool at the Science-Policy Interface!

bip Biodiversity Indicators Partnership
www.bipindicators.net/

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An indicator is contextual and can use certain data for several purposes

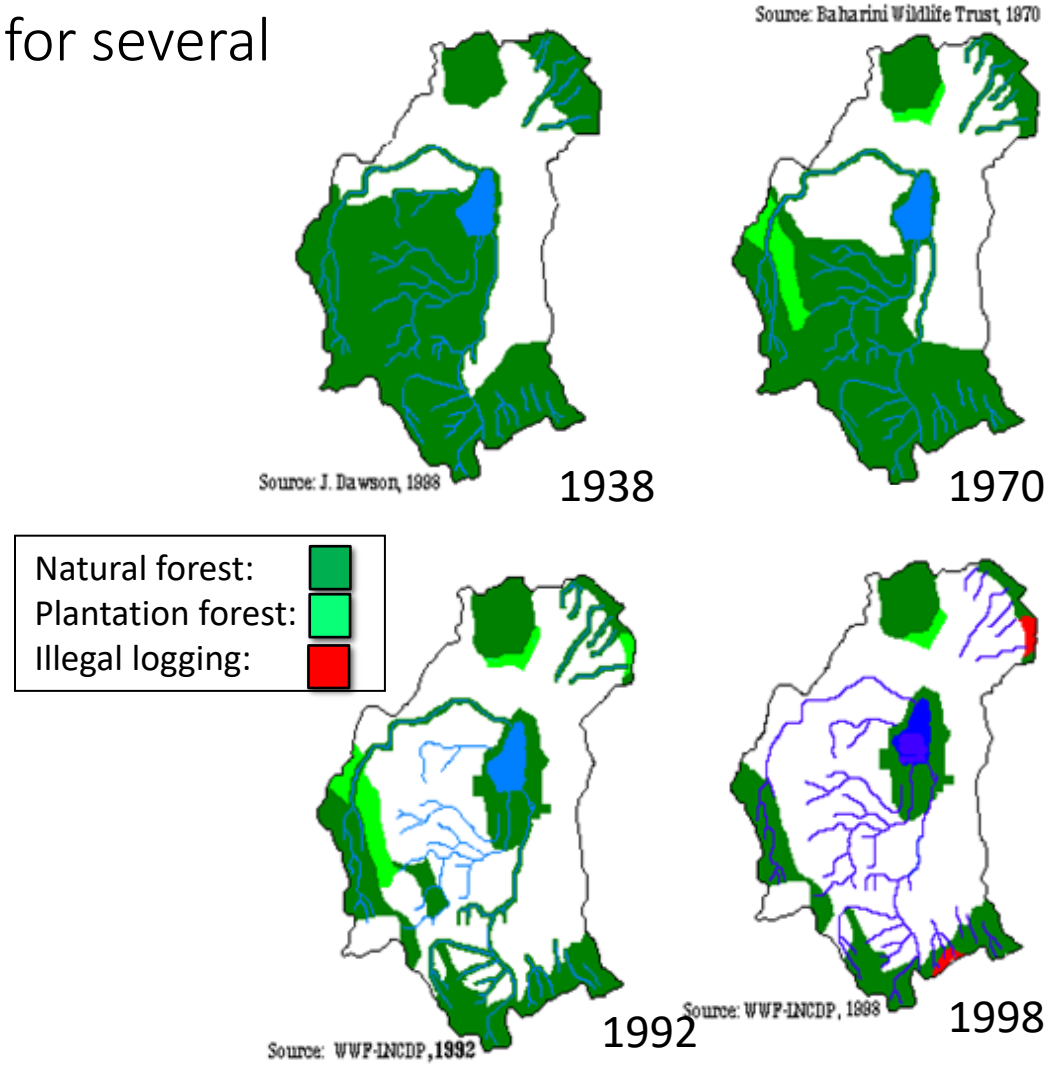
- *Understanding a problem:*
(Where is the forest? How big is it? Does it change over time? Why or why not?)

- *Development of objectives, policies*
(Priority areas? Threats? Protected areas?)

- *Monitoring progress and results*
(Extent of forests, status of protected areas)

- *Communication, support*

(Dialogue with stakeholders, State of the Environment Report, lobbying, fundraising)



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Indicators: examples

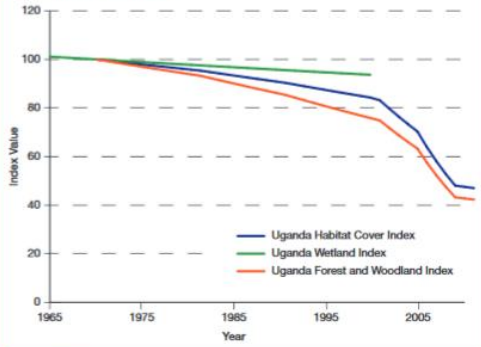
Biodiversity Indicators Partnership

Uganda — *How has the coverage of our habitats changed over time?*

Interpretation: The Habitat Cover Index is an indicator of the average change in the extent of wetlands and forests, with the index set to a value of 100 in 1970. Uganda has seen clear declines in its forest, woodland and wetland habitats since 1965. Forest cover has especially decreased in recent years as deforestation has become more widespread.

Uganda Habitat Cover Index

Data source: MUIENR, UWA, NFA, MUBFS (Makerere University Biological Field Station), Budongo Conservation Field Station, NatureUganda, and WCS



Produced by: *MUIENR in association with WWF International and ZSL.*

Ethiopia — *What is the status of Swayne's Hartebeest populations within our protected areas?*

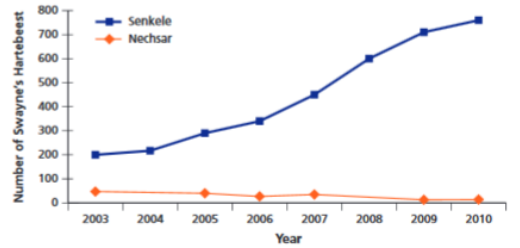
Interpretation: There has been a considerable increase in the Swayne's Hartebeest population at SSHS, which is mainly due to decreases in mortality levels resulting from disease and poaching. Successful actions undertaken to reduce mortality levels include:

- Establishment of habitat management and ecological monitoring mechanisms, which have included capacity strengthening of the Sanctuary's staff;
- Better livestock disease monitoring and increased awareness of communities in areas surrounding the Sanctuary.

Population numbers in Necshar National Park have declined mainly due to poaching.

Population trend of Swayne's Hartebeest within Senekele Swayne's Hartebeest Sanctuary (SSHS) and Nechsar National Park

Data source: SSHS Annual and Monthly reports (complied by EWCA). Nechsar National Park Annual and Monthly Reports



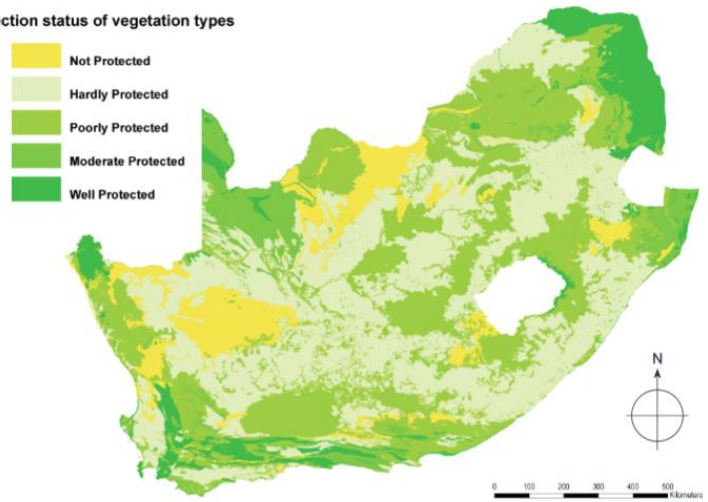
Produced by: *Ethiopian Wildlife Conservation Authority (EWCA), Institute of Biodiversity Conservation (IBC), Central Statistics Agency (CSA) and Ethiopian Wildlife and Natural History Society (EWNHS).*

What is the status of our national ecosystems and habitats?

South Africa — *To what extent does our Protected Area system achieve biodiversity targets for different vegetation types?*

Protection status of vegetation types in South Africa in 2010

Data source: Department of Environmental Affairs (DEA), South African National Biodiversity Institute (SANBI)



Burundi — *What is the coverage of our national forest?*

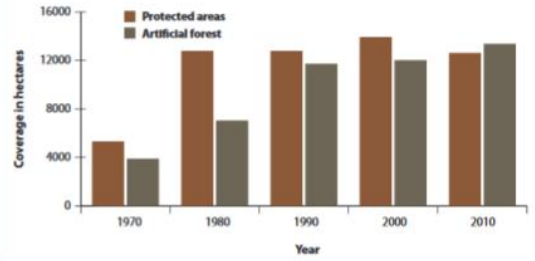
Interpretation: The increase in the extent of artificial forests and forests within protected areas demonstrates positive response actions undertaken by policy makers and other groups to protect forest habitats. Increases in forest cover also imply greater conservation of forest biodiversity and associated ecosystem services which are essential for the welfare of local communities.

Coverage of forests in Burundi

Data sources: Burundi, NEPAD (2009): Implementation of the comprehensive program of development of agriculture in Africa in Burundi: inventory of agricultural development efforts in progress and their alignment with the CAADP principles;

Ministry of Land Management and Environment (2000): National Strategy and Action Plan on Biological Diversity-SNPA-DB;

UNDP (2000): Strategic Framework for Growth and the Fight against Poverty: Second Report Implementation



Produced by: *National Institution for Environment and Wildlife Conservation (INECN); General Direction of Forests and Environment (DGFE); Geographic Institute of Burundi (IGEBU); Burundian Association for the Protection of Birds (ABO).*

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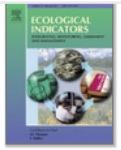
Ecological Indicators
Volume 73, February 2017, Pages 694-697



Joining science and policy in capacity development for monitoring progress towards the Aichi Biodiversity Targets in the global South

Maarten P.M. Vanhove [a, b, c, d], Anne-Julie Rochette [a], Luc Janssens de Bisthoven [a]

Papers

Lessons learnt

Environmental Research Letters

CrossMark

OPEN ACCESS

RECEIVED
20 July 2018

REVISED
9 November 2018

ACCEPTED FOR PUBLICATION
28 November 2018

PUBLISHED

LETTER

Developing policy-relevant biodiversity indicators: lessons learnt from case studies in Africa

Anne-Julie Rochette[1], Jean Didier T Akpona[2], Hugues Adeloui Akpona[5,14], Gaston S Akouehou[3], Blanchard Mayundo Kwezi[4], Chabi A M S Djagoun[5], Bernadette Habonimana[6], Rodrigue Idohou[2], Ingride S Legba[3], Benoît Nzigidahera[7], Augustin Orou Matilo[3], Mohammed Sghir Taleb[8], Benjamin Toirambe Bamoninga[9], Sarah Ivory[10], Luc Janssens de Bisthoven[1] and Maarten P M Vanhove[1,11,12,13,15]

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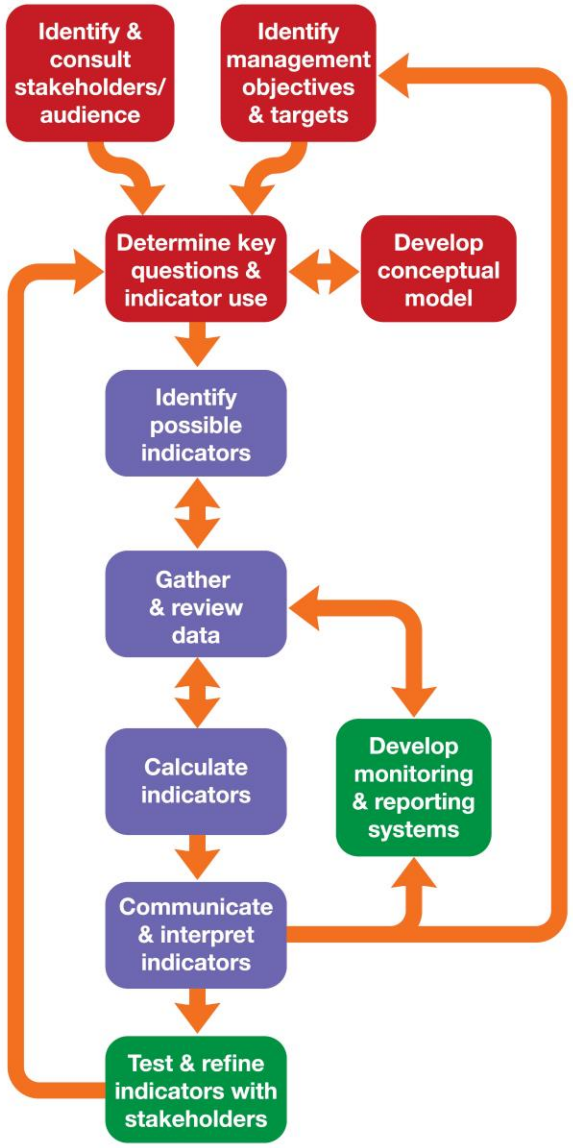
Biodiversity Indicator Development Framework



Lessons learnt

3 themes:

Purpose– needed for selecting successful indicators that respond to the users' needs
Production– essential to generate indicators
Permanence– mechanisms for ensuring indicator continuity and sustainability

MRV projects :

- Most steps followed, especially production and permanence
- Indicators should depend on a target crucial "object" steps!

Where is your project situated in this framework?

What steps are crucial?

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Papier: leçons apprises

Successful indicators?

Project	Scientifically valid	Based on available data	Responsive to change in the issue of interest	Easily understandable	Relevant to users' needs	"Championed" by an institution responsible for the indicator's	Used
A	++	+	+	++	+	=	+
B	=	-	+=	+	+=	-	-
C	++	=	++	+	+	-	+
D	=	-	=	+	=	-	-
E	+	=	+	+	+	-	+=

Poorly met criteria

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Lessons learnt

- The concept of indicators is not well understood
- Key steps:
  - Involve stakeholders from the start!
    - Prioritisation based on existing data, funds, capacity
    - More likely that indicators will be used and regularly updated
  - Accessibility of data
- Data of insufficient quality, misinterpreted, or with non-harmonised methodology → complicated replication and comparison

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Lessons learnt

- Capitalise on existing data rather than always collecting new data
- Existing global initiatives to provide access to data but little known or accessible in the South (language, internet connection, availability of software = barriers)
- Important to repeat monitoring over time (permanence!)
- Importance of harmonised databases continuous data collection and analysis
- Lack of a (national) structure responsible for the recurrent calculation of the indicator!

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Lessons learnt

- Scince-Policy collaboration
  → better understanding of each other's role and expectations, use of reliable scientific data (scientific legitimacy)
- Policy brief: good tool
- Indicators: not only that to reach decision makers! Scenarios and decision projections, economic valuation,...
- Indicators not adapted to all contexts, e.g. traditional knowledge
- Importance of South-South collaboration!

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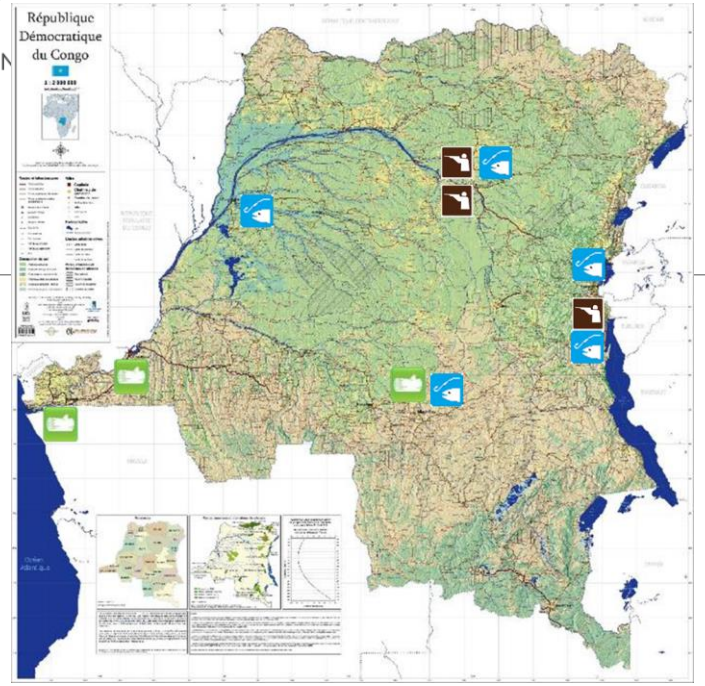
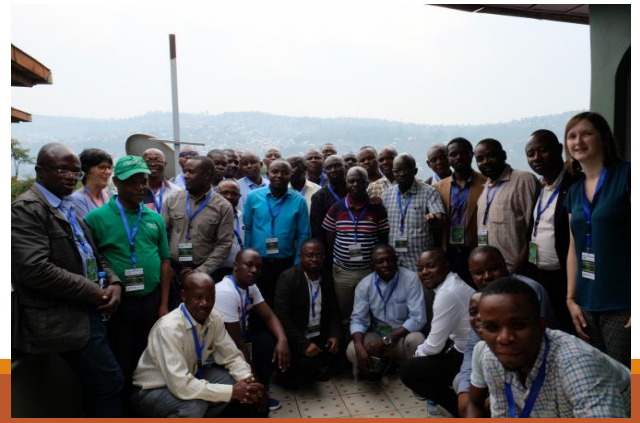


Focus on the DR Congo

Very high potential in terms of biodiversity conservation

- Very biodiverse and huge country
- Many (biodiversity) research institutes, very active dynamic scientific community, with high motivation and many data



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MRV 2016: focus on DR Congo

- Aim: valorizing existing data for biodiversity monitoring and reporting

- Collaboration between:

1) A national institute, research center or public university able to collect and provide the needed data ;

2) A governmental institution (ministry, nature conservation institute…) or non-governmental organization (NGO) to apply data or indicators for the follow-up of DRC SPANB

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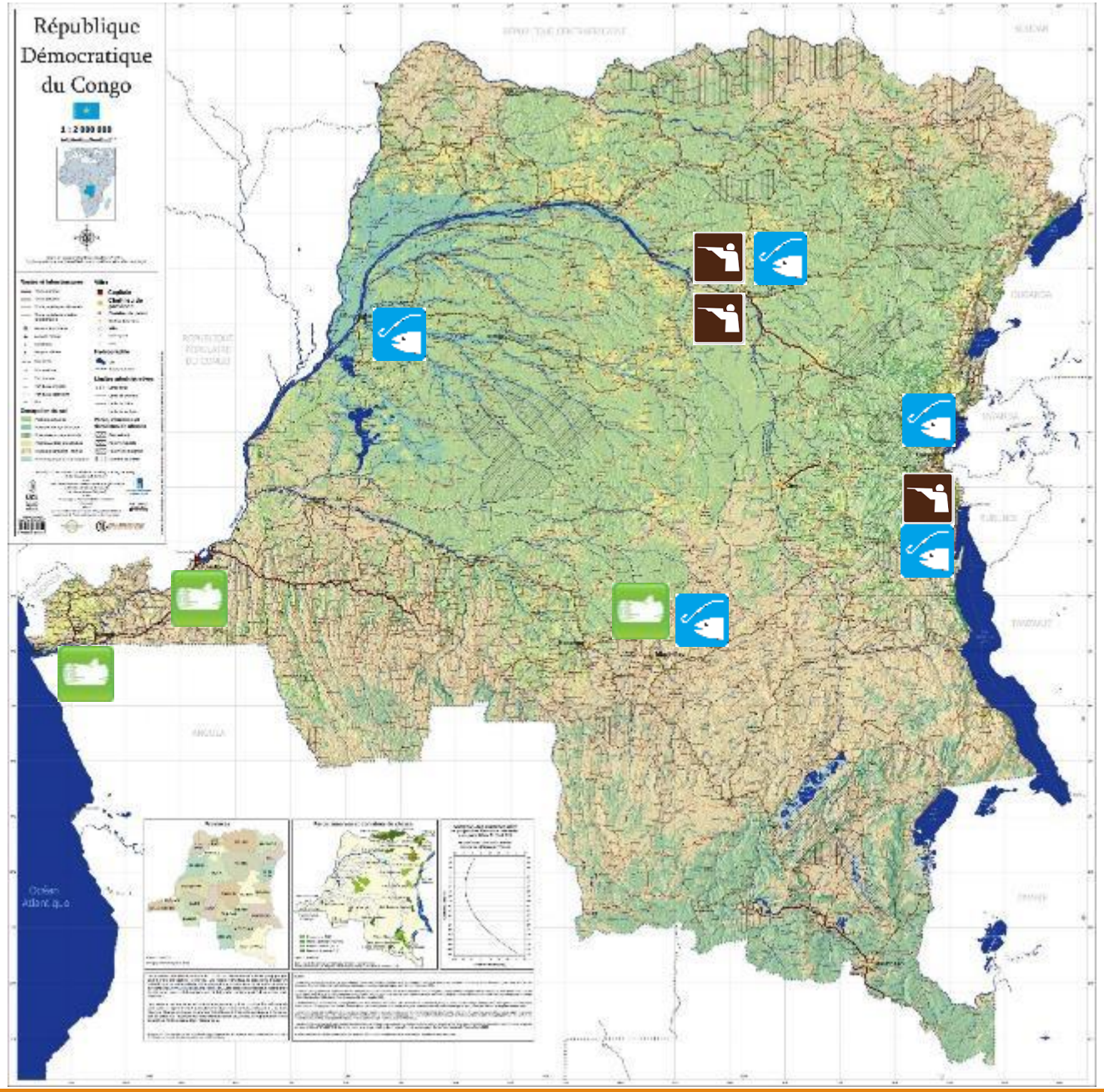
11 Projects in 6 Provinces

Bushmeat

Charcoal

Fisheries



6 research institutes/ universities

- Université de Kinshasa
- Université de Kisangani
- Centre de Recherche en Hydrobiologie d'Uvira
- Université Officielle de Bukavu
- Université Officielle de Mbuji-Mayi
- Institut Supérieur Pédagogique de Mbandaka

6 administrations/centers in charge of biodiversity conservation

- Coordination Provinciale de l'Environnement, Conservation de la Nature
- Institut Congolais pour la Conservation de la Nature
- Ministère de l' Environnement Direction de Développement Durable
- Coordination urbaine de l'Environnement de la ville de Boma
- SCRID-AGRI
- Centre de Surveillance de la Biodiversité (CSB)

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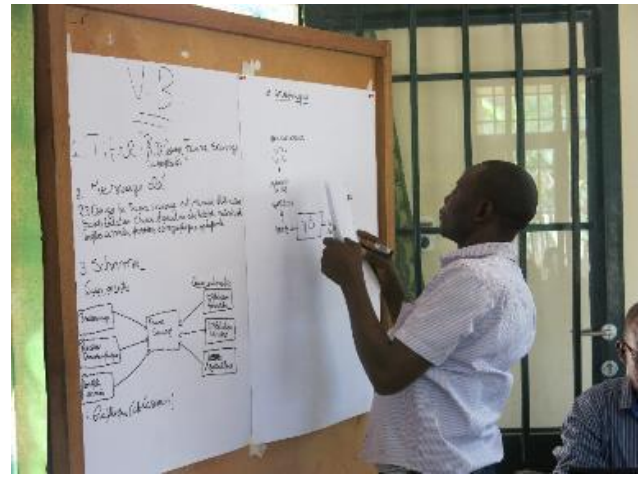
Closing workshops + discussions on MRV in DRC

Workshop at CSB Kisangani (2017) on the importance of indicators, MRV
Creation of policy briefs + position paper for scientific publication



Training workshop on MRV in Bukavu (2020)

Exchange of experiences, round tables

Around 80 participants

- Policy makers/managers (national/provincial/local/park)
- Scientists (universities/research centres/independent)
- NGOs

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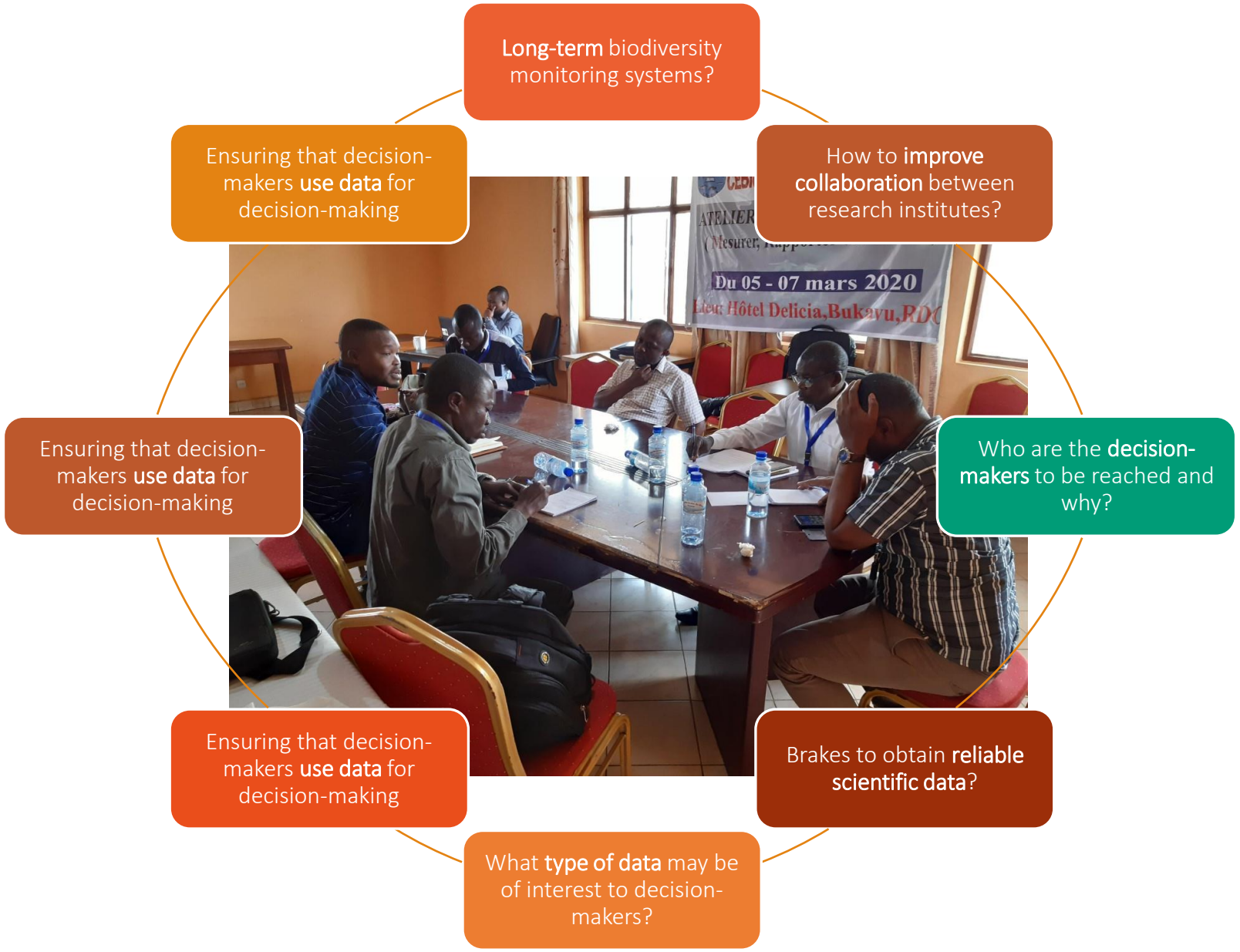
World Café

Policy-relevant monitoring of biodiversity in DR Congo



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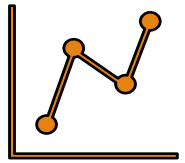
Challenges in DRC

Why no long-term monitoring systems?



Use & sharing of data

- Lack of data exchange between scientists/decision-makers (afraid)
- Weak mobilization of existing data

No global approach, no long-term research vision

- No/weak research programme in the institutions
- Lack of clear national strategy for research

Funding

- Lack of financial means for large-scale/long-term data collection (opportunism)
- DRC does not attract donors (not internationally competitive, not visible enough, perceived as unstable (insecurity / corruption)).
- Sustainability issues of punctual financed projects

No harmonization of data collection methods, and weak data quality

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Challenges in DRC

Barriers for reliable scientific data

- Lack of
  - Capacities regarding data collection, processing and analysis
  - Collaboration among scientists (harmonization of methods, expertise sharing)
  - Adequate equipment, infrastructure, and dedicated laboratories
  - Accessibility to data banks/portals (language, internet, software availability)
- Issues of
  - Material for data archiving
  - Skills in database management

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Recommendations for DRC

Science-Policy interface

Efforts to improve collaboration must be made on both sides

- Data sharing (researchers / provincial administrations)
- Common meetings, hoc biodiversity projects and trainings

Role of scientists

- Stimulate political interest
  - Monitoring and alert role
  - Clear and captivating messages - Improving communication
  - Creative information mechanisms (environmental committees, regular visits,…)
- More cooperation (to broaden/share their expertise and jointly address decision makers)
- Increase their understanding of decision-makers needs
- Decision-makers : not only the environment sector, biodiversity is cross-sectoral! (e.g. mining, energy, agriculture)

Suivi de la biodiversité en RD Congo :
comment le rendre efficace et pertinent pour la gestion et décision

Message clé

La République Démocratique du Congo (RDC) abrite la deuxième plus grande forêt tropicale du monde et est connue pour sa biodiversité foisonnante. Le pays souffre des crises politiques et de santé publique épisodiques, ainsi que des conflits armés et il voit sa riche biodiversité souffrir de dégradations dues à l'homme.

Le pays n'a pas encore mis en place un système de suivi efficace de la biodiversité, ni un ensemble d'indicateurs à cet effet. Il est donc difficile de dresser un tableau précis de la biodiversité et de ses tendances.

Pour suivre l'état de la biodiversité et proposer des solutions appropriées, un lien fort doit être établi entre les données scientifiques collectées et la formulation de politiques de biodiversité.

Analyse

En 2017 et 2020, une centaine de scientifiques et décideurs se sont réunis lors d'ateliers pour mettre en avant les défis à relever afin de proposer des solutions concrètes pour favoriser un suivi de la biodiversité efficace et pertinent pour la gestion et la prise de décision.

Manque de systèmes de suivi de la biodiversité efficace sur le long terme

Difficulté d'obtenir des données scientifiques fiables
- Manque de moyens financiers
- Conditions de terrain difficiles
- Manque de capacités techniques et scientifiques

Mauvaise organisation de la recherche
- Manque de collaboration parmi les scientifiques

Faible valorisation des données existantes
- Données pas disponibles en ligne
- Accès difficile aux données internationales
- Méconnaissance de ces données

Barrières techniques
- Connaissance limitée de l'anglais
- Faible accès à Internet

Manque de communication entre les scientifiques et les décideurs

Manque de contact et de collaboration étroite entre les chercheurs et les décideurs

Manque et connaissance insuffisante des canaux de communication et des plateformes d'échange

Manque de moyens (de communication et financiers) aux chercheurs pour atteindre les décideurs

Manque de recherches pertinentes pour les politiques
- Pas de politique nationale de recherche claire
- Manque de vision politique et scientifique
- Recherche non orientée vers la résolution de problème réel

Echange insuffisant d'informations

Paper ongoing

National networking to bridge the science-policy gap in a megadiverse and fragile country:
policy-relevant monitoring of biodiversity in DR Congo

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General conclusions

Lessons learnt

Biodiversity Indicators

- Good communication tools toward decision-makers: synthetic, visual (trends), easy to understand
- Concept of indicators not sufficiently understood + lack of (national) structures responsible for the recurrent calculation of the indicator
- Not adapted to all contexts, e.g. traditional knowledge

Many central African countries :

- High potential: very biodiverse, very high motivation
- Left behind in terms of biodiversity monitoring (cf global initiatives)
- Have no access to international efforts such as online data portals

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General conclusions

Lessons learnt

Capacity building needs

- The indicator concept
- Database management
- Sharing data and accessing online data
- Cf BID call

Promoting

- Mobilization of existing data
- Triangular cooperation (North South South)
- Indicator development initiatives with South expertise
- Tandem approach Science/Policy
- Active communication tools at the SPI (e.g. policy brief)
- Research topics formulated based on their research agenda
- Strategies for sustainability of data collection

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During the workshop

Objectives

- ✓ Exchanging on projects
- ✓ See how to go further in the projects
- ✓ Reflect on the MRV approach
- ✓ Prepare the submission of the awareness raising call

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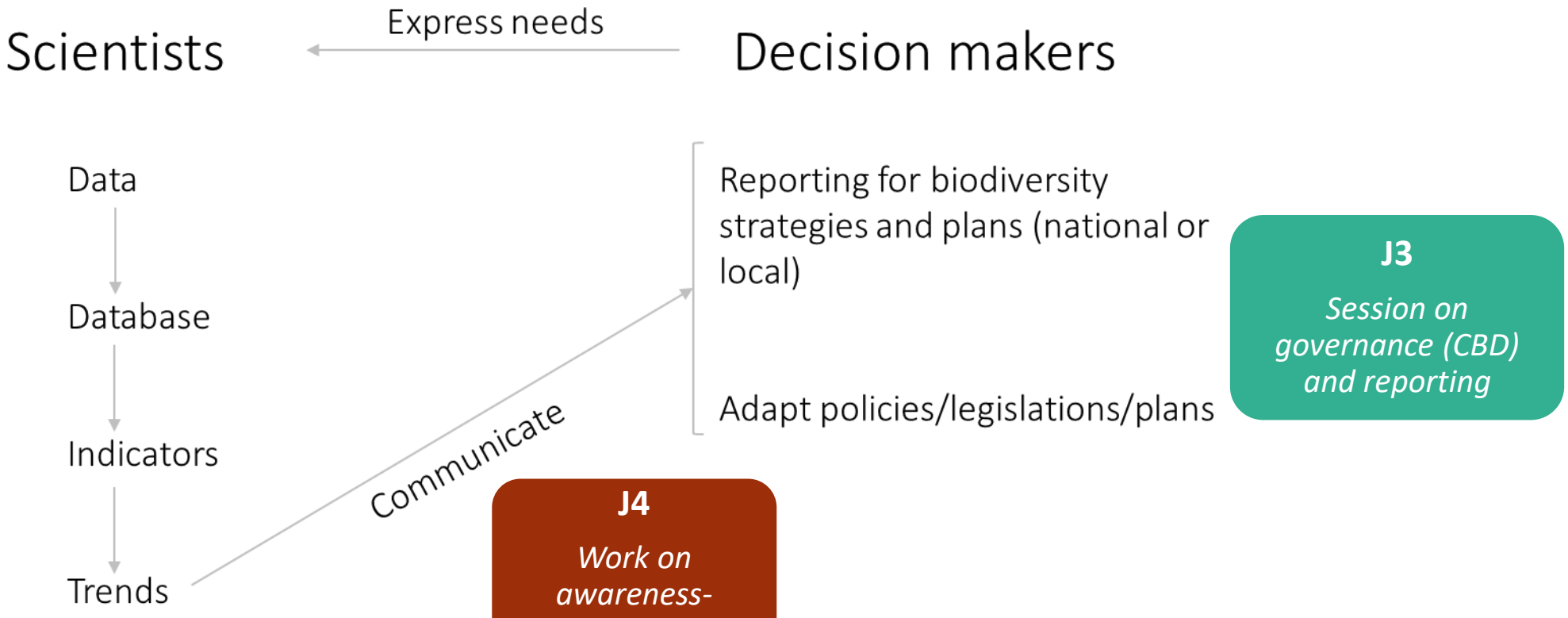
J1
Presentation of the projects

J2
Project cycle management

J2
MRV structure of projects

J3
Roundtables on the MRV approach

During the workshop



J3
Session on governance (CBD) and reporting

J4
Work on awareness-raising projects

J4
Session on policy briefs

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Welcome to the CEBioS Alumni private page.

Bienvenue sur la page privée des alumnis de CEBioS.

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Thank you!

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