



CEBioS Strategy 2024-2033

10-YEAR STRATEGIC PLAN OF
THE CEBIOS PROGRAMME:
2024-2033

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CEBioS Strategy 2024-2033

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List of acronyms

ACARE	African Center for aquatic research and education
ACNG	Acteurs de coopération non gouvernementale
APNCB	Archives des Parcs Nationaux du Congo Belge
ARES	Académie de recherche et d'enseignement supérieur
AVEDEC	Association villageoise d'entraide et de développement communautaire
AVIGREF	Union des Associations Villageoises de Gestion des Réserves de Faune
ASREEBU	Association pour la Restauration et l'Enrichissement de l'Environnement au Burundi
BBPf	Belgian Biodiversity Platform
BELSPO	Belgian Science Policy Office
BESNET	Biodiversity and Ecosystem Services Network
BIOPOLS	Belgian Policy Support of RBINS
BOAD	Banque Ouest-Africaine de Développement
BRAIN	Belgian Research Action through Interdisciplinary Networks
CBD	Convention on Biological Diversity
CBFP	Congo Basin Forest Partnership
CC	Climate Change
CEBioS	Capacities for Biodiversity and Sustainable development
CEC	IUCN Commission on Education and Communication
CEESP	IUCN Commission on Environmental, Economic and Social Policy
CEIBA	ONG au Bénin
CENAGREF	Centre National de Gestion des Réserves de Faune, Benin
CEPA	Communication, Education and Public Awareness
CEPGL	Communauté économique des Pays des Grands Lacs

CHM	Clearing House Mechanism
CIBA	Centre d'Information sur la Biodiversité Africaine
CITES	Convention on International Trade in Endangered Species of wild fauna and flora
COHERENS	Coupled Hydrodynamic Ecological Model for Regional Shelf Seas
COP	Conference of the Parties
CSB	Centre de Surveillance de la Biodiversité, Democratic Republic of Congo
DEA	Diplôme d'études approfondies
DGD	Belgian Development Cooperation
DRC	Democratic Republic of Congo
EAC	East-African Community
ECOMOD	Group in OD Nature (RBINS) on modelling
ECOWAS	Economic Community of West African States
EDUCAID	Belgian Platform for education and lifelong learning within the development cooperation
EGD	European Green Deal
ENABEL	Belgian Development Agency
EU	European Union
FIABEL	Federation of Institutional Actors in Belgium
FEDtWIN	Federal Programme for Research and infrastructures
FPS	Federal Public Service
GBF	Global Biodiversity Framework
GBIF	Global Biodiversity Information Facility
GBO	Global Biodiversity Outlook
GEF	Global Environment Fund
GEOBON	Biodiversity Observation Network of the Group on Earth Observations
GIS	Geographic Information System

GTI	Global Taxonomy Initiative
ICCN	Institut Congolais pour la Conservation de la Nature, Democratic Republic of Congo
ICCP	Intergovernmental Climate Change Panel
IOB	Instituut voor Ontwikkelingsbeleid
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPLC	Indigenous People and Local Communities
IRHOB	Institut de Recherches Halieutiques et Océanologiques du Bénin
IRSNB	Institut Royal des Sciences Naturelles de Belgique
IUCN	International Union for Conservation of Nature and Natural Resources
JSF	Joint Strategic Framework
JFW	Join4Water
KBA	Key Biodiversity Area
KM	Kunming Montreal
LF	Logframe or Logical Framework
LNOB	Leaving No One Behind
M&E	Monitoring & Evaluation
MAB UNESCO	Man and Biosphere programme
MEA	Multilateral Environment Agreement
MEDD	Ministère de l'Environnement de Développement Durable, Democratic Republic of Congo
MEP	Monitoring of Ecosystems, their services and protected areas
MoU	Memorandum of Understanding
MRAC	Musée Royal d'Afrique Central
MRV	Measuring, Reporting and Verification
NBS	Nature-Based Solutions

NBSAP	National Biodiversity Strategy and Action Plan
NGO	Non-Governmental Organization
NP	Nagoya Protocol
NR	National Report to the Convention of Biological Diversity
N-S-S	North-South-South
OBBD	Organisation Béninoise pour la Biodiversité Durable
OBPE	Office Burundais pour la Protection de l'Environnement (avant: INECN), Burundi
OD	Operational Directorate
OECD	Organisation for Economic Co-operation and Development
PACECOR	Projet d'Appui à la Conservation des ECOSystèmes du bassin hydrographique de la Rusizi
PB	Policy Brief
PCM	Project Cycle Management
RBINS	Royal Belgian Institute of Natural Sciences, Belgium
SBI	Subsidiary Body on Implementation
SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advice
SDG	Sustainable Development Goals
SECORES	Network for resilient ecosystems (joint thematic framework)
SER	Social-ecological Resilience
SPANB	Stratégie et Plan d'Action National de Biodiversité
SO	Specific Objective
SSC or S-S	South-South Cooperation
SYN	Synergies and complementarities, SECORES and external projects
TOC	Theory of Change
UAC	Université d'Abomey-Calavi, Benin
UB	Université du Burundi, Burundi

UGent	Universiteit Gent
UP	Université de Parakou
UN	United Nations
UNDP	United Nations Development Programme
UNEP	UN Environment Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNIKIS	Université de Kisangani, Democratic Republic of Congo
VLIR-UOS	Flemish Interuniversity Council, Development Cooperation, Belgium
WCMC	UNEP World Conservation Monitoring Centre
WIA	Whole of Institute Approach
WWF	World Wide Fund for Nature

A. Introduction to the state of play

The 10-year strategy of the CEBioS-programme is structured in two parts: the first part introducing to the current state of play in the actual multi-crisis context, and a second part explaining the [CEBioS](#)¹ programme's strategy in terms of actors, theory of change, partner countries, operational sub-programmes and management, monitoring and evaluation. For more details on the state of play, recommendations from the Evaluation & management response, the Global Biodiversity Framework linked to CEBioS, and the general guiding principles of CEBioS we refer to the annexes².

From 2018 onwards, a new logical framework and a Theory of Change promoted a learning process and guided implementation, planning and reporting of the CEBioS programme in a more efficient, structured and focused way.

Anno 2023, a new external evaluation was performed for the second five-year term and the 2014–2023 10-year strategy. The evaluation was overwhelmingly positive and its recommendations were integrated in the present strategy to keep CEBioS fit for the future.

1. What is CEBioS?

CEBioS is a programme subsidized by the [Belgian Development Cooperation](#) and operating at the Royal Belgian Institute for Natural Sciences in Brussels, since November 2023 called 'Institute for Natural Sciences'. It has a staff of 10 persons. Its objective is to support partner countries in the global South in their implementation of Multilateral Environmental Agreements, more specifically the Convention of Biological Diversity ([CBD](#)) for a more sustainable management, use and conservation of biodiversity linked to local livelihood and eradication of poverty. The vision and mission of CEBioS are presented in boxes 1 and 2.

The positive external mid-term evaluation in 2018 enabled CEBioS to operate according to a more results-based, lean and adaptive way during its second phase (2018-2023).

Box 1: Our vision:

- our planet should remain green, resilient,
- biodiversity should be high on the political agenda in Belgium and in developing countries
- every citizen should be aware of the crucial need to maintain biodiversity and ecosystem services
- biodiversity conservation contributes to poverty eradication and vice versa through the sustainable use and management of its ecosystem services (Box 3).

¹ All words in blue are hyperlinks to websites.

² This document contains 4 annexes: Annex 1 (state of play), Annex 2 (Recommendations from the Evaluation & management response), Annex 3 (the GBF and CEBioS) and Annex 4 (general guiding principles of CEBioS)

2. A strategy with new accents

Since the writing of the previous strategy (2014), the world has profoundly changed. It has been shaken by the Covid pandemics and conflicts in partner countries and elsewhere. Climate change has become even more the -literally-hot topic, intrinsically linked to biodiversity loss. The direct drivers of change in nature with the largest global impact have been changes in land and sea use, direct exploitation of organisms, climate change, pollution and invasion of alien species. Those five direct drivers result from an array of underlying causes, the indirect drivers of change, which are, in turn, underpinned by social values, economic dynamics and behaviours. These crises are especially exacerbated in the global South, where fragile economies, poor governance and widespread poverty result in low resilience to biodiversity erosion and climate change.

Box 2: Our mission:

- to mutually (i.e. in a post-colonial sense, as a dialogue between North and South) strengthen & promote scientific research, knowledge dissemination and awareness raising on the knowledge, conservation and sustainable use and management of biodiversity in the global South;
- to better understand and participate in the science-policy-development interface at various levels, to contribute to more informed decision-making on complex biodiversity issues.

Therefore, a systemic approach to these interconnected crises is needed which should lead towards transformative changes to reshape societies and their economies. The global South's strategic priorities of alleviating poverty, halting the biodiversity loss linked to climate change are reflected in our strategy. This should lead, as expressed in our vision and mission (Box 1 & 2) to a more green economy in harmony with nature, based on Nature-Based Solutions and

sustainable development. Our work is based on the paradigm that sustainably harnessing ecosystem services (Box 3) will lead to better developed value chains, hence providing income to local populations and conserving biodiversity, the ultimate goal of our theory of change.

In short, our 10-year strategy 2024–2033 will address the urgency of the biodiversity crisis linked to climate, water, food security and health crises.

Box 3: Ecosystem services:

The benefits people obtain from ecosystems. In the Millennium Ecosystem Assessment, ecosystem services can be divided into supporting, regulating, provisioning and cultural. For example regulating services include pollination, water purification, erosion and flood control, carbon storage and climate regulation. This classification, however, is superseded in IPBES assessments by the system used under "Nature's contributions to people" which reflects the rich social, cultural, spiritual and religious significance of a number of services that cannot only be characterized in materialistic / utilitarian terms and acknowledges different value systems as equally relevant.

The strategy builds on successful CEBioS experiences and interventions we want to continue and strengthen by : (1) implementing as much as possible the newly created targets (annex 3) and monitoring framework of the Global Biodiversity Framework of the CBD with dedicated policy support towards the Belgian Development Cooperation (DGD), The Science Policy administration (BELSPO), the Rio Convention on Biological Diversity (CBD) and the partner countries, (2) a strong focus on the nexus of biodiversity with climate, water, food and one health³ (Box 4) by fine-tuning eligibility of calls and terms of references of workshops and trainings, (3) deepening of strategic interventions with active participation in the [SECORES](#) network and its Joint Strategic Framework on Resilience of social-ecological systems, (4) use

³ E.g., One Health and OD Phylogeny: through the identification of intermediate vectors of zoonoses in mammals and birds and the genetic identification of bushmeat on the markets.

a [whole of institute approach in our institutional cooperation](#). We will work more explicitly through 6 sub-programmes (explained further in this document) linked to the Theory of Change (TOC) and logframe. Extra attention will be devoted to developing capacity building modules including elements of remote sensing, the [Evamab manual](#) on rapid assessment of ecosystem services (developed by a consortium coordinated by CEBioS) and conservation tools developed by the International Union for Conservation of Nature (IUCN).

Box 4: One Health is an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems.

The approach mobilizes multiple sectors, disciplines and communities at varying levels of society to work together to foster well-being and tackle threats to health and ecosystems, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development.

3. The strategy covering two phases of five years

This CEBioS strategy covers a period of 10 years (2024– 2033). It reflects the importance of working in the long-term with a number of trusted institutions in our partner countries. It provides an optimal time frame to insure anchoring, ownership, sustainability and monitoring of our interventions. The period is divided into two multi-annual periods of five years. This allows to develop multi-annual and results-based

implementation plans with regular monitoring and intermediate evaluations to guarantee efficiency, efficacy, outcome, impact and agility.

4. The strategy at the crossroad of policy and governance in view of the current crisis

On the policy front, the [Sustainable Development Goals](#) replaced in 2015 the Millennium Development Goals. The last CBD Conference of the Parties (COP-15, Kunming-Montreal) of December 2022 set [new targets](#) in its [Kunming-Montreal Global Biodiversity Framework](#) (vision and mission, see Box 5) for the period 2022 – 2030. The CEBioS programme intends to match to the targets of the Global Biodiversity Framework of the CBD as much as possible (annex 3). Next to the targets, the [CBD decisions 15/6](#) (monitoring framework) and [15/8](#) (capacity-building and development and technical and scientific cooperation) of the GBF are cornerstones for the CEBioS strategy. In the so-called post-2020 era, Belgium and its partner countries are in the obligation to implement the [GBF](#).

For the 2024-2033 period, the RBINS through its CEBioS-programme will continue to develop a wide range of activities that include the building of new knowledge on biodiversity, the strengthening of partner institutions' abilities to play a major role in the implementation of the Convention on Biological Diversity through their National Biodiversity Strategy and Action Plan ([NBSAP](#)), the improvement of biodiversity information flows and the mainstreaming of biodiversity in development and poverty reduction processes. These interventions match with the OECD good practices listed in Drutschinin⁴ et al., 2015.

⁴ Anna Drutschinin & Juan Casado Asensio & Jan Corfee-Morlot & Dilys Roe, 2015. "Biodiversity and Development Co-operation," OECD Development Co-operation Working Papers 21, OECD Publishing.

Box 5: Vision and mission of the Global Biodiversity Framework

The vision of the Kunming-Montreal Global Biodiversity Framework is a world of living in harmony with nature where “by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.”

The mission of the Framework for the period up to 2030, towards the 2050 vision is: To take urgent action to halt and reverse biodiversity loss to put nature on a path to recovery for the benefit of people and planet by conserving and sustainably using biodiversity and by ensuring the fair and equitable sharing of benefits from the use of genetic resources, while providing the necessary means of implementation.

In 2012, the Intergovernmental Platform on Ecosystem services and Biodiversity ([IPBES](#)) was created to a.o. support the implementation of the CBD, as it was the case with the Intergovernmental Panel on Climate Change ([IPCC](#)) as a support to the implementation of the UNFCCC. Since then, it has undertaken assessments on basis of synthesis and integration of existing knowledge and data on a number of urgent topics, such as pollination, land degradation and restoration or biodiversity and climate change in order to give the actual pulse of the state of biodiversity. This is complementary to reports by international NGOs such as WWF ([Living Planet report](#)) and [IUCN](#). The different studies, together with national reports to the CBD, gave input to the [Global Biodiversity Outlook 5](#). This documentation illustrates well the actual threats to biodiversity and highlights the urgency and priorities as inspiring anchors for CEBioS.

5. CEBioS within RBINS, a powerful Belgian programme to tackle the biodiversity crisis linked to poverty

Urgent action is needed to eradicate poverty through ensuring a sustainable economic and social development, especially where gaps and needs remain the most significant. To achieve this, increased efforts and innovative solutions, including [Nature-Based Solutions](#) (NBS) approaches are needed to meet the new targets for the conservation of biodiversity and the safeguard of the ecosystem services it delivers, while mitigating climate change and adapting to it. This requires fundamental changes in the way we tackle poverty and biodiversity loss, such as a better knowledge and understanding of biodiversity, ecosystems and their services by our partners in the South and a better alignment of their policies towards these objectives.

CEBioS, as a flagship programme of the Belgian Development cooperation and housed within the Royal Belgian Institute of Natural Sciences, has a unique position to deliver on that.

The Royal Belgian Institute of Natural Sciences, one of the leading generators of scientific knowledge and a major provider of expertise on biodiversity in Belgium and abroad, is fully committed to do its part to conserve biodiversity and maintain or enhance degraded ecosystem services for the benefits of all.

The [institute](#) has a collection of over 30 million animal specimens, making it a global taxonomic repository to document biodiversity alongside famed institutions such as British Museum, Smithsonian and Muséum d’Histoire Naturelle of Paris.

CEBioS is embedded in RBINS as one of the teams within the science policy group ‘BIOPOLS’ of the Operational Directorate ‘Nature’. This direct link

to world-renowned taxonomic expertise places CEBioS as a unique programme envied (and even copied!) by the international community and other development agencies. Its 'Global Taxonomy Initiative' (GTI, see below) spearheads capacity building of young scientists of the global South specialising on taxonomy (the science of discovering and describing new species) and related genetic methods (e.g., bar coding, environmental DNA) through internships with RBINS researchers or other institutes with taxonomic expertise in Belgium or through field work in their country. Next to taxonomists, RBINS also harbours excellent expertise on marine biodiversity, environmental impact assessment and policies, remote sensing of aquatic systems and modelling of aquatic currents and particles (larvae, shrimps, sediments). CEBioS connects and taps into this expertise to organize transfer of skills and knowledge to the global South. All these interventions (taxonomic, modelling and others) always relate to enhancing local capacities of institutions, and empowering individuals (especially women) to be agents of change.

As such, CEBioS articulates between natural sciences and development cooperation, understanding both domains and languages and making the necessary links in the science-policy-development interface. Hence, CEBioS endeavours to influence science to be more development-oriented and to influence development cooperation to be more science-based. This specialized and complex work is done by dedicated programme officers and technical and administrative staff based at RBINS in the CEBioS team.

Further, RBINS hosts also the Belgian National Focal Point for the Convention on Biological Diversity (in close collaboration with CEBioS), its Clearing House Mechanism ([CHM](#), within CEBioS) and Global Taxonomy Initiative ([GTI](#), within CEBioS). RBINS is also centrally placed to bring together key biodiversity actors, to foster collaboration and to provide advice for policy decisions at national (DGD, Belspo, FPS Environment, NGOs and others) and international levels (CBD, or other Multilateral Environmental Agreements, the partner countries). Within the BIOPOLS group of RBINS, CEBioS collaborates closely with the BELSPO-supported Belgian Biodiversity Platform (BBPf) (e.g., information sharing, application of BBPf best practices to own interventions

and vice-versa, workshops etc...), itself the national focal point for IPBES. The interventions by the CEBioS programme in the global South situate themselves at the crossroad between both poverty- and nature-centric approaches (see Box 8 in annex 1).

Box 6: The ambition of CEBioS

Be a centre of excellence/ Power House / think tank

Expertise for ecosystem services, stakeholder engagement & conservation, capacity building, Global South, especially Africa

Train - Facilitate - Network - Empower – Inform- Influence - Support – Connect – Listen- Integrate-Include

For Biodiversity in global South linked to poverty reduction

Testimonies by our partners [here](#)

6. CEBioS and the Joint Strategic Framework

In 2021 the thematic Joint Strategic Framework (JSF) on the resilience of social-ecological systems and its associated network, called SECORES was created by CEBioS (currently chair for 2022-2023), Join4Water, WWF, Bos+, Uni4Coop and Via Don Bosco. Both CEBioS and SECORES can be instrumental in providing policy advice to the ministries and their administrations on respectively the biodiversity nexus with climate-food-health-water and resilience of social-ecological systems, a.o. in the framework of the Congo forests problematics and the great green wall in the Sahel, flagship priorities of the cabinet of development cooperation.

The pioneering role of CEBioS together with the other five organisations in the creation of SECORES and their active role in its implementation will enable the development of a powerful think

tank and policy tool within the landscape of the Belgian Development Cooperation. Each of the constituent members of SCORES is specialized in specific elements of resilience in the development cooperation context, e.g., Join4Water for water, WWF for conservation etc... CEBioS is playing its role by articulating a science-based and international policy-based within the JSF and promoting biodiversity (through ecosystem services and Nature-Based Solutions) as key element of social-ecological resilience. The combination of all SCORES expertise provides more added value than its separate elements because of integrative and synergetic actions. SCORES (and CEBioS within it) strive for enhanced collaboration with other thematic JSFs (e.g., Higher education, resilient cities, decent work) and ENABEL.

It is in that perspective that CEBioS will especially focus on so-called nexus relations, i.e. biodiversity and climate, biodiversity and water, biodiversity and 'one health' or biodiversity and food security. This nexus-approach harnesses well the underlying principles of CEBioS' interventions, namely to work in an interactive, multi-disciplinary (think about combining social sciences and conservation), holistic and integrative way, so as to capitalize on the positive forces towards solutions. These forces reside in enhanced knowledge, information sharing, understanding and awareness of biodiversity loss and policies, as well as positive actions to promote Nature-Based Solutions for better value chains (think about fish, mushrooms, eco-tourism, integrated water management, medicinal plants, climate mitigation through reforestation, climate adaptation with mangroves, etc...) based on ecosystem services. This is a basis for enhanced resilience of social-ecological systems.

7. The policy framework

In summary, the CEBioS strategy contributes to, is inspired and/or embedded in several policies, conceptual frameworks and strategies (for details, see annex 1), such as:

- The Sustainable Development Goals ([SDGs](#)), especially the SDG 14 (life below water), SDG 15 (life on land), SDG 13 (climate action) and

SDG 6 (clean water and sanitation), linked to SDG 1 (no poverty), SDG 3 (good health and well-being), SDG 4 (quality education), SDG 5 (gender equality), SDG 2 (zero hunger) and ultimately, SDG 17 (partnerships for the goals). The [hierarchical representation](#) of the SDGs (Fig. A3, annex 1) explains well how the SDGs 14, 15, 6 and 13 are at the basis of all other SDGs;

- The UN Rio convention on Biological Diversity ([CBD](#)) as a major anchor for the CEBioS programme. CEBioS staff is part of the official Belgian delegations to the CBD Conference of the Parties (COPs) and preparatory meeting (open-ended working groups, SBI, SBSTTA, Vilm and others). RBINS is a member of the CBD Consortium of Scientific Partners;
- The [strategic notes of the Directorate-general for Development Cooperation and Humanitarian Aid](#) (DGD), especially the ones on environment, water and climate;
- Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services ([IPBES](#)) assessments, World Wildlife Fund (WWF) [Living Planet reports](#), International Union for the Conservation of Nature (IUCN) [publications](#) and Intergovernmental Panel on Climate Change ([IPCC](#)) reports;
- European Union (EU) [policies](#) related to biodiversity, capacity building and development aid. Further, CEBioS contributes to the positions of Belgium within the EU in preparation to the COPs of CBD through the WP/IEI (Working Party on International Environment Issues) meetings;
- The National Biodiversity Strategy and Action Plans ([NBSAP](#)) of Belgium and partner countries, especially DR Congo, Benin and Burundi;
- Other Multilateral Environmental Agreements (MEAs), platforms or networks, among others:
 - The [Ramsar](#) Convention on wetlands;
 - The [Agenda 2063](#) of the African Union;
 - The United Nations Educational, Scientific and Cultural Organization

([UNESCO-MAB](#)) Man and the Biosphere programme. CEBioS coordinated a BELSPO-funded Unesco-Mab project [Evamab](#) in 2017–2019 and produced a [manual](#) on ecosystem services of African biosphere reserves.

- Commission des Forêts d’Afrique Centrale ([COMIFAC](#)) and [Congo Basin Forest Partnership](#). RBINS is a member of its scientific chapter.
- Support to [Biofin](#) (e.g., Niger, Burundi) : CEBioS is instrumental to support countries through DGD and the BIOFIN programme of UNDP. BIOFIN is working with governments, civil-society, vulnerable communities, and the private sector to catalyse investments in nature.

8. Short- and long-term impact

This strategy expects short-term impacts (reflected in the logframe at the level of the Intermediate Results and their indicators):

(1) at the individual level, many scientists and especially women, will have acquired additional scientific capacities in their taxonomic work and make use of it for their published scientific peer-reviewed articles on their way to acquire a Masters or PhD in a relevant field or their further career as a post-doc, lecturer etc (as agents of change). Many civil servants will feel strengthened in their policy work.

(2) At the group level, CEBioS will act as a catalysator to promote dialogue, exchange of best practices and cross-fertilisation through multi-stakeholder participative workshops between scientists and authorities in the global South in the framework of the work on indicators for the Global Biodiversity Framework and the (local) science-based promotion of value chains (e.g., mushrooms, precious trees and plants, medicinal plants, fish etc).

Target publics will be better aware of the biodiversity crisis and possible Nature-Based Solutions linked to climate adaptation and mitigation, food security, integrated water management and one health.

(3) At the institutional and national levels, existing decision-making structures and implementing agencies will have a clearer vision and mission to deal with the biodiversity crisis through research and implementation of policy (NBSAP and others). Partner countries and their institutions will have increased connection to international science and governance and be more empowered to be agents of change.

(4) At the output level, we will have created new policy briefs, finished more lexica, created vulgarizing and simplified versions of [lexica](#) to be used by field personnel, a number of [Abc Taxa](#) books, as well as peer-reviewed scientific articles, all co-created by North and South in service of parataxonomists, taxonomists, biologists, ecologists and managers of the global South. These outputs will not remain in shelves but be actively used to change perceptions, inform practices, acquire new insights and transform behaviour. Local partners will have produced many articles, awareness tools and media. All authors of our partner countries will be proud of their work, attached to their responsibilities and act as alumni to be ambassadors of their capacity building experience with CEBioS.

In the long-term (reflected in the logframe at the level of the general and specific objectives and their indicators), all CEBioS interventions should have a trickling down effect and impact towards local communities in biodiversity-rich and -vulnerable landscapes and ecosystems, with emphasis on fragile groups such as women, local communities and indigenous people. They should feel that the contact to their authorities is beneficial, respectful of human rights, and that the policies implemented serve both a better preserved biodiversity and a better access to resources in a more sustainable way, hence creating more wealth and well-being in the long-term and a halt to the current degradation of biodiversity and ecosystem services, in short, a society and ecosystems more resilient to withstand the current environmental crisis.

B. The programme

1. The Belgian actors

The [Royal Belgian Institute of Natural Sciences \(RBINS\)](#) is the implementing institute for the [CEBioS programme](#). It is a Belgian Federal Institute that operates under the BELSPO administration. The funding agency for the CEBioS programme is DGD, linked to the The Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation. The governance of the CEBioS programme is stipulated in a Protocol of Cooperation. It is the framework for a collaboration between BELSPO and the DGD to articulate their respective initiatives of Research in support to Development carried out within the Federal Scientific Institutes.

1.1. The Royal Belgian Institute of Natural Sciences (RBINS)

RBINS, commonly called now 'Institute for Natural Sciences', is devoted to the conservation of nature, the study of the long history of life and its sustainable management. The Institute is respected by the academic world and public authorities for its research activities and the public services it provides in terms of advice, expertise and studies. It is well known and valorized by the general public for the Museum of Natural Sciences and the associated activities. It also conserves, enriches and manages immense natural history collections of specimens, samples as well as archives and databases. RBINS manages the Belgian oceanographic vessel, the RV Belgica, on behalf of the Belgian Science Policy Office (Belspo). The Institute is one of the ten federal scientific institutions (FSIs) governed by Belspo.

CEBioS is a programme of RBINS and is part of the Operational Directorate (OD) Nature. Within OD Nature, the science-policy group called BIOPOLS includes CEBioS, the Belgian Biodiversity Platform, the National Focal Point to the CBD, the National

Secretariat on Invasive and Alien Species and the Marine policy unit. BIOPOLS is responsible for the science-policy interface (SPI) within RBINS. RBINS has a general strategy and a research strategy (2023–2027). CEBioS, as a member, provides services in the realm of science-policy-development. As such, it cooperates with all 4 components of RBINS, being research, services, collections and museum.

1.2. The Directorate General for Development Cooperation and Humanitarian Aid (DGD)

DGD has issued >20 [strategic notes](#), ranging from agriculture, to water or gender. The Directorate for the Environment and Climate (MD8) manages, develops and coordinates foreign policy in the area of environment and sustainable development, and is under the joint responsibility of the DGM⁵ and the DGD. It is responsible for the CEBioS programme. For Cebios, the most important strategy notes are on Environment, on Water, and on Climate (in preparation, 2023).

As stated by the DGD, to the face the environmental challenges listed, there is a need for:

- (1) The understanding that the 'preservation and protection of the environment' is a critical determinant stake will contribute to the strengthening of environmental policies in the partner countries. This will involve capacity building through the mutual transfer of knowledge, technology and competences on environmental issues, climate matters and natural resources management in key institutions, within Belgium's development cooperation and with civil society and national and regional actors.

⁵ Direction Générale des Affaires Multilatérales

(2) A sectoral environmental support (i.e. mainstreaming in economic sectors) that is country-specific and responds to the development needs in the partner country or is necessary for achieving inclusive and balanced social-economic development.

(3) Seeking policy coherence in favour of sustainable development within the various policy areas in Belgium and at the European level and seeking complementarity and synergy within country programmes with a view to increasing the effectiveness of the Belgian development cooperation.

DGD is a member of the steering committee and strategic committee governing CEBioS and co-signatory of the Protocol of Cooperation with BELSPO. Further, [the implementing agency of the Belgian development cooperation ENABEL](#), active in the [14 official partner countries of DGD](#), may offer interesting cooperation perspectives with CEBioS.

[The Law on Belgian Development Cooperation of 19 March 2013](#) stipulates that “Belgian development cooperation is enshrined in the principles, declarations and treaties of the United Nations concerning development and the environment, as well as human rights in all their dimensions” and that “the protection of the environment and natural resources, including the battle against climate change, drought and global deforestation” is integrated as one of the priority themes. Belgian development cooperation therefore contributes to the objectives of the UN Convention on Biological Diversity through various programmes and projects.

1.3. The Belgian Science Policy (BELSPO)

RBINS is functioning under the [Strategic plan of BELSPO](#). BELSPO is a member of the steering committee and strategic committee of CEBioS and co-signatory of the Protocol of Cooperation with DGD. The CEBioS staff within RBINS is entitled to raise BELSPO funding through its various calls (e.g., [BRAIN](#)), either as promotor, co-promotor or

associated partner. For instance, in 2017, CEBioS was the promotor of the BELSPO-funded [EVAMAB project on the rapid assessment of ecosystem services in UNESCO Man and the Biosphere Reserves in Africa](#). CEBioS is cooperating in several other BELSPO-funded schemes or programmes (e.g., [FEDiWIN](#), [CANATHIST](#)⁶, Vietnam cooperation). Further, BELSPO is currently undergoing a reform of its programmes which would provide opportunities for CEBioS to strengthen /open its scope of activities, notably through the Protocol of Cooperation DGD-BELSPO.

1.4. Collaboration with other Belgian Institutions

CEBioS seeks cooperation with AfricaMuseum and Botanical Garden Meise, through several modalities or modes of operation:

- Sharing of contacts, networks, information;
- Cooperating on common subjects, such as the support of the Centre de Surveillance de la Biodiversité in Kisangani and the Herbarium National of Yangambi (DR Congo);
- Alignment in administrative guidelines (scholarships) with AfricaMuseum;
- Providing training in subjects relating to science-policy interface (e.g., policy briefs in AfricaMuseum);
- Training on scientific publications by AfricaMuseum to CEBioS alumni;
- Providing GTI funding for specific alumni and researchers for Botanical Garden Meise;
- Exchanging of best practices, such as affirmative action in specific projects of AfricaMuseum;
- Participation in juries;
- [Abc Taxa](#), fully financed by CEBioS, is managed by three scientific editors, coming from respectively RBINS, AfricaMuseum and Botanical Garden Meise;

⁶ CANATHIST, access of the Natural History collections collected in central Africa by Belgian institutions in a decolonization approach

- Common workshops in North and South (e.g., on Nagoya Protocol);
- Formal decisions under the Protocol with AfricaMuseum are made at the annual strategic committee.

[federatie](#), MICA (Mangroves International Coordination Action), International Coordination Action (ICA) in support of the IUCN Species Survival Commission's new Parasite Specialist Group (PSG). Some staff members are also member of the IUCN commissions [CEC](#) and [CPEES](#).

Parallel to its integration within the JSFs and the many contacts with the Belgian embassies in the partner countries, CEBioS developed links (e.g., MoU) with ENABEL. This may offer opportunities of cooperation at several levels:

- Zero-budget cooperation such as sharing of information, advise on country programmes (identification, formulation, implementation), participation in conferences & panels organized by both parties, etc.
- Possible subcontracting of CEBioS for specific aspects related to biodiversity mainstreaming.
- Participation of CEBioS in EU and UNDP projects with ENABEL as implementing agency.

Furthermore, CEBioS is a member or an observing member in a number of other platforms, foundations (Leopold III Foundation, [SBBOA](#)) or organisations, such as e.g., [ACARE](#), [EDUCAID](#), [FIABEL](#), [NGO](#)

2. Theory of Change of CEBioS

Since 2018, CEBioS is operating according to a Theory of Change (TOC) (Fig. 1). It forms the basis for the logical framework of the CEBioS programme, presented in the five-year programme 2024–2028.

CEBioS, as a programme funded by DGD and operating at the RBINS, operates with its partners (sphere of control, the providers) through several approaches (expressed as 'Intermediate Results': capacity building in research; awareness raising; Clearing House Mechanism as a means of information sharing; Monitoring-Reporting-Verification) to influence 4 groups of target public (expressed as specific objectives: scientists, national implementing agencies, ministries, development actors) (sphere of influence, the direct beneficiaries) to achieve a better

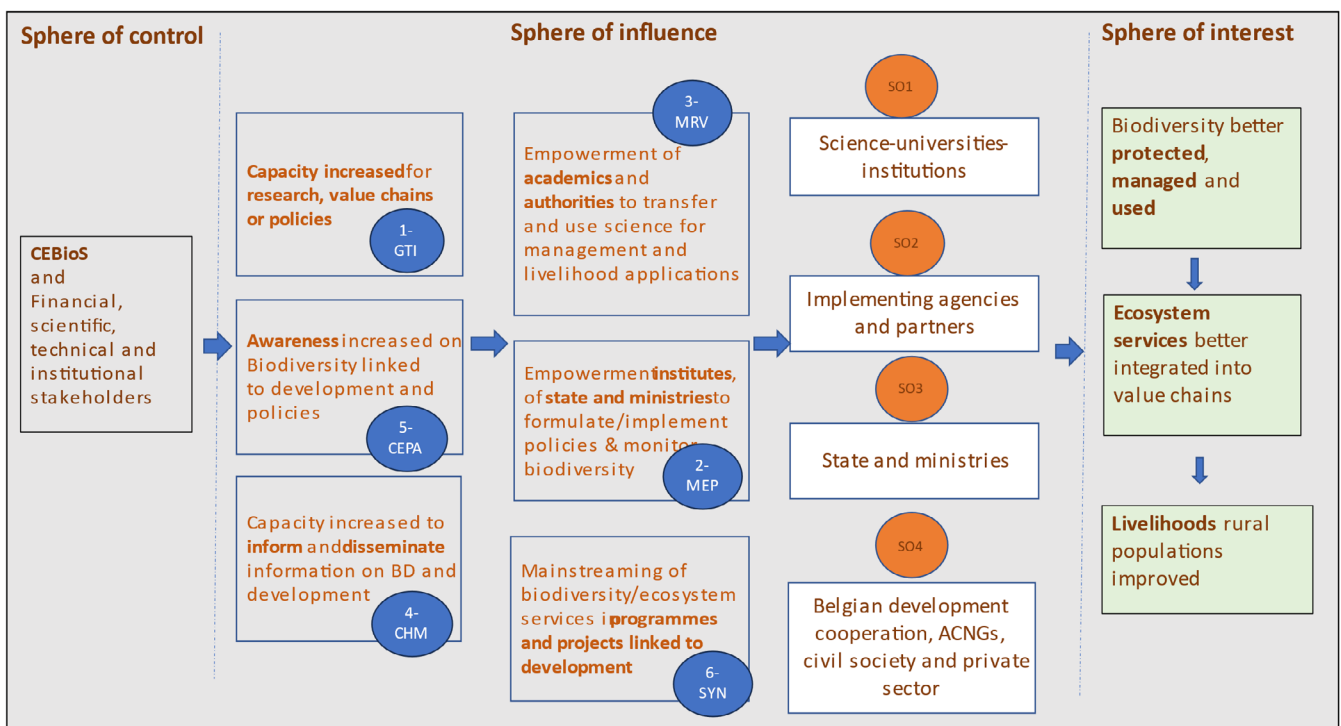


Fig. 1: Theory of Change of the CEBioS Programme. SO = Specific Objective. Blue spheres refer to the sub-programmes.

protected, managed and used biodiversity. This in order to achieve a better access of local communities to ecosystem services and enhanced livelihoods (value chains) (sphere of interest, the ultimate indirect beneficiaries). The rationale behind is to increase harmony between people and nature through Nature-Based Solutions. When local communities see an advantage to preserve their environment, they become proactive actors and owners of conservation processes, and conservation works.

Since CEBioS is a founding member of the Thematic JSF 'Resilience' and associated network SECORES, it aligns, adheres and contributes to its [Theory of Change](#), illustrated in Fig. 2.

The TOCs of CEBioS (Fig. 1) and SECORES (Fig. 2) are overlapping and complementary. The "resilience" scale (mainly based on the concept of [planetary boundaries](#) developed at the Stockholm Resilience Centre) in the sphere of interest of SECORES greatly contributes to the Biodiversity-Ecosystem Services-Livelihood sphere of interest of CEBioS (Fig. 1) and vice versa.

3. The sub-programmes of CEBioS

3.1. How do the sub-programmes contribute to the General Objectives?

To facilitate the general understanding of the functioning of CEBioS programme, we present it as 6 interlinked sub-programmes, which are the concrete intervention modalities to implement the TOC (Fig. 1, see blue spheres).

CEBioS can make a difference through its 6 sub-programmes: it is quite unique worldwide to have such a capacity building programme being embedded in an internationally recognised Natural History Institute full of biodiversity expertise. Moreover, CEBioS has a direct link to scientists, universities, other institutes and NGOs and at the same time, has a natural link to DGD, BELSPO, the cabinet of the Minister for development cooperation, CBD and local authorities.

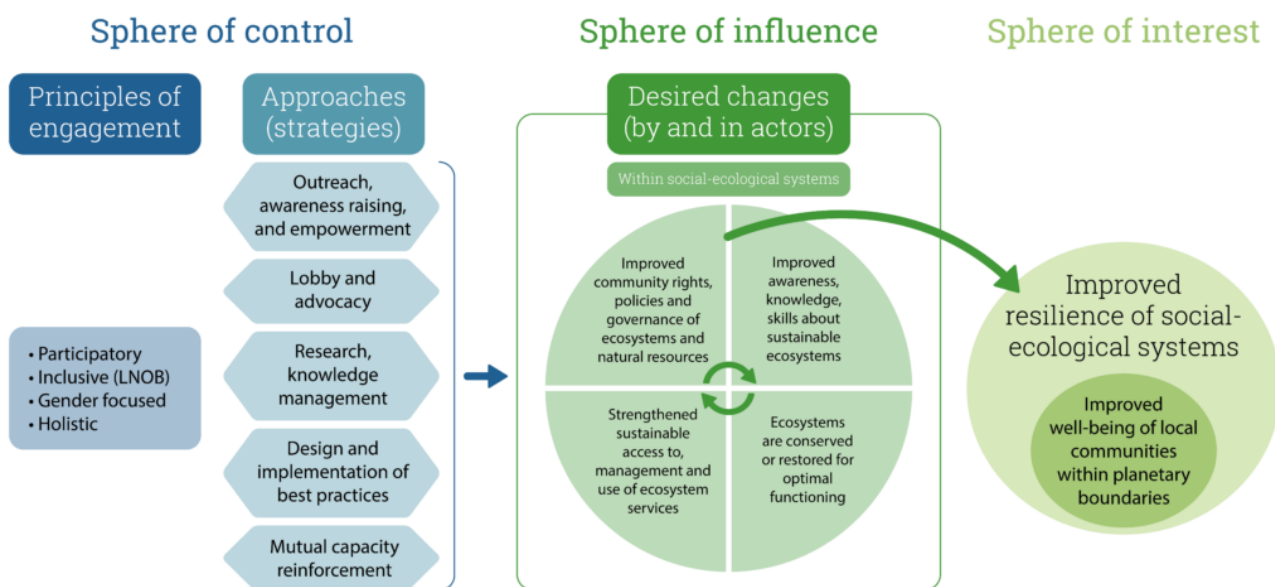


Fig. 2. Theory of Change of SECORES. CEBioS is one of the 6 members of SECORES

It acts as a catalysator, adviser, capacity builder, facilitator, moderator in many dialogues, processes and debates through the following 6 sub-programmes:

1. CEBioS supports taxonomy in the global South (GTI sub-programme) in function of value chains and conservation, hence being the bridge between science and application of science for conservation management, policies and decision making within the nexus biodiversity with climate, water, one health and food.
2. At the level of research institutes and government agencies, it offers long-term institutional cooperation through training and support for the monitoring of biodiversity, both terrestrial, freshwater and marine (MEP sub-programme).
3. It acts at the science-policy-development interface (MRV sub-programme) by promoting exchanges and workshops amongst authorities and scientists. This feeds the national indicators and databases to make the partner country fit for national planning and reporting to the CBD or other MEAs.
4. It is (co)-pilot to agenda items at COP and preparatory meetings of the CBD and supports our partner countries in these meetings and the Clearing House Mechanism by offering mobility finance combined with coaching and policy advice nationally and internationally (sub-programme CHM-POL).
5. CEBioS supports awareness raising at several levels (CEPA sub-programme).
6. Finally, CEBioS promotes the mainstreaming of biodiversity issues into the Belgian development cooperation (SYN sub-programme).

The operational translation of the theory of change into the logframe, associated indicators and budget is explained in detail in the five-year programme. See Fig. 3 to visualise the links.

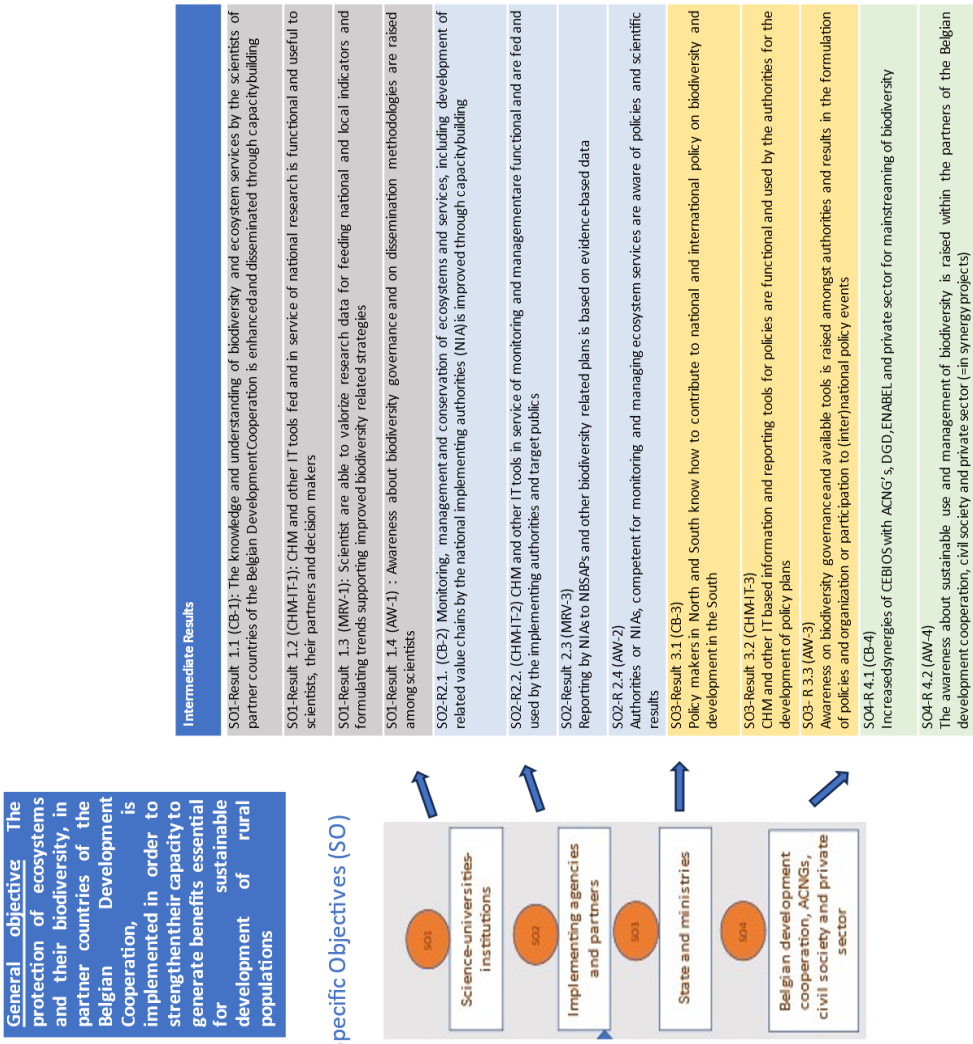
3.2. The Global Taxonomy Initiative (1-GTI)

This first sub-programme (GTI) is the most research-oriented, together with the MEP sub-programme. Partner countries need good scientists such as taxonomists, but also ecologists and other life sciences to better study and understand their biodiversity (as defined by the [CBD](#)). These individuals, with an emphasis of encouraging women in an affirmative way, will be boosted in their skills and knowledge, becoming as CEBioS alumni true ambassadors of Belgian capacity building. They will act as agents of change within their department, institution, but also beyond, by contributing actively to transferring science to policies, conservation and the development of value chains. They will develop skills in outreach and community development, be more aware of or linked to issues such as e.g., indigenous people and local communities and their traditional knowledge or climate change. Their training by CEBioS and their peers will empower them to better connect with the international science community and policies.

The [Global Taxonomy Initiative \(GTI\)](#) is a set of activities and objectives agreed to by governments to tackle the taxonomy impediment to improve decision-making related to the conservation and sustainable use of genetic resources.

CEBioS hosts the [National Focal Point for the GTI in Belgium](#) and is one of the few worldwide to offer taxonomic trainings on a competitive basis to countries in the global South. This is done through two calls: (i) selecting scholars to spend 4–5 weeks at RBINS, Botanical Garden Meise or another research institute in Belgium to work on own samples, collections, publications; (ii) funding tutors from these host mentoring institutes to organize a group field training in the South on certain taxa. Eligibility to subscribe to GTI calls will be determined by the links the taxonomical projects have to sustainable development goals, the monitoring framework of the GBF, its targets, and more specifically the science-based development of value chains based on biodiversity and certain aspects of the nexus biodiversity-climate-water-food-health. This GTI sub-programme also includes the production of [Abc Taxa](#), a high profile volume series about specific taxa in the global South, co-

Logframe (part)



Theory of Change

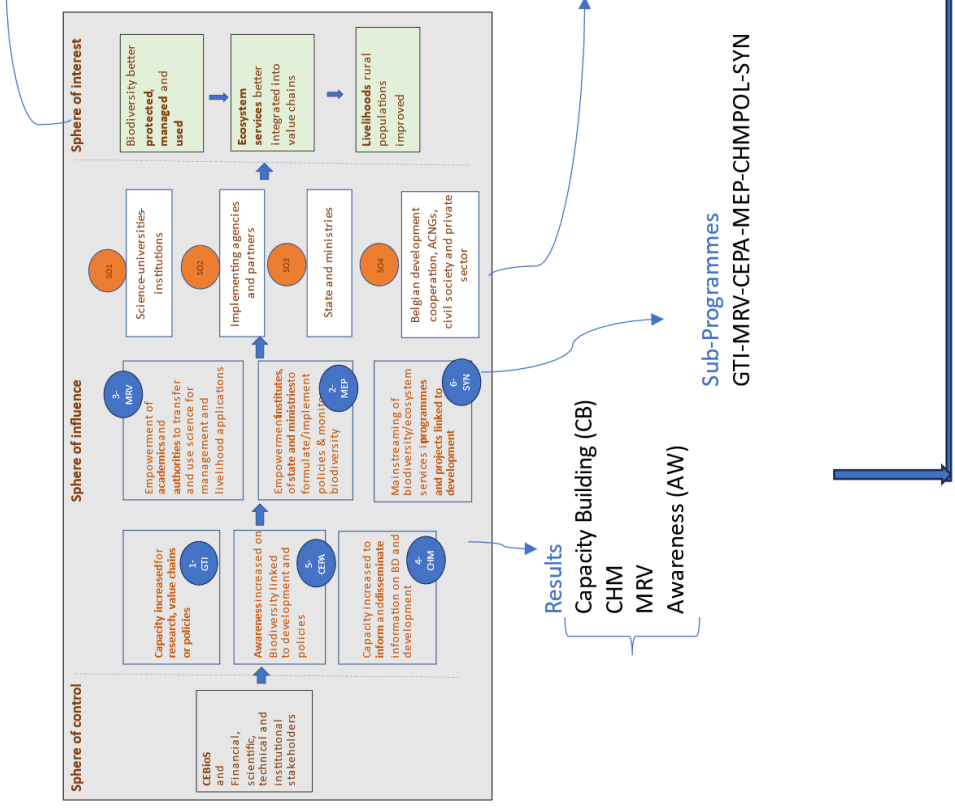


Fig. 3: Links between the elements of the theory of change, the logic interventions of the logframe and the sub-programmes.

realized by authors from the global North and from the global South (often being CEBioS alumni).

Some strategic orientations for GTI are: organize multi-annual projects; make a mapping of existing taxonomic expertise in Belgium and in the South to better organize the match-making with the needs of the global South; test pilots with GTI in a South-South model (with South tutors); link up with regional biodiversity centres (promoted by the CBD) which will be created (RBINS is also a candidate); promote women in a more proactive way dynamizing a CEBioS alumni community; continue linking up the scholars in Belgium with other training offers.

3.3. The Monitoring of Ecosystems, their services and Protected Areas (2-MEP)

The second sub-programme (MEP) is the most linked to conservation and monitoring of habitat dynamics. MEP relies both on a number of institutional cooperation and external projects. MEP offers and promotes skills and tools or generates data, which are needed for national planning and reporting to CBD or other MEAs.

The “Monitoring of Ecosystems, their services and Protected Areas” (MEP) is a reformulation of a sub-programme previously called ‘IMAB’, and later ‘Habitats’. With this new name, CEBioS would like to better emphasize the ecosystem perspectives, and the ecosystem services. This implies also a stronger focus on the threats to existing ecosystems (e.g., endangered trees) and a willingness to develop value chains in and around protected areas to support local communities. It also includes, as a follow-up of the BELSPO-funded [EVAMAB project](#), trainings on the rapid assessment of ecosystem services in UNESCO Man and Biosphere reserves in Africa by means of our [manual](#) in French and English and more

focus on the use of remote sensing.

Further, MEP will cater for the cooperation with ICCN in DR Congo on the inventories of fauna and flora through dedicated projects using classical transect methods, remote sensing, GIS, drone technology and camera traps. Special attention will be given to biodiversity which has potential to serve the local population for its services and value chains (e.g., mushrooms, fish) and the transfer of the data to global databases such as [GBIF](#). This approach will also be followed in Benin (work with Université de Parakou, UAC, CENAGREF, African Parks) and Burundi (with OBPE, Université du Burundi). MEP will draw training materials from existing [IUCN tools](#) and integrate landscape approaches (e.g. connectivity, restoration).

One important new strategic orientation within MEP will be to co-produce with the global South practical manuals on fauna and flora, which can be used in the field by managers and eco-guards. An option is to make derivative simplified products of our [lexica](#). Further, CEBioS regularly updates and maintains the [‘Archives des Parcs Nationaux du Congo Belge’ \(APNCB\) website](#). It is a long-term digitalization project of all paper archives at RBINS. Open access of these archives to the South is an example of contribution to our decolonization exercise ‘avant la lettre’.

Finally, CEBioS supports, within OD Nature of RBINS, the group ECOMOD to transfer modelling skills on the [open-source model ‘COHERENS’](#) to model marine and freshwater currents and particles (sediments, larvae, plankton, pollution). This is essentially done within an institutional cooperation with IRHOB in Benin. A BELSPO-funded project [CLIMDIS](#) does the same in Vietnam in the Halong Bay with IMER, as a spin-off of earlier CEBioS capacity building.

3.4. Indicators for Policy (3-MRV)

Along the knowledge value chain from science to policy, the sub-programme MRV is essential, since it connects scientists with authorities through projects and workshops. Hence, MRV will cater for a structured science-based development of indicators.

The MRV sub-programme stands for 'Monitoring-Reporting and Verification'. As this acronym is difficult to grasp, we dubbed this sub-programme 'Indicators for Policy'. Indeed, it is essentially a concept to facilitate interactions between biodiversity researchers and their local and national authorities and decision-makers, strengthening the science-policy interface, and more specifically the use of biodiversity data (indicators) to inform, influence and shape policy. 'Indicators for Policy' operates through dedicated workshops, summer schools and a dedicated call adapted for French-speaking and English-speaking stakeholders.

One important aspect in this sub-programme is to harness the collected data to define indicators for the [NBSAPs](#) and report on them in the [national CBD reports](#) of the respective countries to implement the Monitoring Framework of the GBF in the CBD. In that respect, we see the 'États des lieux de la biodiversité' organised in 2022–2023 (in press) in DR Congo with the Centre de Surveillance de la Biodiversité as an interesting pilot exercise which can serve as an example for other countries. It is a follow-up of the [first exercise in 2014](#).

Important outputs of participative multi-stakeholders MRV workshops are the co-creation of [Policy Briefs \(PB\)](#) aimed at feeding the science-policy interface. CEBioS will give special attention to a better capitalization of these PBs by decision-makers. Linking up our MRV activities to better support value chains based on biodiversity will be obviously an objective.

3.5. Policy Support & Clearing House Mechanism (4-CHM-POL)

RBINS-CEBioS hosts the national focal point for the Clearing House Mechanism (CHM) of the CBD.

The CHM-POL sub-programme is in fact at the origin of the CEBioS programme and acts as a powerful flagship tool of capacity building by Belgium in the

global South. We do not only support national CHM and CBD focal points to install, update/migrate, feed and maintain their national CHM websites through dedicated national and regional calls and workshops, but we do much more in terms of policy support to the South.

We organize regional meetings for training and information as well as exchanges of best practices and networking, often in cooperation with the CBD Secretariat. We support and coach selected national focal points in key preparatory CBD meetings and the Conferences of the Parties (COP) of the CBD. CEBioS supports the national obligations of the parties to the CBD for Belgium and its partners countries. We work in cooperation with the Belgian National Focal Point for the CBD, also hosted at RBINS (OD Nature, BIOPOLS) and contribute to an EU project to promote science in the policy support to the CBD, [COOP4CBD](#).

CHM and policy-support are part of the same sub-programme, as they are intrinsically linked and serve the same purpose. In our policy support actions, we are part of the Belgian delegations to the SBI, SBSTTA and COP of the CBD and staff is often a lead negotiator for the EU. The calendar of preparatory meeting to the Conference of the Parties of the CBD will influence the timing of our policy support activities.

Staff members are also involved in several Informal Advisory Committees/ Groups of the CBD and in expert groups of the EU, demonstrating that the expertise of CEBioS is well appreciated and recognised nationally and internationally.

3.6. Awareness and communication (5-CEPA)

Communication, Education & Public Awareness, in short CEPA, is seen by the CBD as essential in its global strategy (it was Aichi target 1 and now [target 21 in the KM-GBF](#)). CEBioS develops CEPA in several ways:

- Development of a communication strategy;
- Annual awareness calls for national focal points to CBD and local environmental NGOs;

- Target publics of awareness campaigns may be schools, students, teachers, local authorities, conservation managers, decision makers, entrepreneurs etc.;
- Themes of awareness raising will vary according to the local needs, but can cover a.o. conservation issues, endangered species of the [IUCN red list](#), or value chains;
- Awareness mini-projects within GTI and MRV to disseminate projects results;
- CEPA training on specific issues such as policy briefs, science communication;
- Dissemination and visibility of CEBioS and partners through attendance to conferences, with lectures, posters and stands;
- Dissemination of information through our websites. CEBioS will focus on better visibility of own results and projects in own platforms and external ones, such as [BESNET](#) or the [IUCN commissions](#) CEESP (Commission on Environmental, Economic and Social Policy) or CEC (Commission on Education and Communication) and [PANORAMA](#);
- Social media will be used as well, also to create and promote the Alumni community (e.g., connect with the Belgian alumni initiative organised by the Belgian Embassy in Bénin);
- Results of projects and trainings will also be made available on national CHM sites of the countries where they have been implemented.

3.7. Synergies and complementarities, SECORES, external projects (6-SYN)

A. JOINT STRATEGIC FRAMEWORKS AND SECORES

Since 2017, CEBioS is participating to the Joint Strategic Frameworks per country, initiated by DGD in order to create synergies and complementarities

with other Institutional Actors (IA) and NGOs, together referred to as 'ACNGs'. This has led in 2022 to the creation of [SECORES](#). CEBioS can have a multiplication effect in the partner countries through the JSF and its network SECORES through several actions or interventions and outputs to promote Resilience of Social-Ecological Systems (SER):

- Working groups on social-ecological resilience (SER) tools and [production](#) of a 4-pager and on intersectionality-inclusion-gender (to be confirmed);
- Workshops on SER in Burundi (June 2022), in Benin (October 2023) and more countries in the future;
- Strategic Dialogues in Belgium (December 2022) and in the partner countries;
- Masters students in the field (e.g., of VUB and Université du Burundi to test the SER tools, summer 2023);
- Being at the interface between science, development and policy, CEBioS is able to support the links between the civil society partners of SECORES and the decision-makers and international policies. E.g., by organising side events on resilience at CBD or IUCN events.

The involvement of CEBioS in the JSFs and SECORES led to (i) extra visibility, recognition and knowledge about CEBioS -and RBINS- in civil society and (ii) extra knowledge about civil society amongst CEBioS staff and by extension, RBINS. It already resulted in a number of common projects with Join4Water and Louvain Coopération in Burundi and it strengthens the 'Team Belgium' approach of the Belgian Development Cooperation.

B. EXTERNAL PROJECTS & PARTNERSHIPS

CEBioS is currently involved in so-called 'external projects' which are additional to the 6 sub-programmes (core budget), in terms of partners and budget, but fit well within its capacity building mandate. In many projects, CEBioS was asked to be a co-promoter or cooperation partner.

The projects can follow several concepts or modalities of functioning and funding:

- Cooperation on a zero budget basis in terms of missions with back to back participation in certain partner events, workshops, juries, panels, but also in terms of advice, and information sharing (e.g. ENABEL, AfricaMuseum, Botanical Garden Meise, GEF, UNESCO, SECORES)
- Being a co-promotor of projects funded by VLIR-UOS and ARES (e.g., on Lake Manyara, Lake Tanganyika, Rusizi);
- Being promotor or associated partner in BELSPO-funded projects (e.g., network of mycologists, EVAMAB, CANATHIST, FEDtWIN)
- Being associated partner in other projects linked to the EU and UN (e.g., PACECOR (with UNDP); Pascale-B in Burundi, COOP4CBD, Yangambi-UNESCO in DRC;
- Being part of Boards or steering committees (e.g., KLIMOS and KLIMSEC (closed), foundations, EU projects etc...

Whenever possible, CEBioS tries to finance extra personnel on project funding, strengthening the CEBioS core business. All external projects will be mentioned and explained in a transparent way within the CEBioS annual reports & plans to avoid any double financing.

4. The focus countries and institutional cooperation

4.1. Countries for CEBioS interventions

In article 3 of the protocol of cooperation between DGD and BELSPO, Federal Scientific Institutions are requested to contribute to the objectives in the

« partner countries of the Belgian Development Cooperation », however without excluding other countries that are that are subject to a joint strategic framework (namely in the framework of MEAs and in particular the Rio Conventions). It is encouraged to focus only on a few priority countries, to engage in the dynamics of the JSF in the countries of the indirect cooperation, and to look for synergies and complementarities with other actors of the Belgian cooperation.

CEBioS intervenes primarily through institutional cooperation in 3 priority countries of the Belgian cooperation: Benin, Burundi and DR Congo. With all of its partners, the RBINS/ CEBioS has signed memoranda of understanding. For projects, CEBioS cooperates with service contracts, according to the principles of Project Cycle Management with logframe, operational plan, deliverables and budget. Each project has to deliver activity and financial reports.

The DGD concentrates bilateral cooperation in 14 partner countries. Within the partner countries, DGD will prioritize its interventions in rural areas, where most of the unserved population currently lives, and in the so-called secondary cities and the peri-urban areas. CEBioS is entitled to concentrate its interventions in these countries, as well as countries that are subject to a joint strategic framework, adding up to a total list of 28 countries (see Fig. 4).

List of eligible countries

28 eligible countries for our calls or interventions:

Benin – **Burkina Faso** – **Burundi** – Cabo Verde – Cambodia – Cote d'Ivoire – **DR Congo** – Gambia – Ghana – **Guinee** – Guinee Bissau – Kenya – Laos – Liberia – **Mali** – **Morocco** – **Mozambique** – **Niger** – Nigeria – **Palestinian Territory** – **Rwanda** – **Senegal** – Sierra Leone – **Tanzania** – Thailand – Togo – **Uganda** – Vietnam

These countries include the **14 partner countries of the Belgian bilateral cooperation**, as well as the countries member that are subject to a joint strategic framework

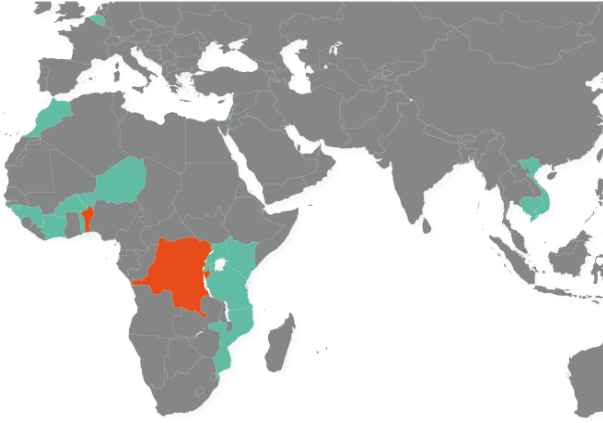


Fig. 4: Map of countries with interventions by CEBioS. The orange countries (DR Congo, Burundi, Benin) are priority countries with more projects and institutional cooperation. The other countries have more punctual activities or projects linked to open calls for projects (Belgium, Morocco, Niger, Burkina Faso, Togo, Ivory Coast, Liberia, Guinea, Vietnam, Palestine, Uganda, Kenya, Tanzania, Mozambique, Rwanda).

COOPERATION PER COUNTRY

Institutional cooperation

CEBioS is providing through its MEP sub-programme institutional support to research and conservation management institutes or organisations in 3 countries (including the so-called ‘implementing agencies’ in our logframe). Given the timing of the writing of the present strategy (summer 2023), we are not at the stage of knowing precisely how the next phase will be filled in by our institutional partners, at least not up to operational details (level of their logframes). Nevertheless, it is clear that in the next phase, through our MEP sub-programme, we will focus on a continuation of the successful institutional cooperation, which is based on long-term support, with some new thematic accents (see five-year plan). The concrete results of our institutional cooperation will be explained in annual reports. Further, future identification missions might result in some additional support within Benin, Burundi and DR Congo or in e.g., Guinea, Rwanda or Tanzania.

The aim is to dedicate earmarked annual budgets around certain research, awareness and monitoring (MEP) aspects, in combination with our other sub-programmes, such as GTI, CHM-POL and MRV, and this, in alignment/support with the respective NBSAPs of partner countries.

We strive at a Whole of Institute Approach (WIA), whereby the supported unit is working in service of the needs of its institute and the senior management of the institute is informed of, and supports the CEBioS cooperation. Often, the biodiversity-related support is supplemented by more management and logistic support as well, a.o. internet, green energy supply, small lab material, ICT material, accountancy software and skills, or training on good leadership and governance, strategic thinking, transparent governance, the use of conservation tools, etc.

DR Congo

We will work at several levels in DR Congo:

1. **Monitoring support (MEP)** to the ‘Institut Congolais pour la Conservation de la Nature’ (ICCN) and public universities by supporting Masters, DEA and PhD students of public universities (Lubumbashi, Goma, Bukavu, Kinshasa, Kisangani, ERAIFT) on aspects of habitats, monitoring and conservation in Protected Areas under management of ICCN (e.g. Bombo Lumene, Kahuzi-Biega, Virunga, clear forests of Katanga). New accents will be defined as a function of the expertise of the new collaborator responsible for MEP. Very probably, Lomami National Park could become the next focus, as it is a newly created national park in need of a management plan. It is supported by a.o. Germany (recent MoU between RBINS and Senckenberg). Given the latest governance problems at the level of ICCN, CEBioS will only finance research projects directly with the concerned universities.

2. Strong **institutional support** to the [Centre de Surveillance de la Biodiversité \(CSB\)](#) at UNIKIS. This is done in cooperation with AfricaMuseum and Botanical Garden Meise, forming a consortium in support of the CSB through the ‘Conseil d’administration’. We provide training, support for field research, management support and support in fund raising and implementation of external projects, such as the UNESCO Yangambi project linked to the carbon flux tower (UGent, UNESCO, DGD). In November 2024, CEBioS will have a formulation mission to consolidate the partnership with CSB for the next 5 years.

3. More **ad hoc support** through our calls, dedicated workshops or summer schools, support of individuals to attend conferences.
4. **Synergies** with Belgian NGOs in DR Congo. Through SECORES (WWF, JFW, Bos+, ULB Coopération) in DRC we will find new avenues of cooperation on e.g., deforestation and community protected areas.

Benin

1. Support in **marine modelling** to 'Institut de Recherches Halieutiques et Océanologiques du Bénin' (IRHOB), mostly in terms of coaching of the Coherens model with local students in Masters and PhDs, but also some support in related work on plankton, shrimp and epi-benthos. The supported students spend internships at RBINS every year. The identification mission to Bénin in August 2023 was very useful in that respect, as the research thematics are now defined (see five-year plan).
2. **MEP support** to Université Abomey-Calavi (UAC): Given the increasing insecurity in Pendjari and Parc National du 'W' due to Jihadist terrorism, we are currently (mission Bénin, August 2023) identifying possible new avenues of cooperation in the mangroves of SW-Benin (Grand Popo, Bouche du Roy). CEBioS in October 2023 attended the Strategic Dialogue of the JSF Bénin, met all stakeholders of CEBioS (civil society, Université de Parakou, Université Abomey-Calavi, Ministry), and organised with Join4Water a workshop about Resilience in the framework of SECORES. Our new collaborator responsible for MEP was introduced and presented to all partners. She will identify possible avenues of future collaborations in her portfolio. A new MoU with Université de Parakou will be signed.
3. Support to University of Parakou (UP) (several labs, on mushrooms, genetics, fish, forestry). See point 2.
4. Support through our Awareness calls, involving local environmental NGOs (e.g., Nature Tropicale, Eco-Bénin, CEIBA, Capebio,

OBBD) and Belgian NGOs such as Uni4Coop (Louvain Coopération), Join4Water (JFW).

5. Support to the Ministry of Environment and Sustainable Development on the Clearing House Mechanism, the Nagoya protocol and public awareness.
6. Through our partners, the "Eaux et Forêts" and the CENAGREF as well as the Village Associations AVIGREF are often involved for facilitation and dissemination of information in protected areas.

Burundi

1. Support to the Office Burundais pour la Protection de l'Environnement (OBPE) and the Université du Burundi (UB): often the actions are taken jointly, in order to facilitate transfer of knowledge, science to management. The OBPE gets our support for MEP, CHM, MRV and GTI activities, in the 3 main national Parks, Ruvubu, Rusizi and Kibira.
2. In cooperation with OBPE, UB and local NGOs, CEBioS works with JFW and Louvain Coopération in the Pascal-B project (EU) to strengthen the civil society in biodiversity mainstreaming. This fits perfectly within the CEBioS mandate, the JSF Burundi and SECORES.
3. In a new UNDP-EU-Enabel project PACECOR, CEBioS will support OBPE for the monitoring of the Rusizi and Kibira national parks. The operational modalities are still being worked out. Extra attention will be given to keep all OBPE support complementary and mutually strengthening. A CEBioS mission in November 2023 will work this out with our new MEP colleague.
4. More ad hoc support through our calls, dedicated workshops or summer schools.
5. Cooperation through synergies between OBPE and the civil society with NGOs like ASREEBU/AVEDEC in joint projects between JFW and CEBioS.

4.2. Thematic cooperation

Next to the earmarked budgets for institutional cooperation, CEBioS allocates funds towards cooperation with all countries on the basis of workshops, summer schools and calls for projects (see sub-programmes GTI, CHM, CEPA, MRV). The choice of the targeted countries is defined within the eligibility criteria of the specific calls or the Terms of References of other events or training. Attention will be given to tackle the nexus of biodiversity with climate, food, water and health.

5. Management, Monitoring, Evaluation & Learning

The CEBioS staff currently consists of a coordinator, 5 scientific officers, a communication officer and 2–3 administrative and technical support staff (secretariat, accountancy, graphical design). The staff is on the payroll of DGD subsidies and belongs to the RBINS personnel as contractual staff. The needed workforce (and the profiles of experts) is tailored towards the programme objectives, its expectations, output, outcomes and impact. The staff is regularly seconded by students or interns as well. Further, it works in close collaboration within RBINS with BIOPOLS, consisting of a.o. the National Focal Point to the CBD, and the Belgian Biodiversity Platform. CEBioS is also linked to RBINS researchers working in the framework of the GTI, freshwater biodiversity, remote sensing and modelling. RBINS provides services of central accountancy, HR, support to events and biodiversity expertise for the GTI and other sub-programmes.

Monitoring, Evaluation & learning (MEL) is implemented at several levels:

EXTERNAL EVALUATION & MONITORING as defined by the Protocol of Cooperation⁷

- 2–3 steering committees/ year (coordinator, RBINS direction, Belspo, DGD). This meeting is the space where actual operational issues are discussed, plans and reports validated, budget shifts of more than 15% per SO according to certain criteria are approved (to be confirmed in the new Protocol of Cooperation).
- 1 strategic committee/ year (=steering committees of CEBioS and AfricaMuseum + cabinets of the Minister of Development Cooperation and the State Secretary responsible for Scientific Policy)
- Intermediary and end-of-term evaluations by external bureau commissioned by BELSPO (cycle determined in new Protocol).
- Audits.

INTERNAL MONITORING & EVALUATION

- BIOPOLS meetings every 2 months & OD Nature Business Reviews 2 times a year
- Monthly reporting into online OD Nature Monitoring sheet
- Weekly whole team meetings
- Thematic working group meetings
- Brainstorming days on specific thematics, programming, systems of M&E
- Retreat of 2–3 days & team-building days
- Collecting data on indicators of logframe in preparation of annual reports by means of shared sheets. Here CEBioS intends to improve this system in order to have the data more easily at hand, also for daily management as recommended by the evaluation.

⁷ Changes are still possible according to new Protocol

- Monthly report of state of expenditures by means of a 'pense-bête' (every staff has a plasticized sheet with the list of budget posts according to the structure of the logframe) in order to react in a flexible and adaptive way. The structure of the logframe is also reflected into the structure of the common online sharepoint with all the dossiers.
- The coordinator applies the mandatory federal "Ontwikkelingscirkels" M&E to technical and administrative staff.
- Missions by staff include M&E components and produce mission reports.

LEARNING

Staff is encouraged to attend training offered by [OFO](#) and other organizations to improve skills and knowledge base.

All recommendations or decisions by the steering and strategic committees, the missions, the evaluations and audits are integrated into the daily operational and strategic functioning of CEBioS through a learning and ownership process by the coordinator, the staff and the partners.

Annex 1: State of Play

1. The biodiversity crisis and sustainable development in the global South

1.1. Reversing biodiversity loss

As stated by the last Global Biodiversity Outlook GBO-5 (2020), humanity stands at a crossroads with regard to the legacy it leaves to young and future generations. Biodiversity is declining at an unprecedented rate, and the pressures (e.g., deforestation, pollution, over-exploitation, poaching (GBO-5)) driving this decline are intensifying. None of the [Aichi Biodiversity Targets](#) was fully met, in turn threatening the achievement of the [Sustainable Development Goals](#) and undermining efforts to address climate change. The COVID-19 pandemic has further highlighted the importance of the relationship between people and nature, reminding the profound consequences to our own well-being and survival that can result from continued biodiversity loss and the degradation of ecosystems.

The Kunming-Montreal Global Biodiversity Framework seeks to respond to the Global Assessment Report of Biodiversity and Ecosystem Services issued by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), the fifth edition of the Global Biodiversity Outlook, and many other scientific documents that provide ample evidence that, despite ongoing efforts, biodiversity is deteriorating worldwide at rates unprecedented in human history. The direct drivers of change in nature with the largest global impact have been (starting with those with the most impact) changes in land and sea use, direct exploitation of organisms, climate change, pollution and invasion of alien species. Those five direct drivers result from an array of underlying causes, the indirect drivers of change, which are, in turn, underpinned by social values, economic dynamics

and behaviours. There is no single, 'ideal' pathway towards the Kunming-Montreal GBF 2050 Vision for Biodiversity that applies equally to all regions and all circumstances. Within the essential areas of change outlined above, there are many alternative approaches which will reflect local conditions and priorities. For example, ambitious conservation measures focused on the protection of large areas of land exclusively for nature may have the greatest impact on the survival of terrestrial species, while equally ambitious approaches that prioritize greener landscapes within farmed and urban environments may result in substantial improvements in the provision of some ecosystem services.

The GBO-5 identifies 8 key transitions to sustainable pathways: (1) land and forests, (2) freshwater, (3) sustainable fisheries and oceans, (4) sustainable agriculture, (5) food systems, (6) cities and infrastructure, (7) climate action and (8) One Health.

Moreover, a broader approach to sustainability involves better understanding the factors that can influence fundamental changes in institutions, governance, values and behavior, essential to bringing about the transitions described in the GBO-5. The latest [IPBES Global Assessment](#) (2019) has identified eight priority points for intervention, or leverage points with five associated 'levers' – incentives and capacity building, coordination across sectors and jurisdictions, pre-emptive action, adaptive decision-making and environmental law and implementation – that may be targeted by leaders in government, business, civil society and academia to spark transformative changes towards a more just and sustainable world (Fig. A1)

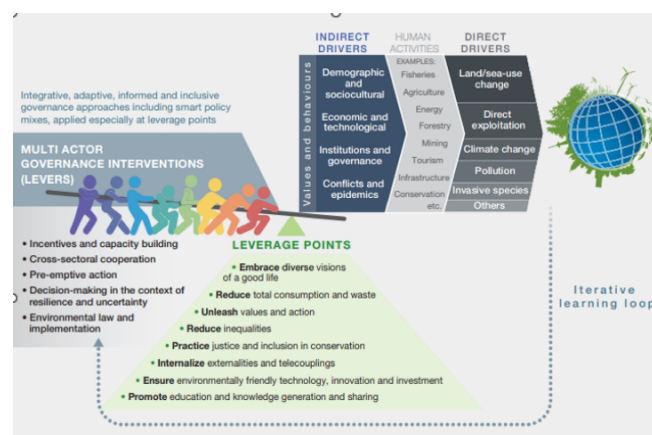


Fig. A1. Multi-actor governance interventions, leverage points, direct and indirect drivers of biodiversity loss (IPBES Global Assessment, 2019).

Both the GBO-5 and the IPBES Assessments provide inspiring anchors for the CEBioS theory of change and strategy.

1.2. Biodiversity and sustainable development in developing countries

The IPBES Global Assessment (2019) illustrates well the gap between economies of industrialized countries and developing and least developed countries and the correlation with several environmental indicators (Fig. A2).

The renowned Stockholm Resilience Center and the Swedish Expert Group for Aid Studies listed in 2022 their main [expert insights](#) on tensions and barriers when tackling biodiversity and poverty:

- Empowering agents across three spheres of transformation (practical, political and personal) is key.
- Leverage points should not be seen as blueprints for preserving biodiversity but rather “conversation starters”.
- Intensifying dialogue with key actors in the development field and developing mechanisms for improving policy coherence are needed.
- More specific studies on the very notion of transformation are necessary in order to address

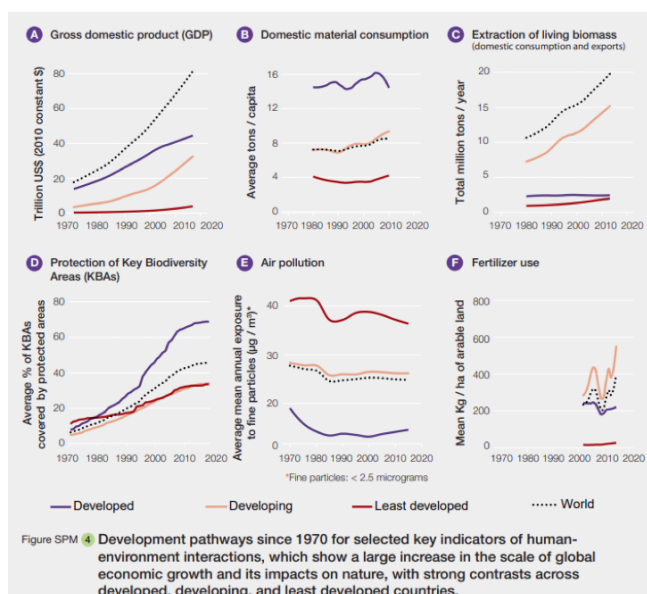


Fig. A2. IPBES Global Assessment (see legend in the graph)

different underlying value commitments that otherwise might prevent concerted action.

The conclusions of IPBES and the Stockholm Resilience Center, and contains many elements addressing these issues.

Development cooperation providers face a number of methodological and practical challenges in monitoring and evaluating biodiversity-related interventions. These are not exclusive to the field of biodiversity conservation and sustainable use, but their scale and interaction is relatively unique. Some of these challenges include:

- Ambiguous definitions that are not commonly understood of biodiversity and ecosystem services;
- A limited knowledge base of what works and of the need to create theories of change to achieve both biodiversity and development outcomes in biodiversity-related interventions;
- A lack of suitable and simple standardised indicators to monitor biodiversity related activities;
- The difficulty to link biodiversity and development outcomes in biodiversity-related interventions;
- Difficulties in setting up baselines and targets given uncertain operating contexts in developing countries;
- The large geographic spread of biodiversity and ecosystem services and the scale programmes required to manage these;
- The long timeframes required to observe results, extending beyond the lifespan of most development co-operation interventions.

Box 7: Improved knowledge and innovative solutions are critical to be successful.

To characterize the regional and global status and trends of biodiversity, inclusive collaboration across borders and continents is required, in support of national, European and global research and policy. To safeguard

our biodiversity, it is crucial to ensure the continuation of ecological processes. Reinforcement and harmonization of national/ regional biodiversity monitoring schemes and effective science-policy-practice interfacing are also important to foster cost-effective measures and management options for natural capital while respecting planetary boundaries.

(European Green Deal)

The following box explains where poverty-centric and nature-centric approaches (Miller, 2014) intersect, a crossroad in which this 10-year strategy of the CEBioS programme is grounded.

Box 8: Poverty-centric and nature-centric approaches

Identifying and prioritizing the objectives of a biodiversity-related development co-operation activity from the start is essential. There are a number of lenses through which to view the objectives and priorities of such an intervention. A poverty-centric approach prioritizes how biodiversity and ecosystem services can be instrumental in reducing poverty, and will often target areas outside of biodiversity hotspots and critical habitats. In contrast, a nature-centric approach to biodiversity mainstreaming will prioritize areas of particular biodiversity significance, such as biodiversity hotspots and critical habitats, to deliver the greatest biodiversity benefits. "Biodiversity hotspots" are those areas containing exceptional concentrations of endemic species that are undergoing exceptional loss of habitat (Miller, 2014).

2. Policy and conceptual Frameworks

The CEBioS strategy 2024–2033 is embedded in, or aligned to, several national and international policies, strategies or conceptual frameworks.

2.1. The Sustainable Development Goals

Fig. A3 depicts the Sustainable Development Goals (SDGs) of the UN Agenda 2030 in a hierarchy, from the Biosphere forming the base of everything, towards the economy. It shows how the SDG 14 (life below water), SDG 15 (life on land), SDG 13 (climate action) and SDG 6 (clean water and sanitation) are the fundament for all other SDGs, as they provide ecosystem services that constitute the material - geophysical - condition for all other objectives to be pursued. The CEBioS strategy is certainly a contribution to these SDGs, but indirectly will also contribute to SDG 1 (no poverty), SDG 3 (good health and well-being), SDG 4 (quality education), SDG 5 (gender equality), SDG 2 (zero hunger) and ultimately, SDG 17 (partnerships for the goals).

2.2. IPBES, IPCC and the nexus Biodiversity-climate

Both the CBD, IPBES and the IPCC (Intergovernmental Panel on Climate Change) recognize how climate change and biodiversity are intrinsically linked ([IPCC, 2002](#), [IPCC, 2021](#), [IPBES, 2020](#), [CBD,](#)



Fig. A3. [The Sustainable Development Goals.](#)

[2023](#)) (Fig. A4). Climate Change (CC) affects plant and animal distributions, their food supply and reproductive cycles. CC increases ocean acidification and temperatures, threatening calcium-dependent organisms such as corals to near extinction. Biodiversity on the other hand provides the major carbon sink, both at land and in the sea (CC mitigation). Further, biodiversity offers Nature-Based Solutions (NBS)⁸ to cope with the effects of CC (CC adaptation), such as the mangroves in coastal areas protecting from hurricanes. Indeed, nature-based solutions, such as ecosystem-based approaches to climate change adaptation and disaster risk reduction, have the potential to increase the resilience of ecosystems and human livelihoods to the impacts of climate change. Such approaches can also make significant contributions to climate change mitigation by reducing emissions from deforestation and other land-use changes, and by enhancing carbon sinks. It doesn't stop there, ecosystem-based approaches can be cost-effective, and provide employment and income generating opportunities, while also contributing to food security. It is those social, economic and environmental co-benefits that make nature-based solutions so attractive ([CBD, 2019](#)). For a detailed account on the roles of EbA and Eco-DRR, we refer to the [CBD Technical Series Nr. 93](#). In brief, Ecosystem-based adaptation (EbA) is the use of biodiversity and ecosystem services as part of an

overall adaptation strategy to help people to adapt to the adverse effects of climate change. EbA aims to maintain and increase the resilience and reduce the vulnerability of ecosystems and people in the face of the adverse effects of climate change.” (SCBD 2009) Ecosystem-based disaster risk reduction (Eco-DRR) is “sustainable management, conservation and restoration of ecosystems to reduce disaster risk, with the aim of achieving sustainable and resilient development.” (Estrella and Saalismaa 2013)

IPCC & IPBES highlight co-benefits of climate action and biodiversity protection:

According to their [report](#), “protection and restoration of carbon rich ecosystems is the top priority from a joint climate change mitigation and biodiversity protection perspective”. This nexus approach promoted by IPBES and IPCC is relatively new and transversal to CBD and UNFCCC.

CEBioS will try to emphasize as much as possible (e.g. in defining the eligibility criteria in calls or institutional cooperation) through its different interventions the nexus Biodiversity-Climate Change and, linked or derived from it, also the nexus Biodiversity-Food security, -Health and -water (Fig. A5). This approach allows for a holistic or integrative planning and action.

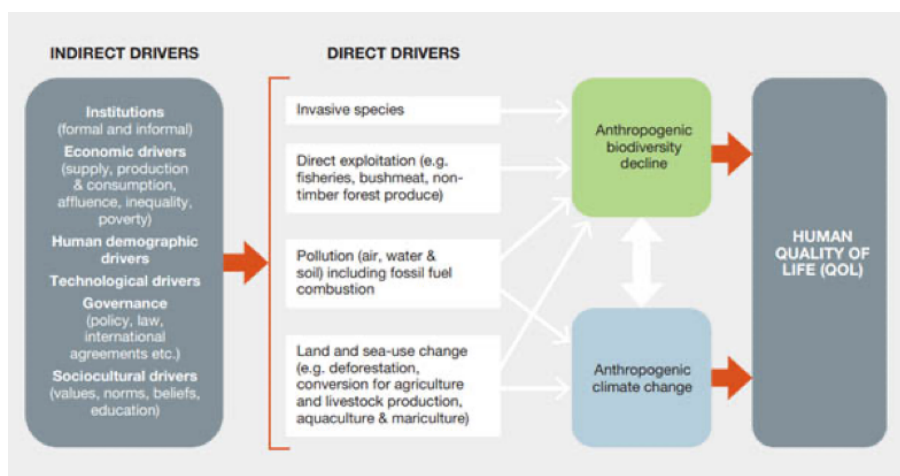


Fig. A4. [Indirect and direct drivers](#) of anthropogenic biodiversity decline and climate change.

⁸ NBS are actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits. Their role defined in UNEA resolution [UNEP/EA.5/Res.5](#)

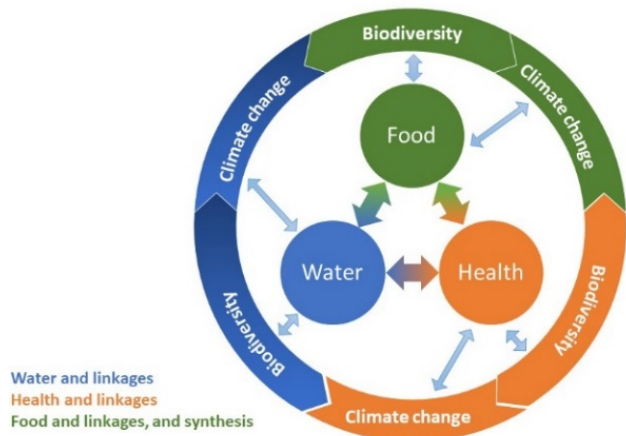


Fig. A5. Nexus between biodiversity and climate change, linked to food, water and health (<https://www.ipbes.net/events/online-conference-seek-input-scoping-process-nexus-assessment>)

Cooperation with the Operational Directorate (OD) 'Phylogeny' of RBINS will for instance promote 'One Health' research⁹, while more focus on the [Ramsar Convention on Wetlands](#) will promote the sustainable use, management and conservation of wetlands, rapidly disappearing ecosystems, and their services and biodiversity. This entails also close cooperation with members of the SCORES network, including focus on water and food.

2.3. The UN Convention on Biological Diversity (CBD)

The CEBioS interventions are part of Belgium's efforts to implement the strategy of the Rio Convention on Biological Diversity (CBD, 1992). Belgium and its development cooperation partner countries have ratified the CBD and have an obligation to contribute as much as possible to implement it globally. This is part of the worldwide contributions to Aichi Target 20 (mobilising finances), see "A Decade of Development Finance for Biodiversity | OECD iLibrary (oecd-ilibrary.org)". The UN Rio Convention on Biological Diversity (CBD) followed the strategic plan 2011–2022 including the 20 Aichi Biodiversity Targets. The Global Biodiversity Outlook 5 (2020) provides an authoritative assessment of progress on each Aichi target. In 2022, following a four-year negotiation process (during which CEBioS staff supported the Belgian delegation), the Conference of the Parties COP-15 defined in Kunming and Montreal the new

Global Biodiversity Framework (GBF), an ambitious strategy for the period 2020–2030

The Kunming-Montreal Global Biodiversity Framework is a contribution to the achievement of the 2030 Agenda for Sustainable Development. At the same time, progress towards the Sustainable Development Goals and the achievement of sustainable development in all its three dimensions (environmental, social and economic) is necessary to create the necessary conditions to fulfil the goals and targets of the Framework. It will place biodiversity, its conservation, the sustainable use of its components, and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, at the heart of the sustainable development agenda.

The Kunming-Montreal Global Biodiversity Framework (section G) has four long-term goals for 2050 related to the 2050 Vision for biodiversity:

- A. The **integrity, connectivity and resilience of all ecosystems** are maintained, enhanced, or restored, substantially increasing the area of natural ecosystems by 2050; Human induced extinction of known threatened species is halted, and, by 2050, the extinction rate and risk of all species are reduced tenfold and the abundance of native wild species is increased to healthy and resilient levels; The genetic diversity within populations of wild and domesticated species is maintained, safeguarding their adaptive potential;
- B. Biodiversity is **sustainably used and managed** and nature's contributions to people, including ecosystem functions and services, are valued, maintained and enhanced, with those currently in decline being restored, supporting the achievement of sustainable development for the benefit of present and future generations by 2050;
- C. The **monetary and non-monetary benefits from the utilization of genetic resources and digital sequence information on genetic resources, and of traditional knowledge** associated with genetic resources, as applicable, are shared fairly and equitably, including, as appropriate with indigenous peoples and local

⁹ One Health and OD Phylogeny: through the identification of intermediate vectors of zoonoses in mammals and birds and the genetic identification of bushmeat on the markets.

communities, and substantially increased by 2050, while ensuring traditional knowledge associated with genetic resources is appropriately protected, thereby contributing to the conservation and sustainable use of biodiversity, in accordance with internationally agreed access and benefit-sharing instruments;

D. Adequate **means of implementation, including financial resources, capacity-building, technical and scientific cooperation, and access to and transfer of technology** to fully implement the Kunming-Montreal Global Biodiversity Framework are secured and equitably accessible to all Parties, especially developing country Parties, in particular the least developed countries and small island developing States, as well as countries with economies in transition, progressively closing the biodiversity finance gap of \$700 billion per year, and aligning financial flows with the Kunming-Montreal Global Biodiversity Framework and the 2050 Vision for biodiversity.

The Kunming-Montreal Global Biodiversity Framework, section H, has 23 action-oriented global targets for urgent action over the decade to 2030¹⁰. Table 1 gives an estimate of how CEBioS interventions contribute to each target.

Matches between the CEBioS programme and the KM-targets of the GBF are listed in annex 3.

For CEBioS, as a capacity building programme for the global South, especially **Decisions 15/6 (Monitoring Framework) and 15/8 (capacity-building and development and technical and scientific cooperation)** of the GBF are of the utmost importance as guidelines. Decision 15/8 contains 9 pages with 32 decisions or other items, without counting 12 pages of annexes. In summary, all principles and modalities of CEBioS adhere closely to its contents (see guiding principles, pg. 12):

- a. Inclusive analysis of existing capacities and needs is essential to ensure effective interventions;
- c. Country ownership and commitment should be cornerstones for capacity-building and development actions;

- d. Strategic and integrated system-wide approaches to capacity-building and development should be promoted;
- e. Interventions should be designed and implemented according to recognized good practice and lessons learned; Indigenous peoples and local communities, gender and youth perspectives should be fully integrated into biodiversity capacity-building and development efforts, taking into account the Gender Plan of Action;
- f. Monitoring, evaluation and learning frameworks should be incorporated into capacity-building and development strategies, plans and programmes from the start.

Further, we invite the reader to consult the key strategies (pg. 13), as well as the 15 guiding principles for technical and scientific cooperation initiatives, listed on pg. 17 of Decision 15/8, with a.o. demand-driven, synergistic, multi-stakeholder engagement, continuous learning or mutual respect.

The **Monitoring Framework** ([CBD, Decision 15/6](#)) is also an important instrument to monitor and report on the progress of these Targets. It is composed of so-called headline indicators, as well as component and complementary indicators. The drafting of these indicators is work in progress and will be refined at COP-16 in 2024. CEBioS will draw on this framework to feed into its trainings and workshops.

2.4. The European Union – Green Deal

The EU Green deal is a policy/legislative package. The EU Commission adopted strategies in addition to this. The EU and its member states translate some Green Deal ideas and ambition to mainstream environmental issues in development cooperation, from which CEBioS could also inspire itself. For instance, the EU designed ‘Team Europe Initiatives’ in partner countries, including on ‘green thematics’ and focused on some of Belgium’s priority development partners.

CEBioS is framed within the EU strategies on biodiversity and climate, not only for its values and concepts, but also for its applicability beyond the EU, especially in

¹⁰ <https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf>

Africa, where the EU plays, with the transposition of its [European Green Deal](#) (EGD) into Green Partnerships, a pivotal role in e.g., DR Congo and Burundi (two priority countries of CEBioS). Beyond the EU, the need to stop biodiversity loss and to preserve and restore ecosystems is now recognized at the highest political level, as demonstrated by the declarations at the G7/G20 and the World Economic Forum.

2.5. Other Multilateral Environmental Agreements (MEA), programmes & networks

1. Group On Earth Observations Biodiversity Observation Network (GEOBON)

[GEOBON's mission](#) is to improve the acquisition, coordination and delivery of biodiversity observations and related services to users including decision makers and the scientific community. CEBioS staff regularly attend their conferences to stay updated about the latest trends and standards and share our best practices with the community. At the same time, our participation serves as basis for the capacity building of our partners.

2. African Union: Agenda 2063: The Africa We Want

[AGENDA 2063](#) is Africa's blueprint and master plan for transforming Africa into the global powerhouse of the future. It is the continent's strategic framework that aims to deliver on its goal for inclusive and sustainable development and is a concrete manifestation of the pan-African drive for unity, self-determination, freedom, progress and collective prosperity pursued under Pan-Africanism and African Renaissance. Its 7th Goal is about "Environmentally sustainable and climate resilient economies and communities", listing:

1. Sustainable natural resource management and Biodiversity conservation
2. Sustainable consumption and production patterns
3. Water security
4. Climate resilience and natural disasters preparedness and prevention
5. Renewable energy

CEBioS interventions relate to the points 1, 3 and 4.

3. UNESCO – Man and the Biosphere Programme (MAB)

In 2017–2019, CEBioS was promotor of the [EVAMAB project](#), funded by BELSPO in support of the [UNESCO-MAB programme](#). Field work was conducted in 4 Biosphere reserves in Africa: Pendjari NP in Benin, Mont Elgon in Uganda, Lake Manyara in Tanzania and Lake Tana in Ethiopia. CEBioS core activities, combined with smaller VLIR-UOS projects have resulted in workshops, scientific publications and a major output in the form of a [manual on assessing ecosystem services in African Biosphere reserves](#). CEBioS will continue supporting African Biosphere reserves through training of the rapid assessment tools explained in the manual. Moreover, from 2023 onwards, CEBioS is partner with UNESCO, CSB and UGent in a DGD-funded project to support the Yangambi Biosphere Reserve in DR Congo. CEBioS is also part of an ENABEL-UNDP-EU programme in Burundi to support the Rusizi National Park, a MAB in Burundi (PACECOR).

4. International Union for the Conservation of Nature (IUCN), Key Biodiversity Areas (KBA)

The [IUCN](#) is the most prominent international NGO on the conservation of biodiversity. With its scientific commissions (CEBioS staff are member of [CEESP](#) and [CEC](#)) and the development of approaches and tools (e.g. classification of protected areas, green list of ecosystems, management of protected areas), it sets global standards in conservation. CEBioS will draw such [IUCN tools](#) and training elements for its own capacity building activities in order to link up local partners with these global standards and opening them the way to global fund raising. CEBioS will also attend the IUCN world congress.

Moreover, IUCN, together with other global NGOs such as Birdlife, GEF, World Conservation Society and WWF developed "[Key Biodiversity Areas](#)" worldwide as a global conservation network. This kind of information will be integrated into CEBioS training modules. Key Biodiversity Areas (KBAs) are the most important places in the world for species and their habitats. Faced with

a global environmental crisis, we need to focus our collective efforts on conserving the places that matter most. The KBA Programme supports the identification, mapping, monitoring and conservation of KBAs to help safeguarding the most critical sites for nature on our planet – from rainforests to reefs, mountains to marshes, deserts to grasslands and to the deepest parts of the oceans.

5. The National Biodiversity Strategy and Action Plans of partner countries

Although CEBioS is entitled to work in 30 countries, it considerably concentrates on institutional and open call interventions in mainly 3 African countries, being Benin, Burundi and DR Congo. As it is the case with Belgium, these countries have ratified the CBD and other binding MEAs and must implement the KM-

GBF as much as possible. CEBioS supports their governments in this process.

Key strategic documents are the National Biodiversity Strategy and Action Plans (NBSAP), as well as the National Reports (NR) to the CBD. Our support contributes to their implementation in these 3 countries in a direct way (e.g., when supporting revision and definition of indicators) or indirectly (e.g., when enhancing the capacities of civil servants and scientists and raising awareness).

Needless to add that our interventions in the other countries (Vietnam, East Africa, Sahel, Morocco, Palestine) all contribute to their NBSAPs and NRs as well.

Annex 2:

Recommendations from the Evaluation & management response

The conclusions by the external evaluation from the executive summary according to the OECD [DAC](#) criteria are presented here below:

Relevance The CEBioS programme has demonstrated **considerable relevance** in aligning its goals with the needs of its beneficiaries and partner institutions. It has excelled particularly in individual capacity support activities and has shown significant relevance to biodiversity-related Sustainable Development Goals (SDGs) and Convention on Biological Diversity (CBD) objectives.

Coherence The CEBioS programme exhibits a **strong degree** of internal coherence, aligning well with the Royal Belgian Institute of Natural Sciences (RBINS) activities and the Belgian Biodiversity Policy Support Group (BIOPOLS).

Efficiency The CEBioS programme displays **commendable efficiency**, achieving notable results with a lean team, modest budget increases, and

operations across various countries. Its economic efficiency is evidenced by a high output of work, including manuals, policy briefs, and training with limited resources. Furthermore, despite the significant budget allocated to human resources, CEBioS has been successful in converting inputs such as funds and expertise into outputs.

Effectiveness The CEBioS programme demonstrates **strong effectiveness**, surpassing annual targets for most outputs and intermediate outcomes, and maintaining alignment with strategic objectives. Despite challenges such as the caretaker government period and the COVID crisis, the programme has displayed resilience and flexibility, delivering high-quality outputs. The effectiveness of the programme is evident in its progress between phase I and phase II, the appreciated contributions to capacity development activities, the contribution to Belgian CBD commitment in supporting CHM focal points of partner countries and the successful partnerships established in its concentration countries.

Impact The CEBioS programme has made **significant contributions** to biodiversity conservation and knowledge building, exhibiting potential for transformative impacts on social, environmental, and economic outcomes.

Sustainability The CEBioS programme has **demonstrated progress** towards sustainability, with robust environmental and institutional practices. Amongst others, it ensures access to and longevity of its physical outputs, enhancing environmental sustainability. It also fosters institutional sustainability through strategic partnerships and capacity development initiatives, which promote South–South capacity building.

Table 1 provides the recommendations and their management response.

Table 1: The recommendations by the Alesopi Evaluation Bureau are taken from the executive summary of the evaluation (June, 2023). The right column formulates the management response of CEBioS, worked out in the strategy and the 5-year programme.

Nr.	Recommendations	Management Response by CEBioS
	On moving to a more strategic role	
1	Aligning with Country Needs: Develop a strategic vision for CEBioS to better align with country needs and priorities. Transform from an offer-driven to a demand-driven process, and identify collaboration opportunities with ANGCs to enhance developmental impact	Being implemented, through online meetings and identification missions. Demand-driven process will always be limited by our resources and the available expertise on offer though. The topics of calls as GTI and MRV will remain open enough to guarantee local relevance. Countries will express their capacity building needs in the update of their NBSAPs towards the end of 2024. We will evaluate at that moment their demands and try to integrate these for 2025 – 2028 programme years. Collaboration opportunities with ACNGs are in the centre of our efforts within the Joint Strategic Frameworks and SECORES in particular.
2	Institutional Capacity Building: Create a comprehensive strategy for institutional capacity development. Establish stages to guide partner support and allow for thematic and geographic evolution, ensuring dynamic portfolio management.	The dynamic portfolio management is an interesting concept to be implemented as much as possible within the existing available resources. Institutional capacity development is indeed a comprehensive package, within the constraints of our capacities to create training contents or mobilize expertise for training.
3	Strategic Role with Other Actors: Amplify CEBioS's strategic role with other ANGCs actors, BELSPO, and DGD at both country and Belgian levels. Capitalise on CEBioS's credibility and network to foster intersectoral collaborations and enhance biodiversity impact.	CEBioS' credibility will be further developed and capitalized within Belgian strategic discussions at federal level and within the context of the JSF, as well as in our partner countries at the level of the embassies and the development actor platforms such as FOBAC.
4	Promoting Intersectionality: Move beyond silos and pre-set boxes, and actively seek development relevance through intersectionality. Amplify efforts in linking biodiversity with other sectors such as agriculture and health to optimise impact	Intersectionality is further promoted through the concepts of 'nexus' for biodiversity, climate change, water, health and food. This will be part of our general narrative, linked to ecosystem services and appear in terms of references and eligibility criteria within our calls for projects.

5	Addressing Taxonomic Impediment: Advocate for the importance of taxonomy across various sectors. Highlight its role in biodiversity knowledge, sustainable resource use, and implications for sectors like agriculture, climate change adaptation strategies, and more.	CEBioS is in a worldwide context a quite unique capacity building programme for taxonomy. Linking taxonomy to climate change, agriculture, water and health is part of the nexus approach promoted in this programme and strategy. It enhances the perceived utility of taxonomic research and justifies it within a sustainable development perspective.
On strategic collaborations and increasing synergies (SO4)		
6	Collaborative Activities with Belgian Development Actors: Implement joint activities with Belgian development actors to assess country needs and priorities related to biodiversity. Develop a comprehensive problem analysis for each country considering the interactions of various sectors.	CEBioS is observing member of several geographical JSFs and active founding member of the thematic JSF and its network SECORES. Through these channels, it is informed by and eventually contributes to problem analysis for each country, which is certainly a much larger scope than what CEBioS is able to do, considering the interactions of various sectors. Nevertheless, within its scope, CEBioS is collecting country needs through partners and stakeholders to finetune and adapt its offer as best as possible to demand and needs from the South.
7	Collaboration with ENABEL: Explore potential benefits of collaboration with ENABEL beyond scientific validation. Identify possible support CEBioS could receive from ENABEL, such as the possibility to benefit from the junior assistance programme (based on the Act of 23 November 2017 amending the name and missions of the Belgian Development Agency).	Collaboration with Enabel is certainly welcome. It remains a balance act to remain within the CEBioS' mandate, not to be a 'study bureau' for implementation of some elements of country programmes. Dialogue with Enabel is going on and CEBioS is always available for advice on biodiversity related issues. The idea of junior assistance programme is interesting and will be explored.
8	Synergies with RMCA: Increase collaboration and align strategies with the RMCA to enhance impact. Map common activities and partners for improved information sharing and potentially organise joint planning missions in concentration countries to enhance best practices and country relevance	CEBioS sees RMCA as a key Belgian partner. We align on administrative scholarship matters, and inform and exchange about our work in Yangambi Biosphere Reserve (DR Congo) and CSB (DRC). Further, we provide training on the elaboration of policy briefs and organise joint trainings on scientific publishing. Mapping common activities and partners will be considered.
On further empowering institutional partners (SO2)		
9	Institutional Partnership Development: Foster a broader approach to institutional partnerships, considering rotation between countries, departments, and focus areas. Promote whole-institution approach (WIA) to mitigate dependency externalities and create synergy with other development actors such as satellite internet, and ensure the mitigation of the digital gap.	WIA is indeed a noble endeavour and will be promoted through involvement of all institutional hierarchy and transparent information. Rotation is of rather limited use, given the long-term partnerships and the limited resources. CEBioS is well aware of dependency dynamics and being aware of that risk, will further promote empowerment and responsibility of partners, also through South-South cooperation and training, as well as train the trainer approach.

10	<p>Collaboration Scope Widening: Extend collaboration within partner institutions to identify new areas of relevance. Use the WIA to assess partner needs and explore collaborations with other Global North partners to address areas beyond CEBioS's mandate.</p>	<p>Our partners come themselves with new avenues of cooperation during our identification missions. We discuss with them what is possible and define the cooperation axes, which will be the basis for their future log-frames. CEBioS can indeed facilitate other collaborations with other experts with our institutional partners to cover other areas beyond its mandate, such as ICT, library, infrastructure, governance, accountancy, management, leadership, vision, strategy etc.</p>
11	<p>Sustainability Strategy for Capacity Development: Establish a clear strategy for sustainable institutional capacity development, aiming for autonomy. Implement sustainability indicators and adjust focus areas over time to enhance biodiversity mainstreaming activities.</p>	<p>Autonomy is definitely the ultimate objective. We believe our impact and outcome indicators contribute to assess the sustainability of our interventions. Biodiversity mainstreaming is our main objective in e.g., our SYN sub-programme. We will continue to work on mainstreaming in Burundi with OBPE and explore ways for the other institutional cooperations.</p>
12	<p>Promotion of Strategic Planning Autonomy: Support the autonomy of partner institutions in strategic planning, especially for CSB. Facilitate self-reflection processes to allow partners to develop their own vision and strategy.</p>	<p>We completely agree with the suggestion to promote more self-reflection at CSB for more strategic decisions with highest possible ownership of their vision and mission within their strategy. The CSB is experiencing its position between UNIKIS hierarchy and autonomy, which can be a healthy process. Given its lack of internal resources, its strategy will very much be adapted towards the possible external resources. Keeping this in good balance is a challenge.</p>
13	<p>Investment in Internet and Energy Autonomy: Prioritise investments in improving internet and energy infrastructures for partners, crucial for institutional capacity and sustainability. Explore emerging affordable solutions;</p>	<p>One of the results of CEBioS is CHM, as well as marine modelling within MEP. That indeed requires a functioning internet and computers and associated energy supply, preferably green. Within our capacities, we look together with our partners for solutions (e.g., solar panels at OBPE).</p>
14	<p>Equipment Support for Taxonomic Studies: Support partners in acquiring necessary equipment for taxonomic studies. Coordinated investments and maintenance training could enhance sustainability and efficiency of equipment use.</p>	<p>This especially applies to our GTI sub-programme. Some budget is set aside for exactly such small lab equipment. Larger lab equipment is envisaged for long-term partners. However, it remains constrained by our available resources. Procurement is a tiresome and administrative heavy process and CEBioS seeks to keep a balance not to be purely a logistic hub.</p>

	On activating the alumni network as potential CEBioS task force	
15	“Train the Trainers” Approach: Increase focus on training local trainers to transition CEBioS team from implementation to supervision, freeing up time for strategic work and empowering local experts.	CEBioS agrees with this approach and will implement this within CHM, MRV and GTI, by promoting South-South trainings and projects.
16	Engage CEBioS Alumni: Implement regular activities with CEBioS alumni. These individuals are a valuable resource and can contribute to developing future GTI and MRV programmes.	CEBioS will further develop and animate its alumni network, agreeing that these individuals are the best ambassadors and have great capacities as ‘change agents’ in service of their country. They will also be mobilized for specific future trainings and projects, to share expertise and experience.
17	Encourage South-South Knowledge Exchanges: Encourage exchanges of knowledge and practices between southern partners. This will foster a regional community of trainers and SPI experts for biodiversity.	CEBioS agrees with this approach and will continue to implement this within CHM, GTI, MRV and MEP.
	To improve efficiency	
18	Expand Team Expertise: Broaden the CEBioS team with professionals from advocacy and development backgrounds to provide insights into African development challenges.	Expand team expertise requires additional FTE and resources. We have attracted a professional with these qualities within our MEP sub-programme.
19	Implement Timely Processes: Ensure that delays in call processes and money transfers do not impact partners. Adequate time should be provided for partners to complete activities.	This is a recurrent problem, based in a complex set of factors. CEBioS does its utmost possible to be highly responsive, reactive and keep the deadlines within its administrative processes. We believe that many exchanges with concerned administrations within RBINS, as well as steady improvements of internal processes, have substantially improved these processes. Further improvements will be made on a continuous basis.
20	Improve Budget Monitoring Tool: Expand the “pense-bête” (i.e. a budget reminder tool) to provide a comprehensive “dashboard” view that includes as well the overall execution compared to the total multi-annual budget, aiding better activity and expenditure planning and monitoring.	This is indeed a very useful suggestion. We will consider the building-up of such a dashboard with our IT services and consider its development as a function of costs.
21	Leverage Technology for Efficiency: Use virtual machines for efficient support of partner institutions, overcoming hardware limitations and addressing expenditure eligibility criteria	Again, an interesting suggestion. Virtual machines use will be explored for feasibility and relevance.

	On Gender sensitivity	
22	Gender Affirmative Actions in Calls: Implement gender affirmative actions in all CEBioS calls to actively address gender inequalities and enhance women's participation;	CEBioS incorporates gender and "leaving no one behind" in its strategy and indicators. Moreover, an affirmative gender approach will be gradually developed in order to reach a more equitable gender balance amongst our beneficiaries, despite ingrained cultural, institutional and structural barriers. MRAC will be contacted to share their experience with affirmative gender actions, and a 'gender focal point' was designed in among CEBioS colleagues.
	On scientific capacity development (SO1)	
23	Explore GTI Tutor Partnerships: Encourage collaboration with other institutions and universities to share the responsibilities of GTI tutoring, bringing additional competencies to the table.	This has been e.g., demanded during our identification mission to Bénin in August 2023. We will incorporate such concept within GTI and test pilots first.
24	Map Belgian Expertise: Work with the Belgian Biodiversity Platform to identify additional experts/tutors, supporting broader collaborations.	GTI will indeed map taxonomic expertise in Belgium and in our partner countries to ensure a better needs analysis and matchmaking.
25	Map African Expertise: Identify and engage experts in African universities/countries to encourage South-South mentoring.	See 24
26	Implement GTI Internal Project Multi-Annual Calls: Consider long-term internal project calls for recurring projects with a "train the trainers" aspect and optional awareness activities.	A multi-year approach will certainly considerably diminish our administrative handling. This suggestion is most welcome and will be applied. Train the Trainer and awareness are integral part of GTI.
27	Wider Impact of GTI Internal Projects: Promote the opportunity of GTI internal projects to relevant organisations in eligible countries, ensuring a broader reach and increased impact.	The need for taxonomic capacity building is huge and worldwide. CEBioS contributes to it by mobilizing Belgian expertise to that effect. Looking for new beneficiaries is part of the call process, within the given resources.
28	Include Needs Assessment in ABC Taxa: Perform comprehensive country needs assessments across various sectors to identify taxonomy gaps and priorities, increasing relevance of ABC taxa publications.	Finding authors willing to spend their time and efforts in making an AbC-Taxa is a challenge in itself. This is done by the 3 editors-in-chief and CEBioS. Matchmaking with taxonomy gaps and priorities is part of that process.
29	Keep GTI External Grants Open: Maintain open topics for GTI external grants to ensure local relevance. Explore potential co-financing opportunities to expand the grant duration or number.	Open themes/topics is indeed one of the characteristics of the GTI-calls. The experts know better what to do to match the local relevance. Co-financing is an interesting track to explore. We e.g. think about the UNDP-EU-Enabel project PACECOR in Burundi or the VLIR-UOS South Initiative RUBICOM on the Rusizi plains in Burundi.

30	Explore Co-Financing for GTI Grants: Consider out-of-the-box funding options to extend GTI training duration or increase the number of grants, given the high demand and limited sources of funding for taxonomy	Yes, see 29.
On science policy interface activities including MRV, Policy support and awareness raising (SO3)		
31	Co-Build Monitoring Priorities with Local Stakeholders: Involve local stakeholders and scientists in the development of habitat monitoring priorities and relevant lexica. Expand the content to include fauna, which is of interest to eco-guards and tourists.	MEP has been reshaped or redefined in that respect. Producing derived products of existing lexica is now part of this 5-yr plan.
32	Align Science-Policy Activities with Strategic Vision: Improve the relevance of the science-policy interface by aligning MRV calls with the strategic vision of CEBioS and country needs.	The CHM sub-programme now explicitly includes the SPI component of CEBioS. MRV will continue seeking alignment with the GBF and its Monitoring Framework (see strategy).
33	Leverage Connections for Funding and Project Amplification: Explore potential funding sources and leverage connections with international biodiversity organisations for project expansion	External projects, fund raising are now explicit parts of the SYN sub-programme.
On monitoring for biodiversity (outcomes) and development (impact) results.		
34	Revisit Initial Results Chain: Use the more coherent results chain from the phase II 2019 plan for improved results monitoring and strategic programme steering.	Results have now been ventilated per Specific Objective, with corresponding indicators, see log-frame.
35	Reorient Monitoring System for Management Purposes: Transition the monitoring system from purely reporting to management-oriented. A comprehensive framework monitoring activities, outputs, and outcomes will address budget allocation and result mapping.	See remark 20 on dashboard.
36	Develop a MEL System: Create a Monitoring, Evaluation and Learning (MEL) system including a workplan and tools for constant monitoring of implementation from the planning phase.	The MEL is explained in the strategy.
37	Create 'Capacity and Sustainability Grids and Index': Inspired by good practices developed by Belgian actors in the Congo basin, create similar tools for monitoring capacity development.	This concept is new to CEBioS. We will explore this possibility and eventually implement according to effort/real added value ratio.

38	Provide Up-to-date Monitoring Results on the Website: Use the website to display monitoring results in an appealing format for a wider audience.	CEBioS acknowledges this idea. Implementation can be linked to creation of dashboard, but will depend on costs and available expertise at RBINS. Communication will be adapted to emphasize more key results and numbers.
39	Monitor Use and Impact of Policy Support Products: Track the usage of policy support tools and measure their impact on users and processes.	Policy Support Products, such as Policy Briefs, are only useful if used by policy-makers. It is a real challenge and reflection with the policy-makers will be launched to include the 'post-production' aspect and dissemination strategy of such products in our trainings and calls criteria. CEBioS will offer and explain the PBs as much as possible. Current CEBioS Policy Brief Trainings are providing advice for scientists on how to reach policymakers and keep track of policy efforts.
40	Refocus Social Impact of the ToC: Shift focus towards more targeted and achievable social impact, connecting with value chains and implementation by stakeholders to amplify results.	ToC has been adapted accordingly.
41	Conduct Regular Impact Study: Commission a study every five years to explore CEBioS activities' impacts on environmental issues and support the development of streamlined tools.	We believe that an external evaluation and audit every 5 year are the only options to appreciate the efficiency and impact of CEBioS taking into account the available budget according to the 1% rule for the evaluation. We suggest that this idea could be included in the terms of references of the next external evaluation. Moreover, a definition of 'streamlined tools' is warranted.
<p><i>Included are the recommendations to DGD, BELSPO, the Protocol steering committee, the partner institutions and the alumni, so that the reader of this 5-year plan can appreciate the evaluation. However, CEBioS cannot provide a management response on this.</i></p>		
	Recommendations to DGD and BELSPO	
42	Maintain existing support to CEBioS and substantially increase its funding: CEBioS is a credible and successful programme, a future strategic plan can deploy even more development impact.	
43	Strategically Implement the 10y Programme: Implement the 10-year programme in two phases, with the second phase building strategically on Phase I.	

44	Align CEBioS and Belgian ANGC Programming Cycles: This alignment can enhance synergies between CEBioS and Joint Strategic Framework stakeholders or allow for open funding for collaborations.	
Recommendations to Protocol Steering Committee		
45	Focus on Value Chains and Multiplier Effects: Rather than proving impact on poverty and hunger reduction, focus on value chains and capturing multiplier effects for implementation by other actors.	
46	Make Internet and Energy Autonomy Investment Eligible: Recognise the digital and energy gap in the Global South and develop policies to address these issues.	
Recommendations to CEBioS partner institutions		
47	Express Needs Freely with CEBioS: Foster a trusting relationship with CEBioS and freely express needs while understanding CEBioS's mandate limitations.	
48	Link CEBioS with Other Departments of your institution: Ensure communication and coordination with other departments of your institution to inform and amplify impact of CEBioS' activities.	
49	As part of a larger institution, ensure the link with other departments of your institution and play a role of hub to engage other departments in strategic assessments of needs and priorities to orient CEBioS activities.	
Recommendations to CEBioS Alumni		
50	Develop Local Capacity: Work with CEBioS to develop a community of practice and local task forces to enhance local scientific and stakeholder training capacities.	
Recommendations to JSF members		
51	Assess Country Development Priorities: Collaborate with CEBioS to evaluate country development priorities and develop joint activities that integrate CEBioS's biodiversity competency. Use concepts such as Nature-based solutions to broaden perspectives on biodiversity and identify collaboration opportunities.	

Annex 3:

The GBF and CEBioS



Table 2 provides a tentative match between the 23 targets of the GBF and the level of involvement by the CEBioS programme.

Table 2: Contributions of CEBioS to the targets are estimated on a Likert scale of 1-2-3-4-5.

Target	Contents	CEBioS score
1	Ensure that all areas are under participatory, integrated and biodiversity inclusive spatial planning and/or effective management processes addressing land- and sea-use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030, while respecting the rights of indigenous peoples and local communities.	2
2	Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under effective restoration , in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.	2
3	Ensure and enable that by 2030 at least 30 per cent of terrestrial and inland water areas , and of marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories.	2
4	Ensure urgent management actions to halt human induced extinction of known threatened species and for the recovery and conservation of species, in particular threatened species, to significantly reduce extinction risk, as well as to maintain and restore the genetic diversity within and between populations of native, wild and domesticated species to maintain their adaptive potential, including through in situ and ex situ conservation and sustainable management practices, and effectively manage human-wildlife interactions to minimize human-wildlife conflict for coexistence.	3

5	Ensure that the use, harvesting and trade of wild species is sustainable, safe and legal, preventing overexploitation, minimizing impacts on non-target species and ecosystems, and reducing the risk of pathogen spillover, applying the ecosystem approach, while respecting and protecting customary sustainable use by indigenous peoples and local communities	3
6	Eliminate, minimize, reduce and or mitigate the impacts of invasive alien species on biodiversity and ecosystem services by identifying and managing pathways of the introduction of alien species, preventing the introduction and establishment of priority invasive alien species, reducing the rates of introduction and establishment of other known or potential invasive alien species by at least 50 per cent by 2030, and eradicating or controlling invasive alien species, especially in priority sites, such as islands.	2
7	Reduce pollution risks and the negative impact of pollution from all sources by 2030, to levels that are not harmful to biodiversity and ecosystem functions and services, considering cumulative effects, including: (a) by reducing excess nutrients lost to the environment by at least half, including through more efficient nutrient cycling and use; (b) by reducing the overall risk from pesticides and highly hazardous chemicals by at least half, including through integrated pest management, based on science, taking into account food security and livelihoods; and (c) by preventing, reducing, and working towards eliminating plastic pollution.	1
8	Minimize the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction actions, including through nature-based solutions and/or ecosystem-based approaches, while minimizing negative and fostering positive impacts of climate action on biodiversity.	3
9	Ensure that the management and use of wild species are sustainable, thereby providing social, economic and environmental benefits for people, especially those in vulnerable situations and those most dependent on biodiversity, including through sustainable biodiversity-based activities, products and services that enhance biodiversity, and protecting and encouraging customary sustainable use by indigenous peoples and local communities.	4
10	Ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably , in particular through the sustainable use of biodiversity, including through a substantial increase of the application of biodiversity friendly practices, such as sustainable intensification, agroecological and other innovative approaches, contributing to the resilience and long-term efficiency and productivity of these production systems, and to food security, conserving and restoring biodiversity and maintaining nature's contributions to people, including ecosystem functions and services.	3

11	Restore, maintain and enhance nature's contributions to people, including ecosystem functions and services , such as the regulation of air, water and climate, soil health, pollination and reduction of disease risk, as well as protection from natural hazards and disasters, through nature-based solutions and/or ecosystem-based approaches for the benefit of all people and nature.	4
12	Significantly increase the area and quality, and connectivity of, access to, and benefits from green and blue spaces in urban and densely populated areas sustainably , by mainstreaming the conservation and sustainable use of biodiversity, and ensure biodiversity-inclusive urban planning, enhancing native biodiversity, ecological connectivity and integrity, and improving human health and well-being and connection to nature, and contributing to inclusive and sustainable urbanization and to the provision of ecosystem functions and services.	2
13	Take effective legal, policy, administrative and capacity-building measures at all levels, as appropriate, to ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources and from digital sequence information on genetic resources , as well as traditional knowledge associated with genetic resources, and facilitating appropriate access to genetic resources, and by 2030, facilitating a significant increase of the benefits shared, in accordance with applicable international access and benefit-sharing instruments.	5
14	Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting , within and across all levels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities, and fiscal and financial flows with the goals and targets of this framework.	5
15	Take legal, administrative or policy measures to encourage and enable business, and in particular to ensure that large and transnational companies and financial institutions : (a) Regularly monitor, assess, and transparently disclose their risks, dependencies and impacts on biodiversity, including with requirements for all large as well as transnational companies and financial institutions along their operations, supply and value chains, and portfolios; (b) Provide information needed to consumers to promote sustainable consumption patterns; (c) Report on compliance with access and benefit-sharing regulations and measures, as applicable; in order to progressively reduce negative impacts on biodiversity, increase positive impacts, reduce biodiversity-related risks to business and financial institutions, and promote actions to ensure sustainable patterns of production.	1

16	Ensure that people are encouraged and enabled to make sustainable consumption choices , including by establishing supportive policy, legislative or regulatory frameworks, improving education and access to relevant and accurate information and alternatives, and by 2030, reduce the global footprint of consumption in an equitable manner, including through halving global food waste, significantly reducing overconsumption and substantially reducing waste generation, in order for all people to live well in harmony with Mother Earth.	2
17	Establish, strengthen capacity for, and implement in all countries, biosafety measures as set out in Article 8(g) of the Convention on Biological Diversity and measures for the handling of biotechnology and distribution of its benefits as set out in Article 19 of the Convention.	2
18	Identify by 2025, and eliminate, phase out or reform incentives, including subsidies, harmful for biodiversity , in a proportionate, just, fair, effective and equitable way, while substantially and progressively reducing them by at least \$500 billion per year by 2030, starting with the most harmful incentives, and scale up positive incentives for the conservation and sustainable use of biodiversity.	1
19	Substantially and progressively increase the level of financial resources from all sources , in an effective, timely and easily accessible manner, including domestic, international, public and private resources, in accordance with Article 20 of the Convention, to implement national biodiversity strategies and action plans, mobilizing at least \$200 billion per year by 2030, including by: (a) Increasing total biodiversity related international financial resources from developed countries, including official development assistance, and from countries that voluntarily assume obligations of developed country Parties, to developing countries, in particular the least developed countries and small island developing States, as well as countries with economies in transition, to at least \$20 billion per year by 2025, and to at least \$30 billion per year by 2030; (b) Significantly increasing domestic resource mobilization, facilitated by the preparation and implementation of national biodiversity finance plans or similar instruments according to national needs, priorities and circumstances; (c) Leveraging private finance, promoting blended finance, implementing strategies for raising new and additional resources, and encouraging the private sector to invest in biodiversity, including through impact funds and other instruments; (d) Stimulating innovative schemes such as payment for ecosystem services, green bonds, biodiversity offsets and credits, and benefit-sharing mechanisms, with environmental and social safeguards; (e) Optimizing co-benefits and synergies of finance targeting the biodiversity and climate crises; (f) Enhancing the role of collective actions, including by indigenous peoples and local communities, Mother Earth centric actions ¹³ and non-market-based approaches including community based natural resource management and civil society cooperation and solidarity aimed at the conservation of biodiversity; (g) Enhancing the effectiveness, efficiency and transparency of resource provision and use.	3

20	<p>Strengthen capacity-building and development, access to and transfer of technology, and promote development of and access to innovation and technical and scientific cooperation, including through South-South, North-South and triangular cooperation, to meet the needs for effective implementation, particularly in developing countries, fostering joint technology development and joint scientific research programmes for the conservation and sustainable use of biodiversity and strengthening scientific research and monitoring capacities, commensurate with the ambition of the goals and targets of the Framework.</p>	5
21	<p>Ensure that the best available data, information and knowledge are accessible to decision makers, practitioners and the public to guide effective and equitable governance, integrated and participatory management of biodiversity, and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management and, also in this context, traditional knowledge, innovations, practices and technologies of indigenous peoples and local communities should only be accessed with their free, prior and informed consent, 14 in accordance with national legislation.</p>	5
22	<p>Ensure the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making, and access to justice and information related to biodiversity by indigenous peoples and local communities, respecting their cultures and their rights over lands, territories, resources, and traditional knowledge, as well as by women and girls, children and youth, and persons with disabilities and ensure the full protection of environmental human rights defenders.</p>	4
23	<p>Ensure gender equality in the implementation of the Framework through a gender-responsive approach, where all women and girls have equal opportunity and capacity to contribute to the three objectives of the Convention, including by recognizing their equal rights and access to land and natural resources and their full, equitable, meaningful and informed participation and leadership at all levels of action, engagement, policy and decision-making related to biodiversity.</p>	5

Annex 4:

General guiding principles of CEBioS

CEBioS operates according to a number of guiding principles, shortly described here.

Efficiency of Aid: the CEBioS strategy and implementation follows as much as possible the [principles of Efficiency of Aid](#) endorsed in the Paris Declaration (2005) and Accra Agenda for Action (2008). It entails:

Decolonization: a general reflection is going on in the Belgian Development Cooperation about the decolonizing approach of development aid, and CEBioS is receptive to this complex problematics to apply any recommendations in that sense. Most cooperation principles applied by CEBioS listed here are related to this decolonization approach. Examples are the CANATHIST BELSPO project, associated to CEBioS for increased access of collections at the Museum to the Global South and the digitalisation of archives leading to open access to the global South.

Results-Based Management: CEBioS embraces the Results-Based Management (RBM) methodology

promoted in development cooperation, consisting of project cycle management (PCM) (identification- formulation- financing and implementation – monitoring and evaluation). Two PCM tools are used to that effect: the Theory of Change (ToC) and the Logical Framework (logframe or LF). While the ToC is explained in the present overarching 10-year strategy (2024–2033), the logframe spans only for 5 years (2024–2028) and is detailed in the five-year programmes.

Train the Trainer and N–S–S and S–S cooperation: part of empowering processes is to promote or facilitate training of South partners by our alumni to create multiplier and upscaling effects. This entails a double capacity building, as the trainer is training his training skills as well. Train the trainer and South–South cooperation go hand in hand. An example can be found in CHM trainings, where e.g. Burundi trains Madagascar or in the ‘Etats des lieux’ workshop in DR Congo in 2022, fully moderated by a Southern expert from Benin. S–S cooperation will be introduced in the GTI sub-programme as well.

South demand and needs: within the range of our expertise (offer-based), we respond to expressed gaps, needs and demands (demand-based) of the partners in the global South. This scoping of needs to define the next phase was done through regular M&E missions, surveys and online missions. Table 3 gives a short overview of this scoping. Decision COP15/8 asks countries to express their priorities in capacity building and developments needs in the update of their NBSAPs. As countries have till December 2024 to update their NBSAPs, we will partly adapt our activities based on these priorities during the next 5-year programme (Table 3).

Table 3: overview of scoping for needs in the Global South to prepare for the next phase of the strategy and five-year.

Date	Country- partner
December 2021	Benin - all actors through multi-actor workshop (mission & online conference)
October 2022	Summer school in Burundi, with all key partners, with sessions on formulating needs (mission)
December 2022	DRC - ICCN , UNILU, UB, UOG (mission)
February 2023	GTI seminar and brainstorming with alumni and tutors
April-May 2023	Burundi - OBPE & université du Burundi (mission)
March-May 2023	All alumni (survey & meeting at RBINS)
June 2023	Visit to RBINS by official delegation from Vietnam Ministry of Science and Technology organized by BELSPO
August & October 2023	Benin - all actors including UAC, Un. De Parakou, IRHOB (mission)
September 2023	DRC- CSB (UNIKIS) (mission)

Inclusivity: gender equity and ‘leave no one behind’:

Through explicit encouragements of women, we seek to increase the proportion of women in science and decision making. This proves harder than expected because of cultural barriers. As part of the Belgian cooperation, CEBioS fully adheres to the DGD strategic guidelines on empowerment of women (to be downloaded [here](#)). Therefore, affirmative actions will be explored and tested within our calls, but taking care not to generate unexpected negative impacts on power balances (SECORES workshop in September 23 was very instructive in that regard). Leaving no one behind (LNOB) includes ensuring free, active, and meaningful participation of all stakeholders (ensuring ‘intersectionality’) in the projects developed under this programme, and will be pursued in all steps and phases of planning and programming. Also within the CEBioS staff we seek gender parity. One staff member is our gender focal point.

Competitive calls: we mainly developed 5 different types of calls for projects: GTI intern and

extern, CHM, CEPA and MRV. The advantages of calls are multiple:

- Possibility to define eligibility criteria according to target public (e.g., certain ministries, focal points) and theme (e.g. biodiversity-climate nexus, value chains);
- Affirmative action for gender and other fragile groups (youth, Indigenous People and Local Communities);
- Equitable handling for all;
- Clear framework for budget planning;
- Promotion of healthy competition to achieve best possible results;
- Possibility to include capacity building on how to write and submit fund raising projects;
- Openness of thematic, letting the candidates decide about their needs within the framework of the call (demand-driven).

Earmarked Budgets for institutional cooperation:

besides the calls, open for more countries, institutional cooperation proved an invaluable tool as well, but is limited to Benin, Burundi and DR Congo. It also has serious advantages and can be seen as a game-changer: Possibility to implement a Whole Institution Approach (WIA), meaning that the supported unit is of service to its institution and responds to its needs and priorities and that the institution is well aware of the CEBioS interventions in a particular department or unit;

- Operating good governance and transparency may act as a trigger and multiplicator effect in the targeted institution to refine their strategy, vision and mission;
- Long-term cooperation over several years with the same structures and staff leads to in depth changes;
- Ear-marked budgets are strictly spent according to agreed-upon logframe and regulated by contracts with clear deliverables and reporting obligations.

Alignment of scholarships and regulations for

expenditures: within GTI, CEBios launches each year a call to have between 10 and 20 scholars to spend 4–5 weeks in Belgium. These scholars will learn techniques, skills, acquire knowledge and learn to operate in a new environment conducive to international high standard research. The per diems, bench fees, small material are aligned with the modalities used at AfricaMuseum and to the directives of the FPS Foreign Affairs and DGD for short-term scholarships, also applied by VLIR-UOS, ARES and Institute for Tropical Medicine (ITM). All regulations related to mobility, workshops, expenditures follow these guidelines:

- a. work regulations of RBINS; (website being updated)
- b. DGD directives document (available on demand)
- c. [CEBioS 'vademeccum'](#)