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REPORT 2014

Building capacities for biodiversity and development

DRCongo@L. Janssens de Bisthoven

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Acronyms

ABS	Access and Benefit Sharing
BTC	Belgian Technical Cooperation
CBD	Convention on Biological Diversity
CHM	Clearing House Mechanism
CITES	Convention on International Trade in Endangered Species of wild fauna and flora
CNEDD	Conseil National de l'Environnement pour un Développement Durable, Niger
COHERENS	Coupled Hydrodynamic Ecological Model for Regional Shelf Seas
COMIFAC	Commission des Forêts d'Afrique Centrale
COORD	Programme Coordination and Management
COP	Conference of the Parties
CSB	Centre de Surveillance de la Biodiversité
DGD	Belgian Development Cooperation
EDIT	European Distributed Institute of Taxonomy
GTI	Global Taxonomy Initiative
ICCN	Institut Congolais pour la Conservation de la Nature, Kinshasa, D.R. Congo
ICT	Information and Computer Technology
IEBR	Institute of Ecology and Biological Resources, Hanoi, Viet Nam
IFS	International Foundation for Science, Sweden
IMAB	Inventories Monitoring and Assessment of Biodiversity
INECN	Institut National pour l'Environnement et la Conservation de la Nature, Bujumbura, Burundi
ISCNET	Institut Supérieur de Conservation de la Nature, de l'Environnement et du Tourisme , R.D. Congo
ISDR-GL	Institut Supérieur de Développement Rural des Grands Lacs, D.R. Congo
LEGERA	Laboratoire d'Ecologie et de Gestion des Ressources Animales, D.R. Congo
LEM	Law Enforcement Monitoring
MATEE	Ministère de l'Aménagement du Territoire, de l'Eau et de l'Environnement , Morocco
MIST	Management Information System
MRV	Measurement Reporting and Verification
MUMM	Management Unit of the North Sea Mathematical Models
NGO	Non-Governmental Organisation
NP	Nagoya Protocol
NBSAP	National Biodiversity Strategy and Action Plan
OBPE	Office Burundais pour la Protection de l'Environnement
PEET	Partnerships for Enhancing Expertise in Taxonomy
PM	Person Month
PNKB	Parc National de Kahuzi-Biega
PN	Parc National
POL	Policy Support
PTK	Portal Toolkit
RBINS	Royal Belgian Institute of Natural Sciences
RDC	D.R. Congo

SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advice
SSC	South-South Cooperation
TCT	Target cross-linking tool
TST	Trans Sectorial Team
UAC	Université d'Abomey- Calavi, Benin
UA	Universiteit van Antwerpen, Belgium
UB	Université du Burundi
ULB	Université Libre de Bruxelles, Belgium
UNIKIS	Université de Kisangani, D.R. Congo
UNILU	Université de Lubumbashi, D.R. Congo
UOB	Université Officielle de Bukavu, D.R. Congo
VLIR-UOS	Flemish Interuniversity Council, Development Cooperation, Belgium
VVOB	Vlaamse Vereniging voor Ontwikkelingssamenwerking en technische Bijstand, Belgium

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Executive summary

2014: First year of multi-annual plan

The year 2014 has been a very fruitful year, with a revamp of our visibility, the participation to COP12 (CBD) and COP/MOP1 (Nagoya Protocol) in S. Korea, and many individual training and workshops on the clearing house mechanism, the monitoring of habitats and marine modeling. It was also the year during which our two main institutional partners (OBPE in Burundi and UAC in Benin) started their three-year programmes, after a successful formulation of these programmes at the beginning of 2014.

Visibility and strategic objectives

The DGD-RBINS programme is now baptised 'CEBioS', standing for 'Capacities for Biodiversity and sustainable development', part of the operational Directorate 'Nature' of RBINS. In order to increase transparency, visibility, networking and interaction, a logo, flyer and website with news feed have been created, see http://cebios.naturalsciences.be . Being the first annual report of the 5 year plan (2014-2018), it is the first time the new structure with the 6 strategic objectives (SO) is being used for reporting. From 2014 onwards, these 6 new strategic objectives (Science, Information, Awareness, Policy, MRV, Nagoya Protocol) as developed in our 10 year strategy provide a better response to new challenges and priorities.

The staff has been enlarged with the recruitment of a new scientist, Dr. Maarten Vanhove, who will, from January 2015 onwards, specifically focus on SO5 (MRV, lead)) and SO6 (Protocol of Nagoya, co-lead). At the end of 2014, another scientist, ir. Anne-Julie Rochette, was engaged for one year to work with Maarten on these topics as well. This is a welcome support to face the increasing work load.

Capacity building and institutional strengthening

Under the specific objective SO1, the 11th **call for individual grants** for taxonomic training, 18 grantees from Benin (3 people), Burundi (2), Cameroon (3), Côte d'Ivoire (4), D. R. Congo (3), Ecuador (1), Madagascar (1) and Morocco (1) came for short stays to Belgium to work on topics related to taxonomy as well as ecosystem services related to development. Under the 11th **call for training in the South**, researchers from RBINS had projects in Ecuador (bees and sawflies), Ivory Coast (insects), Vietnam (entomo-diversity) and DRC (amphibians and reptiles). The team developing **marine modeling** continued providing distance coaching to its partners, as well as in house training, with the later to experts from Peru. The institutional **cooperation with Université de Kisangani (UNIKIS and Centre de Surveillance de Biodiversité, CSB)** (DR Congo) in 2014 was implemented mainly through (1) participation to the first Conference on Biodiversity of the Congo basin, and scientific support locally and during stays in Belgium to three thesis students on bats, *salmonella* and bushmeat.

Under the specific objective SO 2, as in previous years, the **Clearing House Mechanism** (CHM) Portal Toolkit was trained to grantees in Belgium, this year they came from Benin and Tanzania. Our staff also gave 5 local workshops to more than 70 persons in Cameroun, Ghana, Benin and Rwanda. With the change in scope of partner countries, Kenya, Tanzania and Rwanda have become new members of the Belgian CHM network, which is hence extending towards East Anglophone Africa. In West Africa Ghana, Liberia and Togo have become members as well. The partner countries which are no longer

included in the list of 18, have benefitted from a mutually agreed exit strategy (e.g. Columbia, Cameroun). The CHM reinforcement call resulted in 7 selected projects in 6 countries.

Awareness raising

The awareness call launched in the second half of 2014 under the specific objective SO3 resulted in 5 projects in 4 countries, specifically dealing with Aichi target 1 and the examination of a baseline about public awareness. Under this call, the cooperation with VVOB in D.R. Congo on raising awareness for biodiversity at the level of professional schools in agro-forestry has started. The reports of the projects are expected in 2015. The activities of CEBioS in DRC were presented with a poster at the first International Conference on the Biodiversity of the Congo Basin in Kisangani (RDC).

Institutional cooperation with Benin, Burundi and Peru

The institutional cooperation with IMARPE (Peru) about marine modeling began with a formulation mission using the PCM approach in summer 2014. The implementation started with the training of Peruvian staff locally and at RBINS.

The institutional partnerships with the "Institut national pour l'Environnement et la Conservation de la Nature" (INECN) (since November 2014 renamed in Office Burundais pour la Protection de l'Environnement (OBPE)) in Burundi and with the 'Université d'Abomey-Calavi' (UAC) in Benin are for the first time reported on an annual programme basis and in a result based management approach, instead of on project basis as in the past (annual reports, see annex 3 and 4).

Also, as a result of the formulation mission in Burundi at OBPE in April 2014, OBPE wrote a South Initiative to answer to a competitive call by VLIR-UOS, using the compulsory log-frame approach. OBPE, the Université du Burundi, together with RBINS and VUB succeeded in securing these additional external funds in order to setup a biomonitoring framework of Lake Tanganyika in Burundi. This external support to OBPE complements the on-going institutional cooperation with CEBioS. The Belgian embassies in Burundi and Tanzania showed their interest in this project and wish to be further informed. Moreover, some MRV activities on inventories of specific ecosystem services at OBPE were also allocated to the 2014 budget. A project submission to Brain-Pioneer (Belspo call) on integrated water management of Lake Manyara, Tanzania, did however not succeed.

The 'Office Burundais pour la protection de l'Environnement' (OBPE) (Burundi) (full report, see annex 3) realised a large part of the objectives as outlined in the logframe (see part II, institutional cooperation) and the annual plan for 2014. Work has been done in collecting plant specimens, establishing plant herbariums at the headquarters of the three national parks (Kibera, Ruvubu, Rusizi) and starting a data base. A workshop moderated by F. Muhashy for the managers of the parks was held in order to learn about the collection, registration and interpretation of the data. The inventory of ecosystem services is making progress. The study on the productivity of edible mushrooms has started in two miombo forests by two master students. Two other students are working on pollinators in the Rusizi and Kibira National Parks. The procuration of solar panels is making good progress. The CHM network in Burundi is coordinating efforts through several meetings in order to implement the national information strategy. CEBioS continued to support internet connectivity, administrative support and support to the national scientific bulletin. OBPE presented its activities on an open day to the Minister of Environment through 16 posters. The support to the library in Gitega also progressed,

with an additional training on software and the installation and a better visibility of the library on the premises of OBPE.

The 'Laboratoire d'Ecologie Appliquée' (LEA) of the 'Université Abomey-Calavi' (UAC, Benin) (full report, see annex 4) realised most objectives as outlined in the logframe (see part II, institutional cooperation) and the annual plan for 2014. Past research results on bush fire and pastoralism were synthesised and presented to the managers of Pendjari National Park (PNP). The 'ecogardes' were trained in situ on sampling plants and recognising main vegetation types, as well as on technical aspects of fire management. Two master students have started to work on certain aspects of fire management in protected areas. Vegetation and animals have been recorded in the local languages Waama, Biali and Gourmantché as a preparation for a future lexicon. First results of this increased cooperation between the university (UAC) and the national park authorities (CENAGREF) through several workshops are (i) the intention to look for extra funds to install a herbarium for PNP as a reference centre, (ii) the need to make a field guide for the identification of animal excrements (indicator of presence and diet), and a number of other recommendations. We may conclude that the institutional programme 2014-2016 with UAC started very well.

Policy work was carried out in the framework of Sustainable Development Solutions Network (http://unsdsn.org/), with participation in the global brainstorming to develop new Sustainable development Goals (SDGs) which will replace the MDGs in September 2015. The current state of this discussion, involving high level panels and others is that 17 SDGs are defined with 169 targets. The aim is to cluster them to 6 SDGs which are easy to be communicated. We also were involved with DGD in the ENVIRONET project of OECD (http://www.oecd.org/dac/environment-development/aboutusenviron et.htm) for providing information and feedback to a scoping paper on biodiversity and development. The year 2014 was strongly marked by the preparation at national and European level and the participation to COP12 (CBD) and COP MOP 1 (Nagoya Protocol) in South Korea. Several staff members were part of the Belgian delegation as pilot or co-pilot for specific themes related to the strategic objectives (e.g. CHM, bushmeat, sustainable development, capacity building). Also the contribution to the Chennai recommendations on biodiversity and development in 2013, mentioned in 'Science connect' nr. 43 (2014), were valorised at COP12 (2014) through a CBD info document on the assessment of barriers in implementing Aichi targets in the South and the inclusion of primary, secondary and tertiary education in the recommendations. The team contributed as well to the peer review of various policy documents at Belgian (through BELSPO) and European (WPIEI) level and international level.

Meetings have been held with representatives of Belgian Embassies in the countries where there is institutional strengthening to promote the inclusion of biodiversity in the Belgian development cooperation with these countries. The results of those meetings can be measured by the number of responses that DGD 2.4 has received from embassies on our 2015 plan.

The team was instrumental for the cooperation between **BELSPO** and the **International Foundation for Science** (Stockholm, www.ifs.se) by participating in moderation and training (Dr. Marie-Lucie Susini) to a regional IFS workshop in Benin, regrouping all collaborative research groups of the last IFS call and some representatives of the previous call to exchange best practices in research about

biodiversity linked to sustainable development. Several of our staff members also reviewed collaborative IFS projects.

To ensure that in all future projects **Project Cycle Management** (PCM) is used, Dr. Luc Janssens trained a number of staff of RBINS, OD Nature, in **Project Cycle Management** in order to work in a result based management approach. PCM is now better known and understood at the institute. Due to the limited time available for L. Janssens to further organise the training in-house, the OD Nature will now explore possibilities to optimize result based management at RBINS with external help.

Part I - The year in brief

Background

The specific objectives of the programme are to build capacities to study and monitor biodiversity, share scientific and technical information and increase awareness (as well as understanding and ownership) of the importance of biodiversity for development.

The programme directly supports the implementation of the UN Convention on Biological Diversity in/by developing countries and of related national, regional and international biodiversity policy.

The 2014-2018 programme includes 6 strategic objectives:

1. To strengthen the **scientific and technical knowledge base** on biodiversity and on its linkages with ecosystem services and poverty reduction;
2. To enhance the **information base** on these issues and on associated governance processes;
3. To **raise awareness and communicate** on the importance of biodiversity and ecosystem services for poverty reduction and sustainable development, and on associated governance processes.

The Convention on Biological Diversity (CBD)

The objectives of the CBD are:
- the conservation of biodiversity
- the sustainable use of the components of biodiversity
- the fair and equitable sharing of the benefits arising from the use of genetic resources.

Our programmeme of work contributes to these objectives and to the following articles of the Convention:
- identification and monitoring of biodiversity (Article 7)
- research and training (Article 12)
- education and public awareness (Article 13)
- the transfer of technology (Article 16)
- the exchange of information (Article 17)
- the promotion of scientific and technical cooperation (Article 18)

The RBINS, with both its partners and DGD-D2.4. and other departments aims:

4. To improve the **mainstreaming of biodiversity and ecosystem services** in policy sectors that have a high relevance for development;
5. To improve the knowledge on the **measurement, reporting and verification (MRV)** of policy choices and activities linked to biodiversity and ecosystem services;
6. To raise awareness on, and build capacities for, the implementation of the **Nagoya Protocol (NP) on Access and Benefit Sharing (ABS)**.
7. The last programme component is the **Programme Coordination and Management (COORD)** devoted to coordination and management, as well as transversal issues such as project communication, networking and outreach.

Main milestones in 2014

1 JANUARY TO 31 DECEMBER 2014

25 January -02 February	Regional CHM training in Cameroun by Han de Koeijer and Marie-Lucie Susini (RBINS) to 17 participants from Cameroun, Chad, Congo and Gabon
10 -24 February	In Lubumbashi: Support for the establishment of a dynamic monitoring system of habitats termitosols in the open forest Luswishi (30 km from Lubumbashi) for the development of this natural reserve by François Muhashy
21 February- 01 March	Participation by Han de Koeijer to the 3rd meeting of the Intergovernmental Consultation for the Nagoya Protocol (ICNP-3) and a training workshop for the ABS-CH. (Lead for the EU on capacity building item of the agenda)
26-28 February	Follow-up training for the contributors to the national CHM website of Côte d'Ivoire, Abidjan, Côte d'Ivoire, Marie-Lucie Susini as trainer
10-21 March	25th training session for CHM administrators, Brussels. 2 participants from Benin, given by Han de Koeijer and Marie-Lucie Susini.
23-31 March	Formulation mission by Luc Janssens and Han de Koeijer to Burundi to prepare the Memorandum of Understanding 2014-2016 for the cooperation between RBINS and the "Institut National de l'Environnement et de la Conservation de la Nature" (INECN). Debriefing to the Belgian embassy. Participation and presentation (Han de Koeijer) to awareness workshop on ecosystem services for decision makers in Bujumbura.
14 – 18 April	Formulation mission by Luc Janssens and François Muhashy to Benin to prepare the Memorandum of Understanding 2014-2016 for the cooperation between RBINS and the "Université Abomey-Calavi" (UAC). Debriefing at the Belgian embassy.
3-12 May	Regional Workshop for African Countries on the CHM, organised with the CDB Secretariat, Buea, Cameroon, Han de Koeijer and Marie-Lucie Susini as organiser and facilitator.
3 – 13 June	Contribution and participation and networking to the first international conference on the biodiversity of the Congo Basin, Kisangani, DRC, by Luc Janssens de Bisthoven

12 – 22 June	Participation by Han de Koeijer to Working group on the review of Implementations of the Convent-5 (WGRI-5), Montréal, Canada, with special attention to the Chennai process, capacity building and the CHM.
23-28 June	SBSTTA 18 (Eighteenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice'), Montréal, Canada. ML Susini as Belgian pilot on item 9.6 entitled "Sustainable use of biodiversity: bushmeat and sustainable wildlife management".
July 2014	Katrijn Baetens and Patrick Luyten: formulation mission at IMARPE, Peru, for the programming of the next 3 years for marine modeling at institutional level.
8 September 2014	Han de Koeijer presented "biodiversity in the Belgian development cooperation"(by and Luc Janssens de Bisthoven) to EU working group on Biodiversity and development cooperation.
14 - 25 September	Training of conservators protected areas managed by the Institute of Environment and Conservation in Burundi (INECN) and François Muhashy
03-12 October (Marie-Lucie) 03-20 October (Luc + Han)	Participation by Han de Koeijer to COP MOP 1 (Nagoya Protocol) and COP 12 (CBD, CHM)) and by Marie-Lucie Susini (bushmeat) and Luc Janssens de Bisthoven (sustainable development) to COP 12 (CBD) in Pyeong Chang, South Korea
12 October	Participation by Han de Koeijer to ABS-CH workshop, Pyeong Chang, South Korea. de Koeijer H. 12.10, Facilitator during UNEP workshop on "Exploring opportunities for enhancing cooperation to implement the biodiversity-related conventions at the national and regional level – presentation of a draft sourcebook for discussion and peer-review", Pyeong Chang, S. Korea
13 October	Organisation, moderation, presentation by L. Janssens de Bisthoven of side event to COP 12 on 'mainstreaming biodiversity in development cooperation, S Korea, in cooperation with UNEP-UNDP-PEI. Invited speakers from CBD secretariat, EU Commission, OECD, WWF India and ICCC Iran.
16 October	Organisation, presentation and moderation by Han de Koeijer of CEPA fair event on the CHM cooperation Belgium-Benin, with debate with delegates from Benin, Malawi, RD Congo, Madagascar and Niger.
31 October	Mission by Han de Koeijer to Wageningen, Netherlands with Dutch CHM NFP
15 – 23 November	Mission by Han de Koeijer to Huye district, Rwanda courses during national CHM.
16-23 November	National CHM training for the use of the PTK, Accra, Ghana, M-L Susini as trainer.

19-26 November	Monitoring the implementation of the partnership with ICCN in general in the Reserve and Hunting Area Bombo-Lumene (RDCBL) by François Muhashy.
24-27 November	Atelier CHM de coopération sous-régionale entre le Benin, le Burkina Faso, la Côte d'Ivoire, le Niger, et le Togo', Cotonou, Benin, Marie-Lucie Susini as facilitator
3 – 5 December	Participation by Han de Koeijer in EC CHM Meeting, Copenhagen, Denmark
08-11 December	Workshop Benin Marie-Lucie Susini with IFS (Stockholm)
13 December	Royal Academy of Science, Letters and Fine Arts of Belgium has awarded the Emile Laurent price - Flora of Tropical Africa to François Muhashy Habiyaremye
14 – 16 December	Participation by Han de Koeijer in Geneva, Switzerland to workshop "Enhancing Efficiency and Effectiveness of MEA Implementation: Interoperability between reporting systems" organised by the MEA-IK project.

Some principles pertaining to the institutional cooperation and competitive call

Our main mandate is to develop capacity building around biodiversity and sustainable development in the countries of the Belgian cooperation and to contribute to biodiversity-development policies at the national (Belgian obligations, DGD environmental strategy), European and international (UN, CBD) level.
Several modalities or instruments are used to achieve these goals. The organisation of capacity building goes through (1) privileged cooperation with partner institutions and (2) through the regular launching of competitive calls to a specific target public. The potential direct individual beneficiaries are always anchored either in partner institutions or in government structures (ministries, agencies, parastatals) (being the indirect beneficiaries) of selected partner countries. This contributes to ensure sustainability, long term capacity building, predictability, and the building up of mutual trust, ownership and accountability. CEBioS mostly cooperates directly with the partners in the South, without intermediary in the North, as is mostly the case with university cooperation (VLIR-UOS and ARES). The partners are financially responsible for the received funds and need to plan and report according to the agreements. The selected projects (in the case of support to partners through competitive calls) or programmes (in the case of institutional cooperation) only have CEBioS as partner in Belgium and the South partner is promoter. Moreover, in order to increase ownership, the promoter needs to contribute to the project with matching funds. Scientists from Belgian institutes and universities can be linked to the projects and programmes through their academic expertise on a voluntary basis.

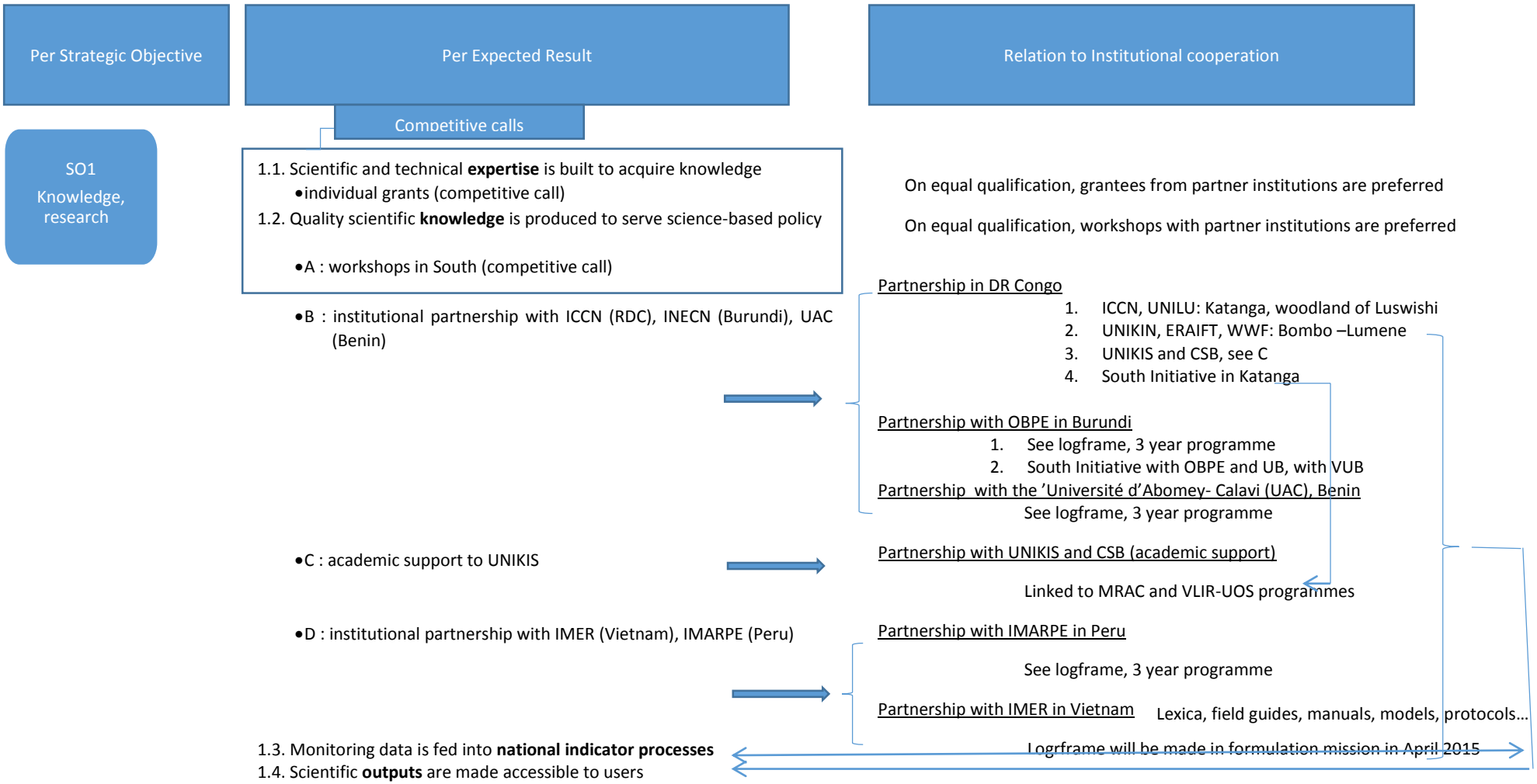
The following principles apply throughout our interventions:

- Whenever possible, all strategic objectives are covered in the established institutional cooperation.
- The institutional cooperation can be on the basis of
    - MoUs, (e.g. ICCN, ERAIFT), with service contracts per project linked to a university (DRC),
    - spin-offs of other programmes (e.g. UNIKIS and CSB),
    - MoUs with a 3 year programme linked to a logframe (OBPE, UAC, IMARPE, IMER soon)
- Competitive calls for projects (taxonomy, CHM, awareness, MRV) are organised ;
    - for a bottom-up approach complementing the top-down institutional approach;
    - For a healthy quality stimulus amongst candidates;
    - to avoid to work 'à la tête du client' ;
    - To promote a gradual approach of cooperation based on the results of the project;
    - Only directed to selected partner countries ;
    - To keep an active network as a pool for future cooperation;
    - With a preference to a link to our more institutionalised cooperation;
    - With a preference to create synergies with other Belgian and international actors (e.g. VVOB in RDC, IFS);
    - To strengthen individuals in our partner institutions for the development of the institution;
    - To strengthen scientific links with Belgian researchers in a very dynamic scientific environment;

The amounts allocated to projects and even to programmes are relatively modest, compared to other cooperation (e.g. BTC, VLIR-UOS). However, the total budget allocated per year does not allow for another approach. Therefore, 'Small is beautiful' is a bit a trade mark for our types of interventions. As we do not have a very large pool of interested Belgian scientists, we need to concentrate on the 'interested expertise' in Belgium on the one hand, and on tight personal contacts with our partners on the other hand and to ensure a fruitful match-making. This ensures an efficient use of resources where the 'value for money' ratio is high.
Due to the expertise present in our staff and at RBINS, but of course also at e.g. MRAC and the botanical garden in Meise, CEBioS has a dual or 'hybrid' function of (1) facilitating capacity building indirectly (as other agencies do such as ARES and VLIR-UOS), but also (2) providing capacity building in a direct way. It acts both as a secretariat to manage the funds and implement the programme, and as a provider of training in specific areas of expertise such as e.g. CHM, tropical botany, aquatic ecology and biodiversity policy and awareness.

Structure of the programme

In order to facilitate the understanding of the structure of the report and of the programme in general, and the links between the logics of strategic objectives and institutional cooperation, the following scheme is provided.



Per Strategic Objective	Per Expected Result	Relation to Institutional cooperation
SO2 Information flows	Competitive calls 2.1. Expertise in information management is built. 2.2. Information flows are improved. 2.3. Information is used to advise governance processes.	Only grantees from partner institutions which are member of the Belgian CHM network, national focal points (mostly ministeries) Only projects from partner institutions which are member of the Belgian CHM network, national focal points (mostly ministeries)
SO3 Awareness	Competitive calls 3.1. Baselines provide an insight on the level of awareness and/or commitment. 3.2. Awareness and commitment are raised. 3.3 Communication and awareness raising in Belgium	Only projects from partner institutions which are member of the Belgian CHM network, national focal points (mostly ministeries)
SO4 Policy	4.1 Expertise of Belgian Development Cooperation is built 4.2 Biodiversity and ecosystem services are mainstreamed in activities supported by the Belgian Development Cooperation	Support on demand for participation of institutional partners to international policy conferences
SO5 MRV	5.1. Expertise of the RBINS on MRV is built. 5.2. Methodologies to assess progress towards the Aïchi Targets are available Competitive calls	Only projects from national focal points CHM and CBD from selecdtion of 18 partner countries, linked with research institution locally and expertise in RBINS and BE (from 2015 on)
SO6 P. Of Nagoya	6.1. The RBINS and DGD are familiar with the obligations under the Nagoya Protocol. 6.2. Awareness of the scientific community on the Nagoya Protocol is raised. As outlined in the section below, capacities will first be built within RBINS. Information and training for other stakeholders, including DGD, will start as of 2015.	To be defined

The logframe at outcome level

The logframe (partim) per specific objective (SO) for the five year programme is given at the outcome level (strategic objectives, SO), as well as the **reporting on the outcome indicators (right blue column)**.

For the logframe (partim) at the level of the expected results, the output indicators and activities, please consult the respective chapters. For a complete logframe including sources of verification and assumptions, please consult annex 1.

Specific objectives (SO)	Outcome	Outcome indicators	Report 2014
SO1 **To strengthen the scientific and technical knowledge base on biodiversity and on its linkages with ecosystem services and poverty reduction**	Selected partner institutions carry out their mandate related to biodiversity and poverty eradication (1.2, 1.3. and 1.4.) ICCN (DR Congo) after five years, ICCN is able to better monitor the dynamics of habitats in its protected areas, both at the implementation level (rangers using tools), as at the management level (reporting, analysing trends and deciding on specific interventions). ICCN has a better knowledge of the value of the ecosystem services and can use this information to promote green economy such as eco-tourism UNIKIS and CSB (DR Congo) after five years, UNIKIS and CSB are more able to investigate the biodiversity in the tropical rain forest linked to poverty reduction, both at the implementation level (research), as at the management level (reporting, analysing trends and deciding on specific interventions) and are part of the global scientific community with more scientific output and exta-muros funding. CSB and UNIKIS are more able to carry out research in promising fields which can help	• Generation of papers, policy briefs and participation to conferences, seminars etc… are indicators for the good functioning of scientists supported through institutional strengthening and through the grant's programme • Production of quality reports on habitat changes at ICCN, INECN and UAC with CENAGREF • Functioning scientific and technical networks as attested by email volume, number of workshops, questions and answers, e-coaching activities, joint projects, memberships in international fora at all partner institutes and with all grantees and Belgian researchers at RBINS and elsewhere • Integrated coastal management plans developed by local	ICCN: The coordinator met the director of ICCN during COP12 in S Korea and had a long and intensive discussion about the cooperation. It is clear that ICCN is demanding support for its scientific activities in support of park management. During his mission, our colleague F. Muhashy made also useful contacts with ICCN in Kinshasa in order to explore new possibilities. However past experiences with postponed reporting needs to be cleared. UNIKIS and CSB: the coordinator visited CSB and UNIKIS during the 1st Conference on the biodiversity of the Congo Basin, hence tightening mutual understanding. Many discussions with E. Verheyen, Hilde Keunens and Ms. Pisani helped refine the concepts of cooperation as well.

	support the local green economy, such as collection of mushrooms, fisheries, insect consumption etc. INECN (Burundi) after five years, INECN is able to better monitor the dynamics of habitats in its protected areas, both at the implementation level (rangers using tools), as at the management level (reporting, analysing trends and deciding on specific interventions).). INECN has a better knowledge of the value of the ecosystem services and can use this information to promote green economy such as eco-tourism, mushroom collection, pollination, etc. UAC (Benin) after five years, UAC and partners (associations de villageois, CENAGREF) is able to better provide scientific answers to monitor the dynamics of habitats in its protected areas and buffer zones (Penjari), both at the implementation level (rangers using tools), as at the management level (reporting, analysing trends and deciding on specific management and conservation interventions, policy briefs), especially concerning pastoralism and bush fire and its implications for poverty and biodiversity. The conflict between nature conservation and pastoralism is better understood and appropriate actions are undertaken to ease this tension for the benefit of the people and the wildlife. The dynamic cycle of fire is better understood in order to take appropriate actions to control it more optimally for the benefit of people, wildlife, and biodiversity in general. IMER (Vietnam) after five years, IMER is able to better monitor the dynamics of habitats in shallow ecosystems with endangered coral reefs such as Halong Bay, and hence to make the most ecologically sensitive decisions for management, taking	authorities can be seen as a proxy indicator of the successful capacity development by the programme at IMER and IMARPE • Number of Scientific output accessible, disseminated and used by stakeholders (1.4.).	OBPE (former INECN) produced now its first annual report of the three year programme formulated at the beginning of 2014. This report is given under Part II, institutional cooperation and in annex 3 UAC (Benin): idem, annex 4 The formulation with IMER is planned in April 2015.

	into account the ecosystem services for the local communities. IMARPE (Peru) after five years, IMARPE is able to better monitor the dynamics of habitats in marine upwelling zones of the Peruvian coast, enabling them to inform the fisheries authorities which measures should be taken in order to promote sustainable fisheries, which is to the benefit of the local fish industry and the marine biodiversity. • Scientists apply their expertise, enabling them to better study and understand biodiversity and ecosystem services linked to poverty eradication and better promote and disseminate the value of biodiversity to society, with enhanced access to and use of field guides, manuals, lexica and tools. Rangers monitor and report habitat changes of areas of high interest for biodiversity (1.2.) • the staff of the partner institutions carry out research more efficiently and effectively on biodiversity and ecosystem services (1.2.,1.3., and 1.4.) • The mathematical Coherens model, is applied, to answer questions about marine biodiversity by partner countries. • A North South South network for Coherens users is functioning (1.2) • National indicator processes receive input (1.3)		IMARPE: the formulation took place in summer 2014. It produced a stakeholders analysis, problem and objective trees, a logframe, an operational plan and a budget. The MoU is still pending for signature by both parties, but the cooperation started successfully with the training of two Peruvians at RBINS. One AbcTaxa on sawflies is due to be published in 2015. One lexicon on vegetation types in Burundi is almost finished and will be published in 2015. Cooperation with RMCA and an NGO in Katanga will result in a book about fauna and culture of Katanga in 2015. For GTI, see chapters under SO1.
Specific objectives (SO)	**Outcome**	**Outcome indicators**	**Report 2014**
SO2 **To enhance the information base on biodiversity and on its linkages with ecosystem services and poverty reduction and on associated governance processes (CHM)**	• Information is the basis of empowerment. Empowerment of the civil servants and decision makers allow them to be more aware of the global and local issues about biodiversity and sustainable development. This enables them to inform the large public, hence enhancing their ownership and increasing the transparency of governance processes. The support of CHM processes contributes to that and to a more	• Professionals in 10 partner countries and 5 neighbouring non-partner countries through South South cooperation participate to their national CHM (2.1., 2.2.)	3 national training workshops 99 persons trained Follow-up training in 2 partner countries 4 countries participate in SSC 80% of partner countries have added >20 pages in 2014 Tool is actively used in 1 partner country and started in 4 others.

	efficient science-policy interface, and hence a more science based policy in the long term. • After five years, The targeted institutes (in Algeria, Benin, Burundi, Congo, Mali, Morocco, Niger, Burkina Faso, Cameroon, Côte d'Ivoire, Madagascar and others) are in a better position to organise awareness raising campaigns through the CHM and other media, and are better able at identifying and applying relevant biodiversity indicators in their national reporting and strategy. • The national CHMs are better structured, maintained and updated and offer quality information on biodiversity and poverty reduction. • The partner institutes have more mutual South-South contacts, exchanges and cooperation. • Partner institutions better fulfil their role as a national information centre on biodiversity (2.2., 2.3.) (see annex 4 for the list of partner focal points) Level of networking and activity increased at governance level (2.2 and 2.3)	• Quality and quantity information added to the national CHM sites The CHM sites are more user-friendly and informative	Discussions with EU and Secretariat of the CBD on updating the PTK to be more user-friendly. Update expected towards 2015. Changing of platform from Zope to Drupal foreseen.
SO3 **To raise awareness and communicate on the importance of biodiversity and ecosystem services for poverty reduction and sustainable development, and on associated governance processes**	o selected partner countries are better aware of baseline data of awareness about CBD when preparing policies and DGD when preparing ICP's (3.1.) o the awareness about the importance of biodiversity and ecosystem services is risen in partner countries at different levels (governance, general public) is enhanced/taken into account in policy making and implementation (3.2) • the awareness in relevant sectors in particular DGD and the actors of the Belgian cooperation in Belgium on biodiversity and ecosystem services related to development cooperation is increased and taken up in the preparation of the new indicative cooperation programmes with the partner countries (3.3) o NGAs and NGO programmes are involved in this exercise (3.3)	• Quality awareness campaigns are organised in the partner countries • Local people are reached by awareness campaigns, and have access to fliers, media, posters, information	The new batch of awareness projects concern the baseline and have started. The cooperation in DRC with VVOB has started. It brings the ministries of education and environment together to work on the curricula for pilot agro forestry schools.

SO4 **To improve the mainstreaming of biodiversity and ecosystem services in policy sectors that have a high relevance for development**	•More capacities in Belgian cooperation about biodiversity (4.1.) • More reference to biodiversity and ecosystem services in Belgian cooperation (PICs, mixed commissions…) by integration of the Aïchi targets and risk assessment of the planned cooperation interventions (4.2)	• Biodiversity and Aïchi targets are part of the Indicative Cooperation Plans • Poverty eradication is linked to biodiversity in cooperation plans and in national development plans (proxy indicator) • On demand of DGD eventual production of syllabi, didactical units and courses	Discussions with DGD and KLIMOS about mainstreaming biodiversity started at the end of 2014. Discussions about courses with DGD started at the end of 2014 and implementation will start in 2015. The coordinator organised a side event at COP12 on 'mainstreaming', with UNEP-UNDP. Invited speakers came from CBD, OECD, EU, WWF and ICCC. Han de Koeijer and Luc Janssens de Bisthoven presented biodiversity in the development cooperation to EU DG ENV in September 2014.
SO5 **To improve the knowledge on the measurement, reporting and verification (MRV) of policy choices and activities linked to biodiversity and ecosystem services**	• RBINS provides advice on MRV to different authorities • tool developed used to monitor and report achievement of Aïchi targets in Belgium and in partner countries	• tool developed is accepted at level of EU and is applied in developing countries • workshops, seminars about MRV	2014: some studies on ecosystem services by OBPE in Burundi are budgeted for 2014, but the implementation will happen in 2014-2015. Full-fletched MRV interventions start in 2015 with recruitment of new staff (2014).
SO6 **To raise awareness on, and build capacities for, the implementation of the Nagoya Protocol on Access and Benefit Sharing**	• RBINS provides advice to Belgian cooperation on Nagoya Protocol and DGD is better informed about the NP. • Nagoya Protocol is better known in partner countries	• Workshops, seminars • Implementation of Nagoya Protocol on the basis of guidance material such as e.g. dissemination papers produced by the National Biodiversity Authority of India	Most interventions were by Han de Koeijer at COP/MOP1 in S. Korea, and preparatory meetings in S Korea and Europe

Where we work

In 2014, we worked with 12 countries around the world, implementing capacity building activities ranging from individual and group training to helping partner institutions manage their day-to-day activities. For CHM workshops in situ, there were participants from Burkina Faso, Niger, Togo, Liberia and Guinea-Bissau.

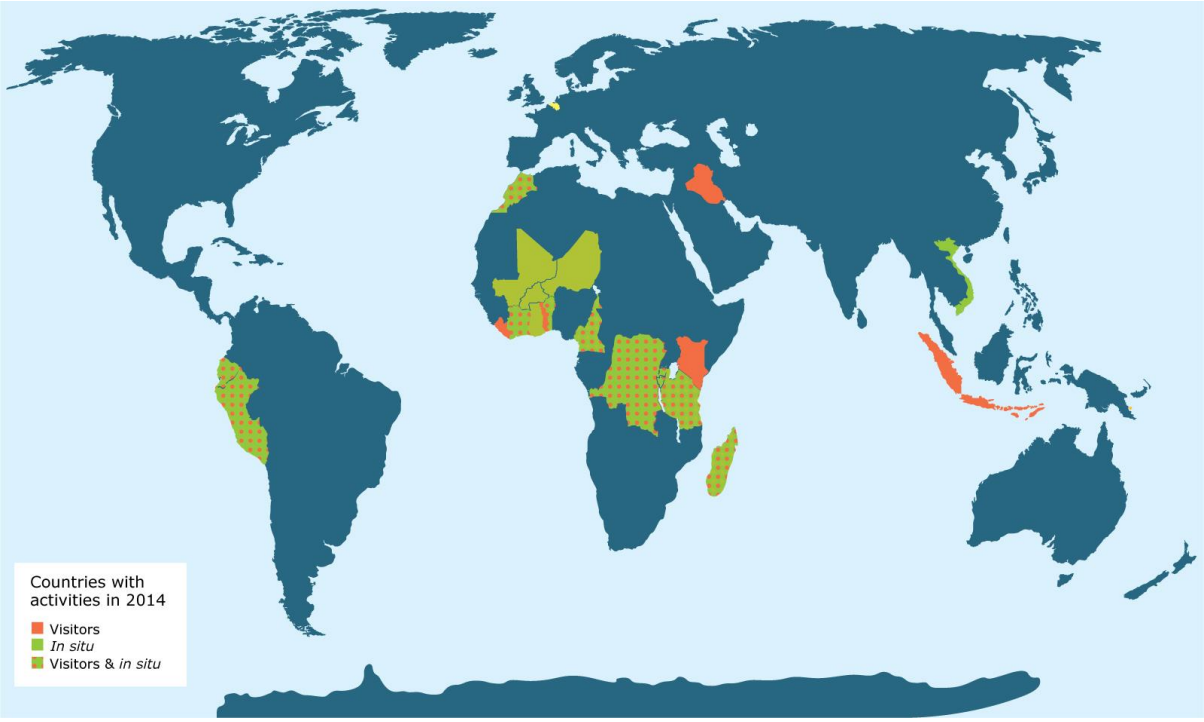


Fig. 1. World map showing places of interventions of the CEBioS programme.

Budget

Introduction

Table 1 shows the expenses per continent and SO (expenses in Belgium are hence not included). More than 90% of our (non-Belgium) funds targeted African institutions and grantees, with a specific focus on our partnerships in DR Congo, Burundi and Benin. Such structural partnerships benefit from support in the form of training activities in Belgium or *in situ*, of continuous e-coaching / distance training, of grants for small equipment or for activities *in situ*.

As in previous years, a smaller proportion of activities were undertaken with Central and South American and Asian countries. Support to these regions was essentially provided in the form of research and training in Belgium or research, workshops and training *in situ*.

Table 1. Expenses (%) per continent for the 6 strategic objectives in 2014.

Tableau de synthèse				
SO	**Africa**	**Asia**	**South America**	**Total/SO**
SO 1	246,483.73 €	0.00 €	34,580.94 €	**281,064.67 €**
SO 2	213,631.31 €	0.00 €	0.00 €	**213,631.31 €**
SO 3	57,762.85 €	0.00 €	0.00 €	**57,762.85 €**
SO 4	0.00 €	0.00 €	0.00 €	**0.00 €**
SO 5	2.260.77 €	0.00 €	0.00 €	**2,260.77 €**
SO 6	0.00 €	18,002.40 €	0.00 €	**18,002.40 €**
Coord & manag	92.43 €	11.82 €	0.00 €	**104.25 €**
TOTAL	**520,231.09 €**	**18,014.22 €**	**34,580.94 €**	**572,826.25 €**
% continent	**90.82**	**3.14**	**6.04**	**100.00**

Expenditure analysis

	Budget	engaged	Realised	open	balance	% used
SO 1 – Strengthen the scientific and technical knowledge base						
ER 1.1 – Scientific and technical expertise is built	67,500.00 €	72,511.65 €	72,511.65 €	0,.00 €	-5,011.65 €	107.42
ER 1.2 – Quality scientific knowledge is produced	184,550.00 €	179,692.63 €	178,362.63 €	1,330.00 €	4,857.37 €	97.37
ER 1.3 – Monitoring data yield indicators	20,000.00 €	26,030.41 €	21,025.41 €	5,005.00 €	-6,030.41 €	130.15
ER 1.4 – Scientific outputs accessible	29,850.00 €	20,597.15 €	13,365.01 €	7,232.14 €	9,252.85 €	69.00
Salaries M.-L. Susini, F. Muhashy, K. Baetens (6+9+5 pm)	139,291.00 €	99,681.01 €	99,681.01 €	0.00 €	39,609.99 €	71.56
Total	**441,191.00 €**	**398,512.85 €**	**384,945.71 €**	**13,567.14 €**	**42,678.15 €**	**90.33**
SO 2 – Enhance the information base						
ER 2.1 – Expertise in information management is built	50,000.00 €	100,275.51 €	83,146.51 €	17,129.00 €	-50,275.51 €	200.55
ER 2.2 – Information flows are improved	50,000.00 €	62,176.17 €	57,976.17 €	4,200.00 €	-12,176.17 €	124.35
ER 2.3 – Information used in governance	25,000.00 €	53,699.37 €	52,593.37 €	1,106.00 €	-28,699.37 €	214.80
Equipment ICT & technical development	4,000.00 €	1,000.95 €	1,000.95€	0.00 €	2,999.05 €	25.02
Salaries M.-L. Susini, H. de Koeijer, K. Vrancken (pm)	62,774.00€	54,714.98 €	54,714.98 €	0.00 €	8,059.02 €	87.16
Total	**191,774.00 €**	**271,866.98 €**	**249,431.98 €**	**22,435.00 €**	**-80,092.98 €**	**141.76**
SO 3 – Contribute to awareness raising						
ER 3.1 – Baselines provide insight on awareness level	30,000.00 €	37,857.27 €	30,237.27 €	7,620.00 €	-7,857.27 €	126.19
ER 3.2 - Awareness and engagement are raised	70,000,00 €	21,944.07 €	21,944.07 €	0,00 €	48,055.93 €	31.35
Salaries H. de Koeijer, K. Vrancken (6 pm)	46,365.00 €	22,119.63 €	22,119.63 €	0.00 €	24,245.37 €	47.71
Total	**146,365.00 €**	**81,920.97 €**	**74,300.97 €**	**7,620.00 €**	**64,444.03 €**	**55.97**
SO 4 – Improve the mainstreaming of biodiversity						
ER 4.1 – Expertise of Belgian Dev. Coop. built	3,000.00 €	0,00 €	0,00 €	0.00 €	3,000.00 €	0.00
ER 4.2 – Biodiversity is mainstreamed in BDC activities	9,000.00 €	5,634.17 €	5,409.17 €	225.00 €	3,365.83 €	62.60
Salaries L. Janssens de Bisthoven (6 pm)	46,578.00 €	34,312.90 €	34,312.90 €	0.00 €	12,265.10 €	73.67
Total	**58,578.00 €**	**39,947.07 €**	**39,722.07 €**	**225.00 €**	**18,630.93 €**	**68.19**
SO 5 – Improve Knowledge on MRV (& indicators)						
ER 5.1 – Expertise of DGD and RBINS built	8,000.00 €	2,283.77 €	2,168.77 €	115.00 €	5,716.23 €	28,55
ER 5.2 – Methodologies are available	11,000.00 €	0.00 €	0.00 €	0.00 €	11,000.00 €	0,00
Salaries M. Vanhove, A.-J. Rochette (3+3pm)	35,352.00 €	22,456.35 €	22,456.35 €	0.00 €	12,895.65 €	63.52
Total	**54,352.00 €**	**24,740.12 €**	**24,625.12 €**	**115.00 €**	**29,611.88 €**	**45.52**
SO 6 – Raise awareness & built capacities on ABS NP						
ER 6.1 – DGD and RBINS familiar with Nagoya Protocol	10,500.00 €	6,911.62 €	6,773.62 €	138.00 €	3,588.388 €	65.82
ER 6.2 – Awareness is raised	500.00 €	0.00 €	0.00 €	0.00 €	500.00 €	0.00
Salaries H. de Koeijer (3pm)	15,868.00 €	17,146.84 €	17,146.84 €	0.00 €	-1,278.84 €	108.06
Total	**26,868.00 €**	**24,058.46 €**	**23,920.46 €**	**138.00 €**	**2,809.54 €**	**89.54**
SO 7 – Coordination and management						
ER – Programme is efficiently, effectively managed	2,000.00 €	848.54 €	848.54 €	0.00 €	1,151.46 €	42.43
Salaries L. Janssens de Bisthoven, V. Pinton, M. Agarad (3+9+9pm)	105,056.00 €	88,534.43 €	88,534.43 €	0.00 €	16,521.57 €	84.27
Total	**107,056.00 €**	**89,382.97 €**	**89,382.97 €**	**0.00 €**	**17,673.03 €**	**83.49**
TOTAL GENERAL	**1,026,184.00 €**	**930,429.42 €**	**886,329.28 €**	**44,100.14 €**	**95,754.58 €**	**90.67**
Structural costs (1GDGCD2)						
Calculated with TMA of 7,75%	79,500.00 €	79,500.00 €	79,500.00 €	0,00 €	0,00 €	100.00
TOTAL GENERAL WITH STRUCTURAL COSTS	**1,105,684.00 €**	**1,009,929.42 €**	**965,829.28 €**	**44,100.14 €**	**95,754.58 €**	**91.34**

The implementation of the year plan 2014 started in fact in May 2014, due to delay in securing the 5 year budget because of the political agenda. We focused with the annual programme on training activities and on institutional partnerships. This year provided a last opportunity to countries which are no partner of the bilateral Belgian cooperation (the list of 18 countries) to exit. By 15 July 2015, we attained a budget execution rate for 2014 of 91 % and a balance of 95.754 € out of a total budgeted 1.105.684,00 €. Due to the multi-year format of the programme, the remaining balance will be added to the 2015 budget and beyond.

The distribution of expenses per type of activities is as follows:

	Budget	engaged	realised	open	balance	% used
Salaries	451.284 €	338.966,14 €	338.966,14 €	0,00 €	112.317,86 €	75,11
Operations	570.900 €	590.462,33 €	546.362,19 €	44,100.14 €	-19.562,33 €	103,43
Equipment	4000,00 €	1,000,95 €	1,000,95 €	0,00 €	2,999.05 €	25,02
Total without structural costs	1.026.184 €	930.429,42 €	886.329,28 €	44.100,14 €	95.754,58 €	90,67
Structural costs	79.500,00 €	79.500,00 €	79.500,00 €	0,00 €	0,00 €	100,00
TOTAL with structural costs	1.105.684,00 €	1,009,929.42 €	965.829,28 €	44,100.14 €	95.754,58 €	91,34

Points of comments:

- All justifications of expenses are available for consultation at the RBINS. The RBINS certifies that these supporting documents, including those corresponding to expenses incurred outside Belgium (made by our local partners), correspond to the amounts reported in the general tables.
- The salaries were overestimated by about 30% in the budget in order to be resilient to changes. Another factor playing a role for underspending in salaries compared to the budget was the delayed recruitment of a scientist for SO5.
- The equipment costs remained relatively low, because the renewal of the server-PC park has been postponed.

1. SO 1 – Strengthen the scientific and technical knowledge base

	Budget	engaged	realised	open	balance	% used
SO 1 – Strengthen the scientific and technical knowledge base						
ER 1.1 – Scientific and technical expertise is built	67,500.00 €	72,511.65 €	72,511.65 €	0,.00 €	-5,011.65 €	107.42
ER 1.2 – Quality scientific knowledge is produced	184,550.00 €	179,692.63 €	178,362.63 €	1,330.00 €	4,857.37 €	97.37
ER 1.3 – Monitoring data yield indicators	20,000.00 €	26,030.41 €	21,025.41 €	5,005.00 €	-6,030.41 €	130.15
ER 1.4 – Scientific outputs accessible	29,850.00 €	20,597.15 €	13,365.01 €	7,232.14 €	9,252.85 €	69.00
Salaries M.-L. Susini, F. Muhashy, K. Baetens (6+9+5 pm)	139,291.00 €	99,681.01 €	99,681.01 €	0.00 €	39,609.99 €	71.56
Total	**441,191.00 €**	**398,512.85 €**	**384,945.71 €**	**13,567.14 €**	**42,678.15 €**	**90.33**

Points of comment:

- For marine modeling (1.2.4.(D)), budget expenditure increased compared to last year, since the non partner countries Columbia and Brazil were still eligible but will be out phased after 2014. The final signing of the MoU with IMARPE (Peru), negotiated in summer 2014, took unexpected delay at IMARPE, hence preventing full implementation. The work with Vietnam

was postponed to April 2015 due to charged agenda of L. Janssens de Bisthoven who will participate in the formulation mission to moderate the PCM part.

- ER1.3.- Monitoring data yield indicators, with 130 % spent is due to the fact that OBPE (Burundi) started research on ecosystem services in order to get an appreciation of their value (bamboo, rotan, indigenous trees), and it was decided to allocate it here as it will form the basis to identify indicators.
- ER 1.4 – Scientific outputs accessible with 69 % spent is due to delay in the publications of AbcTaxa and of the planned lexicon in Burundi. The delay is due to long negotiations with the authors of Abc Taxa and the review committee. However, several volumes are in the pipeline. For the lexicon in Burundi, delay due to the fact that collecting data has to be done in the difficult terrain of the Kibera and Ruvubu National Parks.

2. SO 2 – Enhance the information base

	Budget	engaged	realised	open	balance	% used
SO 2 – Enhance the information base						
ER 2.1 – Expertise in information management is built	50,000.00 €	100,275.51 €	83,146.51 €	17,129.00 €	-50,275.51 €	200.55
ER 2.2 – Information flows are improved	50,000.00 €	62,176.17 €	57,976.17 €	4,200.00 €	-12,176.17 €	124.35
ER 2.3 – Information used in governance	25,000.00 €	53,699.37 €	52,593.37 €	1,106.00 €	-28,699.37 €	214.80
Equipment ICT & technical development	4,000.00 €	1,000.95 €	1,000.95 €	0.00 €	2,999.05 €	25.02
Salaries M.-L. Susini, H. de Koeijer, K. Vrancken (3+6+3 pm)	62,774.00€	54,714.98 €	54,714.98 €	0.00 €	8,059.02 €	87.16
Total	**191,774.00 €**	**271,866.98 €**	**249,431.98 €**	**22,435.00 €**	**-80,092.98 €**	**141.76**

Points of comment:

- ER 2.1 – Expertise in information management is built shows 200 % expenditure. This is essentially due to the procuration of solar panels for the technical station of OBPE in Bujumbura in order to secure a sustainable and green electricity supply not only for the PC park and also to work on the collections, hence allowing for better CHM work with internet and other desk top work for the cooperation. This has been done in cooperation with the Belgian embassy and includes a maintenance agreement.
- ER 2.3. – the budget of 25000 € was spent at 214% due to the organisation of regional workshops which were decided after the planning for 2014.
- equipment: see above

3. SO 3 – Contribute to awareness raising

	Budget	engaged	realised	open	balance	% used
SO 3 – Contribute to awareness raising						
ER 3.1 – Baselines provide insight on awareness level	30,000.00 €	37,857.27 €	30,237.27 €	7,620.00 €	-7,857.27 €	126.19
ER 3.2 - Awareness and engagement are raised	70,000,00 €	21,944.07 €	21,944.07 €	0,00 €	48,055.93 €	31.35
Salaries H. de Koeijer, K. Vrancken (6 pm)	46,365.00 €	22,119.63 €	22,119.63 €	0.00 €	24,245.37 €	47.71
Total	**146,365.00 €**	**81,920.97 €**	**74,300.97 €**	**7,620.00 €**	**64,444.03 €**	**55.97**

Points of comment:

- ER 3.2 - Awareness and engagement are raised, shows 31 %. This post is mostly for graphic work, like fliers and posters, but also for awareness projects by OBPE in Burundi, UAC in Benin and SGECN in RDC. The planned call for this ER was done together with the call for ER 3.1. (two different subjects: baselines and classic awareness). Due to a lack of adequate candidates who subscribed to the call, the budget was left underspent. In order to raise the capacity of new Anglophone partner countries a workshop will be organised in March 2015 to train in project writing for this call.

4. SO 4 – Improve the mainstreaming of biodiversity

	Budget	engaged	realised	open	balance	% used
SO 4 – Improve the mainstreaming of biodiversity						
ER 4.1 – Expertise of Belgian Dev. Coop. built	3,000.00 €	0,00 €	0,00 €	0.00 €	3,000.00 €	0.00
ER 4.2 – Biodiversity is mainstreamed in BDC activities	9,000.00 €	5,634.17 €	5,409.17 €	225.00 €	3,365.83 €	62.60
Salaries L. Janssens de Bisthoven (6 pm)	46,578.00 €	34,312.90 €	34,312.90 €	0.00 €	12,265.10 €	73.67
Total	**58,578.00 €**	**39,947.07 €**	**39,722.07 €**	**225.00 €**	**18,630.93 €**	**68.19**

Points of comment:

- ER 4.1 – Expertise of Belgian Dev. Coop. built: training at DGD is postponed to 2015, due to workload for the preparation and participation in SBSTTA, COP and COP/MOP. Also there has not yet been a concrete demand from DGD.
- ER 4.2 – Biodiversity is mainstreamed in BDC activities: expense concerns the organisation of the side event on 'mainstreaming…' in S. Korea by L. Janssens de Bisthoven at COP12 in S Korea in cooperation with UNDP-UNEP.

5. SO 5 – Improve knowledge on MRV (& indicators)

	Budget	engaged	realised	open	balance	% used
SO 5 – Improve knowledge on MRV (& indicators)						
ER 5.1 – Expertise of DGD and RBINS built	8,000.00 €	2,283.77 €	2,168.77 €	115.00 €	5,716.23 €	28,55
ER 5.2 – Methodologies are available	11,000.00 €	0.00 €	0.00 €	0.00 €	11,000.00 €	0,00
Salaries M. Vanhove, A.-J. Rochette (3+3pm)	35,352.00 €	22,456.35 €	22,456.35 €	0.00 €	12,895.65 €	63.52
Total	**54,352.00 €**	**24,740.12 €**	**24,625.12 €**	**115.00 €**	**29,611.88 €**	**45.52**

Points of comment:

- Due to the general delay of implementation of the annual plan, the recruitment of a new scientist who would work on MRV started in July 2014. Finally, the work contract was signed in January 2015 because the staff member needed to finish work at his previous employer. Therefore, 2015 will have a boost in activity under this SO, and the remnants of this SO will be used in 2015.

6. SO 6 – Raise awareness & built capacities on ABS NP

	Budget	engaged	realised	open	balance	% used
SO 6 – Raise awareness & built capacities on ABS NP						
ER 6.1 – DGD and RBINS familiar with Nagoya Protocol	10,500.00 €	6,911.62 €	6,773.62 €	138.00 €	3,588.38 €	65.82
ER 6.2 – Awareness is raised	500.00 €	0.00 €	0.00 €	0.00 €	500.00 €	0.00
Salaries H. de Koeijer (3 pm)	15,868.00 €	17,146.84 €	17,146.84 €	0.00 €	-1,278.84 €	108.06
Total	**26,868.00 €**	**24,058.46 €**	**23,920.46 €**	**138.00 €**	**2,809.54 €**	**89.54**

Points of comment:

- Same comment as under SO5

7. SO 7 – Coordination and management

	Budget	engaged	realised	open	balance	% used
SO 7 – Coordination and management						
ER – Programme is efficiently, effectively managed	2,000.00 €	848.54 €	848.54 €	0.00 €	1,151.46 €	42.43
Salaries L. Janssens de Bisthoven, V. Pinton, M. Agarad (3+9+9pm)	105,056.00 €	88,534.43 €	88,534.43 €	0.00 €	16,521.57 €	84.27
Total	**107,056.00 €**	**89,382.97 €**	**89,382.97 €**	**0.00 €**	**17,673.03 €**	**83.49**

Training activities

Fig. 2. Training in taxonomy (GTI), at RBINS, Mr. Moissou Lagnika (from UAC, Benin)

Training constitutes the core of the capacity-building programme. While formal academic education is provided by universities, the RBINS offers hands-on experience and advanced professional training. It takes the form of field and lab work for individuals or groups, workshops and distance learning.

Table 2. Overview of **training efforts in 2014** (number of trainees per programme component, activity and country).

	INDIVIDUAL TRAINING IN BELGIUM	INDIVIDUAL TRAINING *IN SITU*	GROUP TRAINING IN BELGIUM	GROUP TRAINING *IN SITU*
SO 1.1- Scientific and technical expertise is built				
1.1.1 Visits in Belgium	Benin (3), Burundi (2), Cameroon (3), Côte d'Ivoire (4), D. R. Congo (3), Ecuador (1), Madagascar (1) and Morocco (1).			
S0 1.2- Quality scientific knowledge is produced				
1.2.1.(A) Taxonomic research is strengthened – *in situ* workshops				Côte d'Ivoire (10), D.R. Congo (2), Ecuador (5) and Vietnam (5).
1.2.2. Cooperation with OBPE				Burundi (14)
1.2.2. Cooperation with UNIGOM				DR Congo (15)
1.2.2. Cooperation with UAC				Benin (9)
1.2.3. (C) Cooperation with UNIKIS	DR Congo (3)			
1.2.4 Marine modeling	Peru (2)			Peru(8)

SO2.1 **Expertise in information management is built** **Training workshops**	Benin (2), Tanzania (2)	Cameroon, Chad, Gabon, Congo (16), Cameroun (14), Ghana (15), Benin (15), Côte d'Ivoire (13)
SO2.3 **Information used in governance**		Rwanda (14)

Distance learning

The process of 'distance learning' has continued in 2013. It took many forms, pending on the type of support needed by our partners. For the CHM, demand-based ad hoc support by e-mail for the web masters was provided regularly.

Fig. 3. Dosso-Kanvaly with Dr Y. Roisin, GTI training

For the **GTI,** the approach is different. Taxonomy is a complex science that highly depends on the studied taxon, explaining why a single person cannot achieve distance learning efficiently.

Distance learning thus takes the form of sharing of resource material through our 'GTI reader' website (http://www.taxonomy.be/gti_course/). It also consists of sustained support throughout the year by the promoters of GTI projects and by the mentors of our trainees. In 2013, such support took the form of review and correction of draft scientific papers, translation of papers into English (or improving the quality of English), production of illustrations and maps, search for literature, etc.

Susini M.-L., de Koeijer H., 2014. 5 new teaching manuals on the use of the PTK for CHM websites have been developed. These are the following manuals:

- 3 manuals in English on advanced properties of the PTK, in the Administration section of the portal:
    - Chapter 8: Map management
    - How to add images to the "slider" of a homepage on a PTK website?
    - How to restrict access to a section on a PTK website?

- 2 manuals in French:
    - Comment partager une vidéo en ligne sur un site web CHM ?
    - Comment modifier les images du « slider » sur la page d'accueil d'un site PTK ?

All the manuals can be freely uploaded online from our training website here:
http://training.biodiv.be/formationptk/manuals/

Part II. Institutional cooperation

Introduction

Our institutional cooperation concentrates on INECN (Burundi, now OBPE) and UAC (Benin). Both started a three year programme in 2014.

The marine modeling team organised in summer 2014 a formulation mission at IMARPE in Peru and a training session at RBINS in December 2014.

Further, the work on habitat monitoring in DR Congo concentrated on supporting several theses at Congolese universities on themes important for ICCN.

We also collaborated with the following institutions for in situ workshops on taxonomy related to ecosystem services: the Université Nangui Abrogoua (ex Abobo Adjamé), UFR Sciences Naturelles, Abidjan, Côte d'Ivoire; the Universidad Tecnica Particular de Loja (UTPL) in Ecuador; the University of Kisangani, Kisangani, in D. R. Congo; the Vietnamese Academy of Science and Technology, Institute of Ecology and Biological Resources, Department of Insect Systematics, Hanoi, Vietnam and the Vietnamese Academy of Science and Technology, Vietnam National Museum of Nature, Hanoi, Vietnam (VNMN).

Grantees coming from the following institutions visited the RBINS or another taxonomic research facility in Belgium thanks to our funding: Université d'Abomey-Calavi, Laboratoire d'Ecologie Appliquée, Cotonou, Benin ; Faculté des Science et Techniques de Dassa, Benin ; OBPE, Burundi ; Faculté des Sciences & Ecole Normale Supérieure, Université de Yaoundé I, Cameroon ; Université Nangui Abrogoua (ex-Université Abobo Adjamé) Abidjan, Côte d'Ivoire; Université Nangui Abrogoua, Abidjan, Côte d'Ivoire ; Centre de recherche en Hydrobiologie (CRH-UVIRA) D.R. Congo ; Faculté des Sciences et Sciences appliquées/Université Officielle de Bukavu, D.R. Congo ; Pontificia Universidad Católica Del Ecuador (PUCE), Ecuador ; Université Péléforo Gon Coulibaly (ex Université de Korhogo), Côte d'Ivoire ; UFR Biosciences/ Université Félix Houphouët-Boigny, Côte d'Ivoire ; Missouri Botanical Garden, Antananarivo, Madagascar ; and Faculté des sciences de Tétouan, Morocco.

We have long term partnerships [1]for the CHM with:

- Agence de l'Environnement et du Développement Durable, Ministère de l'Environnement et de l'Assainissement, Mali
- Centre National de Floristique, Université de Cocody, Abidjan, Côte d'Ivoire
- Conseil national de l'Environnement pour un Développement durable (SE/CNEDD), Niger
- Direction Générale des Forêts et des Ressources Naturelles, Benin
- Direction Nationale de La Biodiversité et des Aires Protégées, Guinea
- Ministère de l'Aménagement du Territoire, de l'Eau et de l'Environnement (MATEE), Morocco
- Ministère de la Production, de l'Environnement, de l'Énergie, de l'Industrie et de l'Artisanat, Comoros
- Ministère de l'Aménagement du Territoire et de l'Environnement, Algeria
- Ministère de l'Environnement et du Développement Durable, Burkina Faso
- Ministère de l'Environnement, Conservation de la Nature et Tourisme, DR Congo
- Ministère de l'Environnement, de la Protection de la Nature et du Développement Durable, Cameroon

[1] Long term partnerships are based on institutional contacts, mostly with CHM focal points

- Ministry of Environment, Science and Technology, Ghana
- Office National pour l'Environnement, Madagascar

Some partnerships are active (see details under CHM), while others are on hold (e.g. Mali, Guinea, Comoros) until new projects are selected.

Institutional cooperation with Office Burundais pour la Protection de l'Environnement (OBPE) (annex 3)

For interventions by CEBioS staff, see Activity 1.2.2. (B). Supporting the monitoring of habitats for the management of ecosystems as well as SO2 (information) and SO3 (awareness)

Author: Benoit Nzigahera (OBPE)

Contexte

Le présent rapport technique concerne le Programme de recherche, échange d'information, sensibilisation et conservation de la biodiversité au Burundi pour les activités de 2014. Il convient de rappeler que ce programme a été mis en place en Mars 2014 à travers un diagnostic participatif de toutes les parties prenantes à Bujumbura. Le projet a connu un retard dans le décaissement et le premier décaissement a eu lieu en septembre 2014. On comprendra rapidement qu'il n'y avait pas moyen d'achever les activités d'une année dans 4 mois. Cependant, certaines activités ne nécessitant pas des fonds immédiats avaient été démarrées depuis Juin 2014.

All annexes mentioned in the following text can be found in annex 3 of the annual report 2014.

	Activités menées
RI1	**Objectif 1: La dynamique des habitats et la biodiversité des aires protégées du Burundi sont mieux connues et comprises**
1.1.1.	**Etablir un système fonctionnel de collecte des données sur les types d'habitats et leur évolution**
Des équipes ont été mises en place (20 gardes forestiers et 10 chefs des secteurs) pour la collecte des données à travers les transects. Dans la collecte des données des fiches LEM ont été utilisées au cours de 2 trimestres de travail (Juillet-Septembre, Octobre-décembre 2014). Il reste un trimestre (Janvier-Mars 2015).	
1.1.2	**Renforcer la gestion des collections de flore, en particulier celle des plantes dominantes qui, en tant que telles, servent de référence pour la reconnaissance des habitats**
1. Tous les spécimens qui ont été collectés sur les transects pour les Parcs Nationaux de la Kibira, Ruvubu et de la Rusizi ont été déterminés par Nzigidahera Benoît. Nyabenda Mathias est en train de finir l'étiquetage. Les herbiers seront acheminés aux chefs-lieux de parcs en février 2015. Dans chaque secteur de chaque parc, un herbier modeste de 30 espèces a été confectionné pour aider les chefs des secteurs et les gardes à reconnaitre les espèces servant de suivi dans les transects. La figure ci-dessous montre Monsieur Nzigidahera Benoît en train de faire la détermination des espèces.	

2. Trois étudiants, ont confectionné trois bases de données (en eXcel) des espèces et leurs photos liées par un hyperlien. En dépouillant les herbiers déjà confectionnés à travers les transects des trois parcs nationaux de la Kibira, Ruvubu et Rusizi. La figure ci-dessous montre les trois étudiants à l'œuvre. Les bases de données sont dans le fichier séparé.

1.1.3.	**Mettre en place et à jour une base de données et transférer continuellement les données (activité faite partiellement)**

En utilisant les fiches LEM envoyés au siège de l'OBPE par les agents des Parcs, Monsieur Masabo Onesphore, chargé de supervision des activités de suivi de la dynamique des habitats sur les transects a fait un encodage global des données (le document en Excel séparé donne des enregistrements faits).

1.2.1.	**Former le personnel de niveau de base sur la collecte des données et l'utilisation des tablettes (activité non encore faite)**

1.2.2.	**Former le personnel de niveau supérieur (cadres des 3 parcs) sur la collecte, l'enregistrement et l'interprétation des données**

En date du 15 au 18 Septembre 2015, dans les enceintes du Bureau de Liaison de l'INECN à Bujumbura, il a été organisé un atelier de formation des chefs de secteurs, des chefs de parcs et cadres de l'INECN impliqués dans les activités de suivi de la dynamique des habitats dans les Parcs Nationaux de la Rusizi, de la Kibira et de la Ruvubu. Le formateur était Un expert de l'IRScNB, Dr François Muhashi appuyé par Monsieur Nzigidahera Benoît (Annexe 1).

RI2	Objectif 2: Les services écosystémiques (SE) dans les aires protégées du Burundi sont mieux compris et valorisés
2.1.1.	**Mener une étude nationale bibliographique d'inventaire des services écosystémiques au Burundi et définir les SE les plus pertinents**

Pour débuter cette activité, il a été organisé une réunion des scientifiques avec comme objet d'identifier et définir les services écosystémiques les plus pertinents au Burundi en date du 10 Décembre 2014, dans les enceintes de l'OBPE. A la fin de cette réunion, une équipe chargée de mener une étude nationale bibliographique d'inventaire des services écosystémiques au Burundi et définir les SE les plus pertinents a été mise en place. Les résultats de la réunion sont en annexe 2.

En date du 07 Janvier 2015, un atelier de validation des études faites par les scientifiques ciblés s'est tenu à Bujumbura dans la salle de la Direction Générale des Ressources en Eau et de l'Assainissement au Ministère de l'Eau, de l'Environnement, de l'Aménagement du Territoire et de l'Urbanisme.

Actuellement, les experts viennent d'intégrer les recommandations de l'atelier. Il y reste à les mettre en commun en une seule étude nationale bibliographique d'inventaire des services écosystémiques au Burundi. Le rapport de l'étalier de validation est en annexe 3. Les documents d'études par services écosystémiques sont séparés de ce rapport.

2.2.1.	**Mener une recherche sur la productivité de champignons sauvages comestibles sur base de recherche taxonomique (év. GTI)**

La recherche sur la productivité de champignons sauvages comestibles sur base de recherche taxonomique a débuté au mois de Novembre dans les forêts claires de Gisagara et de Rumonge. Il s'agit de deux études confiées à deux étudiants de l'Université du Burundi: Monsieur NIMPAGARITSE Désiré pour la forêt claire de Rumonge et Monsieur NIZIGIYIMANA Révérien pour la forêt claire de Gisagara. Les étudiants suivent la méthodologie qui a été utilisée au cours de la phase de recherche sur la productivité des champignons. Ces études sont sous la supervision mensuelle de Nzigidahera Benoit. Dans l'ensemble, les étudiants devront produire deux études sous formes de mémoires de fin d'études comprenant une analyse de la productivité des champignons et un inventaire des champignons ectomycorrhiziques des forêts claires et les connaissances traditionnelles y associées. Les rapports de terrains sont en annexe 4.

2.2.5.	**Mener des recherches sur la taxonomie des champignons**

Depuis Décembre 2013, Monsieur Havyarimana George a débuté une Etude de l'influence anthropique sur la biodiversité mycologique dans différents habitats de la forêt de montagne du secteur Rwegura au Parc National de la Kibira. Cette étude était menée sous l'encadrement de Monsieur Jérôme Degreef, Chercheur du Jardin Botanique de Meise et Monsieur Nzigidahera Benoît comme encadreur local. C'est dans cette optique que Monsieur Géorge a effectué une visite de cherche sur la taxonomie les champignons du Parc National de la Kibira au Jardin Botanique de Meise. Malheureusement, l'étudiant n'est pas rentré au pays pour nous faire un rapport.

2.3.1.	**Mener des recherches sur la taxonomie des pollinisateurs**

Dans le cadre de son Master, Monsieur NDAYIKEZA Longin a fait une étude des abeilles pollinisatrices intitulée «*Etude de l'influence du développement séquentiel du milieu écologique sur les abeilles pollinisatrices au Burundi au Parc National de la Kibira, Rusizi, dans les agroécosystèmes de Mumirwa et en ville de Bujumbura*».
Ainsi, une collecte d'abeilles pollinisatrices a été organisée depuis le mois d'octobre jusqu'au mois de Décembre 2014 pour une durée de 3 mois. Cette collecte a été faite dans deux localités à savoir le Parc National de la Kibira secteur Rwegura et le Parc National de la Rusizi secteur palmeraie. La méthode de

collecte utilisée est la méthode des bocaux jaunes avec une collecte qui se fait journalièrement. Actuellement, Monsieur Longin est en train de rédiger son mémoire de fin de d'études.

Dans le cadre de son mémoire de fin d'études en Biologie, Monsieur Girukwishaka Schadrak a fait une étude des abeilles pollinisatrices intitulée «*Etude systématique et écologique des pollinisateurs des écosystèmes de la Plaine de l'Imbo centre, de la Crête Congo-Nil et de la Dépression de Bugesera*». C'est dans cette optique que Monsieur Girukwishaka Schadrak a effectué une visite de recherche sur la taxonomie des abeilles pollinisatrices du Burundi à l'IRScNB.

RI4	**Objectif 4: Le CHM et le MRV sont renforcés**
4.1.1.	**Assurer un approvisionnement continu en électricité (panneaux solaires), Communiqués aux différentes radios des avis d'appel d'offre**

Dans le but de renforcer le Centre d'Echange d'Information sur la Biodiversité (CHM-Burundais) en assurant un approvisionnement continu en électricité sur base des panneaux solaires, la Compagnie NGUVU Utilities a été recruté. Ce recrutement a eu lieu après deux appels d'offres lancées en 2014 (premier lancement le 22/08/2014, répété le 22/10/2014) pour l'installation des panneaux solaires photovoltaïques dans son bureau de liaison à Bujumbura, Burundi. Le mandat de cette société est le suivant:

- La fourniture d'un système solaire photovoltaïque répondant aux besoins en électricité du bureau de liaison de l'OBPE à Bujumbura, tels que décrits dans l'offre de NUB, chapitre III, demande d'énergie du bâtiment, tel que dimensionné dans l'offre technique;
- L'installation complète du système et sa mise en service, dans le délai convenu dans l'offre, à savoir 4 mois à partir du versement par le Client au Prestataire de la première tranche de paiement décrite à l'article 2;
- La maintenance du système installé, pendant une durée de 3 ans à partir de la date de mise en service du système, selon l'approche décrite dans l'offre technique de NUB, chapitre III, garantie, maintenance et monitoring. La maintenance ne comprend pas les investissements de remplacement de fourniture, dû à l'usure normale ou à une utilisation non correcte du matériel par les gestionnaires du bâtiment;
- Le monitoring à distance du système installé, pendant une durée de 3 ans à partir de la date de mise en service du système, selon l'approche décrite dans l'offre technique de NUB, chapitre III, garantie, maintenance et monitoring;
- La formation sur le système solaire installé, pour les gestionnaires du bâtiment, selon l'approche décrite dans l'offre de NUB, chapitre III, formation. Il s'agit d'une formation de 1 jour pour un ou deux groupes de maximum 10 personnes par groupe;
- La garantie sur les équipements fournis et sur l'installation, pendant une durée de 2 ans à partir de la date de mise en service du système. Il faut noter que la garantie n'est plus valable si la formation n'est pas organisée dans le délai prévu ci-dessous.

Les modalités de signature de contrat sont en cours et l'activité va démarrer au cours du mois de Février 2015.

4.1.2.	**Assurer une connexion internet continue**

Une connexion a été payée pour cette année.

4.1.3.	**Suivi via entre autres l'organisation de réunions périodiques des Points focaux interinstitutionnels du CHM**

Dans le souci d'assurer le renfoncement du CHM, des réunions ont été organisées en faveur des points focaux. Ainsi, en date du 11 Décembre 2014, dans les enceintes de l'Office Burundais pour la Protection de l'Environnement (OBPE) s'est tenue une réunion des Points Focaux Interinstitutionnels du Centre d'Echange d'Information en Biodiversité, CHM-Burundais. L'objectif de la réunion était d'évaluer les activités menées

depuis 2013 et de mettre en place un programme de travail au cours des deux années prochaines. Les détails de la réunion sont en annexe 5

Dans le même sens, en date du 05 au 06 Janvier 2015, dans les enceintes de l'Office Burundais pour la Protection de l'Environnement (OBPE) s'est tenue une réunion des Points Focaux Interinstitutionnels (PFI) du Centre d'Echange d'Information en Biodiversité, CHM-Burundais. Cette réunion avait comme ordre du jour:

- Echange et discussions sur les principales contraintes rencontrées dans l'échange d'information;
- Formation sur la création et le fonctionnement d'un questionnaire d'enquête électronique et du forum des PFI du CHM-Burundais. Cette formation a été dispensée par Han de Koeijer, par le Point Focal National du CHM-Belge.

Les détails sont illustrés au rapport en annexe 6.

4.1.4.	**Recruter un consultant chargé d'appuyer le Point Focal du CHM dans la collecte et le postage des informations sur le site web du CHM pour 8 mois**

Monsieur Mpawenimana Longin a été recruté comme un consultant chargé d'appuyer le Point Focal du CHM dans la collecte et le postage des informations sur le site web du CHM. Ainsi, depuis juillet, il a pu publier plusieurs informations sur le site. Les détails du rapport des activités menées sont en annexe 7.

4.2.1.	**Publier et diffuser annuellement le bulletin scientifique de l'INECN**

Le 13ème numéro de bulletin a été produit et publié en ligne sur le site web de l'OBPE et 75 documents ont été imprimés et distribués. Compte tenu du changement de l'INECN en OBPE, il a été urgent de changer le nom du bulletin qui était au départ «*Bulletin Scientifique de l'INECN*». Ainsi, une réunion des Rédacteurs du bulletin a été organisée pour changer le nom du bulletin et donner de nouvelles orientations du bulletin (annexe 8).

Au cours de la journée de Jubilé d'argent du Ministère ayant l'environnement dans ses attributions, l'OBPE a confié la mission au CHM pour fabriquer des posters à exhiber sur les stands d'exposition. Ainsi, 16 posters ont été faits et montrent l'essentiel des activités menées dans le cadre du partenariat avec la Belgique. Les figures montrent le stand et Nzigidahera Benoit expliquent devant le Ministre de l'Eau, de l'Environnement, de l'Aménagement du Territoire et de l'Urbanisme et Ministre de l'Energie et des Mines.

4.3.1.	**Former les bibliothécaires sur l'utilisation du logiciel WINISIS et sur la recherche et la diffusion de l'information documentaire**

Du 30 septembre au 3 Octobre 2014, il a été organisé une formation des 3 bibliothécaires de la Bibliothèque de l'OBPE à Gitega. La formation portait essentiellement sur l'utilisation du logiciel WINISIS et sur la recherche et la diffusion de l'information documentaire. Les détails de la formation sont en annexe 9.

4.3.4.	**Communiquer l'existence de la bibliothèque (Installer une pancarte pour une large publicité de la Bibliothèque)**

Dans le souci de faire la publicité à la bibliothèque de référence en Biodiversité de l'OBPE à Gitega, un panneau publicitaire a été fabriqué et installé à la proximité des enceintes de l'OBPE à Gitega.

4.3.5.	**Disponibiliser un guide du catalogue, un lexique vernaculaire et un dictionnaire Anglais-Français-anglais**

Un dictionnaire pour faciliter la recherche a été disponibilisé pour les bibliothécaires. Il a été retenu que le lexique vernaculaire des mots environnementaux suffisait amplement pour guider les bibliothécaires dans la compréhension de certains mots environnementaux. De plus, dans leur formation, un syllabus leur a été offert sur le catalogage et recherche documentaire.

CONCLUSION

Dans l'ensemble, on note un bon déroulement des activités du programme. Plusieurs résultats sont déjà atteints mais d'autres sont attendus tels sont les études. De plus, il y a des activités qui doivent continuer jusqu'en début de la saison sèche en Mai 2015 notamment la productivité des champignons. L'activité 1.2.1. commencera dès que les tablettes seront disponibles au mois d'Avril. A l'Etat actuel, il serait difficile de commencer à faire une évaluation sur base des indicateurs. Le rapport final en mai 2015 pourra certainement montrer comment nous progressons dans la mise en œuvre du programme.

Institutional cooperation with Université Abomey-calavi (UAC) (annex 4)

For interventions by CEBioS staff, see also Activity 1.2.2. (B). Supporting the monitoring of habitats for the management of ecosystems, but also SO2 (information) and SO3 (awareness).

From the annual report 2014 provided by the Laboratoire d'Ecologie Appliquée of the Université Abomey-Calavi (Benin):

This annual report has been integrated into the logframe (valid for 2014-2015-2016).

Logique d'intervention	Indicateurs	Rapport 2014 (author: Prof. Marcel Houinato, UAC)
Objectif général: Contribuer à l'amélioration des connaissances scientifiques et de leur transfert vers les acteurs cibles en vue d'améliorer la gestion de la biodiversité et la sensibilisation à sa conservation.		De façon globale, les activités budgétisées ont été presque toute exécutées. La collecte, l'analyse et la publication des données sur le vocabulaire vernaculaire et les connaissances traditionnelles relatives à la biodiversité ont été démarré et seront poursuivies en 2015. Par contre la plupart des activités devant nécessiter un appel de fonds compétitif n'ont pas pu être réalisée car le temps pour le déroulement d'un tel processus a fait défaut.
Objectifs spécifiques: 1. Renforcer les capacités de l'université d'Abomey-Calavi à répondre aux préoccupations de la DPNP, et des AVIGREFs sur la gestion des feux et leurs impacts sur les habitats et la faune dans la Réserve de Biosphère de la Pendjari, tout en valorisant l'expertise de l'IRSNB. 2. Informer et sensibiliser les acteurs et les bénéficiaires des services inhérents	L'UAC répond plus efficacement aux demandes du CENAGREF et des AVIGREFS en rapport avec la gestion des feux et des parcours Les gestionnaires et autres acteurs intègrent la composante biodiversité dans 75% au moins de leurs activités.	Le présent programme de coopération visant le renforcement des capacités des agents de conservation au niveau de la Réserve de Biosphère de la Pendjari, a bien démarré et se montre déjà important pour la valorisation de la science au profit de la conservation de la biodiversité. Sa poursuite est souhaitée en vue de redéfinir d'autres activités plus stratégiques visant l'atteinte des objectifs de la coopération.

au parc (entre autres CENAGREF et AVIGREFs) sur les valeurs de ces services écosystémiques. 3. Contribuer au réseau CHM national pour renforcer la coopération scientifique et technique.	Des supports de sensibilisation sont produits et des ateliers de sensibilisation sont organisés. Une baseline sur la participation au réseau CHM (site web, info …) est définie. La participation au réseau CHM a significativement augmenté par rapport au baseline 2012-13.	

RI1 Les connaissances scientifiques pré-existantes et disponibles sont transférées vers les acteurs, y compris le CHM	**Indicateurs**	**Rapport 2014**
1.1. Les chercheurs synthétisent leurs recherches passées	75% des études et travaux sur la thématique de feu et parcours sont synthétisés	Cette sous-activité a été réalisée totalement. Ainsi, les résultats des recherches réalisées par le passé dans les domaines de la végétation de la Réserve de Biosphère de la Pendjari (RBP), de l'utilisation du feu dans l'aménagement des parcours naturels au Benin et leurs impacts sur la faune en général, ont été synthétisés et consignés dans un document (cf. Document de synthèse en Annexe 1).
1.2. Les chercheurs informent les gestionnaires (DPNP et AVIGREFs) sur leurs résultats passés	1 atelier d'échange et d'information est organisé sur les résultats des travaux réalisés sur la thématique de feu et son impact sur les parcours et la faune	Cette sous-activité a été aussi intégralement exécutée à travers un atelier réalisé du 16 au 18 octobre 2014, qui a permis pour partager avec les gestionnaires du Parc National de la Pendjari, la synthèse des résultats des recherches documentés. Ces résultats ont été simplifiés en quatre communications portant respectivement sur les acquis de la recherche sur la végétation de la Réserve de Biosphère de la Pendjari, les acquis de la recherche au Benin sur les feux et parcours et les acquis de la recherche sur l'impact du feu sur la faune et son habitat en Afrique de l'Ouest. Au cours de cet atelier, les gestionnaires de la RBP ont fait remarquer le manque des notions techniques et d'accompagnement spécifique pour gérer le feu par le passé, ce qui aurait conduit à l'embroussaillement de certaines formations végétales dans la réserve. Ces gestionnaires estiment l'importance voire l'urgence de revoir l'aménagement de ces zones. Il a été aussi retenu de tenir compte de la présence des animaux domestiques dans la zone périphérique, pour envisager l'amélioration de ces parcours exploités. Les

		besoins de recherches sur les cas de mortalité des animaux sauvages observés dans la réserve après le passage du feu ont été exprimés. En prélude à l'élaboration du lexique sur la végétation de la Pendjari un travail de synthèse sur la reconnaissance des unités de végétation dans les différentes langues locales a été fait. Ainsi, des exemples de chaque formation végétale ont été projetés pour permettre l'identification par les agents de terrain dans leurs différentes langues locales. Ensuite, sur la base de leurs expériences, ils ont défini pour chaque formation les espèces de plantes et d'animaux qu'on y rencontre le plus en précisant leur nom dans les langues locales Waama, Biali et Gourmantché. L'éventuelle difficulté liée à la discrimination de certaines formations végétales sur le terrain a pu être surmontée en s'appuyant sur des images claires de chaque type de formation et de leurs espèces caractéristiques. Une partie de cet atelier s'est également déroulée dans la réserve où les chercheurs et les agents de terrain ont pu s'accorder sur différents types de formations végétales définies dans la littérature et présentes sur le terrain. A la fin de cet atelier, les recommandations suivantes ont été formulées ; - Conduire des essais de feu de contre saison dans des zones en cours d'embroussaillement ; - faire ressortir de façon claire les types de feu applicables dans la RBP, ainsi que la méthode d'application et un calendrier de mise à feu en accord avec les objectifs de la réserve ; - associer les gestionnaires de la réserve dans la sélection des étudiants devant conduire les sujets de recherches du projet ; - impliquer les amodiataires des zones de chasse dans cette redynamisation de la gestion du feu dans la RBP ; Le rapport de mission du 16 au 18 Octobre 2014 fournit le détail lié à l'exécution de cette sous activité (cf. Rapport de mission du 16 au 18 octobre 2014 en annexe 2).
1.3. Les chercheurs contribuent au CHM	augmentation du nombre de documents de recherche et de gestion sur le CHM	Cette sous-activité n'a pas pu être exécutée au cours de l'année 2014 du fait du grand retard dans le démarrage et du temps pris par les autres activités. Mais elle sera réalisée dans le premier trimestre de l'année 2015.
RI2 De nouveaux outils de gestion des feux et parcours dans des aires protégées sont disponibles pour un meilleur suivi		

2.1. L'UAC et l'IRSNB simplifient les contenus des résultats scientifiques déjà disponibles ; ce qui facilite leur transfert vers les usagers	Une première édition d'un lexique portant sur les connaissances préexistantes est réalisée	Cette sous-activité a démarré à travers les ateliers organisés avec le CENAGREF et la DPNP et se poursuivra en 2015.
2.2. Le vocabulaire vernaculaire et les connaissances traditionnelles relatives à la biodiversité sont collectés, analysés et publiés.	Un document en trois langues (wama, gurmantchéman et biali) sur le vocabulaire et connaissances traditionnelles est disponible intégrant un guide d'utilisation du feu comme outil d'aménagement	L'exécution de cette sous activité a démarré par la collecte des données liées aux connaissances traditionnelles relatives à la biodiversité (voir rapport de mission sur la sous-activité 1.2). Cependant la collecte doit être poursuivie et les données doivent être analysées et publiées.
2.3. La méthode de collecte et de suivi des données est adaptée aux feux et parcours	Le protocole de méthode de collecte et de suivi est élaboré	Dans le cadre de l'exécution de cette sous-activité, un atelier a été réalisé du 19 au 24 Décembre 2014 à Tanguiéta sur le dispositif de suivi du feu et de la dynamique de la végétation dans la Pendjari. Les activités de cet atelier ont été effectuées en deux phases. Une phase a lieu à la DPNP où deux communications ont été présentées. Une communication sur le dispositif de suivi de feu et une autre sur le dispositif de suivi de la dynamique de la végétation. Au cours des communications, le dispositif de suivi des feux et de la dynamique de végétation dans la Réserve ainsi que les paramètres à évaluer pour étudier l'effet des traitements de feu et la dynamique de la végétation ont été aussi présenté. La deuxième phase s'est déroulée dans la Réserve de la Pendjari et a permis l'installation d'un dispositif pour le suivi des feux et la dynamique de la végétation. Ainsi, cinq types de formations végétales ont été retenus dans la Réserve de Biosphère de la Pendjari pour l'installation du dispositif de suivi du feu et de la dynamique de la végétation. Il s'agit des savanes arbustives, arborées, saxicoles et herbeuses et des forêts denses sèches. Dans chaque type de formation, deux placeaux d'une superficie d'un ha (100 m x 100 m) chacun ont été installés pour le suivi du feu et de la dynamique de la végétation.Au total dix placettes d'études ont été installés dans la Réserve de Biosphère de la Pendjari. Chaque placeau d'un ha (100 m x 100 m) est subdivisé en 4 placettes de 40m x 40 m chacune. En effet, chaque placette recevra un traitement de feu. Les traitements de feu retenus sont le feu précoce répété, le feu tardif alterné avec le feu précoce et le feu de contre saison avec un traitement témoin sans feu. En raison de la topographie du sol, les dimensions des deux placettes en savane saxicole ont été modifiées et sont de 50mx100m subdivisés aussi en des placettes. Pour tous les placeaux, les coordonnées géographiques des quatre angles et du centre ont été pris. (Cf. Rapport de mission du 19 au 24 Décembre 2014).

2.4. La méthode adaptée au point 2.3. est utilisée pour analyser l'occurrence des plantes dominantes des habitats	Les photos, planches, géo-localisations, herbiers, fiches de suivi	Pas pour 2014
2.5 Sur base des résultats relatifs aux points 2.1, 2.2., et 2.3, le lexique est produit, et disponible en version électronique et papier, et distribué	1 lexique mis à jour est produit	Pas pour 2014

RI 3 Les connaissances scientifiques sur les feux et les parcours sont accrues et adaptées		
3.1. La recherche sur les feux et parcours est effectuée	1 thèse de doctorat ; au moins 4 mémoires de master défendus avec succès	Cette sous-activité a démarré et est en cours d'exécution par deux mémorants Master. Un premier mémorant du nom de GBEFFE Alain travaille sur le thème : « Effet de l'interaction feu et termitières sur la composition floristique, la productivité et les traits fonctionnels de diversité des communautés végétales dans la Réserve de Biosphère de la Pendjari». Le travail vise spécifiquement à (i) évaluer l'effet du feu et des termitières sur la diversité des communautés végétales et des groupes fonctionnels au sein (ii) évaluer l'effet du feu et des termitières sur la productivité en biomasse des espèces au sein des groupes fonctionnels (iii) évaluer l'effet du feu et des termitières sur la surface foliaire et la matière sèche des espèces dominantes des groupes fonctionnels. Le mémorant a fini la collecte des données sur le terrain et est présentement dans la phase de traitement et d'analyse des données en vue de sa soutenance. Mme Bernadette SABI LOLO ILOU a travaillé sur l'impact des feux de végétation sur les services écosystémiques dans la Réserve de Biosphère de la Pendjari au nord-Benin pour son mémoire de master Intégration Régionale et Développement. Elle a soumis son document dont le résumé est en annexe et doit soutenir dans les semaines à venir.
3.2. Les résultats des recherches sont transférés ou restitués aux gestionnaires du PN de la Pendjari (UAC, Cenagref, DPNP, Avigref)	2 ateliers de restitution au moins 5 présentations ppt, 5 posters et 5 plaquettes sont édités et mis à disposition des gestionnaires	Cette sous activité, prévue pour 2015, doit se faire après la soutenance des mémorants
3.3. les nouveaux résultats sont	Les résultats sont intégrés aux	Pas pour 2014

disséminés et vulgarisés (étudiants, chercheurs, riverains des aires protégées)	modules de syllabus pour étudiant et de matériaux de sensibilisation	
RI 4 Le suivi de la dynamique des habitats au PN de la Pendjari par les gestionnaires est renforcé		
4.1. Les gestionnaires sont capables de faire le suivi des habitats du PN de la Pendjari	Ateliers de formation sur les critères pertinents repris sur les fiches de suivi avec les gestionnaires du PN de la Pendjari et avigrefs/	Cette sous-activité a été réalisée. Sa réalisation a permis de renforcer les capacités des gestionnaires sur le suivi de la dynamique des habitats dans la Réserve de Biosphère de la Pendjari à travers une séance de formation théorique en salle suivie d'une phase pratique sur dans la réserve de la Pendjari. En effet, au cours de la formation théorique, 3 modules ont été développés à savoir : (i) Systématique des plantes et montage d'un herbier, (ii) Technique et utilisations des données d'inventaire floristique et (iii) Mesure de biomasse et relevés linéaires. Au cours de la phase pratique des relevés linéaires ; la coupe de biomasse et les relevés phytosociologiques au niveau de la strate herbacée et de la strate ligneuse ont été réalisés. Au cours de la réalisation des relevés linéaires et phytosociologiques, les plantes dont les noms scientifiques ne sont pas connus ont été échantillonnées pour la constitution d'herbier. La technique de montage des herbiers a été ainsi démontrée en pratique sur les échantillons de plantes en suivant les règles de l'art scientifique. Au regard de l'utilité des outils de collecte des données de végétation pour le service écologie de la DPNP, les participants que sont les principaux acteurs de la RBP, ont émis le souhait d'avoir un local dédié pour la conservation des échantillons de plantes du Parc National de la Pendjari sous l'appellation de : herbier de la Pendjari. Ils solliciteront des aides techniques et financières pour l'atteinte de cet objectif (Cf Rapport de mission du 11 au 17 janvier 2015). Concernant la faune, les acteurs ont aussi reçu sur le terrain une courte formation sur comment collecter des échantillons de déjection pour des analyses ultérieures du régime alimentaire et aussi pour obtenir des indices de densité des populations animales. Dans la mesure du possible, un guide d'identification des déjections animales sera élaboré pour faciliter le suivi de ces indices de présence dans les plateaux délimités pour l'étude de la végétation.
4.2. Les gestionnaires appliquent les critères pertinents pour la collecte des données sur la dynamique des habitats et tiennent compte des résultats dans	Au moins 75% des sites choisis sont suivis	Pas pour 2014

les plans de gestion du PNP		
4.3. Une base de données sur le suivi de la dynamique des habitats est établie et utilisée à l'UAC par les chercheurs et étudiants. La base de données est partagée avec les gestionnaires	La base de données sur le suivi de la dynamique des habitats est fonctionnelle, accessible et utilisée	Pas pour 2014
RI 5 La sensibilisation sur la conservation de la biodiversité est réalisée		Seule la dissémination des activités, résultats et produits de sensibilisation par le CHM était prévue pour 2014. Mais du fait du retard dans le démarrage, le temps consacré aux autres activités et la difficulté à faire concorder les emplois du temps de l'équipe du CHM et celui de l'UAC pour démarrer la recherche de financement, cette activité n'a pas pu être réalisée.
5.1. Les décideurs et élus locaux sont sensibilisés	atelier(s) de sensibilisation	
5.2. Les riverains et les AVIGREFS sont sensibilisés	atelier(s)de sensibilisation	
5.3. Du matériel de sensibilisation est produit et disséminé	Campagnes, posters, folders, etc…	
5.4. Le CHM relate les activités et partage les produits de sensibilisation	Statistiques du site web CHM	

Part III – Detailed output per strategic objective

Specific objective 1. The RBINS strengthens the scientific and technical knowledge base on biodiversity and on its linkages with ecosystem services and poverty reduction.

Background

Despite technological advances such as DNA barcoding or cyber taxonomy and large scale programmes such as the European EDIT or the United States' PEET project, taxonomic knowledge remains scarce and there seems to be only little, if any, speeding up of the rates of species description. Capacity needed to maintain and build taxonomy and taxonomic collections is fragmented or even non-existing in developing countries where the bulk of biodiversity is situated. Governments, through the Convention on Biological Diversity, have acknowledged the existence of this problem and have termed it the "taxonomic impediment". To alleviate this obstacle the Global Taxonomy Initiative (GTI) has been installed and made operational. One of the staff of the DGD-unit at RBINS is the Belgian focal point for GTI.

In Belgium, the Royal Belgian institute of Natural Sciences, as the National Focal Point to the GTI, coordinates and organizes the activities needed to implement the objectives of the GTI.

In 2014, activities focussed on the provision and/or facilitation of taxonomic training both in Belgium and in partner countries: transfer of technology to selected institutions, delivery of taxonomic expertise to colleagues in the South, and liberation of taxonomic data via our website (http://www.taxonomy.be/). Whenever possible, we orientated activities such as research projects so as to favour the integration of a poverty-reduction vision. Through two of its former sub-programmes, "Tackling the taxonomic impediment" (GTI) and "Supporting biodiversity inventories, monitoring and assessments" (IMAB), our cooperation programme has long been strengthening the scientific and technical knowledge base on biodiversity. It has been doing so by capitalizing on the robust expertise of RBINS in the following aspects: i) the identification, monitoring and assessment of components of biodiversity (from taxonomic identification to ecological studies), (ii) the study and modeling of ecosystem functioning and (iii) the scientific foundations of conservation biology. Our mission of building scientific capacities in developing countries has proven efficient and will remain central in the coming framework programme.

Biodiversity is essential for general human well-being. The ecosystem services, i.e. the benefits derived from ecosystems, offer an exceptional instrument for conceptualizing the links between human development and biodiversity. Acknowledging the relevance of this perspective for poverty reduction, we are resolute in addressing it in our capacity building activities for the 2014-2018 programme. Specific objective 1 will strive to improve the scientific and technical knowledge on the above mentioned linkages.

It should be noted that the programme provides short term capacity building without the objective of obtaining a degree (Ms or PhD). However, many scientists are in the process of obtaining their thesis through research and the programme directly contributes to obtaining this degree through access to tools, material and knowledge. Therefore, in the logframe the number of graduates is given as a target, albeit being indirect or 'proxy'.

Expected results

1.1. Scientific and technical **expertise** is built
1.2. Quality scientific **knowledge** is produced
1.3. Monitoring data is fed into **national indicator processes**
1.4. Scientific **outputs** are made accessible to users

Expected result 1.1 Scientific and technical expertise is built

Logframe (partim):

Expected results (output)	Output indicators	Report 2014
1.1 Scientific and technical expertise is built	National authorities use the information provided by SO1 in the national indicator processes 12-18 students trained / year will produce: 8 posters and/or oral presentations given at national or international events/ year; 5 publications in scientific journals or general media/ year; 3 who graduate (Master or Ph. D.)/ year;	18 stagiaires visited Belgium (see table 3) Magnika Moïssou (Benin) discovered with Dr. Frank Fiers 4 new species for science of Copepoda (zooplankton) in Benin. Two short symposiums were organised in 2014 by our trainees to present their research: • Ms Rondro Ramananjanahary from the Missouri Botanical Garden, Antananarivo, Madagascar gave a presentation entitled 'Costularia and Eleocharis (Cyperaceae) of Madagascar' on Friday 29 August 2014 at the Botanical Garden of Ghent University. • Mr Gilles S. A. Nago gave a presentation entitled 'State of amphibian diversity in Benin and outlook for research and cooperation' on Thursday 18 December 2014 at the RBINS. In 2014, we have continued our alumni programme and maintained contact with our former visitors and trainees. We were very pleased to learn that two of our alumni successfully defended their Ph.Ds: • Mr Tenon Coulibaly defended his Ph.D. on the theme "Diversité et dégâts des termites dans les vergers de manguiers (*Mangifera indica* l., Anacardiaceae) de la région de Korhogo (Côte d'Ivoire): essai de lutte par utilisation d'extraits aqueux de trois plantes locales" at the Université Félix Houphouet-Boigny, Abidjan, Côte d'Ivoire, on July 12, 2014. • Mr Evariste Hermann Taedoumg from the Université Yaoundé 1, Cameroon, defended his PhD on his research entitled "Biosystematic study of *Craterispermum Benth* (Rubiaceae) in continental Africa" on July 30, 2014. Here is a selection of the scientific outputs of actual or former GTI trainees in 2014: • New publication in Zootaxa 3795 (5): pp 549–556 entitled 'A new species of Carnoya Gilson, 1898 (Rhigonematida: Carnoyidae) parasite of a spirobolid (Diplopoda: Spirobolida) from Cuba'. The co-authors are Nayla GARCÍA RODRÍGUEZ and GTI alumnus Jans MORFFE

		RODRÍGUEZ from the Instituto de Ecología y Sistemática, La Habana, Cuba. • New publication in Journal of Animal & Plant Sciences, 2014, vol. 22, Issue 3: 3455-3468, entitled 'Dégâts des termites dans les pépinières de manguiers du nord de la Côte d'Ivoire (Korhogo) et essai de lutte par utilisation d'extraits aqueux de plantes' by GTI alumnus COULIBALY Tenon, with co-authors AKPESSE Akpa Alexandre Moïse, YAPI Ahoua, ZIRIHI Guédé Noël, and KOUASSI Kouassi Philippe. • 2 articles in press by GTI alumnus PHAM, Hong Thai, 'The genus Dundubia Amyot & Audinet-Serville, 1843 (Hemiptera: Cicadidae) from Vietnam, with key to species' and 'A review of the genus Meimuna Distant, 1905 (Hemiptera: Cicadidae) from Vietnam, with key to species.' in the Proceedings of the 8th Vietnam national conference on Entomology, Agriculture Publishing House, 2014.
Activities	Report 2014	
1.1.1. organise the external call, selection and mobility of 12-18 trainees per year	done	
1.1.2. follow-up of the young scientists for scientific output and graduation	done	

Table 3: logframe (partim) for SO1, 1.1.

Activities

At the beginning of year 2014, we launched our 11th external call for proposals for capacity building in taxonomy and access to collections in Belgium (Global Taxonomy Initiative, GTI).

After an evaluation, 18 taxonomists were selected out of the 80 applications received. They were invited in Belgium for a short training (3-4 weeks). The selection criteria were mainly the country and institution of origin, the scientific quality of the trainee/project, the planned dissemination of the results, the contribution to the conservation of biodiversity and/or ecosystem services; and how the research can participate in fighting poverty in the South.

These 18 taxonomists were students (Master/Ph. D) or young researchers/assistants in Universities. It was mandatory for them to belong to an official institution (research institution, university,…). They came from the following countries: Benin (3 people), Burundi (2), Cameroon (3), Côte d'Ivoire (4), D. R. Congo (3), Ecuador (1), Madagascar (1) and Morocco (1).

Our visitors were trained at the RBINS, MRAC, Meise Botanic Garden, Ghent University, ULB and UCL (MUCL). See table 4 for the full list of trainees and details.

Table 4. List of visitors for the taxonomic training and access to collections in Belgium in 2014 (sorted per country)

NAME	COUNTRY	VISIT PERIOD	RESEARCH TITLE	TAXA	RELEVANCE TO DEVELOPMENT	AFFILIATION	TRAINING LOCATION
LAGNIKA Moïssou (see figure 4)	Benin	12.11 to 13.12.2014	Taxonomie et systématique des Oligochètes dulçaquicoles du Benin	Oligochaets	Assessment of drinkable water + health issues	UAC	RBINS
LOKO YEYINOU Laura Estelle	Benin	12.11 to 06.12.2014	Diversité des termites (Insecta: Isoptera), principaux ravageurs des tubercules d'igname (Dioscorea sp.) et résistance des variétés locales au Benin	Isopteres	Pest management	UAC	ULB
NAGO Sèdjro Gilles Armel	Benin	23.11 to 27.12.2014	Initiative Amphibiens du Benin	Amphibians	Conservation and management of protected areas	UAC	RBINS
GIRUKWISHAKA Schadrack	Burundi	16.11 to 06.12.2014	Etude systématique et écologique des pollinisateurs des parcs nationaux de la Rusizi, de la Kibira et de la réserve naturelle de Murehe et de leurs milieux agricoles riverains	Insects	Pollination and agriculture	OBPE	RBINS
HAVYARIMANA Georges	Burundi	05 to 26.10.2014	Etude de l'influence anthropique sur la biodiversité mycologique des différents habitats de forêt de montagne du secteur Rwegura au parc national de la Kibira.	Mushrooms	Food	OBPE	Meise
MBENOUN MASSE Paul Serge	Cameroon	07.09 to 27.09.2014	Perfectionnement et renforcement des capacités sur l'étude des Myriapodes du Cameroun	Arthropods	Agriculture and food	Université de Yaoundé I	MRAC
TADU Zephirin	Cameroon	07.09 to 04.10.2014	Impact des systèmes de gestion des terres dans la préservation de la Biodiversité dans les systèmes agroforestiers à base de Cacaoyer : Cas des fourmis	Arthropods	Agriculture and food	Université de Yaoundé I	RBINS
ZEMAGHO MBOUZANG Lise Arlette	Cameroon	16.09 to 14.12.2014*	Révision systématique du genre *Sabicea* Aubl. (Rubiaceae) en Afrique Continentale	Plants	Invasive species and management	Université de Yaoundé I	Meise

DOSSO Kanvaly	Côte d'Ivoire	24.08 to 13.09.2014	Initiation à la maîtrise du microscope morphométrique pour une identification aisée et fiable des espèces de termites	Termites	Bioindicators and agriculture	Université Nangui Abrogoua	ULB
KONE Mouhamadou	Côte d'Ivoire	28.09 to 18.10.2014	Etude taxonomique et Numérisation des fourmis de Côte d'Ivoire	Insects	Agriculture and bio-indicators	Université Péléforo Gon Coulibaly	RBINS
KRA Kouadio Dagobert	Côte d'Ivoire	09 to 28.06.2014	Identification et numérisation des coléoptères de Côte d'Ivoire	Insects	Pest management	Université Nangui Abrogoua	MRAC
YIAN Gouvé Claver	Côte d'Ivoire	24.11 to 20.12.2014	Taxinomie, Ecologie et Services Ecosystémiques des Macromycètes du Parc National du Banco	Mushrooms	Food	Université Félix Houphouët-Boigny	Meise
LUSHOMBO Joseph Matabaro	D.R. Congo	16.11 to 13.12.2014	Comparative molecular ecology of native and Lake Kivu introduced populations of the Lake Tanganyika Poecilid fish, *Lamprichthys tanganicanus*, Eastern Africa.	Fish	Food and sustainable fisheries	Université Officielle de Bukavu	RBINS
MILENGE KAMALEBO Héritier	D.R. Congo	05 to 26.10.2014	Taxonomie des champignons du genre *Marasmius* (Basidiomycètes) des forêts de montagne de l'Est de la République Démocratique du Congo. Cas du Parc National de Kahuzi-Biega	Mushrooms	Food	Université Officielle de Bukavu	Meise
MUSHAGALUSA CIRHUZA Deo	D.R. Congo	09 to 29.06.2014	Étude du zooplancton (Copépodes) et son importance dans l'écosystème du Lac Tanganyika, Afrique de l'Est.	Copepods	Bio-indicators, fishing and food	CRH Uvira	RBINS
VARGAS Gabriela	Ecuador	07.09 au 04.10.2014	Training in *in vitro* culture collections management for long term conservation of Ecuadorian Fungal diversity	Mushrooms	Food and trade	Pontificia Universidad Católica Del Ecuador	MUCL
RAMANANJANA HARY Rondro Hanitrinitiana	Madagascar	03 to 31.08.2014	Révision taxonomique de *Costularia* et *Eleocharis* de la famille des Cyperaceae	Plants	Protection of wetlands	Missouri Botanical Garden	Ugent
SAHIB Souad	Morocco	15.06 to 05.07.2014	Les Syrphidés (Diptera: Syrphidae) du Maroc: étude taxonomique, cytotaxonomique et écologique	Arthropods	Biological control of pests and agriculture	Université Abdelmalek Essaadi	RBINS

* with additional external funding from 18.10 to 14.12.2014.

Fig. 4. Moïssou Lagnika from Benin working with his tutor at the RBINS, Dr Patrick Martin.

In 2014, we have introduced two new evaluation forms. After the training, each trainee is sent an evaluation form in order to give us his feedback regarding his visit (logistics, housing, tutoring, material he could use at the lab., etc.); the second evaluation form is sent to the Belgian tutors in order to have their opinion on the trainee. From the report that we have received so far, we have a majority of very positive replies, both from the trainees and the tutors. It encourages us to keep on doing our best to make the trips and stays in Belgium as smooth as possible and offer the best access to the rich knowledge and facilities offered in Belgium in the field of taxonomy.

We however continue to ask each trainee to send a scientific report of his training at the latest one month after he returned to his home country.

An overview of the projects carried out by our visitors along with their scientific reports can be found on our website (http://www.taxonomy.be/gti_calls/grants_awarded/).

Two short symposiums were organised in 2014 by our trainees to present their research:

- Ms Rondro Ramananjanahary from the Missouri Botanical Garden, Antananarivo, Madagascar gave a presentation entitled 'Costularia and Eleocharis (Cyperaceae) of Madagascar' on Friday 29 August 2014 at the Botanical Garden of Ghent University.
- Mr Gilles S. A. Nago gave a presentation entitled 'State of amphibian diversity in Benin and outlook for research and cooperation' on Thursday 18 December 2014 at the RBINS.

In 2014, we have continued our alumni programme and maintained contact with our former visitors and trainees. We were very pleased to learn that two of our alumni successfully defended their Ph.Ds:

- Mr **Tenon Coulibaly** defended his Ph.D. on the theme "Diversité et dégâts des termites dans les vergers de manguiers (*Mangifera indica l.*, Anacardiaceae) de la région de Korhogo (Côte d'Ivoire): essai de lutte par utilisation d'extraits aqueux de trois plantes locales" at the Université Félix Houphouet-Boigny, Abidjan, Côte d'Ivoire, on July 12, 2014.

- Mr **Evariste Hermann Taedoumg** from the Université Yaoundé 1, Cameroon, defended his PhD on his research entitled "Biosystematic study of *Craterispermum* Benth *(*Rubiaceae) in continental Africa" on July 30, 2014.

Both Tenon and Hermann sent the Belgian GTI team their acknowledgements, according to them, their GTI trainings were decisive for their research and their Ph.Ds.

We have received information on other types of outcomes of our programme, such as scientific publications, popularisation communications and/or recommendations for management/action. Data relating to career advancement and outcomes from the trainings can be consulted in the news section of our website (http://www.taxonomy.be/).

Here is a selection of the scientific outputs of actual or former GTI trainees in 2014:

- New publication in Zootaxa 3795 (5): pp 549–556 entitled 'A new species of Carnoya Gilson, 1898 (Rhigonematida: Carnoyidae) parasite of a spirobolid (Diplopoda: Spirobolida) from Cuba'. The co-authors are Nayla GARCÍA RODRÍGUEZ and **GTI alumnus Jans MORFFE RODRÍGUEZ** from the Instituto de Ecología y Sistemática, La Habana, Cuba.
- New publication in Journal of Animal & Plant Sciences, 2014, vol. 22, Issue 3: 3455-3468, entitled 'Dégâts des termites dans les pépinières de manguiers du nord de la Côte d'Ivoire (Korhogo) et essai de lutte par utilisation d'extraits aqueux de plantes' by **GTI alumnus COULIBALY Tenon**, with co-authors AKPESSE Akpa Alexandre Moïse, YAPI Ahoua, ZIRIHI Guédé Noël, and KOUASSI Kouassi Philippe.
- 2 articles *in press* by **GTI alumnus PHAM, Hong Thai**, 'The genus Dundubia Amyot & Audinet-Serville, 1843 (Hemiptera: Cicadidae) from Vietnam, with key to species' and 'A review of the genus Meimuna Distant, 1905 (Hemiptera: Cicadidae) from Vietnam, with key to species.' in the Proceedings of the 8th Vietnam national conference on Entomology, Agriculture Publishing House, 2014.

Expected result 1.2 Quality scientific knowledge is produced and used for the better understanding and management of biodiversity in partner countries

Description:

Collaborative projects will be organised with partner institutions that cover training, research support to improve small infrastructures (such as material for scientific collections, lab work, training in the use and application of models to manage ecosystem services) and networking. Such projects will be undertaken with well-established partners that have signed a partnership agreement; there are a number of selection criteria for such partnerships, such as a significant operational role and mandate in the national strategy and policies at national and international level, a positive track record of past cooperation (e.g. grants, work on archives, workshops, and trainings), requests for additional cooperation. This expected result focuses on the generation and appropriate use of scientific knowledge related to taxonomy, ecology and ecosystems (function, services). Due to historical reasons, budget line and content reasons, **it is subdivided into four parts (A to D),** each dealing with one aspect and related to different partners and concepts of work (see below).

All activities undertaken to achieve this expected result, whether training workshops, research projects or equipment support, are developed in the framework of long-term partnerships. They all intend, in addition to the mentioned expected result, to consolidate partner institutions and enhance their role in their respective countries.

Logframe (partim):

Expected Results	Output Indicators	Report 2014
1.2 Quality scientific knowledge is produced **(4 parts: A, B, C, D)** 1.2.1.(A) taxonomic research is strengthened 1.2.2.(B). the monitoring of habitats for the management of ecosystems is strengthened	A number of trained students / year will produce ; publications in scientific journals and general media; graduates (Master or Ph. D.); in-country training courses as multiplier effect and additional people trained. Results will be valorised through publication in renowned science journals. They will also be used under SO1.4. A and B to produce vulgarisation tools. B At least one training per country is organized and is followed by two applications campaigns on the field. 30 people trained in the habitat monitoring, Syllabi produced and/or updated (see also 1.4.B) 4 articles published in peer reviewed journals, 4 lexicons will be finalized and used, see also SO1-4b over 5 years : 2 PhD students, 6 master students finalised their thesis, 5 oral contributions (participation to meetings, conferences, lectures, seminaries…) 5 information exchange sessions have been organised in relation with poverty reduction related subjects of the studies.	A The 4 projects that took place in 2014 were: • 'Bees and sawflies of Ecuador' by Drs Alain Pauly & Jean-Luc Boevé • 'In depth training on ant and insect taxonomy for young scientists from Western Africa at Station d'écologie de LAMTO, Ivory Coast' by Dr Wouter Dekoninck • 'A step further in the Entomodiversity of Vietnam (part V)' by Dr P. Grootaert & J. Constant • 'Diversity assessment of Congolese amphibians and reptiles, building herpetological collections and establishing a new research network in the DR Congo' by Dr Zoltan T. Nagy. B Students supported and their research: - Walelu Nsabua : « Identification et catégorisation des services écosystémiques d'approvisionnement inhérents aux termites du Miombo Katangais » -Tshibuy Ngandu : « Identification et catégorisation des services écosystémiques de régulation inhérents aux termites du Miombo Katangais » -Tshomba Wetshy : « Identification et catégorisation des services écosystémiques de soutien inhérents aux termites du Miombo Katangais » memoirs of the master level as follows: -Mr Matuba Minzinu Baudoin (ERAIFT) achieved and presented his work entitled « Les usages alimentaires des plantes spontanées de la RDCBL.

1.2.3. (C). taxonomic research and the monitoring of lowland forests at the University of Kisangani is strengthened	C 3 PhD students identified 3 PhD students/year followed training supervised by expert in Belgium/ elsewhere (total=15) For 3 PhD students: 1 local visit/2years by supervisor (total=9) 1 'atelier de restitution'/year for the 3 PHD students after their training framed in the context of poverty reduction related subjects of the studies (total=4+the PhD defence) 2 publications in scientific journals/PhD student (total=6).	Contribution à l'évaluation de la disponibilité de Gnetum africanum », 128p; -Kamana Habineza Florence (UNIKIN) also finished the « Contribution à l'inventaire des services écosystémiques des Clusiaceae dans l'aire de la RDCBL» but the date of the defence of her results is still to be determined. C In 2014 we organized 3 research stays for 2 earlier selected Congolese scientists, and one new student. Project titles: 1. Falay Dadi Sadiki: 'Understanding of epidemics of invasive salmonellosis in Central-Africa' 2. Casimir Nebesse Mololo: 'L'exploitation et commercialisation de la faune Mammalienne par les habitants du bassin du Congo et stratégies de conservation durable des espèces en forêt tropicale humide (R.D. Congo)' 3. Prescott Musaba Akawa: 'Phylogéographie, zoonose et biodiversité des chauves-souris de la forêt de basse Altitude (Kisangani, RDC)'. A1 publications • Laudisoit A., Falay D., Amundala N., Dudu Akaibe M., Goüy de Bellocq J., Van Houtte N., Breno M., Verheyen E., Wilschut L., Parola P., Raoult D., and Socolovschi C., 2014. High Prevalence of Rickettsia typhi and Bartonella Species in Rats and Fleas, Kisangani, Democratic Republic of the Congo. American Journal of Tropical Medicine and Hygiene: published online January 20, 2014; doi:10.4269/ajtmh.13-0216
1.2.4.(D) Application of the COHERENS model for integrated coastal management and monitoring of ecosystems	D A review of the presentation of the specific research questions of the partner institutes Number of scientific output (presentations, conference) Number of qualified trainee ex-post reports within the visitors programme	• Bryja J., Mikula O., Šumbera R., Meheretu Y., Aghová T., Lavrenchenko L. A., Mazoch V., Oguge N., Mbau J., Welegerima K., Amundala N., Colyn M., Leirs H., Verheyen E. 2014. Pan-African phylogeny of Mus (subgenus Nannomys) reveals one of the most successful mammal radiations in Africa. BMC Evolutionary Biology 2014, doi:10. 1186/s12862-014-0256-2

	3 policy briefs are to be produced by the partners Documentation of the Developed modules for COHERENS available.	Participations at international conferences 21st Benelux Congress of Zoology, Liege, Belgium (12-13 December 2014), 1st International Conference on Biodiversity in the Congo Basin, 6-10 juin 2014, Kisangani, Republic Démocratique du Congo (6-10 juin 2014). (abstract, see text) D • July 2014: formulation with IMARPE in Peru, logframe, problem, objective trees, stakeholder's analysis, operational plan, MoU signed (3-02-2015) and training of 8 students. • December 2014: training at RBINS of 2 Peruvians in marine modeling. • e-coaching

Activities	**Report 2014**
1.2.1.(A) Supporting taxonomic research through Prospecting new partnerships in e.g. East Africa Call for 4-5 'classical' projects Follow-up of projects and publications/dissemination/reporting	done
1.2.2.(B). Supporting the monitoring of habitats for the management of ecosystems through For DRC, Burundi, Benin **Training + Follow up** •Workshops + Follow up subsequent practice •Syllabi preparation •Expert missions •Supplying Basic Equipment and documentation •Collecting data on habitats state – Data base (feeding + exploitation) •Lexica (Redaction + Publication) **Promotion of research**	See Part II, institutional Cooperation

•Contribution to the identification of the topics • Supporting theses: preparation + publications •Help to Implement the recommendations issued by research •Attending the yearly Coalition pour la Conservation au Congo (CoCoCongo Coalition pour la Conservation au Congo –CoCoCongo Une plateforme d'appui à l a conservation des Aires Protégées regroupant l'ICCN et ses partenaires) meeting	
1.2.3. (C). Cooperation with the University of Kisangani for the taxonomic study and the monitoring of lowland forests through Selection of 3 PhD candidates with a relevant research programme Training of the selected PhD candidates in Belgium (RBINS, RMCA, Flemish and Francophone universities, & when necessary foreign experts) Expert missions for local follow up of progress made by 3 PhD students Financial support for field work, equipment, documentation, transport Financial support for 3 PhD thesis defence	3 students came to Belgium. E. Verheyen had missions to Kisangani.
1.2.4.(D) Application of the COHERENS model for integrated coastal management and monitoring of ecosystems through Setting up and implementing partnerships Supporting development of web sites Supporting visitor programmes Facilitating communication between independent participants Distance E-coaching Producing marine policy reports Coaching towards an independent use of the COHERENS model and its applications Coaching in developing site-specific applications with the code in function of policy needs, i.e. develop a site specific biological module or wastewater module Workshop for advanced users Support with scientific arguments for stakeholders Establishing links between physics, sedimentation and biodiversity is scientifically documented.	Training in Peru (8 students) Training in Belgium (2 students)

Table 5: logframe (partim) for SO1, 1.2.

Activity 1.2.1. (A). Supporting taxonomic research

Training workshops in the South

The 11th internal GTI call for proposals was launched in early 2014. As usual, it was addressed to RBINS researchers. The project must be built around the provision of training to students, scientists and/or technicians in the South. The project must contribute to strengthen local institutions. It must also have an applied component that either targets the conservation or sustainable use of biodiversity or that is essential to better understand the services provided by ecosystems.

We selected 5 high quality projects. Among these projects, 4 took place in 2014. The 4 projects that took place in 2014 were:

- 'Bees and sawflies of Ecuador' by Drs Alain Pauly & Jean-Luc Boevé
- 'In depth training on ant and insect taxonomy for young scientists from Western Africa at Station d'écologie de LAMTO, Ivory Coast' by Dr Wouter Dekoninck
- 'A step further in the Entomodiversity of Vietnam (part V)' by Dr P. Grootaert & J. Constant
- 'Diversity assessment of Congolese amphibians and reptiles, building herpetological collections and establishing a new research network in the DR Congo' by Dr Zoltan T. Nagy.

The 5th project entitled 'Formation en taxonomie et renouvellement de collections d'insectes de trois sites de la province orientale de la RD du Congo' promoted by Dr P. Grootaert should hopefully take place in early 2015.

As usual, at the end of the project, researchers were asked to provide reports (both narrative and financial) and a list of their outputs such as publications in scientific journals, posters, presentations given at international meetings, etc. The narrative reports and the outputs are published on our website www.taxonomy.be for public awareness purpose and knowledge dissemination.

Project 1. 'Bees and sawflies of Ecuador' by Drs Alain Pauly & Jean-Luc Boevé

The project took place in October 2014. The aim was to perform a taxonomic study on two groups of Hymenoptera insects, bees and sawflies, in Ecuador Bees are of prime importance by their role as pollinators in nearly each terrestrial ecosystem, and they are recognized as top priority group in the 'Biodiversity Convention' (The Sao Paulo Declaration on Pollinators, from 1999). The larvae of some sawfly species have a significant economic impact since they have caused the death of livestock in three continents including South America.The taxonomy and ecology of Ecuadorian bees and sawflies deserve further attention, especially for those species living at high altitude (over 2,500 m). The partner in Ecuador was the Universidad Técnica Particular de Loja (UTPL). UTPL recently launched a research collection of insects that they wish to significantly develop in the future. Through this visit, Drs Pauly and Boevé managed to establish collaborative links, including training, between the Ecuadorian researchers from UTPL and the RBINS.

The Ecuadorian colleagues from UTPL who collaborated with Drs Pauly and Boevé are David Donoso, Carlos Ruiz Carreira, Thibaut Delsinne (former RBINS researcher), Diego F. Dominguez, Diego Marin

The UTPL already has an entomology laboratory whose work has focused on beetles, ants and bees of the family Melipona. The teachers and students are very interested to extend their research to other groups of insects and sought the expertise of the Belgian researchers to assist them in collection development. The mission enabled them to diversify their sampling techniques in order to catch other bee families.

Fig. 5. Preparing the field trip (photo: A. Pauly)

The sampled specimens will be studied in collaboration with various international specialists on South American fauna: Claus Rasmussen (Denmark) for the Meliponinae, Michael Engel (USA) for the Halictidae and Laurence Packer (Canada) for the Colletidae. These three families represent up to 90% of the harvested material. A reference collection will be filed at the UTPL.

Publications will be prepared in co-authorship with the international specialists and the Ecuadorian colleagues. All this will be done in accordance with the license to harvest and export scientific material obtained through the UTPL.

Project 2. 'In depth training on ant and insect taxonomy for young scientists from Western Africa at Station d'écologie de LAMTO, Ivory Coast' by Dr Wouter Dekoninck

The mission took place in December 2014. It is a follow-up of a mission funded by the GTI in 2013. The major objectives of this mission were the:

- Organization of a small workshop at Nangui Abrogoua University Abidjan on the topic: Importance of taxonomy for the conservation of biodiversity (one half day).
- Organization and realization of a 8 day-long ant course (10–17/12/2014) on arthropod taxonomy and ecology in the LAMTO research station. This training was followed by 10 Ivorian students of which 8 had followed the previous GTI training « Training on soil-dwelling entomofauna inventory and ant taxonomy at Station d'écologie de LAMTO, Ivory Coast - GTI Grant Type 2» in 2013.
- Sampling of several insect families besides ants to improve the taxonomic knowledge of the studied region by "Field taxonomy courses", i.e. the use of very simple sets of characters to rapidly recognize groups, will be proposed and tested with the participants. All participants will be trained to general entomological collecting and to specific collecting of the groups studied by the other members of the staff in order to reach the best efficiency as a group during fieldwork.
- Development and further valorisation of an entomological reference collection at LAMTO, using the best international standards.
- Training on mounting of several insect families besides ants.
- Deposition of specimens in the LAMTO and RBINS' entomological collections to provide high quality material allowing local and international specialists to study the individuals collected in the future.

Fig. 6. Students ready to start the fieldwork at the LAMTO research station. (photo: W. Dekoninck)

The aims of the 8 days ant course (fig. 6) were to provide a group of 10 biology students hosted at Station d'écologie de LAMTO and Université Nangui Abrogoua (ex Abobo Adjamé) UFR-SN, Centre de Recherche en Ecologie, a training that will enable them to develop the skills:

- to disentangle the taxonomic status of several assumed ant species and genera;
- to develop a reference-type collection, using the best modern sampling and curation techniques;
- to understand the importance of a good practice of adding type-material to a collection;
- to (re)describe species and genera
- to carry out diversity surveys,
- to identify insect orders and families,
- to develop reference collections, using the best modern sampling and curation techniques.
- It is expected that this training will stimulate local students and future scientists to carry out high-quality research on entomology and myrmecology, especially within the framework of conservation projects. In addition, this project allowed the RBINS researcher to launch new and strengthen collaborations between students and taxonomical specialists related to RBINS or the Institutions/Universities of the trainers (i.e. Université Nangui Abrogoua, Station d'Ecologie de Lamto, Ivory Coast ; Université Péléforo Gbon Coulibaly de Korhogo, Ivory Coast ; Université de Yaoundé I, Faculté des Sciences, Yaoundé, Cameroun ; Departamento de Ciencias Naturales, Universidad Técnica Particular de Loja (UTPL), Ecuador).

The high instructor to student ratio (1:2) allowed the instructors to supervise students individually and to be easily available for questions or needs of supplementary information. In addition, the complementary experiences and specialties of the instructors contributed to the high-quality level of the course.

Fig. 7. Students are shown an animation movie about ant ecology and documentaries on ants in Savannahs and forests in Western Africa (photo: T. Delsinne).

The long-term objectives the researchers hope to achieve in the future are:

- stimulate the integration of insects (ants, termites, bees and beetles: mainly pest species) and some other entomofauna groups in biological surveys and conservation programs, at both the regional and national scales;
- enhance the value and the quality level of entomological collections, in particular the LAMTO entomological collection;
- motivate professors and scientists of Ivory Coast and neighbouring countries to include insect taxonomy and ecology in their teaching activities;
- improve the ant diversity and distribution knowledge in Ivory Coast, especially in the LAMTO Nature Reserve. A preliminary checklist of the collected species (Formicidae and other focus groups such as Cerambycidae, Scarabeidae-Rutelinae, Buprestidae, Fulgoridae, Saturniidae, Asilidae) will be elaborated in 2015-2016, probably with descriptions of new taxa as was already done in 2014 with specimens collected in 2013 (LIMBOURG, 2013; TOMASOVIC & DEKONINCK, 2014). Differences observed between ant assemblages from the two vegetation types (savanna, forest) selected will be discussed.

To conclude, this second entomological training in Lamto was a great success. Both professors and students enjoyed to share their experience and knowledge. All the objectives were achieved. Students were asked to write about the training to highlight what they liked or disliked. Their answers were globally very positive. After the course, the Belgian researcher will keep contact with the students.

After the training at Lamto, the instructors visited two other locations where maybe in the future new courses could be organized. It is important that Taxonomical education does not stay restricted to biology students from Université Nangui Abrogoua at Lamto NP, but also other Universities. In this context W. Dekoninck had a meeting in Yamoussoukro (17/12/2014) with some other interested biology students and representatives of Universities (such as Université Péléforo Gbon Coulibaly de Korhogo) and he visited the Ecological Research Station at the National Parc Comoe (north of Ivory Coast 18-20/12/2014).

The project took place in July-August 2014 during 3 weeks. The partner institutions in Vietnam are the Institute of Ecology and Biological Resources, Department of Insect Systematics, Vietnam Academy of Science and Technology, Hanoi, Vietnam (IEBR) and the Vietnamese Academy of Science and Technology, Vietnam National Museum of Nature, Hanoi, Vietnam (VNMN). It is a follow-up of missions organised since 2011 thanks to GTI funding.

The aims were to continue developing the knowledge on Vietnamese entomofauna via two main axes:

- Collecting, identifying and inventory of 7 target groups (i.e. Homoptera Cicadidae, Fulgoridae, Eurybrachidae, Heteroptera Pentatomidae, Phasmoptera, Lepidoptera Saturniidae and Coleoptera Rutelinae, Sericinae and Lucanidae) in 3 national parks and nature reserves in Southern Central Vietnam, a poorly known region. The training of the Vietnamese staff members, with Ms Hanh who joined the IEBR in 2013, to field collecting techniques and to identification routines, will be continued. All participants will be trained to general

entomological collecting and to specific collecting of the groups studied by the other members of the staff in order to reach the best team-efficiency during fieldwork.

- Improving the entomological collections, the collections management and the study of the material preserved at IEBR. Environmental conditions have been improved in 2011 by the purchase and installation of a great capacity freezer to allow preservation of unmounted material and disinfection of parasitized material.

This project report can be divided into 4 parts. The first part deals with the entomofauna inventories in selected National Parks of southern Central Vietnam, the second part deals with the workshop the Belgian researchers attended concerning the project of the Bidoup-Nui Ba National Park to become a UNESCO Biosphere Reserve, the third part is the assessment of the entomological collections of VNMN and the last part is the communication efforts and results about the project and GTI in general, especially at the occasion of the publication of the description of three giant phasmids including the second longest insect known to date.

Regarding Entomological Inventories, three sites were sampled: Bidoup-Nui Ba, Phuoc Binh and Nui Chua National Parks. Light trapping was done each night, whenever possible in 2 places the same night (when power sources were available). Sweeping, beating and sight collecting was done during all day time and also during the night, using front lights and torches. As a general trend, the insects were fairly abundant and specimens belonging to most insect groups were collected.

Identified specimens, including a lot of Orthoptera identified by Dr Sigfrid Ingrisch (Germany) and paratypes of newly described species of phasmids (a. o., the three new giant stick insects – see publication list below), have been brought back to VNMN to be included in the reference collection by H.T. Pham during his visit to RBINS in December 2014. This aims to facilitate the work of Vietnamese entomologists inside Vietnam in the future. Several papers by the participants dealing with new species collected during the GTI missions from 2010 to 2014 were recently published or are submitted for publication (those with material collected in 2014 are marked with *). Most of those papers are published in online, international, peer-reviewed, open-access journals so that they are easily available to all scientists worldwide at no cost. More are on the way.

The scientists were invited by the authorities of the National Park to participate in the workshop they organized in Da Lat on July 28, 2014. The aim of the workshop was **the application of the Bidoup-Nui Ba National Park to the get status of UNESCO Biosphere Reserve.** The authorities were particularly interested and impressed by the number of new species the researchers had found in just one week of prospection as it adds to the knowledge of the fauna of the park and enhances the interest of its protection. The discussions were also about the implication of the local people who live inside the park and in the buffer zone and go on exploiting some natural resources of the forest. Debates were also fed by officers of the Japanese Cooperation who shared their experience in the similar process they had been involved in at Crocker Range (Sarawak, Borneo, Malaysia).

Fig. 8. The new species described; the staff and the UNESCO workshop (left to right).

According to the scientists involved, this GTI project has been a great success again in all points of view: insect collecting (many new species and new records), contacts between the members of the staff learning experiences and sharing of knowledge and projects for further future collaboration. The Ph.D. started by Ms Le My Hanh in Taiwan is a great achievement of the project and the new position of H.T. Pham is also partly the result of this long-term collaboration. New challenges are before the scientists now, as the training of the new collaborators at VNMN.

Again, this project will lead to the description of numerous new species in the groups studied, and it is obvious that the remaining material, when it will be dispatched to the specialists abroad, will also contain new species. The inventory of the entomofauna of Vietnam is very far from being ended and should go on to obtain a better view of the amazing biodiversity of the country. The data on phasmids collected this year in 3 national parks situated close to one another, with nearly all species undescribed and only one species present in two of the parks lead the researchers to consider their 2013 estimate of at least 300-400 more undescribed species in the country to be far below reality.

The collaboration between the staffs of RBINS and VAST (VNMN + IEBR) is now very strong and leads to very encouraging results, with several papers published in the best international taxonomy journals.

Considering communication activities, J. Constant will participate in a TV show on the Flemish TV VRT to speak about his project in Vietnam, taxonomy, stick insects etc. It will be broadcasted on March 11, 2015. Experimental activities with classes in 3 primary schools in Belgium with the participation of the pupils who will rear phasmids and vote for the name of the new species will start in February 2015. The Belgian researcher hopes that it will be a success and that we will be able to reproduce the activity in primary schools in Hanoi with the Vietnamese colleagues.

Project 4. 'Diversity assessment of Congolese amphibians and reptiles, building herpetological collections and establishing a new research network in the DR Congo' by Dr Zoltan T. Nagy

The expedition took place from 22 September to 16 October 2014. It is part of a capacity building project with early-career herpetologists of the Centre de Surveillance de la Biodiversité (CSB), University of Kisangani. The CSB provided logistical support. After the field work, a four-days training has been completed about best practice to build scientific collections at the CSB.

The Congolese herpetologists involved in the project were Jeannot Akuboy Bodongola and Gabriel Badjedjea Babangenge, they are both very early-stage researchers (i.e. shortly before Master degree) at the University of Kisangani. A series of training is needed for them to improve their theoretical and practical knowledge and this project was a great opportunity for them to be trained by the RBINS herpetologist, Dr Zoltan T. Nagy.

The long-term perspective of this project is to achieve a sufficient number of well-trained Congolese herpetologists with solid knowledge on the Congolese herpetofauna as well as on biological conservation issues (e.g. threats due to the global climate change, deforestations, pathogens).

In total, 182 specimens and tissue samples were collected, representing frogs, toads, snakes and lizards. Collections focused on providing a broad representation of different taxa since the fauna of the surveyed areas is poorly documented. Hence, both common widespread species and more rare or interesting findings are represented in the collection. Collected specimens and genetic samples will serve as important source for comparative biogeographic or phylogeographic analyses to understand dispersal patterns of amphibians and reptiles, date relevant phylogeographic events in Central Africa and describe genetic variations.

Regarding the capacity building component, the following field methods were applied with the two Congolese early-career researchers: digital call recording of frog specimens, manual recording of environmental data, handling and euthanasia of amphibian and reptile specimens including venomous snakes, collecting tissue samples for molecular analyses; preserving and mounting specimens for wet and dry collections, data recording and databasing for bioinventory using current standards.

In addition, basic equipment for field work has been purchased prior to the expedition. For example, a Garmin GPS receiver, a snake tong, head lamps, vials and chemicals for tissue samples, etc. were donated to the Congolese researchers. With this equipment, they will be able to conduct field work independently.

So far (2010-2014) over 2,000 specimens of amphibians and reptiles have been collected in the Democratic Republic of the Congo in expeditions that were partly supported by the GTI. Corresponding tissue samples were always taken for genetic analyses. A large DNA barcoding project for biodiversity assessment is still ongoing, thereby we are collaborating with further colleagues (for example in Germany, the USA, Denmark and the Czech Republic). Although many, recently initiated and/or larger projects are ongoing, in 2014 we published peer-reviewed papers and presented our results at a scientific meeting.

Fig 9. Processing specimens in the field lab in the base camp at Bagwase III (left) and mounting specimens of amphibians and reptiles for scientific collection (right) (photos: J. Muratet).

Peer-reviewed papers published in 2014 or in press:

- Nagy, Z.T., Gvoždík, V., Meirte, D., Collet, M. & Pauwels, O.S.G. (2014): New data on the morphology and distribution of the enigmatic Schouteden's sun snake, Helophis schoutedeni (de Witte, 1922) from the Congo Basin. Zootaxa 3755: 96-100. DOI: 10.11646/zootaxa.3755.1.5
- Nagy, Z.T., Kielgast, J., Moosig, M., Vamberger, M. & Fritz, U. (in press): Another candidate species of Pelomedusa (Testudines: Pelomedusidae) from the Democratic Republic of the Congo? Salamandra.

In June 2014, Zoltan Nagy attended the First International Conference on Biodiversity in the Congo Basin in Kisangani, and was author or co-author of the following presentations, related to the current GTI project:

- Nagy, Z.T., Chifundera Kusamba, Z., Greenbaum, E., Gvozdik, V., Matthyssen, S., Akuboy Bodongola, J., Verheyen, E., Mebert, K. & Kielgast, J.: Assessing the diversity of Congolese snakes with DNA barcoding
- Chifundera Kusamba, Z., Nagy, Z.T., Greenbaum, E., Kielgast, J., Gvoždík, V., & Mebert, K.: L'herpetofaune de la Cuvette Centrale en R.D. Congo.
- Greenbaum, E., Conkey, N., Chifundera Kusamba, Z., Pramuk, J., Carr, J., Roedel, M-O., Jackson, K., Kielgast, J., Nagy, Z.T. & Penner, J.: Systematics of Congo Basin true toads (Anura: Bufonidae: Amietophrynus) reveals widespread cryptic speciation.

- Kielgast, J., Nagy, Z.T., Chifundera Kusamba, Z., Lotana Lokasola, A., Akuboy Bodongola, J., Mebert, K. & Lötters, S.: Knowledge-gaps and novelty in the amphibian diversity of the Democratic Republic of the Congo.

The following poster was also presented during the Conference: Chifundera Kusamba, Z., Nagy, Z.T., Kielgast, J., Collet, M., Mebert, K. & Gvozdik, V.: Reptiles and amphibians as bushmeat in the Democratic Republic of the Congo.

Fig 10. Sampled specimens: *Grayia ornata* (left) and *Xenopus* frogs (right) (photos: J. Muratet).

Activity 1.2.2. (B). Supporting the monitoring of habitats for the management of ecosystems

As explained earlier, the annual reports for 2014 written by our institutional partners OBPE (Burundi) and UAC (Benin) are reported under Part II Institutional cooperation and can be consulted in annexes 3 and 4. The reporting here concerns the capacity building activities involving CEBioS staff, especially Dr. François Muhashy.

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1. Partnerships in DR Congo

1.1. Activities carried out in synergies with ICCN, UNILU: Katanga, in the forest in the forest reserve of Luswishi (Katanga)

•Introduction Monitoring of habitats

It was decided at the beginning of the 2014 programme, the LEM habitats was going to be focussed on the valorization of the most relevant results generated from the earlier programme (see previous reports).

In 2014, we continued the work undertaken by the ICCN and the UNILU with the RBINS support to establish a reference device for the monitoring of the dynamics of habitats on termitosols, on a model site that is serving also in promoting the ecosystem services that are inherent to termite mounds. This activity was set up during the first trimester of 2014 under the supervision of Prof. Basile Mujinya Bazirake (Agricultural Faculty, UNILU) within the woodland of Luswishi (30 km from Lubumbashi). Five transects were installed and ten permanent plots of 20,000 m2 each one were delineated along these transects. The monitoring comprised two components and generated the results below:

• Dynamics of habitats

The monitoring was ensured in connexion with the PhD research that was begun by Mr Cuma Mushagalusa Fidèle, a young assistant at the UNILU, on the “mécanismes d’assemblage d’espèces termitophiles en forêt claire du Miombo".

The various habitats were recognized in correspondence to the following vegetations types: - grass savannas dominated by Loudetia simplex and Hyparrhenia spp.; -steppe savanna ; - Sub-shrub savanna; - shrub savannah ; -tree savanna ; -woodland ; - Clear forests (Miombo); - remnant dense dry forests (Muhulu). A total of 156 plant species have been inventoried.

The data obtained were used to compare the matrix and termite mounds in order to highlight differences in productivity between the two habitats. Thereby the contribution of high termite mounds compared to that of the matrix and to that of the total biomass of the miombo was is pointed out.

•Identification and qualification of ecosystem services

Ecosystem services inherent to termite mounds have been associated with the identified and qualified following the typology proposed by the Millennium Ecosystem Assessment (MEA) (2005). Four categories were easly recognized at the Luswishi Reserve: Supply services; Regulating services; Cultural services; Support services. Further observations have led to the specification and the definition and description of 17 kinds of services comprised in the above categories. This work was carried out with the participation of students from the Faculty of Agriculture in the frame of their internship. Their names and subjects of their contributions are the following:

- Walelu Nsabua : « Identification et catégorisation des services écosystémiques d’approvisionnement inhérents aux termites du Miombo Katangais »

-Tshibuy Ngandu : « Identification et catégorisation des services écosystémiques de régulation inhérents aux termites du Miombo Katangais »

-Tshomba Wetshy : « Identification et catégorisation des services écosystémiques de soutien inhérents aux termites du Miombo Katangais »

1.2. Activities with ICCN, UOB (and UNIGOM)

1.2.1. Lexicon of habitats types and of the dominant plants in the Itombwe Natural Reserve

To complement the observations made previously (2013), an agreement was signed by IRSNB and UOB in 2014, in order to conduct a campaign to collect new data. Apart Professor Masumbuko, his field team comprised also four young researchers (MM Butoti Rusati, Igunzi Felix, Shwapa Kitera and Mis Bahati Cirimwami) who decided to work in the RNI in the frame of their memoirs. Several rangers were involved also.

The study was carried out from the low plateaus up to the highlands of Itombwe, on three itineraries (Rubanga – Lac Lungwe, Mugaja – Magunda, Nundu – Kipupu) through the territories of Uvira, Mwenga and Fizi.

The vegetation types were identified following the physiognomic parameters (mostly the stratification and the coverage) and dominant species were recorded. For each individual habitat, photographs were taken. A total of three hundreds of plant species (trees, shrubs and herbs), serving to characterize the vegetation and their dynamics, were photographed, identified with their Latin names, recorded on Excel files and inserted into herbarium. Their local names were also mentioned in five local languages (common names): Kifuliru, Kibembe, Kinyindu, Kinyarwanda and Kivira.

Species groups which distinctly characterize one or another mountain altitudinal interval (low plateaus or highlands) were pointed out.
With our colleague Masumbuko Ndabaga Cephas (UOB), we checked the results above (Fig. 11).

Fig. 11. Professor Masumbuko Ndabaga Céphas (UOB) and Dr F. Muhashy (RBINS) in a work session organized in September 2014.

1.2.2. Workshop for the enhancement of the management of ecosystem services in the Virunga National Park

• Contribution to Training on inventory methodologies of *Prunus africana* in the mountains of Kivu - Butembo (DR Congo from 26 April to 3 May 2014)

The objective was to "prepare a team that is able to make an inventory of the populations of *Prunus aficana*, to evaluate the density, quality, phenology and regeneration, such that the management of this resource become sustainable and make it possible to avoid extinction due to the trade of tree bark of the species ".
By the way of its synergies with the ICCN, the "Centre for Information and Promotion of Agricultural Projects (CIPPAGRI), asked Dr. François Muhashy Habiyaremye to contribute to this training. However, the task was delegated to our collaborator Prof. Musumbuko Ndabaga Cephas (UOB), because the above period coincided with a mission to Benin (UAC).
At the workshop on *Prunus africana*, he took in charge the module on "dynamic and regeneration of this species."
The practical part of the training took place in the forest reserve of Kalikuku (37 km from the city of Butembo).

Fig. 12. «**Ouverture des layons de comptage dans la réserve de Kalikuku»**

1.2.3 Co-organization by the RBINS (via UOB) and the Botanical Garden Meise (BGM) of a workshop for the Network of mycologists of the Great Lakes Region (Goma- DR Congo, 13 -17 November 2014)

Theme: knowledge of mushrooms that are to be valorized, especially those which are spontaneous and edible in the African Great Lakes Region.The IRSNB sponsored the participation of 15 scientists from three countries (Burundi, Rwanda and DR Congo) and it covered the cost of the Belgian trainer, Dr. J. Degreef (BGM).

Regarding the practical part of this workshop, the participants worked 3 days in the forests at the Kibati locality in the vicinity of the PNVi (25 km from the city of Goma).
The young assistants who benefited from the training at this occasion will continue to strengthen the skills they have acquired, by participating in research on Fungi in this park.

1.3. Collaboration with ICCN, UNIKIN, ERAIFT, WWF in the Reserve of Bombo –Lumene

In 2014, RBINS continued to provide support to two students who have been preparing their thesis of the master level:

-Mr Matuba Minzinu Baudoin (ERAIFT) achieved and presented his work entitled « Les usages alimentaires des plantes spontanées de la RDCBL. Contribution à l'évaluation de la disponibilité de Gnetum africanum », 128p;

-Kamana Habineza Florence (UNIKIN) also finished the « Contribution à l'inventaire des services écosystémiques des Clusiaceae dans l'aire de la RDCBL» but the date of the defence of her results is still to be determined.

Dr F. Muhashy continued to ensure the co-supervision of these studies.

During a mission in Kinshasa (19- 26 November 2014), F. Muhashy checked definitively the content of these memoirs as well as the plant specimens referred to therein and conserved in the herbarium of the UNIKIN (Fig. 13).

Fig. 13. Visit to the UNIKIN herbarium where plant specimens from the RDCBL are conserved

He also discussed with partners on the need to continue and deepen the research on ecosystem services. Regarding the research at the ERAIFT, Mr Matuba concluded that *Gnetum africanum* and *Dracaena camerooniana* are among the plant species that are subject to excessive harvesting from the RDCBL. He wants to focus his future investigations on recognition and quantification of other plants that are overexploited. His ambition is to facilitate and to propose the domestication of such wild species in order to keep and enhance sustainably their economic importance.

With the Academic Secretary of ERAIFT (Prof. Mathe Mweru) it was agreed to encourage the continuation of this work as a PhD project.

At the ICCN, Mr Nlemvo Budiongo Paul and Dr. Augustin Ngumbi Amuri (Advisors at the General Directorater) and Mr Mathe Kisuki (Technical Director) found that the RBINS contribution constitutes the largest achievements of the scientific component of their institution. Indeed, 2 doctoral theses and 4 memoirs of the master's degree level have been completed. Furthermore, we have already delivered 2 didactic manuals, 16 scientific articles, 9 posters and a very significant report (150p) prepared within the programme of the "Système de Gestion de l'Information sur les Aires Protégées"

(SYGIAP II). This initiative of UNESCO was funded by the Belgian Federal Scientific Policy and was devoted to protected areas in Danger in DR Congo.

This occasion served also to know the new needs expressed by the ICCN, especially the following:

- an involvement of the IRSNB in preparing manuals as guides to facilitate the recognition of Congolese species listed or to register on the Red List of the IUCN;
- identification of new research topics
  We thought about the involvement of young researchers in evaluating the productivity of spontaneous mushrooms, particularly edible species in and around the Virunga National Park.

This is also the most important recommendation made by the participants in the workshop of the Network of the Mycologists of the Great Lakes Region held in Goma in November 2014 with the RBINS support.

2. Partnership with the OBPE in Burundi

2.1. Monitoring of the dynamics of habitats

- **Workshop at the OBPE**

Following the request of Benedict Nzigidahera, the OBPE Scientific Director, Dr. François Muhashy Habiyaremye (RBINS) carried out a mission in Bujumbura in September 2014. The objective was to train the personal to record standardized observations on the dynamics of habitats in order to improve a data base on the Burundi protected areas that is being constituted.
The list of 14 persons who benefited from this training is given in the annex2. Each of the 10 sectors in which a transect was established during the 2013 campaign of LEM habitats was represented.

Introduction
We recalled the usefulness of these ecological paths, for example the one that was established in the Rwegura sector in the Kibira National Park:
- It served as didactic framework for the practical part of the trainings organised on the field during the first workshop on the monitoring of the dynamics of habitats; - It corresponds to the predetermined track, along which the observations on monkeys, especially chimpanzees, were done. Therefore this transect is appropriate for the interpretation of interrelations between habitats and wildlife; - This device can attract various other collaborations, in particular with the WCS that wrote on chimpanzees of the Kibira mountains (2005); - It can be used in synergies in the field of REDD +, and so on.

Revision
The training began with a revision to address inaccuracies that were identified from the report obtained from the OBPE on observations on the dynamics of habitats, as recorded from the field by the managers of the protected areas within the framework of the implementation of the LEM.
The trainees exercised themselves to designate habitats on the basis of forms that synthesize the physiognomic descriptors of the vegetation and with reference to dominant plants in each vegetation. Specimens of these species were checked at the OBPE herbarium where they are conserved. The whole session was conducted interactively (Fig. 14).

Fig. 14. Mr Manirakiza Mark, who completed his memoir in the PN Kibira and presented it at UB in 2013, is currently involved in maintaining herbarium constituted at the OBPE to facilitate monitoring of the dynamics of habitats.

Learning how to record data electronically

The ambition being to acquire the capacity to record the data electronically, some Excel notions were recalled or taught to trainees and they were helped to record data with this software.

Participants appreciated the advantages it offers in comparison with the paper sheet they used before and they were very enthusiastic to take advantage from this new tool: - unlimited possibility to increase the record of observations of the electronic sheet ; - automatic recording using pre-established macros; - corrections without or with minimal constraints; - strong reduction of the risk of losing papers of records (no risk of damage by rain, etc.); - very easy transfer of data from the field to the headquarter of OBPE. Interactive exercises were done.

N.B. The workshop was reported by a team of the national Radio and Television of Burundi.

Fig. 15. Session of recording LEM data on an Excel spreadsheet

2.2. Preparation of the lexicon dedicated to habitats of the Kibira National Park

« Guide illustré à travers les habitats du Secteur Rwegura dans le Parc National de la Kibira (Burundi) ».

In 2014, the text that was prepared at the end of 2013 and its illustrations were reviewed. In addition to the corrections made during the mission mentioned above, it was decided that Mr Benoît Nzigidahera (OBPE) can improve the presentation of the map of the ecological path of Rwegura sector so that this transect and permanent plots demarcated along the last, for the monitoring of the dynamics of habitats in this mountains, can be well highlighted with a consistent legend. Similarly, this partner would provide us original photographs of habitats and their dominant plants so that this material can be used when editing this manual, which expected to be delivered next spring (2015).

2.3. Scientific knowledge acquired on the natural productivity of wild edible fungi in woodland in eastern Burundi

We followed up the production of the report on the results of the research set up since 2013 on the above subject.

Out of the works carried out by MM Kankunze Alain and Nkengurtse Jacques, while they were students at the UB under the supervision of Dr Jérôme Degreef (BGM) and Benoît Nzigidahera (OBPE) and with the RBINS support, we obtained among other the following results.

- **Inventory**
    - Ectomycorrhizal mushrooms: 38 species distributed into 14 genera, these belonging to 7 families;
    - saprotrophic fungi: 3 species ;
    - unidentified: several specimens.

Some species from this inventory are illustrated on Fig 16.

- **Productivity**

Quantitatively, an average of 276,2kg of edible mushrooms / ha/year were found in the woodlands of eastern Burundi.

- **Phenology**

Mushrooms abound mainly during rainy seasons; the quantities harvested linearly depend on rainfall.

Fig 16. Illustration of some mushroom species collected

3. Partnership with the 'Université d'Abomey- Calavi (UAC), Benin

Following the pre-agreement on the planning of the partnership between RBINS and the UAC, particularly the activities focussed on the Pendjari National Park, one mission was carried out by Luc Janssens de Bisthoven and François Muhashy in Benin in April 2014. The objective was to formulate the whole project for the period 2014-2016 and to organize the first workshop to begin the simplification of the scientific content published previously on bush fire.

•The meeting held prior on the observations of habitats in this park.

Four presentations were given and discussed. These include the intervention of Dr François Muhashy (RBINS) on "the experiences drawn from the programmes carried out previously in DR Congo and Burundi" and Professor Marcel Houinato's presentation on "the results of the research that are available on wildfires in Benin".

During these sessions, vocabulary and relevant concepts that need to be simplified have been identified and the following other points were underlined:

- It was noted that no previous study relates specifically to the PNP. Yet it was clear that acquiring the capacity to choose the type of fire to be applied specifically to each type of vegetation of the PNP is one of the major concerns of managers of the park.
- It was recommended that the project can provide specific answers to various locations in the park.
- It has become necessary to simplify the content of the studies conducted elsewhere, especially in classified forests and to apply them to the PNP.
- Given that the most advanced work was focused on the evaluation of biomass, this element needs to be consolidated by a section on quality, as it constitutes a major factor of attractiveness of animals.

•Observation of habitats on the field

Along several ecological itineraries (Piste de Bondjagou ; Piste de Bali ; Piste de la Pendjari ; Piste aux éléphants) we visited humid biotops such as the hippo swamp, and different savannahs represented in the park.

For each station observed, we identified the type of vegetation, according respective dynamical level. This typological exercise was based on physiognomic parameters (mostly the stratification and the coverage); the plant species dominant were also recorded systematically.

The recovery of vegetation after burning and resilience of plants against fires was examined. Explanations for these subjects were given mainly by Prof. Marcel Houinato (UAC). (Fig. 17).

Fig. 17. Professor Marcel Houinato (left in photo) explaining the phenomenon of tillering in grasses during the recovery of the vegetation after fires

At the end of the workshop it was agreed that the vocabulary and relevant concepts will continue to be pointed out and proposed for simplification. These elements and their translation into words more easily understood by a greater number of actors were going to constitute the content of a first manual to be written by the IRSNB-UAC. Suggested title: "feux de végétation dans les aires protégées: guide d'utilisation".

- **Visites à l'ambassade de Belgique et à la GIZ à Cotonou (Benin)**

Avant et après son déroulement à Cotonou, nous avons eu un rendez-vous à l'ambassade de Belgique au Benin les 14 et 17 avril respectivement. L'objet, le déroulement et les résultats de ces visites sont bien restitués dans le rapport fourni par Luc Janssens de Bisthoven à l'issu de cette mission et qui s'étend également sur l'entretien que nous avons eu au siège de la GIZ dans le pays.

Fig. 18. Office at Belgian embassy, Cotonou, Benin, Mr. Broecke (Ministre Conseiller) debriefing of formulation mission by Luc Janssens de Bisthoven. Prof. Marcel Houinato in the middle, Mr. Pont on the right.

Activity 1.2.3.(C) Cooperation with the University of Kisangani for the taxonomic study and the monitoring of lowland forests

This report summarizes the activities that have been specifically financed by the DGD-RBINS framework agreement. Reports on complementary activities carried out in Kisangani (finalization and inauguration of the CSB, its first Council of the CSB and the organisation of '1ste International conference on Biodiversity in the Congo Basin') are provided in the annual report of the DGD-RMCA framework agreement for 2014, and the respective VLIR and BELSPO reports (VLIR & Belspo financed these events).

Supervision of the work of three Congolese PhD students

- In 2014 we organized 3 research stays for 2 earlier selected Congolese scientists, and one new student.

- Project titles:
  1. Falay Dadi Sadiki: 'Understanding of epidemics of invasive salmonellosis in Central-Africa'
  2. Casimir Nebesse Mololo: 'L'exploitation et commercialisation de la faune Mammalienne par les habitants du bassin du Congo et stratégies de conservation durable des espèces en forêt tropicale humide (R.D. Congo)'
  3. Prescott Musaba Akawa: 'Phylogéographie, zoonose et biodiversité des chauves-souris de la forêt de basse Altitude (Kisangani, RDC)'

Activities

- The stays of Falay Dadi Sadiki and Casimir Nebesse Mololo, were preceded by at least one previous visit to the laboratories of their Belgian supervisors (respectively Dr Jan Jacobs of the ITM, and Erik Verheyen, at the RBINS/UAntwerpen & external experts Prof. Marijke Verpoorten (University of Antwerpen, Department development Studies & Victor van Caeckenberghe UAntwerpen). Hence their stay continued the training they already received concerning laboratory practices (analyses), data analyses, and reporting (drafting reports & scientific publications). For Prescott Musaba Kasawa, who was selected to replace the late Philibert Tazole, it was the first visit abroad in the context of this project.

- To ensure that their stays would be as efficient as possible, Falay Dadi Sadiki and Casimir Nebesse Mololo were asked to prepare a detailed overview of the status of their work, including a detailed planning before coming to Belgium.

- Falay Dadi Sadiki and Casimir Nebesse Mololo, were subjected to interactive sessions to further elaborate their programmes, to prepare their laboratory work, and to analyse their results. They were also assisted with the actualisation of their literature database, and were asked to list the missing links (data, analyses) that may be required to make their data publishable in international scientific journals.

- Falay Dadi Sadiki was also supported in his attempt to secure an Individual PhD Sandwich Scholarship Programme (ITM-DGD) that could allow him more facilities to continue his PhD research project. The fellowship is awarded after a competitive procedure based on the evaluation of academic merit, a full PhD project proposal and the quality and relevance of the institutional set-up. The doctoral research project will typically last four years. The scholarships are of the 'sandwich' type; meaning that the student will spend the doctoral research time partly in the home institute/country and partly at ITM. The outcome of his application is still pending. These activities were funded with the budget for 2013. For project year 2014, Falay has been invited to Belgium between 18 February and 15 April 2015.

- Casimir Nebesse Mololo, was given the opportunity to process the new bushmeat samples he had collected in Kisangani, and to make a combined analyses of the molecular identification of the bushmeat samples collected on the markets in the region around Kisangani. With these data in hand, he was asked to draw the first conclusions concerning the differences in species composition of bushmeat sold in rural and city markets, interpret the observation why several rare/red-listed species were sold under a wrong label on the markets. Finally, he was assisted to browse the local grey literature (theses, reports) from the area of Kisangani to make an inventory of the recorded species composition of bushmeat sold in Kisangani during surveys carried out between 20-25 years ago and today. Again, some attention was given to the evaluation of the 'questionnaires' he developed earlier to investigate the economic, social and cultural (gastronomic) drivers of the bush-meat trade.

- As Prescott Musaba Kasawa was selected to participate in the 'stage' Conservation et Informatisation des Collections Muséales en Zoologie" that was organized at the RMCA-Tervuren between 3-28 November 2014, we used this opportunity to split his first research stay in Belgium in two stages.

- His first stay in October 2014 (without incurring travel expenses for our project budget), will be followed by a second stay in project year 2014 that will be organized between 1 February-15 March 2015. During this first stay, Prescott Musaba Kasawa was given the opportunity to learn how to find and gather recent literature on his subject, followed by some exercises on how to use this information to further elaborate his PhD project proposal. Special attention was given to making a combined inventory of all the bat samples he and his co-workers had already collected during previous field campaigns ((including the Congo2010 expedition). Finally, he received a brief theoretical initiation in DNA barcoding (molecular identification of animal species) in the molecular laboratory of the RBINS.

Fig. 19. Aerial view on deforestation of lowland tropical forest, near Kisangani.

Outcomes

- The outcome of the visit of Falay Dadi Sadiki included (see previous report[2]): Moreover, Falay Dadi Sadiki submitted an Individual PhD Sandwich Scholarship Programme (ITM-DGD) that could allow him more facilities to continue his PhD research project. The outcome of his application is pending.

- The outcome of the visit of Casimir Nebesse Mololo builds on the results of his previous stay: (i) the further exploitation of the collected material and the corresponding documentation, (ii) application of molecular bar-coding of (approximately 240) bush-meat samples from in and around Kisangani, (iii) the comparison of the molecular identifications and the species names given to the purchased bush-meat, (iv) the analyses of the proportion of protected species sold on markets, (differences observed in species composition of animals sold in the main and peripheral markets in the region), (v) attempt to infer the profit margin of various bush-meat products marketed, (vii) the details of the different types of mammals sold as bush-meat in Kisangani.

Publications

Papers

- Laudisoit A., Falay D., Amundala N., Dudu Akaibe M., Goüy de Bellocq J., Van Houtte N., Breno M., Verheyen E., Wilschut L., Parola P., Raoult D., and Socolovschi C., 2014. High Prevalence of Rickettsia typhi and Bartonella Species in Rats and Fleas, Kisangani,

- [2] (i) refinement and cleaning of his study database, (ii) merging clinical and microbiological database and (iii) assessing the relations between different variables by pivot tables/graphs and testing them for statistical significance. In addition, Dadi performed an extensive literature study about invasive salmonellosis in Central-Africa and started to compile the results in a manuscript of which the main findings are (i) confirmation of the outbreak of invasive salmonellosis with observation of an over-time shift from *Salmonella Typhimurium* to *Salmonella Enteritidis*, (ii) observation of an association between increased transfusion need at the one hand and Salmonella Enteritidis bacteremia at the other hand (significantly more as compared to Salmonella Typhimurium) and (iii) similar differences in clinical presentation, i.e. significantly more pallor and more severe anemia in the case of Salmonella Enteritidis compared to Salmonella Typhimurium. Dadi presented his findings at several meetings with peer researchers and has finalized a first draft of the a manuscript which will be submitted for publication. His findings are of high relevance for the understanding of epidemics of invasive salmonellosis in Central-Africa. Dadi considers to elaborate further research on this topic, with emphasis to the role of wildlife and live stick as sources of salmonellose in the villages and cities of the province Orientale in RDC.

Democratic Republic of the Congo. American Journal of Tropical Medicine and Hygiene: published online January 20, 2014; doi:10.4269/ajtmh.13-0216

- Bryja J., Mikula O., Šumbera R., Meheretu Y., Aghová T., Lavrenchenko L. A., Mazoch V., Oguge N., Mbau J., Welegerima K., Amundala N., Colyn M., Leirs H., Verheyen E. 2014. Pan-African phylogeny of Mus (subgenus Nannomys) reveals one of the most successful mammal radiations in Africa. BMC Evolutionary Biology 2014, doi:10. 1186/s12862-014-0256-2

Participations at international conferences

- 21st Benelux Congress of Zoology, Liege, Belgium (12-13 December 2014),
- 1st International Conference on Biodiversity in the Congo Basin, 6-10 juin 2014, Kisangani, Republic Démocratique du Congo (6-10 juin 2014).

Abstracts in these meetings

- To Hulu M., Pitchou J.-P., Amundala Drazo Nicaise, Iyongo Waya Mongo Léon, Gambalemoke Mbalini S., Mate Mweru J.-P., Ewango C., Verheyen E., Dudu A., Bogaert J. 2014. Diversity and demographic structure of Rodents populations (Rodentia: Mammalia) according an anthropisation gradient in Forestry Reserve of Masako (R. D. Congo). Abstract Book, page 79, ZOOLOGY 2014, 21st Benelux Congress of Zoology, Liege, Belgium (1213 December 2014)
- Amundala Drazo N., Leirs H., Verheyen E., Laudisoit A., Mbalitini Gambalemoke S. and Dudu A. 2014. Biodiversity, reproduction and population structure of Sciuridae (Rodentia, Mammalia) from the Forest Reserves of Yoko, Masako and the locality of Uma (Eastern Province, DR Congo). Abstract Book, page 108, ZOOLOGY 2014, 21st Benelux Congress of Zoology, Liege, Belgium (1213 December 2014)
- Mbalitini Gambalemoke S., Itoka Mukinzi J.-Cl., Kabeya Mutombo, Drazo Amundala N., Gatate-Banda Katuala P., Hutterer R., Hulselmans J., Prévot V., Verheyen E. and Dudu A. 2014. Preliminary data on the biodiversity of Rodents (Rodentia) and shrews (Soricomorpha) in the Hunting Area Rubi - Tele (Province Orientale, Democratic Republic of Congo). Abstract Book, page 204, ZOOLOGY 2014, 21st Benelux Congress of Zoology, Liege, Belgium (1213 December 2014)
- Nebesse Mololo C., Nyere G. A., Fatima M. P., Malekani B., Gambalemoke Mbtalitini S., Gembu Tungaluna G.-C., Verheyen E. and Dudu A. 2014. State of play of the registered exploitation of game at the Control post AFILONDO (Project Pro-roads) on the RN4 (PK 129, Route Buta, Kisangani, DR Congo) Abstract Book, page 212, ZOOLOGY 2014, 21st Benelux Congress of Zoology, Liege, Belgium (1213 December 2014)
- Laudisoit A., Falay D., Amundala N., Dudu A., Goüy De Bellocq J., Van Houtte N., Breno M., Verheyen E., Wilschut L., Parola P., Raoult D., Socolovschi C. 2014. High Prevalence of Rickettsia typhi and Bartonella Species in Rats and Fleas, Kisangani, Democratic Republic of the Congo. 1st International Conference on Biodiversity in the Congo Basin, 6-10 juin 2014, Kisangani, Republic Démocratique du Congo.
- Nagy Z. T., Chifundera Kusamba Z., Gvozdik V., Matthyssen S., Bodongola Akuboy J., Verheyen E., Mebert K., Kielgast J. 2014. Assessing the diversity of Congolese snakes with DNA barcoding. 1st International Conference on Biodiversity in the Congo Basin, 6-10 juin 2014, Kisangani, Republic Démocratique du Congo.
- Nagy Z. T., Verheyen E., Vreven E., Sonet G., Breman F., Jordaens K., van Houdt J., Danadu Mizani C., Snoeks J. 2014. Towards the DNA barcoding of the Congolese riverine fish fauna. 1st International Conference on Biodiversity in the Congo Basin, 6-10 juin 2014, Kisangani, Republic Démocratique du Congo.
- Laudisoit Anne M, Chantrey Julian, Amundala Nicaise, Vanhoutte Nathalie, Crombe Florence, Birtles Richard, Verheyen Erik, Gouy De Bellocq Joelle 2014. Microdiversity inside

macrobiodiversity: Zoonotic risk along the Congo River. 1st International Conference on Biodiversity in the Congo Basin, 6-10 juin 2014, Kisangani, Republic Démocratique du Congo.

- Gambalemoke Mbalitini Sylvestre, Stanley William T, Hutterer Rainer, Kerbis Peterhans Julian C, Mukinzi Jean Claude, Katuala Pionus, Hulselmans Jan, Prevot Vanya, Verheyen Erik, Dudu Akaibe Benjamin (2014). Phylogéographie et diversité biologique des musaraignes (Soricomorpha, Soricidae) au N-E de la Cuvette congolaise en RD Congo. 1st International Conference on Biodiversity in the Congo Basin, 6-10 juin 2014, Kisangani, Republic Démocratique du Congo.

Main issues encountered/solved

- With the new building of the CSB fully functional since the spring of 2014, including a more reliable internet and electricity supply, the scientific staff at UNIKIS now by far fewer problems that could keep them from carrying out their academic and scientific tasks. Due to the financial constraints on the UNIKIS campus that is a direct consequence of the rejection of a multi-annual financial support for the CSB through a framework agreement between Belgian Development Aid and the RMCA-Tervuren, it remains to be a matter of concern how long the currently favourable conditions can be assured (now maintained via FLEGT/CSB till end 2015).

Fig. 20. Centre de Surveillance de la Biodiversité, Kisangani, RD Congo

Recurrent problems

- Many Congolese researchers, read, write and speak English insufficiently well to independently write manuscripts that are acceptable for international scientific journals. Although Falay Dadi Sadiki has made significant progress, this remains a difficulty that we will have to continue to address. We will suggest that PhD students should be priority target audiences for the 'Academic English' modules that are offered in UNIKIS through the VLIR CUI project. Should this not suffice, new initiatives aiming at strengthening the capacity of the local scientific community need more specific/specialized language courses that are better tailored to the needs of their target audience. This issue was also addressed in the Strategic Plan of the CSB and the developed activities programme for the CSB will provide additional training in English academic writing for the CSB personnel, including the academic personnel of the University of Kisangani.

- The lack of basic skills of Congolese trainees to analyse data remains a real concern. Basic statistical skills are very limited, and the lack of experience using software packages to statistically analyse results is a fundamental issue. From now on, we have decided to provide every trainee

with the free software package PAST http://folk.uio.no/ohammer/past/) and accompanying training to ensure improved data analysis, with functions for data manipulation, plotting, univariate and multivariate statistics, ecological analysis, time series and spatial analysis, morphometrics and stratigraphy.

- Visa problems: Although the visa problems that we had for Dr Falay were finally solved, it is clear that we need to stay vigilant to avoid encountering such problems in the future.

Activity 1.2.4. (D). Application of the marine modeling to integrated coastal management and monitoring

Activities of 2014:

1. Formulation mission Peru
2. Improving capacity building skills
    a. Course notes
    b. Introduction package
    c. Website and forum
3. Training course: Introduction to hydrodynamic models (1 December til 23 December 2014)

Formulation mission Peru

In 2014 we focused on establishing a cooperation with Peru, more specifically with the IMARPE institute (Instituto del Mar Peru, contact person: Jorge Quispe). A formulation mission was organized (21-25 July 2014) in Lima with representatives from MINAM, San Marcos University and IMARPE. During that mission we formulated a project we could work on. The focus of the cooperation is on capacity building for the sensible use of hydrodynamic models. These models are the cornerstone of many applications that protect marine coastal ecosystems. It was agreed that we would apply the model on four different ecosystems. The case studies are situated on the map below. The map is followed by a problem statement that explains the value of the study for the biodiversity and how it will strengthen the economic position and health of the local inhabitants.

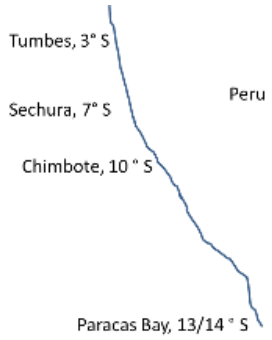


Fig. 21. The coast of Peru with the study sites.

Tumbes

Tumbes is a mangrove area at the border between Peru and Ecuador. The ecosystem suffers increased sedimentation due to changed land use upflow the river Tumbes. Further on the mangrove system is protected in Peru, but not in Ecuador. The cut of the mangroves in Ecuador results in a breach of the natural dyke function the ecosystem has, hence demolishes its value. Further on it is also believed that climate change will damage the ecosystem. Climate change causes Temperature rise, sea level rise and alters the salinification/desalinification cycle, which is important for the species composition of this habitat. The alteration of this cycle is enhanced in combination with an el niño event. Hence, the overall objective of this study is to contribute to obtain a healthier and stable mangrove ecosystem.

Paracas bay

The second case study is Paracas bay. This bay is an area with a high biodiversity and has a nature reserve. http://en.wikipedia.org/wiki/Paracas_Bay gives some background info. It has a lot of migratory birds coming over. The region is also the habitat of sea wolves, Sea wolves or South American sea lions. It has wetlands which are typically biodiversity rich hot spots, it is referred to as the Galapagos for the poor man. It is also the source of bird fertilizer for the agriculture in the region. Unfortunately there is also a lot of industry going on in the region (gas pipes, fish meal factories, ..). A flooding can cause huge damage to the industrial constructions. Flooding is a real threat since there is a lot of seismic activity going on in the region. The main objective of this case study is to increase the safety of both ecosystem and people living in the area.

Sechura bay

The main problem of Sechura bay is a high concentration of phosphates in the marine waters. This is a problem because it limits the ecosystem to the lower trophic levels (plankton), the higher trophic levels disappear. Hence, next to endangering the ecosystem of the bay, the livelihoods of the local fish farmers is under threat. The high concentration of phosphate is caused by the mining of the surrounding rock fractions in the area. The sediments of the rivers are richer in phosphate especially when seasonal heavy rain falls happen. The mining in combination with seasonal strong winds, lead to dust winds high in phosphate, which ends up directly in the bay. Recently IMARPE discovered even higher concentration of phosphate which they assign to inefficient ship loading with phosphate; the loading happens by means of a pipeline that directly deposits the phosphate in the ship, a lot of spill happens during the process. During summer there is a very slow circulation in the bay, so there is almost no washout of the phosphate. The area is also under thread because in case of flooding the industrial constructions and mining sites are damaged and the whole area can be flooded and damaged, since this area is covered with flatlands.

The goal for this case study would be to link the water circulation regime of the bay with the concentrations of phosphate and prove that the ship discharge methods should be improved in order to keep the ecosystem and the livelihood of the fish farmers safe.

Chimbote

The Chimbote case study is about two bays that are situated just next to each other and have the same ecosystem and hydrodynamic conditions. There is permanent upwelling in the bays, so both bays have a high fish stock. One bay has a river, the other not. The presence of the river caused the exploitation of this bay and the resurrection of fish meal farms next to the bay. The exploitation was so intensive that the resources of the bay are exhausted; the nutrients are so high in the area that

there is almost a permanent algae bloom in the region, hence an ecosystem with very little trophic levels appears. The exploitation of the second bay is now slowly starting. IMARPE wants to avoid a quick exhaustion of resources and damage to the ecosystem here as well, so it wants to establish area's that are suitable for fish farming and areas that are not. The philosophy is that it is impossible to stop people from exploiting the bay, but it is possible to manage the process of exploitation. With a circulation model in combination with a fish larvae model (with which our institute has experience) the nursery areas of the bays will be identified and managed in relation with fish farming. The MOU with the details of the agreed project details can be found in appendix A.

Improving capacity building skills

Course notes

Some effort has been made this year to improve the training of students by writing a course for people starting to use hydrodynamic models. The course contains 35 pages and is titled 'COHERENS, becoming an independent user'. It highlights the chapters of the manual that are important for a beginner and gives some more explanation where necessary. This course is intended for users who want to get an in-depth knowledge of how a hydrodynamic model works, how to set up their own model application and ultimately change the code to its own desires. An academic level and a basic knowledge Linux and of Fortran are expected. Users who are solely interested in model applications rather than constructing and setting up a model, are recommended to read the 'getting started' section that can be found on the web-site: www.odnature.be/coherens. The introduction will explain where COHERENS is positioned in the pool of models that describe fluid flows and will give a description of the COHERENS development history. This course of COHERENS is based on the manual version 2.6. The manual is a *vademecum*, its first concern was providing all the information needed to understand the code. This has as a consequence that the manual is linear and not associative, so the explanation of a principle can be spread out over different chapters. This course tries to bundle the information a starting user needs to get on its way. It hopes to introduce the basic from which the user can become advanced by self-study. Chapters 2 till 4 of the course provide the user with some concepts he needs to know before starting to set up his own project. Chapter 2 is an overview of the code structure, so the user knows how and where the different parts of the codes are stored. In this chapter the conventions needed to get started are explained and some key files are discussed in more detail. Chapter 3 is a short chapter and explains the very basics of compiling the code in linux, if you feel you need more background information check out the getting started section of the website (www.odnature.be/coherens). In chapter 4 some principles needed to become an active code manipulator are explained: monitoring the run (log files), identifying problems, files needed for setting up a model application (usrdef_files), some concepts that will make the code easier to understand (modfiles, arrays that describe boundaries and Arakawa-C grid). In chapter 5 the student gets to develop his own project and will develop the skills needed to become an independent user. Typically, setting up a model is an iterative process containing the following steps: preparation, grid setup, model switches, boundary conditions, surface wind, nesting, other modules such as sediment and biology. This chapter will be developed into more detail in the next version of this course. There are two appendices, one that illustrates the use of an Arakawa C grid and the other one is a list with the available output parameters. The course can be found in appendix B.

Website with online manual and forum

The forum was started this year where people can ask questions online. It is slowly starting, for the moment there are 25 members and 44 posts. Most questions are about the test cases and installation. The url of the forum is http://odnature.naturalsciences.be/coherens/forum/ the one of the on line manual http://odnature.naturalsciences.be/coherens/documentation

Training course Peru

During the month of December a four week training course was organized. There were three students. One bachelor, one master and one postdoc student (see picture). The mixture of levels was good so the students could help each other to reach a higher mental level. The first week had a tight schedule, the next weeks were more open as the students worked on their individual set ups.

Fig. 22. Trainees from Peru for the capacity building at RBINS

The two Peruvian students were working on the Chimbote area and Paracas area as described in the first part of this report. Appendices C and D present their final powerpoint presentation.

Expected result 1.3. Monitoring data is fed into national indicator processes

Description:
Pilot projects that will enable biodiversity monitoring data to be fed into national indicator processes. It will be important to valorise the work carried out by our partners (target: people trained under SO1, 1.1. and 1.2) who are involved in biodiversity monitoring studies, so that their data can be useful for, and used in, current indicator processes on the status of biodiversity. This will enable science based communication in various national and international bodies and documents. Sound baselines and measurements of biodiversity are needed to be able to provide meaningful trends. To enable our partners to contribute to these indicator processes, training and dedicated follow-up will be required to ensure the quality of the produced data.
These activities also directly contribute to fulfil specific objective 5, on measurement, verifying and reporting processes (MRV).

Logframe (partim):

Expected Results	Output indicators	Report 2014
1.3 Monitoring data is fed into national indicator processes	in at least 4 partner countries of the Belgian development cooperation data from monitoring activities are integrated in at least one of the indicators for the follow up of the respective national strategy.	Postponed to 2015

Activities	Report 2014
1.3.1.Launch call for project on Aichi target indicators	Postponed to 2015

Table 6. logframe (partim) for SO1, 1.3.

Activities:
By 2015 at the latest, all parties to the Convention on Biological Diversity will be required to present a National Biodiversity Strategy and Action Plan (NBSAP) in line with the **Strategic Plan for Biodiversity** 2011-2020 and including specified national Aichi targets with relevant **indicators**. When national targets and indicators are determined by partner countries, collaboration with authorities will be established in order to draw on our expertise in collecting data to feed the indicator processes. In the meantime, research projects carried out by students or early-career scientists associated with partner institutions, that are promoting the collection of data that are relevant for achieving Aichi targets, will be supported (one possibility is to work on this with IFS or in the framework of BRAIN). Results will be valorised through their validation and publication in renowned science journals as well as through the national strategy monitoring systems that will be promoted under specific objective (SO2)2: enhancement of the information base on biodiversity.
We will launch each year a **call for projects** that will work on gathering indicator data for Aïchi objectives related to habitat/ecosystem monitoring, species data and have a relation with poverty eradication

Expected result 1.4. Scientific outputs are made accessible to users

Description:
Tools will be produced and contribution will be made to processes that support research and its dissemination (publications, websites, end-user meetings, participation in communities of practice...). The relevance of all these scientific activities for development is to be ensured by prioritizing the acquisition of knowledge and the establishment of projects in sectors that contribute to development policies, such as sustainable forest management, sustainable use of natural resources (including for agriculture and energy), sustainable water management, sustainable coastal and marine management (including use of natural resources from the marine environment), issues linked to health policy, management of invasive alien species and pest species, biodiversity conservation, ecotourism and trade. At this stage, we prefer not to provide a restricted list, as to ensure a maximal adequacy with the national priorities of our partners.

Logframe (partim):

Expected Results	Output Indicator	Report 2014
1.4 Scientific outputs are made accessible to users	• At least 5 Abc Taxa manuals have been produced during the 5-year period dissemination per volume • Supporting/disseminating materials formerly produced • 4 lexicons, • Syllabuses produced and/or upgraded, • participation by staff members in 5 events relevant to taxonomic popularisation tools development/capacity building. • feedback on the use of courses available. • results of at least 5 projects and public awareness activities under SO1-1 and SO1-2 are published on the internet on www.taxonomy.be or a national CHM website if available.	Participation of Marie-Lucie Susini to an ISF workshop in Benin. Guest lecture by L. Janssens de Bisthoven at the KU Leuven (Master aquatic ecology and sustainable development) Projects from SO2 and SO3 started in second half of 2014 and reports and results are expected in 2015. Posting on CHM will be done in 2015. Lexicon in Burundi: collection of data is ongoing, publication expected in spring 2015. AbcTaxa: list of volumes, publication in 2014 about sawflies being finalised. Poster at CSB, Kisangani, flier at side event 'Mainstreaming' COP12, flier CEBioS

Activities	Report 2014
1.4.1. Taxonomic scientific tools production and dissemination of AbcTaxa manuals **1.4.2.** Popularization tools production of lexicons production/upgrade of syllabi dissemination of tools (other than Abc taxa)	See above

participation in international congresses on taxonomy and/or ICT for development and training follow-up on feedback of use of courses archiving output on GTI and CHM websites	

Table 7. logframe (partim) for SO1, 1.4.

Activity 1.4.1. Taxonomic scientific tools

Abc Taxa*: a series of manuals for taxonomic capacity building*

For 2014, we provided funding for the publication and distribution of one volume on sawflies and for the distribution of the already published manuals. The editing is on-going.

The planned volumes of abcTaxa are the following

The planned volumes of Abc Taxa are the following

15. Guide to the sawflies of southern Africa
16. Field guide for molecular studies of invertebrates
17. Guide to the taxonomy of ants, worldwide
18. Reptiles of Cuba (will be a massive volume!)
19. African diatoms
20. Sponges of Peru, S America
21. Polystomes of the world

Preface of the next Abc Taxa on sawflies

Living organisms detected, observed and/or collected in the field deserve to be identified as soon as possible in order to advance scientific research. This underlines the crucial importance of taxonomy for fundamental as well as applied research, in particular when it comes to the understanding of the functioning of biodiversity and its conservation and sustainable use. However, even in in the 21st century biologists and other stakeholders are still confronted with barriers that obstruct their work. One of the most persistent barriers encountered is the availability of updated identification tools, ideally for all parts of the world. In this context, the knowledge and know-how made available through the capacity building series Abc Taxa comes as highly appreciated. Volumes in this series aim to deliver not only identification keys of a taxon, but also high quality colour illustrations, biological data and useful technical advices (for instance on collection methodology and collection management) related to the group. Moreover, each volume is devoted to the group living in a specific geographic area, with preference for those areas that are generally underrepresented in other works, not seldom, these are areas in developing countries. The latter observation explains why the Belgian Development Cooperation funds this series.

In the field, sawflies are less often encountered than other hymenopteran insects such as bees, ants and wasps. They nevertheless play a significant ecological role in many terrestrial ecosystems, because the caterpillar-like larvae of virtually all sawfly species are plant-feeders, their overall host range including a large range of gymnosperms, angiosperms (dicots and monocots), and ferns. Several species are significant pests of crops, in orchards, forests, etc. Sawflies are much better known in the Northern than the Southern Hemisphere, the biology and ecology of many species particularly from sub-Saharan Africa remaining simply unknown. Thus, the present, well-illustrated volume contributes to fill a gap in the study of this taxon, and will not only help researchers such as taxonomists studying the entomological fauna of South-Western Africa, but will also help conservationists in drawing up biodiversity management plans

Although 'biodiversity' is a buzzword and a keystone notion often mentioned in the frame of public, political, and economic discussions, its study continuously needs reference books such as those delivered worldwide by the series of Abc Taxa.

Jean-Luc Boevé

Activity 1.4.2. Popularization tools

Over the years, the collaboration with partner institutions for the monitoring of habitats has led to the production of popularization tools of high relevance for the management of ecosystems, especially protected areas. The development of such tools will continue to be encouraged and supported in the following years. Drawing on the successful experience of the « Habitats de la Réserve et Domaine de chasse de Bombo-Lumene - Lexique Kiteke des plantes observées dans ces milieux », it is planned to produce and publish about 4 additional lexicons: one in RD Congo in partnership with ICCN, two in Burundi in partnership with INECN and one in Benin in partnership with UAC. The production of syllabuses is also foreseen: one in RD Congo (ICCN), two in Burundi (INECN) and two in Benin (UAC).

Taxonomic popularization tools are also expected to be developed as the result of projects supported under expected result SO1.1. Indeed, as applicants will be required to demonstrate their direct or indirect contribution to the conservation of biodiversity and/or ecosystem services and to the fight against poverty in their country, one means of meeting this criteria is the development of tools destined for a wider audience (including competent authorities, local populations, etc.).

In order to continuously update internal capacities in dissemination technologies and methods, participation to international workshops or conferences will be necessary. One event per year will be selected for its relevance and attended to by a staff member.

The data were collected in 2014 to provide material for the lexicon in Burundi, which will be published in spring 2015.

Participation of Dr. Marie-Lucie Susini to a workshop on collaborative programme from the International Foundation for Science (funded by BELSPO)

The meeting was organized by the International Foundation for Science with funding from BELSPO and the Carnegie Corporation. It took place in Ouidah, Benin from 8 to 11 December 2014. The local host was the Université d'Abomey Calavi, with Prof. Achille Assobadjo chair of the IFS/Benin Alumni Association, as main local organizer. The participants came from 8 countries, both French (Burkina Faso, Benin, Côte d'Ivoire) and English speaking (Tanzania, Uganda, Nigeria, South Africa, Ghana). The total number of participants, including organizing staff and resource people was 61. The aims of the workshop were for the 13 teams present to listen to the experience of project leaders of current ongoing projects (initiated in 2013) and to work together to integrate the biodiversity and collaborative aspects on their projects they submitted for the 2014 IFS call for proposals.

ML Susini participated in the workshop as a biodiversity expert. She helped the participants include biodiversity aspects in their research proposals, in accordance with the CBD Strategic Plan for Biodiversity 2011-2020, including the Aichi Biodiversity Targets.

Fig. 23. collaborative research Training from the International Foundation for Science, Benin, December 2014, funded by BELSPO and facilitated by RBINS, CEBioS.

Specific objective 2. The RBINS plays a leading role in the enhancement of the information base on biodiversity, on its linkages with ecosystem services and poverty reduction and on associated governance processes

Background

The CBD's 'Clearing-House Mechanism' (CHM) is an essential tool for the implementation of biodiversity policy. It develops and strengthens cooperation and networking between stakeholders of various fields of biodiversity – governments, NGOs, consultants, academic institutions, environmentalists and others. By doing so, it enables the mainstreaming of scientific information into policies and plays a role in raising the awareness of all types of audiences on the importance of biodiversity.
The development of networks of websites forms the main pillar of the CHM approach for this programme. These websites are designed to host electronic information (policies, best practices, scientific papers, etc.) and databases (species, habitats, experts, etc.). As a corollary to the electronic networks, the CHM also fosters strong and active human networks, which are crucial for the gathering and restitution of the information and data
The Belgian CHM partnership is unique under the Convention on Biological Diversity and has proven its usefulness over the years. We will therefore continue our work, taking into account both the requirements from the new CBD Strategic plan 2011-2020 and the newly formulated strategy for our framework programme.

The 2014 programme has continued providing several **training opportunities at national level**, as well as its **recurrent support to CHM**. A **regional workshop** has been organised to update knowledge of the national focal points on the 2020 Biodiversity Targets Crosslinking Tool as well as prepare them for COP12 and COP/MOP 1 for the Nagoya Protocol and in combination with a CBD workshop, in Cameroon. We initiated a multi-annual work programme, particularly towards the consolidation of our contribution to governance processes.

Expected results

2.1. Expertise in information management is built.
2.2. Information flows are improved.
2.3. Information is used to advise governance processes.

Expected result 2.1. Expertise in information management is built

Logframe (partim)

Expected results (ER)	Output indicators	Report 2014
2.1. Expertise in information management is built	• 10 national training workshops, • 120 persons trained, • follow-up training has been organised in at least 8 partner countries. • 5 countries participate in the information management/ CHM network through South-South Cooperation (SSC) with one of our partner countries. • 70 % of the partner CHM sites have 20 pages added or updated /year. • Tool to follow-up the implementation of the national strategy is actively used in at least 5 countries	3 national training workshops 99 persons trained Follow-up training in 2 partner countries 4 countries participate in SSC 80% of partner countries have added >20 pages in 2014 Tool is actively used in 1 partner country and started in 4 others. Procuration of solar panels for continuous supply of renewable energy for CHM activities and other ICT activities.

Activities	Report 2014
2.1.1. two national training workshops per year 2.1.2. 1-2 follow-up trainings per year 2.1.3. one south south collaboration/yr initiated 2.1.4. Promotion of tool in at least 1 country /year	2.1.1.: 3 national training workshops (Rwanda, Burundi, Comoros, Sudan) 2.1.2.: 2 follow-up trainings (Burundi, Ghana) 2.1.3. 3 south/south collaboration projects (Cameroun/Morocco, Madagascar/Comoros, West Africa region/Togo-Guinea Bissau) 2.1.4.: promotion of tool in Burundi and during regional meetings with partner countries.

Table 8. logframe (partim) for SO2, 2.1.

To build expertise in information management we are offering several types of capacity building activities related to the CHM to our partner countries. These activities are described in our plan 2014. Depending on their existing capacity the partners will have to express their interest to participate in or organise one of the capacity building activities in their country.

As a follow-up to the African regional workshop on the CHM, co-organised by the Secretariat of the Convention on Biological Diversity, the Government of Cameroon and CEBioS, several Anglophone

countries have asked in 2014 to become member of the CHM partnership offered by Belgium. In 2014 we have received request from and accepted in the partnership the following countries: Ghana, Guinea-Bissau, Mali, Kenya, Rwanda, Tanzania, Togo.

During 2014 we have been able to honour the following capacity building activities request:

Table 9. Training courses organised with CEBioS funds

Dates	Type of activity	Place	Country	No part	Language	Trainer
17-21.11	National training course for information exchange through the CHM	Accra	Ghana	15	EN	M.-L. Susini
24-28.11	Regional training course for the CHM	Cotonou	Benin	15	FR	M.-L. Susini
17-21.11	National training course for information exchange through the CHM. (partly GEF funding)	Huye region	Rwanda	14	FR	H. de Koeijer
24.11-03.12	Initiatie tot CHM	Brussels	Tanzania	2	EN	H. de Koeijer
5-6.01.2015	National training course for information exchange through the CHM	Bujumbura	Burundi	14	FR	H. de Koeijer

Union of the Comores Islands, Sudan and Iraq had demanded our assistance in setting up their national CHM in 2013 and reiterated the request in 2014. As these countries are not eligible for training through the funding of DGD we have contacted our partner countries to see who would be interested in assisting those countries through South-South collaboration. In 2014 the following training workshops (Table 10) have been organised or initiated through South-South collaboration or through GEF funding. The trainers M. Raharimalala and Madbouhi are alumni from our programme.

Table 10. Training courses organised through South-South cooperation or GEF funding in 2014

Dates	Type of activity	Place	Country	No part	Language	Funding	Trainer
23-25	National training course for information exchange through the CHM	Moroni	Comores	17	FR	DGD	Voahangy Raharimalala (Madagascar)

16-20.12	National training course for information exchange through the CHM (GEF funding)	Khartoum	Sudan	22	EN	GEF	Mostafa Madbouhi (Morocco)
Postponed to 2015	Training course for information exchange through the CHM	Brussels	Iraq	2	EN	GEF	H. de Koeijer

The results of the capacity building efforts can be seen in the development of the number of visitors to the different national CHMs as well as the number of pages added to the site. The countries that have received capacity building in 2013 – 2014 show a substantial increase in the number of visitors. (Table 13)

Fig. 24. Meeting in Buea, Cameroun

Under this activity all distance learning is also included. In 2014, ML Susini and H. de Koeijer have developed 5 new teaching manuals on the use of the PTK for CHM websites. These are the following manuals:

- 3 manuals in English on advanced properties of the PTK, in the Administration section of the portal:
  - Chapter 8: Map management
  - How to add images to the "slider" of a homepage on a PTK website?
  - How to restrict access to a section on a PTK website?
- 2 manuals in French:
  - Comment partager une vidéo en ligne sur un site web CHM ?
  - Comment modifier les images du « slider » sur la page d'accueil d'un site PTK ?

All the manuals can be freely uploaded online from our training website here: http://training.biodiv.be/formationptk/manuals/

Expected result 2.2. Information flows are improved

Logframe (partim):

Expected results (ER)	Output indicators	Report 2014
2.2. Information flows are improved	• CHM websites running and regularly updated:50% of websites updated Alternative indicator : information added on the CHM partner websites during 2014-2018 has increased with 20 % compared to the period 2008-2012. • Number of information meetings with different stakeholders in partner countries • OBPE strengthened : CHM website updated on a regular base (pages added/year and number of visitors per year compared to baseline of 2012), Library documented and used (number of books added in the library database, number of visitors to the library), 5+ scientific bulletins published	All websites have been updated with new information. As the projects under SO2.1 are still running we can't tell yet how many meetings have taken place. According to the projects at least 10 meetings were planned. OBPE: Website has been updated with 500 % more pages. At the time of writing of the report no information available on books added to library database nor number of visitors. One scientific bulletin has been published.

Activities	Report 2014
2.2.1. one call per year for CHM consolidation	The call was launched in 2014. 6 countries have started to work on 7 projects for CHM consolidation.

Table 11. logframe (partim) for SO2, .2.2.

This activity offers support to raise awareness of the existence of the national CHM, the importance of information sharing, to build networks of users, and stimulate the use of the CHM through various means such as helping installing appropriate equipment, providing opportunities to organise national 'data providing' meetings, hosting of websites on the RBINS server, providing a helpdesk for partners who encounter difficulties in using the 'Portal Toolkit' web content management tool, etc. Projects are selected on a yearly basis, through calls for project proposals.

Introduction

In 2014, the seventh call for proposals was launched for the reinforcement of CHM websites. Seven of the ten projects submitted have been selected: **Benin, Burkina Faso, Burundi, Cameroon, Madagascar** and **DR of Congo**. Table 12 lists the 7 projects.

Table 12. The seven projects selected in the framework of the reinforcement projects 2014

TITLE OF PROJECT	DATES	PARTNERS
Renforcement des capacités du CHM-Burundais	Project part of the institutional capacity building activities for the INECN	Institut National pour l'Environnement et la Conservation de la Nature, **Burundi**
Promotion de la coopération sous régionale pour la mise en œuvre du centre d'échange d'informations sur la biodiversité (CHM)	Project signed on 30 September 2014, end foreseen 31 November 2016	Direction Générale des Forêts et des Ressources Naturelles (DGFRN), **Benin**
Mise en œuvre du volet CHM du Programme de coopération scientifique UAC – IrScNB: Phase 1	Project signed on 18 August 2014, end foreseen 31 November 2016	Direction Générale des Forêts et des Ressources Naturelles (DGFRN), **Benin**
Amélioration de la connaissance et de l'engagement des acteurs nationaux et du contenu du centre d'échange d'informations (CHM) du Burkina-Faso	Project signed on 9 September 2014, end foreseen 28 February 2015	Secretaire Permanent – Conservation de la Nature et le Développement durable (SP/CONEDD), **Burkina Faso**
Transfert de la base de données sur la biodiversité du CHM du Maroc au CHM du Cameroun et formation à l'utilisation de ladite base de données	Contract signed 22 September 2014, end foreseen 31 March 2015	MINEPDED, **Cameroon**
Mise à jour du CHM pour le thème biodiversité côtière et marine et renforcement de la collaboration avec la République des Comores	Project signed on 12 August 2014, end foreseen 30 June 2015	Office national pour l'Environnement, **Madagascar**
Renforcement des sites web CHM 2014	Project signed on 1 August 2014, end foreseen 31 December 2014	SGECN, **DR Congo**

Details per country

Burundi, Benin, Burkina Faso, Cameroon, Madagascar, DR Congo

Burundi

The project had the following goals:

- Consolidation of the functioning of the website for the CHM of Burundi;
- Strengthening of the collecting and posting information systems on the web site of the CHM-Burundi ;
- Strengthening systems of collecting, sharing and diffusion, and exploitation of information through non-web based means;
- Improving the use of the library of the INECN through an awareness campaign.

At the moment of writing the project report is under preparation.

Fig. 25. CHM25 training at RBINS (photo: JD Akpona)

The results of the long-term reinforcement activities are more difficult to measure. However one can note the distribution of number 13 of the scientific journal of the INECN as well as the addition of more than 300 additions on the CHM website which is a quadrupling of the added information. The CHM website attracted 7703 visitors over the reporting phase, with 53546 pages consulted. This is a 73 % increase of the number of visitors and 73% increase in page views compared to the 2013 reporting phase.

Cameroon

The project had the following expected results:

- The webmasters are better equipped to add data and information on the Inventory System on the Biodiversity (SIB)of Cameroon.
- Data is entered in to the database
- Procedures are put in place to manage the database
- The SIB is online and accessible through the Internet.

Fig. 26. Regional meeting in Benin, November 2014

In 2012 Morocco has developed a database to make an inventory of their national biodiversity. The demonstration of this database during the partnership meeting in Marrakesh, Morocco, inspired Cameroon to start a **South-South cooperation with Morocco** to also start the same type of system.

Results:

One webmaster followed a 4 day training in February 2015 in Morocco on how to adapt the SIB. His training was really useful as the technical specifications for hosting and adapting the SIB for Cameroun were different than earlier communicated by Morocco. A prototype for Cameroun was developed on a local server, tested and used as base for installing the SIB on a server in Cameroun.

After installation of the prototype a workshop was organized from 18-20 March 2015 in Cameroun to present the SIB to 20 scientists, discuss its functionalities and possible improvement as well as a hands-on training. Several recommendations were made at the workshop, the report can be found at ……. As a follow up to this workshop 3 scientist and the webmasters of the CHM organized from 26-27 March a follow-up workshop to test adding data to the SIB through xls files. The scientists had prepared these files with available data from their research. Some recommendations to improve the xls sheets were made during this workshop.

At the moment of writing of this report the SIB of Cameroun isn't yet available to the wider public. The webmasters are currently discussing with the IT of their Ministry on URLs to use. During the developing phase already information on 1192 species, 561 genres, 150 families and 71 orders have been added to the system.

Benin (1)

The project has as objectives:

- Global Objective

- Development of a sub-regional concentration for the CHM between: Benin, Burkina Faso, Côte d'Ivoire, Niger and Togo.

- Specific objectives

  - Elaborate, implement and evaluate an Action Plan for the CHM for the 5 countries that participate in the project;

  - Share and replicate best practices of countries in ways to manage the CHM;

  - Build capacity in Togo for the implementation of the CHM;

- Activity 1 (A1): Development of an action plan for the 5 countries.

- Activity 2 (A2): Evaluation of the Action Plan (2014- 2016) and development of an action plan (2017 -2020) for the implementation of the CHM.

This will be done by organising two workshops, one in Benin, 2014, and one in Niger in 2016.

Results:
The first workshop was organized in Benin, 24-28 November. While preparing the workshop CEBioS received the request from Guinea-Bissau to also take part in the CHM partnership. Also Mali asked to be able to participate as after the civil unrest the CHM focal point was revamping the national CHM again. It was decided that both countries could participate in the meeting in order to be involved in the development of the sub-regional action plan. The main outcomes of the workshop were:

- A higher implication by the countries for on-line working and reporting by using the CHM,

- Respect the engagements as outlined in the action plan to ensure their implementation.

The report on the workshop can be found at http://bj.chm-cbd.net/cooperation/coop/cooperation-multilaterale/atelier-de-cooperation-sous-regionale-pour-la-mise-en-oeuvre-du-centre-d-echange/1er-atelier-cotonou-25-27-novembre-2014

Benin (2)

The second project in Benin is part of the institutional capacity building project with the University of Burundi and the Ministry of Environment.
It has as global objective : « de renforcer le partage et le transfert de connaissances sur la biodiversité dans un cadre de coopération scientifique et technique harmonisé et opérationnel »

The specific objectives are :

- To strengthen de knowledge and the capacity of technical and scientific stakeholders on the CBD, the Nagoya Protocol and the CHM.
- To facilitate the transfer of available scientific knowledge to the stakeholders among others through the CHM of Benin.

The 2 year project started in September 2014 and the first interim report is foreseen in March 2015.

Burkina Faso

The general objective of the project is « To improve the knowledge and the engagement of national stakeholder as well as the content of the CHM of Burkina Faso. »

The subjectives are to :

- To inform and raise awareness of the people that are in charge of information management at the sectoral Ministries and other stakeholders, like professional networks and associations, on the importance of the CHM and their implication in its functioning.
- Collect and validate data in the section that will receive special attention during the project.
- Elaborate a strategy for the CHM of Burkina Faso with the aim to revamp it.

The end of the activities of the project was foreseen in February 2015. Due to civil unrest the implementation of the project has encountered some delays. A project extension has been asked for by the Government of Burkina Faso. This extension has been granted and the project will now be finalized by August 2015.

Madagascar

The project has for general objective “the development of the section in the CHM under the theme « coastal and marine biodiversity » and capacity building activities with the Republic of the Comoros”. The specific objectives are to:

- Improve the knowledge on the CBD and especially on the theme of marine and coastal biodiversity. Amélioration de la connaissance du CDB et du thème biodiversité marine et côtière.
- Improve the management of the CHM of Madagascar (section on marine and coastal biodiversity).
- Continued collaboration between Madagascar and Comores for the CHM.
- Capitalise and share information between the CHMs of the 2 countries.

The training in the use of the CHM has taken place in Moroni, Republic of the Comoros, from 23 to 25 September 2014. 17 people from different ministries and NGOs participated in the training. As the project end is foreseen in August 2015 no additional information is available at the writing of this report.

DR Congo

The project has as general objective to reinforce the role of the CHM in the implementation of the NBSAP. It has 4 specific objectives:

- Organise awareness raising workshops with and for the people in charge and the scientists of the CSB as well as other biodiversity stakeholders in Kisangani.
- Share new information on the website of the CHM of DR Congo.
- Identify institutions that should be member of the CHM network.
- Produce and distribute promotion material on the CHM (flyers).

The end of the project was foreseen in December 2014. However due to illness of the national focal point we have allowed them an extension of 2 months.

Results

The national focal point for the CBD has organised in collaboration with the CSB of Kisangani 2 missions to Kisangani to raise the awareness of the stakeholders in Kisangani and staff members of the CSB on the CHM. During each missions 2 workshop were organised, one for the stakeholders and one for the staff member. It became clear that a lot of information is available in Kisangani on the biodiversity of DR Congo and more specifically on the biodiversity of the "Province Orientale".

During the second mission people had brought with them this information to be added to the CHM. Information on: "Annales de UNIKIN", research papers for the higher studies on science and biological science, Master and PhD, as well as the conference papers on the first workshop on the Biodiversity of RD Congo, have been received and will be posted in the coming months on the national CHM.

As a result of the workshops staff members of the CSB will be invited in a national workshop on the CHM and the ABS-CH that will take place in Kinshasa in 2015. Also there is the proposition that a training for using the CHM will be organised towards the second part of 2015 in Kisangani to facilitate adding information on the CHM.

The report of the project can be found on : ……

Web statistics

Like each year, web statistics are provided for a number of our CHM partner countries (see Table 13). They show trends and enable to reflect on the evolution of the websites. As we are starting a reporting under a new five year programme we have decided to use the statistics for 2013 in order to have a baseline. This will assist us in comparing the results of all our activities over the duration of the programme. We have also added the statistics of Cameroon and Madagascar as they are not eligible any longer after 2014 to be able to compare the development of non-partner countries with those of partner countries.

For this reporting period, there are two striking numbers:

- The website of countries that have not followed a training course or done a project for the CHM in 2013 and 2014 show an decrease in visitor and pages added. For Morocco this was due to understaffing of the Biodiversity department of their ministry, Mali due to civil unrest, Niger due to membership in the COP12 bureau and El Haj.

- Overall the number of visitors has continued to grow, this is partly related to the number of items added to the site and special occasions organized under the calls. It shows that additional action to build capacity of the CHM give results.

Table 13. Web statistics on visitors for a selected number of CHM websites.

	2014			2013			Percentage of change		
	Visits	Pages visited	Pages added	Visits	Pages	Pages added	Visits	Pages	Pages added
Burkina Faso	1075	2690	21	783	2764	12	37.29	-2.68	75.00
Burundi	7703	53546	>300	4445	17667	62	73.30	203.08	>500%
Benin	9918	24785	122	5454	14755	92	81.85	67.98	32.61
RD Congo	6065	13217	8	3543	8244	45	71.18	60.32	-82.22
Côte d'Ivoire	11919	33409	206	8359	18593	82	42.59	79.69	151.22
Madagascar	13742	47552	34	11528	36546	174	19.21	30.12	-80.46
Niger	10017	30452	11	11828	35038	59	-15.31	-13.09	-81.36
Cameroun	3629	17005	44	1900	7195	36	91.00	136.34	22.22
Marocco	25609	71518	35	29578	78927	99	-13.42	-9.39	-64.65
Rwanda	551	3940	26	575	2883	15	-4.17	36.66	73.33
Mali	745	1402	0	814	1515	0	-8.48	-7.46	0.00
Belgium	41233	106225	>300	34547	79666	>300	19.35	33.34	

Expected result 2.3. Information is used to advise governance processes

Logframe (partim):

Expected results	Output indicators	Report 2014
2.3. Information is used to advise governance processes	• Level of activity of the network of partners: One regional workshop organised, • number of participation in EU and global governing activities by Be and partner countries. • EU tool for the follow up of the reporting on the national strategies is used in at least 5 countries for the reporting to CBD, related biodiversity Conventions and agreements. • Number of information meetings with different stakeholders in partner countries.	EU Target Crosslinking tool Regional workshop in Benin Regional Workshop for Anglophone countries WGRI-5 COP12

Activities	Report 2014
2.3.1. Networking and organising 1 meeting/yr of CHM nfp of partner countries and governance	Cameroun, Benin
2.3.2. one Mission /yr international meeting	Several missions, WGRI-5, COP12, COP/MOP1 for NP, 2 expert meetings (Copenhagen, Geneva)

Table 14: logframe (partim) for SO2, 2.3.

In the work plan 2014 it is mentioned that under this point the activities will be: to organise at least one regional meeting to prepare partner countries for governing processes; enable Be and partner countries to participate in the governing processes; promote the usage of the EU target cross-linking tool in partner countries as well as information meetings in country to promote the use of available information.

Regional meetings

One regional meeting was organized in collaboration with the Secretariat of the Convention on Biological Diversity in Buea, Cameroon, 5-9 May 2014 to discuss with the partner countries the preparation of WGRI-5, SBSTTA-18, COP12 and COP/MOP1. During the workshop there was also time for 2 days of training on the use of the CHM toolkit as well as the EU Target Crosslinking tool. The

participants made recommendations on items to be taken into account while preparing their national positions towards the different meetings.

At the same location the CBD Secretariat also organised a regional workshop for Anglophone countries. Synergies were established between the 2 workshop and the first and last days were joint sessions. Han de Koeijer also presented the BE CHM partnership, the CHM Toolkit and the EU TCT tool to the participants of this meeting.

The report of the workshop is available on the Belgian CHM http://www.biodiv.be/cooperation/chm_coop/chm-partnering/workshops/regworkshop-Buea-Cameroun-mai2014.

Follow-up after the workshop

During the workshop several Anglophone countries expressed their interest to become part of the Belgian Partnership. They were advised to write an official letter to RBINS with a request for membership to the partnership. During the remainder of 2014 5 of the participating countries sent those letters and were accepted.

Also 2 training workshops mentioned under SO2-1 were the result of the regional workshop in Buea.

Regional workshop in Benin

Under the call for SO2.2 Benin submitted a project for sub-regional cooperation and capacity building. A kick off meeting was organised in November 2014, it is reported under SO2.2.

Regional Workshop for Anglophone countries

During the call for proposals under SO2 and SO3 no Anglophone partner country submitted a project. Therefor the idea was launched to organise a special workshop for Anglophone partner countries. Tanzania has proposed to organise it in Dar es Salaam and tentative dates for the workshop are at this moment 9-13 March 2015. During this workshop participants from Ghana, Kenya, Liberia, Rwanda and Tanzania, will learn how the calls work, what can be done under the partnership as well as proposals that they have prepared before coming to the Workshop will be discussed.

WGRI-5

During *WGRI-5* H. de Koeijer used the occasions to meet as many partner countries as possible to discuss the partnership follow up the Buea workshop mentioned above. A day for the start of WGRI-5 the renewed CHM-Informal advisory committee (CHM-IAC) elected H. de Koeijer as president of the IAC. From the partner countries Burundi, Cameroon, Morocco and Madagascar are also member of the IAC, this mainly due to their expertise in developing and maintaining their national CHMs.

On behalf of Belgium H. de Koeijer was pilot or co-pilot for the EU during *WGRI-5* on agenda points:

5 Pilot: Review of progress in providing support in implementing the objectives of the Convention and its strategic plan for biodiversity 2011-20

8. Co-pilot: Report on progress made to address biodiversity in poverty eradication and sustainable development

As pilot for the EU H. de Koeijer had to draft, with the co-pilots, the EU position and do the negotiations in plenary for agenda item 5. This agenda item comprised national reports, technical and scientific cooperation, the Clearing House Mechanism and capacity building. All these subjects were put together as they are the main focus for the implementation of the 2011-2020 Strategic Plan on Biodiversity and the AICHI targets. H. de Koeijer did most of the work for the EU as the Greek presidency was not well aware what the subject of this agenda point was. On behalf of the EU he was asked to reply in plenary for the 27 EU countries on this agenda point.

For agenda point 8 L. Janssens and H. de Koeijer participated in the preparation of the EU position on Poverty Eradication and sustainable development. As the EU Pilot couldn't participate in the meeting the EU depended heavily on our expertise in the subject as L. Janssens had been involved in the development of the Chennai declarations on Poverty Eradication that were the main subject of this agenda point.

During WGRI-5 5 participants of the partnership countries were representing their countries (Burundi, Benin, Ghana, Niger, Tanzania) and were actively involved in the negotiations. One could also see that others had been well briefed by the participants of the Buea workshop.

COP12

The day before COP 12 H. de Koeijer participated in the CHM-IAC meeting that discussed several topics related to the COP as well as a future vision for the CHM.

One country (Ghana) asked for assistance for their participation in COP12 as part of this activity. As Eric Okoree was already in Pyeong Chang we decided to reply positively to this request and paid for his stay during COP 12.

On behalf of Belgium H. de Koeijer was co-pilot for the EU during COP12 on agenda point 13 that dealt with "Review of progress in providing support in implementing the objectives of the Convention and the Strategic Plan for Biodiversity 2011-2020, and enhancement of capacity-building, technical and scientific cooperation and other initiatives to assist implementation". This was logical as it was a continuation from the pilot role during WGRI-5 on the same subject. The Italian presidency was however not well prepared and in the months before COP12 he had to do most of the work for the EU position. This was a good way to get the Be position clearly in it. In the final COP decision most of the BE points on Capacity building, CHM and Public awareness had been included. Also the partner countries expressed in plenary their appreciation for the Belgian partnership under the CHM.

Other international missions

H. de Koeijer was invited as expert in a workshop on "Expert Meeting on MEA Effectiveness and interoperability" organized by the MEA-Knowledge Sharing in December 2014. He has presented the 2020 EU Target Cross-linking tool and participated in the meeting to represent a country view on

reporting. The meeting's goal was to enable "reporting once, using multiple times" between the different MEAs.

H. de Koeijer participated in the EU regional workshop on the CHM in December 2014 in the offices of the European Environmental Agency. During this mission he also participated in the expert group for the development of the PTK and the 2020 TCT.

Specific objective 3. The RBINS contributes to awareness raising and communication on the importance of biodiversity and ecosystem services for poverty reduction and sustainable development, and on associated governance processes.

Background

In 2014, we will continue to support awareness raising activities through calls for proposals whilst pursuing our reflexion towards the establishment of baselines and the identification of suitable indicators.

Expected results

3.1. Baselines provide an insight on the level of awareness and/or commitment.
3.2. Awareness and commitment are raised.
3.3 Communication and awareness raising in Belgium

Outcome:
selected partner countries are better aware of baseline data of awareness about CBD when preparing policies and DGD when preparing ICP's (3.1.)
the awareness about the importance of biodiversity and ecosystem services is risen in partner countries at different levels (governance, general public) is enhanced/taken into account in policy making and implementation (3.2)
the awareness in relevant sectors in particular DGD and the actors of the Belgian cooperation in Belgium on biodiversity and ecosystem services related to development cooperation is increased and taken up in the preparation of the new indicative cooperation programmes with the partner countries (3.3)
NGAs and NGO programmes are involved in this exercise (3.3)

Expected result 3.1. Baselines provide an insight on the level of awareness and/or commitment

Logframe (partim):

Expected Results	Output Indicators	Report 2014
3.1 Baselines provide an insight on the level of awareness and/or commitment	• Number of public awareness projects completed, • At least 3-5 countries will reply to the special call for projects and develop indicators for public awareness. • In 2018 and 2019 these countries and countries that did their baseline studies and indicators development in 2011-2012 will receive can submit projects for funding to redo the same studies as undertaken in the first years. This will facilitate them to study effects and change in conception of the Public awareness work done under SO3.2.	• Benin: Project on raising the awareness and mobilize stakeholders for the implementation of the national biodiversity strategy 2011-2020. • Madagascar : Baseline study on awareness raising of the stakeholders with regards to the first AICHI target of the strategic plan of the Convention (2011-2020) and putting in place a database with indicators to follow their development.
Activities	**Report 2014**	
3.1.1. one call/year for awareness baseline projects in the South 3.1.2. The results should be used for the reporting towards the Aïchi targets and the relevant indicators in the reporting tool that countries will use under SO2-1 and SO5.	Done Collection of data ongoing	

Table 15: logframe (partim) for SO3, 3.1.

Activities:

A call for project to the partner countries was launched in August 2014. In the call partner countries could choose between projects under SO3.1 or SO3.2. Due to the preparations for COP12, the countries asked a bit more time for the preparation of their project proposals. We made in November the selection of the different projects that would receive funding. Only 2 countries had projects related

to SO3.1 and were selected. Contracts with them were signed in the beginning of December 2014. The following projects were chosen under SO3.1:

- Benin: Project on raising the awareness and mobilize stakeholders for the implementation of the national biodiversity strategy 2011-2020.
- Madagascar: Baseline study on awareness raising of the stakeholders with regards to the first AICHI target of the strategic plan of the Convention (2011-2020) and putting in place a database with indicators to follow their development.

As both projects have only started in December 2014 and will run till at least August 2015, we can't report yet on the outcomes of the projects.

Expected result 3.2. Awareness and commitment are raised

Description:
Based on the results of the target audiences and subjects for which public awareness needs to be raised as a result of SO3.1, the partner countries and local institutions and organisations through the CHM and CBD focal points can submit projects under a **call for proposals**.

Logframe (partim):

Expected Results	**Output Indicators**	**Report 2014**
3.2 Awareness and commitment are raised	Indicators on public awareness show a positive development between 2014 and 2018. PA Materials are developed and used in different countries.	Collection of data on going with : • Benin: "Raising awareness of national stakeholders on the conservation of biodiversity in Benin". • Burundi : "Towards an effective awareness raising in the light of the conservation of biodiversity". • Democratic Republic of Congo : Awareness raising on the role of sustainable agriculture for biodiversity in the technical agriculture teaching system.
Activities	**Report 2014**	
3.2.1. special awareness project calls in South organised	done	

Table 16: logframe (partim) for SO3, 3.2.

Activities
Activities
As mentioned under SO3.1 the call was launched in August 2014.
3 projects have been selected under this call:

- Benin: “Raising awareness of national stakeholders on the conservation of biodiversity in Benin”.
- Burundi: “Towards an effective awareness raising in the light of the conservation of biodiversity”.
- Democratic Republic of Congo: Awareness raising on the role of sustainable agriculture for biodiversity in the technical agriculture teaching system.

Also these projects have only started towards the end of December 2014. No results are available yet.

Expected result 3.3 Communication and awareness raising in Belgium

Description:
The results of SO1 - SO3 can be used to raise awareness in Belgium and at international level to the problems that people face in development countries while using and conserving their biodiversity. This will of course depend on the results of the other objectives but it can also steer the call for proposals under SO3.2.
.

Logframe (partim):

Expected Results	**Output Indicators**	**Report 2014**
3.3 Communication and awareness is raised in Belgium	- Number of people reached in Belgium through stands and events - number of related communication material (posters, brochures), - number of people attending awareness raising events or receiving material, etc.: 4-5 public awareness projects completed - Number of events with new stand - New stand - Number of awareness presence in events - courses	Poster at conference Kisangani Flyer CEBioS Web site CEBioS Flyer at side event COP12 about mainstreaming Preparation meetings to build a stand in 2015
Activities	**Report 2014**	
Communication and awareness activities	-guest lecture at KU Leuven about main streaming - side event about mainstreaming at COP12 - CEPA fair Belgium-Benin cooperation at COP12 - preparation meetings for the European Year for development 2015	

Table 17. Logframe partim of SO3-3.3.

Preparations have started for the implementation of this work component; tentative dates have been chosen for a workshop in November 2015.

Part of this programme element is also related to work under SO6.

In 2014 one presentation on the Nagoya Protocol and the implications for Botanical gardens, was given by H. de Koeijer at the annual meeting of the Flemish Botanical Gardens at Meise in November 2014.

At this moment a first awareness raising session towards scientists that are collecting specimen in developing countries and also receive material from developing countries is planned towards the end of February 2015 for the scientist of RBINS. If this session is well received it will be further developed and proposed to other Federal research Institutes and hopefully also to Universities in the different Regions.

Fig. 27. Flier for the CEBioS programme

Specific objective 4. The RBINS and DGD unit D2.4 improve the mainstreaming of biodiversity and ecosystem services in policy sectors that have a high relevance for development.

Background

As a research institution, the RBINS possesses a long-running expertise on biodiversity and ecosystem management. As a museum, its educational activities are key instruments for the spreading of scientific knowledge. And through its mandate as Belgian National Focal Point to the Convention on Biological Diversity and its involvement with other agreements such as the Convention on Migratory Species and CITES, as well as the coordination of the Belgian platform for Biodiversity, it has acquired experience at the policy level. Over the years, this unique position has generated a valuable expertise at the interfaces of science, policy and education. The 'biodiversity team' of the RBINS is now clustered in the 'BIOPOLS' (Belgian Biodiversity Centre for Policy support) group, being a working group under the new operational Direction 'Nature' of RBINS. This will create additional synergies between the DGD-programme, the National Focal Points and the Belgian platform for Biodiversity, as well as the MUMM involved in policy work around OSPAR.

RBINS puts this expertise at the service of the Belgian Development Cooperation and of other interested parties in Belgium, in order to enhance the dialogue and develop strong partnerships between scientists, decision-makers and society.

At the national level, the DGD-programme staff actively participated to the following fora:

- Steering Committee 'Nature'
- Steering Committee 'CBD'
- various BELSPO, RBINS and MRAC seminars
- various DGD and SPF Environment seminars

At the international level, the DGD-programme staff actively participated (also in the framework of the other specific objectives) to the following meetings in 2014:

- SBSSTA 18
- COP 12
- COP/MOP 1 Nagoya Protocol
- WGRI 5
- WPIEI
- EU DEVCO and European working groups
- Various expert groups (e.g. OESO-DAC ENVIRONET, CHM-IAC, MEA reporting, SDSN, CBD-Chennai recommendations)

Outcome: More capacities in Belgian cooperation about biodiversity (4.1.) More reference to biodiversity and ecosystem services in Belgian cooperation (PICs, mixed commissions…) by integration of the Aïchi targets and risk assessment of the planned cooperation interventions (4.2)

Expected results

4.1 Expertise of Belgian Development Cooperation is built
4.2 Biodiversity and ecosystem services are mainstreamed in activities supported by the Belgian Development Cooperation

- SBSTTA 18 (Eighteenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice'), Montréal, Canada, 23-28 June 2014. ML Susini as Belgian pilot on item 9.6 entitled "Sustainable use of biodiversity: bushmeat and sustainable wildlife management".

- COP 12 (Twelfth meeting of the Conference of the Parties to the Convention on Biological Diversity) Pyeong Chang, Republic of Korea, 03-12 October 2014. ML Susini as European co-lead and Belgian pilot on item 27: Sustainable use of biodiversity: bushmeat and sustainable wildlife management. H. de Koeijer as co lead on item 13: "Review of progress in providing support in implementing the objectives of the Convention and the Strategic Plan for Biodiversity 2011-2020, and enhancement of capacity-building, technical and scientific cooperation and other initiatives to assist implementation". L. Janssens as co-lead on item 16: "Biodiversity and Poverty eradication".

- COP/MOP 1 Nagoya Protocol: H. de Koeijer as lead for the EU on item 17: Capacity Building and co-lead on item 8: The ABS Clearing House.

- IFS collaborative research workshop, Ouidah, Benin, 08-11 December 2014. ML Susini as facilitator and Biodiversity expert.

Expected result 4.1. Expertise of Belgian Development Cooperation is built

Description:
For the past few years, we have been most active in the 'indirect cooperation' (some interpret it more as direct) arena of DGD, participating in a number of meetings and events as one of the scientific institutions involved in development cooperation. We have also been involved in supporting the multilateral processes linked to the CBD through our support to DGD and our participation in the national coordination process on biodiversity (through the Coordinating Committee on International Environmental Policy).

For the year 2014, this activity continued to be carried out on a demand-driven basis. Our team strived to answer the various requests for scientific support that arrive at the RBINS.
Examples of support include:

- advice on the implementation of biodiversity-related activities in partner countries,
- advice on proposed, submitted or running projects financed by DGD,
- support for the follow-up of multilateral agreements,
- support to the decision-making process of the ministerial office,
- raising the profile of biodiversity during thematic meetings organised by DGD, participation in a meeting on sustainable agriculture and several meetings on KLIMOS.
- attendance to meetings discussing biodiversity and development issues, Presentation given during the EU Biodiversity and development cooperation expert group, See SO 3?
- identification of people, institutions and organisations working for biodiversity worldwide,
- providing training on biodiversity issues, i.e. illustrating the importance of biodiversity for economic and social development and poverty reduction.

More specifically, the coordinator is involved as expert or member in:

- OESO-DAC Environet scoping paper on biodiversity and development
- Expert meeting on Biodiversity and development (Chennai meeting, India) of the CBD in preparation of COP 12 (October 2014). The Chennai meeting takes place in December 2013, but some follow-up will take place in 2014.
- Solutions for Development Network (SDSN) of the United Nations: peer review and input of contents for web site and panel paper

Logframe (partim):

Expected results	Output Indicators	Report 2014
4.1 Expertise of Belgian Development Cooperation is built	4 training workshops organised for the target groups decided by DGD, Capacities of DGD to include biodiversity in ex-ante SEA and EIA for cooperation projects are raised. Increase of biodiversity protection measures in the development cooperation	Discussions with DGD and KLIMOS, planned for 2015 URL : http://cebios.naturalsciences.be/

Activities	Report 2014
4.1.1. Training provided: (Based on request) around the theme "biodiversity, ecosystem services and development cooperation"	Planned for 2015

Table 18. logframe (partim) for SO4, 4.1.

Activities:

Expertise of the various actors of Belgian Development Cooperation will be built through the organization of training workshops. Training content and material will be developed in collaboration with D2.4 staff and adapted to the characteristics of Belgian Cooperation Development (partner countries, development sectors, etc.). The training content will also match the needs and peculiarities of each target group: work processes, project scale, cooperation partners...

There hasn't been a training session for DGD in 2014 as there hasn't been yet a formal request from DGD. However some meetings have been held with embassy staff in partner countries to raise awareness on biodiversity and the activities that RBINS is undertaking in these countries. The staff in the Embassy in Burundi has asked to be included in training activities on biodiversity and access and benefit sharing whenever it is organised in-country. A training session will be planned in 2015 for them.

Moreover, a new framework agreement between RBINS and the Ministry of Environment has started in 2013, hence increasing the links between RBINS and the ministries involved with the issue of biodiversity even more. Staff has participated in the BRAIN meetings however under axes 4 and 5 didn't manage to include biodiversity in the subjects under these axes, even with the support of the Ministry of Environment.

Expected result 4.2. Biodiversity and ecosystem services are mainstreamed in activities supported by the Belgian Development Cooperation

Description:
Most of the activities undertaken in our programme strive to build capacities within the scientific community of partner countries, acknowledging the critical role of scientific knowledge for the conservation and sustainable use of biodiversity.

Logframe (partim):

Expected results	Output Indicators	Report 2014
4.2 Biodiversity and ecosystem services are mainstreamed in activities supported by the Belgian Development Cooperation	Number of consultancy requests from DGD staff Number of processes	-comments on DCI programme - side event at COP12 - lecture at KULeuven - Review GBO4 - comments on DGD strategy -Briefing Vietnam at DGD
Activities	**Report 2014**	
4.2.1. At least 8 consultancy requests honoured on demand	C. No requests received	
4.2.2.Follow-up of at least 5 processes (e.g. COP, SBSSTA, PIC…)	COP12, WIGRI5, WPIEI, EU DG ENV	

Table 19. logframe (partim) for SO4., 4.2.

Activities:

Consultancy requests from DGD concerned the DCI programme and the environment strategy of DGD. As mentioned under SO 4.1 first talks have been held with different Embassies abroad to start discussions about inclusions of biodiversity in country programmes.

For activity 4.2 the participation by staff members during international meetings have been mentioned under SO 2, 3 6 and 7. ,

Based on the results of a pending assessment of environmental mainstreaming in Belgian Development Cooperation, support included contribution to the elaboration of a new strategic note on environment and/or support to the implementation of the possible subsequent action plan.

Specific objective 5. The RBINS and DGD unit D2.4 improve the knowledge on the measurement, reporting and verification (MRV) of policy choices and activities linked to biodiversity and ecosystem services.

Background

The RBINS, as CBD National Focal Point, has been the coordinator of the Belgian reporting obligations under the Convention on Biological Diversity. Till recently, such reporting under the CBD was largely confined to descriptive information. With the adoption of the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets, countries will have to formulate indicators and gather data that will feed these.

The elaboration and formulation of indicators (largely a regional competence in Belgium) and the establishment / follow-up of formal 'MRV' processes is a relatively new field of expertise for us and we will need to build our own capacities before being fully operational. This year will be used to explore the most relevant means of building our capacities in synergy with DGD Service D2.4, which benefits from many years of experience in the follow-up of all three Rio conventions (climate, biodiversity, desertification).

Expected results

5.1. Expertise of the RBINS on MRV is built.
5.2. Methodologies to assess progress towards the Aïchi Targets are available

Outcome:
RBINS provides advice on MRV to different authorities Tool developed used to monitor and report achievement of Aïchi targets in Belgium and in partner countries

Expected result 5.1. Expertise of the RBINS on MRV is built

Description:
To get build capacity on the MRV procedures and best practices is a learning process, both at RBINS, DGD as in the developing countries. The scale may differ, from NBSAPs to environmental reporting on one particular sector (e.g. mining industry). It is related to dissemination, e.g. through the CHM (SO2).

Logframe (partim):

Expected results (ER)	Output Indicators	Report 2014
5.1. Expertise of the RBINS on MRV is built.	The EU reporting tool for NBS's is developed in cooperation with the CHM network The reporting tool is used for the follow up of the implementation of national strategies and the reporting towards the Aichi targets	Several meetings on the tool by Han de Koeijer The reporting tool is used by Burundi, other countries are testing it.
Activities	Report 2014	
5.1.1. expertise concerning MRV built up in conjunction with DGD	Stage Sandrine Vandenbossche, 3 weeks, on MRV (Haute Ecole Charlemagne)	

Table 20. logframe (partim) for SO5, 5.1.

Activities:
During the first year of the programme, activities focused on consolidating all relevant information on MRV and **identifying existing best practice**, via the literature and contact with experts. Among expert institutions to be consulted are the European Environment Agency and one of its partners, the European Topic Centre on Biological Diversity. One of its main tasks is to build capacity for reporting on biodiversity in Europe, mainly through the European Information and Observation Network (Eionet) (planned 2015).

At the CBD level, follow-up of the progress of the Ad Hoc Technical Expert Group (AHTEG) on Indicators for the Strategic Plan for Biodiversity 2011 – 2020 was an essential part of the RBINS capacity building throughout the multiannual plan.
Starting in 2014 and during the other years of the programme, following results under expected result SO5.2, a **transversal assessment** will be carried out on MRV links with all programme activities. The assessment will aim at identifying all activities that can help establishing methodologies for MRV in the context of Belgian Development Cooperation (one aspect already under way) and, on the other hand, determine what activities can/should be monitored through new MRV methodologies.

All internal capacity building efforts will be closely tied to lessons learned in activities under SO5.2.

Expected result 5.2. Methodologies to assess progress towards the Aïchi Targets are available

Description:
The development of methodologies are necessary for the three levels of MRV, measurement, reporting and verification. This terminology is mostly used in conjunction with THE United Nations Framework Convention on Climate Change (UNFCCC), REDD+ and environmental assessments, e.g. for the mining industry. It is important for DGD, RBINS and the DGD programme to remain updated concerning the global trends in MRV in order to apply it as much as possible in the mainstreaming, policy support, and NBSAPs in developing countries.

Logframe (partim):

Expected results (ER)	Output Indicators	Report 2014
5.2. Methodologies to assess progress towards the Aïchi Targets are available	National indicators are developed and used for reporting towards the Aïchi targets	Data being collected in several projects and programmes under SO-1, 2 and 3
Activities	**Report 2014**	
5.2.1 MRV tools are developed and implemented (e.g. through project calls and other)	Collection of data	

Table 21. logframe (partim) for SO5, 5.2.

Activities:
In the field of **measurement**, a partnership will be undertaken in 2015 with **universities in partner countries and Belgian universities** (to be determined) in order to launch research on best practice. The objective will be to assess indicators developed by various countries (probably a pool of ten countries) in the framework of their National Biodiversity Strategies. Selected countries for this analysis will preferably be current partner countries of our programme. Other countries (either in the North or South) could be chosen for the quality of the proposed indicators. This activity will be initiated as soon as National Biodiversity Strategies are available, i.e. in the course of the year 2015.
It will be possible to **develop methodologies** to measure progress on other indicators if the majority of the partner countries are using more or less comparable indicators. Assessed indicators that will be considered will then be used to measure progress of relevant activities undertaken in this programme, such as activities developed under SO1.
The development of indicators for the measurement of **progress** is also part of our programme via the activities under specific objective 3. The results of these activities will feed discussions at various levels (with partner countries, within CBD processes, etc.) and will hopefully be disseminated for wider implementation.
As for **reporting** methodologies, one of the efforts is to focus on the new tool that is under development at the EU CHM. The Belgian CHM is an active player in the **construction of a tool** that will be at the centre of the reporting processes on Aïchi targets. The use of this new tool by partners countries will be ensured through the training activities planned under SO2.1.

Specific objective 6. The RBINS and DGD unit D2.4. raise awareness on, and build capacities for, the implementation of the Nagoya Protocol on Access and Benefit Sharing in Belgium and in developing countries.

Background

The RBINS and D2.4 both have relatively limited experience on genetic resources, access and benefit sharing provisions or traditional knowledge associated to the use of genetic resources. They have followed the issue in their respective work related to the Convention on Biological Diversity, but without necessarily developing expertise or playing an active role in the process. At the Belgian level, other interested parties are in a similar situation.
The new programme framework rightly makes of the Nagoya protocol the sixth pillar of our activities. As a preparation for years to come, members of the team will start documenting and building capacities on this matter. Also, the ABS-Clearing House will be linked to the national CHM.

Expected results

6.1. The RBINS and DGD are familiar with the obligations under the Nagoya Protocol.
6.2. Awareness of the scientific community on the Nagoya Protocol is raised. As outlined in the section below, capacities will first be built within RBINS. Information and training for other stakeholders, including DGD, will start as of 2014.

Outcome:
RBINS provides advice to Belgian cooperation on Nagoya Protocol and DGD is better informed about the NP.
Nagoya Protocol is better known in partner countries

Expected result 6.1. RBINS and DGD are familiar with the obligations under the Nagoya Protocol

Description:

The year 2014 was devoted to the follow-up of the Nagoya Protocol on Access and Benefit-Sharing, its ratification and implementation at the Belgian, European and international level. The consolidation of intern capacities is a prerequisite for the provision of training and support to DGD, our partners and any other relevant stakeholder.

Logframe (partim):

Expected results	Output Indicators	Report 2014
6.1. The RBINS and DGD are familiar with the obligations under the Nagoya Protocol.	Number of meetings on NP attended Number of staff members aware of the implications of Nagoya Protocol implementation: 2 members of staff trained Researchers and other stakeholders are aware on the implications of the NP on their way to work.	Han de Koeijer attended several meetings in S Korea and Europe, see table 'highlights'
Activities	Report 2014	
6.1.1. A flyer has been developed about "the Nagoya Protocol and implication for collecting species in non-European countries". 6.1.2. One to 2 briefing papers on developments of the NP will be prepared each year. 6.1.3. to attend meetings to get acquainted with the Protocol of Nagoya and to follow up developments	Nagoya Protocol entry into force October 2014. Briefing paper in 2015 foreseen when Belgian Legislation discussions advanced. done	

Table 22. logframe (partim) for SO6, 6.1.

Activities:
As the new position for an additional staff member was not yet filled in 2014, H. de Koeijer was the only person dealing with this SO. Due to the late entry into force of the Nagoya Protocol also not much work was possible under this SO. The briefing papers have therefore not yet been developed.

One of the main activities was to follow-up the development of EU and Belgian legislation as well as on developments on the global level. H. de Koeijer ensured in 2014 a follow-up during the preparation of the Nagoya Protocol as well as during the preparation and in ICNP3, WGRI 5 and COP/MOP 1 meetings in cooperation with the ABS and Nagoya Protocol Belgian focal point. H. de Koeijer also actively participated in the development of the EU regulation on the access and benefit sharing and the Nagoya Protocol, especially on the sections relevant for research and scientific cooperation.

As he participated in the international working group on capacity building for the Nagoya Protocol in 2013, he was chosen as the lead for the EU on the item related to capacity building and the Nagoya Protocol during ICNP-3 and the COP/MOP 1 of the NP. The principal that "capacity building needs expressed by parties was the starting point for all capacity building activities" was underpinned and accepted during the meetings. These preparations and the development of the Belgian and EU positions have been quite time consuming as the EU presidency didn't have an expert on capacity building. Belgian received good feedback from the other EU countries on the work done in the preparation of the EU position for and during COP/MOP 1.

Taking into account that the Nagoya Protocol did only enter in to force in October 2014 and that Belgian has still not ratified the NP, preparation for a flyer has not yet started. We have started to develop however in collaboration with the abs-expert group a frequently asked questions (FAQ) paper to be put on the Belgian CHM in 2015. This FAQ will be tested and will be used as base for a flyer in 2015.

Expected result 6.2. Awareness of the scientific community and other stakeholders on the Nagoya Protocol is raised

Description:

Whenever they bring those species in to Belgium, the Belgian Government will have the obligation to check that the necessary information in relation to Prior Informed Consent (PIC) and Mutual Agreed Terms (MAT) for the use of the species has been respected.

In order to ensure that scientists that travel abroad for collection purposes are aware of the extra paperwork, they need to be informed of the implications of the NP.

As the NP has entered in to force, information on ABS and the NP will be communicated through the national CHM. A special section will be developed in collaboration with the ABS national focal point of Belgium.

Logframe (partim):

Expected results	**Output Indicators**	**Report 2014**
6.2. Awareness of the scientific community and other stakeholders on the Nagoya Protocol is raised.	A special section on the Belgian Clearing House on "Frequently Asked Questions on the Nagoya Protocol" has been developed and is updated regularly.. Number of fliers Number of information sessions	Not in 2014
Activities	**Report 2014**	
6.2.1. information sessions are organised	Not 2014, planned for March 2015	
6.2.2. development of section on NP in CHM.	In collaboration with FOD Environment development of FAQ on NP	
6.2.3.Further actions will depend on the decisions during COP11 and NP COP/MOP1		

Table 23. logframe (partim) for SO6, 6.2.

Activities:

As the Nagoya Protocol only entered into force in October 2014, this year no information sessions has been organised as it was not yet known what the actual implications of the Nagoya Protocol would be for many different stakeholders in Belgium and in development countries. H. de Koeijer gave a presentation on “the implication of the entry in to force of the NP for the Flemish botanical gardens”, during the annual meeting of the Flemish botanical gardens in November 2014, Meisse.

A section on ABS has been maintained with the national focal point for ABS on the Belgian CHM. Under SO-3.3 we have reported on a workshop that will be organised in February/March at RBINS, for which the planning had started in December 2014.

Côte d'Ivoire and DR Congo have asked for assistance on using the ABS-CH during COP/MOP 1. We have asked them to send us an official request in order to be able to formalise this. These requests have not yet been received at the moment of writing this report.

7. Programme coordination and management

Background

The year 2014 was a consolidation and a further development and extension of the networks, modalities and systems established by the new coordinator who started in May 2013 for a results-based coordination and management of the DGD-RBINS programme in the framework of the starting 10 year strategy 2014-2023, phase I (2014-2018).

Outcome:
The project is properly coordinated and managed in order to implement smoothly the 16 expected results under the 6 specific objectives

Expected Results

7.1. Coordination
7.2. Management

Description:
The DGD/RBINS project is a policy support and capacity building unit under the Operational Direction 'Natural environment' or 'Nature' of RBINS, headed by the operational director Dr. Patrick Roose. It is coordinated and managed by the coordinator (Luc Janssens de Bisthoven), an administrative support staff (3 persons: Mariam Agarad, Vincent Pinton, Kristien Vrancken) and three scientists (Han de Koeijer, François Muhasy, Marie-Lucie Susini). Moreover, the programme supports a number of salary months for 2 scientists of RBINS working at the MUMM (Management Unit of the North Sea Mathematical Models and the Scheldt estuary), a department of RBINS (Patrick Luyten and Katrijn Baetens). The unit works closely with a scientist at RBINS, Erik Verheyen, concerning the capacity building in Kisangani (RDC). A new colleague scientist has been recruited in 2014 in order to contribute to e.g. the implementation of SO3, SO5 and SO6.

Logframe (partim) :

7. Coordination and Management	**Key indicators (OVI) and targets**	
Expected results (ER)	**Output Indicators**	**Report 2014**
7.1. Coordination	Annual plan Annual report Recruitments Trainings Project website Fliers, stand New partners, synergies and projects	Annual plan, annual report, recruitment, web site, fliers, new partners, see table 25

7.2. Management	Number of trainees in Belgium Number of qualitative trainings, workshops, symposia, projects, awareness campaigns and functioning CHM websites in developing countries Audit Paperwork Functional computers, equipment (servers…)	
Activities	**Report 2014**	
7.1.1. preparation of the year programme and preparation of the annual report 7.1.2. Human resources and internal capacities 7.1.3. Communication with direction of RBINS, DGD and other stakeholders and visibility 7.1.4. Prospection for synergies, partners, projects and external funding 7.1.5. motivation, support and incitement of staff to reach targets within strategy and activity programme including mid-term evaluation and general coordination	7.1.1 – 7.1.5. done 7.1.4. collaboration with VVOB, project with VLIR-UOS in RD Congo, Funding from UNEP for CHM training with Iraq, Rwanda, Sudan. Synergies with KLIMOS searched.	
7.2.1. organisation of the mobility of the trainees to Belgium 7.2.2. financial management 7.2.3. administration 7.2.4. ICT	7.2.1. -7.2.4 done 7.2.2: 80 % of 2014 funding spent. Up to date financial information available on demand. 7.2.4. Updating to MS office to 2103 for all staff, training in Excel V. Pinton, testing of tablets for use in Burundi.	

Table 24. logframe (partim) for 'coordination and management'

Activities:

The role of the programme coordination is to ensure the coherence and integration of the various components of the cooperation protocol. It also plays an important role of synchronisation with the activities of all project partners: the other RBINS departments, other institutions such as the RMCA, NBGB and universities, NGOs, as well as administrations in Belgium and abroad.

Among other tasks, the coordination is responsible for:

- maintaining regular contacts with the DGD administration, the VLIR, CUD, BTC and others

- the elaboration of the work programmes in collaboration with the responsible persons,
- the adaptation of activities during the programme period whenever necessary,
- the evaluation and reporting of yearly activities,
- the management of accounts,
- the logistic support to the organisation of training activities,
- the supervision of the daily work of the programme's personnel,
- the hiring of staff,
- general aspects of representation, networking and communication.

As part of our networking activities, we continued to exchange information and experiences with other Belgian and international actors involved in biodiversity-related issues. Among our usual partners, we worked closely with the CBD Secretariat, in Montreal, as well as with other UN-agencies and programmes and with IUCN and others (e.g. WWF, the group 'conservation biology' of RBINS etc).

Table 25. Meetings and actions for coordination and management

Actor	Meetings/ action	Date
ANG meeting at 11.11.11.	Coherent approaches	21-05-2014
DGD	Comments on DCI programme	24-09-2014
	Vietnam briefing	13-05-2014
	Worksop strategy environment and review	23-06-2014
	Steering Committee CEBioS	25-06/ 18-12-2014
GBO4	Participation to review	04-07-2014
Belspo/ Belgian Pl. Biodiv.	Extra-europese samenwerking	25-02-2014
	IPBES workshop	16-05-2014
	Brain As 5	17-02-2014
Klimos	Technical meeting with RBINS	02-07-2014
	Seminary sustainable energy transition	16-09-2014
	Steering Committee	09-12-2014
International Foundation Science (Stockholm)	Skype session	28-01-2014
	Meeting with Ms. Pisani and Dr. Haylor	19-02-2014
	Skype session	21-02-2014
	Telephone conversation	22-09-2014
European Yaer Development 2015 (EYD2015)	Meeting service communication RBINS	06-08-2014

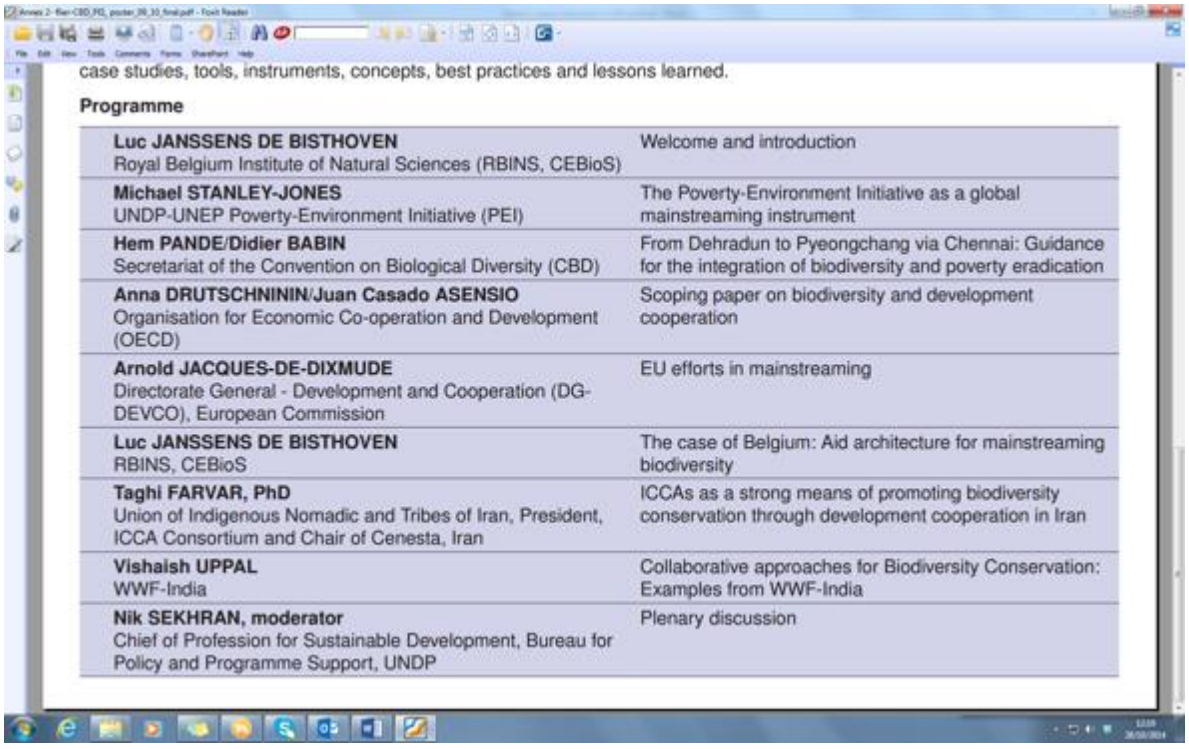
	Template technical fiche DGD	15-08-2014
	Several internal meetings CEBioS and NFP	Through the year
RBINS	BIOPOLS	03-04/14-05/25-07/29-09/04-12-2014
	Committee Functional Chiefs , DO Nature (CFC)	22-01/ 12-05/ 04-12-2014
	Liaison Officers meeting (LSO), DO Nature	27-10/27-11/12-12-2014
	Peer Review DO Nature, P. Roose, K. Martens, B. Lauwaerts	10 and 11-12-2014
	Organisation of PCM workshop @ BELSPO, 16 participants from RBINS	20-06-2014
	Press communication about COP12, however failed to appear in media	21-10-2014
	Recruitment process new scientist: coordination, vacature in several media, jury, selection grid, interview, communication	July-September 2014
	Conservation Biology meetings	06-02/ 09-12-2014
	Seminar on Bushmeat, attendance	05-12-2014
	Meeting with T. Aerts and Vincent Pinton about travel insurances	08-04-2014
	Seminar on quality (RBINS)	26-06-2014
	Web site and flier CEBioS preparation	Many meetings through the year
	Stage by Sandrine Vandenbossche on MRV (Haute Ecole Charlemagne)	1 week in April and 2 weeks in July 2014
Centre de Surveillance de la Biodiversité (CSB)	Visit by Prof. Dudu to Ms. Pisani	09-12-2014
	Meetings about CSB with E. Verheyen, Ms. Pisani, M. Gryseels, M. Descheemakers (RMCA)	12, 17-09/ 01-10/24-10-2014
	Mission in RDC, Kisangani, presentation of poster with activities CEBioS in RDC	02-13 June 2014
Botanical Garden Meise	Meeting at RBINS (S. Dessein, Petra De Block, Marc Sosef)	26-05-2014

Solutions for Sustainable development network (SDSN	Skype Conference	14-04-2014
VLIR-UOS	Technical meeting country strategy Kenya	18-07-2014
	Workshop country strategy Kenya	11-09-2014
	South Initiative Burundi: project writing with OBPE, succeeded	August-Sept. 2014
APEFE	Meeting to explore synergies	16-07-2014
VVOB	Meetings awareness in DRC cooperation, awareness project started.	20-02/ 19-06/ 16-07
EU-DG-ENV	Annual meeting, presentation on mainstreaming made with H. de Koeijer , but given by Han de Koeijer	08-09-2014
COP12	Meeting European level WIPEI	25-07/ 24-09-2014
	Meeting Flemish Ministry Environment	19-09-2014
	Mission in S Korea	9-19-Oct-2014
	Organisation of Side event mainstreaming of biodiversity in development cooperation together with UNDP-UNEP	13-10-2014
OBPE institutional cooperation	Mission to Burundi, PCM workshop, formulation of programme	23-31 March 2014
UAC institutional cooperation	Mission to Benin, PCM workshop, formulation of programme	13-18 April 2014
ICCN institutional cooperation	Meeting during COP12 in S Korea with director	14 Oct. 2014
KU Leuven	Guest course in Masters Aquatic Ecology and sustainable development (Prof. L. Brendonck)	06-10-2014
	Scoring student projects in Masters Aquatic Ecology and sustainable development (Prof. L. Brendonck)	18-10-2014

Fig. 28: Scenes at natural history museum of the CSB (Kisangani, DRC): Drs. Prescott (CSB), Verheyen (RBINS) and Laraque (IRD).

Fig. 29. Aerial view of the lowland rain forest between Kisangani and Goma. Approaching Kisangani, the deforestation becomes apparent (right).

Fig. 30. bush meat and edible molluscs on the market of Kisangani (DRC)



case studies, tools, instruments, concepts, best practices and lessons learned.

Programme

Luc JANSSENS DE BISTHOVEN Royal Belgium Institute of Natural Sciences (RBINS, CEBioS)	Welcome and introduction
Michael STANLEY-JONES UNDP-UNEP Poverty-Environment Initiative (PEI)	The Poverty-Environment Initiative as a global mainstreaming instrument
Hem PANDE/Didier BABIN Secretariat of the Convention on Biological Diversity (CBD)	From Dehradun to Pyeongchang via Chennai: Guidance for the integration of biodiversity and poverty eradication
Anna DRUTSCHNININ/Juan Casado ASENSIO Organisation for Economic Co-operation and Development (OECD)	Scoping paper on biodiversity and development cooperation
Arnold JACQUES-DE-DIXMUDE Directorate General - Development and Cooperation (DG-DEVCO), European Commission	EU efforts in mainstreaming
Luc JANSSENS DE BISTHOVEN RBINS, CEBioS	The case of Belgium: Aid architecture for mainstreaming biodiversity
Taghi FARVAR, PhD Union of Indigenous Nomadic and Tribes of Iran, President, ICCA Consortium and Chair of Cenesta, Iran	ICCAs as a strong means of promoting biodiversity conservation through development cooperation in Iran
Vishaish UPPAL WWF-India	Collaborative approaches for Biodiversity Conservation: Examples from WWF-India
Nik SEKHRAN, moderator Chief of Profession for Sustainable Development, Bureau for Policy and Programme Support, UNDP	Plenary discussion

Fig. 31. Flyer announcing side event on mainstreaming at COP12, S. Korea.

Annex 1: Logframe matrix (2014-2018)

Annex 2: Financial report 2014

Annex 3: Annual report OBPE

Annex 4: Annual report UAC