

Belgium – DR Congo R&D-Cooperation in Biodiversity and Climate change

- Kisangani/Tervuren Workshop ‘Congo-Network’ -
May-June ‘011**



BELSPO “R&D international” --- Strategic goals

- Improve **research excellence** capacity
- Contribute to solving global challenges (**relevance**)
- Raise competitiveness and **innovation potential/market access**

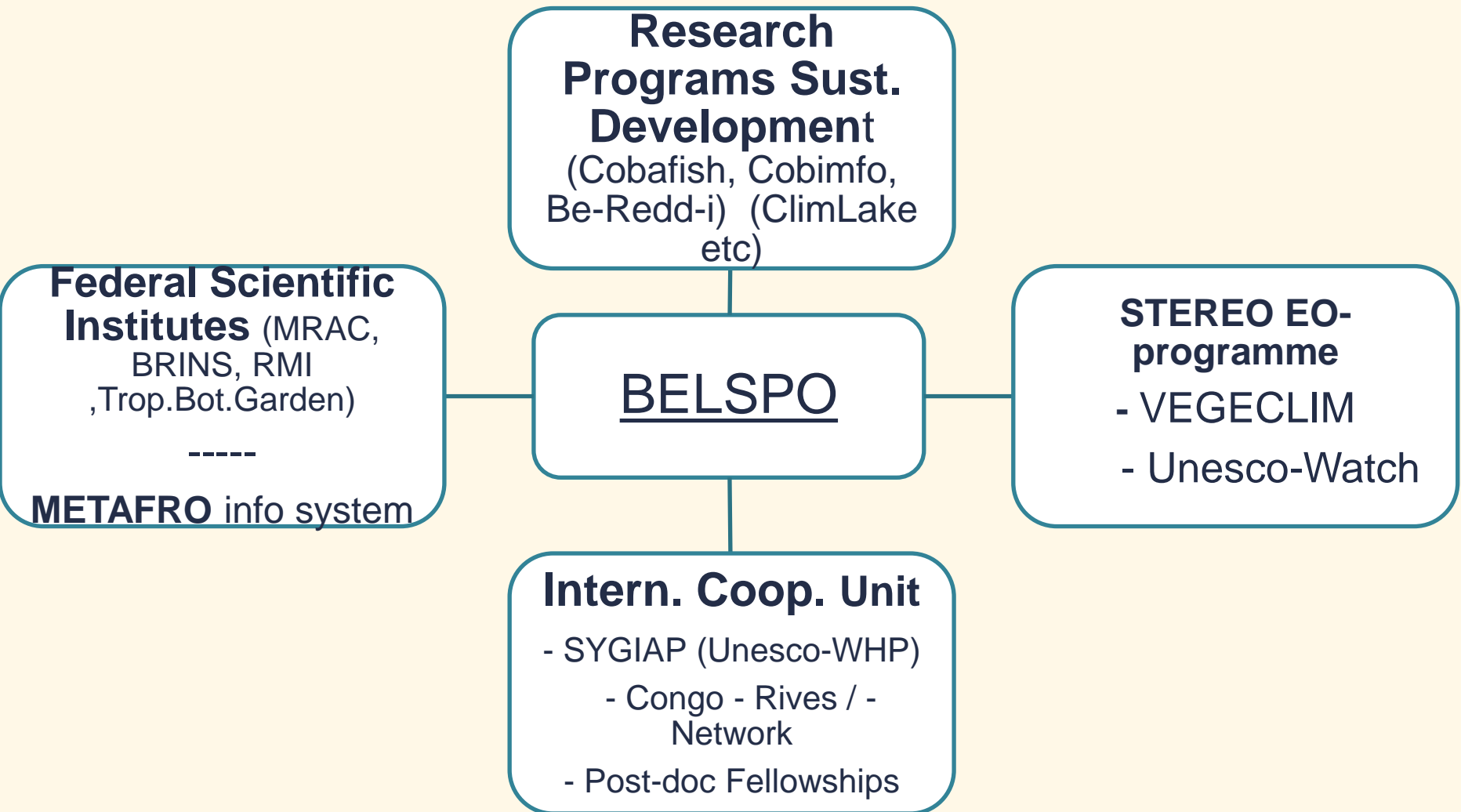
- Balancing basic research and applied research
- Balancing research excellence for solving global challenges and competitiveness
- Strike to balance top down strategic intelligence (targets) with bottom initiatives or research centres and universities
- Transversal coordination S&T policy with domain needs for knowledge (e.g. Environment, Food safety, Energy...)

International R&D cooperation: “Africa strategy”

Objectives

- Enhance **research excellence** (climate change, biodiversity, land&water management, sustainable mining, space applications, health...) by joining forces
- **Relevance:** contribute to resolving global societal challenges, with local impact / contribution to regional development
- Enforce the N-S cooperation dimension to contribute to the **development of research capacity, in particular in C-Africa** , to produce science AND to use science as a sound base for policy and management for sustainable development
- **Uplinking** of DRCongo R&D-cooperation by FSI's and University projects with European and International programmes (JAES/JEG 8, EC-FP7, EC-Devco, JRC (OFAC/FORAF, GMES 4 Africa) , ERAnet Africa, Carbo-Europe, UNESCO-MAB/WHP, FAObiodiv, Carpe...)
- **Strengthen BELSPO-coherence regarding Africa R&D cooperation efforts** (Internat. Cooperation Unit activities /Research Programmes for Sustainable development, STEREO /GMES Africa, UNESCO, Post-doc fellowship programme)

“Bio-Climate R&D cooperation with Africa /DR Congo



‘Support Action’ for the Congo-river Expedition: Congo-Rives & Congo – Network (2010-2012)

“Congo-Rives” (2010)

- Mapping deforestation around the Congo-River expedition transect,
- Sampling information base
- Link to information/data base

“Congo-Network” (2012)

- Encourage multidisciplinary dialogue , coherence and cooperation
- From taxonomy to ecosystem(services)
- Multi-stakeholder approach – Uplinking with European and international biodiversity programmes (UNESCO, EU (OFAC-JRC and others),FAO etc)
- Development of long term (research cooperation) vision /programme ,
- Aiming sustainability of efforts and ensuring real local/regional impact
- Profiling the Congo-Basin in similar importance as the Amazon Basin as crucial green lungs for humanity
- Via a number of workshops, each aiming a specific objective and output

COBIMFO : Congo basin integrated monitoring for forest carbon mitigation and biodiversity, REDD+ perspective, Understanding the relationship between C stocks, fluxes and biodiversity as a function of forest management, including forest protection, degradation and forest regeneration, is of main importance. Increased insight in this relationship is needed to maximize the UN-REDD+ gains, to better address the risks of UN-REDD+ programs, and to avoid substantial biodiversity loss.

Output: baseline reference data on the C balance and biodiversity in pristine and intervened dense tropical forests of the Congo Basin. Increased understanding in the relationship between both variables as a function of forest management

COBAFISH : Knowledge and understanding about the diversity in fish communities in two sub-catchments of the Congo River (Lubilu and Lomami) in terms of biodiversity and functional/trophic diversity, also considering aspect such as importance of seasonal flood events on global ecosystem functioning?

Output: first comprehensive & interdisciplinary dataset on the aquatic biogeochemistry & ecology for a part of the Congo River basin & providing important data to address underlying fundamental ecological dimensions

VEGECLIM: 'GlobCover' processing chain (SPOT VGT landsurface modelling) to forecast terrestrial carbon dynamics in a changing climate context and under different deforestation scenario's (model parameters being optimised for the Amazon basin and for the Congo basin).

UNESCO-Watch: EO-based Method for forest change detection (WHP forest sites)

BELSPO - Post-doc Fellowships DR Congo since 2006) – theme 'Bio'

Granted:

- in 2009 : MRAC (Dr. M. LOUETTE - Ornithology, Ecology, Conservation) : Dr. Charles Kahindo
- (in 2010 : linguistic expert)
- in 2011 : **NBGB Meise & RMMA Tervuren** (Drs. Dessen & Beekman; Post Doc Dr Ewango Ekokinya Corneille, **complementing COBIMFO with COBAPLANT or 'Congo Basin plant diversity and carbon stocks: a latitudinal comparison in the Yangambi and Okapi UNESCO-reserves (DR Congo)'**.

NBGB Meise (Dr. Ch. Cocquyt; Post Doc Prof. Dr. J. Taylor, **complementing COBAFISH with COZADIMO or a 'Preliminary study of diatoms as potential water quality bio-indicators for the tropical Congo and Zambezi sister basins'**

≥≥ Post-docs aiming at a longer term institutional cooperation !

Opportunity for an International Congo-Basin R&D Cluster/Attraction Pole on Climate and Bio-resources (building blocks)

UNIKIS

CSB
(+ guesthouse)

CD-data Platform
Congo-Rives
(2010)

VLIR UOS-CUD
(capacity building)

(**DGOS**-support)
Unesco – FUST(Flanders) WHP/ICCN

BELSPO

Rsearch & enabling projects (Congo-Network), Post-doc fellowships , UNESCO **FSI's**

Kisangani

Research

Development

ERAIFT
(**Regional Forest School**)

Min. BEL Environment(?)

Yangambi

Carbon Fluxtower
(Intern. Research Infrastructure (DGOS- DevCo)

MAB
(Unesco)

INERA
Herbarium (Trop Bot.Garden) IFA

Ngo **WWF** projects (local population involvement)

Oil Palm Plantation (PPP Socfinco – Trop,Agriculture excel.center)

Future option: contribute to set up of a **Climate-Bio Congo basin Internat.R&D Cluster/Attraction pole: (2011-...)**

A unique opportunity...policy context / drivers:

- Post Cancun momentum – REDD+ / Fill in the ‘Congo-Basin’ data gap (twinning Amazon Basin as ‘green lungs’ of the world) & contribution to the grand global challenges
- Biodiversity & Climate Change (Carbon emission) Conventions obligations
- A strong scientific&historical (data) past and an excellent research growth potential in the fields of Biodiversity and Climate Change
- Interfederal cooperation interest (pool resources/join forces): various synergetic investments/efforts (DevCo, Research...)

” Bio-Climate Congo-basin International R&D Cluster/Attraction pole (2011-...): policy context/drivers

- Multidisciplinary & multi-stakeholders effort in a ‘federating project’ (scientists, public authorities (local DR Congo, Belgian , European), private actor(s), ngoes)
- Contribute to regional development
- Zero-emission perspective (sustainable development)
- BELSPO-strategy ‘enforcing the international dimension’ by coherent building on 3 pillars: Research, Capacity building,
Infrastructure (+ attention for the knowledge triangle),
- Strengthening inter-FSI’s cooperation and FSI’s/Universities cooperation

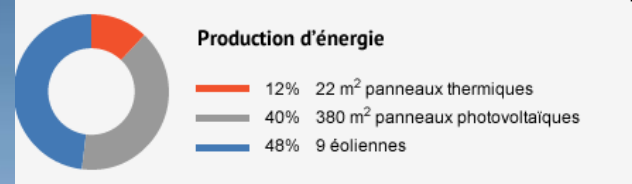
“R&D international” Bio-Climate Congo-basin International R&D Cluster/Observatorium (2011- ...)

Focus:

- Biodiversity / Climate (carbon emission, modelling) **co-benefit** ;
with links to a tropical agriculture excellence pole (support DG Devco – PPP Socfinco)
- Axe Kisangani-Yangambi (2 poles with complementary strengths)
- UNESCO-MAB synergy (biodiversity/participative forest
'conservation')

Challenges:

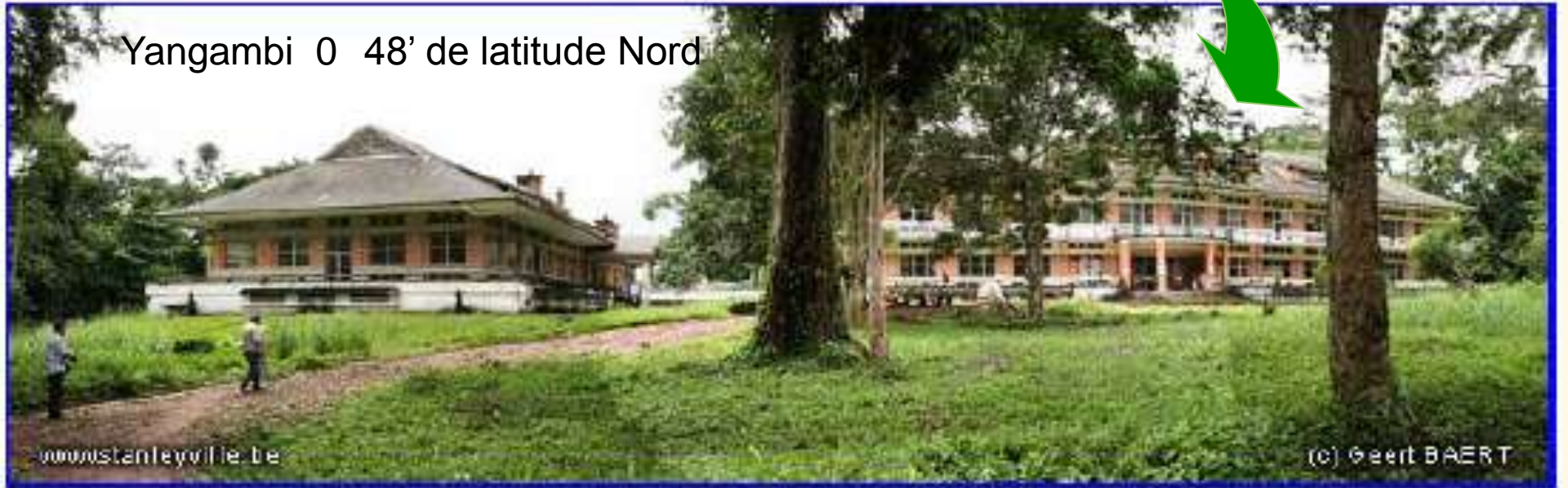
- Governance structure (in DR Congo, in Belgium, (interfederal
committee(?)) / Finance-Business plan
- Ownership of the infrastructure and of the generated data
- Sustainability (operational monitoring, data dissemination)
- European and international uplinks (Flux-NET, Internat. REDD+ DB,
OFAC, CARBO-Europe, GMES4Africa etc, FAO a.o permanent R&D
parcels/transsects) – attract high level internat. R&D - excellency coop. & co-
investments



Station polaire "Princess Elisabeth"
Latitude 71 57' Sud

<http://www.antarcticstation.org/fr/>

Sun & wind energy
Zero-emission (CMD)
Biomass energy



Yangambi 0 48' de latitude Nord

UNESCO/BELSPO future proposal: **focus REDD+**

The project proposal seeks to focus activities in a small set of regionally distributed forest World Heritage sites, especially those with overlapping Biosphere Reserve(MAB) designation. The advantage of testing and developing methods and tools at identified UNESCO designated iconic sites is that they attract keen attention and thus, can be used as learning and demonstration sites for scaling-up the lessons learned to the broader forested ecosystems.

Pilot sites could be chosen from Brazil, Democratic Republic of Congo, Central African Republic, Madagascar, India, and Indonesia representing diverse ecological, social/cultural, political and economic situations. From a list of potential sites from which 5 could be initially selected as pilot project sit,(**DRCongo: Odzala , Yangambi(?)**).

Project goals

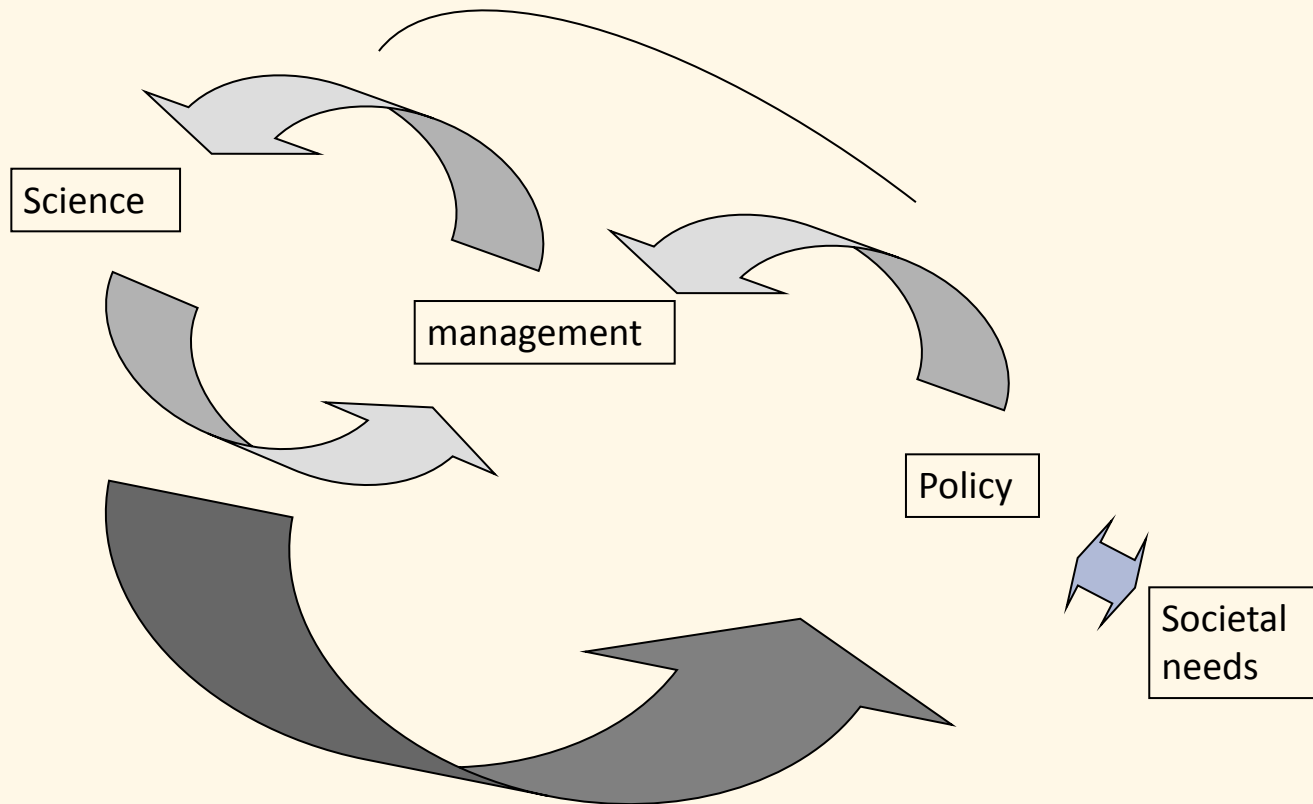
- a) An accepted method to establish the emission reference or baseline against which to benchmark reductions in deforestation and degradation.
- b) The procedure for the operation of the compensation mechanism, including clarity on who has the right to receive payments, and the equity of distribution of such payments to forest dwellers and traditional protectors.
- c) The implementation protocols, including clear enforcement, verification, reporting, and monitoring mechanisms.

Investing in 'Reducing Emissions from Deforestation and Forest Degradation' 'REDD+' (2012-...) - reminder-

- The origins of REDD lies in the notion that developing countries who are rich in forest cover need to be compensated for their efforts at forest conservation and in preventing forest degradation.
- The particular significance lies in the fact that deforestation currently accounts for about 18% of all green-house gas emissions. The REDD mechanism uses market or other financial incentives to support this effort by the developing countries.
(inclusion of the REDD-plus mechanism in the “Copenhagen Accord”)
- (paragraphs 6, 8 &&0) at the UNFCCC’s COP 15,Dec’ 2009 offers the **means for avoided deforestation to provide new incentives for sustainable forest management**);
- REDD+ includes components of deforestation and degradation, but also covers the additional elements of “conservation”, “sustainable forest management”, and “enhancement of carbon sinks”.
- Remark: UN-REDD funding covers 9 **REDD-pilot countries, including DR Congo.**
- Project PROPOSAL seeks to pilot REDD-plus activities in a small set of regionally distributed forest World Heritage sites, especially those with overlapping Biosphere Reserve MAB designation. The advantage of testing and developing methods and tools at identified UNESCO designated iconic sites is that they attract keen attention and thus, can be used as **learning and demonstration sites for scaling-up** the lessons learned to the broader forested ecosystems.

Integrated programme approach

‘from science to management and decision support’,,



THANKS a lot for YOUR ATTENTION - Lets build trust & join our forces !

