Innovative results of the project to support the expanded program on natural resource management training in the Congo Basin (2011-2014)

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Université Laval, Québec Canada (Member of Academic Consortium for the Congo Basin Forest Partnership)
16th CBFP MoP– Kigali, Rwanda (21-26 November 2016)
Presentation Outline

1. COMIFAC Revised Convergence Plan (2015-2025)
2. Project Summary and Beneficiaries
3. Objectives and Expected Results
4. Innovative Results
5. Way Forward
6. Acknowledgements
1. COMIFAC REVISED CONVERGENCE PLAN (2015-2025)

PRIORITIZED THEMES OF INTERVENTIONS

P 1 Harmonization of forest and environmental policies
P 2 Management and sustainable development of forest resources
P 3 Conservation and sustainable use of biological diversity
P 4 Combating the effects of climate change and desertification
P 5 Socio-economic development and multi-stakeholder participation
P 6 Sustainable Financing

CROSS-CUTTING THEMES

T 1 Training and capacity building
T 2 Research and development
T 3 Communication, awareness raising, information and education
2. Project summary and beneficiaries

Client Information

**BENEFICIARY**: Forestry and Environment Training Network of Central Africa (RIFFEAC);

**EXECUTING AGENCY**: RIFFEAC

Financing Plan

**TOTAL COST**: 11,639,985 euros

- **CBFF**: 7,624,985 euros

**Other donors**: Global Affairs Canada (1,575,000 euros); GIZ-Germany (1,125,000 euros); Université Laval-Canada (565,000 euros); Cerfo-Canada (375,000 euros); Riffeac and its member (375,000 euros)

**Period**: 3 years (From July 2011 to June 2014, extended to December 2014)
2. Project summary and beneficiaries

**Beneficiaries**: RIFFEAC Platform and 20 member institutions in 9 out of 10 COMIFAC countries
- Burundi
- Cameroon
- Gabon
- Equatorial Guinea
- Central African Republic
- DR Congo
- São Tomé and Príncipe
- Congo
- Rwanda
- Tchad
RIFFE AC and its 22 members in 2016

Institutions membres du RIFFEAC

1. FABI - Gitega  
2. CRESA - Yaoundé  
3. HIES - Yaoundé  
4. FASA - Cachang  
5. ENEF - Mbaïmayo  
6. EFG - Garoua  
7. ENSAF - Brazzaville  
8. ENEF - Mossendjo  
9. ENEF - Libreville  
10. EUEAFF - Malabo  
11. FMA - Malabo  
12. ISDR - Bangui  
13. ISEA - Bangui  
14. UKV - Boma  
15. UOOG - Bulembou  
16. ERAIF - Kinshasa  
17. UNIKIN - Kinshasa  
18. UNIKIS - Kisenangi  
19. UNILU - Lubumbashi  
20. ISEA - Tshela  
21. KCECM - Kitabi  
22. IUSAES - Sarh

Burundi  
Cameroon  
Cameroon  
Cameroon  
Cameroon  
Cameroon  
Congo  
Congo  
Gabon  
Guinée équatoriale  
Guinée équatoriale  
RCA  
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3. Objectives and Expected Results

The overall objective of the Project was to enhance training and research activities in order to reduce deforestation and degradation of natural resources in the Congo Basin. Its specific objectives were to:

i) support RIFFEAC’s coordination activities,

ii) support the technical training,

iii) support university training and research,

iv) support the project management unit.
3. Objectives and Expected Results

- The expected results were: (i) the training institutions are strengthened technically, financially and in terms of tools and; (ii) modules for technical, university and post-graduate training are prepared and taught at the target institutions; (iii) infrastructures for the training institutions are improved and rehabilitated; (iv) the demonstration forests are developed and well managed; and (v) students conduct research at the target universities.
4. INNOVATIVE RESULTS

4.1. Revision and harmonization of programs for vocational and technical training

- 11 programmes developed and adopted

✓ 3 technical agents with 9 job descriptions

1. Technical agent in forest operations with 4 job descriptions (JD):
   - Forest survey
   - Scaling and classification of wood
   - Felling and mobile sawing
   - Use of forest machine

2. Technical agent in wood transformation with 3 JD:
   - Sharpening of cutting tools,
   - Operation of machinery sawmill
   - Dry operation & quality

3. Technical agent in wildlife and protected areas with 2 JD:
   - Eco-guard
   - Eco-guide
4.1. Revision and harmonization of programs for vocational and technical training

- 5 senior technician certificate (STC/BTS)
- 3 technical engineers

- Senior technician certificate in forest operations
- Senior technician certificate in industrial carpentry
- Senior technician certificate in electro mechanics
- Senior technician certificate in wood transformation
- Senior technician certificate in wildlife and protected areas

- Technical engineer in forest operations
- Technical engineer in industrial carpentry
- Technical engineer in wood transformation
- Technical engineer in wildlife and protected areas
4.2. Revision and harmonization of programs for university training

- **7 programs developed and adopted**
  - **2 Bachelors of Science (Bac+3)**
    - B.Sc.in forest operations
    - B.Sc.in wood industry
  - **4 Masters (3 research and 1 professional)**
    - M.Res.in wood science (ENEF-Gabon)
    - M.Res. Agroforestry (U.Dschang)
    - M.Res. in forest policy and governance (Uniikin)
    - M. Pr.in forest policy and governance (Unik)
  - **1 Process Engineering (Bac +5)**
4.3. SPECIALISATIONS OF INSTITUTIONS

- University training
  - 3 Centres of excellence created
    - ENEF Gabon in wood sciences
    - FASA de Dschang in agroforestry and ecosystem services
    - FSA–UNIKIN in forest policy and governance

- FASA–U.Dschang specialized in agroforestry and ecosystem services
- ENEF Gabon specialized in wood sciences
- FSA–UNIKIN specialized in forest policy and governance
The program aims to train highly qualified personnel (HQP) with expertise in diagnostic, evaluation, design and research skills on techniques, innovative and emerging management of agroforestry systems (AFS) as well as economic and ecological valuations of AFS.
Global objective of the programme

• The program aims to train highly qualified personnel (HQP) with expertise *in areas of wood sciences* (wood anatomy, physics, chemistry, mechanics).
Global objective of the programme

- The program aims to train highly qualified personnel (HQP) with expertise in *forest policy and governance*. It is a multi-disciplinary and multi-faculty program (management of natural resources, economy, law).
Global objective of the programme

The program aims to train wood engineers in 5 years with expertise in *wood sciences, transformation process and engineering sciences* in order to develop production plans in wood transformation industry and valorisation of wood residus (2\textsuperscript{nd} and 3\textsuperscript{rd} transformations).
4.4. TRAINING OF TRAINERS (SCHOLARSHIPS)

- PhD training
  - 20 PhD scholarships
    - 10 Université Laval, Canada
    - 1 U. Stellenbosch, South Africa
    - 9 Institutions of the Congo Basin

- Masters and Diploma of specialized post-graduate studies (DESS)
  - 34 Masters of research scholarships
    - 3 Université Laval
    - 10 ENEF Gabon
    - 10 UNIKIN
    - 11 UNI Dschang
  - 2 Diploma of DESS
Origin and areas of specialization of scholars enrolled at Laval

Research areas:
Agroforestry
Conservation and protected areas
Community forestry
Geomatics, remote sensing and GIS
Mycoremediation (ecological engineering)
Fish farming and population genetics
Wood Science (Physics, and chemistry)
Carbon sequestration Sylviculture
4.5. MODERNISATION OF INFRASTRUCTURES

## Construction

<table>
<thead>
<tr>
<th>No</th>
<th>Name of beneficiary institution (BI)</th>
<th>Place/Country</th>
<th>Work done</th>
<th>Capacity</th>
<th>Date received</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ecole de Faune de Garoua (EFG)</td>
<td>Garoua / Cameroun</td>
<td>Construction of a dormitory R + 1 48 modern rooms</td>
<td>72 Places</td>
<td>17 October 2014</td>
</tr>
<tr>
<td>2.</td>
<td>Ecole Nationale des Eaux et Forêts de Mbalmayo (ENEF Mbalmayo)</td>
<td>Mbalmayo / Cameroun</td>
<td>Construction of a simple building of 2 rooms: one GIS room and 1 computer room</td>
<td>100 Places</td>
<td>29 November 2013</td>
</tr>
<tr>
<td>3.</td>
<td>Ecole Nationale des Eaux et Forêts de Mossendjo (ENEF Mossendjo)</td>
<td>Mossendjo / Congo</td>
<td>Construction of academic block consisting of a library, two computer rooms and 1 office in clay brick</td>
<td>100 Places</td>
<td>27 February 2014</td>
</tr>
<tr>
<td>4.</td>
<td>Ecole Nationale des Eaux et Forêts Libreville (ENEF Libreville)</td>
<td>Libreville / Gabon</td>
<td>Construction of a school complex R + 1: two classrooms, three laboratories, 8 offices, 2 multimedia rooms and 28 single rooms</td>
<td>3 labs = 60, 2 classrooms = 40, 8 offices, 2 multifunctional rooms = 30</td>
<td>10 October 2014</td>
</tr>
<tr>
<td>5.</td>
<td>Institut Supérieur d’Agronomie de Tshéla</td>
<td>Tshéla / RDC</td>
<td>Construction of an administration building R + 1 (01 library, 01 computer room, 13 offices, 01 conference room)</td>
<td>Salle info = 50, Library = 50, Conference room = 50</td>
<td>25 September 2014</td>
</tr>
</tbody>
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### 4.5. MODERNISATION OF INFRASTRUCTURES

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</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>Institut Supérieur d’Agronomie de Gitega (ISA Gitega)</td>
<td>Gitega /Burundi</td>
<td>Rehabilitation of two laboratories and a library</td>
<td>100 Places</td>
<td>29 July 2014</td>
</tr>
<tr>
<td>8.</td>
<td>Faculté Agronomique et des Sciences Agricoles de l’Université de Dschang (FASA –Dschang)</td>
<td>Dschang / Cameroun</td>
<td>Rehabilitation of the Department of Forestry, Dean office and 2 Amphi</td>
<td>2 amphi = 1000 Dean office = 10 Multimedia room= 40</td>
<td>10 May 2014</td>
</tr>
<tr>
<td>9.</td>
<td>Centre Régional d’Enseignement Spécialisé en Agriculture Forêt Bois (CRESA Forêt-Bois)</td>
<td>Yaoundé / Cameroun</td>
<td>Rehabilitation of the instructional unit (10 office, conference room, four classrooms, resource center, two computer labs, etc.)</td>
<td>100 places</td>
<td>7 May 2014</td>
</tr>
<tr>
<td>10.</td>
<td>Ecole Nationale des Sciences Agronomiques et Forestières (ENSAF)</td>
<td>Brazzaville / Congo</td>
<td>Construction of a block of three (03) classrooms</td>
<td>120 places</td>
<td>13 March 2014</td>
</tr>
<tr>
<td>11.</td>
<td>Faculté des Sciences Agronomiques de l’Université de Kinshasa</td>
<td>Kinshasa / RDC</td>
<td>Rehabilitation of plumbing</td>
<td>1000 places</td>
<td>29 May 2014</td>
</tr>
<tr>
<td>12.</td>
<td>Ecole Régionale postuniversitaire d’Aménagement et de Gestion Intégrés des Forêts et Territoires Tropicaux (ERAIFT)</td>
<td>Kinshasa / RDC</td>
<td>Rehabilitation of a conference room (Luki) and a laboratory at ERAIFT Kinshasa</td>
<td>100 places</td>
<td>30 September 2014</td>
</tr>
<tr>
<td>14.</td>
<td>Institut Supérieur de Développement Rurale</td>
<td>Mbaïki / RCA</td>
<td>Rehabilitation of three (03) classrooms</td>
<td>100 places</td>
<td>07 May 2014</td>
</tr>
</tbody>
</table>
4.5. MODERNISATION OF INFRASTRUCTURES

- Informatics and GIS Building at ENEF Mbalmayo - Cameroon
- Residence with 48 rooms at the School of wildlife Garoua - Cameroon
- Multimedia Centre at ENEF Mossendjo - Congo
- Complex X at FSA of University Kasa Vubu in BOMA - RDC
4.5. MODERNISATION OF INFRASTRUCTURES

- Rehabilitation and aménagement of a block of three classrooms and two offices at ENSAF - Congo

- Rehabilitation of the administrative building at FASA-U.DSchang - Cameroon

- Construction of a block of three classrooms at ENSAF - Brazzaville, Congo

- Rehabilitation of three classrooms at ISDR Mbaiki - RCA

- Rehabilitation of student dormitories at KCCEM - Rwanda
4.6. ACQUISITION OF TOOLS AND INSTRUMENTS

- Acquisition of equipment
  - Beds, mattresses and accessories for dormitories, chairs and benches for classrooms and laboratories (mostly to equip new constructions).
  - Computer rooms (to equip the majority of BI) Computers, printers, copiers, laptops, projectors, etc.

- Vehicles
  - 5 vehicles 4x4 and 1 minibus.
4.6. ACQUISITION OF TOOLS AND INSTRUMENTS

Acquisition of equipment

- Educational resources including textbooks (all BI received items)

- Field equipment and laboratory (equipment procured and distributed in 16 BI)
  - Field: Compas, GPS, binoculars, chainsaws, etc.
  - Labo: distiller, scale, microscopes, binoculars, etc.
First ever agroforestry textbook for the tropics

Submitted by Kate Langford on December 4, 2013

Tropical Agroforestry

The first comprehensive textbook on all aspects of agroforestry in the tropics has just been published, filling the need for educational material on an area of agricultural science that has the potential to improve livelihoods and the environment in some of the poorest and most degraded regions of the world.

“This new textbook brings together everything that is currently known about the theory and practice of agroforestry in a tropical context,” explains Ann Degrande, Senior Scientist with the World Agroforestry Centre in Cameroon and one of the textbook’s 4 authors.

“While agroforestry has been practiced traditionally worldwide for millennia, it is only in the last 20 or so years that it has been properly recognized as a discipline of agricultural science.”

Increasingly we are seeing tropical countries look to agroforestry as a means of not only improving people’s livelihoods through the supply of fruits, timber, fodder and fertilizer and therefore higher incomes, but also in stabilizing erosion, replenishing soils, storing carbon and enhancing on-farm biodiversity.

Universities which have developed agroforestry curricula for undergraduate and postgraduate studies are in urgent need of educational resources to support their teaching. The last authoritative agroforestry textbook was published in 1998 by A.M. Nair, a pioneering researcher and educator in the field of agroforestry.

Since then, major advances have been made in the science of agroforestry, such as in tree domestication and agroforestry for integrated pest management and biofuel production.

The contribution of agroforestry to the mitigation of climate change through carbon

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Books can be purchased directly from the publisher or through booksellers such as Amazon.

Alain-René Atangana, Damase Khasa et Martin Beaudoin-Nadeau.

200 copies were distributed to RIFFEAC member institutions.
4.7. RESEARCH SUPPORT

Research Grants

- 2 calls for proposals
  - 1st call for PhD students at Université Laval
  - 2nd call for PhD/M.Sc. students, university research and technology transfer projects in the sub region

[Liste bénéficiaires.docx]
4.8. COMMUNICATIONS OF RESEARCH FINDINGS

- Scientific and technical journal on forest and environment in the Congo basin
  - 7 issues published so far
4.9. SUPPORT TO CONTINUING EDUCATION.

- Preparation of methodological guide on design and organization of seminars of continuing education

- Development and implementation of six modules of continuing education in different institutions by beneficiary institutions
4.10. Internationalization of Laval/CERFO

• **Opportunity:** This project has been an opportunity for Laval/CERFO to renew its commitment of over 4 decades of cooperation in forestry training, education and research with the Congo Basin.

• **Mobilisation of personnel:** Over 25 professors at Laval have been involved since 2008 providing their expertise and knowledge during workshops, teaching at the undergraduate level and supervising graduate students at the M.Sc. and Ph.D. levels, etc.

• **N-S, S-S and N-N Cooperation:** Strengthening of North-South, South-South (Laval-Riffeac and its members) and its members) and North-North (Laval-ACCBFP) partnerships;

• **Creation of three pôles of excellence:** We are exploring bidiplomation (joint diplomas) for the M.Sc. programs the project has helped developed.
5. WAY FORWARD (PHASE II)

Approval at the regional ministerial level of harmonized programs with Riffeac certified label and implementation at targeted institutions

- Consolidation and strengthening of project activities underway in phase I with strong communication strategy in order to achieve sustainability upon the completion of phase II
6. Acknowledgements
Merci de votre attention!

Période de questions