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A Systematic Approach to Strengthening Capacities on Climate Change and Natural Resource Management in West Africa

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Key Messages

- ✓ Capacity development is a process that focuses on developing new and improving existing skills and knowledge. The target groups for capacity development must be clear from the beginning and the activities can be short term or long term in-country or abroad.
- ✓ The identification, engagement and consultation of stakeholders on natural resource management and climate change provide opportunities to design and implement training activities that respond to the needs of the beneficiaries and target groups.
- ✓ The capacity needs assessment process enables key stakeholders to identify and prioritize their training needs on climate change. The content of training activities should therefore be largely defined by key stakeholders and not solely by the projects or funders.
- ✓ The BIODEV project trained more than 1400 people. The percentage of women trained was higher when invitations were sent directly to individuals and not through their institutions.
- ✓ The success of the BIODEV capacity development program was due to:
 - i. Effective coordination and planning amongst trainers.
 - ii. Diverse and complementary expertise of the core training team.
 - iii. Consultation and careful selection of participants and institutions for each training.
 - iv. Content, format, depth and duration of the trainings vis-à-vis the needs of the trainees.
 - v. Immediate linkage of the training content to BIODEV project activities
 - vi. Dissemination of BIODEV results and seeking feedback from participants.

Introduction

Climate change is already impacting the natural resource-dependent communities and economies of West Africa. Agriculture, forest, livestock, water and other natural resources are affected by frequent occurrence of droughts, floods, dust and sand storms, heatwaves, forest fires, etc. Improved capacities - through technical assistance and organizational support - are therefore critical for effectively addressing climate change, managing natural resources, alleviating poverty, and promoting climate-resilient economic and social development. Moreover, there is a need to develop new skills and provide much more complex, integrated and comprehensive knowledge that is required for different stakeholders in West Africa to respond more effectively to climate change challenges and support communities to promote biocarbon development options (refers to increasing biological or natural carbon through improved agroforestry and forestry management and tree planting). The urgency to build capacities is further supported at the international level, under the Paris Climate Agreement, where increasing attention is given to the development of capacities of developing countries.

It is in this context that the Building of Biocarbon and Rural Development in West Africa (BIODEV) project provided different training and conducted capacity building activities to build new skills and enhance existing skills of diverse actors and institutions on climate change adaptation and mitigation, agriculture, agroforestry and forestry in Burkina Faso, Sierra Leone, Mali and Guinea. BIODEV is a four-year (2012-2016) project funded by the Government of Finland. It is implemented by a consortium composed of the World Agroforestry Centre (ICRAF), the Centre for International Forest Research (CIFOR), the University of Helsinki (UH), and the University of Eastern Finland (UEF), along with national partners in Burkina Faso, Guinea, Mali and Sierra Leone. The goal of BIODEV is to achieve sustainable development with long-term livelihood and environmental benefits for rural .

populations and the global community. BIODEV activities contribute to the increase of both carbon and non-carbon benefits through improved agroforestry, forestry management and tree planting. This brief draws on the outcomes of the BIODEV project activities in West Africa to demonstrate the systematic approach to capacity building that was used for managing natural resources and combating climate change.

Target Groups

Three categories of beneficiaries were targeted. They included management and technical staff from policy-planning, implementing and research organizations.

- 1. Policy and planning organizations:** These are the climate focal points, National REDD+ coordinators / advisors, staff of ministries and governmental divisions working on climate change, forestry, agriculture, and agroforestry. These actors drive the process of capacity development and will take over from BIODEV to further develop capacity of their institutions and organizations.
- 2. Implementation actors:** These are actors that carry out extension services, agriculture, agroforestry and forestry activities, and diverse natural resource interventions at the plot, landscape and community levels.
- 3. Research organizations:** These are research institutions and university departments, faculties and schools of agroforestry, agriculture and forestry that are engaged in understanding adaptation and mitigation actions and the different roles of trees within agricultural and forest landscapes.

Approach

BIODEV used a five-step systematic approach for capacity building that comprised of:

- i. Stakeholders' engagement on capacity development.
- ii. Capacity needs assessment (CNA).
- iii. Formulation of a capacity development plan.
- iv. Implementation of the capacity development plan.
- v. Evaluation of capacity development activities.

1. Engagement of Stakeholders

Stakeholders in the target countries were identified during the design, elaboration and implementation of the project. Initial consultations with national implementation partners, inception workshops and project activities provided platforms for identification of, and engagement with, a range of key stakeholders at the national and local levels. The stakeholders were mainly project partners or project beneficiaries and came from policy and planning organizations, research institutions and universities, and community-based actors (including farmers). With limited resources and time, the goal and specific objectives of the project were used as important guiding factors in engaging specific stakeholders for capacity building activities.

2. Assessment of Capacity Development Needs

Capacity development needs were assessed and prioritised through the organisation of national workshops with representatives from the institutions of the identified target groups from the four BIODEV countries. SWOT analysis was used to identify the Strengths, Weaknesses, Opportunities and Threats affecting the implementation of natural resources and climate change activities.

Different actors and institutions had different priorities and needs for capacity building. For example, trainings on adaptation and forestry interventions were envisaged as being priorities for extension services, NGOs and farmers, while research and university institutions considered training courses on climate change as their priority.

Example: Priority capacity development needs in Sierra Leone identified by different actors

National Policy and Planning Institutions		
Agroforestry/Forestry	Adaptation	REDD+
<ul style="list-style-type: none"> ✓ Elaboration of agroforestry projects ✓ Basics agroforestry concepts ✓ Support the development of legislation and policies for agroforestry 	<ul style="list-style-type: none"> ✓ Elaboration of adaptation projects ✓ Understanding climate change and adaptation science ✓ Support the formation of a National Adaption committee and policies 	<ul style="list-style-type: none"> ✓ Elaboration of REDD+ projects ✓ Support the formation of a National REDD+ committee and the development of REDD+ legislation/policies ✓ Understanding REDD+ concept and issues
Research and University Institutions		
Agroforestry/Forestry	Adaptation	REDD+
<ul style="list-style-type: none"> ✓ How to network with international institutions ✓ Research in agroforestry, forestry and climate change ✓ Writing research proposals and scientific publications 	<ul style="list-style-type: none"> ✓ Take courses on land management and climate change ✓ Mobilisation of funds ✓ Identification and diversification of adaptive technologies 	<ul style="list-style-type: none"> ✓ Training of lecturers and researchers on REDD+ ✓ Introduction of short and long-term climate change courses in universities
Extension Services, Farmers and NGOs		
Agroforestry/Forestry	Adaptation	REDD+
<ul style="list-style-type: none"> ✓ Alternative livelihood strategies ✓ Capacity-building ✓ Mobilization of funding 	<ul style="list-style-type: none"> ✓ Training of local expertise ✓ Rehabilitation of degraded areas ✓ Awareness raising and advocacy 	<ul style="list-style-type: none"> ✓ MRV, finance and carbon markets ✓ Training of Trainers: civil society ✓ Advocacy & awareness raising

3. Formulation of Capacity Development Plan

The identified capacity development needs and priorities were used to elaborate a robust and responsive capacity development programme. The programme consisted of two categories: Organizational development and Technical assistance. It was implemented by a team of diverse experts from CIFOR, ICRAF, the University of Helsinki, and the University of Eastern Finland, as well as local institutions in the project countries. Each training depended on the thematic area that focused on precise target groups and was conducted by specialised experts.

Organizational development: This category of capacity building was a more dynamic process, and not a one-time training. Identified activities included, for example:

- ✓ Developing new teaching materials for university courses in climate change, bioenergy, agroforestry, etc.
- ✓ Supporting the formation or strengthening of national climate change committees and policies.
- ✓ Sensitization and advocacy on climate change, adaptation and mitigation.

Technical assistance: This category proposed diverse but interrelated training activities grouped under different areas such as long-term trainings abroad, short-term trainings abroad, and short 2-5 day in-country trainings.

4. Implementation of the Capacity Development Plan

Trainings were organised in Burkina Faso, Sierra Leone, Switzerland and Finland with participants from Burkina Faso, Sierra Leone, Guinea and Mali. Examples of trainings conducted are highlighted in the Box.

Box: A list of selected trainings conducted by BIODEV

Long-term PhD trainings at the University of Helsinki, Finland (3-4 years)

- ✓ Land use and land cover assessment in Sierra Leone.
- ✓ Modelling and development of efficient rapid carbon stock appraisal tools in Mali.
- ✓ Climate change and multi-level governance in Burkina Faso.
- ✓ Synergy between FLEGT and REDD+ in Congo Basin.
- ✓ Deforestation and forest degradation in southern Burkina Faso.

Master of Science (MSc) training

- ✓ BIODEV supported nine MSc students from Burkina Faso (University of Ouagadougou, University of Bobo and University Aube Nouvelle), Senegal (University of Senghor) and Finland (University of Helsinki).

Short-term trainings abroad

- ✓ Helsinki Summer School in 2015 on “Sustainable management of forest landscapes”. Participants from Burkina Faso, Mali and Sierra Leone.
- ✓ UNFCCC negotiation preparations pre-Paris Climate Agreement - Geneva, Switzerland. Participants from Burkina Faso, Mali, Guinea and Sierra Leone.

Selected short-term in-country trainings

- ✓ Landscape carbon inventory in Sierra Leone and Burkina Faso.
- ✓ Sustainable forest management– Sierra Leone and Burkina Faso.
- ✓ Outcomes and Implications of the Paris Climate Change Conference - Sierra Leone.
- ✓ Climate change science, adaptation and mitigation - Burkina Faso.
- ✓ Elaboration and evaluation of climate change projects - Burkina Faso.
- ✓ Promoting synergies between adaptation and mitigation- Burkina Faso.
- ✓ Fabrication and utilisation of improved stoves – Burkina Faso.
- ✓ Development of forest and agroforestry-based community enterprise – Burkina Faso.
- ✓ Establishment, monitoring and evaluation of Innovation Platforms.
- ✓ Tree domestication, value chain and adoption of agroforestry in Burkina Faso and Mali.

5. Evaluation of Capacity Development Activities

After each short-term training, participants evaluated the effectiveness of the trainings. In some evaluations, the participants discussed openly about what they had learnt, what needed to be improved in the trainings, and how they planned to use the new knowledge acquired in their work plans and daily professional activities. In other cases, participants filled out short questionnaires on specific aspects of the training ranging from technical content and logistic to expertise of the trainers. Long-term trainings, such as PhDs, are ongoing and their effectiveness and impact may only be known in the future.

In total, BIODEV trained more than 1400 people from Burkina Faso, Mali, Sierra Leone and Guinea. One major challenge of the training was the difficulties in getting equitable representation of women among the trainees,

especially at the national level. This can be partly explained by the nomination of trainees by the invited institutions. However, where and when the individual participants are directly invited by BIODÉV, especially at the local level, the percentages of women was equal or more than men in some cases. For example, the trainings related to: Rural Resource Center (RCC) in Burkina Faso (women 72%, men 28%), participation in Helsinki Summer School course on sustainable forest landscape management (women 50%, men 50%) as well as the training on manufacturing and effective utilization of improved stoves in Burkina Faso (women 100%, men 0%).

Future Perspective

The approach used in the training by BIODÉV is systematic, with clear steps to follow. The training team used the training-of-trainers concept, where individuals were chosen on the basis of their capacity to further train others. The scope and depth of the individual training modules are defined to widen the array of skills of stakeholders to support climate change adaptation and mitigation. Individuals were therefore trained on different topics, sometimes even topics that were considered ‘outside’ or ‘beyond’ their expertise, mandate or previously acquired knowledge. To ease the replication of the training modules in different locations, context or countries, it is crucial to document the different training modules for dissemination first to the trainees and their respective institutions, and then to the wider public in West Africa and beyond.

Core team of BIODÉV trainers and their areas of expertise
Dr. Ann Degrande (ICRAF): Socio-economy and natural resources governance
Dr. Antoine Kalinganire (ICRAF): Tree domestication
Dr. Catherine Dembele (ICRAF): Tree domestication
Dr. Coulibaly Pascaline-Lingani (INERA): Socio-economy and forest governance
Adj. Prof. Cheikh Mbow (ICRAF): Adaptation, mitigation and development
Dr. Djalal Arinloye (ICRAF): Value chain, marketing and enterprise development
Dr. Ermias Betemariam (ICRAF): Carbon inventory
Dr. Henry Neufeldt (ICRAF): Agroforestry, adaptation and mitigation
Dr. Issa Ouedraogo (ICRAF): Carbon, GIS and remote sensing
Dr. Janne Heiskanen (University of Helsinki); Mapping land cover and forest biomass
Dr. Jules Bayala (ICRAF): Ecophysiology and climate smart agriculture
Ass. Prof. Jerome Tondoh (ICRAF): Land management and climate change
Adj. Prof. Kalame Fobissie (University of Helsinki): Adaptation, mitigation, policy, UNFCCC
Prof. Markku Kanninen (University of Helsinki): Adaptation, mitigation and forest management
Dr. Markus Melin (University of Eastern Finland): Remote sensing and GIS
Dr. Mathurin Zida (CIFOR): Forest management and climate change adaptation
Dr. Matthew Gboku (SLARI): Forest and agricultural extension
Mr. Michael Balinga (CIFOR): Forest management and biodiversity conservation
Prof. Petri Pellikka (University of Helsinki): Mapping land cover and forest biomass
Dr. Sari Pitkänen (University of Eastern Finland): Sustainable fuel wood production

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