REDD-PAC

(REDD+ Policy Assessment Centre)

Project under the International Climate Initiative of the Federal Ministry

for the Environment, Nature Conservation

Building and Nuclear Safety (BMUB), Germany

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Evaluation Report on the assessment strategy

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Contents

List of acronyms	
CAR	Central African Republic
CBD	Convention on Biological Diversity
COMIFAC	Central African Forests Commission
DRC	Democratic Republic of the Congo
FREL	Forest Reference Emission Level
GLOBIOM	Global Biosphere Management Model
GLP	The Global Land Project
IBGE	Brazilian Institute of Geography and Statistics
ICMBio	Instituto Chico Mendes, Brazil
IGBP	International Geosphere-Biosphere Program
IHDP	International Human Dimensions Program
IIASA	International Institute for Applied Systems Analysis
INPE	National Institute for Space Research, Brazil
MECNT	Ministry of Environment, Conservation and Tourism, Republic of Congo
MEFDD	Ministry of Forest Economy and Sustainable Development, Republic of Congo

MMA	Ministry of Environment, Brazil
NBSAP	National biodiversity strategy and action plan
RC	Republic of Congo.
REDD-PAC	REDD+ Policy Assessment Center.
UNEP-WCMC	United Nations Environment Programme World Conservation Monitoring Centre.

1. Objectives of the project

REDD+ has the potential to deliver multiple benefits resulting from reductions in deforestation and forest degradation, and conservation of forest carbon stocks, sustainable management of forests and enhancement of forest carbon stocks. These benefits include both reductions in greenhouse gas emissions (the primary focus of REDD+) and the preservation and restoration of other ecosystem services and biodiversity. Countries have already started on their REDD+ readiness preparations, including in relation to decisions made by the Parties to the United Nations Framework Convention on Climate Change (UNFCCC). Decisions include the need for national REDD+ strategies or action plans, reference levels and safeguard information systems in order to receive results based payments. However, at the project start it was identified that there was a lack of technical know-how and capacity on issues that will ensure the efficiency, effectiveness and environmental integrity of REDD+, ranging from the implementation of reference level methodologies to basic planning for multiple benefits and the operationalization of safeguards.

It was against this backdrop that the REDD+ Policy Assessment Center (REDD-PAC) project was developed to respond to the international community's need for support in designing economically efficient and effective REDD+ strategies and land use policies that are in line with the objectives of the Convention on Biological Diversity (CBD). In this context, REDD-PAC has supported: (1) capacity building on multiple benefits from REDD+ focusing on spatial analysis the Congo Basin and six additional countries; and (2) the use of integrated land-use modelling for REDD+ planning in the member countries of the Central African Forests Commission (COMIFAC) and Brazil that takes account of the objectives of the CBD.

The present document presents a review and updating of the project strategy assessment as published in October 2012 during the first year of REDD-PAC[1]. The recommendation provided by the Advisory Board, five high-level experts in the area of REDD+, are also presented and discussed at the end of the report.

2. Institutional setting

Regional partners of REDD-PAC were chosen in order to maximize both scientific excellence as well as policy relevance of the project. The following sub-sections provide a detailed overview of the strategy for ensuring an appropriate institutional setup of REDD-PAC in Brazil and in the Congo Basin.

2.1. Brazil

The work on Brazil is coordinated by the National Institute for Space Research (INPE). INPE has been leading the Amazon forest monitoring efforts and has been pushing for the open data policy in Brazil. A few months after the kick-off meeting in Brazil, the REDD-PAC team was operational. The team included a group of GIS experts to process and harmonize the spatially explicit data into simulation units used in the Global Biosphere Management Model (GLOBIOM), a modeling team with good computer skills who was committed to learn the GAMS software and the GLOBIOM model, and an economist from IPEA to provide statistical analysis and economic data processing to support the modeling team. This has proven to be an efficient set-up to appropriate the GLOBIOM tool and adapt it to Brazilian context. IIASA's role has shifted gradually from basic training on GAMS software and GLOBIOM model to

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[1]Available online at http://www.redd-pac.org/new_page.php?contents=documents.csv

performing peer-to-peer modeling work in collaboration with the INPE. UNEP-WCMC's role has been to support the interaction between the relevant environmental stakeholders (including the Brazilian Ministry of Environment, MMA) and the modeling team. In particular UNEP-WCMC has been engaging with the Instituto Chico Mendes (ICMBio, an administrative arm of MMA) in the assessment of the how the modeled land use change relates to Brazils commitments under the CBD.

For Brazilian stakeholders, it is also very well perceived that a local team is leading the modeling work. Owing to its high institutional credibility and policy impact, IPEA will most likely be the main outlet of REDD-PAC results in Brazil.

2.2. Congo Basin

REDD-PAC is coordinated by the Central African Forests Commission (COMIFAC) in the Congo Basin which provides support to member countries to manage their forests in a sustainable manner. REDD-PAC activities are implemented at two different scales in the Congo Basin: the whole COMIFAC area which covers the ten member countries and the pilot countries. Pilot countries serve as test to engage with local experts and institutions to co-develop national land use models.

Pilot countries were selected in October 2012 during the REDD-PAC kick-off meeting in the Congo Basin which was attended by the climate focal points of the ten COMIFAC countries and COMIFAC representatives. Selection criteria for pilot countries were: i) the availability of information and statistics ii) the country potential for REDD+ - total forest cover, total carbon stocks, share of the country under forests iii) the current pressure on the ecosystems, and iv) the national interest for REDD+. For the COMIFAC, the country's level of engagement in REDD

was the most important criteria. On this basis, the Democratic Republic of Congo (DRC) and the Republic of Congo (RoC) were easily selected but the climate focal points and COMIFAC representatives could not choose between Cameroon and Central African Republic (CAR). We finally agreed on four pilot countries instead of three planned initially.

The final institutional setting that has been approved by COMIFAC is to hire one person to coordinate the REDD-PAC project in the Congo Basin at COMIFAC and to hire one modeling expert by pilot country as a consultant who would co-develop the national land use model and who would be based at the national REDD+ coordination team office. The hiring process was finalized in July 2013, one year later than in Brazil, which is why it was not possible to bring experts from both regions together for REDD-PAC schools. At the second Congo Basin REDD-PAC school, held in Douala in April 2014, the national experts came with one person from the national CN-REDD team to strengthen the appropriation of the tools by the REDD+ national teams.

An evaluation of the modeling experts work by the COMIFAC together with the local CN-REDD has been conducted in July 2014. It led to the non-renewal of the contract of the CAR expert due to difficulties of interactions - no internet access, no national statistics, and interruption of most state activities during the civil war - and lack of modeling capacity. The freed-up resources from not continuing to work with CAR as an additional pilot country have also enabled us to intensify activities in Cameroon. A new national expert for Cameroon has been provided a full-time position in August 2014 in order to make up for loss of expertise and data that followed the sudden death of Mr. Eustache Awono, the initial national expert for Cameroon.
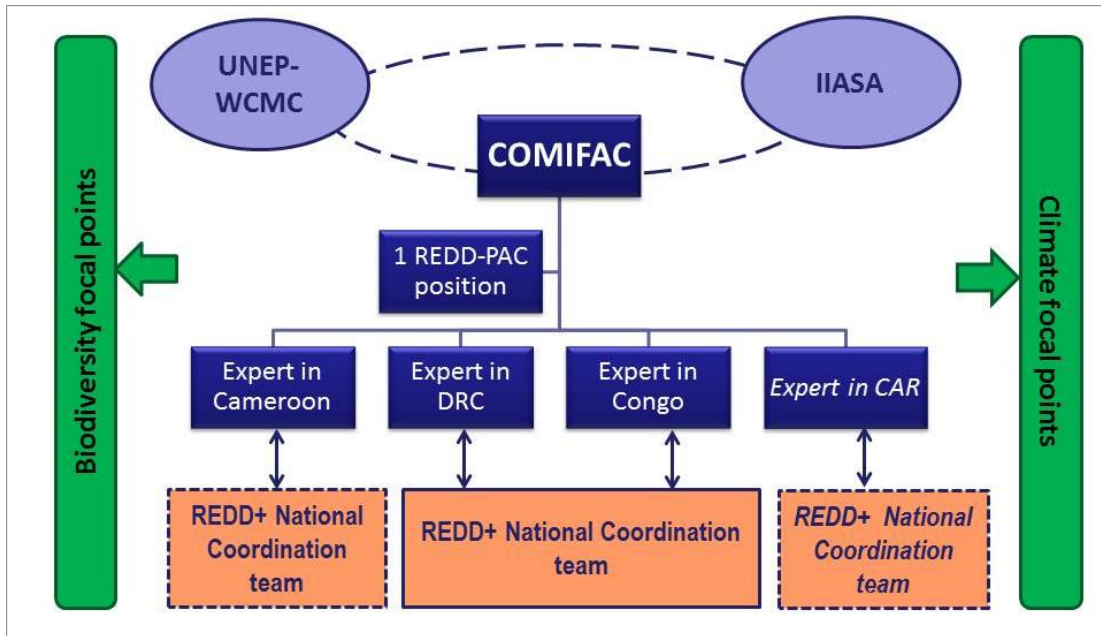
Figure 1: Figure: Institutional setting of the REDD-PAC project in the Congo Basin

3. Strategy for tool development

As described in the strategy report, the main activities undertaken in the REDD-PAC project are i) the creation of a consistent database on land use, land use change drivers and biodiversity (Goal 1, Target1, Indicator 1; Goal 3, Target 5), ii) the development of spatially explicit land use models for Brazil and the Congo Basin (Goal 1, Target 1; Goal 3, Target 6), iii) the policy assessment and scenario development, and iv) the multiple benefits assessment (Goal 3, Target 4).

3.1. Database

While we focus here on the process of the data collection, the detailed overview of the database which has been created for the project is available on the REDD-PAC website. The model-ready driver and policy database is being published in a stepwise approach. First, earlier this year we

put online a collection of metadata describing the sources, units used, spatial resolution, and a general description of each single data item feeding into the model. There we distinguished between GLOBIOM default data which is used and specific datasets that have been collected for Brazil and for the countries of the Congo Basin for REDD-PAC. In a second step, spatial model input data is being made available progressively through the website.

In any modeling exercise it is crucial to start from a good representation of current land uses and land cover. However, generating such information is a difficult exercise since it requires the harmonization of different types of data available at different scales which are collected with different tools. Land cover maps are usually compiled using satellite images with a fine spatial resolution, whereas, land uses are informed through survey data collection at different administrative levels. All of the spatial data then needs to be entered into GLOBIOM at the simulation unit level. For both Brazil and the Congo Basin, many problems have been found in the default land cover map which is used in GLOBIOM (GLC2000). For both regions, no single alternative land cover map was found to be superior so a significant amount of time was invested into compiling different land cover maps and land use statistics to get the most satisfactory representation of starting conditions. INPE has developed excellent products but they are currently focused on the Amazon while the whole territory is under consideration for this project. Technical details regarding the construction of the land use and land cover dataset will be described in the REDD-PAC project deliverable D 2.2.2. "Description of the model cluster", which will be available by January 2015 for DRC, the Republic of Congo and Brazil and April for Cameroon and the rest of Congo Basin (see Annex 2).

In Brazil, the availability and quality of statistical data is good. Most of the agricultural statistics such as cultivated area and production by crop and the number of heads of livestock are available

at the municipality level in Brazil and can be directly downloaded from the website of the Brazilian Institute of Geography and Statistics (IBGE). Missing information is mostly related to grassland productivity and more detailed production costs. Despite the missing information, the data forms a very good basis for refining the model to take account of current practices in Brazil. Time series are available which enables validation of the model results through comparison of the models projections for agricultural production between 2000 and 2010, with observed changes.

On the Congo Basin side, availability and quality of statistics is more problematic. The presence of one expert based in each pilot country facilitated the process of getting access to data. However, the data was often only shared in paper or pdf format during bilateral meetings in each Ministry. Additional work was therefore required to process the data in excel format for use in the model. Cameroon is the Congo Basin country with the most complete statistics, some recent initiatives have tried to fill the information gap in the Democratic Republic of Congo with some estimates at the district level (second administrative level), but Central African Republic and Republic of Congo often have very partial agricultural statistics and only at the national level. Finally, the quality of the information is usually under international standards due to the lack of regular surveys or census and no transparent rules for extrapolation.

Consequently, we have always tried to use expert knowledge in combination to official statistics to build our database. Moreover, there are many development projects going on in the Congo Basin countries which collect useful information though usually at a small-scale. We have also tried as much as possible to explore the "grey" literature resulting from these projects to parameterize the model (e.g. reports on fuel wood use from the Makala project, report on artisanal logging from CIFOR, traditional agricultural practices in South Cameroon, etc.). We

can only regret that there are currently very limited efforts to collect regular statistics and gather all the collected information from different partners in a centralized statistical system.

Mining is one of the drivers of deforestation identified in the Congo Basin. However, despite considerable efforts of the national experts, spatially explicit data could not be collected in any of the Congo Basin countries. The challenge in collecting mining data is illustrated by the example of Cameroon. In Cameroon the ministry of mining was only established in 2012 and has only just started to collect data. Additionally, the mining ministry is only collecting data on industrial mining, smallholder mining is even less documented and the spatial component of available estimates is too weak to be implemented in the model. To investigate the impacts of mining on forest cover, we will focus on one strategic region for future mining development: the Tridom area which spreads across Cameroon, Gabon and the Republic of Congo.

Throughout the work on creating the database the project has focused on making the data as consistent as possible with data countries have previously submitted to the UNFCCC and used for projections of deforestation for REDD+. This includes data used for the elaboration of Forest Reference Emission Level (FREL). The Parties to the UNFCC have highlighted the importance of consistency in country submission. Therefore, using consistent data as far as possible in the REDD-PAC project, and clearly describing why and where there are differences, is important for the utility of the results to national partners.

3.2. Land use models

In the project, the spatially explicit land-use models are in fact a cluster of models centered on an updated version of GLOBIOM, and run at the regional and national scale. They build on the standard features and default database of GLOBIOM but new datasets and assumptions are

included to improve the representation of land-use. In the Congo Basin, three national versions are under development for the three pilot countries, embedded in a model for all the ten COMIFAC countries. The model is solved at a 0.5 degree grid resolution level (50x50 km), allowing for the results to be presented at a variety of scales including municipality, state, biome and national level, in a fully-consistent manner.

GLOBIOM is built in GAMS software. Nobody from both Brazil and Congo Basin REDD-PAC teams knew this programming software before the start of the project. The first REDD-PAC schools have therefore combined GAMS and GLOBIOM training. The Brazilian team was well equipped to appropriate the tool as it included two individuals with strong computer science background, one economist with strong statistical skills, and GIS experts to process all spatial data available. Computing skills are more limited for the Congo Basin team and the fact that the team is spread across several countries has presented another handicap to their joint learning of a new tool.

The GLOBIOM model has been shared with the Brazilian team during the first REDD-PAC school at the International Institute for Applied Systems Analysis (IIASA) in October 2012. Since then, the model has been set-up on an internal IIASA server that can be accessed remotely by the Brazilian team. All the changes are marked through a version control system (Tortoise). This has facilitated the interactions between IIASA and the Brazilian modeling team, on new data sharing, problem solving or more general model quality checks. This is fully operational. One of the technical constraints that had to be overcome to run GLOBIOM in Brazil was the incompatibility of GAMS software with the Unix environment. The INPE Brazilian team has worked on this issue during the first months, leading to successful results and flexibility of operation mode of the model code in Windows (IIASA) or Unix (INPE) environment. The

Brazilian team is visualizing GLOBIOM results using R software, both for maps and statistical analysis.

In order to help overcome the limited computing experience of the Congo Basin team the three national experts and the REDD-PAC coordinator at COMIFAC level visited IIASA to attend one week of intensive training in modeling and to work closely with IIASA researchers during the two following weeks in September 2014. For each of the Congo Basin pilot countries a country version of GLOBIOM has been set-up to facilitate the appropriation of the modeling tool by the national experts. These country versions can be run separately or in the global framework where they act as sub-components of the COMIFAC region. This is a new feature of the GLOBIOM model which has been developed through the REDD-PAC project. Some of the improvements made in the national models are also implemented in the other COMIFAC countries when data availability allows it.

The main progresses achieved so far through the REDD-PAC project for the regional land use model development are the improvement in the accuracy of GLOBIOM spatial projections in these two regions. Better land use input data, internal transportation costs introduction and tariff change between 2000 and 2010, have been major reasons for improvements.

One of the main focuses of the project model development work has been in supporting the capacity development of the regional teams in Brazil and in the Congo Basin (Goal 3). The project aimed for the regional modeling teams to be mainly responsible for (i) including the new datasets into GLOBIOM while ensuring consistency with other datasets, (ii) validation of the model over 2000-2010, (iii) the scenarios implementation and (iv) the results analysis. Currently,

both teams can perform (i), the Brazilian team can also do tasks (ii) and (iii) and is starting (iv). At the end of the project, it is expected that both teams will perform all these tasks with light supervision from IIASA for Brazil and strong supervision from IIASA for Congo Basin.

3.3. Policy assessment and scenario development

The primary aim of the development of the models in both Brazil and the Congo Basin is to support national REDD+ policy development. First of all, one report per region has compiled existing land use policies and potential REDD+ policies that could be implemented. Both are available on the REDD-PAC website. Secondly, the strategy for ensuring that the work is of relevance to national policy makers includes several elements:

- Developing good collaborative working relationships with the relevant national organizations including by carrying out meetings and workshops to assess the countries' needs (see section 2 for more details on the institutional arrangements within the project).

- Developing relevant assessments to be carried out using the model including on the impact of projected land use change in terms of emissions, production and biodiversity (more details provided below). The work to develop the model and ensure it is robust and transparent also feed into this strategy (see section 3).

- Developing scenarios and policy options that are of interest to decision makers can be explored using the model (see section below for more details on the strategy for developing the scenarios).

A key component of both developing relevant evaluations and policy option scenarios is through developing good collaborative working relations with relevant national organization, and holding workshops and meetings to present the planned assessments (see section 2). For example, it is

currently planned that the biodiversity assessments in Brazil will be undertaken in collaboration with the Chico Mendes Institute for Biodiversity Conservation, which is an administrative arm of the Brazilian Ministry of the Environment. This will ensure that the work is of relevance to the government and can be used by them. The assessments will also use the government identified biodiversity priority areas in one component of the assessment.

Additionally, the project is undertaking integrated assessments of the emissions, production and biodiversity impacts. This integrated approach enables the work to provide an assessment of both the impact on climate change mitigation and the impact in relation to the objectives to the CBD and so support integrated planning, a key project goal.

The political sensitivity of deforestation issues in Brazil made project partners agree to first consolidate the model in order to get necessary trust from Brazilian institutions and to not jeopardize the objective of REDD-PAC results to be publicly available and used in the elaboration of the future Brazilian Reference Level for the post-Paris 2015 period. Brazil has become the first country to submit a Forest Reference Emission Level[2] to the UN Framework Convention on Climate Change (UNFCCC). Since the FREL covers the Amazon biome only, one of the main advantages of the REDD-PAC project could be to provide useful results on the other biomes too and especially to show how policy changes in one biome could affect deforestation in the other biomes.

3.4. The multiple benefits assessment

In addition to the work in Brazil and the Congo Basin the REDD-PAC project has also undertaken capacity building on REDD+ multiple benefits in a further five countries. The United

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[2] Available online at http://www.mma.gov.br/redd/index.php/en/forest-reference-emission-levels-frel/the-submission-of-brazilian-forest-reference-emission-levels

Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) leads this work on knowledge and capacity building (Goal 2 and 3). The focus of the work has been the support on spatial planning but it has been tailored to the country's (or in the case of the Congo Basin, the regions) needs. Partnerships were developed with national organizations for conservation planning of the each of the target countries in order to develop the work. The spatial analysis support work has now been completed and has resulted in REDD-PAC reports (for Brazil, China, Congo Basin, the Philippines, Peru, Uganda and Viet Nam). All of the reports are available through the project website.

Despite substantial engagement between UNEP-WCMC and the Climate Change Directorate and the Biodiversity Directorate of the Ecuadorian Ministry of Environment, the ministry was not been able to agree on a way in which the project could support their progress on planning for multiple benefits from REDD+. Although they regularly expressed general interest in the topic, they were not able to agree on one particular piece of support or work which could be undertaken by the REDD-PAC project when pressed for a final decision. Therefore, upon discussion with BMUB the funds earmarked for Ecuador have been re-directed to activities in Peru, the Philippines and Uganda where strong collaborative relationships had already been developed within the project. The activities extended the level of engagement with those countries including by supporting Peru's preparations for the Lima UNFCCC COP, extending the Philippines spatial mapping work to address additional issues raised by national stakeholders, and directly supporting Uganda's inclusion of REDD+ considerations within their national biodiversity strategy and action plan (NBSAP).

One of the key strategies of the work was, where possible and nationally relevant, to work with both the national representatives responsible for REDD+ and the CBD. In Uganda, the

Philippines and the Congo Basin this approach meant the worked helped to bring together the national focal points working on the different issues to identify potential synergies and linkages. In particular work with the Ugandan CBD focal point supported the inclusion of REDD+ considerations within their national biodiversity strategy and action plan (NBSAP). A second key strategy for the work was to adapt the work to the national context. In Peru the work is feeding directly into the national REDD+ strategy and the government plan to expand the initial spatial analysis as part of a follow on project.

4. Interactions with stakeholders and international community

4.1. Interactions with stakeholders

We organized one workshop in each region to present the project to local stakeholders and to collect feedbacks to increase policy relevance of the project (São José dos Campos, Brazil, September 2012, and Douala, Cameroun, October 2013). In addition, bilateral meetings with representatives of ministries of environment, agriculture, mines have been undertaken (see Annex 1). On Brazilian side, Thelma Krug from INPE who is strongly involved in climate negotiations for Brazil is a member of the Advisory Board of the REDD-PAC project.

The REDD-PAC team seeks to maximize policy impact of the project in the Congo Basin by liaising with CN-REDD bodies in a day-to-day basis through the presence of the REDD-PAC expert at the CN-REDDs. Located within the Ministry of Forest Economy and Sustainable Development (MEFDD) in Congo Brazzaville and within the Ministry of Environment, Conservation and Tourism (MECNT) in DRC, the CN-REDD bodies constitute a coordination platform between various ministries and stakeholders and they therefore constitute an ideal entrance point for take up of REDD-PAC tools and results.

In the Democratic Republic of Congo, GLOBIOM preliminary results were used in the framework document of the National REDD+ Strategy which was presented at COP 18 (4 December 2012) by the REDD+ National Coordination team. In 2013, exchanges with the DRC REDD+ National Coordination team have been lower due to deep restructuration on their side. However, contacts were renewed in October 2013 during the series of meetings conducted in the pilot countries with local experts.

In Cameroon, the CN-REDD is under construction and most of the team members are currently civil servants who have limited amount of time to invest in the REDD+ process when limited funding is available. Cameroon's elaboration of its REDD+ strategy is also less advanced than the two other countries. However, the fact that Cameroon's strategy is less developed means that there may be more opportunity for the project to support the strategy development.

At the first quarter of 2015 a series of workshops is under preparation in the three Congo Basin pilot countries and in Brazil to present the first results of the project and explain how they could inform the overall REDD+ strategy including through spatial planning and the elaboration of reference levels.

4.2. Interactions with international community

The REDD-PAC team has also engaged with the wider climate community beyond Brazil and the Congo.

- **COP 20 (December 2014, Lima, Peru)**

At the margins of the UNFCCC COP 20, on 6th December UNEP-WCMC has hosted a discussion forum entitled "Planning for National REDD+ Strategies: Using Spatial

Information to support decision making" where experiences made with both REDD-PAC and the UN-REDD Programme have been shared[3].

- **IUFRO World Congress (October 2014, Salt Lake City, USA)**

The 2014 International Union of Forestry Research Organizations (IUFRO) World Congress highlighted how forest science is helping address significant environmental, social, and economic challenges facing our world. A session on "Addressing The Drivers Of Deforestation: Exploring Synergies Between REDD+ And Forest Policy" has been organized by the REDD-PAC team where potential impacts of REDD+ on biodiversity, potential nexus between REDD+ and Bio Energy, Carbon Capture and Storage (BECCS), and experience with carbon offsetting projects and monitoring of tropical forest management have been presented[4].

- **Global Land Project International conference (March 2014, Berlin, Germany)**

Researchers from IIASA, INPE and UNEP-WCMC presented first REDD-PAC results at the second GLP Open Science Meeting from 19 to 21 March 2014 in Berlin[5]. The Global Land Project (GLP) is a joint research project for land systems for the International Geosphere-Biosphere Program (IGBP) and the International Human Dimensions Program (IHDP). The project's second meeting brought together 570 scientists from all over the world under the conference slogan "Land Transformations: between global challenges and local realities". In recent years, remote sensing and land use modeling technology have advanced greatly which makes REDD-PAC benefit from interaction with the global land community. The session was attended by about 40 persons.

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[3] http://www.redd-pac.org/new_page.php?contents=news21.csv
[4] http://www.redd-pac.org/new_page.php?contents=news20.csv
[5] http://www.redd-pac.org/new_page.php?contents=news14.csv

- **COP 19- Global Landscape Forum (November 2013, Warsaw, Poland)**

At a special session of the Global Landscapes Forum, held on the margins of the COP19 conference in Warsaw in November 2013, REDD-PAC representatives spoke to decision makers about their research using the GLOBIOM model to support REDD+ policy efforts as part of the REDD-PAC project[6]. Besides all the project partner organizations, panel speakers represented leading Universities in the field as well as relevant Indonesian ministries. The session was attended by more than 200 persons. Flyers on the REDD-PAC project have been distributed to the audience.

- **CBD side event (October 2012, Hyderabad, India)**

The REDD-PAC project organized a side event at the 11th Conference of the Parties of the Convention on Biological Diversity[7]. The side event, chaired by Tim Christophersen from the CBD Secretariat, was attended by 70 people. REDD+ can potentially contribute towards achievement of the CBD Aichi Biodiversity Targets as many of the targets link into the objectives of REDD+. The side event aimed to increase awareness of the project within the CBD audience. Two of the countries that involved in the project, Vietnam (one of the additional six countries) and the Democratic Republic of Congo (part of the Congo Basin work), contributed to the side event by presenting their experiences in linking REDD+ and the CBD objectives. Way forward

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[6] http://www.redd-pac.org/new_page.php?contents=news13.csv
[7] http://www.redd-pac.org/new_page.php?contents=news04.csv

5.1. Main recommendations from the steering committee

In order to evaluate the current progress within the project and plans for the project completion a project Advisory Board meeting was convened. At the meeting five high-level experts (the list of participants in Annex 3) in the area of REDD+ reviewed the results achieved thus far and future plans of the project. They provided valuable input to sharpen the focus of REDD-PAC for the remaining project lifetime.

For Brazil:

- Clearly present how REDD+ incentives are being considered in the model

- Use of the **official carbon map of Brazil** to infer C-emissions from modeled land use changes. The map will be published for public consultation by MMA before the end of the year 2014.

- Present the model results at a number of **different scales** relevant to policy makers including the national level and per biome.

- It is better to present first the results internally in Brazil and by the end of the project, results of the project should be presented to a wider public through high-level scientific journals and publicly available data.

- After the release of Brazilian emissions baseline from land use change and agriculture without REDD+ policies in December, the impact of some **REDD+ policies** will be assessed during the first half of 2015.

For the Congo Basin:

- The Advisory Board reiterated that capacity building is an important focus of the project but not only on modelling but on the **capacity building of a wider stakeholder group to use modeling results**.

- In order to ensure project results are taken up, it is important to feed into ongoing policy processes. For instance, there is an opportunity for REDD-PAC to contribute pro-actively to the Mai-Ndombe baseline to be submitted in 1.5 years from now as a precursor to the DRC national baseline.

- The **focus of the project in the Congo basin** for the remaining year could be on three issues:
  - Establishment of **baseline scenarios** with clear presentations of the rules and assumptions behind them to support the development of RLs
  - Implementation of **policy option scenarios** within the model to help evaluate the potential impact of different REDD+ policies and so support the design of REDD+ strategies
  - Present the projections of locations of future land use change under different policy options and scenarios in order to **support spatial planning**

4.2. Next steps

REDD-PAC currently seeks the approval of IKI/BMU for a no-cost extension of the project by six months. It was generally agreed at the Advisory Board meeting that a project extension would be highly beneficial to ensure the achievement of project goals. In more detail, a six months extension would i) allow REDD-PAC results to be showcased at the UNFCCC COP in Paris, ii) strengthen gains made in the capacity building process in both regions and allow full

participation of regional teams in the final completion of scientific publications iii) diffuse to a large audience REDD-PAC results to increase their use in the targeted regions and gain attention from the other regions.

Four main activities will be pursued until the end of the project: i) a detailed documentation of the model clusters and the scenarios implementation, ii) the finalization of the model runs including REDD+ and other sectorial policies, iii) the publication of the results and the underlying data in diverse formats and through different channels of communication (REDD-PAC website, Geo-Wiki, policy briefs, scientific papers) and iv) engagement with stakeholders, first in the targeted regions and to the wider international community with the final objective being the active participation to COP 21 in Paris.

The updated schedule of foreseen activities including model development, deliverables and workshops are described in Annex 2.

5. Annexes

Month and Year	Event	Outcomes
03.2012	Presentation of GLOBIOM model and REDD-PAC project to the Ministry of Plan of DRC and to the Civil society consulted in the REDD+ process in DRC (organized by the national REDD+ Coordination in DRC)	Promotion of REDD-PAC project in DRC
03.2012	Consultation of technical experts on land use activities in DRC	Better understanding of crucial issues related to land use in DRC ; Data collection; Promotion of REDD-PAC project in DRC
05.2012	Kick-off meeting in Brazil	Set-up the milestones of the collaboration between IIASA-UNEP-WCMW and INPE-IPEA
07.2012	Recruitment of REDD-PAC staff Brazil	Start learning about the project and GLOBIOM model
09.2012	Stakeholder workshop in Brazil to discuss Forest Code and REDD+ policies	Promotion of REDD-PAC project in Brazil; Report on land use policies in Brazil by REDD-PAC team
10.2012	Kick-off meeting in Congo Basin (Kinshasa) with climate focal points and COMIFAC	Promotion of REDD-PAC project in the Congo Basin; Choice of pilot countries for country-model development in the Congo basin
10.2012	Annual meeting in Laxenburg	
11.2012	REDD-PAC school in Laxenburg for the Brazilian partners	Training on GAMS and GLOBIOM
04.2013	REDD-PAC school in Brazil for the Brazilian partners	Comparison of different land cover maps for Brazil and harmonization process with other input data in the model; New data on protected areas in Brazil included in the model

06.2013	Annual meeting in Cambridge	
07.2013	Recruitment of REDD-PAC experts to develop country models in the Congo Basin (COMIFAC)	Start learning about the project and GLOBIOM model
10.2013	Regional workshop in the Congo Basin with climate focal points and biodiversity focal points in Douala	Promotion of REDD-PAC project in the Congo Basin; Report on land use policies in the Congo Basin by REDD-PAC team; Definition of new management systems in the GLOBIOM-Congo Basin model through participatory approach
	REDD-PAC school in Douala for the Congo Basin partners	Training on GAMS and GLOBIOM
	Meetings in Yaounde with the REDD+ National Coordination of Cameroon, in Brazzaville with the REDD+ National Coordination of RoC, in Kinshasa with the REDD+ National Coordination of DRC.	Promotion of REDD-PAC project in the Congo Basin; Data collection
11.2013	Side event at the Global Landscape Day in Warsaw	Promotion of REDD-PAC project to the international REDD+ community
03.2014	REDD-PAC session at the International Global Land Project Conference in Berlin to present preliminary results	Promotion of REDD-PAC project in the scientific community
03.2014	REDD-PAC school in Laxenburg for the Brazilian partners	Check results for period 2000-2010
04.2014	Annual meeting in Douala	
	REDD-PAC school in Douala for the Congo Basin partners	Training on GAMS and GLOBIOM
06.2014	Meeting between the Brazilian REDD-PAC team, UNEP-WCMC and the Brazilian Ministry of Environment	Promotion of REDD-PAC project; Data collection; Identification of policy relevant scenarios for Brazil
07.2014	REDD-PAC school in Muenster and Laxenburg for the Brazilian partners	Introduction of scenarios on the Brazilian Forest Code
09.2014	Three weeks REDD-PAC school in	All new input data into the model;

	Laxenburg for the Congo Basin partners	Check of the baseline over 200-2030
10.2014	Steering Committee meeting in Laxenburg	
12.2014	COP Lima, Peru	Promotion of REDD-PAC project; Preliminary presentation of multiple benefits assessment

Annex 2: Activities schedule for the remaining project lifetime with a six month no cost project extension.

	Brazil and Congo Basin								Brazil only			Congo Basin only		
	2014													
	January	February	March	April	May	June	July	August	September	October	November	December		
Model development										Inclusion of all collected data for Congo Basin and downscaling				
										Finalization of Forest Code implementation	Introduction of final land cover map in Brazilian model	Validation of 2000-2010 model simulation for Brazil		
Publications												Critical review of the strategy (D1.2.1)		
Workshops and meetings												UNEP-WCMC side event at the COP-Lima		

	Brazil and Congo Basin		Brazil only		Congo Basin only	
	2015					
	January	February	March	April	May	June	July	August	September	October	November	December

	January	February	March	April	May	June	July	August	September	October	November	December
Model development	Finalization of Congo basin regional model and Cameroon land use model			Implementation of policies scenarios in the Congo basin models							Final model adjustments for the Congo Basin	
					Implementation of policies scenarios in the Brazilian model					Final model adjustments for Brazil		
Publications	Description of the model cluster for DRC and Congo rep (D 2.2.2)	Policy briefs on DRC and Congo Rep.(D2.3.2)		Technical reports associated to baselines for Cameroon and COMIFAC countries (D 2.2.1)		Submission of one scientific paper for DRC						Impact assessment report of REDD+/CBD policies (D 2.3.1)
	Description of the model cluster for Brazil, (D 2.2.2) - Part 1	Description of the baselines for Brazil (D 2.2.2) - Part 2		IPEA Policy brief on Brazil (D2.3.2)		Submission of one scientific paper for Brazil						
Workshops and meetings	CN-REDD led workshops in DRC and Congo		Stakeholders workshop in Brazil/back to back with ICMBio meeting							Final workshop in Brazil	Final workshop in the Congo Basin	COP-Paris-Presentation of final REDD-PAC results

	Brazil and Congo Basin			Brazil only					Congo Basin only			
	2016											
	January	February	March	April	May	June	July	August	September	October	November	December
Deliverables		Policy briefs (D2.3.2)	All data publicly available on the REDD-PAC website									
				Submission of one scientific paper for Congo Basin								
				Submission of one scientific paper for Brazil								

Name of participant	Institution	Role
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Alexander Lotsch	The World Bank	Advisory Board Member
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