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USAID
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**Global Climate Change:
Carbon Reporting Initiative**

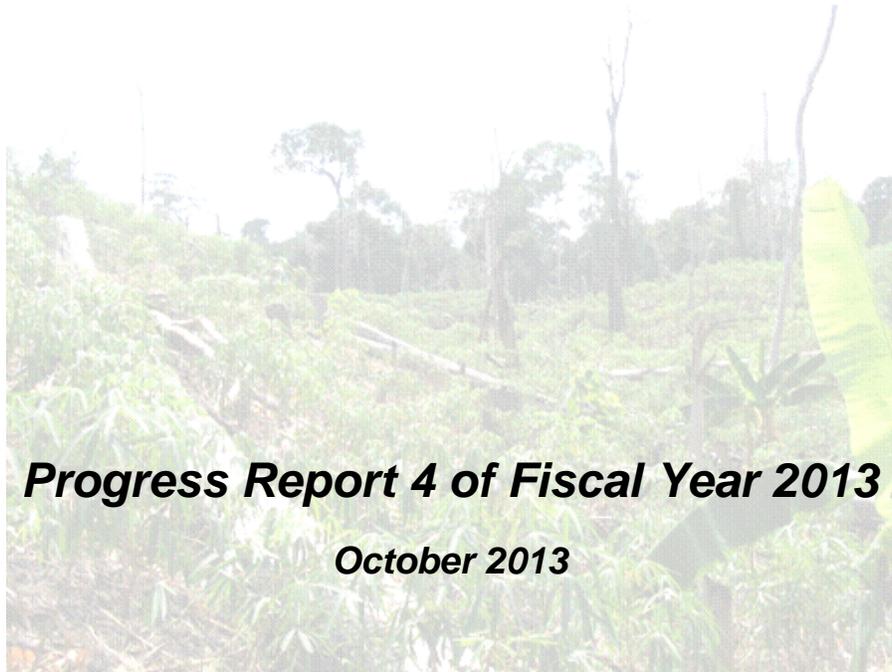
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Progress Report 4 of Fiscal Year 2013

October 2013



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Putting Ideas to Work

1. Background

This progress report summarizes the activities performed during the fourth quarter of year 7. Tasks where no progress has been made are not mentioned in this document.

2. Activities for Year 7

Task 1: Collect data to populate the database

Sub-Task 1a. Data collection for emission factors

Several spatial and literature resources have been identified that are appropriate for improving the ACC (AFOLU C Calculator) and are described in more detail below.

Administrative Units

Refinement of administrative units encompassed

A new global map of administrative units has been created to include the most up-to-date and accurate datasets. This dataset is derived from the GADM database of Global Administrative Areas version 2.0. The administrative units of analysis for some countries, such as Vietnam and Brazil, have been changed to better reflect the scale of USAID operations in each country. Additionally, several countries were added to the database expanding its capabilities beyond USAID implementing countries, such as Algeria, Argentina, Bhutan, Lesotho, Mauritania, Tunisia, Uruguay, Venezuela, amongst others. The addition of these countries allows the ACC to fully cover the southern hemisphere, and thus expands the audience that can benefit from this initiative.

Carbon Stocks

Forest carbon stocks

Significant progress was made in this component. More details are available in section 1b below.

Soil carbon stocks

Soil carbon stock were recalculated globally for forests, grasslands and shrublands based on the most current (2011) MODIS land-cover data, the Harmonized World Soil Database, and IPCC default soil factors.

Mangroves

Concluded.

Agroforestry systems

Winrock has been working on peer review publication lead by Montagnini et al (in prep)¹ to reflect the research conducted to improve the carbon benefits calculated by the AFS Tool. This publication is expected to be submitted to a scientific journal by November 2013.

Additional Datasets

Deforestation rates update

Significant progress was made in this component. More details are available in section 1c below.

Selective Logging Timber Extraction Rates

¹ Montagnini, F., F. Casarim and S. Brown. Potential for carbon sequestration and storage in tropical Agroforestry Systems of Latin America and the Caribbean. In preparation.

Concluded. Peer reviewed publication reflecting the carbon benefits calculated by the FM tool (Pearson et al) submitted for publication in September 2013.

Community forest management

Concluded. Through literature research we concluded that no clear difference in GHG accounting from the current methodology employed by the Forest Management Tool was identified.

Methodology for even-aged forestry in Temperate Regions

Work on this ongoing and no additional progress since Progress Report 3 of FY 2013.

Secondary Forests

Concluded.

Supplementary datasets

Winrock is studying the possibility of using the spatial data layers compiled by the World Resources Institute (WRI) that is a component of their Global Forest Watch 2.0². These data include location of logging concessions and protected areas amongst others, and would mostly be used for informational purposes, assisting users to select the project intervention areas while considering/displaying other activities on the ground nearby the potential project area.

Sub-Task 1b. Finalizing updating and validation of global forest carbon stock map.

Winrock has acquired all biomass data from Dr. Sassan Saatchi at 250m resolution for Africa, Asia and Latin America. Above ground biomass has been calculated using these new data at the sub-administrative level for all countries included in the calculator. Furthermore, this calculation was executed with a new global forest/non-forest layers based on the most current (2011) MODIS land-cover data.

Sub-Task 1c. Refining estimates of deforestation rates.

Concluded. Once Dr. Hansen's higher resolution global deforestation product is published, Winrock will update the deforestation rates again. However the timeline for the release of such product is still unclear, although expected in the coming year.

Task 2: Build and test tools

During this quarter, significant effort was dedicated to revising the methods of all existing tools and producing updates wherever applicable. From the revisions, the following updates were made to:

- Forest Protection tool: deforestation rates for post-project activity implementation were added under level B, so that projects can monitor the real impact of its implementation activities and use such information to more accurately estimate carbon benefits post-project implementation.
- Forest Management tool: The methods implemented in uneven-aged component of this tool are presented in a manuscript submitted to the Environmental Research Letters journal with the following title: Carbon emissions from tropical forest degradation caused by logging. By Pearson, T.R.H., S. Brown and F. M. Casarim. The emission factors associated with timber extraction rates, and the infrastructure created to extract timber out of the forest were updated as a result of the data analysis conducted for the Pearson et al. (submitted) paper.
- Afforestation/Reforestation tool: The growth model estimating carbon accumulation on native forest regrowth were revised to include additional data, and more accurately represent the growth habits of different ecological zones as proposed by FAO (2001).

Subtask 2a. Modification of the forest management tool

Aside from modifications described above, no additional progress was made on the Even-Aged component of the Forest Management tool since Progress Report 3 of FY 2013.

² More information at: <http://www.wri.org/gfw2>

Subtask 2b. Adding capability to add geographic specific details

This work will take place in the upcoming year thus no additional progress has been made since Progress Report 3 of FY 2013.

Subtask 2c. Add an effectiveness rating calculation component

Concluded. The effectiveness rating tool, which is based on questions/ flowchart, was implemented in the third quarter of FY 2013. This feature uses of a pop-up questionnaire to guide users through a sequence of questions, the result of which sets the effectiveness percentage rating. However, based on a request from Evan Notman during a project meeting in September of 2013, we will revisit the effectiveness rating tool, and revise it for a more comprehensive assessment. Users will still be allowed to override the values estimated in the effectiveness rating tool, but only after completing the questionnaire and provide a justification for modifying the value estimated. For the reporting period 2012/2013 edits were made to the text in the effectiveness rating tool to reflect the concerns of Evan Notman and stakeholders he had heard from.

Subtask 2d. Policy and capacity building impacts

In the past Winrock has investigated approaches for determining greenhouse gas benefit for policy and capacity building focused activities. In discussions with USAID, we jointly determined that a full calculating tool based on level of investment will face too much variability, leading to impracticality. Thus Winrock shifted the focus on this Tool, and we are now developing a decision tree type of workflow that users will have to go through, narrowing the questions towards defining the type of emissions reduction/sequestration that the policy or capacity enhancement program can achieve. Ultimately, the decision tree will lead users to existing Tools (Forest Protection, Forest Management, Afforestation/Reforestation, Agroforestry, Agricultural Land Management, or Grazing Land Management) to estimate the potential carbon benefit of supporting such policy and/or capacity enhancement program. A simple beta version of tools for the impact of policy and capacity building projects been implemented in the online interface of the Calculator, and further work is ongoing.

Subtask 2e. Develop a new bioenergy and land use tool.

Winrock hired a consultant for conducting a comprehensive assessment of the literature on work undertaken in fuelwood collection and consumption, thus assisting in refining our methodological assumptions for developing this tool. The consultancy will:

- Survey the state of the field of woody biomass (focus only on woody biomass either live or dead) collection and produce a report summarizing findings. This should seek to identify any significant knowledge gaps related to the sociological dimension of biomass collection and the linkage between collection and degradation. Special attention will be paid towards the decision-making process of resource users, and the degree to which assumptions about user behavior have been shown to be either consistent or divergent across major world regions.
- Review the current host of models and methodologies focused on forest woody biomass collection, covering both the sociological and ecological dimensions of the process. Insight gained from review of relevant literature, as well as any interviews with professional experts in the field, shall be included.
- Identify potential research partners either currently conducting or planning field data collection initiatives on the subject of forest biomass collection (Winrock has two projects related to improved cookstoves and fuelwood collection that we will link to). Where potential partnerships exist, Winrock will contact implementing party to determine potential for collaboration.

Additional subtask 2f. Develop uncertainty estimation for calculated carbon benefits

We will re-engage in this effort between October and December and plan a draft uncertainty assessment for at least the Forest Protection tool of the ACC by January 2014. Aside from this plan of action, no additional progress has been made since Progress Report 2 of FY 2013.

Task 3. Train USAID GCC Team and mission staff (extension of Task 9 of Year 5)

Documentation describing each of the Tools' underlying data and methods along with a comprehensive User Manual has been prepared and posted online for guiding the users and clearly stating the assumptions. Descriptive text explaining the parameters required under Level B of each of the Tools has also been added to the web interface for most parameters.

Investigation and planning was initiated for the development of short video tutorials which will form part of the calculator.

Task 4. Complete Decision Making Tool.

No additional progress since Progress Report 2 of FY 2013.

Task 5: Management and implementation

Subtask 5a. Develop a detailed workplan for year 7

Completed and submitted in October 2012.

Subtask 5b. Host website.

The current version of the ACC will be hosted by Applied Geosolutions during Years 7 and 8.

Additionally, Winrock is also working with AGS to make improvements in the visual appeal and overall user-friendliness and navigability of the ACC. Efforts are currently underway to more effectively guide users on operating the website and leveraging its capabilities to the fullest extent. These efforts include the development of a more robust 'Help' section, incorporating a FAQ feature, and improving the intuitive work flow in the ACC. Furthermore various members of the Winrock team have compiled diverse feedback in an effort to improve the user interface, information architecture, and to catch bugs in the programs, models, and software. Winrock is working with AGS to improve the web designing and visual appearance of the Calculator. The goal is to develop a final improved web interface for the Calculator by March 2014.

Subtask 5c. Production of progress reports.

This document represents the fourth progress report to be delivered to USAID during Fiscal Year 2013.

For more information or comments:

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