Community Carbon Accounting Action Research Project – Indonesia

Activity Report FY2012

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This report is made available to share information on the Community Carbon Accounting Action Research Project launched by IGES in May 2010.

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(1) Introduction

The CCA Action Research Project in Indonesia was launched by IGES and Indonesia's National Forestry Council (DKN) in mid-2010. The Action Research Project is based on the premise that activities to reduce emissions from deforestation and forest degradation and enhance forest carbon stocks (REDD+) will not be sustainable unless communities and indigenous peoples are provided the opportunity and capacity to participate in a fully informed manner in the design and implementation of REDD+ activities and the design of national REDD+ strategies.

The local NGO ARuPA has been an important collaborator throughout the implementation of the Project. ARuPA and DKN have strong stakeholder networks in and around Yogyakarta, including in the villages targeted by this research, i.e. the villages of Semoyo and Terong. The village communities have also been important partners in the design and implementation of the Action Research Project.

The purpose of the action research is to elaborate and demonstrate approaches to engage communities in Indonesia in forest measurement to generate data for estimating carbon stock changes. With this knowledge, communities will be in a better position to make choices about their forests and will be better prepared to participate in the design and implementation of REDD+ activities as well as in REDD+ policy dialogues, if they choose to do so. Following from this objective, the major activities undertaken up to March 2013 were:

- Socialization of the CCA concept;
- Training of the communities for the establishment, measurement and monitoring of carbon stocks;
- Re-measurement of sample plots by the communities to monitor changes in carbon stocks;
- Workshops to take stock of lessons learned and plan steps forward;
- Training of village leaders to participate in the drafting of a Project Design Document (PDD), as villagers wish to be prepared for eventual carbon payments linked to REDD+.

This report is divided in 3 sections. Section 1 describes the major activities undertaken during FY2012. Section 2 provides an overview of the main results achieved. Section 3 lists the activities proposed for FY2013.

(2) Section 1: Major Activities Conducted

1) Re-measurement of the sample plots

Permanent sample plots were re-measured in Semoyo Village. Although this activity was also planned for the village of Terong, in 2012 the village was still completing the first measurement of the sample plots. The activities on socialization and capacity building in Terong (initiated in 2011) took more time than originally estimated, and these activities were carried on into 2012. The re-measurement of the sample plots in Terong is foreseen in 2013.

In Semoyo, teams consisting of villagers supervised by ARuPA were deployed to conduct the re-measurement. The following activities were undertaken in each plot: Identification of plots; Re-delineation of plot boundaries; Refreshing tree numbers; Identification of felled trees; Measurement of tree girth/circumference; Measurement of height; Observation of litter and under growth; Documentation of the measurement and observations on the tally sheets; Signing tally sheets.

At the CCA office, the following activities were taken: Preparing tally sheets; Preparing village/sub-village maps; Preparing equipment; Conducting briefing to the field crews; Receiving and checking filled tally sheets from field crews; Keying in the results of re-measurement into computer database; Under supervision of ARuPA, carrying data compilation and summaries.

2) Integrating CCA into the villages' institutional setting

Through CCA, people are aware that key assets are quantitatively documented. They have better knowledge of the standing (forest) stock that can be harvested and sold. They are more aware forecast their future income.

In 2012, a number of activities were undertaken towards strengthening village institutions for CCA. After 3 years since its initiation, CCA has been widely accepted and today it requires concrete follow up. The CCA has advanced beyond research on community-based carbon monitoring, and communities are inquiring into the potential benefits of CCA (in a REDD+ framework) for local livelihood strategies. Collectively, the community members need guidance for the continuous development of their land and local economy, particularly for administering resources and regulating land treatments (for example, the use of fertilizer and irrigation). There is a pattern of regularity on these issues that calls for improving the communities' institutional framework. For 2013, the institutional setting activities will include:

- The establishment of a legal deed on the statute of the community groups
- Formulation of standard operating procedures with respect to technical treatment of forest land

3) Adaptation of inventory tools to be more practical for community members

Measuring the height of standing trees is necessary to undertake carbon measurements, particularly where regression estimates of tree volume and biomass, based on the tree diameter, do not have a sufficient degree of accuracy. There are various types of tools available for measuring tree height. Modern hypsometers may be accurate for measuring standing trees, but they are sometimes not practical, as their use requires specific technical skills that community members do not have. Additionally, modern hypsometers may not be available in the local shops and acquiring them is expensive. An alternative that is available and can also be made locally at an affordable cost is the Christen-meter or Christen Hypsometer. The principle underlying the use of the tool is depicted in Figures 1 and 2 can be described as follows:

- AC:AB = DF:DE
- DE = (AB)*(DF)/AC

Where:

- DE: tree height
- DF is a 4 meter stick vertically leaned on the tree
- AB is a short, 30 cm stick, the christen-meter (figure 2).
- The point of origin is the person holding the christen-meter at eye-height
- CA is a point to be marked on the christen-meter, showing the height of the tree

Figure 1. Measurement of tree height using a Christen-meter

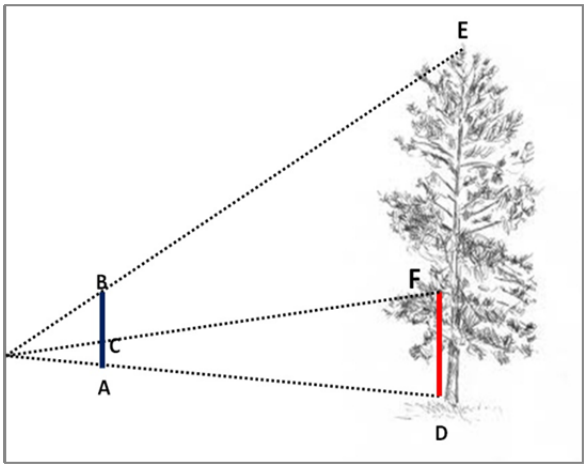

Figure 2. Prototype of christen-meter

Community members with have carpentry skills have produced christen-meters for local use.

4) Socio-economics of CCA: Household surveys

Household surveys were undertaken to asses the relevance of different productive activities for the 200 households participating in the research. The households surveyed were selected through stratified random sampling. Households were selected proportionally to the land size they own, focusing primarily on the areas of home gardens and dry lands. The sample size was set at 25% of the population (50 households) following the criteria:

>1 ha, 46% (23 farmers)

>0.5 ha – 1 ha >, 32% (16 farmers)

<0.5 ha, 22% (11 farmers)

The collected data focused on three main areas:

- Social characteristics of households (composition, age, access to social services, etc.),
- Main productive activities
- Financial/economic performance (inputs, outputs for each activity). Additionally, data were also collected with the community forestry association to learn the production value of timber processed by the association.

5) Preparation of community carbon PDD

A result of the workshop held in Semoyo in November 2011 was that the preparation of a Project Design Document (PDD) is needed to be consequent with the CCA action research, since it is the communities' wish to further explore the possibilities of CCA as an income generating activity within a REDD+ framework.

Therefore, in 2012 activities were designed to equip the communities with knowledge and skills in preparing a PDD. The activities targeting communities included a training of trainers of six village representatives, followed by support to each village on drafting the PDDs. The guidelines of the Climate, Community, and Biodiversity Standard (CCB Standard) were used[1]. A complementary component of these efforts is the evaluation of the socioeconomics of participating communities and the development of a business case.

6) Workshops

A regional workshop was organized at the Gunung Kidul District Auditorium, followed by field discussions at Semoyo Village. Community representatives from Pacitan (East Java Province), Gunung Kidul, and Bantul Districts (Yogyakarta Province) were invited to the workshop. The main agenda of the workshop was:

- Sharing knowledge and experiences in exercising CCA
- Reporting progress and sharing lessons learned in preparing a community carbon PDD

(2) Section 2: Results and observations:

1) Re-measurement of the sample plots

100 plots were re-measured in Semoyo. The plots are on two types of land: home gardens (land surrounding houses) and dry lands (cultivated land at a distance from the house). Tree diameter, total height, and crown diameter were measured. Tree volume was estimated using the following:

$$\text{Volume} = ((22/7)/4)*(\text{Diameter})^2*(\text{Height})*\text{Tree Form Quotient}$$

The tree biomass was estimated based on the regression estimates to the volume. The equations in Table 1 were applied:

Table 1: Species-specific biomass regression equations

[1] See: https://s3.amazonaws.com/CCBA/Upload/ccb_standards_second_edition_december_2008+(1).pdf (accessed 7 March 2013).

1.	Mahoni (*Swietenia mahagoni*)	$Bt = 0{,}9029(D^2H)^{0.9340}$
2.	Sonokeling (*Dalbergia latifolia*)	$Bt = 0{,}7458(D^2H)^{0.8934}$
3.	Jati (*Tectona grandis*)	$Bt = 0{,}0149(D^2H)^{1.0855}$
4.	Sengon (*Paraserianthes falcataria*)	$Bt = 0{,}0199(D^2H)^{0.9256}$
5.	Akasia auri (*Acacia auriculiformis*)	$Bt = 0{,}0775(D^2H)^{0.9018}$
6.	Lain-lain (*Others*)	$Bt = 0{,}0219(D^2H)^{1.0102}$

The results of the analysis are being held in the reference computer in the villages.

Table 2 shows that carbon stocks have increased by more than 4 tC/ha, in spite of timber harvesting that took place between the first and second measurement (a period of one year). It can also be observed that there is no significant difference between the increase of carbon stocks found in home gardens and dry lands.

Table 2. Results of re-measurement of PSPs in Semoyo

Type of Land	Measurement	Total Biomass (Kg) (50 plot, @plot 400 m2)	Total Biomass (ton) (50 plot, @plot 400 m2)	Total Biomass (per plot, @plot = 0.04 ha)	Total Biomass (t/Ha)	Carbon Total (t) (0.5 * Biomass)
Home garden	1st measurement	96,969.54	96.97	1.9394	48.485	24.2425
Dry land	1st measurement	98,617.346	98.62	1.9724	49.31	24.655
Home garden	2nd measurement	115,891.319	115.89	2.3178	57.945	28.9725
Dry land	2nd measurement	115,262.413	115.26	2.3052	57.63	28.815

2) Integrating CCA into villages' institutional setting

The results of activities aimed at strengthening the villages' institutional setting/frameworks include:

Results from Semoyo village:

- Preparation of community forest constitution (statute of the organization)
- Draft of Village Regulation on Timber Legality Administration
- Documents on Standard Operating Procedures related to the management of community forests, including: Area organisation; Unit of management; Annual Allowable cut; Nursery; Planting; Stand maintenance; Harvesting; Marketing; The use of space under the canopy for other crops; Environmental management; Social management; Preparation of management plan.

Results from Terong Village:

- Improvement of land title administration
- Preparation of community forest constitution (statute of the organization)
- Documents on Standard Operating Procedures related to the management of community forests, including: Area organisation; Unit of management; Annual Allowable cut; Nursery; Planting; Stand maintenance; Harvesting; Marketing; The use of space under the canopy for other crops; Environmental management; Social management; Preparation of management plan.

3) Adaptation of inventory tools for community members

The local use of the christen-meter to measure tree height was been tried with a high degree of success. People were more comfortable with this tool since tree height can be read directly from the tool. However, the technical skills to use this tool need to be maintained. This can be attained by the following procedures:

- Selecting a single tree to be measured, preferably 10-15 meter high
- Ask at least 3 persons to measure the height individually and independently at the same time
- Supervise the measurement:
    - Keep holding the christen-meter in a stable position
    - Keep the tool vertical
    - When reading the top of the tree, the bottom of the tree, and the scale on the christen-meter, keep the tool stable and vertical
- Compare the measurement: if the measurement different is more than 0.5 meters, then ask to repeat the measuring task, independently
- Repeat the exercise until participants obtain a consistent measurement figure
- Repeat the activities on at least 3 different trees.

The tool can be produced locally at very low cost of US$ 2.5. At the end of 2012 Semoyo Village has produced 200 christen-meters (Image 1). The units may be distributed to adjacent villages.

Image 1: Local production of christen-meter

4) Socio-economics of CCA: Preliminary results

a. Background

In the first half of the 20th century, the region of Central Java went through a period of heavy deforestation, after which a process of vegetation recovery has been experienced but mainly in the form of home gardens and estate crop plantations (Chokkaligam et al. 2001). This process of recovery was supported during the "reformation period" that began in 1999. During this time, the process of decentralization enabled multi-stakeholder approaches as well as local institutions to act on the recovery of degraded – and even barren – state enterprise plantations. Much of this land has been turned into agroforestry systems (Adi et al. 2004).

The villages of Wonosobo and Terong are located in the regencies of Gunung Kidul and Bantul respectively. In these regencies more than 60% of the land is used for agriculture and agroforestry purposes for subsistence and cash generation. Land use is intensive as several crops are planted in relatively small areas.

Land use management in the villages takes place within a traditional Javanese institution (*wono dusun*) in which a unit of land is managed for multiple purposes including agriculture, animal husbandry and forestry. Forests managed by communities are dominated by albicia (*Paraserianthes falcataria)*, mahogany (*Swietenia macrophylla*) and teak (*Tectona grandis*) (Filius 1997; Adi et al. 2004). *Wono dusun* is practiced in lands classified by the government as people's forests. People's forests are usually privately titled in the name of household heads. These land units contain wood and fruit trees, seasonal crops, spices, fodder and a variety of vegetation. Seasonal products include rice, peanuts, cassava, chilli peppers and vegetables. Fruit gardens play a significant role in households' economy as they provide them with fruits, coffee, fodder and medicinal plants. Part of the production in the villages is destined for subsistence purposes, while some is earmarked for sale. The variety of crops contributes to ensure a relatively stable income. Thus when the price of one product drops villagers have others to sell to compensate. Some of the products sold in the market include cloves, coconuts, cassava and bark. Individual households also engage in the production of processed foods for sale in local markets. However, lack of effective access to marketing channels limits the villages' potential to improve their income (Adi et al. 2004).

In these circumstances, determining the socioeconomic conditions of the communities targeted by the CCA research (*ex-ante* assessment) is a substantial element towards understanding the circumstances under which their engagement in efforts towards climate change mitigation is a viable option. Therefore, during FY2012, data were collected to obtain a picture of the socioeconomic conditions currently found in the villages of Semoyo and Terong.

b. Preliminary results

Productive activities at the village level

Consistent with existing research in Java, the surveys show that households in Semoyo and Terong have a diversified production strategy. Figure 1 depicts the composition of income for the surveyed households. Over 64% of income is generated by agriculture/horticulture, livestock (animal husbandry) and forestry. Income obtained from non-agricultural activities accrues to retail business and off-farm employment. Although agricultural activities represent a relatively low proportion of effective income, it must be considered that much of the agricultural production is not sold, but used for household consumption. Similarly, timber has a relatively low share in income generation; nonetheless timber delivers important inputs for households for the maintenance of farms and houses. Timber also delivers fuel wood, which is a key element for energy generation for many households. The further analysis of the household surveys will deliver deeper insights on issues such as the subsistence value of agricultural and forest production.

Total household expenditures demand 77% of the income generated. 36% of households operate in deficit. This figure does not include the service of debt, that is, loans taken by individual households. When the service of debt is included, 50% of households operated under deficit during the year. As the household surveys compiled data for one year, no conclusions can be drawn at this point on whether the household deficit is a permanent or a temporary condition.

Although income and expenditures rarely go beyond the limit of IDR 40 million, there is strong variability among these variables across the surveyed households. The variability tends to be lower in the case of timber and horticulture, and it is more pronounced in the case of livestock and revenues from non-agriculture. Consequently, those who keep livestock and have non-agricultural sources of income also tend to obtain the highest revenues. Table 3 depicts basic statistical values of the variable included in the surveys.

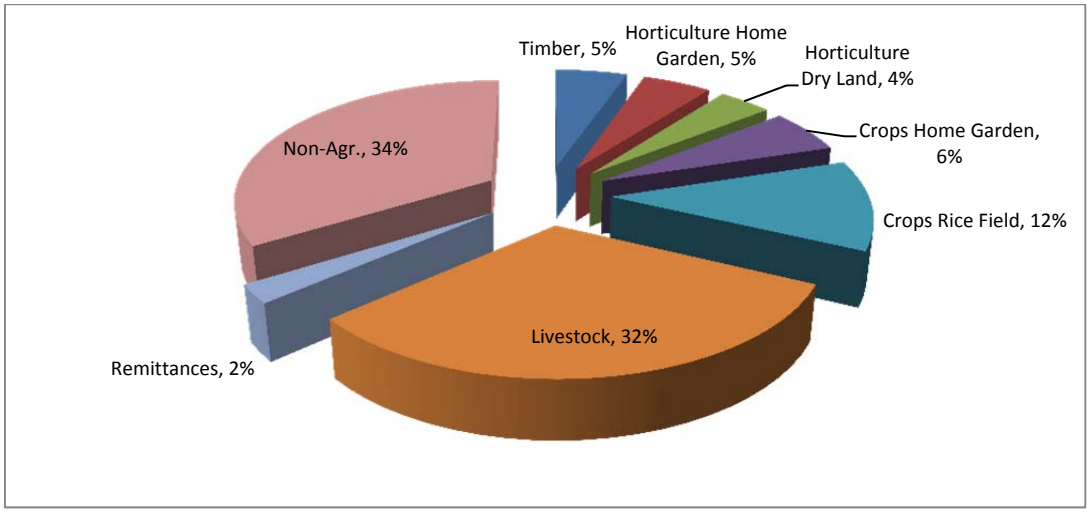

Figure 3: Relative importance of income generating activities

Table 3: Descriptive statistics of household surveys

	N	Minimum	Maximum	Mean	Std. Deviation

Household members	50	2	10	3.98	1.348
Home Garden (HG) ha	50	.02	1.20	.3098	.26772
Dry Land (DL) ha	50	.00	1.90	.6348	.48435
Rice Field ha	50	.00	.73	.2270	.18373
Total ha HG+DL	50	.09	2.15	.9442	.53769
Income timber (IDR)	48	150,000	5,900,000	1,567,500.00	1,241,024.800
Income horticulture HG (IDR)	48	100,000	8,770,000	1,498,311.46	1,694,762.791
Income horticulture DL (IDR)	36	22,500	6,730,000	1,541,402.78	1,908,024.527
Income crops HG (IDR)	44	2,000	10,000,000	1,843,731.82	2,269,916.029
Income rice (IDR)	45	330,000	17,400,000	3,713,577.78	3,444,595.150
Income Livestock (IDR)	44	0	217,656,250	10,157,880.68	34,105,289.758
Remittances (IDR)	15	400,000	8,400,000	2,310,666.67	2,164,055.276
Income non-agr. (IDR)	29	500,000	70,979,200	16,436,524.14	13,407,108.704
Cost maintenance Yr. (IDR)	50	9,600,000	46,800,000	18,552,000.00	5,899,783.462
Debt (IDR)	37	0	13,800,000	4,189,162.16	3,474,196.338
Income total (IDR)	50	1,656,000	220,815,250	28,183,012.00	32,789,356.135
Expenses total (IDR)	50	9,600,000	51,600,000	21,651,980.00	7,569,668.659
Balance (IDR)	50	-38,923,500	199,215,250	6,531,032.00	33,293,819.385

A correlation analysis (bi-variate) was undertaken to explore the possibility of explaining what variables influence income generation, expenses and debt. Initially, this analysis suggests that horticulture in dry land contributes to reduce overall farm expenses (significance of 0.05). Although horticulture in home gardens also shows a negative correlation with debt and the costs of farm maintenance, the values are not significant. Livestock and income from non-agricultural activities show the strongest correlation for the achievement of positive income balances (significance of 0.01). Not surprisingly, debt has a strong impact on total expenditures (significance of 0.01). Nevertheless, at this stage it is not possible to identify what elements have a significant influence in the building of debt, and on the overall level of expenditures. A working hypothesis is that the variables that have a stronger influence on household expenses and debt are not directly related to the farms. A more nuanced analysis of the household surveys will be required to shed light on these issues.

Land is an essential element in the production function of any farm, and the distribution of income according to land ownership suggests that there is a direct correlation between the land owned and the income obtained. This relationship is depicted in Figure 4. Nevertheless, when the distribution is observed separately for each village, this correlation is not so evident, particularly in the case of Semoyo. This suggests that other variables may explain income generation, and a more differentiated analysis is required.

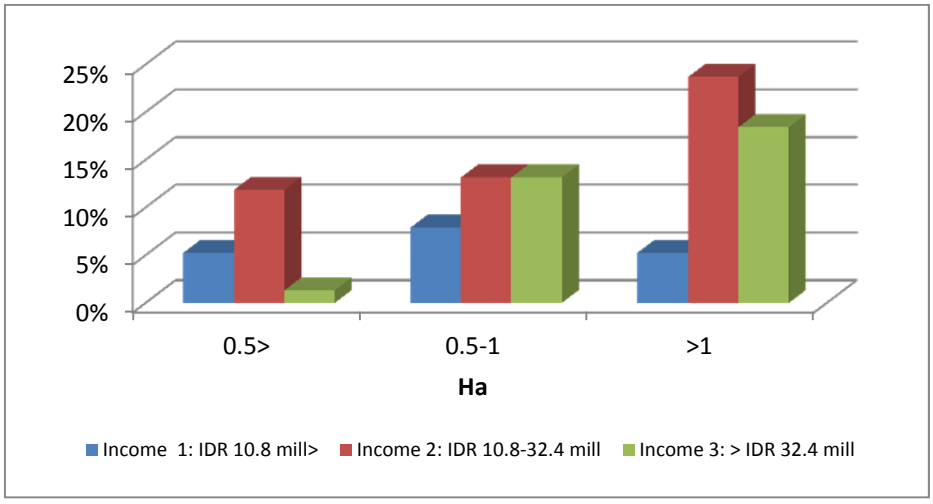

Figure 4: Distribution of land ownership and income in Semoyo and Terong (n=50)

Timber processing

Timber is processed in the village of Semoyo, where timber is received from the adjacent villages. According to the community forestry association, the sawmill operates under a constant yearly timber supply. The association is planning to buy additional sawmills to improve processing. Table 4 summarises the business conditions depicted by the community forestry association.

Although timber processing generates a net profit[2], the payments of dividends (X) reduces the cash flow significantly, and together with business re-investments (VIII+IX) the cash flow is reduced to practically nil[3]. The payment of dividends represents over 87% of the annual net profits. In principle, a more flexible dividend policy would allow for the association to pay for the sawmills without applying for a credit, saving thus on payments for principal and interest (V). For the first sawmill this would represent 3% of annual net profits. Reserving 10% of annual profits would allow the creation of seed capital – i.e. capital for further investments in forestry or in alternative ventures. Nevertheless none of these options are considered viable, because forestry income is used for a variety of short-term needs in the communities that can hardly be postponed, like health expenses, household expenses and social occasions (such as weddings). Moreover, considering that several hundred households belong to the association, dividends are quickly diluted.

Table 4: Business conditions of the community sawmill in Semoyo (IDR x 1,000)

[2] Approximately USD $50,000 yr^{-1}.
[3] Take into account that depreciation is not being included.

		ITEM	Yr 0	1	2	3	4	5	6
I	INVESTMENT	Sawmill	80,000				80,000		
		Office	5,000					5,000	
		Public Accountant Checking	10,000				10,000		
		TOTAL	95,000	-	-	-	90,000	5,000	-
II	INCOME	Income (sawmill wood)		3,840,000	3,840,000	3,840,000	3,840,000	3,840,000	3,840,000
		Income (Other product/remnants)		48,000	48,000	48,000	48,000	48,000	48,000
		TOTAL		3,888,000	3,888,000	3,888,000	3,888,000	3,888,000	3,888,000
III	OPERATION COSTS	Fuel		24,000	24,000	24,000	24,000	24,000	24,000
		Spare parts		9,000	9,000	9,000	9,000	9,000	9,000
		Worker (4 person)		48,000	48,000	48,000	48,000	48,000	48,000
		Operational Cost for getting wood		12,000	12,000	12,000	12,000	12,000	12,000
		Wood purchasing (4 m3/day)		2,880,000	2,880,000	2,880,000	2,880,000	2,880,000	2,880,000
		Administration (employee)		8,400	8,400	8,400	8,400	8,400	8,400
		Public Accountant		10,000	10,000	10,000	10,000	10,000	10,000
		Supplies		1,000	1,000	1,000	1,000	1,000	1,000
		TOTAL		2,992,400	2,992,400	2,992,400	2,992,400	2,992,400	2,992,400
IV	GROSS PROFIT		- 95,000	895,600	895,600	895,600	895,600	895,600	895,600
V	PRINCIPAL+INTEREST	(interest: 6%) loan: 95 million		19,319	19,319	19,319	19,319	37,622	37,622
VI	INCOME TAX			388,800	388,800	388,800	388,800	388,800	388,800
VII	NET PROFIT		- 95,000	487,481	487,481	487,481	397,481	464,178	469,178
VIII	Re-investment			30,000	30,000	30,000	30,000	30,000	30,000
IX	Business development			30,000	30,000	30,000	30,000	30,000	30,000
X	Dividend			427,481	427,481	427,481	337,481	404,178	409,178

c. Conclusions and way forward

The initial assessment suggests that communities operate under financial stress. For them to eventually engage in increasing their carbon stocks (that is, a REDD+ activity) they necessarily have to postpone timber harvesting of a proportion of their stands. This would have the advantage that in the long-term they would be able to harvest timber of larger girths that also pay higher prices per cubic meter. Another opportunity is that the communities could eventually profit from the marketing of carbon stocks. The hurdle to achieve this is the fact that the communities will have to postpone present income for future revenues. But when present income is destined to cover basic needs, as described above, this is a choice that communities are reluctant to take if they have to shoulder the enterprise on their own.

For communities to engage in postponing timber harvesting, i.e. agree to the reduction of present income, external finance will be necessary. Figure 4 illustrates this proposal:

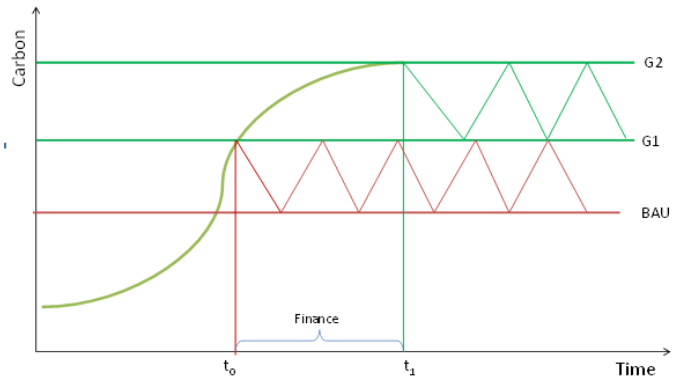

Figure 4: Harvesting postponement and increase of carbon stocks

The proposition of engaging the communities in increasing their carbon stocks implies postponing the harvesting of a proportion of their forest stands for the next 10 years (t_0 – t_1). In the initial situation (BAU), communities harvest timber when it reaches the growth stage G1, and maintain a carbon stock of BAU. When communities postpone timber harvesting, timber grows into a higher girth class (from G1 to G2), and in this transition higher carbon stocks (G1) are secured. The proportion of the harvest that would make sense for the communities to set aside (that is, to achieve a higher girth class) will depend on several variables:

- The price of carbon that may be secured: The Forest Investment Programme – from which funding for this effort would be initially sought – has specified two potential carbon prices $\$1.5/tCO_eyr^{-1}$ and $\$4.6/tCO_eyr^{-1}$. The first price corresponds to FIP's budget whereas the second price corresponds to a combined budget between the FIP and the IFC (International Finance Corporation). Scenarios will be built assuming each price.
- The growth ratio of the timber and its equivalency to fixed carbon. To assess the growth of the tree species harvested regularly, growth curves (and/or charts) for each one will be necessary. These species include mahogany, teak, albicia, rosewood, and acacia.
- The price of timber: Here it is necessary to take two factors into account. First, the income that the village would stop receiving by not harvesting X proportion of its timber stock needs to be assessed. Second, it is necessary to assess the future income that the village would receive once they are producing grade B timber. The financial resources that the community would stop receiving for postponing the harvest is equal to the amount of finance that must be provided.
- The price of carbon and the amount of fixed carbon are key in terms of offsetting the villages' loss of income for setting timber stock aside for future harvest. Finally, the assessment must show that at the end of the 10 years, the community will be able to sell timber at a higher price and obtain a higher income[4], that they will be able to pay the finance provided, as well as maintain higher carbon stocks to justify the payment of carbon credits.

The activities that will be undertaken in the future include a more detailed analysis of the socioeconomic and forestry data to shed light on:

- The real value of surveyed household production and extrapolation to the village level;
- A more differentiated analysis of the data to better understand the variables that contribute to income and expenses. It is particularly important to explore the role that timber has in income generation, since its importance may be greater in some households than others;
- Assess the opportunity cost of postponing timber harvesting to assess the amount of finance required;

[4] Some thought should be given to considering the annual inflation rate to make the analysis in real terms.

- Elaboration of scenarios using FIP carbon prices to approximate the optimal increase of carbon stocks contingent on financing.

5) Preparation of Community Carbon PDD

a. Training of trainers (ToT)

The ToT on the CCA-REDD-PDD was conducted in October 2012. This ToT aimed to:

- Enable participants to understand in detail what a REDD+ project is and become owners and managers of future REDD+ activities;
- Build the knowledge of the participants on basic elements of the PDD;
- Build competencies in understanding, preparation and application of a PDD standard.

The ToT curriculum is outlined in Table 5.

Table 5: ToT curriculum for the CCA-REDD-PDD

I.	FUNDAMENTAL UNDERSTANDING	1. Improvement of knowledge transformation to training participants
		2. Understanding the concept and components of PDD for REDD+
II.	ANALYSIS	1. Analysis of forest carbon stocks, CCA
		2. Comprehension on the CCBS-PDD
		3. Methods for preparing REDD-PDD
		4. Compatibility between participants skills and the selected materials in REDD-PDD training
III.	APPLICATION	1. Preparation of data and materials for REDD-PDD
		2. Application of components of the CCBA standard on specific/village case
		3. Coaching on the preparation data and materials to be used to prepare the PDD according to the standard

Lessons learned from the ToT include:

- Participants are mostly familiar with teaching/providing knowledge to others. Most of them are local leaders and forestry extension agents.
- They will need support for writing the document since they are not familiar with the PDD's technical writing format.
- The training has to be done on a step-by step basis to ensure understanding of the standard. Participants had difficulties understanding the principles of the CCB Standard, and it took them until the last day of the training to grasp these.
- Component G (General, CCBA) was felt the most difficult to complete since it requires a lot of information and data commonly not available, and must be generated and completed through separate activities.
- Component C (Climate, CCBA) was more accessible for villagers participating in the CCA.

- Some elements in the standards are not locally applicable, and this needs to be realized by the PDD appraisal team.

b. Follow up

The ToT was followed up by support to each village to prepare the CCA-REDD-PDDs. In every village, two ToT participants were assigned to inform their peers on the requirements for preparing the CCA-REDD-PDD, and they were instructed to start working on generating the necessary inputs for the CCB Standards components. Progress had to be reported within a month from the closing date of ToT.

6) Workshop

a. Day one

The workshop was organized at the District Government Auditorium of Gunung Kidul. The event was opened by the Vice District Head. More than 50 participants attended the workshop. The first day was used to report on CCA activities that have been implemented in 3 villages representing 3 Districts, namely Semoyo Village at Gunung Kidul District, Terong Village of Bantul District, and Catursari of Pacitan District of East Java. Catursari conducted CCA on its own initiative and resources, and invited the Semoyo trainers as coaches. Results:

- There was intensive information sharing on community timber marketing and prices. This provided valuable information to the local people regarding managing their own forests. They learned how the timber supply chain can influence the economic performance of timber at the regional as well as the national level.
- People also understood that the role of the local government is necessary to promote the timber from community forests in the market. Some regulations issued by central government were also debated, and the workshop recommended to improve the national regulation particularly with respect to timber administration and the development of the local timber processing industry.
- The carbon market was also introduced and received various responses from the forum. Questions were frequently asked regarding benefit sharing and the roles of community members in carbon transactions.
- It was also requested to inform other villages – beyond the pilot villages – with simple but updated information on CCA, and its potential to support better livelihoods in the future.
- The local governments of the three districts represented in the workshop committed to support the initiative of CCA, provided that the commercial use of forests by the communities is maintained.
- By the end of 2012 all three District Governments have delivered concrete support, namely:
    - The head of Pacitan District has sent a letter to the Ministry of Forestry requesting an increase of central government support in community forest certification.

- The head of Bantul District assigned its forestry office to set a special unit to deal with community forests.
- The Head of Gunung Kidul District has set a simple mechanism for periodical community consultation.

b. Day two

The second day of the workshop aimed to update the progress of preparation of the CCA-REDD-PDD of each Village. The workshop was organised at the village hall of Semoyo. Some of the results and recommendations include:

- Semoyo delivered the most advanced progress in preparing the CCA-REDD-PDD. Most of the field work to complete component G (General, CCBA) has been done.
- Although many lessons have been learned in the process of preparing the PDD by Semoyo participants, they have to study deeper the substantial elements of the CCB Standards.
- Collecting data for the PDD has prompted community members to go to the adjacent villages in the boundaries of the project zone, as defined in the PDD. As a result, a closer network and collaboration with the adjacent villages has been created.
- Terong Village needs more time to learn about the CCA-REDD-PDD. Terong is still consolidating its community groups to establish a cooperative at the village level. Particularly, their work on consolidating their forest management and timber business is ongoing.
- Catursari Village of Pacitan is relatively more advanced in timber trading and therefore the perspective on CCA with them has to be approached through timber marketing as the entry point.
- The main lesson learned is that the preparation of a PDD should be carried out in the context of community forest management, and timber business should be compatible with carbon conservation. This is the challenge to be addressed later on.

(3) Section C. Proposed activities for 2013

The following activities for the CCA Project in Indonesia are proposed for FY2013:

- Publication of lessons learned from CCA in Indonesia
- Impact generation:
  - Preparation of Modules in organising CCA programme for FMU in Indonesia
  - Extension of CCA work to adjacent villages
- Finalising issuance of village regulations on community forest management, within which CCA is addressed
- Internalising/aligning CCA with forest-based livelihood systems
- Assess financial needs to pursue increase in carbon stocks

- Evaluate using the PDD to target carbon payment mechanisms including: FIP (forest investment program), voluntary carbon markets, development of micro finance
- Continue carbon monitoring

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