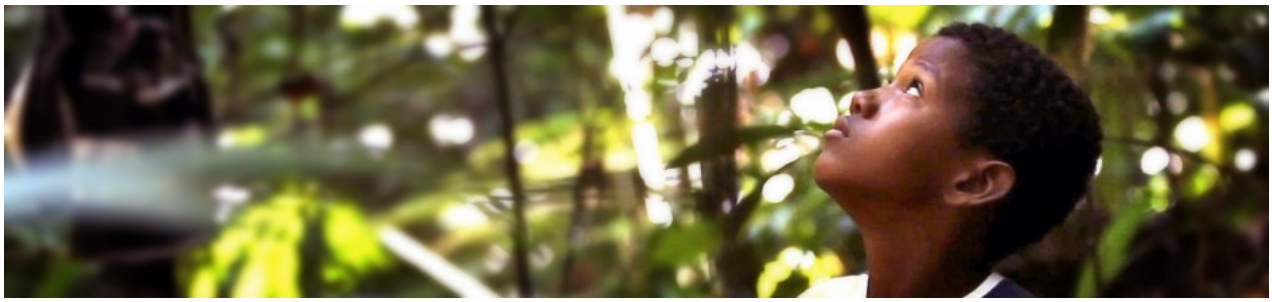
Chocó-Darién Conservation Corridor Project

Monitoring Plans for Climate, Community and Biodiversity Benefits



anthrotect

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Version 1

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Introduction

Project Start and Crediting Dates

The Chocó-Darien Conservation Corridor Project began in 2010 and has a crediting period of 30 years, extending from October 18, 2010 to October 17, 2040.

Monitoring Plan Objectives

This document presents the initial monitoring plans for the Chocó-Darien Conservation Corridor Project (CDCCP) in three components: Social, Biodiversity and Carbon. The analysis and methods laid forth in this document are to be used in assessing the social impacts of the project on local stakeholders as well as offsite communities and biodiversity. The monitoring plan was developed using guidelines laid out on Forest-Trend's Social and Biodiversity Impact Assessment (SBIA) Manual for REDD+ Projects (Richard and Panfil, 2011).

As per the recommendation of Richard and Panfil (2011), a theory of change approach – also referred to as the causal model or theory-based evaluation approach - was utilized in developing the social monitoring plan for this project. The theory of change articulates a causal relationship between project activities and outputs, short-term outcomes, and long term impacts. If it can be shown that outputs and outcomes have been achieved, and there is a convincing causal argument linking these to longer term impacts, then it can be reasonably assumed that the longer term impacts will be achieved, at least in part, as a result of project activities. This causal link tackles the issue of "attribution", that is, showing that project activities are a driver of long-term impacts.

Section I: Social Impact Monitoring Plan

1.1 Management of the CCB Social Monitoring Process

The following stages have been completed and are described in this document as well as throughout the Project Design Document.

1) Identification of baseline social conditions
2) Projection of community conditions in the absence of project activities
3) Projection of future conditions in the "with-project" scenario, utilizing the theory of change
4) Estimation of potential negative impacts
5) Initial identification of monitoring output, outcome, and impact indicators

Given that project activities are likely to evolve and adapt to over the 30 year project cycle, the following stages will take place throughout the life of the project:

6) Ongoing community involvement and consultations throughout the monitoring process
7) Ongoing data collection, analysis, and refinement of project monitoring process

The Chocó-Darien CCB Monitoring Plan will be a "living" document in the sense that it will be adjusted over time in response to the sixth and seventh stages in order to ensure continual improvement and relevance. If it is found that there are unanticipated issues in collecting identified indicators, a more appropriate indicator will be identified and incorporated in to the monitoring plan.

1.2 Baseline Conditions and Focal Issues

In order to determine the pre-project social context, the project supported the execution of a community census which was completed in May 2012. In addition to this census, project proponents undertook a series of focus group discussions with local stakeholders as well as expert consultations. The baseline scenario is characterized by poverty and unmet needs in the

project area. Results are largely in the project design document (CM1.1). Additional summary baseline statistics drawn from the May census are included in Annex 1 of this monitoring plan.

The project identified four focus issues which are important for local communities with respect to their current conditions and well-being and which were important for the success of the project. These focus issues form the basis for the development of the theories of change, monitoring methods and indicators developed as part of this project's monitoring plan. The focal issues and an expression of the desired condition the project would like to achieve for each are as follows:

- ***Strengthened governance*:** Help to construct effective and inclusive mechanisms for territorial governance and resource management by building capacity and increasing local awareness of collective identity and territorial rights
- ***Strengthened cultural identity*:** Recover strengthen local culture and ways of life while aiming to balance the traditional with new sustainable land use practices
- ***Increased Food Security and Expanded Livelihood Alternatives:*** Provide new employment opportunities through sustainable livelihood alternatives
- ***Increased wellbeing*:** Increased wellbeing though increased access to health services, educational services and basic communications infrastructure.

1.3 Community Conditions in the Absence of the Project (The "Without" Project Scenario)

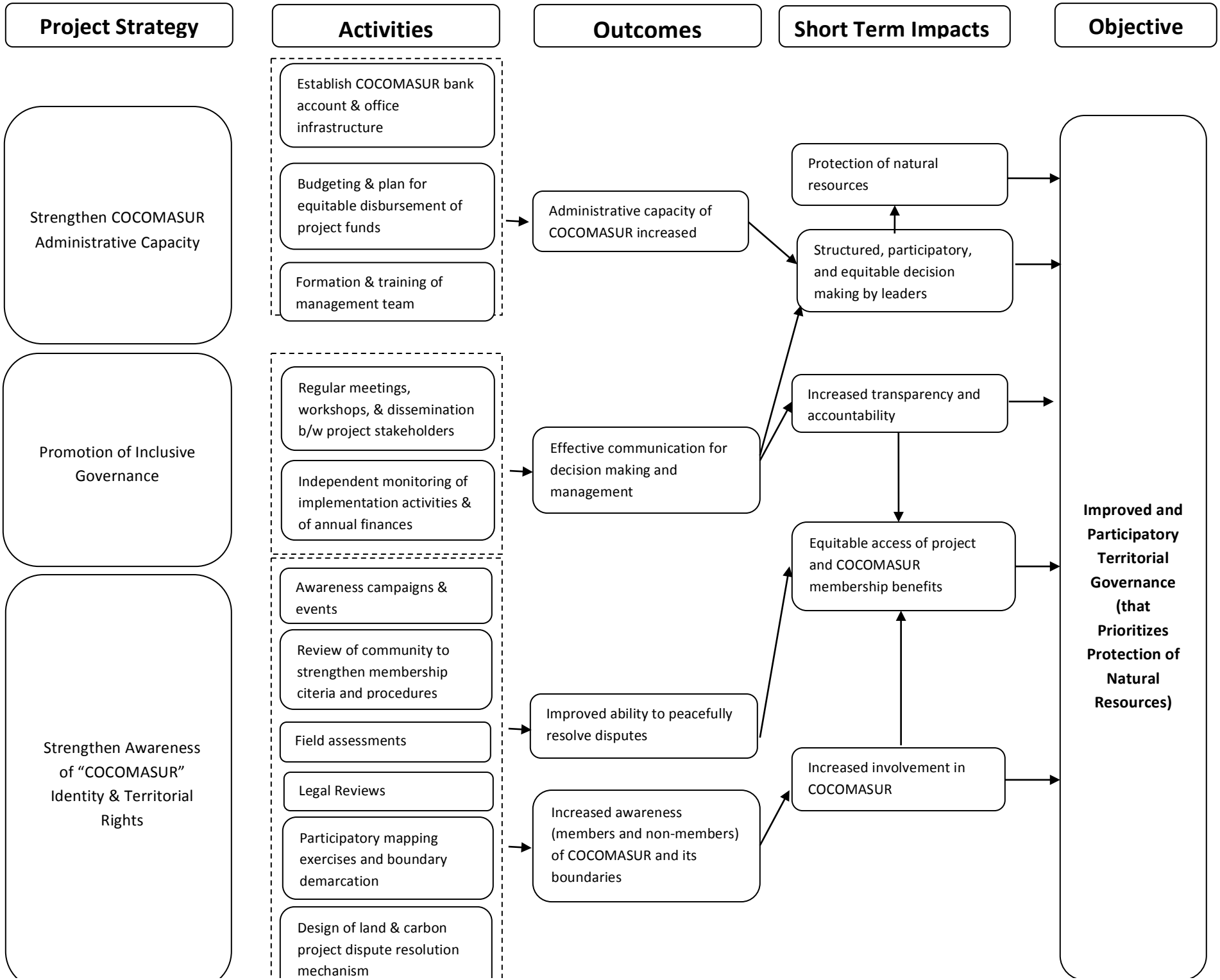
A projection of future social conditions in the "without-project" scenario were developed based on focus group discussions with local stakeholders and expert consultations. These results are described in Section G2 of the project design document. The anticipated long term impact of baseline conditions on communities can be summarized as:

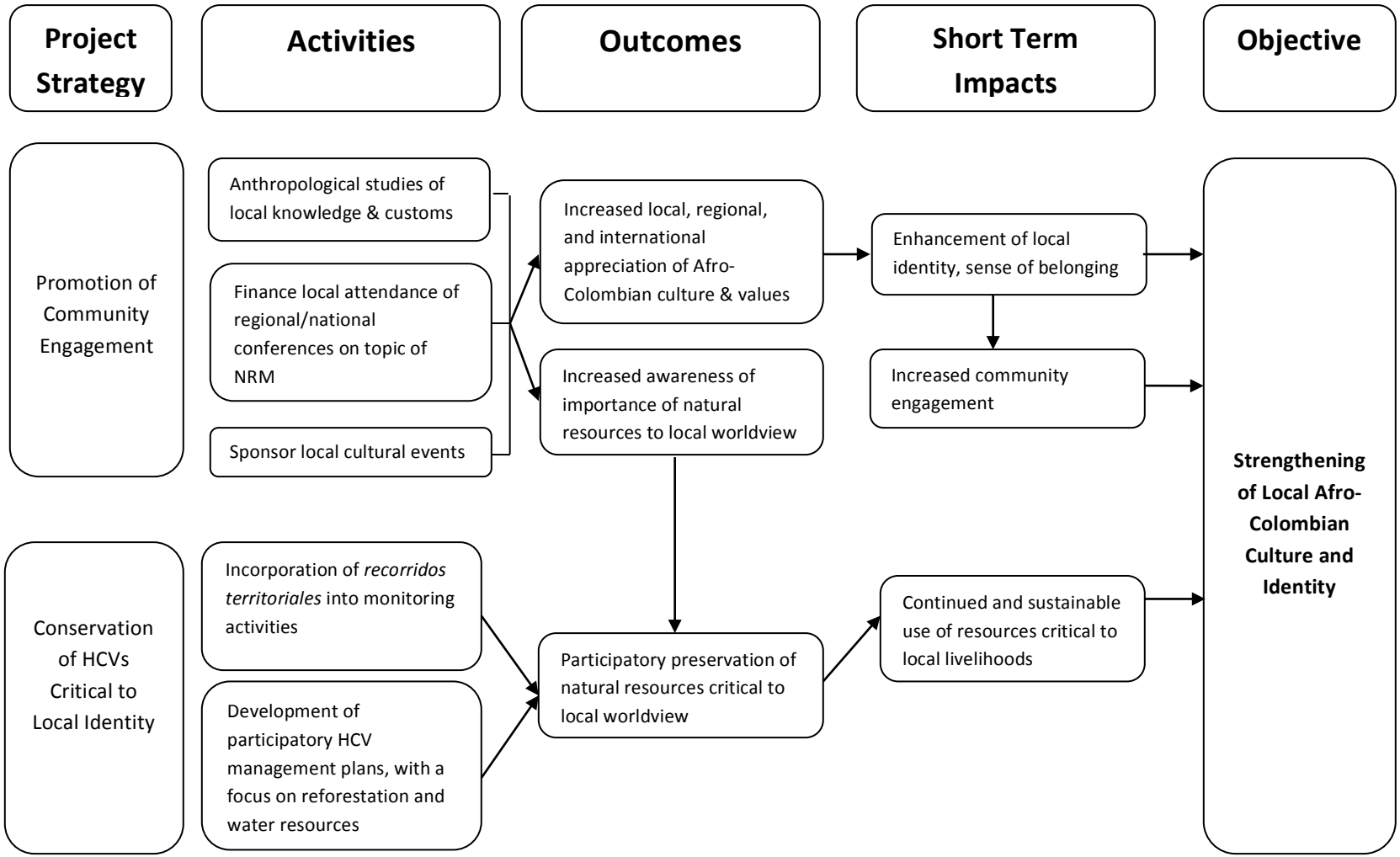
- **Erosion of territorial rights, dignity and identity** as a result of weak governance, ineffective mechanisms for resolution of land disputes, and the continuation of illegal land use activities.
- **Forest, ecosystem and livelihood degradation** as a result of land encroachment, related loss of access to forest resources vital for local livelihoods, and unsustainable agricultural, timber and fishing practices.
- **Low income and productivity** due to lack of transportation and telecommunications infrastructure, limited access to credit, and inefficient and unsustainable practices in traditional livelihood areas such as agriculture and fishing.
- **Unequal access to territorial resources** resulting in part from a lack of awareness regarding collective rights and a lack of community participation in decision making processes

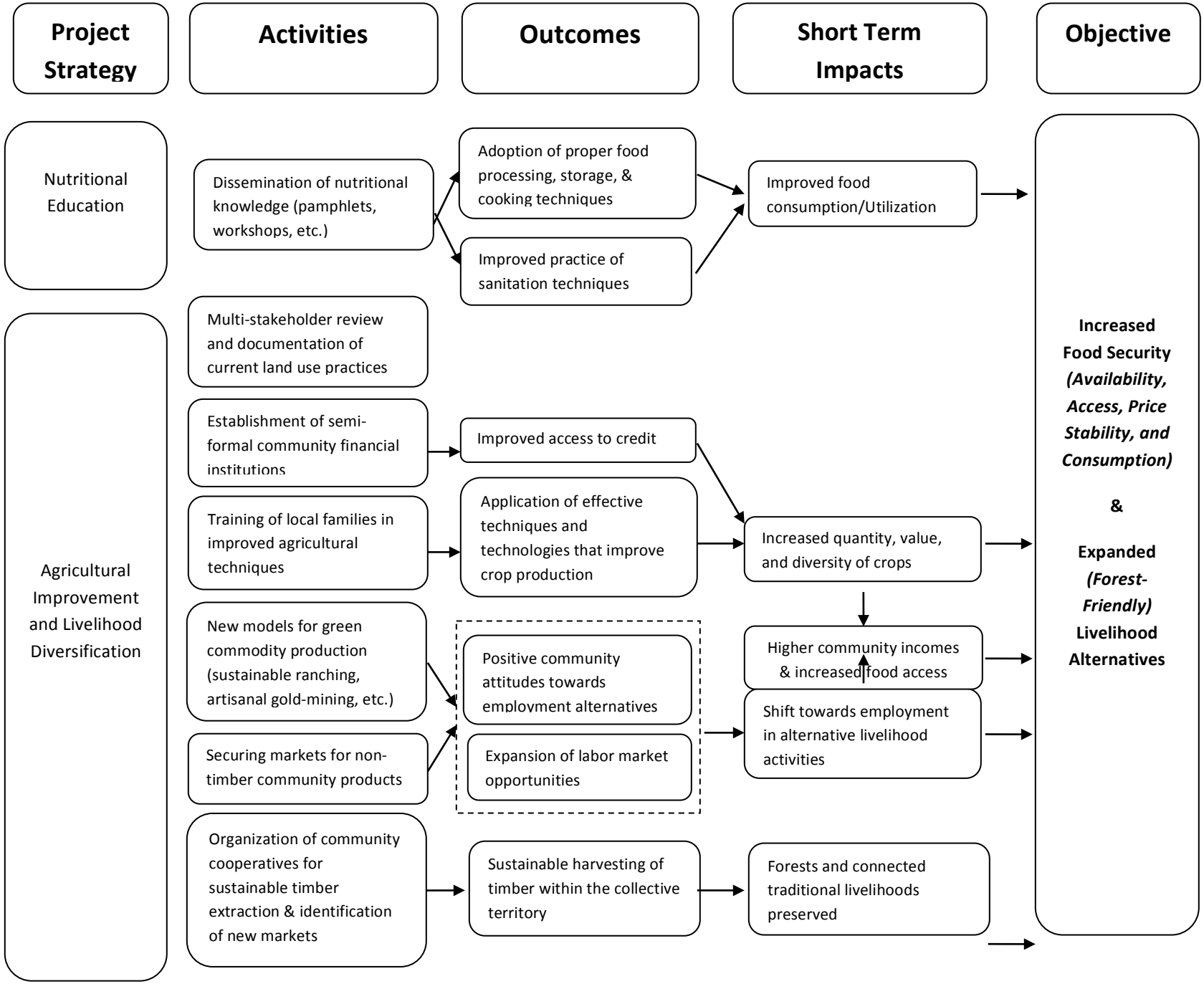
1.4 "With Project Scenario" and Theories of Change

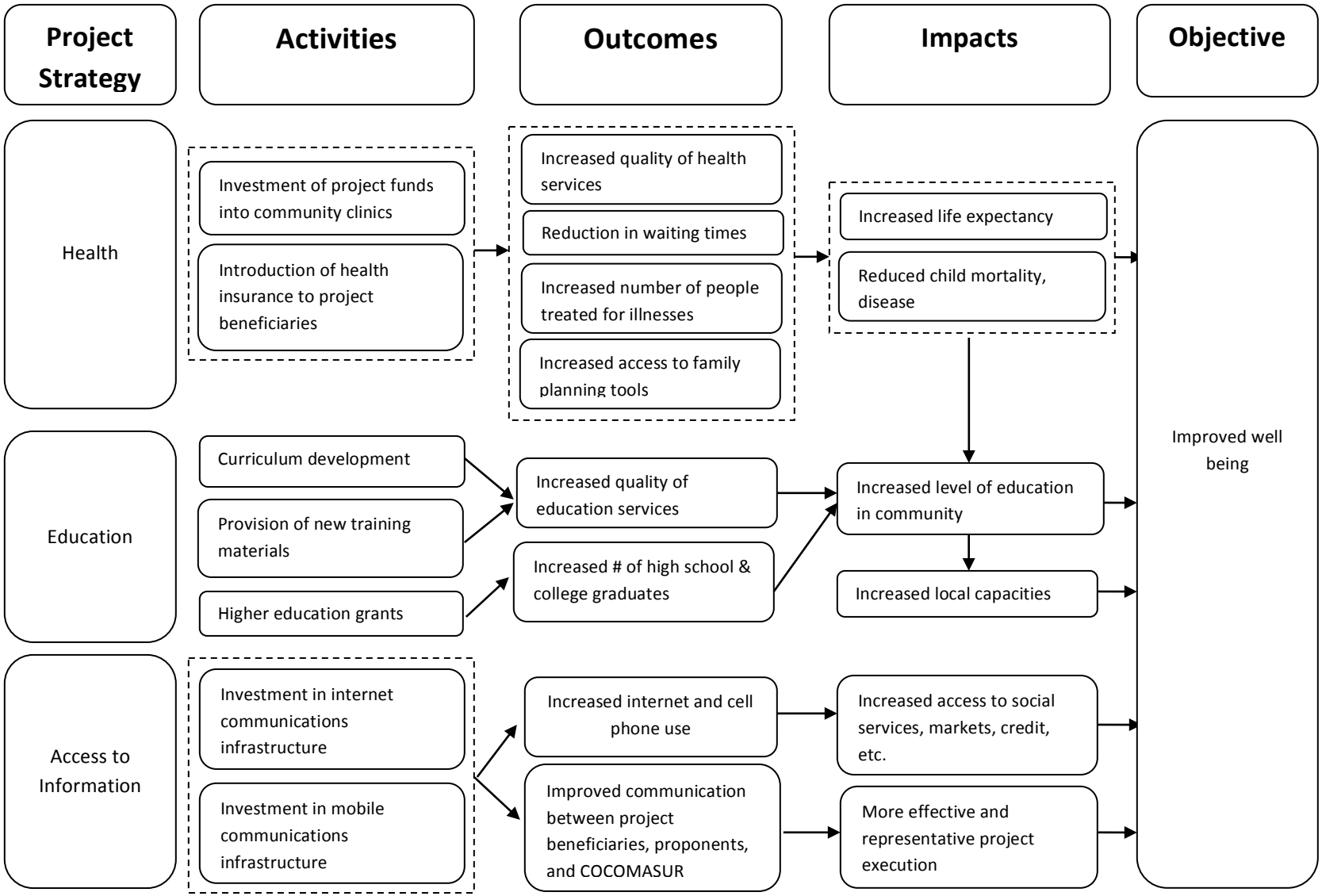
CCB standards require that projects generate net-positive impacts for local communities and biodiversity; that is, it must be shown that changes were attributable to project activities. Furthermore, **CCB Criterion B1.1** requires that estimates of project impact must "use appropriate methodologies to estimate changes" and that these estimates must "be based on clearly defined and defendable assumptions". In light of this CCB emphasis on explaining ***how*** project objectives are to be achieved, the SIA Manual for REDD+ Projects (Richard and Panfil, 2011) recommends the theory of change method (also known as the causal model) as a credible and cost effective method for estimating outcomes and impacts of project activities.

Generic steps as laid forth in the SBIA Manual for REDD+ projects were followed in developing results chains and a theory of change for this project, utilizing definitions of activities, outputs, outcomes and impacts found in the SBIA Manual for REDD+ Projects. Theory of change models are presented below for each of the four identified focal issues. These theories of change will be reviewed and adjusted as necessary throughout the lifetime of the project and as project activities change.


Project Strategy
Activities
Outcomes
Short Term Impacts
Objective
Strengthen COCOMASUR Administrative Capacity
Promotion of Inclusive Governance
Strengthen Awareness of "COCOMASUR" Identity & Territorial Rights
Establish COCOMASUR bank account & office infrastructure
Budgeting & plan for equitable disbursement of project funds
Formation & training of management team
Regular meetings, workshops, & dissemination b/w project stakeholders
Independent monitoring of implementation activities & of annual finances
Awareness campaigns & events
Review of community to strengthen membership citeria and procedures
Field assessments
Legal Reviews
Participatory mapping exercises and boundary demarcation
Design of land & carbon project dispute resolution mechanism
Administrative capacity of COCOMASUR increased
Effective communication for decision making and management
Improved ability to peacefully resolve disputes
Increased awareness (members and non-members) of COCOMASUR and its boundaries
Protection of natural resources
Structured, participatory, and equitable decision making by leaders
Increased transparency and accountability
Equitable access of project and COCOMASUR membership benefits
Increased involvement in COCOMASUR
Improved and Participatory Territorial Governance (that Prioritizes Protection of Natural Resources)


Project Strategy
Activities
Outcomes
Short Term Impacts
Objective
Promotion of Community Engagement
Anthropological studies of local knowledge & customs
Finance local attendance of regional/national conferences on topic of NRM
Sponsor local cultural events
Increased local, regional, and international appreciation of Afro-Colombian culture & values
Increased awareness of importance of natural resources to local worldview
Enhancement of local identity, sense of belonging
Increased community engagement
Conservation of HCVs Critical to Local Identity
Incorporation of *recorridos territoriales* into monitoring activities
Development of participatory HCV management plans, with a focus on reforestation and water resources
Participatory preservation of natural resources critical to local worldview
Continued and sustainable use of resources critical to local livelihoods
Strengthening of Local Afro-Colombian Culture and Identity


Project Strategy
Activities
Outcomes
Short Term Impacts
Objective
Nutritional Education
Agricultural Improvement and Livelihood Diversification
Dissemination of nutritional knowledge (pamphlets, workshops, etc.)
Adoption of proper food processing, storage, & cooking techniques
Improved practice of sanitation techniques
Improved food consumption/Utilization
Multi-stakeholder review and documentation of current land use practices
Establishment of semi-formal community financial institutions
Improved access to credit
Training of local families in improved agricultural techniques
Application of effective techniques and technologies that improve crop production
Increased quantity, value, and diversity of crops
New models for green commodity production (sustainable ranching, artisanal gold-mining, etc.)
Securing markets for non-timber community products
Positive community attitudes towards employment alternatives
Expansion of labor market opportunities
Higher community incomes & increased food access
Shift towards employment in alternative livelihood activities
Organization of community cooperatives for sustainable timber extraction & identification of new markets
Sustainable harvesting of timber within the collective territory
Forests and connected traditional livelihoods preserved
Increased Food Security (Availability, Access, Price Stability, and Consumption)
&
Expanded (Forest-Friendly) Livelihood Alternatives


Project Strategy
Activities
Outcomes
Impacts
Objective
Health
Education
Access to Information
Investment of project funds into community clinics
Introduction of health insurance to project beneficiaries
Curriculum development
Provision of new training materials
Higher education grants
Investment in internet communications infrastructure
Investment in mobile communications infrastructure
Increased quality of health services
Reduction in waiting times
Increased number of people treated for illnesses
Increased access to family planning tools
Increased quality of education services
Increased # of high school & college graduates
Increased internet and cell phone use
Improved communication between project beneficiaries, proponents, and COCOMASUR
Increased life expectancy
Reduced child mortality, disease
Increased level of education in community
Increased local capacities
Increased access to social services, markets, credit, etc.
More effective and representative project execution
Improved well being

1.5 Social Monitoring Indicators

Theory of Change Indicators

Given the CCB requirement that changes in welfare should be "attributable" to project activities, selecting monitoring indicators based on the outputs, outcomes and impacts as laid out in a project's theory of change model is ideal because attribution is "built in" to this model. That is, if indicators provide evidence that outputs and outcomes of the causal model have been achieved, and if the causal model itself has a convincing cause-and-effect flow, then it can be reasonably assumed that desired impacts will be achieved and that they can be traced back project activities.

As the project activities, theory of change models, and focal issues are reviewed over time with the involvement of local communities, project indicators will also be reviewed and updated.

The identified indicators can be found in Annex 2.

Grameen Progress Out of Poverty Index (PPI)

The SBIA Manual for REDD+ Projects (Richard and Panfil, 2011) recommends use of the Basic Necessities Survey (BNS) as a complement to the theory of change approach. The BNS essentially yields a poverty index score for each household.

The CDCCP analyzed a range of other poverty and wealth indices in addition to the BNS, including Grameen's Progress out of Poverty Index (PPI). The PPI is used to estimate the likelihood that a given household falls below three different poverty lines, including; i) the Colombian national poverty line; ii) the $1/day/PPP international poverty line, and; iii) the $2/day/PPP international poverty line. Grameen has developed a Colombia specific PPI based on the 2009 Integrated Household Survey conducted by DANE. The Colombia PPI includes 10 questions that are easily understood and the majority of which are observable by the interviewer during the interview process (i.e. material of floor, etc.).

The PPI was originally developed by Grameen for use by MFIs in order to determine their client's needs and assess how quickly they moved out of poverty. The index, however, is useful outside of the microfinance arena, and, after discussions with the Grameen PPI team in Colombia, has been deemed applicable to project communities and selected as a tool for use in the CDCCP social monitoring plan. Given that a poverty index does not address the issue of attribution, the PPI questions complement rather than replace those indicators derived from the theory of change.

Questions from the Colombia PPI Scorecard can be found in Annex 3.

1.6 Randomized Controlled Trial (RCT)

As a complement to its monitoring activities and conditional on donor funding, Anthrotect will conduct an RCT with lead investigators in collaboration with Innovations for Poverty Action (IPA), a non-profit dedicated to identifying poverty solutions through scientific impact evaluation and to scaling up successful programs.

While the RCT's treatments have yet to be defined, the field experiment will seek to understand how to promote equitable governance and benefit sharing within environmental services (PES) projects. Based on budgets of comparable RCTs in Latin America, it is estimated that USD 150,000 per year will be required to cover the costs of the field experiment. USD 600,000 has been recently requested for this RCT as part of a USAID matching grant.

The RCT will include a minimum of three surveys executed throughout the life cycle of the experiment, including a baseline, a midline, and an endline survey. These surveys will help assess the impact of the treatment, and will be incorporated into regular monitoring procedures and surveys.

Additional details of this randomized controlled trial will be included in future iterations of this community monitoring plan.

1.7 Potential Negative Impacts of the Project

As part of its PDD and in accordance with CCB requirements, the project team assessed possible negative impacts of project activities on both members of the project zone as well as offsite and other stakeholders. Risks were identified through analysis of the theory of change, as well as through stakeholder consultations early on in the project design process.

Because negative impacts can be unexpected and often indirect, the below list of risks and mitigation measures will be complemented by participatory methods when signs of negative impacts are detected in order to explore the underlying problem.

Negative Impacts on Target Community

Risks and mitigation measures as relate to directly to the community in the project area can be summarized as below:

Table 1: Potential Negative Community Impacts

Risk	Related Negative Socio-Economic Impacts	Mitigation Measures
Corruption & Mismanagement	• Inequitable distribution of membership benefits	• Control transfer of management of project funds from Fondo Accion to COCOMASUR
Decreased viability of REDD offsets	• Failure to recover project costs and minimal project membership benefits	• Seek additional revenue through alternative funding sources to smooth fluctuations in carbon price and carbon payments

As unanticipated negative impacts are reported or identified through monitoring activities, participatory methods will be utilized to identify and address the root causes of negative outcomes.

Negative Impacts to Offsite Stakeholders

Identified offsite stakeholders include; i) large private ranchers landowners in neighboring communities; ii) migrants, including those from Cordoba and Antioquia; iii) the neighboring Embera Katio and Chidima indigenous group. The project does not foresee any major negative side effects for these groups. There is, however, a small chance that - as a result of the project's investment in demarcation of boundaries and forest patrols - rangers will encroach onto Embera and Chidima reserves.

In order to monitor and mitigate negative project impacts on the above groups, a stakeholder communication plan has been developed in order to disseminate information regarding project activities and objectives. Any unanticipated negative side effects will be identified by way of this communication. The project will maintain specific communication with leaders of the Chidima reserve in order to remain informed of any perceived threats during forest monitoring activities.

As unanticipated negative impacts are reported or identified through monitoring activities, participatory methods will be utilized to identify and address the root causes of negative outcomes.

Section II: BIODIVERSITY IMPACT MONITORING PLAN

2.1 Overview

The Chocó Darien Conservation Corridor contains elements of high conservation value, at the species, ecosystem and landscape scale. The following plan has been designed in order to monitor the project's performance in maintaining such values, which have been described in detail in the Project Design Document. Since the project will not introduce any GMOs or non-native species through the project activities, the monitoring plan does not address these elements.

Given the species and ecosystem richness of the Serranía del Darien, it is necessary to select biodiversity surrogates, i.e. indicator species, to assess the health of ecosystem functions and habitat and species diversity and to be able to track changes in key biodiversity variables. All biodiversity monitoring activities will be the responsibility of members of Cocomasur. A group of community biodiversity experts will be trained in biological surveys and monitoring techniques by an expert team who will be selected from the research community in regional universities. The expert research team will conduct the initial surveys and establish the biodiversity benchmark and simultaneously will train the local experts in sampling and data recording techniques. Local teams trained by the expert team will be evaluated on a regular basis to ensure that the quality of the monitoring will be that required by the CCB standard.

2.2 Biodiversity in situ

Benchmark assessment

Project activities are designed to generate positive biodiversity impacts in the project area. These positive impacts inside project areas will be monitored concentrating on two levels of biological organization: ecosystem level and species level.

Ecosystem level - Habitat types

The project will produce a detailed map of habitat types in the project area using high resolution (5m/pixel) remote sensing imagery followed by ground truthing, using protocols published in peer reviewed literature. The following basic data will be derived from the habitat type map using GIS tools: 1) area covered by each habitat type, 2) spatial arrangement of habitat types and 3) habitat fragmentation

Species level

Generally, indicator species are those that are sensitive to particular environmental changes, are likely to be consistently present in the areas once monitoring begins and for whom sampling methods are reasonably comprehensive and practical. There has been extensive discussion among the scientific community around which groups are better indicators of species biodiversity. There is consensus on the benefits of using birds as surrogates for animal diversity (Gardner 2010). Several authors also recommend using plants and invertebrates as ecologically sensitive groups, which can be considered indicators of biodiversity and habitat health (IAvH 2006). We will use birds, plants and dung beetles as indicator groups for establishing biodiversity benchmarks and for monitoring biodiversity in the project area. The project will use habitat types as surrogates for ecosystems and for monitoring ecosystem diversity and large scale biodiversity.

Species biodiversity of plants, birds and dung beetles will be described and monitored using an adaptation sampling of protocols designed and tested for Neotropical rainforests (Gardner et al. 2010; Magnusson et al 2005; Costa and Magnusson 2010). The project will use a model that combines rapid biodiversity assessments used commonly to compare biodiversity between sites and long-term ecological research sites needed to monitor ecological processes within sites. The project will adopt a standardized combination of permanent plots and transects which allow surveying different taxa; a system of permanent plots will be established in the project area.

Bird surveys will be conducted using a combination of methods, which include direct observation, mist nets and calls playbacks. Plant surveys will include all species of trees with DBH of more than 30 cm. Individual trees will be identified, tagged and mapped for monitoring purposes. Dung beetles can be surveyed using also a combination of methods; pitfall traps, manual search in suitable substrates and flight traps (using mosquito nets). Baseline assessments of each group will include a description of species composition and relative abundance per species.

Studies in similar habitats in Colombia, Panamá and Costa Rica as well as unpublished work from the Serranía del Darién from Fundación Ecotropico CI, provide short lists of bird and plant species which are suitable as indicators in this forest (see Table 2). This short list includes species which are sensitive to forest fragmentation, which represent the different bird guilds, have restricted ranges or are in any of the threat categories recognized globally or nationally. Population characteristics of the selected indicator species will be part of the biodiversity assessment.

2.3 Monitoring

The systems of permanent plots described above will be used to monitor biodiversity during the project's life. Table 3 summarizes the variables and measurement frequencies proposed for the monitoring program.

2.4 Ecosystem services

The project will protect continuous forest cover on mountaintops; along the altitudinal gradients (steep slopes) of key water catchments and maintain or recover forest cover along rivers and streams. Simple hydrological indicators will be used to assess the role of the forest in maintaining water quality and quantity and to monitor these two parameters down the Tolo and Tanela catchments, thus monitoring the forest's role in regulating the water cycle in the area.

Table 3 summarizes the variables and measurement frequencies proposed for the monitoring program.

2.5 Off-Site biodiversity impacts

The project expects no negative impact on biodiversity inside project areas; full participation of the local community in the design and operation of the project activities, including forest patrols, project monitoring, reforestation and enrichment planting and complementary productive activities are the backbone of project success.

An equivalent system of plots and grids will be established in the leakage area in order to monitor off-site leakage. The same set of parameters, variables, metrics and indicator species will be used for off-site monitoring.

Table 2. Indicator species for biodiversity monitoring (preliminary list)

Species	Group	Justification
Dipteryx oleifera	Large tree	Keystone species; important for human use
Cedrela odorata	Large tree	Keystone species; important for human use
Aspidosperma dugandii	Large tree	Keystone species; important for human use
Anacardium excelsum	Large tree	Keystone species; important for human use
Prioria copaifer	Large tree	Keystone species; important for human use
Switenia macrophylla	Large tree	Keystone species; important for human use
Ara ambigua ambiguus	Birds	Restricted to mature forest and large fragments; easy to detect
Querula purpurata	Birds	Restricted to mature forest and large fragments; easy to detect
Ortalis cinereiceps	Birds	Restricted to mature forest and large fragments; easy to detect
Cyanocompsa cyanoides	Birds	Restricted to mature forest and large fragments; easy to detect
Tangara inornata languens	Birds	Restricted to mature forest and large fragments; easy to detect
Pipra coronata nimuscula	Birds	Restricted to mature forest and large fragments; easy to detect
Pipra erythrocephala erythrocephala	Birds	Restricted to mature forest and large fragments; easy to detect
Crypturellus soui hartertii	Birds	Restricted to mature forest and large fragments; easy to detect
Thamnophilus punctatus	Birds	Restricted to mature forest and large fragments; easy to detect
Xenops minutus ridwayi	Birds	Restricted to mature forest and large fragments; easy to detect
Automolus ochrolaemus	Birds	Restricted to mature forest and large fragments; easy

pallidigularis		to detect
Gymnopithys leucaspis bicolor	Birds	Restricted to mature forest and large fragments; easy to detect
Mirmeciza exsul niglarus	Birds	Restricted to mature forest and large fragments; easy to detect
Myrmotherula axillaris	Birds	Restricted to mature forest and large fragments; easy to detect
Glyphorhynchus spirurus pallidus	Birds	Restricted to mature forest and large fragments; easy to detect
Dendrocincla fuliginosa ridgwayi	Birds	Restricted to mature forest and large fragments; easy to detect
Thalurania colombica colombica	Birds	Restricted to mature forest and large fragments; easy to detect
Eutoxeres aquila salvinii	Birds	Restricted to mature forest and large fragments; easy to detect

Table 3. Monitoring scheme for high conservation value components, in the Chocó Darién Conservation Corridor.

HCV Criteria	Parameter	Variable	Measurement Frequency
HCV 1 Globally, regionally or nationally significant concentrations of biodiversity values	Species Composition	Diversity of the bird community (species composition and relative abundance)	Once a year
Threatened, endangered and endemic species	Population structure of key species	• Age class distribution of selected plant and bird species (endangered / habitat structuring plant species) • No. of individuals in selected plant and bird species (endangered / habitat structuring species)	Once a year
	Habitat structure	Vegetation structure	Once a year
Critical temporal use	Species Composition	Number and relative abundance of migratory bird species present each year	Once a year
HCV 2 Globally, regionally or nationally significant large landscape level forests			
	Ecosystem diversity	Area covered by habitat type	Once every two years
		Fragmentation index per habitat type	Once every two years
		Spatial arrangement of habitat types	Once every two years
HCV 3 Forest areas that are in or contain rare, threatened or endangered ecosystems	Ecosystem diversity	Area covered by habitat type	Once every two years
		Fragmentation index per habitat type	Once every two years
		Spatial arrangement of habitat types	Once every two years

HCV 4 Forest areas that provide basic services of nature in critical situations	Water yield regulation and quality	Water volume (base flow) in up and downstream of Tolo and Tanela Rivers and /or tributaries used by townships	Twice a year
		Water quality and sediment load up and downstream of Tolo and Tanela Rivers and /or tributaries used by townships	Twice a year
		Macro-invertebrate diversity index up and downstream of Tolo and Tanela Rivers and /or tributaries used by townships	Twice a year

SECTION III: CARBON POOL MONITORING PLAN

3.1 Overview

The objective of the monitoring plan is to achieve accurate, regular estimates of carbon stocks and emissions reductions by the project. The monitoring plan includes four continual monitoring activities:

Activity	Frequency	Method
Forest Patrols and Perimeter Observation	Twice per year	Patrol team inspects perimeter of project area
Plot Measurements	Once per year	Sampling teams visit a portion of plots in project, proxy, and leakage areas
Identification of significant disturbance	Once every 2-3 years or after major disturbance event	Periodic inspection of aerial imagery or videography, with ground inspection when necessary
Recordation of log production	When biomass harvest occurs in the project area	Data recordation and reporting at time of verification

Descriptions and frequencies of these monitoring activities are described in the plan. The monitoring plan also maintains the organizational structure of the people responsible for the implementation of the monitoring plan. Finally, the monitoring plan includes training and internal audit procedures for quality control and assurance.

The monitoring plan is a working document which can be revised over time. Whenever revisions are made to the monitoring plan, they should be specifically noted as monitoring deviations in the subsequent monitoring report prepared for a VCS verification event.

3.2 Forest Patrols and Perimeter Observation

The Chocó-Darién Conservation Corridor Forest Patrols are intended to monitor, detect, prevent, and mitigate unauthorized activities within the forests titled to COCOMASUR. Such activities may include (1) illegal activities, especially logging and encroachment by non-members, as well as (2) legal but prohibited activities carried out by members of COCOMASUR without the express authorization of the Governing Council. At the same time, forest patrols may be granted other related responsibilities, such as participation in ongoing measurement of the permanent plots, or assisted regeneration in previously occupied or degraded areas.

Forest patrols will consist of men and women in excellent mental and physical condition who possess intimate knowledge of the COCOMASUR territory and the surrounding region. Priority will be given to members of COCOMASUR and efforts will be made to ensure a reasonable gender balance within the teams. Special priority will also be given to individuals who have participated in the forest inventory and/or those who have notable ethno-botanical, orienteering, or timber experience, such as loggers. The

project will establish two forest patrol teams: one based in each of the main villages near Area 1 (south) and Area 2 (north). Each team shall consist of 3 to 4 individuals, and at least one member of each team shall have received the project training on forest monitoring and measurement. Each patrol team shall have a designated Team Chief who reports directly to the Project Coordinator.

Teams will be provided with uniforms to ensure easy recognition by community members and other stakeholders in the area. Conspicuous uniforms are also likely to have a deterrent effect by heightening project awareness and visibility in the region. In addition to uniforms, the patrol teams will carry handheld GPS units with digital cameras for capturing location-based evidence, as well as printed maps and compasses as back up. Patrol teams will also carry a form for data recording and entry in the field, which will be entered into the database upon return to the project office. Field teams will travel through the territory on horseback and on foot, as local terrain permits.

In the event deforestation or forest degradation is detected by a Forest Patrol Team, the team will proceed as follows:

1) Document with GPS-tagged photographs and record location by GPS coordinates and location on a map in reference to recognized community landmarks;
2) Follow trails and other evidence of encroachment into the project interior, where necessary;
3) Photograph and interview neighbors and landowners in order to identify the party responsible;
4) If the responsible party can be identified:
    a) Communicate the instance to the Project Coordinator
    b) Support the Project Coordinator in pursuing legal available legal measures for corrective action (e.g., warnings and fines);
5) If the responsible party cannot be identified:
    a) Communicate the instance to the Project Coordinator;
    b) Leave notification at the site of the disturbance;
    c) Support the Project Coordinator in monitoring the area and gathering further evidence for the identification of the responsible party;
6) Whether or not the responsible actor is identified, perform outreach to inform and educate neighboring communities about the project aims, the nature and implications of the infraction, and alternatives for reducing deforestation;
7) Follow up with additional monitoring activities where significant disturbances have occurred.

Forest patrols will work in cooperation with the local environmental authority CODECHOCO as well as other local stakeholders, such as the Office of the Mayor, Armed Forces, Office of Migration, and National Police. The Project will distribute contact information for these stakeholders as well as the Forest Patrol team members and Project Coordinator, in order to actively engage villagers in the surveillance effort.

Frequency of Perimeter Observation

The forest patrol teams shall complete regular trips to the field for monitoring and surveillance, such that all high-risk areas, particularly areas of existing or likely logging or encroachment, are covered in a period of one month. In the event that this general monitoring detects illegal or unauthorized activities, the Coordinator will order a follow-up visit by the team, with the support of additional individuals with experience in the relevant areas (i.e., law and/or conflict and dispute resolution).

The project area perimeter shall be patrolled twice every year as indicated in the schedule below.

Year	1st Patrol	2nd Patrol
2012	January – June	July – December
2013	January – June	July – December
2014	January – June	July – December
2015	January – June	July – December
2016	January – June	July – December
2017	January – June	July – December

3.3 Plot Measurement and Monumentation

Biomass and soil sampling shall be conducted according to the VCS Forest Measurement Protocol. (Refer to the VCS Monitoring Report's Confidential Annex B – Forest Measurement Protocol.) The Protocol was written to ensure consistent data collection methods were employed by the sampling teams and the resulting data could be used to achieve the required level of precision of carbon stock estimates. Biomass and soil plot sampling shall be supervised by Anthrotect manager Mauricio Salazar, with support from technical consultant ecoPartners.

Sampling Design and Plot Allocation

For the project accounting area, the sampling design included a two-stage cluster sample with unequal size clusters: the first stage is the selection of transects, and the second stage is selection of plots along these transects. This design was selected in order to reduce the amount of travel time traveling between plots. Transects were no more than 400 meters long and contained at most 5 plots each in order to reduce inter-cluster sampling variation.

For the proxy and activity-shifting leakage areaa, the sampling design employed a traditional simple random sample. The proxy area first was stratified into forest and non-forest, after which inventory plots were randomly selected in non-forested areas in the vicinity of the project area. Biomass and plot measurements were taken using the same protocols used to measure biomass and soils in the project area.

Inventory plots for activity-shifting leakage were randomly selected in forested areas in the vicinity of the project area. Leakage was determined by visually observing evidence of degradation. (Refer to the VCS Monitoring Report's Confidential Annex C – Leakage Plot Sampling Protocol.) In particular, measurement teams observed and recorded the prevalence of tree stumps in relation to the overall number of trees found in each plot. Care was taken to leave no visible evidence of sampling activity remained after measurement teams visited the plots (plots were demarcated by GPS), thus ensuring that the plots remain an unbiased sample of leakage. A total of 32 leakage plots were sampled.

Biomass Measurement

Crews of three to four people shall perform measurements at each plot. Fixed-radius plots consist of two concentric circles (nests), with center given by a GPS point provided and pre-loaded into the GPS taken into the field. The plot center shall be monumented with brightly colored PVC at plot center. In the

innermost circle (radius of 6 meters), the sampling teams shall measure all trees with a diameter between 12 cm and 20 cm. In the outermost circle (radius of 14 meters), the sampling teams shall measure all trees with diameter greater than 20 cm. In all cases, only trees with heights greater than 3 meters shall be measured. (All palms greater than 3 meters in height shall be measured in both nests.) (More detailed documentation of sampling practices is found in the VCS Monitoring Report's Confidential Annex B – Forest Measurement Protocol.)

Soil Measurement

Soil sampling shall include measurements of soil organic carbon (SOC) and bulk density in the first plot on each transect in the project accounting area (for a total of 30 plots) and on each plot in the proxy area (38 proxy plots). SOC shall be measured by extracting a soil core to a depth of 30cm. For bulk density, one pit shall be dug and two samples per soil pit shall be extracted using a soil ring, one above and one below 15cm depth. Both SOC and bulk density samples were sent to a laboratory for analysis.

Degradation Measurement

Leakage sampling shall be conducted according to procedures contained in the VCS Monitoring Report's Confidential Annex C—Leakage Plot Sampling Protocol . Sampling teams shall estimate the extent of degradation within the leakage plots by walking a pre-determined set of transects and recording the number of both standing trees and stumps encountered in the plot. These data shall be used to determine the proportion of degradation that has occurred in the leakage area.

Measurement Protocol and Training

Measurement protocols were developed to collect a comprehensive forest inventory. (Refer to the VCS Monitoring Report's Confidential Annex B – Forest Measurement Protocol.) Measurement teams shall receive extensive instruction and ongoing supervision from Anthrotect's field manager, Mauricio Salazar.

Plot Monumentation

Sampling teams shall mark individual trees in both the project inventory plots and the proxy inventory plots in order to facilitate plot re-measurement and verification. (Refer to the VCS Monitoring Report's Confidential Annex B – Forest Measurement Protocol.)

For the activity-shifting leakage plots, plots shall not monumented with tree tags or any other visible marker. Rather, once the sampling teams arrive at the coordinates indicated by the allocation (and, if necessary, adjusted the location), they shall use a GPS unit to indicate the starting point of the plot by averaging a series of at least 100 points. In order to avoid any visible evidence of monumentation, sampling teams shall bury a 10- to 15-cm iron or steel rod below the surface of the soil (not visible from the surface, but within 10 cm of the surface). (Refer to the VCS Monitoring Report's Confidential Annex C – Leakage Plot Sampling Protocol.)

Frequency of Inventory Measurements

All plots shall be re-measured every five years on a rotating basis per the table below for the first five years following the initial monitoring period. The plot re-measurement schedule also is presented spatially in Confidential Annex IV.

Year	Project Area	Proxy Area	Leakage Area
2012	All plots	All plots	All plots
2013	Plots 31(A), 34(A,B,C,D,E), 37(A,B,C,D,E), 54(A,B,C,E), 64(A,B,C,D,E), 65(A,B,C,D)	Plots 1, 2, 3, 4, 5 ,6, 7	Plots 1, 2, 3, 4, 5, 6, 7, 8
2014	Plots 69(A,B,C,D,E), 90(A,B,C,D,E), 118(A,B,C,D,E), 155(A,B,C,D,E), 179(A,C,D), 192(A,B,C,E)	Plots 8, 9, 10, 11, 12, 13, 14	Plots 9, 10, 11, 12, 13, 14, 15, 16, 17, 18
2015	Plots 235(E), 254(A,B,C,D,E), 257(A,B,C,D,E), 311(A,C,D,E), 336(A,B,C,D,E), 337(A,B,C,D,E)	Plots 15, 16, 17, 18, 19, 20	Plots 17, 18, 19, 20, 21, 22, 23, 24
2016	Plots 344(A,B,C,D,E), 378(A,B,D,E), 389(A,B,C,D,E), 390(A,B,C,D,E), 403(A,B,C,D,E), 427(A,B,C,D,E)	Plots 21, 22, 23, 24, 25, 26	Plots 25, 26, 27, 28, 29, 30, 31
2017	Plot 430(A,B,C,D,E), 431(A,B,C,D,E), 451(A,B,C,D,E), 475(A,B,D,E), 485(A,B,C,E), 517(A,B,C,D,E)	Plots 27, 28, 29, 30, 31, 32	Plots 32, 33, 34, 35,36, 37, 38

3.4 Identification of Disturbances

The project area shall be monitored for significant disturbances.

Definition of a Significant Disturbance

A disturbance shall be significant if carbon stocks emitted into the atmosphere constitute more than 5% of claimed emissions reduction for the current monitoring period or if the disturbance affects an area greater than 20 hectares causing at least 50% of the carbon stocks in the area to change from one carbon pool to another (from instance from AGOT to SD). A disturbance is significant if it occurs as a result of a project activity (for instance selective logging).

Natural Disturbance

Aerial imagery, videography and/or high-resolution satellite imagery shall be used to identify the location of significant events that occur during the current monitoring period if potentially damaging fire, insect, extreme weather or geologic events occur. The boundaries of significant disturbances shall be delineated by GPS or GIS as a new stratum in the project area. If no plots exist in this new stratum, then an appropriate number of plots shall be allocated according to the sampling design. All plots within this stratum shall be measured during the current monitoring period. Plot measurement and monumentation procedures shall be followed.

Disturbance from Logging

Prior to or upon conclusion of logging from a project activity during the current monitoring period, the boundaries of harvest area shall be delineated by GPS or GIS as a new stratum in the project area. If no plots exist in this new stratum, then an appropriate number of plots shall be allocated according to the

sampling design. All plots within this stratum shall be measured during the current monitoring period. Plot measurement and monumentation procedures shall be followed.

Disturbance from Encroachment

In the event that encroachment is observed during the current monitoring period, the boundaries of encroached area shall be delineated by GPS or GIS as a new stratum in the project area. If no plots exist in this new stratum, then an appropriate number of plots shall be allocated according to the sampling design. All plots within this stratum shall be measured during the current monitoring period. Plot measurement and monumentation procedures shall be followed.

Frequency of Disturbance Monitoring

Project proponents shall periodically examine aerial imagery or videography to quickly identify areas of potential disturbance in the project area. Potential disturbances shall be visited by a team that will investigate and document the disturbance as described above.

Year	Disturbance Monitoring
2012	In the event of significant potential disturbance
2013	In the event of significant potential disturbance
2014	Scheduled aerial monitoring
2015	In the event of significant potential disturbance
2016	In the event of significant potential disturbance
2017	Scheduled aerial monitoring

3.5 Recordation of Log Production

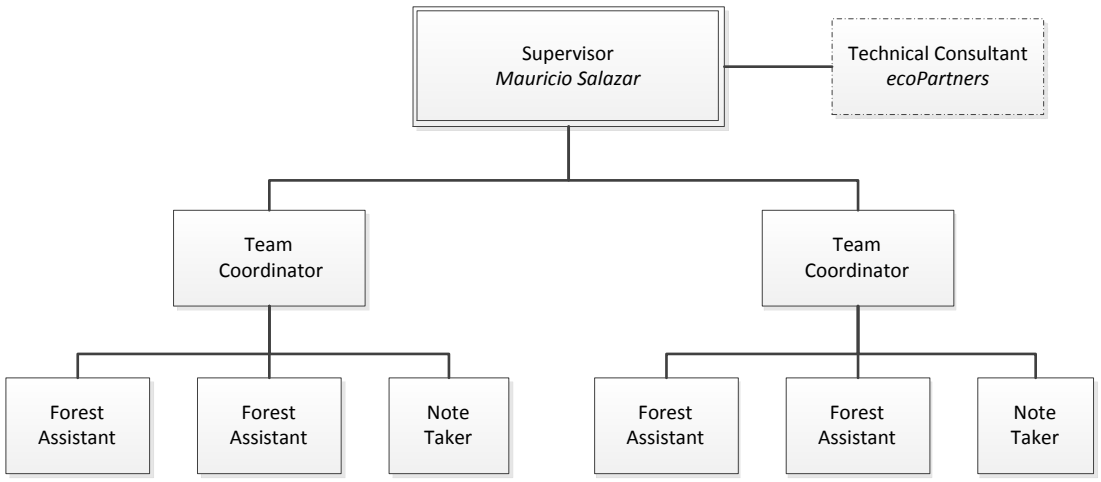
Logs harvested in the project area as a result of project activities shall be monitored. Each log, either on a landing or at the processing location in the forest, shall be recorded. Then length, small-end and large-end diameter, and wood product class shall be recorded for wood products accounting in Appendix C of VM0009. Additionally, the following data shall be recorded for each log:

- Location-tagged photograph of the log
- Date it was processed or moved to the landing
- Destination of the log or wood products processed from the log
- Name of the recorder

3.6 Organizational Structure

Anthrotect's field manager Mauricio Salazar shall recruit, train, and supervise a field staff to perform the project, proxy, and leakage inventories and the destructive allometry sampling. Local community members shall comprise the majority of the measurement teams – taking advantage of local knowledge of the project area and ensuring some employment benefits accrue locally – and may be supplemented with a small number of outside team members in order to obtain the requisite expertise and capacity. For

consistency, the same staff members shall be retained as much as possible for monitoring in subsequent monitoring periods.



For inventory data collection, each team shall consist of four persons with the following requirements and duties:

Role	# per team	Required Background	Duties
Team Coordinator	1	Technical expertise in forest management, biology or botany Experience in similar ecosystems	Locate / demarcate plots Lead plot measurements
Forest Assistant	2	Prior forest inventory experience Ability to read and use maps Local knowledge of roads and trails	Perform plot measurements Carry equipment
Note Taker	1	Reading, writing, mathematical skills	Record and digitize field data

The overall sampling design and field measurement protocols shall be developed primarily by technical consultant ecoPartners. Prior to the forest inventory, ecoPartners shall document the required field measurement protocols, which Mr. Salazar shall translate to Spanish and use to train field staff members. In addition to performing pilot plots during the course of the training, Mr. Salazar shall accompany field sampling teams to approximately 10% of plots. Mr. Salazar shall also regularly supervise and review the work of the Team Coordinators.

Anthrotect has retained the services of ecoPartners to support the technical development of the project, including remote sensing analysis, application of the VM0009 methodology, and forest biometrics. As the project moves from design to implementation, ecoPartners will work to develop and refine innovative and cost-effective approaches to monitoring that combine remote sensing and GIS with a community-oriented approach. ecoPartners will continue to provide technical services throughout the life cycle of the project, ranging from forest management strategies to audit oversight and support.

3.7 Data Collection, Storage and Aggregation

Field data shall be written in pen on pre-printed datasheets in the field and subsequently entered into an Excel workbook by Mr. Salazar. In the process of entering data, Mr. Salazar shall review the data for accuracy and adherence to the measurement protocol, and correct any errors.

Data shall then be reviewed by ecoPartners staff and formatted for inclusion in the final project inventory workbook. This process shall include further error checks to ensure that all fields contain data and the data are consistent and coherent; examples of errors corrected in this process include: incorrect spelling of species names, negative heights due to measuring a tree on a slope (refer to the VCS Monitoring Report Annex B – Forest Measurement Protocol for detailed guidelines on how to measure trees on sloped terrain), and height-diameter confusion. Once the error checks are completed, the workbook shall be used to aggregate data into a master list of tree (and other biomass) and soil measurements, and to designate the appropriate allometric equation to each tree measured according to its species. Tree data shall be analyzed subsequently to determine carbon stock estimates for the entire project accounting area.

Data and accounting models shall be stored in the United States in ecoPartners' offices, where they are backed up on a remote server.

3.8 Field Training

Field training shall be conducted between December, 2011 and April, 2012 by Mr. Salazar with support from technical consultant ecoPartners. Staff members shall be trained how to use the Forest Measurement Protocol and other protocols, including how to locate and demarcate sample plots, how to identify, mark and measure trees, and how to record measurements accurately and consistently on datasheets. Field staff members shall also learn safety procedures and the proper use of a map, compass and GPS. Staff members who are involved in allometry sampling shall receive additional training, including proper methods for measuring trees after felling, taking wedge samples, and packing samples for lab analysis. During the course of the inventory, Mr. Salazar shall supervise field staff members to ensure that proper data collection methods were implemented. In the course of training, Mr. Salazar shall conduct measurements in a pilot plot with all field measurement staff.

3.9 Internal Auditing

In addition to regular checks for proper implementation of standard operating procedures for data collection, internal auditing of data and analyses shall be routinely performed by Anthrotect as well as technical consultant ecoPartners. Errors identified during error checks and subsequent data formatting and analysis shall be reported upstream to field sampling team members or other parties. Once the inventory is completed, Anthrotect and ecoPartners staff shall review the data making sure that inventory data accurately reflects the sampling design and the associated methodology requirements.

Upon review of initial inventory data for the first monitoring period, it was determined that 14 trees were missing diameter measurements in the inventory of the project area. The diameters for these trees were conservatively set to 12cm. Decay class for standing deadwood was not recorded and these values were

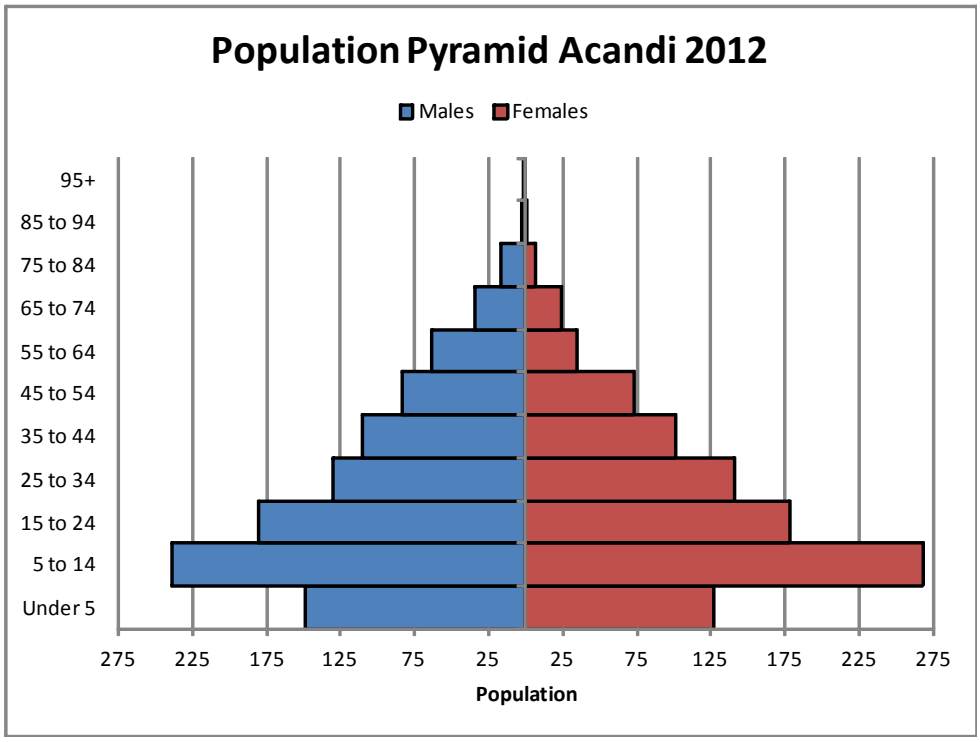
conservatively set to decay class 3. Other results of the internal audit are noted and maintained in the Comments field of the inventories. (Refer to the Monitoring Report's Annex J – Inventory).

Annex I

Baseline Statistics from May 2012 Survey (by Wealth Index Quartile)

I. Population

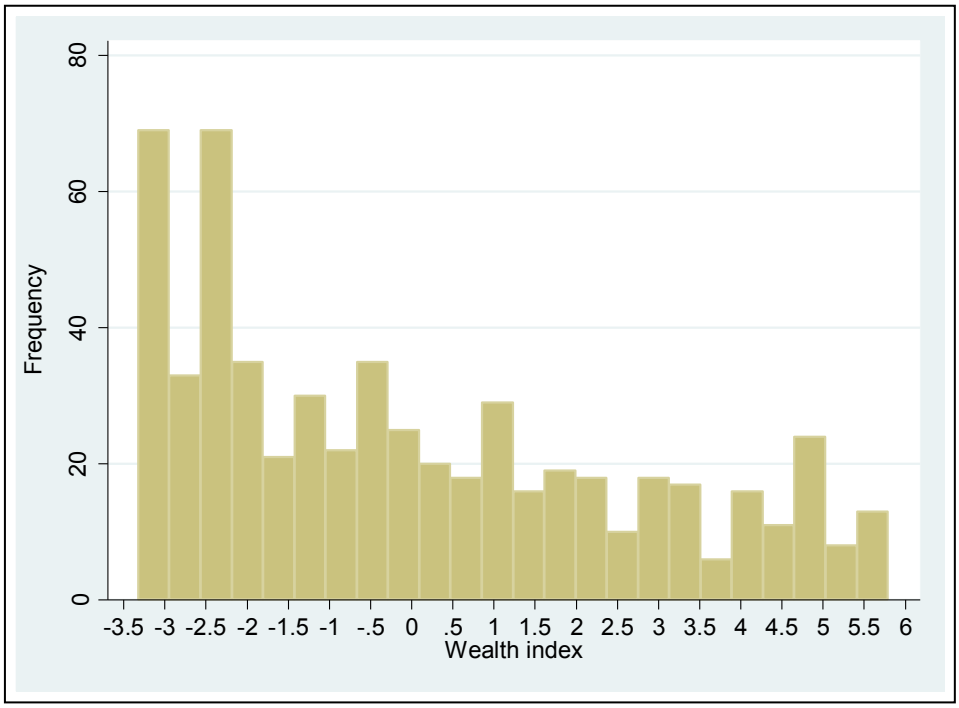
The following figures show the population distribution of households surveyed in May 2012 in COCOMASUR. The total population accounted for in the below figure is 1,964 (1,009 males and 955 females). However, 28 (15 males and 13 females) individuals were omitted from the representation because of inaccurate recording of birthdates and/or missing information, bringing the total population to 1,992 (1,024 males and 968 females).



II. Distribution of Household Wealth Index

The following figure shows the distribution of households by the value of the wealth index. The distribution is skewed right, with the majority of households below the mean. The mean is close to zero for the wealth index because the index is standardized for households to produce z-scores. The median is indicative of the amount of skewing in the distribution (also measured by

the skewness statistic). The median in this case is below the mean, indicating a distribution which is skewed right. Kurtosis is the measure of concentration (pointedness) of the distribution compared with that of a normal distribution. The positive value of 2.15 indicates that the distribution is much more concentrated than a normal distribution.



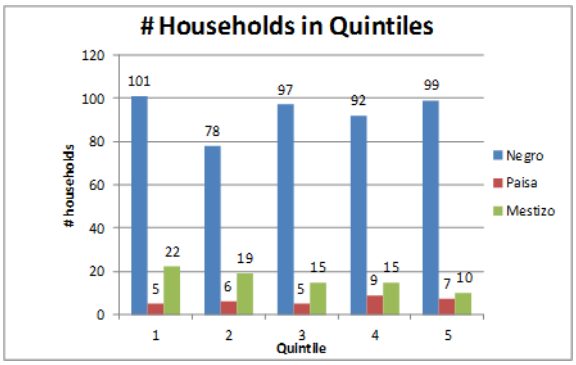
Distributions Statistics for Wealth Index	
Mean	0
Median	-0.53
Skewness	0.585
Kurtosis	2.15

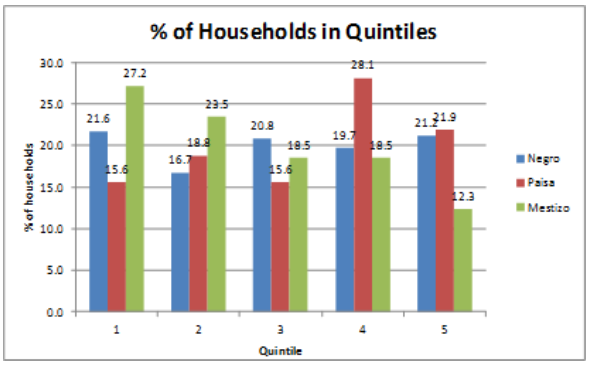
Quintile Cutoff Values	
First-second	-2.39
Second-third	-1.37
Third-fourth	0.24
Fourth-fifth	2.7

Avg Wealth Index Score	
Q1	-2.87
Q2	-1.99
Q3	-.57
Q4	1.37
Q5	4.12

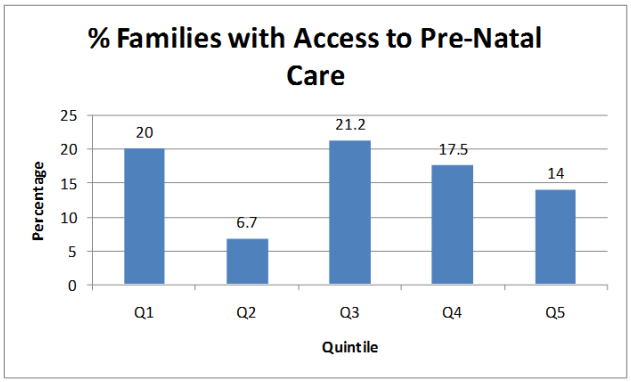
III. Distribution of Households in Quintiles by Ethnic Group

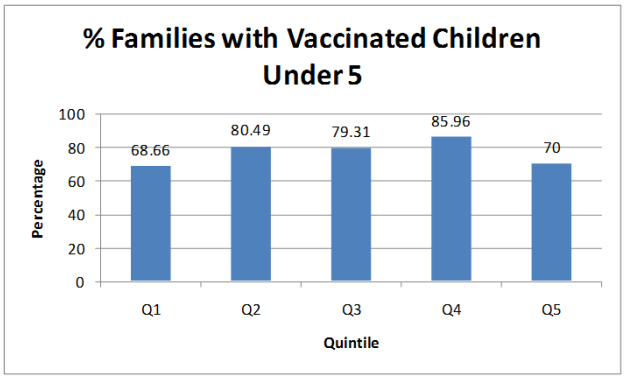
The following two figures represent the distribution of ethnic group households by quintile, both as a total number and a percentage. Mestizo households tend to be concentrated within the lower quintiles, but, on the whole, distribution is of household wealth by ethnic group is not heavily skewed.

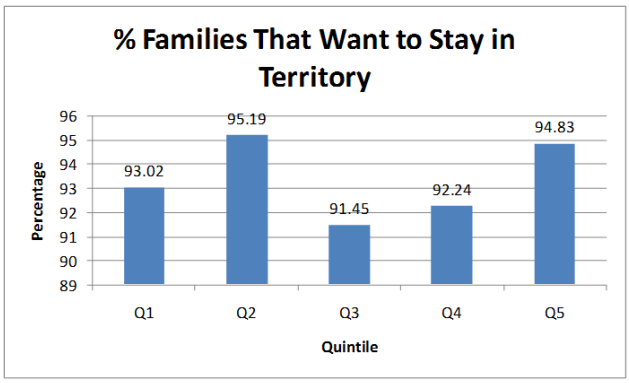


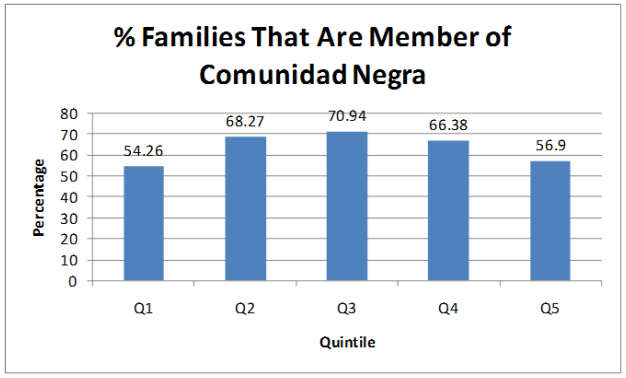


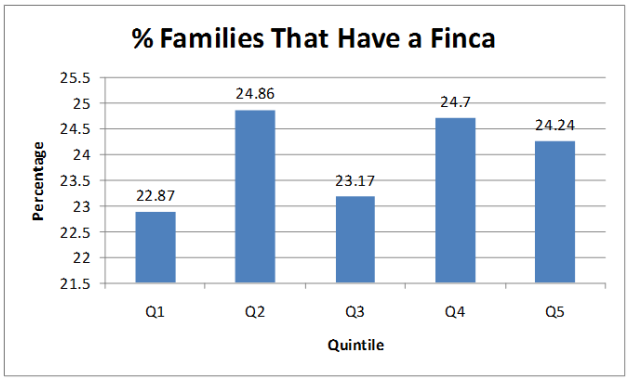
IV. Miscellaneous Baseline Stats by Wealth Quintile

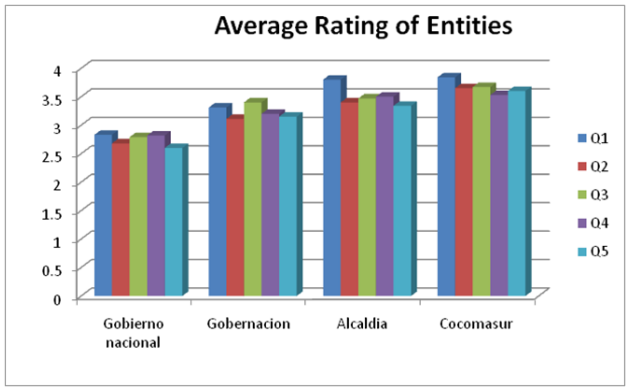





% Families That Want to Stay in Territory
Percentage
96
95
94
93
92
91
90
89
93.02
95.19
91.45
92.24
94.83
Q1
Q2
Q3
Q4
Q5
Quintile


% Families That Are Member of Comunidad Negra
Percentage
80
70
60
50
40
30
20
10
0
54.26
68.27
70.94
66.38
56.9
Q1
Q2
Q3
Q4
Q5
Quintile


% Families That Have a Finca
Percentage
25.5
25
24.5
24
23.5
23
22.5
22
21.5
22.87
24.86
23.17
24.7
24.24
Q1
Q2
Q3
Q4
Q5
Quintile


Average Rating of Entities
4
3.5
3
2.5
2
1.5
1
0.5
0
Gobierno nacional
Gobernacion
Alcaldia
Cocomasur
Q1
Q2
Q3
Q4
Q5

Annex II

Initial Indicators

Table A2.1: Monitoring Indicators for the "*Improved Wellbeing*" Focal Issue

Strategy	Indicator	Indicator Type	Collection Method	Frequency of Collection/Observation
Health	Incorporation of health investments in COCOMASUR budgeting/disbursement plan	Output	COCOMASUR Docs	Once
	Total project funds invested into local clinics	Output	COCOMASUR Docs	Annual
	# of local clinics supported by project funds	Output	COCOMASUR Docs	Annual
	# and % of community members covered by health insurance	Outcome	Survey	Annual
	% change in clinic waiting times	Outcome	Survey	Annual
	% of population utilizing/served by clinics	Outcome	Survey	Annual
	Degree of difficulty in accessing doctors & hospitals	Outcome	Survey, FGDs	Annual
	% of families with children vaccinated	Outcome	Survey	Annual
	Access to family planning tools	Outcome	Survey, FGDs	Annual
	Incidence of severe illnesses	Impact	Survey, FGDs, Clinic	Annual
	Change in child mortality rate	Impact	Clinical/Community records	Annual
	Community life expectancy	Impact	Clinical/Community records	Annual
Increased Quality & Access to	Project expenditures on education	Output	COCOMASUR Docs	Annual
	Development of new school curriculums	Output	Reports	Annual

Education	Funds invested into teaching materials	Output	Reports	Annual
	# schools receiving new teaching materials	Output	Reports, survey	Annual
	# students benefitting from higher education grants	Output	Reports	Annual
	# new schools constructed	Output	COCOMASUR Docs	Annual
	Enrollment rates (middle and high school)	Outcome	School records	Annual
	Completion rates (middle and high school)	Outcome	School records	Annual
	# schools utilizing new curriculums	Outcome	Contact with schools	Annual
	Teacher absenteeism rates	Outcome	School records	Annual
	Student/teacher ratio	Outcome	School records	Annual
	Student/textbook ratio	Outcome	School records	Annual
	# schools with a computer lab	Outcome	Contact with schools	Annual
	Literacy rate	Impact	Survey	Annual
	Standardized test scores	Impact	School records	Annual
Increased Access to Information	# new cell phone towers constructed	Output	Utility companies	Annual
	Total amount of funds invested in internet infrastructure	Output	COCOMASUR records	Annual
	Total funds invested in mobile phones infrastructure	Output	COCOMASUR records	Annual
	Average broadband speeds	Output	Utility companies	Annual
	# of hhlds/individuals who own a mobile phone	Outcome	Survey	Annual
	# hhlds/individuals with access to internet	Outcome	Survey	Annual
	# hhlds/individuals who have a data plan on their phone	Outcome	Survey, utility companies	Annual
	Average time/week spent browsing internet	Outcome	Survey	Annual
	Average time/week spent talking on phone	Outcome	Survey	Annual
	# households with a fixed phone line	Outcome	Survey	Annual

	# schools/non-residential orgs with internet access	Outcome	FGDs, surveys	Annual
	# of requests, applications, complaints etc. received by COCOMASUR via internet and phone	Outcome	COCOMASUR records	Annual
	Perception that COCOMASUR is reflective of community needs	Impact	Survey, FGDs	Annual
	Perception that internet has helped respondent improve their business	Impact	Survey, FGDs	Annual
	How important has the internet been in helping you to make major decisions,	Impact	Survey, FGDs	Annual

Table A2.2: Monitoring Indicators for the "*Strengthened Governance*" Focal Issue

Strategy	Indicator	Indicator Type	Collection Method	Frequency of Collection/Observation
Increased Capacity & Implementation of NRM Strategies	# of third party reports on financial and administrative capacity	Output	Final reports	Annual
	# of trainings for COCOMASUR staff	Output	Minutes	Annual
	Development of a budgeting and disbursement plan for project benefits	Output	COCOMASUR Docs	Once
	Creation of COCOMASUR bank account	Output	COCOMASUR Docs	Once
	Development of a multi-stakeholder mechanism for distribution of project funds	Output	COCOMASUR Docs	Once
	Development of land use policies, legal, institutional, and reg frameworks	Output	COCOMASUR Docs	Once
	% benefits appropriately disbursed	Outcome	COCOMASUR Docs	Annual
	# disbursements/year	Outcome	COCOMASUR Docs	Annual
	External funds raised for NRM purposes	Outcome	COCOMASUR Docs	Every 6 months
	Avg # days required to resolve a conflict	Outcome	COCOMASUR Docs	Annual
	# conflicts resolved peacefully/year through mechanism	Outcome	COCOMASUR Docs	Annual
	Management of project funds transferred to COCOMASUR	Outcome	Financial Reports	Once

	Average score of COCOMASUR reps on technical evaluations	Outcome	Final Reports	Following Evals
	GA meeting held between Dec 15-Jan 15 with 15 days' notice	Outcome	Minutes	Annual
	Election of junta directiva every 3 years at annual GA meeting	Outcome	Minutes	Every 3 years
	Junta directive meets every 2 months with 8 days' notice	Outcome	Minutes	Every 2 months
	# hectacreas additional territory titled	Impact	Government Reports	Annual
Promotion of Inclusive Governance	# reports generated for non-member stakeholders	Output	COCOMASUR Docs	Annual
	Annual independent financial audit	Output	Final Report	Annual
	Report on implementation activities by FEA	Output	FEA	Once
	# workshops	Output	Minutes	Annual
	# assisted meetings with local councils	Output	Minutes	Monthly
	5 delegates present at each GA	Outcome	Minutes	Annual
	All local council populations represented at GA meetings	Outcome	Minutes	Annual
	Implementation/maintenance of local census	Outcome	Survey	Annual
	# unassisted meetings with Colombian government (INCODER, etc.)	Outcome	Minutes	Every 6 months
	# unassisted meetings with local councils	Outcome	Minutes	Every 6 months
	% of funds appropriately disbursed as per plan developed	Impact	COCOMASUR Docs	Annual
	% hhlds who believe they have received appropriate membership benefits	Impact	Survey	Annual
	Existence of channels for reporting corruption	Impact	Survey, FGDs, COCOMASUR Docs	Annual
	# cases of corruption reported	Impact	COCOMASUR Docs	Annual
	Prosecutions of all corruption cases	Impact	COCOMASUR Docs	Annual
	Data, plans, and budgets made publicly available	Impact	Final Reports, FGDs, COCOMASUR Docs	Annual

	# positive external audits	Impact	Final Report	Annual
Strengthened Awareness of COCOMASUR Identity and Territorial Rights	# community events to increase awareness of collective rights	Output	COCOMASUR Docs	Annual
	Formalization of membership criteria and procedures	Output	COCOMASUR Docs	Once
	# pamphlets or other materials distributed to members	Output	COCOMASUR Docs	Annual
	# mapping exercises	Output	COCOMASUR Docs	Annual
	# reported conflicts	Outcome	COCOMASUR Docs, FGDs	Annual
	# members that report awareness of title boundaries	Outcome	Survey, FGDs	Annual
	# members that are aware of project objectives	Outcome	Survey, FGDs	Annual
	# non-members that report awareness of title boundaries	Outcome	Survey, FGDs	Annual
	%/# increase in COCOMASUR membership	Impact	COCOMASUR Docs	Annual
	% of households with positive view of COCOMASUR	Impact	Survey, FGDs	Annual
	# hhlds receiving project benefits	Impact	COCOMASUR Docs, Survey	Annual
	# present at GA	Impact	Minutes	Annual

Table A2.3: Monitoring Indicators for the "*Strengthened Identity*" Focal Issue

Strategy	Indicator	Indicator Type	Collection Method	Frequency of Collection/Observation
Enhance Local Identity and	Ethnographic evaluation of local knowledge and customs	Output	Final Report	Once
	# of national/regional NRM events with COCOMASUR representation	Output	Minutes	Annual

Engagement	# cultural local events sponsored	Output	COCOMASUR Docs	Annual
	HCV limits identified	Output	Final Report	Once
	# recorridos territoriales executed as part of monitoring activities	Output	COCOMASUR Docs	Annual
	HCV management plan developed	Output	COCOMASUR Docs	Once
	Attendance at local cultural events	Outcome	Minutes, COCOMASUR Docs	By event
	# independently organized cultural events	Outcome	Minutes, COCOMASUR Docs	Annual
	# identified articles on project/Afro-Colombian culture in Choco-Darien region	Outcome	Various news sources	Every 6 months
	# individuals who indicate conservation of major resources as a priority	Outcome	Survey, FGDs	Annual
	# individuals who adopt socially sustainable practices	Outcome	Survey, FGDs	Annual
	# of new social organizations/activities begun by members	Impact	COCOMASUR Docs	Annual
	# new members of COCOMASUR	Impact	Survey, COCOMASUR Docs	Annual
	# members reporting plans to move beyond community	Impact	Survey	Annual
	Outside funds raised for cultural strengthening activities	Outcome	COCOMASUR Docs	Annual

Table A2.4: Monitoring Indicators for the "*Increased Food Security and Livelihood Alternatives*" Focal Issue

Strategy	Indicator	Indicator Type	Collection Method	Frequency of Collection/Observation
Nutritional Education	# workshops held	Output	Minutes	Annual
	# pamphlets distributed	Output	COCOMASUR Docs	Annual

	# households practicing proper food preparation practices (food utilization)	Outcome	Survey	Annual
	# households practicing proper hand-washing behavior (food utilization)	Outcome	Survey	Annual
	# households with access to and/or utilizing safe water sources	Outcome	Survey	Annual
Agricultural Improvement and Livelihood Diversification	# interviews with stakeholders on land use practices	Output	FGDs, Minutes	Annual
	Report on land use practices developed	Output	Final Report	Once
	# trainings on improved agricultural techniques	Output	Minutes, COCOMASUR Docs	Annual
	Organization of a community cooperative for sustainable timber extraction	Output	Organizational charter	Once
	# meetings held by cooperative	Output	Minutes	Annual
	Development of professional groups and cooperatives	Output	Minutes, COCOMASUR Docs	Annual
	# formal financial institutions in project area	Outcome	Community Research	Annual
	# informal financial institutions in project area	Outcome	Community Research	Annual
	reported difficulty in accessing financial institutions	Outcome	FGDs, Survey	Annual
	% households that have a bank account	Outcome	Survey	Annual
	# new bank accounts opened (at all financial institutions)	Outcome	Interviews with FIs	Every 6 months
	# loans made by local FIs	Outcome	Interviews with FIs	Every 6 months
	# trained individuals who report implementing livelihood techniques learned	Outcome	FGDs, Household Survey	Annual
	Avg crop yields	Impact	Survey	Annual
	Avg price obtained by farmers for crops	Impact	Survey, FGDs	Annual
	Increased monthly reported hhld incomes	Impact	Survey, FGDs	Annual
	% of members who report benefitting financially from	Impact	Survey, FGDs	Annual

	COCOMASUR activities			
	# hhlds involved in green commodity activities	Impact	Survey, FGDs	Annual
	# meals eaten in a day (food access)	Impact	Survey	Annual
	% household food expenditure to total food expenditure (food access)	Impact	Survey	Annual
	Price and supply of key commodities (food stability)	Impact	Market monitoring	Annual
	# sources of household income (food stability)	Impact	Survey	Annual
	# food distinct groups consumed (food access)	Impact	Survey	Annual

Annex III

Grameen Progress Out of Poverty Scorecard Indicators (PPI)

The following ten questions comprise Grameen's Colombia PPI scorecard and will be administered as part of larger household surveys in the project area. Detailed information regarding how Colombia's PPI was constructed and how poverty likelihoods and rates can be generated using the PPI can be found at www.progressoutofpoverty.org/country/Colombia.

1. **How many household members are 18-years-old or younger?**
    a. Four or more
    b. Three
    c. Two
    d. One
    e. None

2. **What is the highest educational level reached by the female head/spouse?**
    a. None, or pre-school
    b. Primary or middle school
    c. High school
    d. No female head/spouse
    e. Post-secondary or college (1 to 4 years)
    f. Post-secondary or college (5 years or more)

3. **How many household members spent most of the past week working?**
    a. None
    b. One
    c. Two or more

4. **In their main line of work, how many household members work as wage or salary employees for a private firm or the government?**
    a. None
    b. One
    c. Two or more

5. **What is the residence's rate class for electricity?**
    a. No class or zero (no connection, pirated connection, or generator), one or two
    b. Three
    c. Four, five, six

6. **What fuel or energy source does the household usually cook with?**
    a. Firewood, wood, charcoal, coal, electricity, gasoline, petroleum, kerosene, alcohol, or waste material
    b. LPG from a cylinder or tank
    c. Natural gas from a public network
    d. Does not cook

7. **Does the household have a working clothes washing machine?**
    a. No
    b. Yes

8. **Does the household have a working refrigerator or freezer?**
    a. No
    b. Yes

9. **Does the household have a working DVD?**
    a. No
    b. Yes

10. **Does the household have a motorcycle and/or a car for its own use?**
    a. None
    b. Motorcycle only
    c. Car (regardless of motorcycle)