

Type of Review: Annual Review

Project Title: Silvopastoral systems for climate change mitigation and poverty alleviation in Colombia's livestock sector.

Project Location:	Colombia, South America
Project Timescale:	2012-2018
Current Reporting Period:	December 2012-June 2014
Funding: (ICF Funding and possibly other sources)	International Climate Fund and Global Environment Facility
Project website (if available):	www.fedegan.org.co/programas/ganaderia-colombiana-sostenible

Review Summary

What are the key messages from this Review?

The project has been marked B overall

Components 1 and 2 have been marked B, 3 and 4 have been marked A.

The project has slipped by a year

The project has incurred delays of a year, moving the project end date to January 2018. The delay has occurred in the design phase of the Additional Financing (AF) elements and the redesign of some aspects of the parent programme. In general, the Additional Financing elements have experienced the most delay this year. Despite the problems, the delay has allowed for a better quality product to be developed and for planning to take place (for example, conducting thorough environmental and social impact assessments, and building in time to test new payment for environmental services (PES) approaches before wider roll out).

Difficulty disaggregating Additional Finance results

It is difficult to separate out the results of the parent programme from the ICF's Additional Finance as some of the ICF funds are going to extending or expanding the original project. There are some discrete elements such as the deforestation hotspots and the PES 2 farms which are easier to disaggregate and we will be consider how to do this as part of the next annual review. DECC will also look again at the attribution of project benefits.

Some elements have proceeded despite delays

Flexibility and resourcefulness have allowed the training of assessors (component 4) and the production of vegetal material (component 2.3) to proceed using a retroactive financing clause in the Administration Arrangement, despite delays to the wider project. This will allow the project to make up ground once the other elements are in place by initiating critical activities that are season-dependent without having to wait for the Grant Agreement to be signed.

Components 3 and 4 have been marked A in this annual review.

Component 3 ("Strengthening Sub-sector Institutions, Dissemination and Monitoring & Evaluation") is proving effective and early indications are that the project could deliver the anticipated benefits of dissemination and replication. The long term impacts will be contingent on the project itself being successful, which is not yet known.

Component 4 (“Project management would support the overall Project coordination.”) is also proceeding well. The retroactive financing provision enabled the recruitment of the experts required for the Additional Financing to go ahead as scheduled.

Project Wide Lessons

1. More pro-active and regular engagement from the ICF is required to enable the regular reporting to be conducted faster and more efficiently and to ensure DECC can participate more effectively in conversations about the project.
2. The project reporting through the annual reviews would benefit from greater clarity, including more reflection and analysis of what has worked well and what has worked less well so it is clearer where issues have arisen and that lessons have been learnt.
3. Methodologies to disaggregate project results between GEF and ICF will need to be developed so that DECC can report on the ICF’s results.
4. Future reports will need to be clearer on what progress is being made on delivering the Additional Finance elements specifically. The Additional Finance is being used to extend some existing elements of the programme and the report should detail progress on using the Additional Finance to do this, distinct from continuing activities that were already being undertaken.

Legend on scoring

Description	Scale
Outputs substantially exceeded expectation	A++
Outputs moderately exceeded expectation	A+
Outputs met expectation	A
Outputs moderately did not meet expectation	B
Outputs substantially did not meet expectation	C

Introduction and Context

What support is the UK providing?

The Government of the United Kingdom, through its Department of Energy and Climate Change (DECC), has extended to the Government of Colombia a grant of British Pounds 15 million (equivalent to US\$24.4 million) under the International Climate Fund (ICF) program to further promote the adoption of silvopastoral systems (SPS) in Colombia, under the condition that the World Bank be made fiduciary responsible for this grant. It was agreed that this co-financing from DECC to the Government of Colombia would be processed as Additional Financing to the Colombia Mainstreaming Sustainable Cattle Ranching Project (CMSCR), initially funded by the Global Environment facility with US\$ 7 million, using the Colombian Cattle Ranching Federation (FEDEGAN) as lead executing agency and involving a range of NGO partner agencies (CIPAV, the Nature Conservancy and Fondo Acción). It has the full support of the Colombian Government and the Ministries of Environment and Sustainable Development, and Agriculture and Rural Development will participate in the project.

The aim of this project is to increase the environmental and economic sustainability of cattle ranching in Colombia. Cattle ranching is a big industry in Colombia, occupying around 38% of the land, employing 28% of the rural population and generating 3.5% of the country's GDP. The agricultural sector, dominated by cattle ranching, generates 38% of Colombia's total GHG emissions, with deforestation caused by ranching accounting for a further 9% of emissions. The prevailing practice of grazing cattle on open pasture is environmentally destructive and economically inefficient, providing a poor livelihood for many small farmers. Grazing in this way leaves the land degraded and unproductive, generates significant greenhouse gas (GHG) emissions and results in a loss of biodiversity. In turn, as the land becomes less productive, farmers seek to move on to new land, contributing to the destruction of Colombia's biodiversity- and carbon-rich tropical forests.

Agricultural techniques have been developed which can both increase the efficiency of cattle production (providing better incomes for the rural poor), and deliver environmental benefits (including reduced GHG emissions, decreased soil erosion and water pollution, and enhanced biodiversity). These techniques, known as silvopastoral systems (SPS), convert degraded extensive (i.e. open, treeless) pastures into a richer and more productive environment, where trees and shrubs are planted interspersed among fodder crops such as grasses and leguminous herbs.

The term SPS encompasses a range of different agroforestry practices, including trees in pasture, 'living fences', fodder banks (concentrated areas of protein-rich fodder crops) and grazed timber plantations. One type of SPS, known as intensive silvopastoral systems (ISPS) has proved particularly effective in tropical areas such as Colombia. ISPS consist of fodder shrubs planted at high densities, intercropped with improved, highly-productive pastures and timber trees, all combined in a system that can be directly grazed by cattle.

This project aims to convert around 48,000 hectares of open pasture to SPS in seven regions of Colombia (see figure 1), promote wider adoption of SPS across the country, and gather more evidence on whether introducing SPS can help reduce the deforestation caused by cattle ranching, and alleviate poverty through the increase of milk and beef production, and the provision of alternative income through forestry products and PES schemes. SPS have been tested successfully in Colombia and elsewhere, and this intervention will build on the experience learnt from previous and on-going pilot projects.

The structure of the original project (GEF) has remained unchanged and the activities under the Additional

Financing will be implemented under the existing components and sub-components. The Additional Financing will also provide supplementary resources to existing sub-components in order to complement activities planned under the original project as well as expand project activities into the two areas of hotspots of deforestation, and to pilot the new Carbon-Payment for Environmental Services (PES) scheme.

Note: in this document, “the project” refers to the overall project, combining the resources from the GEF and ICF. For specific mention to UK contribution to the project, we will use the term “Additional Financing”.

Prioritized Areas of the Colombia Mainstreaming Sustainable Cattle Ranching Project (GEF- ICF)

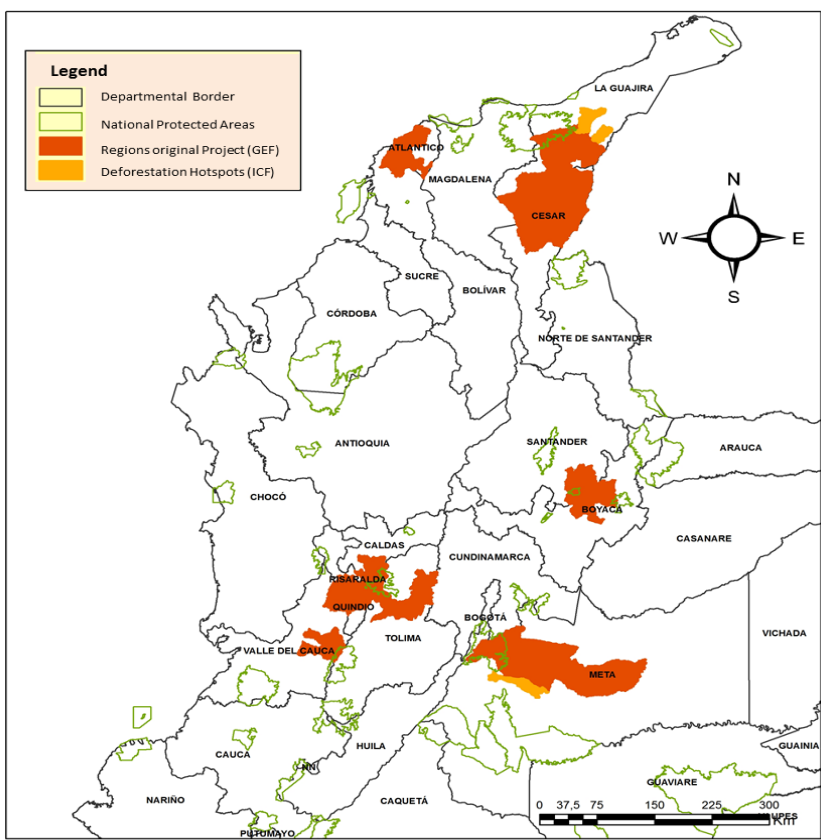


Figure 1: Project intervention areas

Note: The proposed ICF project zones are (i) the Cesar River Valley (Department of Cesar and South of Guajira) including areas in the Sierra Nevada deforestation hotspot; (ii) the lower Magdalena River region (western part of the Department of Atlántico); (iii) the traditional dairy cattle production regions of Boyacá and Santander (linked to the “Andean Oak Forests Corridor”); (iv) the coffee producing ecoregion with Areas in Valle, Quindío, Risaralda, Caldas and Tolima departments; and (v) the low foothill region in the eastern cordillera of southern Meta including areas of the La Macarena (north) deforestation hotspot.

The two underlying strategic objectives of the ICF are climate change mitigation and poverty reduction. Accordingly, activities supported under the Additional Financing have been designed to emphasize project impacts on these two fronts, while also continuing supporting the activities initiated under the parent project. In order to optimize impacts in terms of poverty reduction, only small- and medium-scale farmers would be eligible for support under the Additional Financing. On the climate mitigation front, the proposed Additional Financing would support two new features:

- **Piloting a new Carbon sequestration scheme:** The carbon footprint of cattle ranching under intensive SPS (iSPS) is much lower than under conventional practices, as iSPS stores significant amounts of carbon in the soil and in the above-ground biomass (as well as reduces emissions of methane and nitrous oxides). The iSPS is not eligible for payments under the CMSCR's PES program ('PES-1' hereafter) that primarily focuses on biodiversity-friendly land uses. Under the Additional Financing, a new scheme would be piloted to specifically support the adoption of iSPS and enhance carbon stocks in cattle ranching farms. This new scheme would complement PES-1 and would combine in-kind up-front support (soil analysis, provision of seeds/seedlings...) with ex-post performance-based payment ('PES-2' hereafter). It would exclusively benefit small- and medium-scale farmers outside biodiversity priority corridors.
- **Expansion into two hotspots of deforestation.** The Additional Financing would expand the project activities into two additional areas (in La Guajira and El Meta). Both are national deforestation hotspots: they have significant degrees of ecosystem fragmentation, but with high potential for increasing ecological connectivity between remnant riparian vegetation. They were selected because they: (a) represent two distinct zones of ecological importance and significant biodiversity, (b) are areas where cattle ranching has been identified as a key driver of deforestation, and (c) are close to existing project areas, allowing the use of existing project infrastructure and staffing, and thus considerably reducing costs.

In addition, the Additional Financing would address the major challenges identified during the first three years of implementation of the project, particularly:

- **Technical Assistance:** The need for TA was under-estimated: the CMSCR project provided for 7 staff at the Project Unit (PIT) and 10 technicians in the pilot areas (2 per focus area), which quickly proved insufficient. To remedy this, FEDEGAN-FNG recruited 40 additional regional technicians. The Additional Financing would finance the renewal of these agents as well as recruit additional ones in order to timely respond to farmers' needs in terms of technical guidance. Additional resources would also be allocated to further support farmers to access to credit. Those agents would receive specific training.
- **Planting Material:** Farmers willing to adopt SPS have been regularly constrained by the low availability of quality planting material, as well as its high initial costs. The Additional Financing would support the production of high-quality planting material and would make it available to farmers at a reduced price. It would combine the production of seeds and seedlings in large nurseries with the production at the farm-level (building on the model set up under the FEDEGAN-SENA project).

What is the context in which UK support is provided and why is UK support required?

Despite on-farm and off-farm benefits, SPS have only been adopted to a limited extent in Colombia due to the lack of knowledge of their existence, the high initial cost, and technical complexity. Given the potential for reducing GHG emissions, delivering environmental benefits and reducing poverty there is a strong case for accelerating the spread of SPS: This requires new instruments and schemes (i.e PES schemes and technical assistance), and financial support from the national government and international aid. There is evidence from pilot studies that providing access to credit, technical assistance and Payment for Environmental Services (PES) can achieve conversion of land to SPS, and this is how UK support would be used. This project has always benefitted from a very high level of support from both the Colombian Ministry of Environment and Sustainable Development (MADS), and the Ministry of Agriculture and Rural Development (MADR). The project is seen as a laboratory to pilot innovative systems and mechanisms to support sustainable cattle ranching in Colombia and the Additional Financing would add innovative features

to the existing project, which will increase its transformational potential. This project represents a unique opportunity to contribute to one of Colombia’s fundamental endeavours to recover significant areas of degraded lands, improve environmental services, and reduce greenhouse gases. Moreover, the focus on small and medium farmers will contribute to poverty alleviation due to the improvement of income sources and increase profitability of their livestock production.

The experiences from the original GEF intervention were basis for the AF. The project team identified the main challenges and bottle necks to achieve the broader conversion to sustainable cattle ranching production systems in the project areas. These learnings were essential inputs for the design of the AF, which intended to address issues such as: technical assistance, provision of vegetal material, support for the establishment of intensive SPS, and the demonstrative farms, among others.

These points will be further explained in “Key challenges under Section B”.

What are the expected results?

The theory of change below sets out the overall rationale for the project. The full results log frame associated with the theory of change is attached at annex 2

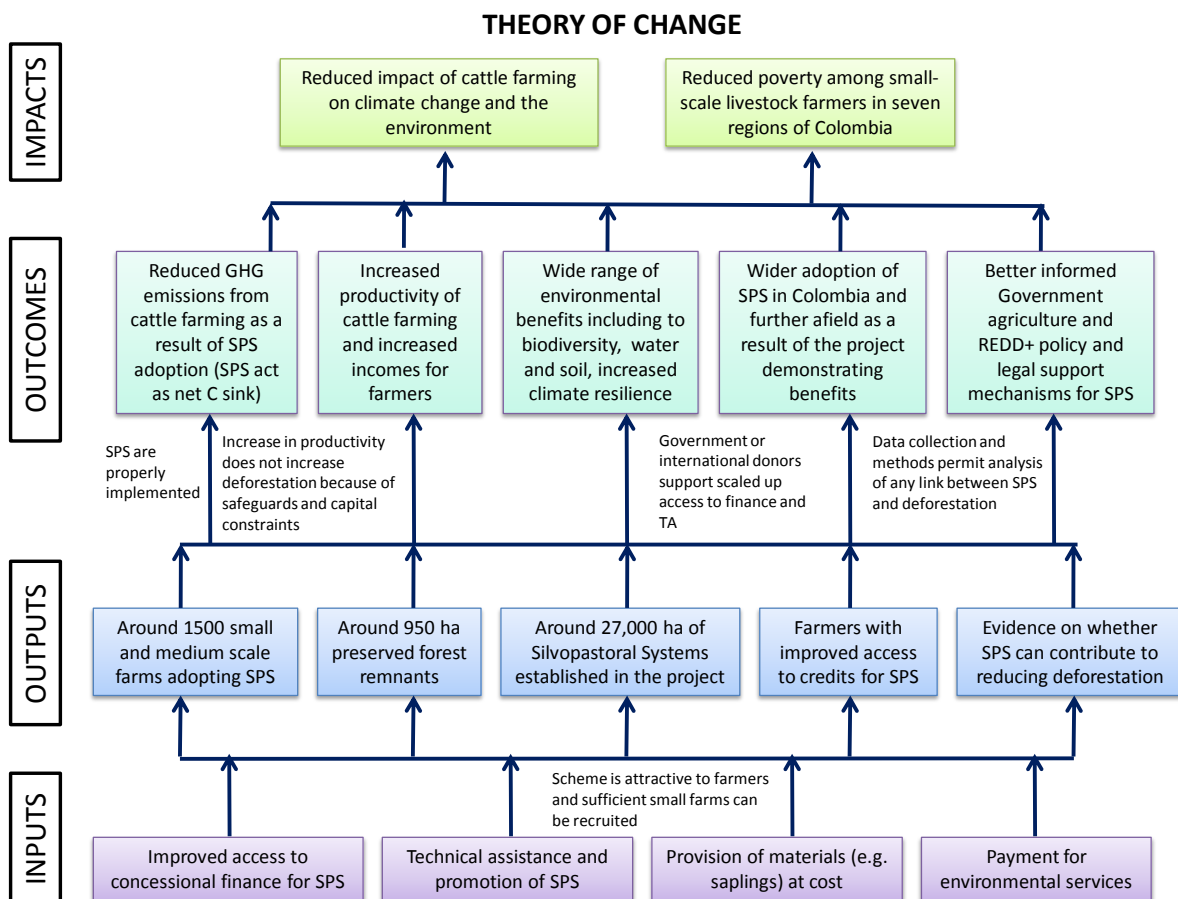


Figure 2: Theory of Change

Note: The outputs presented in the figure represent the goals of the Additional Finance. See annex 2 Results Framework that explains the overall expected results and the annual expected results.

Summary of progress to date:

There has been a significant delay to the initiation of the project following the signing of the administration agreement in December 2012. It had been expected that the grant agreement with FEDEGAN that would start the project activities was to be signed in Summer 2013. However, negotiations to complete this agreement have only recently been completed. We are therefore approximately a year behind the original expected timeline and it will be necessary to rapidly move into implementation to mitigate the impact of these delays. The additional complexities identified in the first phase of the parent project and set out in table 2 on page 20 have also meant that some of the expected results have had to be reduced in comparison to those set out in the original GEF business case.

The key reasons for this delay include:

- new processes required for the ICF extension to the programme, e.g. a PES scheme based on carbon saving, were more complex and have taken longer to agree than anticipated, with existing project partners responsible for PES not wanting to implement these without a trial period
- delay in completing the Social and Environmental Impact Assessments, and related uncertainty over one of the hotspot areas the project will work in
- the knock-on effects of restructuring the existing CMSCR programme (this has required a significant re-evaluation of the results framework and redesign of some operational elements, e.g. changes to land use mapping, to make the approach more cost-effective).

To mitigate some of the risks of this delay, DECC and World Bank have signed an addendum to the administration agreement in January 2014 which allows the additional financing to be used for 'retroactive activities' i.e. eligible activities to be undertaken by FEDEGAN prior to the signing of the administration agreement. Specific progress made on these retroactive activities is highlighted in the detailed scoring section.

Despite the delays, the project has now begun to make progress and as of June 2014, the design of the Additional Financing has been completed, along with the restructuring of the Parent project, and the Negotiations between the World Bank and FEDEGAN-FNG were completed on May 23rd 2014. The progress to date has been related to: 1. The original project (GEF) intervention, 2. The design of the supplementary activities under the AF (ICF), and 3. Retroactive financing for eligible activities under the AF (ICF). These three outputs will be described in detail in Section A (Detailed Output Scoring).

Given that implementation is only in the early stages the detailed reporting in section A focuses on highlighting where progress has been made on initiating the activities under the project. We have set out the 4 key components of the projects, the outputs association with these components and any progress made in delivering them. In future years, the World Bank is expected to report on the results framework of the project, jointly financed by the GEF and ICF (see annex 2: results framework). Progress on the key outcomes under the parent project is set out in the progress to date column of the log frame in annex 2.

Section A: Detailed Output Scoring

Component 1. Improving productivity in participating cattle ranching farms in Project areas, through SPS would pursue the institutional capacity building on SPS at the national and local levels to provide technical assistance to farmers on silvopastoral systems and cover the selection process for the additional 300 beneficiaries in the two "hotspot of deforestation" areas.

Associated outputs

The following indicators, outcomes and the expected results are set out in the results framework at annex 2. The annex shows the progress to date for each indicator, as well as the annualized and the final goals. In future years we will report against this framework.

Component 1 score and performance description:

Component 1 has been assigned a B.

As of June 2014 the central and regional technical teams are fully operational. A total of 2,491 participants/farms have been selected (63.5 percent of total applicants to the two Convocatorias) covering about 114.905 Ha (mean 46.1 Ha). 72.3 percent of selected participants are small farms, 20.3 percent are medium-sized, and 7.4 percent are large. As of November 2013, 854 contracts have been signed for technical assistance (TA). The selection of the 300 additional beneficiaries in the hotspot areas will be launched in August 2014 (completion of the selection is expected by the end of 2014).

Progress against expected results:

The Additional Financing supports a number of activities under this component including:

- **Sub-Component 1.1. Provision of SPS training to national, regional, and local TA providers:** the Additional Financing would pursue the institutional capacity building initiated under the CMSCR project by training additional professional from regional TAPs (Tecnigans - FEDEGAN's countrywide technical assistance arm) on SPS establishment and management, to create a pool of 100 experts in the seven regions of the project.
- **Expected Result:** It is expected that by the end of the project, a total of 100 professionals will have been trained.
- **Progress:** 68 professionals have already received some training on SPS establishment and management. This has mostly been under the parent project, rather than the ICF's Additional Finance. It is expected that the training of the additional experts will begin in July 2014.
- **Sub-Component 1.2. Beneficiary selection and baseline assessments:** the Additional Financing would finance the selection process in the two new hotspots of deforestation. The additional financing would specifically support the following activities: (i) preparation of the "Convocatoria" in the two new areas, including the preparation of the Terms of references, the Promotion & Dissemination campaign, the organization of sensitization workshops; (ii) Selection of the Beneficiaries (around 300) in the two new areas (deforestation hotspots) and (iii) land use mapping, including the acquisition of equipment, software, satellite images, field visits and technical assistance.
- **Expected Result:** In total 2,700 farmers are expected to be selected in the 7 project areas.
- **Progress:** 2,491 beneficiaries have already been selected in the five original project areas and baseline assessments are almost completed. The preparation of the third *convocatoria* has been initiated for the selection of the 300 farmers in the hotspot areas. This *convocatoria* includes: outreach material, terms of reference, communication strategy, and hiring outreach promoters. This is expected to be complete by the end of 2014.

- **Sub-Component 1.3. Provision of TA to farmers for SPS implementation in various regions in Colombia's territory:** the first years of implementation of the CMSCR project have highlighted the fact that the need of technical assistance at the farm level to accompany the conversion to SPS practices was largely under-estimated. The Additional Financing would dedicate significant resources to ensure an adequate provision of technical assistance to the project beneficiaries: it would complement the technical assistance provided to the farmers by the CMSCR and would expand into the new two areas. In addition, it would support peer-to-peer exchanges in demonstration SPS farms.
- **Expected Result:** All 2,700 selected farmers will be receiving TA (independently of whether they receive PES or not).
- **Progress:** Most of the already selected farmers have started to receive some technical assistance. Through the retroactive financing provision included in the administration agreement, as of June 2014, the project has hired a team of 10 additional professionals to provide advice and support on the SPS plantings.
- **Sub-Component 1.4. Improving access to financial resources for SPS adoption:** this sub-component was not funded by GEF resource. Based on the bottlenecks identified during the first three years of implementation of the CMSCR project, the Additional Financing would help deploy a "Financial Brigade" in charge of providing small and medium-scale landholders with personalized support all along the process of access to financial credits. This dedicated technical assistance on banking and loan management aims at increasing uptake of credits for iSPS activities;
- **Expected Result:** No quantitative target was originally set for this work. It is expected that, through the Public Policy Advisory Committee, some adjustments would be made to the existing credit system to overcome barriers encountered by small and medium-sized farmers to access financial products.
- **Progress:** A proposal on key aspects of the crediting system was built and delivered to the agricultural credit advisor to the Minister of Agriculture
- **Sub-Component 1.5. Assessing and adjusting sector technologies applied in each Project area:** No additional resources would be allocated to this sub-component
- **Sub-Component 1.6. Supporting market-based instrument to secure long-term funding:** the Additional Financing would support the development of market-based initiatives to promote broader adoption of SPS: this sub-component will seek to work with emerging certification schemes (e.g. The Global Roundtable on Sustainable Beef, and the Grupo de Trabajo da Pecuaria Sustentable) to increase the economic sustainability of the project and promote a wider uptake of SPS in Colombia.
- **Expected Result:** It is expected to have 2 market-based/consumer initiatives designed by 2017.
- **Progress:** A roundtable on green markets was established, and a new alliance with Asocolflores is under discussion.

Recommendations:

The assigned score for this component (B) reflects the delays on the project execution, as a result of the preparation of the additional financing and restructuring of the parent project (GEF). Activities under this component have however maintained steady implementation under the GEF financing but could not expand

as planned under the Additional Financing. Such expansion has been initiated in July with the strengthening of the regional team reaching 100 professionals, the selection of the beneficiaries during the third *convocatoria* reaching 2,700 farmers, and the newly signed contracts for TA.

Impact Weighting (%): 35%

Revised since last Review? Yes – first annual review of ICF contribution to the project

Risk: Low/Medium/High: Moderate Risk. See annex 4: World Bank's Operational Risk Assessment framework:

Revised since last Review? No

Component 2. Increasing connectivity and reducing land degradation through differentiated PES schemes would provide support under the PES-1 scheme to 700 additional farmers, would support the production of high-quality planting material and would pilot a new scheme to promote the adoption of intensive silvopastoral systems in about 1,250 farms.

Component 2 score and performance description:

Component 2 has been assigned a B in this review.

As of June 2014, 364 PES contracts covering 417 farms have been signed and 334 participants have received baseline payments (average payment of US\$730.86).

Progress against expected results:

The new activities under the Component 2 to be supported by the Additional Financing (ICF) would include:

- **Sub-Component 2.1: This sub-component would be renamed “Adjustment and Implementation of two short-term PES mechanisms”**: While the scheme for Payment for Environmental Services supported under the CMCSR project was primarily focused on biodiversity conservation (hereafter PES-1), the Additional Financing would pilot a new scheme of PES focused on carbon sequestration (hereafter PES-2) to support adoption of the intensive SPS (iSPS). Both schemes would support payments for environmental services (both under PES-1 and PES-2) based on land-use changes. As a result, under the sub-component, the Additional Financing would support the following activities:

- a. it would accrue the payment to be made for Natural Resources Management (PES-1) to around 700 small- and medium-scale farms selected in the project (~300 farms would be located in the areas of hotspots of deforestation, while the 400 others would be in the five areas originally targeted by the CMCSR project);

Progress: (i) Spatial analysis of small and medium properties to define the farms that will receive PES-1 have started. (ii) The preparation of the third *convocatoria* was initiated.

- b. it would pilot the new scheme for the promotion of the adoption of iSPS (PES-2): this scheme would benefit to about 1,255 small- and medium-scale farms located in the seven targeted areas

of the project. It would combine (a) the provision of up-front in-kind support (including seeds, seedlings, soil analysis etc) and (b) annual ex-post payments based on the conversion into iSPS (the modalities of implementation of the PES-2 are described in an background document in the project files);

Progress: As part of the retroactive financing, to date, the project team has carried out the selection and hiring of a Procurement Professional who will be responsible of the purchasing processes related to the: a) in-kind support of the PES-2 (purchase of inputs), b) acquisition of small equipment for the establishment of SPS (Component 1), and c) production of vegetal material (Sub-component. 2.3).

c. it would support the analysis of land use changes through GIS monitoring, field verification by regional teams, and tree coverage through LANDSAT images.

- **Expected Result:** Under the Additional Financing, 700 farmers would receive PES-1 and 1,255 would receive PES-2.

Progress: Farmers eligible for the PES-1 payments in the originally targeted sites have already been selected and will receive payments as soon as the Additional Financing gets effective. Selection of the 300 farmers in hotspot areas will be launched in August 2014. The new PES-2 scheme will require additional time to ensure proper sensitization to the farmers and procurement of in-kind un-front support.

- **Sub-Component 2.2.: This sub-component would be renamed “Design of local long-term PES mechanisms”:** The Additional Financing would complement the activities initiated under the parent project to develop at least two local PES mechanisms by the end of the project.

- **Expected Result:** It is expected that by the end of the project, 2 local long-term PES mechanisms would be designed

- **Progress:** The work led by The Nature Conservancy (TNC) on designing the long-term PES schemes in two river basins is under implementation. A particular focus is on the consolidation of local alliances for the development and sustainability of those schemes.

- **Sub-Component 2.3.: This sub-component would be renamed “Production of vegetal material”:** While no GEF resource was allocated to this sub-component, the Additional Financing would support the production of high-quality seeds and seedlings to participating farmers to facilitate the adoption of SPS (specifically to further encourage “isolated trees” and living fences in beneficiary farms). This seeds and seedlings would be produced through national/regional nurseries, and through nurseries established at the farm level. Small equipment would also be acquired by the project under this sub-component (Banco de Maquinaria Liviana) and would be made available to farmers to prepare the soil before using seeds and seedlings to increase the survival rates (detailed description of the access/use of light machinery is provided in the Operational Manual). The Additional Financing would also provide technical assistance to the production of the seeds and seedlings at the nursery level as well as to the sowing at the farm level.

- **Expected Result:** It is expected to produce about 2 million seedlings by the end of the project.

- **Progress:** As of June 2014, the Project team started with the selection process of the Professional on Vegetal Material Production who will be part of the project implementation team (PIT), and will be responsible for the coordination of the Production of Vegetal Material and the supervision of regional

team assigned for this activity. The selection process of the regional technical team in charge of the vegetal production has begun and will be responsible of: a) evaluating the production of vegetal material by tree nurseries, b) advising the construction of new tree nurseries through the “green business strategy”, and c) supporting the planting processes at the farm level.

- Also, the project designed a course for “nurseryman/women” that will be conducted in the month of August with the support of ELTI (Environmental leadership and Training Initiative) and LERF (Laboratório de Ecologia e Restauração Florestal) from the University of São Paulo, Brazil.
- **Sub-Component 2.4: this would be a new sub-component, named “Demonstrative farms”** that would finance the setting up of pilot farms “fincas demonstrativas” in the different sub-regions covered by the project and promote on-site visits with beneficiaries to foster “peer-to -peer” exchanges (in conjunction with sub-component 1.3) .
- **Expected Result:** It was expected that by the end of 2014, the demonstrative farms would have been selected and that SPS pilots would have been established in some of them.
- **Progress:** Through the retroactive financing provision included in the administration agreement, as of June 2014, the group of technical professionals was hired to advise the selection and installation of demonstrative farm. Processes for purchasing material and hiring human labor for the establishment of demonstrative farms, were also initiated. The selection of demonstrative farms has been completed and the establishment of silvopastoral plots has started in some of them.

Recommendations:

The implementation of the activities under the Component has been significantly affected by the delays in the signing of the Grant Agreement. It is however expected that good progress will be made in the coming months, particularly in terms of the selection of the beneficiaries of the PES-2 scheme, the production of plant material (with a projected production of 1.2 million trees in 2015). Half of the demonstrative farms are planned to be established by September 2014, and the remaining by May 2015. This will be an important asset for the project, as it will facilitate knowledge sharing within farmers and between farmers and technicians.

Impact Weighting (%): 35%

Revised since last Review? Yes – first annual review of ICF contribution to the project

Risk: Low/Medium/High: High risk. This component includes the innovative tools such as PES schemes, demonstrative farms and production of vegetal material, which are piloted in this project. The risk is considered high, due to the associated procurement and fiduciary capacity that needs to be in place for the implementation and accomplishment of those mentioned activities. See annex 4: World Bank’s Operational Risk Assessment framework

Revised since last Review? No

Component 3. Strengthening Sub-sector Institutions, Dissemination and Monitoring & Evaluation

would provide policy-makers with evidence-based results on the benefits (social, environmental and economic) of SPS to support the transformation of the cattle ranching sector in Colombia.

Component 3 score and performance description:

The component has been assigned an A in this review.

As of June 2014, the M&E system has become operational: farm land-use planning, remote sensing GIS, detailed methodologies for each indicator and socio-economic assessment (baseline). Some adjustments are needed on some modules of the system (el Escarabajo and the Productive monitoring) and are planned for early 2014.

One of the project strengths is the high-quality methodologies that were designed to measure each indicator of the project. These methodologies provide sound and reliable socio-economic and environmental data that will help decision makers design policies with a sound scientific basis.

The project is gaining more and more momentum at the national level, with increased attention received from Ministry of Agriculture and Ministry of Environment. The project is seen as an incubator, where new schemes and instruments are piloted and then replicated at a larger scale.

In addition, the project has gained significant visibility at the international level. Colombia was selected to host the meeting by the Global Alliance for Sustainable Livestock (GASL) due to its efforts on introducing sustainable livestock (SL) in the tropics, mainly thanks to the Mainstreaming Sustainable Cattle Ranching Project. This project is currently seen as a successful example of climate-smart agriculture at the local, regional and global level; because it provides triple win solutions related to: climate change mitigation, through the carbon sequestration generated by silvopastoral systems; climate change adaptation, caused by the enhanced ecosystem services; and poverty reduction, generated by the increased livestock productivity. Therefore, the GASL will position the name of Colombia as one of the tropical countries actually demonstrating changes in livestock practices towards sustainable production systems with important impacts on poverty reduction and natural resources management.

Progress against expected results:

This component has been renamed “Strengthening sub-sector institutions, Dissemination and M&E” and would be adjusted to properly reflect on the priorities of the UK-DECC’s Investment Climate Fund.

- **Sub-Component 3.1. Monitoring and evaluation of Project activities:** the Additional Financing would strengthen the M&E tools established under the CMSCR project, particularly the monitoring of environmental services (tree cover, soil and biodiversity). It would also develop systems to monitor the contribution of SPS to climate mitigation (through measurement of the emissions of greenhouse gases at the farm-level, including its impact, if any, on deforestation trends at the farm-level. It would also monitor the contribution of the SPS to poverty reduction through socio-economic surveys, monitoring of livestock productivity (milk and beef) and carrying capacity in intervened areas.
- **Expected Result:** Full M&E plans for the project to be in place.
- **Progress:** As part of the retroactive financing, the progress on this activity has been the selection of the Professional on M&E, who will be part of the PIT, and will be responsible for the coordination of this sub-component. The regional team has started supporting this professional, through the implementation of

the M&E activities in the project areas. Methodologies for the ICF KPIs have been developed and the full plans for the Impact evaluation are being developed. It is expected the full M&E plans for the project will be in place by mid-2014.

- **Sub-Component 3.2. Results dissemination to key stakeholders:** the Additional Financing would further promote the dissemination of project results to key stakeholders through: (i) the recruitment of a full-time communication specialist, (ii) the implementation of the communication strategy that would compile lessons learnt and specifically target key stakeholders groups, to promote the adoption of environmentally-friendly SPS country-wide, (iii) the production and dissemination of targeted, user-friendly documentation (PES operation manuals, guidelines for ES monitoring, among others).and (iv) the promotion and monitoring of SPS outside of the selected project areas.
- **Expected Result:** The outreach and communication will be enhanced locally and globally. The Communications Professional will strengthen the dissemination of the contributions of each partner of the alliance.
- **Progress:** This sub-component was also selected for the retroactive financing. As of June 2014, the project team has started the selection process of the Communications Professional (part of the PIT), who will be responsible of the implementation and supervision of the communications strategy. The team has disseminated the Project in national and international events, covering audiences with different backgrounds (scientists, policy-makers, farmers etc). The PIT has developed the ToRs for the Communications Professional, which are currently under the World Bank's review. The communications strategy will be in place by the end of 2014.

Recommendations:

Future annual reports will present the annual and overall progress on each indicator presented in the results framework. In addition, this component will include detailed information on the carbon measurement activity as well as the poverty reduction indicators, which involves the productivity and carrying capacity indicators. This information will inform UK-DECC about the impact in its main focus areas: climate change mitigation and poverty reduction.

As part of the PIT reinforcement, a new Communications Specialist is expected to be hired by September 2015 who will strengthen the results dissemination to key stakeholders. Also, the project has started developing a number of videos to share the local experiences from farmers and scientists. These videos will be disseminated locally and internationally to diverse audiences.

Impact Weighting (%): 20%

Revised since last Review? Yes – first annual review of ICF contribution to the project

Risk: Low/Medium/High: Moderate Risk. See annex 4: World Bank's Operational Risk Assessment framework

Revised since last Review? No

Component 4. Project management would support the overall Project coordination.

Component 4 score and performance description:

This component has been assigned an A in this review.

The Project Implementation Team (PIT) is in place and operational at the national and regional level. Recruitment is on-going to reinforce capacities (particularly on Procurement, Financial Management in addition to technical expertise under the other components) in the perspective of the implementation of the Additional Financing.

Progress against expected results:

Bearing in mind the supplementary activities designed for the additional financing, and the needs in terms of fiduciary capacity, additional resources would be allocated to this Component to ensure a satisfactory technical, financial, legal and administrative execution of the project. The Additional Financing will cover expenditures related to operation costs, financial costs and audits.

As part of the retroactive financing, the selection process of an Accountant and Procurement specialist (part of PIT) has been launched. The accountant will be specifically in charge of supporting the financial management of the project, which will be increased with the operation of the AF activities. The procurement specialist will be in charge of the new activities implemented under the AF, particularly the production of vegetal material and small equipment.

Recommendations:

The PIT will continue to be strengthened to ensure the delivery of the fiduciary and technical responsibilities. It is expected that by December 2014, the full PIT will be on board. As a result, the future annual reports will reveal significant progress on the four components due to this new PIT structure.

Impact Weighting (%): 10%

Revised since last Review? Yes – first annual review of ICF contribution to the project

Risk: Low/Medium/High: Moderate. See annex 4: World Bank's Operational Risk Assessment framework

Revised since last Review? No

Section B: Results and Value for Money.

1. Progress and results

1.1 Has the logframe been updated since last review? Yes

The Results Framework has been updated since the approval of the Business Case. It was agreed that the contribution from the UK-DECC would be processed as an Additional Financing to the original project (financed with GEF resources): accordingly, the Results framework of the project has been updated/adjusted to reflect the new features to be financed by the Additional Financing. The original logframe presented at the business case stage did not have milestones and these have now been added in on an annual or bi-annual basis.

As a result, the World Bank will report on the consolidated Results Framework set up for the entire project (including GEF and ICF contributions) (See Annex 2). In the future, the World Bank will be using the consolidated results framework for reporting on both GEF and ICF. Additional reporting will be made to UK-DECC on specific indicators (KP indicators).

1.2 Overall Output Score and Description:

The project has been marked B because of the delay in setting up the project. It is expected that the project will proceed according to the updated timeline and this delay will not be extended in the forthcoming year. It is difficult to assess the outputs of the project as it is still in the early stages, but against the early indicators such as number of farms and assessors recruited, the project is making progress.

1.3 Direct feedback from beneficiaries (where appropriate in 6 monthly reviews; required in annual reviews)

As the project is in the early stages of implementation and project activities are only just beginning there is limited feedback from beneficiaries on the impact of the additional financing. However, communication work with beneficiaries is a key element of the wider project and details and outcomes of this work is set out below.

Communication for Development:

Communication, dissemination, sensitization are key features of the project. the Additional Financing would further promote the dissemination of project results through (i) the implementation of the communication strategy that would compile lessons learnt and specifically target key stakeholders groups, to promote the adoption of environmentally-friendly SPS country-wide. Testimonials are a key element of the strategy.

One of the specific objectives of the strategy is the strengthening of the existing communication strategy through the identification of significant experiences of cattle ranchers who have adopted the SPS, and have abandoned traditional cattle ranching production systems (see below).



"My neighbors tell me it's a crazy idea, it's an idea that One could almost believe that it's unsustainable. However, I said 'No, I think this is a good way to accommodate more cows, because in this place, farms are very small, so a good strategy to manage this, is through the establishment of mixed fodder banks to feed the cows, and plant more trees to provide them shade'." Juan Medina. Farmer from Encino, Santander-Colombia



"I love observing the environment; I'm in love with my farm, not a single paddock is desolated... I constantly check, protect and take care of the trees in my farm. I have silvopastoral systems and I believe that this is not only a good way to conserve the environment, but also a mode to provide a more welcoming area for my cattle. Besides that, it's easier to maintain... I'm happy to say that the farm production and water sources are permanent in my farm, they don't dry, and we have always legumes available such as guácimo, algaborrillo and rudito" (Luis Guillermo Acosta. Farmer from Villanueva, Guajira)

Surveys:

Surveys were designed with the aim of capturing environmental and socio-economic information of cattle ranchers benefiting from the project. This information will be used to identify the current conditions of participating farms and assess the impacts of the project.

As of June 2014, 1,817 socio-economic surveys were uploaded to the system. This data will serve as a baseline of the beneficiaries, and will be used to conduct statistical analysis and as an input for the impact evaluation of the project.

Table 1. Surveys available in the system separated by regions of intervention.

REGIONAL	No. Surveys
1. Bajo Magdalena	293
2. Valle del Rio Cesar	351
3. Boyacá & Santander	343
4. Ecorregión Cafetera	592
5. Piedemonte Orinocense	238
Total general	1817

The surveys will be conducted at the beginning and at the end of the project. Therefore, we are expecting to have two samples of surveys that will be contrasted with the intention of trends and changes in environmental and socio-economic conditions in 2014 and 2017.

Farmers leaving the project:

The project aims to cover 2,700 beneficiaries. To date, 2,491 farmers have signed the contracts, but a few of them (around 10) have left the project due to: death, and delays on the project implementation as a result of the beneficiaries' selection process. Some of the relatives of the death proprietaries are interested in continuing in the project, and thus, the project is currently analysing the new documentation to define their eligibility to participate.

1.4 Summary of overall progress

The project has been under implementation for more than three years (with GEF resources): progress to date is presented in the Results Framework (see Annex 2). Some activities under the Additional Financing have already been launched through the retroactive financing provision to ensure that the growing season for new plants was not missed. The Grant Agreement for the Additional Financing was signed on 5th September. Following that, the Additional Financing should enter the full implementation phase in Autumn 2014 and we expect to see more progress in the up-coming year.

1.5 Key challenges

Lessons learnt from the 3-year implementation of the parent project were mainstreamed in the design of the additional financing. Throughout the implementation of the original project, a number of challenges were identified that may negatively affect the likelihood of meeting the targets of the results framework. Nonetheless, the project has developed strategies to mitigate these impacts and allow the project to be executed timely and effectively. We are confident that the proposed mitigation measures are likely to properly address the challenges and the risks but we have also made provision in the Project Paper to closely monitor this project and ensure reactive supervision to allow for any adjustments at any time during

implementation.

The next table presents the identified challenges and mitigation strategies:

Table 2: Key challenges and mitigation strategy

Challenge	Mitigation Strategy
(i) The much higher proportion of small-scale farms among participants than foreseen during preparation (total farms area 114,000 ha vs. 4 million ha of project intervention area)	(i) The Additional Financing would finance the renewal of these agents as well as recruit additional ones in order to timely respond to farmers' needs in terms of technical guidance. Additional resources would also be allocated to further support farmers to access to credit. Those agents would receive specific training.
(ii) The higher than anticipated level of TA needed at the different steps of the process of conversion into silvopastoral systems (sensitization campaigns, selection process, baseline assessments): The need for TA was under-estimated: the CMSCR project provided for 7 staff at the Project Unit (PIT) and 10 technicians in the pilot areas (2 per focus area), which quickly proved insufficient. To remedy this, FEDEGAN-FNG recruited 40 additional regional technicians.	(i) The Additional Financing would finance the renewal of these agents as well as recruit additional ones in order to timely respond to farmers' needs in terms of technical guidance. Additional resources would also be allocated to further support farmers to access to credit. Those agents would receive specific training.
	(ii) The outreach and communication strategy will be strengthened with the support of the AF. A specialized person on communications will be hired as part of the PIT, to improve the development of the sensitization campaigns
	(iii) The methodology of the land use mapping was re-designed to reduce the man labor and the operational costs, which is translated into better resource and time management
(iii) The difficulties faced by project beneficiaries to access credits and ICR earmarked by FINAGRO, aimed at overcoming the high initial costs of adoption of SPS	(i) the project will provide informative sessions to orient the farmers on the options to access credit for the establishment of SPS
	(ii) Bearing in mind the barriers that small and medium farmers are facing to access to credits, the project has developed a new scheme (PES-2) under the AF that provides up-front support (up to US\$ 600 per farmer) for the establishment of intensive SPS
(iv) Limited availability of vegetal material nationwide: Farmers willing to adopt SPS have been regularly constrained by the low availability of quality planting material, as well as its high costs	(i) the AF will support a new activity named Production of Vegetal Material that aims to produce 4.5 million trees in the project areas. Part of this production will be through the provision by national/regional tree-nurseries, and through the creation of tree-nurseries in farms that are benefiting from the project

(v) Institutional arrangements for the implementation of the activities under the AF

(i) Roles and responsibilities under the Alliance were re-defined and validated as part of the preparation process of the AF.

1.6 Annual/6 monthly Outcome Assessment

The next annual review will be completed by the beginning of March 2015 (instead of the scheduled review in January) and the 6 monthly and annual reviews will follow a regular timetable after that. DECC and the World Bank will begin this process in January 2015 and work together between now and then to develop the following items which it has not been possible to include this time:

1. Milestones for delivering and running the four components until the end of the project, including review points. Reporting has begun against annual milestones in the Results Framework and will be included in subsequent reviews. Delivery partners will contribute to the Operational Plan, providing progress reports on each of the components and indicators for each fiscal year.
2. The methodology for attributing the KPI results in Annex 3 (but not the Results Framework, Annex 2) and expected annual results. The methodologies for the carbon measurements (but not the attribution) are under preparation already. The World Bank is in the process of hiring TNC as the executing agency for this activity.
3. A review of whether to include the two Finance KPIs, requiring methodologies, expected total and annual results and attribution methodology for: Private finance leveraged (KPI 13, \$) and Public finance leveraged (KPI 12, \$)
4. The Value For Money (VFM) assessment, including details on economy, efficiency and effectiveness following [DFID's approach](#).

Please also see Annex 2 (Results Framework) and Annex 4 with the KPI that apply to this project.

2. Costs and timescale

2.1 Is the project on-track against financial forecasts: No

Delays in preparation have generated delays in disbursement. While 0.8 million was planned to be disbursed under the FA by June 2014, only 0.2 million were disbursed (as per the retroactive financing). This delay is mainly due to the adverse climatic conditions experienced in most project regions over the past few months (el Niño fenomeno) that limited the potential for the establishment of demonstrative farms and the production of vegetal material. This has been partially mitigated with the inclusion of a provision on retroactive financing in the Administration agreement (amended in February 2014). In February 2014, FEDEGAN has planned for retroactive expenditures up to US\$1.4 million: as of June 2014, an estimated US\$789,000 has been committed and an estimated US\$57,000 has been already spent (and substantially more has been committed). The table below (Table 3) presents the funds execution to date and the commitment of the retroactive financing per component.

2.2 Key cost drivers

Table: Summary of the Project Costs (US\$'000)

Project Cost per Component	Original Project		Additional Financing	Total Original + Add. Fin.	Counter-part financing* (as parallel financing)	TOTAL
	Allocation on PAD	Allocation Restructuring				
Comp. 1 Improving productivity in participating cattle ranching farms	1,677.79	1,790.69	9,535.19	11,325.88	3,506.48	14,832.36
Comp. 2 Increasing connectivity and reducing land degradation through differentiated PES Schemes	3,816.22	3,631.31	7,869.85		2,790.04	14,291.20
Comp. 3 Strengthening sub-sector institutions, dissemination and M&E	824.00	896.00	2,613.48	3,509.49	1,134.92	4,644.41
Comp. 4: Project Management	682.00	682.00	681.48	1,363.48	1,962.57	3,326.05
Total Project Costs	7,000.00	7,000.00	20,700.00	27,700.00	9,394.02	37,094.01

* this column reflect the cumulative counter-part financing (parallel financing) from FEDEGAN-FNG, CIPAV, Fondo Acción and TNC (as per the Implementation Agreements).

2.3 Is the project on-track against original timescale: No

The project is behind with respect to the initial timeframe. The preparation of the AF has been much longer than planned because there were multiple issues that needed to be analysed and defined before the completion. Some of these issues were related to the institutional arrangements of the project for the implementation of the new activities under the AF. Another issue was related to the challenges and lessons learned from the original project, which were essential contributions for the development of the new activities of the AF. Finally, the environmental and social safeguard assessments in the two new deforestation hotspot areas took longer than expected, due to the complexity of the areas.

In order to mitigate these delays, an amendment to the Administrative Agreement, signed between the World Bank and UK-DECC, was adopted in February 2014 to include a provision on retroactive financing, in order to allow for more flexibility in the implementation of season-sensitive activities. As a result, the Client could start implementing season-sensitive activities, such as production of vegetal material, the establishment of SPS, and the development of demonstrative farms, starting from December 2013 (at the time of the Appraisal mission, when the technical design of the Additional Financing was approved).

Project Cost By Component and/or Activity	RETROACTIVE FINANCING (ICF) (US\$000)	
	DISBURSEMENT	COMMITMENT
1. Improving productivity in participating cattle ranching farms	50	707

1.1. SPS training to national, regional, and local TA providers	-	-
1.2. Beneficiary selection and baseline assessments	-	-
1.3. TA to farmers and implementation of SPS in the different regions	50	707
1.4. Improving access to financial resources for SPS adoption	-	-
1.5. Assessing and adjusting sector technologies applied in each project area	-	-
1.6. Supporting market-based instruments to secure long-term funding	-	-
Component 1-Physical Contingencies	-	-
2. Increasing connectivity and reducing land degradation in participating cattle ranching farms	-	82
2.1. Adjustment and implementation of a PES mechanism offering short-term payments to SPS	-	-
2.2. Design and implementation of local PES mechanisms financed by service users that would offer long-term payments	-	-
2.3. The production of vegetal.	-	-
2.4 Demonstrative Farms		82
Component 2 Physical Contingencies	-	-
3. Institutional strengthening, dissemination and M&E efforts	7	-
3.1. M&E of project activities	7	-
3.2. Results dissemination to key stakeholders	-	-
Component 3 Physical Contingencies	-	-
4. Project management	0	-
4.1. Operating Costs	0	-
Component 4 Physical Contingencies	-	-
Total Baseline Cost	57	789
Physical Contingencies	-	-
Price Contingencies***	-	-
Total Project Costs	57	789

3. Evidence, Monitoring and Evaluation

3.1 Assess any changes in evidence and implications for the project

Taking into consideration that the ICF donation was accepted as an additional financing to the original GEF project, the preparation of the Project Paper integrated the new activities of the additional financing, to the original effort. The results framework (Annex 2) reflects the changes and integration of both interventions.

The design of the Additional Financing has benefitted from the lessons learnt from the 3-year implementation of the parent project and an in-depth analysis of the challenges and potential barriers (table 2). As a result, in addition to the specific features developed under the AF (particularly PES-2, demonstrative farms...), the AF would address the major challenges identified during the first three years of implementation of the project, particularly:

- **Technical Assistance:** The need for TA was under-estimated: the CMSCR project provided for 7 staff at the Project Unit (PIT) and 10 technicians in the pilot areas (2 per focus area), which quickly proved insufficient. To remedy this, FEDEGAN-FNG recruited 40 additional regional technicians. The Additional Financing would finance the renewal of these agents as well as recruit additional ones in order to timely respond to farmers' needs in terms of technical guidance. Additional resources would also be allocated to further support farmers to access to credit. Those agents would receive specific training.
- **Planting Material:** Farmers willing to adopt SPS have been regularly constrained by the low availability of quality planting material, as well as its high costs. The Additional Financing would support the production of high-quality planting material and would make it available to farmers at a reduced price. It would combine the production of seeds and seedlings in large nurseries with the production at the farm-level (building on the model set up under the FEDEGAN-SENA project).

All those learnings were taken into account in the design of the new activities as well as the reinforcement of the already-existing activities under the parent project (PES-2 scheme, production of vegetal material, strengthening the PIT and regional teams, and modifying land use mapping methodologies).

3.2 Quality of monitoring and reporting

Not applicable for this annual report. This will be reassessed at the next annual review.

3.3 Where an evaluation is planned what progress has been made?

An Impact Evaluation (IE) will be conducted and the methodology is under finalization (see draft methodology in Annex 5): the ultimate objective of the IE is to assess the efficiency and efficacy of the different instruments piloted under the project (PES schemes, Technical Assistance) with the prospects to influence policy decisions at the national level to transform the livestock sector in Colombia.

4. Risk

4.1 Output/Outcome Risk Rating: High

The overall risk under the Parent Project was rated Substantial at the appraisal stage. The major risk identified then referred to the "Bank's reputational risk associated to work with FEDEGAN-FNG and with "the cattle ranchers", perceived by certain social sectors as having supported illegally armed groups, particularly paramilitary groups". The mitigation measures set to reduce this risk consisted of strict screening procedures to select project beneficiaries, jointly implemented by FEDEGAN-FNG, CIPAV, Fondo Acción and TNC. These screening procedures for the selection of the project beneficiaries, though

time- and resource-consuming, have proven very efficient: so far, no complaint was registered and the process is largely seen as transparent and fair. The same approach will be applied for the selection of the additional beneficiaries.

The risks were re-assessed as part of the preparation of the Additional Financing and are described in detailed in the ORAF section (see Annex 4). In line with its innovative nature, the overall risk for the Additional Financing is rated Substantial. The proposed approach is demand-driven and based on voluntary changes in land-uses at the farm-level: while projections have been made building from the Regional RSPS Project, the level of uncertainty remains very high as how the conversion to new practices will roll out in the seven project areas. In order to mitigate this risk, the project would build a robust monitoring & evaluation system to regularly assess the progress made towards the various indicators and flexibility would prevail to ensure on-time adjustments during the course of the project implementation.

This risk rating is also based on the following considerations: (i) the Additional Financing would pilot two new features, including the new PES-2 scheme that would combine in-kind support and ex-post payments; (ii) it would expand into two new areas, bringing the total number of municipalities covered to ninety. While lessons learnt from the parent project have been mainstreamed in the design of the Additional Financing, particularly in terms of risk mitigation, these additional challenges would only be overcome if FEDEGAN-FNG's and partners' operational and fiduciary capacities are strengthened (cf. legal covenant). In addition, partners' interaction has sometimes proven difficult due to diverse nature of project entities and managerial styles over the course of the implementation of the parent project in terms of coordination: special attention has been given during the preparation of the Additional Financing and will be maintained to improve the coordination.

4.2 Assessment of the risk level

See Annex 4: Overall Risk Assessment Framework –ORAF

4.3 Risk of funds not being used as intended

As set out above, the key risk identified has been the use of FEDEGAN-FNG as an implementation partner. However we believe that the mitigation measure outlined have been successful in reducing this risk.

5. Value for Money

Given this is the first annual review, and we do not yet have results to review, we have not undertaken a full value for money review of the project. This will be undertaken in future years.

Early improvements have been made to the project already based on lessons learnt. The parent project revealed that the original farm monitoring approach was prohibitively expensive. Adjustments have been made to the project to reduce the cost of the monitoring, while retaining sufficient quality to make the monitoring robust and useful.

6. Project partnerships, sustainability and transformation

6.1 Partnerships

The project's activities are implemented by an alliance led by FEDEGAN and comprising CIPAV, Fondo Acción, TNC. This partnership arrangement dates back to 2005 when progress under the GEF regional silvopastoral project encouraged FEDEGAN and CIPAV to seek a scaling-up operation that coincided with the subsector's interest in promoting a sustainable production culture. Fondo Acción and TNC joined the initiative in 2009 given their interest in stimulating private sector participation and investments in biodiversity conservation and sustainable natural resource use. The opportunity to work directly with the cattle ranching association, traditionally unaware of the environmental and social considerations promoted by the project, was capitalized by all agencies involved.

Implementation arrangements for the Additional Financing provided by ICF would be similar to those under the CMSCR project. FEDEGAN-FNG would remain the lead executing agency and would be the signatory of the Grant Agreement with the World Bank. Adjustments would be made to the Implementation agreements signed between FEDEGAN-FNG and CIPAV, Fondo Acción, and TNC, as "Core partner agencies". In addition, two other Implementation agreements would be signed between FEDEGAN-FNG and Fondo Acción to respectively cover: (i) the implementation of PES-1 under the Additional Financing and (ii) the implementation of the PES-2 under the Additional Financing. No drastic changes have been made in the institutional arrangements of the project. It was agreed that the in-kind incentive of the PES-2 will be managed by FEDEGAN, while the ex-post payments will be administered by Fondo Acción.

6.2 Transformation

The project could help bring about a sustainable transformation in a sector which represents a key part of the Colombian economy and one of its largest sources of GHG emissions. There are a number of factors which increase the likelihood that this intervention catalyses a change which extends beyond the lifetime and direct scope of the project:

1. **Political will and local ownership:** There is strong support for this approach from the Colombian Government and clear political willingness to continue to build an enabling policy and regulatory environment and use the experience of this project to design future support measures for SPS. This initiative supports the National Development Plan to 2014, the National Low Carbon Development Strategy (currently in preparation), the national REDD+ Strategy (as set out in the Forest Carbon Partnership Facility Readiness Preparation Proposal) and Colombia's green growth strategy. Analysis by the National Planning Department and the World Bank on mitigation potential in Colombia has identified SPS as a key mitigation tool, and the Ministry of Agriculture and Rural Development is promoting SPS as a driver of economic competitiveness in the livestock sector. Lessons learnt from the project are periodically fed into national and regional policy-making through the Public Policy Advisory Committee.
2. **Increased capacity and capability to act:** From the beginning of the original project, there has been a strong support from the livestock sector in Colombia. The cattle ranchers' association FEDEGAN has set a goal of transforming at least 25% of the 40 million hectares currently used for extensive cattle ranching, to more sustainable land uses such as SPS, agroforestry or ecosystem conservation by 2019. Fedegan is also implementing project tools in other regions of Colombia using public co-financing and with partners such as mayoral and gubernatorial offices as well as regional autonomous corporations. The project has already trained 100 regional technicians specialized in sustainable cattle ranching production systems. Moreover, the project implementation team (PIT) staffed by 10 people, are specialists in specific topics such as financial management, monitoring and evaluation, production of vegetal material, technical assistance (among others), which are essential for the continuous supervision of an intervention of such magnitude. Both the regional technicians and the PIT are key

assets for the future implementation and replication of this initiative.

3. Previous findings on the regional project implemented in Costa Rica, Nicaragua and Colombia has shown that a thorough M&E system could provide robust evidences to scale-up this type of initiatives. For instance, prior impact evaluation results from the Colombian experience showed long term effects of the project intervention, through a follow-up survey carried out in 2011 that found that the land use changes adopted under the Silvopastoral Project has been retained by participants four years after the project's end, alleviating fears that they would be abandoned once payments ended. In fact, some of the silvopastoral land uses that the project had promoted continued expanding after the project's end, albeit at much lower rates than under the project. The economic analyses of the project have confirmed that although SPS are initially costly to adopt, they provide a good return on investment in the medium term, and allow land to be used productively while also delivering environmental benefits such as carbon sequestration and biodiversity conservation. These findings allowed the government and different agencies to replicate this initiative in other areas in Colombia (i.e. Nestle-CIPAV in Caquetá and CORPOICA in Atlántico). The World Bank has also shared these results at the regional and global level, to promote the SPS as a climate smart agriculture initiative that helps tackling poverty reduction, climate change mitigation and adaptation.
4. The broad network of partners involved in this initiative creates many channels to disseminate learning and mainstream SPS. At the moment, the project has created **more than twenty institutional alliances throughout the country**, ranging from private, public and academic sectors.
5. Within the project intervention areas, the demonstrative farms together with the peer-to-peer learning processes, will help the replicability of the project at the local level as the farmers would be able to see by first-hand the socio economic and environmental benefits of SPS.
6. Bearing in mind the growing market and consumer support for sustainably sourced products, the project partners have been working on the construction of demand-side or consumer market led measures such as voluntary certification for products that are sustainably sourced, which have the potential to provide support for the wider uptake of SPS. Some companies have already expressed their interest for meat products such as WOK restaurants, Andrés Carne de Res; and others for milk products such as Nestle. FEDEGAN is involved in work on developing eco- labels in conjunction with the Rainforest Alliance and Global GAP. The project will seek to work with one or more of these certification schemes to increase the economic sustainability of the project and the viability of wider uptake of SPS.
7. The lessons learnt from the PES schemes (1 and 2) are expected to contribute to the development of innovative market-based strategies for conservation that the Ministry of Environment is building through the National strategy on Payments for Ecosystem Services. The M&E methodologies related to measurements of ecosystem services (i.e. biodiversity, carbon sequestration and soil erosion) will be fundamental evidence of success of these incentives. The creation of PES policies at the national level will provide sustainability to this efforts, as the farmers will continue to have access to incentives that promote the land-use conversion to SPS. Moreover, the increase of milk and beef production due to the enhanced animal well-being as a result of the establishment of SPS, may be sufficiently attractive to cattle ranchers that want to implement this strategy in the future.
8. This project is recognized internationally for being an example of a Climate Smart Agriculture strategy that addresses climate change mitigation and adaptation, and also contributes to poverty reduction in rural areas. For this reason, the FAO selected Colombia as the host for the Global Congress on Sustainable Livestock that will take place next October 7th-10th in the city of Cali.

9. Evidence of effectiveness is credible and shared widely. Although the project has just started the AF, and the GEF has recently entered in the full implementation stage, this initiative has been published in multiple newspapers and specialized publications (see annex 6).

7. Lessons learned, conclusions and actions

The proposed Additional Financing (AF) heavily builds on the lessons learnt from the three years of implementation of the parent project and is designed to address the major challenges identified (see table 2). These lessons learned were fundamental to re-structure the original project (GEF) and shape the design of the new activities under the AF (ICF).

8. Review Process

Conducted by:
Cleared by SRO:
Reviewed by:

Sources used:

Annex List

Annex1: Project expenditure

Annex 2: Results Framework

Annex 3: KPIs 6 and 8 methodology

Annex 4: Overall Risk Assessment Framework (ORAF)

Annex 5: Impact Evaluation

Annex 6: List of publications

Annex 1: Project expenditure (actual vs. planned expenditure, including the delivery rate (%))

FY	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18
AF Estimated Disbursements (Bank FY/US\$m)								
Annual				0.8	4.7	6.5	6.7	3
Cumulative				0.8	5.5	12	18.7	21.7
GEF Estimated Disbursements (Bank FY/US\$m)								
Annual	0.7	0.5	0.9	1.1	1.3	2	0.5	0
Cumulative	0.7	1.2	2.1	3.2	4.5	6.5	7.0	7.0
TOTAL Estimated Disbursements (Bank FY/US\$m)								
Annual	0.7	0.5	0.9	1.9	6	8.5	7.2	3
Cumulative	0.7	1.2	2.1	4	10	18.5	25.7	28.7

Note: FY covers the period from July 1 to June 30. AF refers to funds donated by ICF.

Annex 2: Results Framework

REVISED PROJECT RESULTS FRAMEWORK

Project Development Objective (PDO): To promote the adoption of environment-friendly silvopastoral production systems in Colombian cattle ranching in Project areas, to improve natural resource management, enhance the provision of environmental services (biodiversity, land, carbon, and water), and raise the productivity in participating farms. Click here to enter the revised PDO of your operation												
PDO Level Results Indicators ¹	Core	UOM ²	Baseline Original Project Start (2010)	Progress To Date (June 2014) ³	Cumulative Target Values ⁴				Frequency	Data Source/ Methodology ⁵	Responsibility for Data Collection	Comments
					FY 2015	FY 2016	FY 2017	FY 2018				
Area under environment-friendly cattle ranching production systems implemented in Project areas	<input type="checkbox"/>	hectares	na	15,000	25,000	43,500	50,600	63,000	Annual	Land use georeferencing showing conserved area or converted to different SPS	FEDEGAN-FNG	The 2013 value represents the areas under natural ecosystems (forests and wetlands) in the participating farms. The target value represents the areas in the participating farms converted into SPS land-uses (such as pastures with trees, agroforestry, live fences, iSPS...), as well as the natural ecosystems that have been conserved. This refers to land-use UT#1-5 and 7 as per the Land use ES index in Annex 4 of the PAD. The UT#5,

¹ Please indicate whether the indicator is a Core Sector Indicator (for additional guidance – please see <http://coreindicators>).

² UOM = Unit of Measurement.

³ For new indicators introduced as part of the additional financing, the progress to date column is used to reflect the baseline value.

⁴ Target values should be entered for the years data will be available, not necessarily annually. Target values should normally be cumulative. If targets refer to annual values, please indicate this in the indicator name and in the “Comments” column.

⁵ The revised Operation Manual includes a detailed description of the methodology to measure and monitor each of the indicator included in the Results Framework.

												live fences and wind barriers, are accounted as per conversion ratio 1km= 3.5ha.
Land area where sustainable land management practices have been adopted as a results of the project	<input checked="" type="checkbox"/>	hectares	na	0	10,000	28,500	35,600	48,000	Annual	Land use georeferencing showing conserved area or converted to different SPS	FEDEGAN-FNG	This indicator is a WB Core Indicator. It relates directly to the above PDO indicator: while the latter includes area under conserved natural ecosystems, this indicator only reports <u>additional areas converted into SPS</u> land use as results of the project.
Increase in the production of beef and/or milk per intervened hectare in participating farms	<input type="checkbox"/>	Percentage	0	-	0%	3%	-	10%	Twice during the project lifetime	Information collected: -Number of animals (incl. nb of cows milked) - Total area (ha) in SSP where animals graze - milk production per animal per day -Weigh of animals	FEDEGAN-FNG	Measurement of the beef/milk production will be made twice in a sample of participating farms: first measurement will be made during the second half of 2014and will give the baseline value; second measurement will be made before the mid-term review, and the third measurement just before the project closure. Detailed description of the methodology is included in the Manual of Operations.
Improved presence of globally important biodiversity in Project areas, as measured by an increase in the	<input type="checkbox"/>	Increase in Environmental Services	na	0	150,000	300,000	450,000	750,000	Annual	The ESI is calculated by multiplying the number of hectares under	FEDEGAN-FNG with CIPAV	This ESI is measured in each farm at the beginning of the project and the results are summed up to

Environmental Services Index (ESI) resulting from the adoption of environment-friendly SPS in participating farms in Project areas, over baseline		Index (ESI)								each land use category, and the corresponding index for each land use.		obtain a baseline score. This operation is repeated annually, but the yearly score is subtracted from the baseline to find the incremental points (ESI) that correspond to those obtained during the lifetime of the project.
Reduced soil erosion (tons/ha) induced by the adoption of SPS and measured in at least 2 pilot areas, over baseline	<input type="checkbox"/>	Tons/ha	na	na	0	-	-	0.15	Annual	Monitoring soil loss measurement. An average of soil erosion from 3 plots (in each region) is calculated. Each plot is set in a SPS. Control areas will be pastures without trees in the same property or in a neighbouring area.	FEDEGAN-FNG-FNG with CIPAV	The pilot plots are under implementation in two regions: Valle río Cesar and Ecorregión Cafetera. Measurements need to be made on a one-year period (to cover both rainy and dry seasons). Accordingly, the baseline for this indicator will be available by July 2014.
Reduction in greenhouse (GHG) emissions from avoided deforestation and forest degradation and increase in carbon sequestration at the farm-level through adoption of environment-friendly SPS in participating farms	<input type="checkbox"/>	Eq. tons of CO ₂	0	0	-	-	-	2 million	Twice during the lifetime of the project	Plots establishment. Data collected from permanent plots will be used for estimates of aboveground carbon biomass for the different type of land uses. ..	FEDEGAN-FNG with TNC	Average carbon content will be estimated for the different land-uses. There will be two measurements: (i) baseline once all selected farms are GIS-referenced, and (ii) at the end of the project based on the land use mapping of the beneficiary farms. Detailed description of the methodology is

Intermediate Results and Indicators												
Intermediate Results Indicators	Core	Unit of Measurement	Baseline Original Project Start (2010)	Progress To Date (June 2014)	Target Values				Frequency	Data Source/ Methodology	Responsibility for Data Collection	Comments
					FY 2015	FY 2016	FY 2017	FY 2018				
Intermediate Result 1: To improve productivity in participating cattle ranching farms in Project areas, through SPS												
Area converted to intensive SPS in participating farms	<input type="checkbox"/>	hectares	0	190	1,000	4,000	8,000	10,000	Annual	Land use georeferencing (area converted to iSPS in each farm). Annual direct measurements will be done in each farm.	FEDEGAN-FNG	The progress to December 2013 is based on the land use assessment already conducted in the 780 farms (it is projected that about 500 ha of iSPS could already be in place in the 2,400 farms selected by the project). It is expected that about 4,000 hectares would be converted as a result of the PES-2 scheme, while another 6,000 hectares would be converted as a result of technical Assistance only.
Increase in average stocking rate (cows/ha) in intervened Project Areas	<input type="checkbox"/>	Percentage	0	0	-	3%	-	10%	Twice during the lifetime of the project	Sampling methodology (farm level)	FEDEGAN-FNG	Measurement would be made twice in a sample of participating farms: a baseline value measurement will be made during the second half of 2014; then the measurement of progress will be made before the mid-term review, and the second measurement just before the project

Intermediate Results and Indicators												
Intermediate Results Indicators	Core	Unit of Measurement	Baseline Original Project Start (2010)	Progress To Date (June 2014)	Target Values				Frequency	Data Source/ Methodology	Responsibility for Data Collection	Comments
					FY 2015	FY 2016	FY 2017	FY 2018				
												closure. Detailed description of the methodology is included in the Manual of Operations.
Number of cattle ranching farmers sensitized on SPS and informed about availability of credit sources	<input type="checkbox"/>	Number	0	1,800	2,500	3,000	3,500	4,000	Annual / bi-Annual	<p>Illustrative talks on SPS</p> <p>Field tours in demonstration farms</p> <p>Permanent support to producers in each farm extension</p> <p>Presentation about credit management strategy and current regulations,.</p>	FEDEGAN-FNG	Sensitization campaigns are conducted as part of the <i>Convocatoria</i> process. In addition, regular dissemination events are organized. The <i>Fincas demostrativas</i> will also be an instrument for dissemination of SPS practices.
Number of professionals and technicians trained on SPS establishment and management	<input type="checkbox"/>	Number	0	68	80	100	100	100	Annual / bi-Annual		FEDEGAN-FNG	

Intermediate Results Indicators	Code	Unit of Measurement	Baseline Original Project Start (2010)	Progress To Date (June 2014)	Target Values				Frequency	Data Source/ Methodology	Responsibility for Data Collection	Comments
					FY 2015	FY 2016	FY 2017	FY 2018				
Intermediate Result 2: To increase connectivity and reducing land degradation through differentiated PES schemes												
Area under PES schemes in Project areas (PES-1 and PES-2)	□	Ha	0 (PES-1) 0 (PES-2)	5,250 (PES-1) 0 (PES-2)	12,480 (PES-1) 800 (PES-2)	22,280 (PES-1) 1,600 (PES-2)	33,280 (PES-1) 2,800 (PES-2)	41,600 (PES-1) 4,000 (PES-2)	Annual	Activity reports and field visits	Fondo Acción / FEDEGAN-FNG	Under the PES-, only areas with land uses environmentally-friendly will be reported, i.e. Land use UT#1-5 (as per the table on the ES Score Annex 4 of the PAD). The areas under other land use that receive payments (Land use UT#6-9 based on their location in corridors or the presence of native species) will not be reported in this indicator. Under PES-2, only land-use UT#7 is targeted.
Number of cattle ranching farms benefitting from a PES scheme (NRM or Carbon)	□	Number	0 (PES-1) 0 (PES-2)	292 (PES-1) 0 (PES-2)	700 (PES-1) 250 (PES-2)	1,500 (PES-1) 500 (PES-2)	1,700 (PES-1) 900 (PES-2)	1,700 (PES-1) 1,255 (PES-2)	Annual	Activity reports and field visits	Fondo Acción / FEDEGAN-FNG	The scheme for Carbon-PES exclusively focuses on small- and medium-scale farmers.
Number of focal plant species used/conserved in cattle ranching	□	Number	0	2	10	20	30	50	Annual	Field visit reports by technical assistants	FEDEGAN-FNG- CIPAV	This indicator measures the number of focal plant species planted in project

Intermediate Results Indicators	Core	Unit of Measurement	Baseline Original Project Start (2010)	Progress To Date (June 2014)	Target Values				Frequency	Data Source/ Methodology	Responsibility for Data Collection	Comments
					FY 2015	FY 2016	FY 2017	FY 2018				
farms (25 of which are globally important species)										and field surveys.		farms.
Number of market-based / consumer initiatives designed, (including large-scale PES mechanism), that could support the broader adoption of SPS by the end of the project	<input type="checkbox"/>	Number	-	-	-	-	-	2			FEDEGAN-FNG	

Intermediate Results Indicators	Core	Unit of Measurement	Baseline Original Project Start (2010)	Progress To Date (June 2014)	Target Values				Frequency	Data Source/ Methodology	Responsibility for Data Collection	Comments
					FY 2015	FY 2016	FY 2017	FY 2018				
Intermediate Result 3: To strengthen subsector institutions and dissemination and M&E												
Number of strategic alliances established with key public and private, national and regional entities for the promotion of SPS in Colombia	<input type="checkbox"/>	Number	0	1	2	3	4	5			FEDEGAN-FNG	Type of alliances: research institutions, government entities at the local regional and national levels, private sector, among others. The alliance with SENA has already supported activities of distribution of seedlings for the promotion of SPS.
M&E system established and providing timely and relevant information on Project's activities and results.	<input type="checkbox"/>	Yes/No	No	No	Yes	Yes	Yes	Yes				As of January 2014, the M&E system has been designed and is almost operational. Methodologies have been defined (and reflected in the revised MoP) for each of the Project indicators.
Communication Strategy implemented for different target audiences (mainly policy makers and farmers)	<input type="checkbox"/>	Yes/No	No	Yes	Yes	Yes	Yes	Yes				The Communication strategy has been prepared and is implemented.
Number of farms not directly participating in Project adopting SPS	<input type="checkbox"/>	Number	0	0	50	150	300	400	Annually		FEDEGAN-FNG	FEDEGAN-FNG ensures a global monitoring of SPS adoption at the national level.

Annex 3: KPIs 6 and 8 methodology

Short title	ICF KPI 6: Net Change in Greenhouse Gas Emissions (tCO₂e) – tonnes of GHG emissions reduced or avoided through landuse changes at farm and landscape levels.														
Type of indicator	Cumulative: report annual in-year totals against each milestone. These annual in-year totals should then be summed to give cumulative totals for the current spending review period (2011/15).														
Key reporting requirements	<p>Below is a list of key reporting requirements to keep in mind when making your returns. Further details are available in the text below:</p> <table border="1" data-bbox="412 768 1305 1184"> <thead> <tr> <th data-bbox="412 768 716 806">Requirement</th> <th data-bbox="716 768 1305 806">Summary</th> </tr> </thead> <tbody> <tr> <td data-bbox="412 806 716 873">Is this a DRF indicator?</td> <td data-bbox="716 806 1305 873">No</td> </tr> <tr> <td data-bbox="412 873 716 940">Available for reporting?</td> <td data-bbox="716 873 1305 940">Yes</td> </tr> <tr> <td data-bbox="412 940 716 1008">Methodology changes?</td> <td data-bbox="716 940 1305 1008">Yes – minor changes</td> </tr> <tr> <td data-bbox="412 1008 716 1045">Units</td> <td data-bbox="716 1008 1305 1045">tCO₂e</td> </tr> <tr> <td data-bbox="412 1045 716 1083">Attribution</td> <td data-bbox="716 1045 1305 1083">Pro-rata share of funding</td> </tr> <tr> <td data-bbox="412 1083 716 1184">Disaggregation to be reported in results templates</td> <td data-bbox="716 1083 1305 1184"> <ul style="list-style-type: none"> • None, but please report if carbon credits have been obtained or not and if these have been sold. </td> </tr> </tbody> </table>	Requirement	Summary	Is this a DRF indicator?	No	Available for reporting?	Yes	Methodology changes?	Yes – minor changes	Units	tCO ₂ e	Attribution	Pro-rata share of funding	Disaggregation to be reported in results templates	<ul style="list-style-type: none"> • None, but please report if carbon credits have been obtained or not and if these have been sold.
Requirement	Summary														
Is this a DRF indicator?	No														
Available for reporting?	Yes														
Methodology changes?	Yes – minor changes														
Units	tCO ₂ e														
Attribution	Pro-rata share of funding														
Disaggregation to be reported in results templates	<ul style="list-style-type: none"> • None, but please report if carbon credits have been obtained or not and if these have been sold. 														
Technical definition/ Methodological summary	<p>The indicator will report on the <u>net change</u> in greenhouse gas (GHG) emissions measured in tonnes of carbon dioxide equivalent (tCO₂e), estimated in land cover/forestry changes 2010-2017.</p> <p>TNC will report under the LULUCF and Agriculture sector and will capture changes in emissions from deforestation and forest degradation, forest conservation, sustainable management of forests and enhancement of forest carbon stocks (REDD+).</p>														
Rationale	<p>A key priority of the ICF is to demonstrate low carbon development is feasible and to achieve emission reductions. Monitoring the level of emissions abated from ICF projects is a key indicator of progress and results of direct action on the ground.</p> <p>TNC signed in 2011 an agreement with JAXA (Japan Aerospace Exploration Agency) where it gets free access to all ALOS/PALSAR Radar imagery, which allows accurate estimation of aboveground biomass for different land cover/use types and monitor through time biomass changes and deforestation processes.. The K&C uses</p>														

	<p>remote sensing data generated by JAXA and ALOS, to contribute with the global environment monitoring of the following topics: forests and wetland mapping, understand terrestrial carbon cycles, support climate change topics framed in the Kyoto Protocols, support the World Summit on Sustainable Development and the Summit to Combat Desertification (UN).</p> <p>TNC has been part of the K&C since 2011, and its continuity was recently extended until 2017.</p> <p>The methodologies and work protocols under the K&C initiative are developed and discussed by international experts who work on forests, wetlands and carbon, with the aim of having a standard method for the analysis of ALOS PALSAR data.</p>
Reporting Organisation	TNC
Country office role	TNC will report according to IDEAM (official REDD+ responsible agency) and those agreed with ICF/DECC.
Data source	Project and IDEAM data.
Data included	Estimated lifetime emission savings, derived from activity data base on land use data measured by TNC within project.
Formula/Data calculation (including attribution rule)	<p><u>Calculation</u></p> <p>The indicator will report net changes in GHG emissions from the intervention for each year of the project and providing a forecasts for the remaining expected emission savings over the lifetime (2017).</p> <p>The indicator will report in year savings and the remaining expected lifetime tCO₂e avoided, including sequestration.</p> <p>Any increases in emissions (reversals) will also be recorded.</p> <p><u>Calculation</u></p> <p>TNC will measure forest related emission savings: as net change in GHG emissions calculated from net changes in land use relative to the baseline. Land use is converted into a corresponding amount of CO₂e by multiplying land use (in hectares) by a specific emission factors.</p> <p>Land use emission factors will be established by landuse types established by project (see protocol KPI 08).</p> <p>The monitoring of emission savings will use the three types of calculation:</p>

	<p>1. Where the forest type remains the same but its quantity has changed e.g. in an afforestation project:</p> <p>$\Delta \text{ Emissions} = [\Delta \text{ forest land area} \times \text{emission factor}]$</p> <p>2. Where the quantity of forest remains the same but its condition has changed e.g. in an anti-degradation project:</p> <p>$\Delta \text{ Emissions} = [\text{forest land area} \times \text{emission factor} \times \Delta \text{ degradation multiplier}]$</p> <p>3. In addition, the method of land use <i>change</i> should be taken into account. For example, deforestation through fire releases more GHGs than deforestation through felling.</p> <p>TNC will perform their own calculations consistent with IPCC methodologies and the DFID appraisal guidance.</p>
Most recent baseline	Data from PALSAR-1 will be used to characterize project regions by establishing baseline conditions of land-cover for the time period of 2008-2010 by using already generated land-cover data. Land cover changes will be used also to estimate deforestation and avoided deforestation at landscape level and specifically of farms in hotspot areas. Wood samples of dominant species were taken in 3 GEF vegetation plots, to obtain new data to help adjust allometric curves to estimate CO ₂ e. Field data on biomass in different SPS has still to be obtained.
Good performance	Achievement of target / expected results with no concerns of leakage, non-permanence (for forest projects) or significant rebound effect.
Return format	Absolute volume of greenhouse gas emissions reduced or avoided (tCO ₂ e). Further disaggregation required as listed below.
Data dis-aggregation	TNC will measure additional tonnes of GHG avoided/saved (tCO ₂ e) from Land Use Change and Forestry (LULUCF) if applicable.
Data availability	Changes in CO ₂ (e) will be reported every two years.
Time period/lag	The time lag is related to measures in implementation of silvopastoral systems and response in CO ₂ sequestration.
Quality assurance measures	Protocols and quality measures will be agreed upon with IDEAM and WB.
Data issues	PALSAR-1 & PALSAR-2 (Japanese Aerospace Exploration Agency) and potentially Sentinel-1 (European Space Agency) radar data and optical imagery available for the 2013 will provide the baseline for remote sensing indicators (i. e. gamma naught values) that characterize and are sensible to changes associated to vegetation structural variations (i. e. increase/decrease in biomass

	<p>stocks). The ground truth data gathered at a farm level will provide data of biomass estimations (ton CO₂/ha) that will be introduced in spatial explicit techniques with remote sensing data as predictable variables (i.e. decision trees, linear regression, maximum entropy, e.t.c).</p> <p>Spatial explicit modelling will provide an estimation of biomass (ton CO₂) (including farms associated to the project) to determine historical and landscape biomass tendencies (2007-2017), to determine the contribution of project avoided degradation and deforestation activities at a watershed level.</p> <p>Spillover effects and leakage of emissions outside the scope of a project may also be evaluated.</p>
Additional comments	n/a
Leads	<p><u>For Forestry:</u></p> <p>Matthew Sellars (DFID) m-sellar@dfid.gov.uk</p> <p>Phil James (DECC) philip.james@decc.gsi.gov.uk</p>

Short title	ICK KPI 8: Carbon balance where deforestation and degradation have been avoided through ICF support at landscape level and farm level in Colombian Cattle ranching landscapes.														
Indicator Type	Cumulative: TNC will report every two years totals against each milestone. These annual in-year totals should then be summed to give cumulative totals for the current spending review period (2008/17).														
Key reporting requirements	<p>TNC will comply with reporting requirements:</p> <table border="1" data-bbox="370 562 1263 976"> <thead> <tr> <th data-bbox="370 562 678 598">Requirement</th> <th data-bbox="678 562 1263 598">Summary</th> </tr> </thead> <tbody> <tr> <td data-bbox="370 598 678 667">Is this a DRF indicator?</td> <td data-bbox="678 598 1263 667">Yes</td> </tr> <tr> <td data-bbox="370 667 678 737">Available for reporting?</td> <td data-bbox="678 667 1263 737">Yes</td> </tr> <tr> <td data-bbox="370 737 678 806">Methodology changes?</td> <td data-bbox="678 737 1263 806">Yes</td> </tr> <tr> <td data-bbox="370 806 678 837">Units</td> <td data-bbox="678 806 1263 837">Hectares</td> </tr> <tr> <td data-bbox="370 837 678 873">Attribution</td> <td data-bbox="678 837 1263 873">Pro-rata share of funding</td> </tr> <tr> <td data-bbox="370 873 678 976">Disaggregation to be reported in results templates</td> <td data-bbox="678 873 1263 976"> <ul style="list-style-type: none"> • NA </td> </tr> </tbody> </table>	Requirement	Summary	Is this a DRF indicator?	Yes	Available for reporting?	Yes	Methodology changes?	Yes	Units	Hectares	Attribution	Pro-rata share of funding	Disaggregation to be reported in results templates	<ul style="list-style-type: none"> • NA
Requirement	Summary														
Is this a DRF indicator?	Yes														
Available for reporting?	Yes														
Methodology changes?	Yes														
Units	Hectares														
Attribution	Pro-rata share of funding														
Disaggregation to be reported in results templates	<ul style="list-style-type: none"> • NA 														
Technical definition/ methodology	<p>This indicator will aggregate:</p> <ol style="list-style-type: none"> a. Estimation of carbon gain where deforestation has been avoided; b. Estimation of carbon loss where forest degradation has been avoided; c. Estimation of carbon gain where afforestation has taken place; and d. Estimation of carbon loss where reforestation has taken place. <p>The indicator will be measured every two years</p> <p>Indicators will be measured at the landscape and farm level:</p> <p>LANDSCAPE LEVEL</p> <p>Deforestation, degradation, afforestation and reforestation of land are defined according to changes in forest structure traits (biomass) in time between areas intervened and non-intervened by the project. Remote sensing data and plot ground truth data gathered in the LULC associated to farms part of the project will be integrated to estimate carbon stocks (aerial) at landscape level. Remote sensing to be used is RADAR imagery from ALOS PALSAR-1 & ALOS PALSAR-2 and SENTINEL sensor (high to medium resolution imagery). Ground truth data from plots about aerial biomass estimations (training data set) and remote sensing (predictable variables) will be integrated in different modelling techniques (i. e. linear regression, logistic regression, discriminant analysis, tree decision, etc.) to determine the spatial distribution of biomass estimations at a landscape level.</p>														

Modelling techniques will provide baseline data of biomass projections from 2007-2017 yearly at a landscape level using biomass estimations at farm level, to characterize project ecoregions by establishing baseline and tendencies of carbon stocks. Comparing carbon balance in farms associated to the project areas with the landscape level estimations will help to determine benefits of implementation of silvopastoral systems in the project to carbons sequestration and ecosystem services in a landscape level.

Programme managers should proceed in three stages:

Step 1: Establish the historical spatial distribution of biomass at a landscape level: what is the carbon estimations in the landscape?

Step 2: Estimate the impact of the intervention: what is carbon estimations after the intervention in farms associated to the project?

Step 3: Calculate the contribution to total biomass balance at the landscape from the biomass balance at farm level.

Step 1: Establishing the historical tendencies of biomass estimations

This step involves establishing the historical tendencies of biomass indicators at a landscape level.

To estimate historical values of the indicator due to net deforestation, degradation, reforestation, afforestation. The application of Radar data form 2007 to 2017 will be applied to detect vegetation changes related to areal biomass (figure 1). The expected benefits of this framework are appealing because of consistent data capture capabilities of Radar images will complement the usual weakness of monitoring approaches that rely on the availability of optical data for land cover mapping over mountain and cloudy areas.

PALSAR-1 & PALSAR-2 (Japanese Aerspatial Exploratory Agency) and potentially Sentinel-1 (European Space Agency) radar data and optical imagery available for the 2013 will provide the baseline for remote sensing indicators (i. e. gamma naught values) that characterise and are sensible to changes associated to vegetation structural variations (i. e. increase/decrease in biomass stocks). The ground truth data gathered at a farm level will provide data of biomass estimations (ton CO₂/ha) that will be introduced in spatial explicit techniques with remote sensing data as predictable variables (i.e. decision trees, linear regression, maximum entropy, e.t.c).

Spatial explicit modelling will provide a estimation of biomass (ton CO₂) (includes farms associated to the project) to determine historical and landscape biomass tendencies (2007-2017) to determine the contribution of project avoided

degradation and deforestation activities at a watershed level.

Because the spatial modelling integrates different natural processes and anthropogenic activities as variables. The historical tendencies involve identifying the most likely activity on the land in the absence of an intervention. For example the programme manager may want to consider:

- For natural forest land, is there pressure from agricultural expansion to convert it to cropland?
- For degraded land, is there pressure from palm oil expansion to convert it into a palm oil plantation?
- For deforested land, are there plans to reforest it or construct buildings to settle permanently?

These changes will provide the information about the most likely activity related to LULC transformation on landscape associated to project areas in absence of project intervention.

Step 2: Estimating the impact of the intervention

To estimate carbon stocks and biomass associated to different LULC types the national and subnational REDD protocol for carbon estimation for Colombia will be applied (Yepes *et al.* IDEAM 2011). Allometric equations will be applied to forest LULC types and direct measurements will be applied to non-forest LULC types based on plot measurements. Carbon stocks (t/per unit area) will be estimated by LULC type and to estimate the total carbon estimations to farm level is described by the equation 1:

$$Total\ B\ (t) = Bha\ \left(\frac{kg}{ha}\right) \times \left(\frac{1t}{1000kg}\right) \times TotalA$$

This methodology will be applied to farms where activities from the project will be implemented. This step is about the change in land use after the intervention.

- **Deforestation:** Estimation of carbon loss by the number of hectares (within project area) where wood was harvested (in the reporting year)
- **Degradation:** Estimation of carbon loss by the number of hectares (within project area) where forest land was degraded (in reporting year)
- **Afforestation:** Estimation of carbon gain by the number of hectares (within project area) where silvopastoral systems and forests were planted (in reporting year)
- **Reforestation:** Estimation of carbon gain by the number of hectares (within project area) where forests were replanted (in reporting year)

Step 3: Contribution of carbon balance of the landscape by project implementation

To calculate the total balance carbon for the landscape will be estimated using Radar data in different time periods Figure 1. Based on the data available at a farm level of carbon stocks, the contribution of the intervention of the project areas to the total carbon balance of the landscape will be calculated.

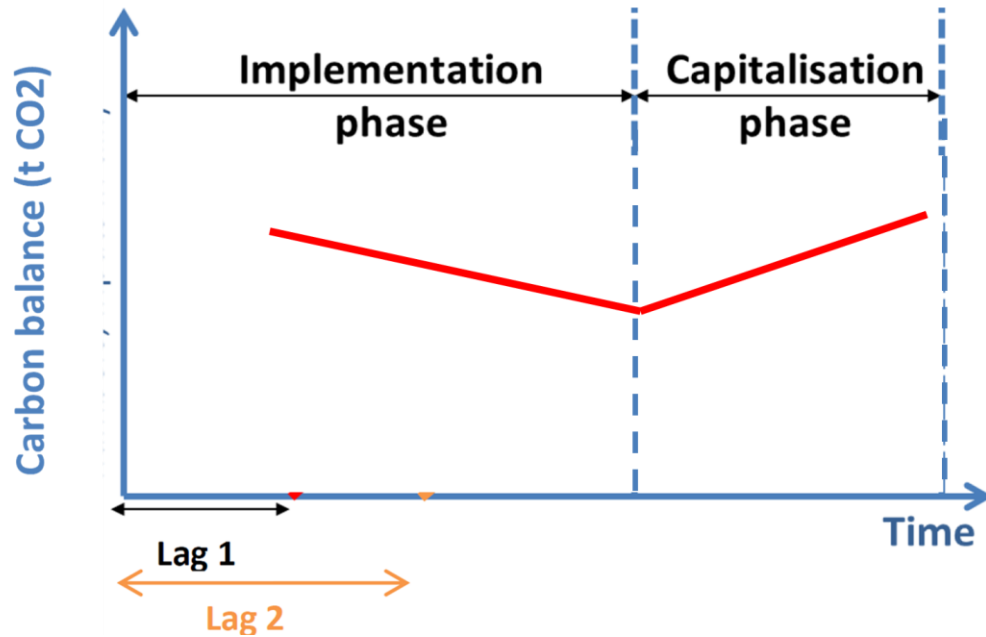


Figure 2. Contribution of the project to the Carbon balance at a landscape level.

INDICATORS AT THE FARM LEVEL

At farm level following landuse types will be analysed (table 1):

TYPE_U T	LANDUSE
1	Mature forests and wetlands
2	Secondary forest
3	Dispersed trees in grasslands and managed secondary growth
4	Agroforestry (minimum 2 strata)
5	Life fences (km)

6	Agricultural and cattle ranching soils with landcover above 80%.
7	SSPi (> 5.000 trees or shrubs per ha)
8	Other transitory crops and forestry plantations
9	Soils with degraded grasslands
0	Infraestructure

TNC will proceed according to proposed three stages already mentioned at landscape level.

Step 2: Estimating the impact of the intervention

The previous methodology applied to farms where no project intervention is expected will be applied to farms where activities from the project will be implemented. This step is about the change in land use after the intervention.

- **Deforestation:** Estimation of carbon loss by the number of hectares (within farm)
- **Degradation:** Estimation of carbon loss by the number of hectares (within farm (in reporting year))
- **Afforestation:** Estimation of carbon gain by the number of hectares (within project area) where silvopastoral systems and forests were planted (in reporting year)
- **Reforestation:** Estimation of carbon gain by the number of hectares (within project area) where trees were replanted (in reporting year)

Afforestation and reforestation will be defined according to above land use types (Table 1).

Land uses 3-8 will be included in afforestation category and 1-2 will be included in the three remaining. Natural regeneration will be considered as reforestation.

Step 3: Difference between counterfactual and actual

To calculate the total balance carbon figure, the programme managers should do the following calculation:

(Carbon estimations due to deforestation under counterfactual) – (Carbon estimations due to deforestation in project intervened farms) + (Carbon estimations due to degradation under counterfactual) – (Carbon estimations due to degradation in project intervened farms) + (Carbons

estimations due to afforestation in project intervened areas) – (Carbon estimations due to afforestation under counterfactual) + (Carbon estimations due to reforestation in project intervened areas) – (Carbon estimations due to reforestation under counterfactual)

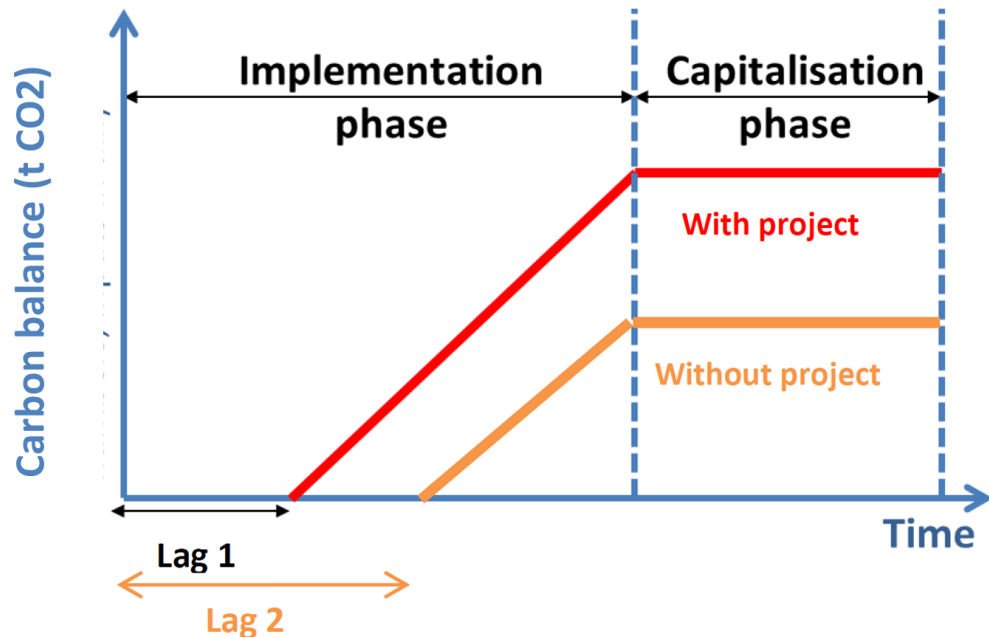


Figure 1. Carbon balance through the project execution time frame. Red line describes carbon stocks in farms intervened by project activities. Orange line describes carbon stocks under counterfactual



Figure 2. Polygon over an optical image from year 2013 –Baseline-. In **RED delineated** area where landuse change activities are located (inner strip is natural regeneration, outer strip is silvopastoral systems), **BLUE** squares are the control areas.

As mentioned in format, TNC reports against proposed indicators (and in turn will be aggregated to calculate the headline ‘total hectares’ figure) include:

- Forestry and Climate Change (DFID Climate and Environment Department, CED)
- Forests, Governance, Markets and Climate (DFID CED)
- Nepal Multi-Stakeholder Forestry Programme (DFID Nepal)
- Reducing Deforestation in the Brazilian Cerrado (Defra)
- South Asia Alliance for Climate Resilient Landscapes and Livelihoods (DFID Asia Regional Office)
- Forests Investment Programme (multilateral programme managed by the World Bank)
- Papua Comprehensive Programme on Spatial Planning and Low Carbon Development (DFID Indonesia)

These programmes have been selected on the basis that they have already included some form of ‘number of hectares’ target in their Business Case or Strategic Case. **Additional contributions to this result/indicator from other programmes not listed here, or developed in the future, will subsequently be added to the list.**

	<p>TNC will identify the most appropriate source of data, as there may be reliable data provided by national bodies or other international bodies.</p> <p>The number of hectares avoided will be used for ICF reporting, where it is possible to measure results from DECC and/or DEFRA reporting this should also be noted, so as to avoid replications of the exercise to generate the required data for the ICF Board.</p> <p>As there are poor data and no standard methodology for modelling future rates of deforestation/degradation, this project will be aligned with a consistent methodology that has being refined by CED. TNC will follow the methodology outlined above, but will propose an alternative methodology that CED will quality assure and standardise to contribute to the indicator.</p> <p>1. Once the methodology has been refined and tested, CED will provide a worked example for successful reporting against this indicator.</p>
Rationale	<p>The objectives of the UK's forest finance are to reduce greenhouse gas emissions from the forest sector, to preserve bio-diversity and reduce poverty through the deforestation and forest degradation. This indicator will provide a broad measure of success against the headline forestry outcome of reduced deforestation and degradation of the world's forest land.</p> <p>Programme data will be used instead of international forestry data (available from the UN FAO) for the following reasons:</p> <ul style="list-style-type: none"> • FAO data is only reported once every five years (though in the future this will be every three years) which is not thought to be sufficiently frequent for DFID reporting purposes; • As discussed in 'technical definition/methodology' section above, UK spending is not thought to be sufficiently large that changes in international rates could be reasonably attributed to UK programmes. It is reasonable to expect that international rates of deforestation could go up as well as down (for example, due to natural disasters or increases in productive industries using forest land). <p>However, CED and cross-Whitehall colleagues plan to monitor international forestry trends reported by the FAO in order to triangulate project monitoring and evaluation data. Defra is also looking at ways in which satellite data could be used to measure changes in land use.</p>
County office role	As part of annual programme reporting, country offices will be required to quality assure information provided. The proposed methodology is aligned with IDEAM and national REDD methodologies.
Data source	Programme annual monitoring and evaluation data will be used as available from outside and national programmes.
Formula/Data calculation	Aggregation of the total number of hectares of forest land where deforestation

(including attribution rule)	and degradation have been avoided will be measured by TNC.
Most recent baseline	<p>As part of programme monitoring and evaluation frameworks, programme officers will be required to submit: (i) a baseline level of deforestation, afforestation or forest degradation in the project area; and (ii) an estimate of the 'business as usual' (or counterfactual) scenario that would occur if the programme did not take place. The counterfactual involves identifying the most likely outcome and economic activity on the land in the absence of an intervention.</p> <p>TNC will generate the required information to establish baseline.</p>
Good performance	<p>The public should be looking to decrease the total hectares of forest land deforested and/or degraded, while increasing the total hectares reforested or afforested.</p> <p>TNC will generate this information and maps.</p>
Return format	Hectares - total i.e. not abbreviated by thousands or millions
Data disaggregation	<p><u>Data to be disaggregated as part of workings and Quest number provided:</u></p> <p>Disaggregation of the following variables will not be collected as part of the ICF results template. Please include disaggregated data in your working documents and record the Quest number for these documents in the ICF results template.</p> <ul style="list-style-type: none"> - The number of hectares where deforestation and degradation has been avoided by country.
Data availability	Annual monitoring and evaluation reporting from this programme will be provided.
Time period/lag	<p>TNC will report on the number of hectares where deforestation and degradation were avoided in the preceding year in defined project areas at landscape and farm level. .</p> <p>Results will be compared to international changes in the area of forest land in intervention countries, as reported by the UN FAO on a five yearly basis.</p>
Quality assurance measures	TNC will assure that data comply with country offices (IDEAM), CED and FCPD.
Data issues	TNC will design specific methodologies that will be used to calculate the baseline and counterfactual scenario in each region of this project.
Additional comments	<p>TNC will agree with CED indicators will be addressed by TNC. TNC will identify:</p> <ul style="list-style-type: none"> • Changes in the quality of forest land in project intervention area, as reflected by biodiversity and CO2 sequestration levels • Measures of leakage at landscape level of intervention areas

	<ul style="list-style-type: none"> • Measures of permanence • TNC will support CED in their plans to monitor trends in deforestation rates which are reported every five years by the UN FAO Forests Resources Assessment. <p>TNC will support activities to improve this indicators by:</p> <ul style="list-style-type: none"> • Using satellite radar data to accurately measure changes in forest land and quality of forest land in project intervention areas. Satellite data will also help us identify leakage. • TNC where possible, will work with international experts such as the FAO, World Bank Forests Investment Programme staff, World Bank Carbon Finance Specialists, World Resources Institute, and the Government of Norway to develop more sophisticated methodologies and improved national forestry inventories. • TNC will also improve this indicators as it will communicate to policy makers the results to contribute with the REDD+ strategy in Colombia
Lead official	<p>Statistical advisor: Craig Irwin (DFID) c-irwin@dfid.gov.uk</p> <p>Subject matter lead: Matthew Sellar (DFID) m-sellar@dfid.gov.uk</p>

Annex 4. OVERALL RISK ASSESSMENT FRAMEWORK (ORAF)

Project Development Objective(s)	
<p>The Project Development Objective is to promote the adoption of environment-friendly silvopastoral production systems (SPS)⁷ for cattle ranching in Colombia’s Project areas, to improve natural resource management, enhance the provision of environmental services (biodiversity, land, carbon, and water), and raise the productivity in participating farms..</p>	
<p>PDO Level Results Indicators:</p>	<ol style="list-style-type: none"> 1. Area under environment-friendly cattle ranching production systems implemented in Project areas (<i>sub-indicator</i>: Land area where sustainable land management practices have been adopted as a result of the project) 2. Increase in the production of beef and/or milk per intervened hectare in participating farms 3. Improved presence of globally important biodiversity in Project areas, as measured by an increase in the Environmental Services Index resulting from the adoption of environment-friendly SPS in participating farms in Project areas, over baseline 4. Reduced soil erosion (tons/ha) induced by the adoption of SPS and measured in at least 2 pilot areas, over baseline 5. Reduction in greenhouse (GHG) emissions from deforestation and forest degradation and increase in carbon sequestration at the farm-level through adoption of environment-friendly SPS in participating farms 6. Number of cattle ranching farms benefitting from Project instruments (technical assistance, PES or support for establishment of on-farm nurseries)

1. Project Stakeholder Risks	Rating:	Moderate
<p>Description: Participation to the project is on voluntary basis. While economic return of SPS techniques are un contested (regional SPS project and other SPS initiatives in Colombia), these techniques are still largely unknown by farmers,</p>	<p>Risk Management: Out of the expected 2,700 beneficiaries of the project, more than 2,400 have already been selected through the 2 <i>convocatorias</i> organized as part of the parent project (72.4 percent of selected participants are small farms, 20.2 percent are medium-sized, and 7.4 percent are large). The additional 300 participants will be selected in the two new areas (deforestation hotspots). The AF</p>	

⁷ Four criteria are used to assess whether a cattle ranching system is environmentally friendly: (a) increase in vegetation cover, including trees; (b) decrease of agrochemicals of fossil origin (pesticides and fertilizers); (c) contributions to reduced soil erosion; and (d) overall contribution to improving the quality of the landscape.

<p>especially small and medium farmers. Getting a good participation thus requires a targeted communication strategy to sensitize farmers to the benefits of these new techniques.</p>	<p>project will open a call for participants in the two deforestation hotspots through the implementation of a communication strategy particularly addressed to small farmers to disseminate the benefits of SPS and explain up front the conditions to participate. It is worth noting that the Additional Financing will exclusively support small- and medium-scale farmers. Lessons learnt from the project will be largely disseminated in order to foster adoption of SPS techniques much beyond the project areas and guide decision-making process at the policy level.</p>			
	<p>Resp. : FEDEGAN-FNG</p>	<p>Stage: Impl.</p>	<p>Due Date :</p>	<p>Status: Recurrent</p>
<p>2. Implementing Agency Risks (including fiduciary)</p>				
<p>Capacity</p>	<p>Rating:</p>	<p>Substantial</p>		
<p>Description: FEDEGAN-FNG will remain the lead executing agency and the CIPAV, Fondo Acción and TNC will remain “core partner agencies” to the project. The Additional Financing will extend the project activities in 2 new areas and pilot a new scheme that will combine in-kind and monetary support to the farmers. This will dramatically increase the workload of the various agencies and particularly FEDEGAN-FNG. Risk that FEDEGAN-FNG and partners face difficulties in implementing and monitoring project activities is rated substantial.</p>	<p>Risk Management: The institutional arrangements set up under the parent project have proven efficient and will remain the same under the Additional Financing (see below in “Governance” section). One of the criteria against which the two areas to be covered under the Additional Financing were selected relates to the proximity to the existing areas covered under the parent project, allowing the use of existing project infrastructure and staffing, in order to reduce costs and risks.</p> <p>A Financial Management Assessment of FEDEGAN-FNG and the partner entities, CIPAV, Fondo Acción, and TNC, was conducted in accordance with the Bank’s Policy OP/BP 10.00. Based on the results of the assessment it has been concluded that FEDEGAN-FNG and the partner entities continue to have adequate financial management arrangements that should also apply to the additional financing.</p> <p>However, to overcome the additional workload of the AF (particularly the production of planting material and the new scheme for iSPS), FEDEGAN-FNG will maintain the experienced staff already involved in the parent project and will strengthen the national and regional teams through the recruitment of additional staff, both at the administrative and technical levels: (i) at the administrative level, it is expected that FEDEGAN-FNG will recruit a Financial Specialist, an accountant and two assistant accountants; (ii) at the technical level, FEDEGAN-FNG will recruit expert to oversee the production of seeds and seedlings and provide support to on-farm nurseries. Due the expected increase in the procurement activities FEDEGAN-FNG would maintain through all the life of the project a procurement team with at least two</p>			

	<p>experts with experience in World Bank procurement Guidelines and procedures.</p> <p>Other partners, CIPAV, Fondo Acción and TNC, will continue to provide administrative and technical support to the project, and additional operating costs as needed. In addition, the Project Operational Manual is under revision to reflect on the new features under the Additional Financing and reflect any lessons learnt from the parent project. The signing of the amended Implementation Agreements would be a condition of effectiveness of the Additional Financing.</p>			
	Resp: FEDEGAN-FNG	Stage: Impl.	Due Date : by June 2014	Status: not yet due
Governance	Rating: Substantial			
<p>Description :</p> <p>- <u>Multiplicity of agencies involved</u>: There is the risk that relations among the partner entities do not work as intended, thus having an impact on project implementation.</p> <p>- <u>Potential risks associated with Cattle ranching sector</u>: during the preparation of the parent project, the risk of supporting cattle ranchers (and particularly through the cattle rancher association) was identified as FEDEGAN-FNG and livestock sector (particularly</p>	<p>Risk Management :</p> <p>The alliance between FEDEGAN-FNG, CIPAV, TNC and Fondo Acción, has proven very effective in ensuring the provision of an adequate mix of expertise to the project. As such the institutional arrangements will remain the same under the Additional Financing: FEDEGAN-FNG will remain the lead agency in charge of the implementation of the project and the Implementation agreements signed between FEDEGAN-FNG and the other partner agencies (CIPAV, Fondo Acción, and TNC) as part of the parent project will be extended and/or amended, as needed, at least till the new closing date of the project.</p> <p>Accountability will remain with FEDEGAN-FNG but decisions will be left for adoption by consensus from the Steering Committee members, comprised also by CIPAV, TNC and Fondo Acción. At the higher level, the Public Policy Committee (PPC), set up under the parent project will continue offering high-level stewardship and guidance under the Additional Financing.</p> <p>As part of Project preparation, activities have been undertaken to strengthen the partnership between project partners. A workshop with the participation of organizational coaching experts will be held by mid-December 2013.</p> <p>Screening procedures for selection of project beneficiaries under the current CMSCR Project have proven effective in mitigating reputational risks and will continue to be used under the Additional Financing. Under the CMSCR project, Fondo Acción (FA) performed the role of selecting project participants,</p>			

<p>large cattle ranchers0 were perceived as related to paramilitary groups.</p>	<p>independently of FEDEGAN-FNG. Project participants do not need to belong to FEDEGAN-FNG to participate. Two calls for proposals have been open and closed, resulting in the selection of about 2500 participants (achieving this project's goal), 75% of them small producers, each one having passed through judicial verification and land property rights/tenure screening with the support of national authorities. In addition, ex ante grievance and redress systems to address local concerns on preliminary beneficiary selection are embedded into the procedures. Under the proposed Grant same procedures/measures will be applied, including the opening of calls for participants in the two new areas to select 300 more participants. The collective Project management scheme, with the participation of all core partner agencies, will continue under this Grant.</p>			
	<p>Resp: FEDEGAN-FNG</p>	<p>Stage: Impl.</p>	<p>Due Date :</p>	<p>Status: Recurrent</p>

3. Project Risks			
Design		Rating:	Moderate
<p>Description: The AF project will scale up the existing activities in two new areas and will pilot a new scheme to promote the adoption of iSPS; it will combine: (i) an upfront in-kind support for the establishment of 1 hectare and (ii) annual ex-post payments to be made against verification of land use changes. The Additional Financing will also support the production of high quality planting material (seeds and seedlings). Financial management performance of the current project has been rated as Satisfactory, but the design of the project includes: new subcomponents; increase of the project beneficiaries; project funds will be triplicated; and there are four entities implementing the project, as a result the FM risk is assessed as substantial.</p>		<p>Risk Management : The proposed Additional financing heavily builds on the lessons learnt from the three years of implementation of the parent project and is designed to address the major challenges identified (technical assistance and planting material). In addition, the two new features under the Additional Financing (new scheme for iSPS and production of planting material) have been extensively discussed with the various partners as part of the preparation phase.</p> <p>Project Operational Manual is reviewed and approved by the partner entities and Implementation agreements with the partner entities will be amended to incorporate the additional roles and responsibilities.</p>	
		Resp: FEDEGAN-FNG	Stage: Prep/Impl.
		Due Date :	Status: in progress
Social & Environmental		Rating:	Moderate
<p>Description: The Additional financing will expand the project in two new areas, both presenting high rate of deforestation (deforestation hotspots) and consisting of extensions of two of the existing areas. The two deforestation hotspots are: (i) La Guajira (low foothill of the Sierra Nevada within the same area of the Valle del Rio Cesar), and (ii) El Meta (northern area near La Macarena within the same area of the low foothill region of the eastern cordillera of southern Meta).</p> <p><u>Environmental Assessments</u> have been conducted in both new areas and concluded that the project activities will be environmentally-beneficial in the two areas: they are expected to positively impact</p>		<p>Risk Management: The Additional Financing specifically aims to preserve biodiversity, increase ecosystem connectivity and reduce pressures on natural habitat. It specifically aims at addressing one of the most important drivers of deforestation in Colombia which is unsustainable cattle ranching practices, through the piloting of a new PES scheme that will promote the adoption of iSPS</p> <p>Specific features will be included in the PES schemes (both PES-1 and PES-2) to reward preservation of natural forests. The CMSCR project is successfully implementing PES-1 scheme for forest conservation, with participant farms with 30% of their land covered with forests agreeing to preserve them (the PES-1 scheme for forest conservation under CMSCR project recognizes a baseline payment of US \$23</p>	

biodiversity, ecosystem connectivity and water regulation. However, there is a risk that increased productivity at farm level, following SPS adoption, may create incentive for an expansion of cattle ranching, potentially causing more deforestation.

Social Assessments have also been conducted in both new zones. The Additional Financing will exclusively benefit small- and medium-scale farms (as the donor UK/DECC specifically targets impacts on poverty alleviation).

- In the Meta department, the conflict has led to an accelerated displacement and impoverishment of peasants and a high concentration of land ownership.
- The Guajira department has an important cultural diversity with the presence of indigenous ethnic groups such as Wayuu, Wiwa and Kogis. Nevertheless, the social assessments clarified that there is no overlap with legally constituted Indian reservations or formal process of incorporation within the intervention area for the AF (Econat, 2013). Wayuu people within the project area do not live in indigenous reserves. Unlike, they have private land-holding, possess their own economic activity, and although they maintain certain traditional customs, many of them have chosen westernized lifestyles.

Safeguards: The Safeguards instruments have been implemented in a satisfactory manner under the parent project.

and of US \$18 in the following years of the project). While under PES-2, no payment will be made for forest preservation, farmers involved in deforestation practices (based on land use monitoring) will be automatically withdrawn from the project and all PES contracts will be terminated.

The same screening procedures, which have proven successful under the parent project, will be used for the selection of the beneficiaries in the 2 additional areas. Based on the social assessment for the two deforestation hotspots, SAT has agreed in not triggering the Indigenous Peoples safeguard. Nevertheless a social management plan (SMP) will be implemented to undertake dissemination activities in the project sites where diverse cultures exist and with the neighboring indigenous groups to keep them informed about the project activities, using material in the appropriate indigenous dialects. Additionally, for the two Wayuu communities in the project area that are not cattle ranchers but that have expressed interest in benefitting in terms of seeds and seedlings, the project will envision including them in the “planting material production” activities, through the set-up of in-farm nurseries. This will strengthen the transfer of knowledge between the Wayuu communities and the project beneficiaries with a potential of great value added to the project.

Based on the Social and Environmental Assessments in the two additional areas, the Safeguards instruments have been considered relevant for these new areas and their implementation will thus be extended to the two new areas. The budget for the implementation of the safeguards instruments has been mainstreamed in the various components of the project. FEDEGAN-FNG will remain in charge of management and coordination of safeguards (social and environmental) requirements and implementation of safeguards instruments.

Resp:	Stage: Impl.	Due Date :	Status: on-going
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	FEDEGAN-FNG			
3.1. Program & Donor	Rating:	Moderate		
<p>Description : The Government of the United Kingdom, through its Department of Energy and Climate Change (DECC) has extended to the Government of Colombia a grant of UKP15 million (equivalent to US\$24,025,371) under the International Climate Fund (ICF) program to further promote the adoption of SPS in Colombia. An Administrative Agreement was signed between the UK/DECC and the WB on December 2012. The UK/DECC required the use of a Promissory Note rather than the use of usual financial arrangements; this financing modality falls outside the Bank's Call of Funds (CoF) regular system.</p>	<p>Risk Management : The WB and the Donor (DECC) have entered into an Administration Arrangement where clear agreements about supervision and reporting have been agreed upon. Bi-annual monitoring report will be submitted to UK/DECC. The UK Embassy staff will be invited to participate in WB supervision missions. The Task Team, with the support of the TF coordination team in LCR, will closely monitor the Call of Funds with the Donor and will enter them manually in the system.</p>			
	Resp: Bank	Stage: Impl.	Due Date :	Status: recurrent
3.2. Delivery Monitoring & Sustainability	Rating:	Moderate		
<p>Description: The proposed approach is demand-driven and based on voluntary changes in land-uses at the farm-level: while projections have been made building from the Regional RSPS Project, the level of uncertainty remains very high as how the conversion to new practices will roll out in the seven project areas.</p> <p>Additionally, the focus on climate change mitigation (one of the two development objectives for the Donor UK/DECC) requires the set-up of a new monitoring of GHG emissions and carbon sequestration as part of the Additional Financing.</p>	<p>Risk Management: The project would build a robust monitoring & evaluation system to regularly assess the progress made towards the various indicators and flexibility would prevail to ensure on-time adjustments during the course of the project implementation. The Monitoring and Evaluation tools have been developed under the parent project and are now operational. They will be used as part of the implementation of the Additional Financing. The Monitoring and evaluation framework for the project has been revised as part of the preparation process of the Additional Financing: quantitative targets have been updated to better reflect the context of cattle ranching in Colombia and the lessons learnt under during the first three years of implementation of the parent project. In addition, the methodology for the monitoring of each of the indicators under the Results Framework have been fine-tuned and included in the Project Operational Manual.</p> <p>For the Climate change indicator, the high level technical and scientific expertise of the various partners will be combined to ensure a transparent and credible monitoring. In addition, part of the monitoring and impact evaluation activities will remain under the Bank-executed part of the project, precisely to guarantee independence. Therefore, some monitoring activities and external impact assessments will be contracted out by the Bank.</p>			

	Resp: Both	Stage: Impl.	Due Date :	Status: on-going
3.3. Other – Political interferences	Rating:	Moderate		
Description: Colombia is entering a period of presidential campaign. It was identified as a risk the potential “use” of the project as a political tool toward rural electorate. The transition poses a new challenge, Government’s continued support to the project to mainstream the establishment of iSPS through the design and adoption of public policies based on project’s lessons and data.	Risk Management: A Steering Committee of the project met on October 9, to agree on the specific measures to be applied during the campaign period: (i) selection of the additional beneficiaries in the two new areas will be launched only after the June 2014 and (ii) the scheme for the promotion of iSPS will only become effective after June 2014 (with the provision of in-kind support) and (iii) the project should not be mentioned in any political events. The Public Policy Committee (PPC) which both Ministries (Agriculture and Environment) preside will remain the high-level steering body of the project under the AF.			
	Rspt: FEDEGAN-FNG	Stage: Prep. / Impl.	Due Date :	Status: recurrent
5. Project Team Proposed Rating <u>Before</u> Review				
5.1. Preparation Risk Rating: Substantial	5.2 Implementation Risk Rating: Substantial			
Comments: Project preparation has taken longer than expected due to several reasons: (i) time consuming environmental and social assessments and review of environmental management plan and preparation of social management plan. (ii) extensive technical discussions and validation among project partners of the design of a new instrument to promote the establishment of iSPS by small farmers, with two components (upfront in-kind support) and ex-post PES for carbon sequestration; (iii) the restructuring of the parent GEF project to align the operation to the reality of its actual implementation; and (iv) the validation of the institutional arrangements for the implementation of the AF project.	Comments: The overall risk under the Parent Project was rated Substantial at the appraisal stage. The major risk identified then referred to the “Bank’s reputational risk associated to work with FEDEGAN-FNG and with “the cattle ranchers”, perceived by certain social sectors as having supported illegally armed groups, particularly paramilitary groups”. The mitigation measures set to reduce this risk consisted of strict screening procedures to select project beneficiaries, jointly implemented by FEDEGAN-FNG, CIPAV, Fondo Acción and TNC. These screening procedures for the selection of the project beneficiaries, though time- and resource-consuming, have proven very efficient: so far, no complaint was registered and the process is largely seen as transparent and fair. The same approach will be applied for the selection of the additional beneficiaries.			
	The risks were re-assessed as part of the preparation of the Additional Financing and are described in detailed in the ORAF section (see Annex 4). In line with its innovative nature, the overall risk for the Additional Financing is rated Substantial . The proposed approach is demand-driven and based on voluntary changes in land-uses at the farm-level: while projections have been made building from the Regional RSPS Project, the level of uncertainty remains very high as how the conversion to			

	<p>new practices will roll out in the seven project areas. In order to mitigate this risk, the project would build a robust monitoring & evaluation system to regularly assess the progress made towards the various indicators and flexibility would prevail to ensure on-time adjustments during the course of the project implementation.</p> <p>This risk rating is also based on the following considerations: (i) the Additional Financing would pilot two new features, including the new PES-2 scheme that would combine in-kind support and ex-post payments; (ii) it would expand into two new areas, bringing the total number of municipalities covered to ninety. While lessons learnt from the parent project have been mainstreamed in the design of the Additional Financing, particularly in terms of risk mitigation, these additional challenges would only be overcome if FEDEGAN-FNG's and partners' operational and fiduciary capacities are strengthened (cf. legal covenant). In addition, partners' interaction has sometimes proven difficult due to diverse nature of project entities and managerial styles over the course of the implementation of the parent project in terms of coordination: special attention has been given during the preparation of the Additional Financing and will be maintained to improve the coordination.</p>
6. Risk Team	
6.1. Preparation Risk Rating:	6.2 Implementation Risk Rating
Comments:	Comments:
7. Overall Risk Following Review	
7.1. Preparation Risk Rating: Substantial	7.2 Implementation Risk Rating: Substantial
Comments:	Comments:

Annex 5: DRAFT Impact Evaluation Design

Impact Evaluation of the Colombia Mainstreaming Sustainable Cattle Ranching Project

Stefano Pagiola

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DRAFT – 17 June 2014

1. This notes summarizes plans for conducting an impact evaluation of the *Colombia Mainstreaming Sustainable Cattle Ranching (Ganadería Colombiana Sostenible, GCS)* Project.
2. The GCS project began implementation in 2010. It was initially financed by a US\$7 million grant from GEF and US\$13 million from partner contributions. In 2014, the project received additional financing of US\$21.7 million from the United Kingdom's Department of Energy and Climate Change (DECC) under its International Climate Fund (ICF) program. The GCS project is being implemented at five sites in different parts of the country, selected for their high levels of biodiversity and proximity to strategic ecosystems and protected areas: (i) the Cesar River Valley region, (ii) the Magdalena River region, (iii) the Boyacá-Santander region, (iv) the coffee-growing eco-region, and (v) the Piedemonte Orinocense region. The additional financing will allow for two additional sites (La Guajira and El Meta, both deforestation 'hotspots') to be added, adjacent to two of the existing sites.

Prior impact evaluation results

3. The feasibility and usefulness of impact evaluation was demonstrated by the impact evaluation that was carried out for the previous *Regional Integrated Silvopastoral Ecosystem Management Project*, which was implemented between 2003 and 2008 at sites in Colombia, Costa Rica, and Nicaragua. In Colombia, the project's pilot site was in the Quindío area.⁸ The Silvopastoral Project was the first World Bank natural resource management project to include a control group that was monitored throughout project implementation. Thanks to this feature, it was possible to demonstrate the effectiveness of the Payment for Environmental Services (PES) instrument used in the project.
- **Effect of PES.** PES recipients converted almost half of their farms to silvopastoral practices over the project's four years, compared to less than 10 percent by the control group; moreover, PES recipients adopted environmentally more beneficial land uses than the control group – differences that were strongly statistically significant. As a result, the estimated level of environmental services provided by PES recipients increased by almost 50 percent, while the change in environmental services provided by the control group was not significantly significant from its level at project start.
 - **Technical assistance (TA).** The results of the analysis were inconclusive with respect to the effect of providing TA to participants, as the difference in land use change between TA recipients and non-recipients was not statistically significant. This non-significance, however, might have resulted from TA 'leaking' to non-recipients. The participants themselves stressed the importance of the TA they received.

⁸ The GCS project's Coffee Eco-region site is close to this site.

- **Participation by the poor.** The analysis also demonstrated that poorer households were in fact able to participate in the project, even though participation required onerous and technically difficult measures. Indeed, by some measures poorer households participated at higher rates than better-off households.
 - **Project design.** Further, the analysis showed that short-term PES programs such as that offered by the Silvopastoral Project, while effective at inducing adoption of environmentally-friendly productive land use practices, were not successful in inducing adoption of essentially conservation-oriented land uses. It also suggested that some land uses might be sufficiently profitable not to require short-term PES.
4. **Long-term effects.** A follow-up survey carried out in 2011 found that the land use changes adopted under the Silvopastoral Project have been retained by participants four years after the project's end, alleviating fears that they would be abandoned once payments ended. In fact, some of the silvopastoral land uses that the project had promoted continued expanding after the project's end, albeit at much lower rates than under the project.
 5. Although significant, these results are nevertheless limited to a single site with particular characteristics, and to a particular group of participants. Even though broadly similar results had been found at the Silvopastoral Project's other study sites, in Costa Rica and Nicaragua, there is understandably some caution in generalizing them to other areas.

Objective of the impact evaluation

6. The objective of the impact evaluation is to assess the effectiveness of the instruments that the GCS project is using to induce adoption of environmentally-friendly land uses, namely PES and TA, under different conditions. The analysis should be able to distinguish between the various forms of treatment offered, including the various types of payments, and TA.
7. Two broad measures of impact could in principle be used: (1) the average impact of the project on behavior of the eligible population, or (2) the average impact on those who participate. Assessing the impact of the project on the eligible population—known as Intent to Treat (ITT)—would require a large-scale, representative sample of that population, as well as a suitable control population. Such an effort would be beyond the capacity of the project's limited resources. Assessing the impact of the project on participants—known as Average Treatment Effect (ATE)—on the other hand, requires data on participants (which is already being collected as a normal part of project activities) and on a suitable control group. The evaluation of the project will use the ATE measure. This will be complemented by an analysis of how the participants compare to the eligible population.

Treatments under the GCS project

8. The GCS project seeks to induce the adoption of silvopastoral land uses by ranchers in five target areas by offering them a mix of short-term PES and TA. The payment mechanism used in the GCS is based on that of the *Regional Silvopastoral Project*, with changes based on lessons learned. In particular, land uses were grouped into fewer categories to ease monitoring.⁹ The GCS Project's original design also omitted payments for intensive silvopastoral (iSPS) practices, who were thought likely to be

⁹ The GCS Project's Environmental Services Index recognizes 9 different land uses, compared to 28 in the *Regional Silvopastoral Project's* index.

sufficiently profitable to be adopted even without support other than TA and facilitated access to a subsidized government credit program, the *Incentivo a la Capitalización Rural* (ICR).¹⁰

9. Under the original GCS design, PES was offered to ranchers within designated ‘PES areas’ inside the five project sites. These PES areas were based on biodiversity criteria and aimed at creating biodiversity-friendly corridors between protected areas. All land users within these PES areas are eligible to receive both payments and TA. Within these PES areas, ‘connectivity corridors’ that are particularly important for biodiversity are delineated, and land use changes within these corridors receive higher payments. The PES payments offered under the original GCS design are known as ‘PES1’. PES1 payments are based on the total score of a participating farm on the project’s environmental services index (ESI). Participants receive a one-time payment for their baseline points, and then annual payments based on their incremental points relative to the baseline (see Table 1 in the Appendix). Under the original design, landholders within the five target areas but outside the PES areas were only offered TA.
10. The additional financing allowed the PES1 payment program to be extended to 400 additional small and medium farms in the five project sites, as well as to 300 small and medium farms in the two new hotspot sites. In addition, a new PES program focusing on adoption of iSPS practices was added, which was offered to all small and medium landholders in the target areas, except in the connectivity corridors.¹¹ This program, called PES2, includes an up-front, in-kind payment aimed at helping landholders overcome the obstacles to iSPS adoption and a series of ex-post payments conditional on adoption of iSPS, as well as TA.
11. The project thus includes several different treatments, as shown in Figure 1:
 - PES1 payments, as originally offered under the original project to all landholders inside PES areas and later extended thanks to the additional financing to most small and medium landholders inside the target municipalities but outside the PES areas, and to the new hotspot sites.
 - PES2 payments for iSPS adoption offered to small and medium landholders inside the target municipalities, except in the connectivity corridors, and to the new hotspot sites.
 - TA offered to all landholders inside the target municipalities.
12. Note that many combinations of such treatments are possible, although some combinations may not be accessible to all landholders: in particular, large farms are not eligible to receive any form of support from the additional financing, and thus cannot participate in the PES1 program unless they are located in the PES areas, and cannot participate in the PES2 program under any circumstances.¹² Outside the PES areas, large farms are only eligible to receive TA. Most participants, however, could in principle participate in several treatments. Most small and medium farms are eligible to participate in both the PES1 and PES2 programs, for example, in addition to receiving TA. Ultimately, however, some of these farms may opt to participate in both PES programs, while some will only participate in one or the other, and others may participate in neither,

¹⁰ FINAGRO, which administers the ICR, adopted new ICR modalities specifically focusing on silvopastoral practices, and earmarked US\$22 million equivalent to support their adoption (via the first-tier banks operating with FINAGRO in the project sites).

¹¹ Access to the ICR proved very difficult to achieve for small and medium-sized farms, due to the nature of the bureaucratic procedures involved.

¹² Note that the definitions of small, medium, and large farms are site-specific.

and only receive TA. The analysis needs to consider which specific treatment(s) a given farm participates in, as it is possible that different combinations of treatments have a different impact than each treatment separately (combinations of treatments might have a greater impact than individual treatments if there are positive synergies between them, or a lower impact if they compete for investment resources or management attention). Among small and medium farmers, those located within the PES areas will start receiving PES1 earlier than those outside it. This timing difference also might affect results, as later recipients will already have received TA prior to deciding whether and how to participate in the PES1 program, and thus may be better able to understand the potential benefits of participation and to choose appropriate land uses for their farm; they may also have had opportunities to observe adoption on the farms of earlier PES1 recipients.

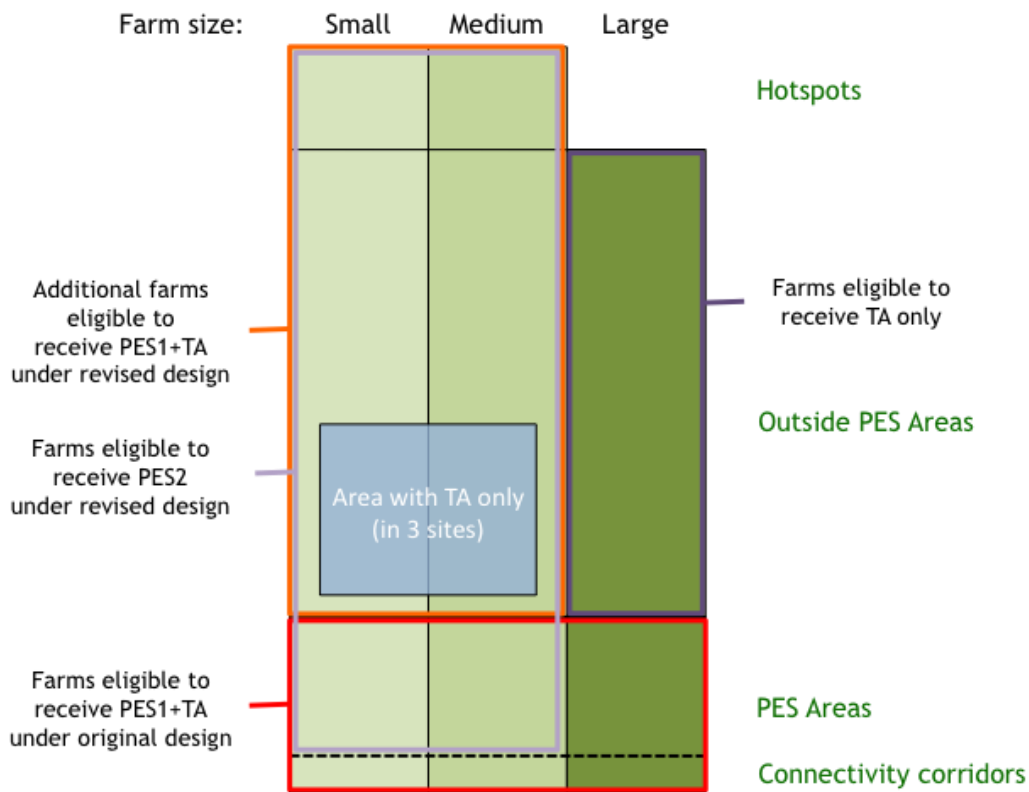


Figure 1: Treatments offered under the GCS Project with additional financing

13. It is also important to bear in mind that the silvopastoral practices promoted under the program cover a wide range of alternative land uses, from relatively simple changes such as adding dispersed trees to tree-less pastures, to relatively complex changes such as adopting iSPS. The analysis thus cannot limit itself to a binary assessment of 'adoption' compared to 'non-adoption'. Moreover, participants might choose to convert greater or lesser portions of their farm. The analysis thus has to consider the extent of adoption, and the particular land use changes adopted. As in the case of the analysis conducted of the earlier *Regional Silvopastoral Project*, the analysis will use a variety of metrics of the degree and type of adoption.
14. To allow an assessment of the effect of providing TA alone, it was decided that part of the original sites would be 'fenced off' and would not be offered either PES1 or PES2, as

shown in Figure 1 above. This would be done at the Coffee Eco-region, Piedemonte Orinocense, and Río Cesar Valley sites. As noted, the available budget does not in any case allow PES1 to be offered to all existing participants outside the PES areas. Municipios at each site in which the extended PES1 will be offered will be randomly selected.

Participants

15. Participants were sought through a call for participation (*convocatoria*) that was open from 13 June to 12 August, 2011. As a result of this *convocatoria*, 972 participants were eventually enrolled, with farms covering 55,634 ha (mean 57.2 ha), of which 412 (covering 29,095 ha) are in PES areas. As the number of participants enrolled in this *convocatoria* was insufficient to meet the project's targets, a second *convocatoria* was launched from June 4 to August 31, 2012. This resulted in an additional 1513 participants being enrolled. Tables 2 and 3 in the appendix provide basic data on the participants enrolled under the second *convocatoria*. An additional 300 households will be enrolled in the two new sites.
16. It was thought likely that many of the respondents to the initial *convocatoria* would have been among the best-informed and best-connected households in the project areas. Results based on an analysis of their behavior, therefore, might have limited external validity. It was decided, therefore, to only use households from the second *convocatoria* for the impact evaluation.

Control group

17. The GCS project had an initial target of enrolling 2000 participants. As it was thought unlikely that the number of applications to participate in the project would greatly exceed this number, it was decided early on that randomly assigning applications to either a treatment or a control group would not be feasible. Indeed, accepted applications to the first *convocatoria* fell well short of the target number of participants, necessitating a second *convocatoria*.
18. **Rejected applicants.** Rejected applicants are a possible source of controls. If they could be used, they would be very desirable controls, as they had self-selected to participate. Thus at least some sources of selection bias would be absent. But whether they can be used depends on the reason for rejection. Some reasons for rejection, such as not having appropriate land titles, may well have an important effect on land use decisions (by reducing incentives to undertake long-term investments, or by limiting access to credit). The total number of rejected applicants at the three sites is low, however, so it is unlikely that rejected applicants will be a sufficient source of controls, especially after dropping those that were rejected for reasons likely to affect land use.
19. **Matching.** As randomizing applications was not feasible, it was decided to use a matching approach. Suitable controls would be chosen by matching participating households with other households in the same areas with similar characteristics. The matching would be based on observable characteristics as recorded in FEDEGAN's Technical Information System (*Sistema de Informacion Técnica*, SIT) database, which contains information on the majority of livestock farms countrywide, including the project areas. The database was initially developed as part of FEDEGAN's livestock vaccination efforts.
20. Unfortunately, the SIT database has limitations. It has a limited number of variables, and even those are not available for all farms (the degree to which there are gaps in the data

varies across sites). Moreover, some discrepancies have been found between information in SIT and information collected in the project's surveys. To enable full advantage to be taken of the information available, it was decided to undertake matching separately at each site, using the greatest amount of information available at that site. This results in several separate impact evaluation exercises, rather than a single impact evaluation covering all sites. A single impact evaluation would have required a lowest-common-denominator approach to matching, using only data for which SIT had information at every site. Where possible, SIT data will be supplemented by using georeferenced information on farms in the SIT database to generate additional data for those farms from other existing GIS databases (such as slope, soil type, distance to roads, and so on). Location data are available for most farms in Valle del Río Cesar, but for almost none in Piedemonte Orinocense.

Baseline survey

21. To collect data for the analysis, a baseline survey will be administered to all participants in the treatment group (that is, all participants in the second *convocatoria*) and to all members of the control group selected through matching, as early as possible following their selection. The initial land uses of all members of the treatment and control groups will also be mapped at this time, using the same techniques in both cases. A second survey will be conducted among all treatment and control households at project end.

Monitoring land use change

22. Land use changes by treatment group participants will be monitored annually, per the project design, as such monitoring is necessary to allow the conditional annual payments to be made.¹³ Land use changes by control group participants, on the other hand, will only be monitored at project start and project end, though consideration will be given to conducting a mid-term monitoring of their land use change if resources allow.

Pending issues

23. Budget constraints will probably preclude full impact evaluations of all five (plus two) project sites. Accordingly, it may be decided to concentrate the available resources on a few of the sites.

Appendix 1: GCS Treatments

PES1 Payment Program

24. The PES1 program offers:
 - A one-time “baseline” payment based on total ESI points for land uses present on a participant’s farm at project start, valued at US\$0.23/point.
 - Annual payments for incremental ESI points resulting from land use changes on a participant’s farm, relative to the baseline points, valued at US\$0.75/point.

¹³ Because of the high cost of mapping of initial land uses directly in the field, the project is moving to mapping initial land uses based on self-declarations by participants. This creates a potential comparability problem as results may be measured in different ways among participating households. To the degree possible, full field mapping efforts will be concentrated among households at sites where impact evaluation will be conducted.

- Annual points for conservation of forest present at project start on a participant's farm, valued at US\$0.18/point.
- Technical assistance.
- Payments are based on the Environmental Services Index shown below:

Table A1-1: Environmental Services Index (ESI)

<i>Land use</i>	<i>ES score</i>	<i>Additional ES points</i>	
		<i>Location in connectivity corridors</i>	<i>Use of native species^a</i>
Mature forests or private wetlands	100	0	0
Secondary forests	95	0	0
Pastures with high tree density and managed ecological succession	70	10	10
Agroforestry crops (at least 2 strata)	50	20	10
Live fences and wind barriers	10	5	5
Agricultural and livestock lands with over 80% vegetative cover	10	0	10
Other agricultural and livestock practices (temporary crops, forest plantations)	0	0	10
Degraded soils in degraded pastures	0	0	0

^a Including several globally important species according to Project reference lists (TNC-CIPAV).

PES2 Payment Program

25. The PES2 program offers:

- A one-time, up-front, in-kind support *per participant* consisting of (a) soil analysis to determine soil physical and chemical characteristics, to assess their suitability for iSPS, and to develop appropriate management recommendations and (b) provision of seeds (leucaena -including inoculation-, botón de oro, improved pasture) and stakes (botón de oro, Tiló), as well as other inputs needed for the establishment of iSPS (incl. organic fertilizers, electric fences, water pipes), valued at about US\$600 per participant.
- Annual payments for incremental points resulting from the adoption of iSPS practices, computed as for the PES1 program, using a ES score of 200 points.
- Technical assistance.

Appendix 2: Participants enrolled under the Second Convocatoria

Table A2-1: Number of participants enrolled under the Second Convocatoria

<i>Region</i>	<i>Farm size</i>			<i>Total</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	
Bajo Magdalena	299	10		309

Valle del río Cesar	158	41	18	217
Boyacá & Santander	249	77	17	343
Ecorregión Cafetera	292	123	49	464
Piedemonte Orinocense	153	16	11	180
Total	1151	267	95	1513

Table A2-2: Mean farm size of participants enrolled under the Second Convocatoria

<i>Region</i>	<i>Farm size</i>			<i>Average</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	
Bajo Magdalena	13.9	119.2		17.3
Valle del río Cesar	29.2	135.0	472.4	86.0
Boyacá & Santander	4.8	20.7	113.4	13.8
Ecorregión Cafetera	9.4	49.9	180.5	38.2
Piedemonte Orinocense	21.9	121.8	642.5	68.7
Average	14.0	61.5	277.3	38.9

Annex 7: List of publications

El País:

http://internacional.elpais.com/internacional/2014/04/14/actualidad/1397501715_065818.html

On the World Bank website (with the addendum of the UK):

<http://www.bancomundial.org/es/news/feature/2014/04/14/sustainable-cattle-ranching-colombia>

CONtexto ganadero: <http://www.contextoganadero.com/reportaje/el-banco-mundial-apoya-la-reconversion-de-la-ganaderia-colombiana>

El Espectador:

C:\Users\wb451179\AppData\Local\Temp\notesD0EE28\Banco mundial y ganadería
ELESPECTADOR_COM.mht

Nature.com: <https://app.box.com/shared/8j2z4j7d931zmfhumjph>

La Patria:

C:\Users\wb451179\AppData\Local\Temp\notesD0EE28\Convocatoria y Proyecto GCS
Manizales - La Patria.mht

El Heraldito:

En Codazzi lanzan programa Ganadería Colombiana Sostenible

Fedegán y Banco Mundial, por recursos naturales en fincas.

Una importante iniciativa para mejorar la gestión de los recursos naturales y el incremento de la prestación de servicios ambientales que ayuden a la biodiversidad, lanzan hoy en Codazzi, Cesar, Fedegán y el Banco Mundial.

José Félix Lafaurie, presidente de Fedegán, manifestó que “nos respaldan los ministerios de Agricultura y Medio Ambiente, para adoptar en varias áreas sistemas silvopastoriles amigables con el ambiente, que mejoran suelos, agua y retención de carbono, aumentando la productividad de las fincas”.

Son sistemas en donde leñosas perennes (árboles) interactúan con los componentes tradicionales (forrajeras herbáceas y animales), bajo un manejo integral, reducen el impacto ambiental de los métodos tradicionales ganaderos.

Mejoran calidad de alimentación y disminuyen costos de producción, aprovechando los espacios. La internacionalización de los mercados implica

que las actividades productivas deben ser más eficientes, incrementando rendimientos productivos por unidad de área, conserven los recursos naturales.

Lafaurie dijo que “el proyecto durará 5 años y se enfocará en los medianos y pequeños productores bovinos de 5 zonas estratégicas, como son Bajo Magdalena, Valle del Río Cesar, corredor de Roble Andino entre Boyacá y Santander, región Cafetera y Piedemonte del Meta”.

Será administrado por Fedegán, con el concurso del Centro para la Investigación en Sistemas Sostenibles de Producción Agropecuaria (Cipav), el Fondo para la Acción Ambiental y la Niñez (Faan), The Nature Conservancy (TNC) y el Centro Agronómico Tropical de Investigación y Enseñanza (Catie), de Costa Rica.

Es un gran aporte para la conservación del ambiente, porque la ganadería se desarrolla en 38 millones de hectáreas. Y se encuadra en las estrategias de Fedegán: Promoción de un uso ambientalmente sostenible de los recursos naturales, y Plan Estratégico de la Ganadería 2019’.