Inputs for an International Climate Fund Business-Case for DECC investment in the Amazon Vision Program: Production Systems and Private Sector Involvement Component

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An International Climate Fund Business-Case for DECC investment in the Amazon Vision Program: Production Systems and Private Sector Involvement Component

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Intervention Summary

What is the purpose of the intervention?

Colombia is well-positioned to become a leader in addressing the pressing global challenges of climate change, tropical deforesation and food security. At the 2009 Conference of the Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC) Colombia announced an ambitious goal of reaching zero net deforestation in the Colombian Amazon by 2020[1]. To reach this goal, the national government is currently developing a comprehensive program called the "Amazon Vision". If successful, this strategy could avoid globally significant amounts of CO_2 to the atmosphere by 2020. These emissions reductions would be accompanied by substantial co-benefits in the form of improved smallholder farmer livelihoods, better air quality, biodiversity conservation and regulation of water flow in watersheds[2].

In order to achieve zero net deforestation in the Amazon region by 2020[3], Colombia must confront a number of critical challenges facing the region, including limited governance capacity exacerbated by decades of armed conflict, an illicit crop industry and populations isolated by inadequate infrastructure. Extensive cattle ranching is the single most important use of cleared land in the Amazon, with pastures occupying some 70% of deforested land. Transforming this dominant livelihood system to sustainable practices, such as intensive cattle ranching, silvopastoral or agroforestry systems that have the potential to improve livelihoods while reducing the need for cleared land, is one of the most critical challenges for Amazon Vision.

There is also the challenge of fragmentation. Governments, farm sectors, companies and communities have different goals and interests. At one level, the challenge and the opportunity of the Colombian Amazon Vision program is to foster a new "low-emission rural development" model in which governments, private sector, farm sector and communities become aligned and in agreement upon regional milestones for reducing deforestation, increasing production and improving livelihoods. For these shared milestones to be realized, they must be accompanied by incentive systems that drive changes in land-use systems and improvements in governance capacity, supported by monitoring platforms that track progress towards these milestones (Figure 1).

[1] Forest cover was estimated to be 59,924 km^2 in 2012, 60% of which is found in the departments of the Colombian Amazon (Datos IDEAM, 'Forest-Non-Forest Map for the Period 2010-12).

[2] Nepstad, D. C. *et al.* Addressing Agricultural Drivers of Deforestation in Colombia: Increasing Land-Based Production while Reducing Deforestation, Forest Degradation, Greenhouse Gas Emissions and Global Poverty: Report to the United Kingdom Foreign and Commonwealth Office and Department of Energy Climate Change, Forests and Climate Change Programme. 158 (London, UK, 2013).

[3] Zero net deforestation describes a forest frontier region in which the area of forest that is cleared over a given time period is equal to or less than the area of "new" forest that is regenerating or being anthropogenically restored during that same time period.

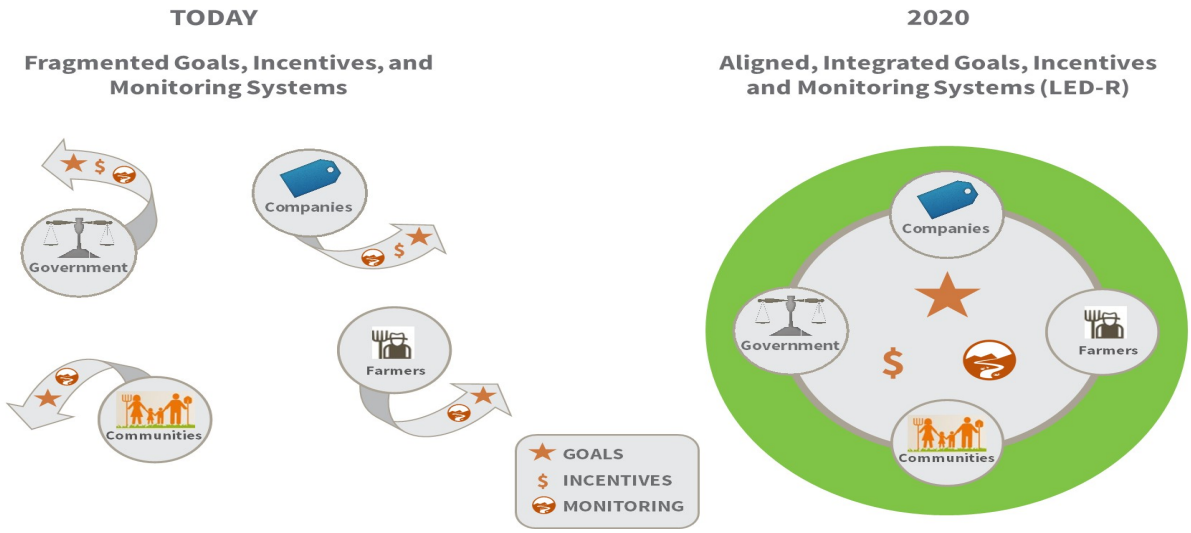

Figure 1. The challenge and the opportunity of the Colombian Amazon Vision program: to make the transition from the current state of fragmented goals and incentives to shared regional goals and incentives, supported by effective monitoring of progress towards these goals.

Why is Donor support required?

Colombia has an excellent opportunity to develop a strategy to reduce deforestation in the Amazon that is supported by government, the private sector and civil society. The likelihood of success of this strategy will be enhanced through a sustained, orchestrated commitment from donor nations that helps maintain momentum across political election cycles and that provides a long term prospect for funding that could catalyze a regional shift in development strategies, laying the groundwork for a jurisdictional approach to sustainability, in which producers, private sector actors and governments work together to define territorial performance goals and align incentives to reach those goals. The proposed project focuses on three of the key challenges that Colombia faces as it strives to reduce deforestation caused by the agricultural sector: 1) insufficient technical support and financial incentives for producers to convert dominant land uses (extensive cattle ranching) to sustainable production systems, 2) low private sector investment in sustainable production systems due to insufficient competiveness of products and high investment risk, and 3) insufficient governance and governmental capacity within municipalities and departments to design and implement a regional blueprint to eliminate deforestation.

What support will Donor provide?

The Donor will provide just over £50 million to be used over four years (2015-2018) to support sustainable production systems and sustainable supply chains in the Colombian Amazon.

Donor funds could support the implementation of three thematic components of the Amazon Vision Program: 1) sustainable production systems that reduce deforestation, 2) sustainable supply chains and private sector alliances committed to reducing deforestation and 3) improved governance capacity and incentives to support these production systems and alliances. These thematic components should be

supported by a fourth component of coordination and administrative management that ensures complementarity of the interventions and oversees the processes of planning, follow-up and reporting on results of the interventions. A description of the three proposed thematic components follows.

Component 1 (£31 million) will support producers with improved rural extension services (Investment 1) and credit access (Investment 2) for the establishment of sustainable production systems that: 1) do not depend on deforestation, promote the restoration of degraded lands and forest conservation within landholdings or other environmentally-friendly actions, and align with existing land-use plans; 2) contribute to food security, increase productivity and generate incomes at the local level; 3) include promising and suitable species for the Amazonian conditions (e.g. taking into account its soils and biodiversity and 4) help integrate producers into supply chains and support management practices that align with goals of zero-deforestation supply chains.

Component 2 (£19 million) will benefit supply chain actors (including producers, producer associations, companies and processors) through strategies to increase competitiveness, reduce risks and implement best practices in support to the region's zero net deforestation goal. This component will promote multi-stakeholder platforms within priority supply chains (rubber, cocoa, coffee and cattle) in each department, support sector strategies including zero-net-deforestation goals (Investment 3) and identify and catalyze partnerships between producers and companies, while providing support to implement best practices and reach milestones (Investment 4).

Component 3 (£293,000) complements governance strategies within the broader Amazon Vision program by seeking to align goals and incentives for producers, companies and regional governments under a "Green Municipalities" program (Investment 5). This program will promote multi-stakeholder dialogues for territorial management in support of Amazon's zero—net deforestation goal. A territorial or jurisdictional performance approach [4] involves a participatory and collaborative definition of performance goals (i.e. reducing deforestation, improving productivity), the establishment of shared and measurable milestones towards performance goals, and integrated incentive systems that drive changes in producers, companies and governments to reach the performance goals. A central feature of this approach is a transparent monitoring system and supporting governance structure at the jurisdictional level to track progress towards milestones and implement or refine incentive systems.

What are the expected results?

Headlines:

- Donor financial support – and leveraged domestic public and private sector support – will reduce deforestation in Caquetá and Guaviare by replacing dominant deforestation-dependent land use practices with sustainable land management practices, potentially reducing greenhouse gas emissions associated with deforestation while enhancing CO_2 removals from the atmosphere by restoring degraded pastures into natural forest systems at a scale of approximately 35.5 million tons of CO2 equilvalent over ten years.
- The adoption of sustainable production systems (including silvopastoral and agroforestry systems) is expected to transform almost 25,000 hectares (ha) of land into sustainable use.
- The intervention will directly benefit over 8,000 rural producers, improving rural livelihoods.
- The intervention will establish new and improved credit lines and financial incentives for rural

[4] Nepstad et al. 2014. More food, more forests, better livelihoods, fewer emissions. Carbon Management

producers (EcoAgro, Agrosostenible, AgroBosque).

- The intervention is expected to foster over 100 alliances between producers and companies within target supply chains.
- Municipal governments will establish time-bound performance goals to reach the 2020 zero-net deforestation goal within territorial management plans.

What are the main risks and how to manage them?

The top three risks are:

1. Institutional:

- Insufficient institutional coordination, such that overlapping or competing programs undermine potential impact of proposed Donor investments, especially with regards to financial incentives.

Mitigation Action:

- Coordinate with other Amazon Vision initiatives, international cooperation agencies, and governmental programs such that intervention strategies are coordinated across sectors and agencies, and that similar criteria for monitoring performance are used across the board.

2. Market demand:

- Insufficient consumer demand for zero-deforestation products, either due to insufficient knowledge of products or unwillingness to pay price premiums.
- Insufficient perception of corporate risk associated related to deforestation since Colombia has yet to be the target of international deforestation campaigns

Mitigation Action:

- Include a marketing "buy sustainable" component in the Amazon Vision program
- Design integrated market incentives to reduce dependence on consumer choice: trade facilitation programs, market strategies, alliances between sector associations and buyers.
- Develop a value proposition focused on market access and risk management that raises private sector interest in the zero-net deforestation target for the Amazon region

3. Governance, Violence and Illicit Activities:

- Insufficient capacity of departmental and municipal governmental to control illegal activities driving deforestation such as coca production and mining.
- Escalation of FARC and paramilitary activities under a scenario of weakening or failing peace talks, elevating risks to companies and undermining potential progress in developing governance capacity

Mitigation Action:

- In conjunction with programs to promote alternative livelihoods to producers, provide financial incentives to municipalities linked to reductions in illegal activities, among other performance goals.

Business Case Contents

1 Strategic Case

1.1 Context and need for donor intervention

1.1.1 Wider Context and Colombia's Zero-Deforestation Goal for the Amazon

At the 2009 Conference of the Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC) Colombia announced an ambitious goal of reaching zero net deforestation in the Colombian Amazon by 2020[5]. The Amazon region reported the highest rates of deforestation for the whole of Colombia for the period 2010-2012 (IDEAM)[6], with especially high rates in the colonization frontiers of Caquetá, Putumayo, Meta, and Guaviare[7].

Faced with rising deforestation rates, persistent rural poverty and fragile governance systems undermined by years of armed conflict, the Colombian government developed the Amazon Vision Program[8] to help reach the government's zero-deforestation target. Amazon Vision defines four key strategies for conservation and development in the region; 1) improve governance; 2) strengthen legal and sustainable production activities; 3) strengthen the participation of indigenous communities; and 4) create conditions that support a vision of zero deforestation for the Amazonian region.

The proposed project focuses on three of the key challenges that Colombia faces to reduce deforestation in the agricultural sector: 1) insufficient technical support and financial incentives for producers to convert dominant land uses (extensive cattle ranching) to sustainable production systems, 2) low private sector investment in sustainable production systems due to insufficient competiveness of products and high investment risk, and 3) insufficient governance and governmental capacity within municipalities and departments to design and implement a regional blueprint to eliminate deforestation..

The proposed investment strategy will work in concert with the Amazon Vision program to transform the region's economy from it's current high deforestation, high emission trajectory to one that reduces deforestation while improving livelihoods through a balanced suite of policies, initiatives and incentives targeted at various sectors (producers, governments, and private sector). Experiences in other countries, such as Brazil, demonstrate the potential for economic

[5] Forest cover was estimated to be 59,924 km² in 2012, 60% of which is found in the departments of the Colombian Amazon (Datos IDEAM, 'Forest-Non-Forest Map for the Period 2010-12).

[6] Data provided by the *Subdirección de Biodiversidad e Información del Instituto de Hidrología, Meteorología y Estudios Ambientales* [Sub-department on Biodiversity and Information of the Institute of Hydrology, Meteorology, and Environmental Studies] (IDEAM).

[7] The departments with the highest rates of deforestation for the 2010-2012 period are Caquetá (28,761 hectares), Meta (22,810 hectares), and Guaviare (16,159 hectares), representing 46% of the national deforestation.

[8] The Amazon Vision Program is currently led by the Minister of Environment and Sustainable Development (MADS) with the participation of key governmental agencies and civil society organizations, including the Ministry of Agriculture and Rural Development (MADR), Sinchi Institute, IDEAM, and the Unit of National Natural Parks, among others.

transformation with coordinated incentives for producers, private sector actors and governments (Nepstad et al. 2014).

1.1.2 Drivers of deforestation

Cattle ranching is the single most important use of cleared land in the Colombian Amazon (Nepstad et al. 2013). Seventy percent of deforested area of the Amazonian region now supports cattle pasture; the area of forest conversion to transitional or permanent agricultural crops (i.e. palm or sugarcane) is small by comparison (Murcia et al. 2014). The predominant extensive cattle ranching systems are characterized by low stocking densities (0.5 Large Livestock Units/hectare) and inefficient pasture management, leading to a cycle of degradation, low productivity and then further deforestation for pasture expansion. Despite the low productivity of extensive grazing, cattle ranching continues to expand, driven, in part, by the subsistence and market utility of cattle for Amazon households and availability of credit for cattle.

While cattle ranching is the main use of cleared land in the Amazon[9], deforestation in the Colombian Amazon is facilitated by underlying and interrelated processes of violent conflict and political instability, disorganized colonization and illicit crop production. A history of armed conflict and forced displacement has resulted in one of the largest populations of displaced people in the world, with numbers estimated between 3 and 5 million (USAID). Forced displacement resulted in the abandonment of over 4 million hectares, while at the same time armed groups acquired over 4.5 million hectares between the 1980s and 2000. Insecurity in rural areas has contributed to the general absence of the state in the Colombia Amazon and the proliferation of illegal crop production, mining activities and disorganized colonization. Lack of clarity regarding land tenure and few, if any, regional development blueprints contribute to the disorganized dynamic of regional colonization (Blanco 2013). Settlers are drawn to the region by social inequity, poverty, and violence in other regions in conjunction with development policies promoting geopolitical stabilization vis-à-vis colonization of Colombia's hinterlands (Armenteras et al. 2013, Dávalos et al. 2011). New roads, usually built in the interest of illicit crop production, petroleum exploration or illegal extraction of minerals, serve as important conduits for new colonists seeking to convert forests to agricultural plots and pastures.

Coca production continues to permeate local economies, not only contributing to forest conversion for cultivation, but the continued marginalization of many rural producers who livelihoods fall in a gray area between illegal and legal production. There is significant overlap between areas of coca production and those with high deforestation rates in the Colombian Amazon- not only do forests provide apt conditions for coca cultivation, but the inaccessibility of many forested areas is attractive for this illicit activity (UNODC 2010, Dávalos et al. 2011).

In Colombia, land tenure is an unresolved problem, as evidenced by the fact that the State still owns nearly 28% of the territory. In Caquetá, 56% of the area belongs to the state (27%

[9] 1,463,647 ha of landpastures are already established in Caquetá, and 299,922 ha in Guaviare. Cocoa, rubber and coffee crops cover around 11,000 ha in Caquetá. Cocoa and rubber occupy less than 2,000 ha.

belonging to the Amazon Forest Reserve), with 23% registered as private property. In Guaviare, the vast majority (90.99%) is registered as indigenous territory, with just 7.33% of the area registered as private property. Many smallholders are located in state-owned areas and do not possess legal land titles, yet continue to clear forest for pasture and agricultural plots (Davalos et al. 2014). Without clear title, smallholders face barriers to making long-term investments in the land and forming contractual and cooperative relationships with producers and suppliers. Further, illegality of land parcels, especially in forest reserves, presents even greater legal challenges to halting deforestation. In 1994 the Government institute a land reform program that provided government subsidies for small producers to purchase land for productive use, but ultimately the program was plagued by continuing violence in the countryside and corruption (Taylor 2006). One major step is toward tenure security is the Victims and Land Restitution Law 1448 of 2011, which includes mechanism to restitute victims of displacement and repossession of stolen lands. In terms of indigenous tenure, Colombia has made significant progress through official recognition of indigenous lands in the 1991 Constitution.

1.1.3 Sustainable Production Systems: Barriers and Opportunities

In the Colombian Amazon, regional economies are dominated by cattle ranching and illicit crop production. Agricultural production outside of these land uses plays a minimal role in regional economies and their contribution to Colombia's GDP. The Amazon region contributes less than 1% to national Gross Domestic Product (GDP), with minimal contributions from the agricultural sector. In Caquetá, all agricultural related activities, including cattle ranching contributed just 18.2% to department GDP in 2012, and in Guaviare, the contribution was less than X % (DANE 2012). Beyond subsistence production, farmers cultivate crops such as cacao, coffee, rubber, and palm oil in Caquetá, while in Guaviare, production is more focused on cereal grains such as corn and upland rice ['*arroz secano*']. Average plot sizes for family producers range between 40-80 ha, whereas medium size producer plots may reach up to 200 ha.

To date, illicit crop (*Erithroxilum coca)* production remains one of the only viable alternatives to the traditional agricultural economies failing small-scale producers. Despite the fact that in recent years national aggregate figures show a decrease in the area under cultivation as a result of the policy of interventions (UNODC), coca cultivation persists in Caquetá and Guaviare with favorable environmental and political conditions (i.e. presence of illegal armed actors). While coca still permeates the economies of Caqueta and Guaviare, recent studies have noted an important trend- that the success and continuation of coca production is not so much related to the earnings of the illegal economy, but rather to the dismal performance of legal activities (MinJusticia and ODC 2014). This suggests an important potential tipping point for the region- financially competitive and technically viable production systems could shift production systems away from illicit crop production towards more sustainable livelihoods and could breakdown some of the economic and political barriers towards improved governance overall in the region.

Several known alternatives for sustainable production systems already exist. Forest-grazing systems are viable alternatives to extensive cattle ranching that have the potential to generate both environmental and economic benefits (González and Alcaráz 2013, Medina et al. 2011, Avila and Revollo 2014). Agro-Forestry Systems (AFS), including cash crops such as natural rubber "caucho", cacao and coffee production systems currently established in Caquetá and Guaviare, can improve food security, generate greater incomes, and reduce risks for farmers through diversified production systems while securing ecosystem benefits such as tree cover,

efficient soil use and integrated pest management (Pavón et al. 2014, IDEAM 2011). While forest grazing and agro-forestry systems do not achieve the same ecosystem functions as native forests, they may complement conservation goals by conserving remaining forest fragments, recuperating degraded areas, and creating buffer zones and corridors that connect protected areas (Beer et al. 2003). Through the establishment of agroforestry plantations, these systems may maximize producers' income over the long term, with returns from the harvest of rubber, precious timber and other species that also help improve productivity in the short and medium term. However, implementation of these alternatives, especially those in which producers will not see returns in the short-terms, will require financial incentives and technical assistance, and could require levels of labor input that surpass the capacity of many households.

Currently, Colombia's agricultural finance credit lines and incentives managed by the Fund for Agricultural Financing (FINAGRO) and offered via Banco Agrario and private banks amount to several billion US dollars. All FINAGRO credit and incentives are theoretically restricted to agricultural land that has not been recently deforested; in practice, this stipulation is rarely enforced. While credit and incentives program could be used to support conversion to sustainable production systems, few Amazonian producers actually access these mechanisms. Amazonian producers are generally excluded from government credit and other rural assistance programs, in part due to their inability to meet criteria for loans (i.e. land titles) and in part due to a concentration of government technical assistance and finance programs outside of the Amazon region. For example between 2007-2012 Amazonian producers were loaned just 3.2% of all investments by FINAGRO's Incentivo a la Capitalización Rural (Incentive for Rural Capitalization) program. In addition to the program's regional bias, it also favors medium and large-scale producers who meet selection criteria. Similarly, a national subsidy program for sustainable forestry Forest Incentive Certificate (CIF, Certificado de Incentivo Forestal) focuses largely on commercial plantations of exotic species with well-established technological specifications (with the important exception of providing support for rubber harvesting in the 2 target departments), leaving sustainable natural forest management largely unsupported. In addition, the costs of applying for incentives such as CIF are prohibitively high for small producers with only a few hectares in production; and many of these programs are not well known in rural areas.

One promising initiative by the Colombia Ministry of Agriculture and Rural Development (MADR), the *Proyecto de Apoyo a Alianzas Productivas* [Support Project for Productive Alliances] (PAAP) is designed to link smallholder organizations to specialized markets through contract farming arrangements. The PAAP program has created 49 alliances across the Amazon, benefitting close to 50,000 people. Partnerships include a range of products, with the most prominent being coffee, cacao and rubber. Another instrument of the MADR is the Development Program of Investment and Capitalization Opportunities for Assets of Rural Microenterprises (Oportunidades Rurales) that provides support to rural micro-entrepreneurs organized into groups of 20 or more. However, to date the Amazon region has received just 6.2% of nationally disbursed PAAP funds and 7.8% of Oportunidades Rurales funds.

Existing financial incentives and technical assistance programs are insufficient for reaching and supporting Amazon producers, especially smallholders. At the same time, many of the programs, such as PAAP and ICR, could be modified or redesigned specifically for the Amazon to address the region's realities (i.e. lack of clear land titles for many producers), to catalyze low-deforestation production systems, and to integrate smallholders into sustainable supply chains

and build organizational capacity among producer groups. In order to catalyze adoption of low deforestation production systems, incentives must be bundled with technical assistance, finance, support for organizational capacity development, as well as broader governance reforms to tackle critical underlying factors, such as lack of tenure security and persistence of the illegal coca economy.

1.1.4 Limited Private Sector Investment in the Region

Globally, the private sector has been the focus of debate and controversy regarding expanding agricultural commodity production and deforestation. There is growing momentum among companies to "decouple" their supply chains from deforestation, via voluntary agreements, certification, commodity roundtable standards, among other schemes. The Brazilian Amazon has demonstrated that private sector-led mechanisms can drive reductions in deforestation, while at the same time increasing productivity (Nepstad et al. 2014). In this case, private sector mechanisms worked in parallel with government-led policies and initiatives. For example, a 2009 Greenpeace campaign against a major beef processing company led to a voluntary "Cattle Agreement" in which major beef processors excluded producers from their supply chains who deforested after 2009. The Brazilian Government instigated the Rural Environmental Property Registry, making it a requirement for certain loans and government programs, which facilitated the traceability of the supply chain. The Critical Counties initiative further reinforced the commitment to reduce deforestation from the beef supply chain by blacklisting municipalities with high rates of deforestation and restricting government funds to those municipalities.

The profusion of private sector and public policy initiatives that drove Brazil's 76% decline in Amazon deforestation provides some important lessons for the Colombia agenda in the Amazon. Brazil has yet to deliver positive incentives or adequate technical assistance to its Amazon farmers, and is precariously dependent upon command-and-control approaches to deforestation. Colombia's Amazon strategy could be initiated with a robust plan for providing "carrots" and not just "sticks" to its land uses.

To date, private sector involvement in the Colombian Amazon is extremely limited due to high risk for investment and low competitiveness of Amazonian production systems. Decades of armed conflict, high levels of rural poverty and limited infrastructure pose risks for investors and constrain potential profitability (see Fedesarrollo 2007, Gravito 2012, Oxford Business Group 2014). The majority of private sector investment is geared towards petroleum and mining operations. Investment and innovation in the agricultural sector lags far behind, despite the potential of many sub-sectors such as coffee, rubber, cacao and milk to meet gaps between supply and demand at the national level.

Engaging the private sector in regional conservation and development strategies, such as Amazon Vision, has many advantages. First, private sector actors are able to respond nimbly to investment opportunities, and therefore may be well poised to engage and invest in innovative strategies for alternative production systems in the Amazon. Second, companies and investors may have a vested economic interest in the continued sustainability of resources as well as in developing innovative technology for production and processing. Thirdly, more and more companies are engaged in a race to the top to remove deforestation from their supply chains and reduce reputational risk from poor environmental practices. But beyond punitive measures,

companies, like producers, are also responsive to incentives designed to make improvements to meet broader regional goals, such as Colombia's net-zero deforestation goal. Attracting the private sector to invest in sustainable production systems and supply chains will require a two-pronged effort that a) decreases investment risk by improving business conditions including productivity, efficiency, profitability, and rule of law (Mercy Corps 2012) and b) provides the right suite of incentives for the private sector. Incentives may include support for partnerships between companies and producers to improve production practices, product differentiation for "zero deforestation" products, as well as voluntary agreements by companies to eliminate deforestation from their supply chains as a means to access niche markets.

Many infrastructure and governance deficiencies must be addressed in order to address corporate risks systemically, attracting private sector investment. These deficiencies include legal security, clarity over land tenure, institutional capacity, as well as roads, electricity, among other structural improvements. Ideally, both government and the private sector work in conjunction towards regional-level goals to improve productivity and reduce deforestation. For example, private sector actors, through alliances with producers, can generate technical and organizational capacity, improvements in productivity and value-added processing, and overall increase profits to supply chain actors. Governments at departmental and municipal level can create enabling conditions for private sector investment, as well as align incentives to meet territorial goals, such as the zero-deforestation for 2020.

1.1.5 The policy context for reducing deforestation in Colombian Amazon

Colombia is committed to rural development that increases production while slowing deforestation. However, most governance capacity lies outside of the Amazon forest regions and most of the main private sector innovation and transition to sustainability is taking place in the Piedmont and Llanos regions, far from the forest frontier. The Colombian government has demonstrated a strong commitment to reduce deforestation and a low-carbon development strategy, via the 2020 zero-deforestation goal, as well as key policies/initiatives. These include:

- National Climate Change System (CONPES 3700/2011): Includes four instruments: 1) the national climate change adaptation plan, 2) the Colombian low-carbon development strategy; 3) National Strategy to Reduce Emissions Derived from Deforestation; and 4) financial-protection against climate-related disasters. Within these instruments, climate change is framed as a cross-cutting social and economic issue that should be integrated in planning and development processes.
- Colombia Low-Carbon Development Strategy (2011): Five principle components include identification and assessment of "alternatives and opportunities in low carbon development", policy design, sector-specific low carbon development plans, improved governance, among others.
- National Development Plan (2010-2014): One important outcome of the NDP were mechanisms to regulate (or strengthen) the 1959 law (Law 2) for the Amazon Forest Reserve, which sought to establish land use zoning for the Amazon region, but has been undermined by illegal settlements, non-compliance with intended land use regimes, and general lack of clarity regarding tenure. Under the NDP, the Ministry of Environment and Sustainable Development's Resolution 1925 of 2013 defines the zoning and land-use planning of the Amazonian reserve for the departments of Caquetá, Guaviare, and Huila.

- The Forest Incentive Certificate- CIF (1996): objective to foster management of forest resources, remains a key initiative that can be leveraged to reduce deforestation. The CIF, administered by FINAGRO, compensates land owners for conserving forests within the landholding. One major limitation of this initiative is that to date, few producers have benefited from CIF in the Amazon and small-scale producers are often limited by selection criteria, such as secure land titles.

While these policies, programs and initiatives provide an extensive regulatory framework for environmental issues, Colombia's rural sector policies and dialogues are highly fragmented, undermining their ability to address the underlying drivers of deforestation in an integrated manner. Strategies for increasing the production of crops, livestock and biofuel are operating outside of strategies for ending deforestation or resettling hundreds of thousands of displaced farmers onto the land. The national strategy for mining is even further removed from the forests and farms agenda. As a result of this fragmentation, many programs and policies have the potential to undermine each other. To achieve better harmonization across divergent objectives, multi-sector dialogues at different scales that develop evidence-based, spatial land-use zoning plans, infrastructure plans, and strategies for increasing frontier governance capacity are needed.

A multi-stakeholder, territorial management approach, described above, is consistent with Colombia's decentralized spatial planning policy and holds great potential for diminishing conflict among rural development agendas. Several existing policies and initiatives provide a framework for this territorial approach, including Territorial Land-Use Plans, Watershed Use and Management Plans, *Campesino* Reserve Zones, and Relatively Homogeneous Zones, among others. These instruments offer opportunities to include goals of low-emission development and reduction of deforestation. The current land-use plan of the Department of Caquetá – "Government of Opportunities 2012-2015" – prioritizes deforestation as a department-level problem and describes strategies to address the problem, including policy design and implementation, raising citizen and environmental awareness, and implementing reforestation projects with native forest species. Further, the plan details sector-level activities to enable municipalities to reach their zero-deforestation goal while implementing sound environmental and social practices. The government of Guaviare's land use plan includes a strategic objective to construct a unified vision of sustainable development that seeks to reconcile economic, environmental, and social objectives. Also included in the department's plan is the launch of the *Programa Guaviare Competitivo* (Competitive Guaviare Program) that seeks to encourage production, transformation, and commercialization of agricultural products. These mechanisms, and others, could be harnessed to support the development of regional performance targets and integrated incentive systems that could be implemented at the jurisdictional level. These include:

- 2011 Organic Law on Territorial Land-Use Planning: This national-level regulatory framework for land use planning promotes the decentralization of authority for planning, management, administration and resource allocation from central government to jurisdictional units. The law identifies "high priority" zones to reduce poverty through targeted investments from the *Fondos de Inversión de la Nación* [Investment Funds of the Nation]. While devolving authority to the jurisdictional level, the State retains authority to establish the general policy for territorial land-use planning in matters of national interest, particularly with regards to national parks and

protected areas, large infrastructure projects, urban expansion, areas of historic and cultural significance, and, importantly, strategies to reduce deforestation.

- The proposed Law on Land and Rural Development, currently under consultation, defines 'rural development with a territorial approach' as "the process of productive, institutional, and social transformation of rural territories, in which local social actors have a predominant role and enjoy the support of public, private, or civil society agencies, or some or all of these, with the objective of improving the wellbeing of the inhabitants based on the sustainable use of biodiversity, in particular of natural renewable resources and ecosystem services. A result of this process should be the correction of regional imbalances regarding levels of development.

Recent initiatives, such as the National Climate System and Low Carbon Development strategy could strengthen Colombia's mandate for the development of alternative livelihood strategies. Further, policies could have an impact on reducing deforestation by offering incentives, such as is the case with the Forest Incentive Certificate; guiding land-use planning processes (e.g. Revisions to Law 2 of 1959 via the National Development Plan, Territorial Land Use Planning Law of 2011)

1.2 Rationale for ICF (donor) involvement and the potential for transformational impact

The proposed suite of investment strategies is well-aligned with ICF's mission to catalyze low-carbon development pathways. The project directly incorporates two of the three main priorities for ICF. Investments will promote the transition to a low-carbon emission rural economy in the Colombian Amazon, while stimulating new partnerships between the private sector, governments and producers to drive innovation and new alternatives for sustainable and climate resilient rural economies. By demonstrating proof-of-concept that 1) low-emission rural economies are viable and attainable, and 2) that the private sector can be a cutting edge actor in the transition to low-emission rural economies, the project will also contribute to ICF's third thematic strand of strengthening international negotiations around reducing deforestation and low-carbon development.

1.3 Theory of change

The interventions being funded by this project involve multiple donors' contributions to the Amazon Vision Program. The investment portfolio of this program aims to deliver on eight strategies and four pillars taking into account their importance to the goal of curbing deforestation in the Amazon region of Colombia.

The theory of change tracks the relationship between the current status of production systems, sustainable supply chains and governance and how these conditions need to change in a way that sustainable production and private sector engagement could become important agents in achieving reduction deforestation goals in the Amazon.

The theory of change for the proposed intervention is detailed in Figure 2:

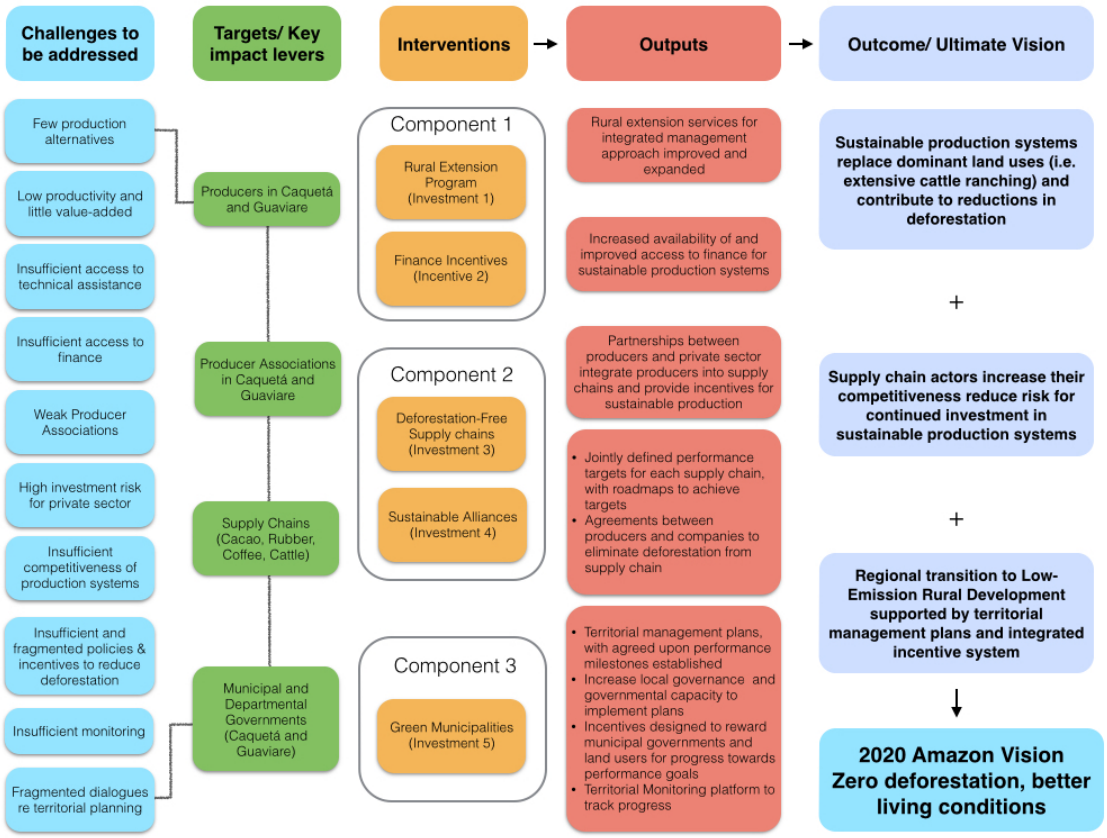

Figure 2. Diagram of the theory of change proposed for the actions that would be financed by the United Kingdom within the framework of the production systems component of the Amazon Vision Program.

Our theory of change summarizes the principle drivers of deforestation in the Colombian Amazon described in the previous sections as key challenges to be addressed by the project. We relate these drivers and market failures to the target beneficiaries of the project- producers, producer associations, and other supply chain actors (such as companies and processors) as well as municipal and departmental governments, who can act as critical agents of change in the region given the right suite of incentives.

There are three main intervention components aimed to reduce deforestation and generate better living conditions in the Colombian Amazon; these include 1) sustainable production systems that do not depend on deforestation, 2) sustainable supply chains and private sector alliances committed to reducing deforestation and 3) improved governance capacity to support these production systems and alliances. The intervention strategy is highly synergetic and designed to be implemented as a package. The proposed intervention strategies will build upon one another to drive a regional transition to low-deforestation development. It begins at the producer level, where improved and expanded rural extension programs will promote integrated land management, providing services such as technical assistance, capacity building and monitoring to replace dominant land uses with sustainable land use practices. Rural extension complements new and improved financial incentives to support the adoption of new land management practices. The second component, focused on supply chain actors, will

catalyze new partnerships between producers and companies and improve conditions for the private sector's investment in sustainable production systems. And lastly, component 3 complements governance strategies within the Amazon Vision program by seeking to align goals and incentives for producers, companies and regional governments under a "Green Municipalities" program for territorial management (Investment 5).

1.3.1 Expected Results

The global benefit expected from the proposed intervention is reduced deforestation and improved living conditions for rural Amazonian producers,

Direct benefits expected from the proposed intervention include:

- A reduction in deforestation in Caquetá and Guaviare by replacing dominant deforestation-dependent land use practices with sustainable land management practices, potentially reducing greenhouse gas emissions associated with deforestation while enhancing CO_2 removals from the atmosphere by restoring degraded pastures into natural forest systems at a scale of approximately 35.5 million tons of CO2 equilvalent over ten years.
- The adoption of sustainable production systems (including silvopastoral and agroforestry systems) is expected to transform almost 25,000 hectares (ha) of land into sustainable use.
- The intervention will directly benefit over 8,000 rural producers, improving rural livelihoods.
- The intervention will establish new and improved credit lines and financial incentives for rural producers (EcoAgro, Agrosostenible, AgroBosque).
- The intervention is expected to foster over 100 alliances between producers and companies within target supply chains.
- Municipal governments will establish time-bound performance goals to reach the 2020 zero-net deforestation goal within territorial management plans.

Beyond these direct impacts that are accounted for and included in the cost benefit analysis of the investment portfolio (elaborated in the Appraisal Case), donor support will increase the likelihood of collective action to move entire jurisdictions towards low-emission rural development through integrated incentives for reductions in deforestation and improved governance capacity to monitor and implement incentives. Furthermore, medium to long-term impacts of the intervention include:

- Greatly enhanced capacities and knowledge of sustainable agroforestry and silvopastoral production systems among both rural extension agents and producers themselves. This capacity will be sustained for many years beyond the length of the program and will very likely result in a dominance of such production system in these departments and nearby areas (e.g., Meta) and perhaps even more broadly, if there is attention and resources put into broader dissemination nationally.
- Realigned finance or new financial mechanisms implemented in Colombia by both public and private actors that will continue to provide financial support to sustainable agroforestry and silvopastoral production systems.

- Real examples of zero-deforestation supply chains that can inform the creation of such supply chains in other departments and/countries.
- The implementation of a Green Municipalities program outside of Brazil that can provide its useful experience to other departments and states in and beyond Colombia and lead to the creation of such programs elsewhere.

The following table presents the potential impacts of each investment (and assuming 25% leakage rates across all investments – see Appraisal Case for more information on the cost-benefit analysis).

Table 1. Expected outcomes of Investments

Investments	Beneficiaries			Hectares		
	Unique Producers	Total Service providers	Producers' associations	Transformed into sustainable production systems	Avoided deforestation	Total hectares of forests conserved
1. Rural extension program	2,387	450		7,161	1,842	41,184
2. Finance incentives	2,809			8,426	2,098	48,461
3. Zero Deforestation supply chains*						
4. Sustainable alliances	3,159		105	9,478	2,303	54,513
5. Design of a Green municipalities program	20 municipalities across 2 departments				90,295	6,593,101
Total	**8,319**	**450**	**106**	**24,958**	**6,217**	

* Beneficiaries and hectares overlap with Investments 1, 2 and 4 and are thus not included here.

1.3.1.1 Capacity building for the implementation of sustainable production practices

Donor finance will be used to support a rural extension program that will promote the transformation of 7,161 ha into sustainable production and benefit 2,387 producers

The establishment of a rural extension program will support farmers in the implementation of sustainable production practices that do not rely on deforestation, including improved pasture management and agroforestry systems.

A rural extension program will promote sustainable production systems with an integrated approach. A major priority is to increase the intensity and productivity of cattle ranching for meat and milk production through improved pasture management, including the adoption of silvopastoral systems, and improved breeds. There are several initiatives underway that seek to promote silvopastoral systems and the focus here should be on ensuring that all farmers have

access to the technical assistance they need to adopt these innovations so as to reduce and eventually eliminate deforestation from livestock production, while increasing economic returns to farmers.

This investment aims to implement a rural extension program to support rural producers in Caquetá and Guaviare so they can make the transition to new or renovated low-emission farming systems that reduce deforestation through adoption of sustainable crop and livestock production, fully integrated into regional supply chains.

- Establish a decentralized rural extension system linked to Secretaries of Agriculture of Departments and funded by private sector producer associations, rural extension national organizations, universities and research institutions that achieves the scale required for the regional transformation of smallholder farming and forest management systems.
- Develop the organizational capacity of smallholder organizations so they can provide basic services for members and represent them in negotiations with government agencies and companies.
- Develop and begin implementation of a program to train local technicians to work with farmers via regional demonstration farms and farmer-to-farmer exchanges.
- Develop a participatory monitoring network integrated into extension system that links producers to regional research institutions monitoring platforms.

Based on calculations in the Appraisal Case, an estimated 2,387 producers will benefit from the program and could potentially: transform 7,161 ha into sustainable production systems; conserve more than 41,233 ha of forest on their land; and avoid 1,842 ha of deforestation. The proposed rural extension program expects to train 450 local service providers[10] to support producers in the sustainable management of their farms.

1.3.1.2 Credit access for producers interested in implementing sustainable production practices:

Donor financial support will be used to support financial mechanisms that will promote the transformation of 8,476 ha into sustainable production systems and benefit 2,809 producers.

Given the current reality that producers have limited access to existing credit and incentives, and the absence of incentives for zero deforestation production, there is a great opportunity to offer better access to – and/or terms of – credit or other financial incentives to producers who want to implement sustainable, high-quality production systems while also reducing deforestation in the Amazon.

The goal of this investment is to support the transformation of current production systems into non-deforesting sustainable production systems through the provision of special finance to local

[10] Currently companies and sector associations provide rural extension services according to their needs. There are not many local technicians trained to provide rural extension services and support local farmers in the transition to sustainable production systems. This program will invest in training service providers in order to generate capacities at local level and cultivate specialized teams that can be counted on to support the institutions involved in the rural extension program and other actions related to this portfolio of investments.

producers, including via producer associations. Activities of the investment will focus on supporting local producers with needed finance for the establishment, monitoring and maintenance of new or renovated sustainable production systems.

Access to credit and other financial mechanisms would incentivize the transformation of production systems for those producers willing to commit to zero-deforestation agreements. The donor will support the design of a package of financial mechanisms with the goal of providing credit and financial incentives to farmers and producer associations interested in establishing sustainable production systems. This includes the design and implementation of two new financial incentives – Agrobosque and Ecoagro[11] – which are based on existing incentives in Colombia (the Rural Capitalization Incentive and the Forestry Incentive Certificate, both of which are described further in the Appraisal Case) and modified to better serve the conditions of Amazon beneficiaries and sustainable production systems. In addition, a new fund – Agrosostenible – will be designed and implemented to invest via debt or equity into sustainable production in the Amazon.

Based on the assumption that these mechanisms will provide finance to 2,098 producers in three years, they will: transform 8,426 ha into sustainable production systems; conserve 48,461 ha of forest; and avoid 2,098 ha of deforestation.

1.3.1.3 Zero-Deforestation supply chains

Donor finance will support investments in the production, processing and commercialization of cocoa, coffee, rubber and cattle by fostering producer-private sector alliances, as well as strengthen sector-specific organizations and the establishment of performance targets through multi-stakeholder dialogues.

The donor will support key actions to strengthen priority supply chains in Caquetá and Guaviare (milk, beef, cocoa, coffee and rubber). Increased capacities for processing and accessing markets more effectively will reward supply chains that commit to reducing deforestation and improve management practices along the supply chains. Action plans for each supply chains will be developed and actions implemented through specific partnerships between sector associations and private sector companies. Also, this intervention will importantly help to build markets for zero-deforestation, Amazonian products for these supply chains.

The supply chains in Caquetá and Guaviare are still in the process of being consolidated; therefore, interventions that develop or strengthen multi-stakeholder platforms within target municipalities and supply sheds will enable the development of partnerships, quality management, traceability, and greater access to markets. Building stronger supply chains will depend on both the provision of technical assistance to producers as well as alliances among producers, businesses and public sector institutions (i.e. technical assistance providers, rural development programs).

[11] Possible names of these new incentives are included for clarity.

It is assumed that all producers participating in Investments 1, 2 and 4 (Rural Extension, Financial Mechanisms and Sustainable Alliances) will benefit from Zero Deforestation Supply chains, so no new beneficiaries are assumed for this component of the intervention. However, it is important to note that this component is critical in the overall investment package so the beneficiaries of other investments will have markets into which to sell their products.

1.3.1.4 Sustainable alliances

This investment seeks to transform current production systems into non-deforesting sustainable production systems by supporting critical partnerships between businesses and local producers' associations that reduce the investment risk of – and provide incentives for – sustainable production, landscape management, and more sustainable processing. It also seeks to support other needed investments into improved transportation, logistics, refrigeration, etc. that allow producers to get higher quality and quantity of products to markets.

The national Support Program for Productive Alliances (PAAP) has been successful in fostering partnerships between buyers and products by improving the organization and technical capacity of producer associations and their members, integrating small producers into supply chains, and providing access to credit via revolving funds. To date, implementation of PAAP in the Colombian Amazon has been relatively limited compared to other regions. In order to build on the successes of this program and increase its impact in the Amazon, we propose a new Sustainable Alliances program that will similarly foster relationships between producer associations and companies to increase certainty around supply and demand, as well as to achieve quality standards needed by buyers. In addition, Sustainable Alliances will foster producer-and-buyer defined best practices and performance milestone related to Colombia's zero net deforestation goal, as well as provide technical and financial support to partnerships to reach performance milestones and implement medium to long term sustainable financing strategies.

The donor will support Sustainable Alliances between local production associations and buyers, which will be supported by local public institutions such as offices of mayors and governors (similar to PAAP currently), Ministry of Environment, Ministry of Agriculture, local environmental authorities, research institutes, among others. These alliances will be fostered based on concrete, shared objectives regarding production, quality, sustainability, and commitments to zero deforestation.

This investment will support 105 alliances in three years. Based on the assumption that 3,159 producers and 105 producer associations would benefit, some 9,478 ha could be transformed into sustainable production systems. 54,513 ha of forest could be conserved, and 2,303 ha of deforestation could be avoided.

1.3.1.5 Incentives to reward municipalities and their farm sectors that achieve better performance in reducing deforestation

Donor finance will support the design of a "green municipalities program" for Caquetá and Guaviare to provide incentives to those municipalities that achieve better performance in reducing deforestation.

The long-term sustainability of supply chains and zero-deforestation commitments by businesses and producers will depend on local capacity for providing technical assistance, creating and implementing incentives, as well as for controlling and overseeing unsustainable practices that lead to forest degradation and deforestation. This will require engaging local governments and institutions to adopt strategies in support of low-emission rural development, as well as research institutions and universities, who can provide long-term monitoring and institutional support. The objective of this investment is to ensure that Caquetá and Guaviare and the municipalities within them have the long-term capacity that enable them to work hand-in-hand with the producers to accomplish the goals of sustainable production systems and zero deforestation.[12]

Colombia could design a program that rewards farmers, settlements, and governments in municipalities that are lowering deforestation. This program could initially focus on Caquetá and Guaviare Departments (priority regions under the current study) and expand to the Llanos/ Orinoco and other regions. This program could also engage companies through a matching fund or other mechanism that allows companies to increase their investments in their supply chains by linking to public funds (AgSostenible, others).

1.4 Summary of assumptions and risks

1.4.1 Assumptions

Expected impacts and results are estimated based upon assumptions of institutional coordination, political interest, technical capacity, and interest on the part of the production-related actors to change their production systems:

- Viable alternative production systems exist that: 1) are regionally appropriate, 2) reduce deforestation, 3) capture/store carbon, 4) restore landscapes, 5) are semi-intensive or intensive, 6) optimize production, and 7) improve producer livelihoods.
- The Amazon Vision Program provides a framework for institutional coordination to achieve the goal of reducing deforestation in the Amazon.
- Institutional interest and stability exist in the medium and long term that permit the development of the proposed initiatives through inter-sectoral coordination.
- Knowledge and technical capacity exist for promoting and establishing sustainable production systems.

[12] The Consortium is analyzing the current regulatory framework with the objective of identifying mechanisms that connect institutional services or policy proposals that strengthen the development of strategies to reduce deforestation.

- There is interest on the part of producers in accessing certain markets, lines of financing, incentives, and mechanisms of product differentiation (i.e. certifications).
- The public sector, academia, and research institutions have the credibility to effective engage with and exchange knowledge and information with private sector actors regarding sustainable production systems in the Colombian Amazon.

1.4.2 Risks

In Table 2 below, the principal risks to the success of the investment package are identified and mitigation measures are identified.

Table 2. Principle risks and mitigation measures

Risk description	Risk level	Mitigation actions	Residual risk
Institutional capacities and governance			
Insufficient institutional coordination, such that overlapping or competing programs undermine potential impact of proposed investments, especially with regards to financial incentives.	Medium	Coordination with other Amazon Vision initiatives, international cooperation agencies, and governmental programs such that intervention strategies are articulated across sectors and agencies, and those similar criteria for monitoring performance are used across the board. Institutions are already in a dialogue to coordinate strategies and activities, but in the short term, a greater leading role is needed in order to ensure inter-institutional coordination.	Low
Lack of credibility of the implementing institutions from the perspective of the local population and private sector	Medium	Provide support to existing initiatives or modifications of existing initiatives such as financial mechanisms or PAAP that could generate impacts in the short term. As investments are designed according to the characteristics of Amazonian producers and expectations of the private sector, is expected that this will build trust with local actors as the strategy is implemented. Awareness campaigns for rural extension and financial incentives programs will broadly disseminate information about the programs and build credibility from the beginning of implementation (and according to the target population). It has been documented that Amazon producers do not access many programs, projects and incentives because, in part, they do not know about them. Institutions fail to disseminate information about their services, especially to remote regions. Therefore, it is a manageable risk.	Low
Political cycles will jeopardize sustainability of governance reforms, alliances between producers, private and public sector, and LED-R strategies at municipal	High	Involvement of civil society actors, such as research institutions, universities and NGOs, will provide institutional memory and long-term monitoring to weather political cycles. This is why the proposed interventions have been built based on the experiences of local actors and related sectors.	Medium

Risk description	Risk level	Mitigation actions	Residual risk
and department level		Furthermore, the Amazon Vision program is already included in the National Development Plan 2014-2018, and it is expected that it will become an integrated approach and a common vision in the long term led by national government. In either case, there are some larger political and economic interests that are beyond the implementing institutions' control.	
Weak capacity of local authorities (for example, due to lack of human resources) to guide businesses in the implementation and monitoring of regulations	High	Strengthen the capacity of authorities and local organizations to provide technical assistance. Promote alliances between the public and private sectors in order to achieve common goals. The investments focus on working closely with local authorities – e.g., in the rural extension program and associated monitoring, where local authorities will play an important role in developing producers' skills, reaching more rural areas and producers, and learning about local businesses – and this is designed to help actors see authorities as technical guides who can help them meet regulations rather than just deploying punitive measures if they are not in compliance with such regulations.	Medium
Lack of market access and risks for private sector investments			
Fluctuations in market demand increase risks to producers and companies	Medium	Define market access strategies jointly with private sector actors and dedicate resources to supporting strategies that help open up markets to products from the region that are characterized by their sustainable land use and/or their contribution to reducing Amazonian deforestation. Commodities like rubber, cocoa and Amazon coffee are demanded both nationally and internationally. The interventions are designed to make sure local supply meets market requirements. The Ministry of Environment has planned a campaign promoting green or environmentally-friendly products.	Low
Prices of key commodities could raise or fall significantly	Medium	Prices of commodities are determined by international markets, therefore this not a risk that can be controlled. However, Investment 3 will promote adding value to products so local production can reach more markets.	Medium
Informal and insecure land tenure hinders the development of production initiatives due to limited access to credit and high investment risks for businesses	High	Develop regulatory proposals that offer opportunities for small producers to secure formal land tenure, whether via property deeds or other schemes that promote land tenure especially if producers are using the land sustainably. There is room to explore various approaches to legal access to land. Authorities at different levels are looking for alternatives to past	Medium

Risk description	Risk level	Mitigation actions	Residual risk
		approaches, especially under a post-conflict scenario.	
Insufficient consumer demand for zero-deforestation products, either due to insufficient knowledge of products or unwillingness to pay price premiums	High	Design integrated market incentives: trade facilitation programs, market strategies, alliances between sector associations and buyers, etc. As mentioned above, the Ministry of Environment has planned a campaign promoting green or environmentally-friendly products. Through this campaign, the demand for those products should increase, and it will be possible to market Amazon products in ways that can capture niche markets.	Low
Insufficient infrastructure in the Amazon region limits competiveness of supply chains	High	To improve business enabling conditions such as road and power infrastructure is beyond the scope of these investments; however, through sustainable partnerships and supply chains, supply can be planned so that issues like poor quality decreases, value is added to products at the farm level, etc., and thus businesses will be less affected by these conditions. Also, through supply-chain dialogues, plan production according to the conditions of the region and limitations imposed by certain periods of the year.	Medium
Little local capacity to process commodities that can add value to raw materials	High	Strengthen processes to generate value-added products in accordance with market requirements and characteristics of demand. The investment portfolio has activities focused on developing producers' skills and strengthening capacities in processing/transformation, according to the improvement plan designed between supply chain actors. Thus, this risk is manageable if dialogue within supply chains is robust and market demand and quality specifications are addressed.	Low
Armed conflict, illegal mining, and illicit crop cultivation that could interfere with project implementation, discourage participation of local producers, and/or undermine public order	High	Work in a coordinated manner with local actors to jointly identify the actions that are necessary for preventing negative effects of these activities. This is not a directly manageable risk. However, by focusing on helping legal businesses become more profitable and sustainable, and also generating or strengthening economic opportunities for local people, this risk is indirectly addressed via the investment proposal.	Medium
Social conditions			
Illegal practices (trafficking in timber, wildlife species, coca cultivation) compete with the project's production options	High	Close coordination with other programs to combat illegal practices and promote integrated strategies. Strengthen governance processes at the local level and identify viable alternatives to illegal activities.	Medium

Risk description	Risk level	Mitigation actions	Residual risk
		The strategy could support production systems to become more profitable and sustainable, and generate new opportunities for local people. Promotion of sustainable production systems, as well as financial and market incentives, will create opportunities for vulnerable populations that have been affected by armed conflict.	
Regulatory gaps and lack of capacity for management and processing of biodiversity-based products	Medium	Review regulatory framework and identify laws and regulations that promote private sector investment. Close coordination with environmental authorities, universities and research institutes (as providers of basic research and knowledge in order to meet the necessities of producers and private sector) will lead to enhanced local capabilities to improve protection of biodiversity and establish better control and regulation of biodiversity-based products.	Medium

2 Appraisal case

This Appraisal Case evaluates the options for investment and the implementation strategy needed to assure a transformational impact.

2.1 Investment options

A multi-criteria analysis (MCA) was developed to evaluate seventeen investment options to achieve the five expected results described in the Strategic Case. These options were evaluated based on a set of strategic (7) and operational criteria (5) as presented in Table 3 below. The evaluation was performed by scoring each of the criteria on a scale of 1 to 3, in which 1 means that the option evaluated makes a small contribution to the criteria, 2 is a medium-level contribution, and 3 is a significant contribution. The weight assigned to Strategic Criteria and Operational Criteria is 50%.

Table 3. Key Strategic and Operational Criteria within the Multi-Criteria Analysis

Attributes		Score		
		1	2	3
Strategic Criteria	1. Strengthens local capacities	Doesn't contribute to strengthening capacities at local level	Contributes to strengthening capacities of some actors	Contributes to strengthening capacities of local authorities, private sector and local producers
	2. Potential to engage the private sector in REDD+ and Low-Emissions Development activities	Doesn't promote private sector engagement in REDD+/LED activities	Promotes private sector involvement in the implementation of some REDD+/LED activities	Encourages/relies on private sector leadership and collaboration with local actors in REDD+/LED activities
	3. Diversification of production alternatives and incomes	Doesn't promote new production alternatives	Includes the promotion of some new production alternatives	Offers opportunities to promote an integrated approach and support new supply chains
	4. Promotion sustainable practices / reduction of deforestation	Option doesn't include promotion of good practices or actions to reduce deforestation	Option includes promotion of good practices but no clear how to reduce deforestation	Option includes promotion of good practices and agreements to reduce deforestations
	5. Potential for transformational impact at the regional or national level	Specific to a particular area/initiative, not many options for regional-level impact	Option offers opportunities for transformational impact in a specific territory or supply chain	Option with transformational regional impact. Offers opportunities to scale up, replicate at regional and/or national level

Attributes		Score		
		1	2	3
	6. It is an incentive that could be linked to performance based system	Option does not provide an incentive(s) to promote good practices and reduce deforestation	Option does provide an incentive(s) to promote good practices and reduce deforestation	Option does provide an incentive(s) to promote good practices and reduce deforestation and could be linked to a performance system
Operational Criteria	7. Existing experiences relevant to guide and inform implementation	There are no experiences or projects that can contribute to the design and implementation of the program	There are experiences/ projects/funding that can contribute to the design and implementation of the program at national level	There are experiences/projects /funding that can support implementation in the short term at local level
	8. Existing institutional capacities for administration/ implementation of a program	There are no local capacities or potential partners interested at local level	There are institutions with local or potential partners that could support the implementation	There are institutions with local or potential partners that could support the implementation of the project and run similar programs
	9. Potential to encourage government and private sector co-funding	Is highly dependent on international cooperation	Even though this option depends on international funding in the first stage, it has the potential to attract government and private sector funding in the medium term	This option has the potential to attract government and private sector funding during its first stage
	10. Readiness to start activities 2015	Implementation requires a long process of design or additional processes of consultations with actors, delaying implementation for a year or longer	Needs a short process to complete its design and (if current program exists) to adapt the current program to achieve the intervention's desired impact	It is an existing program that could start activities as soon funds available

Seventeen options were analyzed related to 5 investments needed to achieve results proposed in the strategic case. Based on the results of the MCA, it is recommended that the donor invest in the following investments:

1) Design and implementation of a rural extension program with an integrated approach;
2) Design and implement new finance mechanisms in conjunction with medium-term public and/or private vehicles for deployment;

3) Support existing supply chains in developing collaborative strategies that improve competitiveness and market access, while at the same time aligning with the goal of zero deforestation;
4) Develop Sustainable Alliances based on PAAP and more comprehensively supporting productive partnerships in the Amazon in sustainability and other goals; and
5) Design of Green Municipalities programs in Caquetá and Guaviare.

Table 4 below presents the results of the MCA and qualifications of each one of the options analyzed.

Table 4. MCA Reveals Best Investment Options

Invest.	Options	Strategic criteria (weight 50%)[13]						Operational criteria (weight 50%)				Subtotal		Total
		1	2	3	4	5	6	7	8	9	10	SC	OC	
Rural extension program	1. Design and implementation of a rural extension program with an integrated approach	3	3	3	3	3	3	2	3	3	2	9	5	14
	2. Support rural extension programs leaded by private sector associations of priority supply chains	2	2	1	3	2	3	3	3	3	3	6,5	6	12,5
	Do nothing	1	1	1	1	1	1	1	1	1	1	3	2	5
Financial incentives	1. Realign existing MADR/FINAGRO finance and incentives	1	1	2	2	3	2	2	3	2	1	5,5	4	9,5
	2. Develop new mechanisms and realign MADR/FINAGRO finance	3	2	3	3	2	3	2	3	2	2	8	4,5	12,5
	3. Develop new mechanisms and medium-term public and/or private vehicles for deployment	3	3	3	3	3	3	2	3	2	2	9	4,5	13,5
	4. Do nothing	1	1	1	1	1	1	1	1	1	1	3	2	5
Deforestation-free supply chains	1. Multi-stakeholder Dialogues/Roundtables of Supply Chain Actors of priority supply chains in each department	2	2	2	3	3	1	2	2	2	2	6,5	4	10,5
	2. Engagement of companies in the implementation of good practices and zero deforestation goals in their supply chains	2	2	2	3	3	3	2	2	3	2	7,5	4,5	12
	3. Support existing supply chains in improving competitiveness while committing to reduce deforestation and improve production practices, involving market strategies for amazon products	3	3	3	3	3	3	3	3	3	3	9	6	15
	4. Do nothing	1	1	1	1	1	1	1	1	1	1	3	2	5
Sustainable alliances	1. Develop new program to support productive partnerships in sustainability and other goals	3	3	3	3	3	3	2	2	3	1	9	4	13

[13] Weighting: 50% for Strategic Criteria and 50% for Operational Criteria.

Invest.	Options	Strategic criteria (weight 50%)[13]						Operational criteria (weight 50%)				Subtotal		Total
		1	2	3	4	5	6	7	8	9	10	SC	OC	
	2. Modify PAAP to better support productive partnerships in sustainability and other goals	3	3	3	3	3	3	2	2	3	2	9	4,5	13,5
	3. Do nothing	1	1	1	1	1	1	1	1		1	3	1,5	4,5
Incentives to reward municipalities and their farm sectors	1 Design of Green municipalities programs in Caquetá and Guaviare	3	3	3	3	3	3	2	2	2	1	9	3,5	12,5
	2.Support existing planning processes and promote a departments in the implementation of plan to control deforestation	2	1	1	1	3	1	3	3	1	3	4,5	5	9,5
	3.Do nothing	1	1	1	1	1	1	1	1		1	3	1,5	4,5

Next, the evaluation of possible Intervention options is described in more detail.

2.1.1.1 Intervention options for Investment #1 – Rural Extension Program

Option 1. Program of technical assistance with an integrated approach: Under this option, donors would invest in the design and implementation of a rural extension program targeted to producers associations and local producers interested in managing their farms sustainably. The program will promote an integrated approach involving assistance with: 1) land-use planning at the farm level, 2) sustainable production practices, 3) sustainable forest management for timber and NTFPs, 4) quality and post-harvest management, and 5) entrepreneurial skills and farm business management.

Option 2. Support rural extension programs of priority supply chains: Under this option, donors will support existing supply chains by strengthening existing rural extension programs.

Option 3. Do nothing: This is the current scenario without intervention of Donor. Technical assistance will depend on the existing international cooperation programs, support of supply chains and projects of institutions such as Universidad de la Amazonia, Corpoamazonia or Sinchi Institute.

Table 5 summarizes the results of the analysis.

Table 5. Intervention options for Investment 1 – Rural Extension

Intervention	1. Design and implementation of a rural extension program with an integrated approach	2. Support rural extension programs leaded by private sector associations of priority supply chains	3. Do nothing
Benefits (Strategic Criteria)	• Integrated approach, not linked to one supply chain, would provide range of production activities and management practices tailored to producers' needs, • Generate institutional capacities for rural extension involving good practices at different levels (farmers, service providers, institutions, sector organizations) • Private sector support in the design of rural extension programs, informed by their experiences. • New approach could be replicated in other departments. • Eventually, rural extension program could be an incentive linked to performance	• Targets private sector associations • Supports existing rural extension programs of sector associations. • Builds organizational capacity of sectoral associations to deliver improved rural extension services and integrate low-deforestation practices • Promotes impacts on specific supply chains by including good practices and promoting zero-deforestation agreements. • Support to private sector could be an incentive based on performance.	Adoption of low-deforestation practices would depend of interest of farmers in response to changes in buyers' criteria or other external factors
Operational opportunities and constraints (operational criteria)	• To date, low institutional capacity for rural extension and no programs in place. • Insufficient articulation between existing government and international cooperation programs. • Experiences at national and local level could inform program design. • Potential for long-term sustainability of the program after international donor funds end if sufficient capacities are built within government institutions for	• Private sector actors may be more nimble and able to innovate rapidly in response to business opportunity • Potential for fast delivery relatively high • Focus would be on select supply sheds, broader impacts uncertain • Long-term sustainability highly dependent on private sector actors' continued interest and funding	• Without adequate support and promotion of livelihood alternatives, producers most likely will continue implementing unsustainable practices, including forest-clearing techniques to establish new production areas. • Existing business models, unsustainable production practices and lack of capacities would

Intervention	1. Design and implementation of a rural extension program with an integrated approach	2. Support rural extension programs leaded by private sector associations of priority supply chains	3. Do nothing
	continued management.		continue driving unsustainable processes in the Amazon region.
Overall assessment	While Option 2 has greater potential for private sector involvement and delivery in 2015, it has fewer benefits in terms of capacity building, institutional strengthening and greater risk for long-term program sustainability and broader regional impact. Even though Option 1 will require more time from design to implementation, it is chosen given the higher potential impact on promoting articulation among organizations to ensure long-term program sustainability and in generating capacities at local level for to implement alternative, low-deforestation practices with an integrated approach.		

2.1.1.2 Intervention options for Investment #2 – Financial incentives

Option 1 – Realign existing Colombian agricultural MADR/FINAGRO finance and incentives to better support sustainable production systems. Under this option, donors will invest in the design and implementation of *modifications to existing mechanisms* to better support sustainable agricultural production in the Amazon. This will include: 1) better terms of credit and incentives, with special attention paid to the needs of small producers and the productive life cycles of Amazon tree and crop species, 2) easier access to existing credit and incentives that sidestep land tenure and credit history issues, and 3) a focus on integrated land management that encompasses more productive, quality systems that also achieves on-farm sustainability (including restoration of degraded land).

Option 2 – Develop new finance and incentives to support sustainable production systems in the short term and develop medium-term modifications to Colombian agricultural MADR/FINAGRO public finance. Under this option, donors will invest in the design and implementation of *new mechanisms* to better support sustainable agricultural production in the Amazon in the short-term while also working with stakeholders to *realign existing agricultural finance*. This will include: 1) better terms of credit and incentives than now exist, with special attention paid to the needs of small producers and the productive life cycles of Amazon tree and crop species, 2) easier access to existing and new credit and incentives that sidestep land tenure and credit history issues; and 3) a focus on integrated land management that encompasses more productive, quality systems that also achieves on-farm sustainability (including restoration of degraded land).

Option 3 – Similar to Option 2 but with a focus on developing sustainable production systems in the short term and developing medium-term opportunities to deploy financial incentives through both/either public MADR/FINAGRO finance and/or private or nonprofit institutions. Under this option, donors will invest in the design and implementation of *new mechanisms* to better support sustainable agricultural production in the Amazon in the short-term while also working with regional and local stakeholders to strengthen existing agricultural finance, improve local capacities and develop channels through which finance can be deployed in the medium-term (both public and private vehicles). The finance and incentives will include: 1) better terms

of credit and incentives than now exist, with special attention paid to the needs of small producers and the productive life cycles of Amazon tree and crop species, 2) easier access to existing and new credit and incentives that sidestep land tenure and credit history issues; and 3) a focus on integrated land management that encompasses more productive, quality systems that also achieves on-farm sustainability (including restoration of degraded land).

Option 4 – Do nothing. No new finance will be offered to support agricultural production in the Amazon.

Table 6 summarizes the results of the analysis.