FAO/GLOBAL ENVIRONMENT FACILITY

PROJECT DOCUMENT

PROJECT TITLE: Promoting Climate-smart Livestock Management in the Dominican Republic **PROJECT CODE: GCP/DOM/019/GFF**	
COUNTRY: Dominican Republic	
FINANCING PARTNER: GEF Trust Fund	
FAO Project ID: 645733	**GEF/LDCF/SCCF Project ID: 10054**
EXECUTING PARTNERS: Ministry of Environment and Natural Resources; Ministry of Agriculture	
Expected EOD (Starting Date): 01 July 2018	
Expected NTE (End Date): 30 June 2021	
CONTRIBUTION TO FAO's STRATEGIC FRAMEWORK:	**a. Strategic Objective/Organizational Result:** FAO Strategic Objective 2: Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner Organizational Outcome 2.1– Producers and natural resource managers adopt practices that increase and improve agricultural sector production in a sustainable manner. Organizational Outcome 2.2 - Stakeholders in member countries strengthen governance – the policies, laws, management frameworks and institutions that are needed to support producers and resource managers – in the transition to sustainable agricultural sector production systems. Organizational Outcome 2.3 – Stakeholders endorse/adopt international (including regional) instruments and support related governance mechanisms for sustainable agricultural production systems. **b. Regional Result/Priority Areas:** FAO – Regional Initiative 2: Family farming and inclusive food systems for sustainable rural development FAO – Regional Initiative 3: 'Managing Natural Resources, Risk Management and adaptation and climate change mitigation"

c. Country Programming Framework Outcome:

The country strengthens capacities to develop sustainable use and management of forest resources and land strategies in prioritized areas, and with the participation of civil society

Moreover, this project is aligned with the following recently signed CPF (2018-2021) Priorities:

Priority 3: Natural Resources & Risk integral management to promote a sustainable and resilient agricultural sector

Outcome 3.2: The country strengthens interinstitutional mechanisms for the integral soil & water resources management in the agricultural sector

GEF/LDCF/SCCF Focal Area: Climate Change Mitigation - CCM-2 Program 4

GEF/LDCF/SCCF strategic objectives: Objective 2 – Demonstrate systemic impacts of mitigation options

Program 4: Promote conservation and enhancement of carbon stocks in forest, and other land use, and support climate smart agriculture.

Outcome A. Accelerated adoption of innovative technologies and management practices for GHG emission reduction and carbon sequestration.

Indicator 4. Deployment of low GHG technologies and practices.

Outcome B. Policy, planning and regulatory frameworks foster accelerated low GHG development and emissions mitigation.

Indicator 5. Degree of support for low GHG development in the policy, planning and regulatory framework.

Environmental and social risk classification (insert √): Low risk √ Moderate risk High risk

Financing Plan: GEF/LDCF/SCCF allocation:	**USD 1,540,586**
<u>Co-financing:</u>	
Ministry of Environment and Natural Resources	USD 1,000,000 (Cash)
Ministry of Environment and Natural Resources	USD 98,550 (In-Kind)
Ministry of Agriculture	USD 156,460 (In-Kind)
FAO	USD 60,000 (In-Kind)

	DIGEGA	USD 95,100 (In-Kind)
	Banco Agricola	USD 5,142,857 (In-Kind)
	CONALECHE	USD 1,256,545 (Cash)
	CONALECHE	USD 132,176 (In-Kind)
	IDIAF	USD 146,160 (In-Kind)
	FEGACIBAO	USD 53,560 (In-Kind)
	Sub-total cofinancing:	**USD 8,141,408**
Total Budget:		**USD 9,681,994**

Executive Summary

The agricultural sector is a traditional pillar of the Dominican economy contributing to food security, employment, currency generation, and the creation of raw materials for other industries. The sector is considered a driver for poverty reduction in rural zones of the country. Based on the Dominican Central Bank and the World Bank, the agricultural sector (including livestock, silviculture, fishing, and agriculture itself) accounts for 7.6% of GDP of which 3.9% relates to livestock activities, 3.6% to agriculture, and 0.03% to forestry. The growth rate of this sector has fluctuated over the last 10 years (2002-2011) oscillating between 3.7% (Ministry of Agriculture 2012) and 7% as cited above.

Agricultural production exerts pressure on natural resources such as soil, water, forest and biodiversity. In the Dominican Republic, this pressure is deeply affecting upstream basins. The poverty level in mountainous regions is 67% (population living below the poverty-line), of which 21% are indigent, illiteracy rate among indigent people is near 91.8% (91.2% of men and 92.3% of women. The main source of income of this population is traditional and subsistence agriculture (mainly rain-fed crops, cattle breeding, and others), which is done on poor soils and with inappropriate techniques for crop production and cattle breeding. It is well documented that the traditional model for production for upstream basins, based on felling and burning trees, contributes to deforestation, soil erosion, basin pollution, and dam sedimentation and destruction of endemic species' habitats. GIZ (2010) (GEF-UNDP, 2009, 2014) and World Bank (2016).

Traditional bovine production has centered on the unregulated and extensive use of pastures, which translates into pasture degradation, compaction and erosion of soils especially considering that 67 % of cattle farms practice open-pasture (IICA, 2006). The ongoing use of traditional production systems leads to low levels of productivity and efficiency related to the exploitation of productive resources such as: humans, natural (soil, water, and forest), markets and economies. In that regard, it should be noted that productivity levels for milk cattle (including double purpose) of 5.5 liters/cow/day (baseline PROLEFAM, 2014), while in beef daily weight gains are below 300 grams/day, translating into a fattening period greater than 48 months for a steer until slaughter.

While numerous efforts have been made, there are multiple barriers that impede the livestock sector's advance towards climate smart livestock management and reductions of carbon and water footprints, land conservation, as well as the protection of water resources and biodiversity. The main barriers to the climate-sustainable development of the livestock sector can be summarized as (i) Lack of integrated articulation and policy for the livestock sector, including the perspective of climate change mitigation, (ii) Lack of information regarding livestock sector (iii) Limited knowledge management capacities at institutional level, (iv) Limited technical and management capacities of producers (v) Limited access to markets and financing for climate-smart investments.

This project proposes to contribute to the reduction of greenhouse gas emissions generated by agricultural production, through the implementation of good practice models to improve productivity and cost effectiveness. Likewise, technical capacities will be strengthened at the level of the Ministries of Environment and Agriculture for the implementation of the MRV system and technical assistance for adoption of technologies and good practices for low-emission livestock. Recovery of soil, water and biodiversity in the basin are considered as co-benefits. The alternative scenario involves the development, introduction and upscaling of Climate Smart Livestock Management (CSLM) on small and medium-sized farms that are engaged in intensive livestock production on natural rangelands. This will lead to fewer GHG emissions, reversal of land degradation and restoration of land and the decreased economic vulnerability of farmers.

The project objective is to mitigate climate change and to restore degraded lands through the promotion of climate-smart practices in the livestock sector, whilst focusing on family farming.

The project is structured in 4 components which jointly contribute to the achievement of the objective. Component 1 aims to improve inter-institutional and financial efficiency and capacity to promote efficient and low emissions of livestock; consolidate and interpret knowledge, information, methodologies and lessons learned to produce practical recommendations to the sector and facilitate its replication. Component 2 will validate packages of technologies to stimulate climatically efficient and low-emission livestock production using scientific frameworks tested by applied science, GHG analysis and their relationship to livestock management of different types and contexts. Component 3 aims to strengthen the Monitoring, Reporting and Verification system in the Ministry of Environment and Natural Resources to interact with the livestock and agriculture sectors. Lastly, Component 4 ensures project results based management, including a monitoring and evaluation system, and a results based communication strategy.

The Global Environmental Benefits are (i) a reduction of 42,153 tons CO2-eq per year on GHG emissions (ii) An Area of 5,000 hectares under sustainable management (iii) 5,750 tons CO2 year on carbon sequestration (iv) Increased incomes: additional US$ 6,858,190 (year) in Project area for dairy farmers (v) Productivity increase: 18,790 tons of milk/ year (+46.3%) and 538 tons of meat /year (+34.3%).

Total project financing amounts to USD 9,681,994 over the three-year implementation period. Co-financing amounts to USD 8,141,408. GEF incremental resources amount to USD 1,540,586 (16% of the total financing).

Acronyms

ADHA	Asociación Dominicana de Hacendados y Agricultores, Inc
AW/P	Annual Work Plan and Budget
BH	Budget Holder
CC	Climate Change
CONALECHE	National Council for the Regulation and Promotion of the Dairy Industry (Consejo Nacional para la Reglamentación y Fomento de la Industria Lechera)
CONIAF	Consejo Nacional de Investigaciones Agropecuarias y Forestales
CSA	Climate-smart agriculture
CSLM	Climate Smart Livestock Management
DIARENA	Directorate of Environmantal and Natural Resources information (Dirección de Información Ambiental y de Recursos Naturales)
DIGEGA	General Directorate of Livestock (Dirección General de Ganadería)
FAO	Food and Agriculture Organization of the United Nations
FE	Final Evaluation
FLO	Funding Liaison Officer
FPMIS	Field Programme Management Information System
GCF	Green Climate Fund
GEF	Global Environment Facility
GHG	Geenhouse Gas
GIS	Geographic Information System
GLEAM	Global Livestock Environmental Assessment Model
GPC	General Project Coordinator
HDI	Human Development Index
IDIAF	Agricultural and Forestry Research Institute (Instituto Dominicano de Investigaciones Agropecuarias y Forestales)
INDC	Intended Nationally Determined Contribution
JAD	Dominican Agribusiness Board (Junta Agroempresarial Dominicana)
LAVECEN	Central Veterinary Laboratory (Laboratorio Veterinario Central)
LEAP	Livestock Environmental Assessment and Performance
LTO	Lead Technical Officer
LULUCF	Land Use, Land Use Change and Forestry
MARENA	Ministry of Environment and Natural Resources
M&E	Monitoring and Evaluation
MRV	Monitoring, Reporting and Verification
MTE	Mid-term Evaluation
NAMA	Nationally Appropriate Mitigation Action
NAP	National Adaptation Plan Process
NDA	National Designated Authority
NDC	Nationally Determined Contributions
OED	Office of Evaluation
PCU	Project Coordination Unit
PIR	Project Implementation Review
PPR	Project Progress Report

PSC	Project Steering Committee
PT	Project Team
PTF	Project Task Force
RAUDO	University Environmental Network (Red Ambiental Universitaria)
RBM	Results-based management
SINIAF	System of Agricultural and Forestry Research (Sistema Nacional de Investigaciones Agropecuarias y Forestales)
TOR	Terms of Reference
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
VITROGAN-RD	Laboratory of Animal Reproductive Biotechnology

SECTION 1 – PROJECT RATIONALE

1.1 PROJECT CONTEXT

1.1.1 The national context

1. The agricultural sector is a traditional pillar of the Dominican economy contributing to food security, employment, currency generation, and the creation of raw materials for other industries. The sector is considered a driver for poverty reduction in rural zones of the country. Based on the Dominican Central Bank and the World Bank, the agricultural sector (including livestock, silviculture, fishing, and agriculture itself) accounts for 7.6% of GDP of which 3.9% relates to livestock activities, 3.6% to agriculture, and 0.03% to forestry. The growth rate of this sector has fluctuated over the last 10 years (2002-2011) oscillating between 3.7% (Ministry of Agriculture 2012) and 7% as cited above.

2. Agricultural production exerts pressure on natural resources such as soil, water, forest and biodiversity. In Dominican Republic, this situation is deeply affected in upstream basins, reflecting the level of poverty of mountainous regions which have 67% of its population below the poverty-line, 21% are indigent with an illiteracy rate nearing 91.8% with men at 91.2% and women at 92.3% (UN, 2016 estimate). The main source of income of this population is traditional and subsistence agriculture (mainly rain-fed crops, cattle breeding, and others), which is done in inadequate soils and with inappropriate techniques for the production of crops and cattle breeding. It is well documented that the traditional model for production for upstream basins, based on felling and burning trees, contributes to deforestation, soil erosion, basin pollution, and dam sedimentation and destruction of endemic species' habitats. GIZ (2010) (GEF-UNDP, 2009, 2014) and World Bank (2016).

3. Traditional bovine production has centered on the unregulated and extensive use of pastures, which translates into pasture degradation, compaction and erosion of soils especially considering that 67 % of cattle farms practice open-pasture (IICA, 2006). The ongoing use of traditional production systems leads to low levels of productivity and efficiency related to the exploitation of productive resources such as: humans, natural (soil, water, and forest), markets and economies. In that regard, it should be noted that productivity levels for milk cattle (including double purpose) of 5.5 liters/cow/day (baseline PROLEFAM, 2014), while in beef cattle weight earnings are registered below 300 grams/day, translating into a fattening period greater than 48 months for a steer until slaughter.

4. While the economic growth of the sector is moderate (between 3.7% and 4.4% per annum) there is a lack of understanding of the quantity of soil or water resources needed to sustain it due to knowledge gaps. In certain watersheds of the country where studies have been made related to land use (Land Use Cover Change Analysis), such as the Artibonite's River Basin (GEF-UNDP, 2014) and the Plan Sierra for the northern part of the *Yaque del Norte* River, there is strong evidence of an exodus from agriculture towards livestock. In different interviews done for those initiatives, the teams documented unreliable rainfall and an increasing demand for meat as drivers of change. Logically, farmers are mitigating risks with changes in their land-use patterns.

Institutional and legal framework

5. Decree 269-15 attributes the responsibility of the National Climate Change Policy to the Ministry of Economy, Planning and Development, to the Ministry of Environment and Natural Resources and to the National Council for Climate Change and Clean Development Mechanism. Given the multisectorial nature of climate change, the institutional framework related to the subject is very broad and must be approached with a systemic perspective, since it contains environmental, social and economic dimensions.

6. Regarding the livestock sector, the Ministry of Agriculture has, within its structure, relevant dependencies such as the the General Directorate of Livestock (DIGEGA), the National Council for the Regulation and Promotion of the Dairy Industry (CONALECHE), the Central Veterinary Laboratories (LAVECEN) and Animal Reproductive Biotechnology (VITROGAN-RD). In addition, the National Council for Agricultural and Forestry Research (CONIAF) and the Institute for Agricultural and Forestry Research (IDIAF) have some weight on the sector, along with several non-governmental organizations that are integrated into the country's agricultural and livestock production, as we will see below.

7. **The Ministry of Planning and Development** was created in 2006 as the Economy, Planning and Development State Secretariat through Law 496-06, changing its name to that of "Ministry" with Decree 56-10 on February 6, 2010. It is the result of a profound legal transformation of the Dominican public administration that started from the need of the modernization process of the State to articulate the conduction of the planning system with the other transversal systems of the Dominican State. This Ministry plays a fundamental role in the development of key planning instruments to incorporate action against climate change into the national agenda. It leads the National Climate Change Policy that outlines the route to promote the actions on CC adaptation and mitigation and will contribute to consolidate the articulation process of those actions with concrete and effective measures and with the participation of social actors, laying the foundations for the elaboration of a long-term climate change strategy in the Dominican Republic.

8. **The Ministry of Environment and Natural Resources** was created through Law 64-00, as the governing body for managing of the environment, ecosystems and natural resources. It has a Climate Change Directorate responsible for ensuring compliance and maintaining follow-up to the UNFCCC and holds the responsibility of being the National Focal Point. This Ministry is the National Designated Authority (NDA) to the Green Climate Fund (GCF) and has the role of preparing the process for the development of the country's capacities in order to facilitate access to the financial GCF resources by interested national institutions in developing projects and programs for CC adaptation and mitigation.

9. **The National Council for Climate Change and the Clean Development Mechanism** was created by Decree No. 601-08, on September 20, 2008, with the aim of articulating and joining efforts from different institutions that make up the country's development sectors to combat the global problem of climate change. Among its objectives, it can be mentioned the establishment of the necessary coordination for the implementation of the national policies on CC Adaptation and Mitigation. It is governed by the Presidency of the Republic, and includes the heads of the Ministries of Environment and Natural Resources, Economy, Planning and Development, Agriculture, Foreign Affairs, Finance, Industry and Commerce, and Public Health and Social Assistance, as well as several entities from the banking,

energy, industrial sectors, private companies and representatives of civil society organizations.

10. **The National Energy Commission** was created by the General Electricity Law (LGE 125-01) that establishes the new legal and institutional framework that governs the activities of the subsectors: electric, hydrocarbons, alternative sources and rational use of energy. Its role in the energy sector focuses on the use of fuels derived from oil, natural gas and coal for use in generation, transport, industry, commerce and residential, as well as in relation to renewable energies (solar, wind, hydro, etc.) and biofuels and biogas as well as their potential in the country.

11. **The Ministry of Agriculture** was instituted in the Constitution of February 25, 1854, being called, Ministry of the Interior, Police and Agriculture. Since the 2010 Reform of the Constitution of the Dominican Republic and according to Decree No. 56-10 dated February 8, 2010, which came into force in October 2011, it is called the Ministry of Agriculture. It is directly responsible, or in coordination with other entities, for activities related to the adaptation of the agricultural sector to climate change to ensure food security through its Department of Risk Management and Climate Change. This body has the Sectoral Strategic Plan for Agricultural Development 2010-2020 (MA 2011) and among its strategic axes are: strengthening of agrifood health and safety, inter-institutional relations and producer organizations (training and coordination), as well as increasing competitiveness of the livestock subsector.

12. Within its organizational structure, there are relevant units to the dual purpose livestock production in the country: the General Directorate of Livestock (DIGEGA), the National Council for the Regulation and Development of the Dairy Industry (CONALECHE), the Central Veterinary Laboratories (LAVECEN) and the Laboratory of Animal Reproductive Biotechnology (VITROGAN-RD). These entities are briefly presented below:

13. CONALECHE was created by Law 180-01, dated November 10, 2001 and is the official institution responsible for ensuring the growth and development of the dairy sector of the country. It is dedicated to the elaboration and execution of a dairy policy that promotes self-sufficiency and improves productivity levels and competitiveness within the sector. It is oriented to develop and coordinate the national dairy industry, encouraging the production, industrialization, commercialization and consumption of milk and its derivatives. Its objectives include participating as a member of the commission created by decree No. 505-99, which establishes the regulation on imports of agricultural items of the Dominican Republic to the World Trade Organization (WTO) and ensure compliance with the provisions of Article No. 1139, dated July 28, 1975, which approves the Sanitary Regulations for Milk and Dairy Products.

14. LAVECEN was created in 1948 by Law No. 4030 and currently operates as a decentralized body governed by a Board of Directors, created by decree No. 128-93, chaired by the Minister of Agriculture. It is an institution committed to the agricultural sector, serving to support state policies regarding animal health, safety, agro-food safety and production of biologicals. LAVECEN is based on team work adhering to national and international standards, with the aim of contributing to animal and human health programs. On another note, the Laboratory of Animal Reproductive Biotechnology (VITROGAN-RD) recently opened its doors for the development of the production of quality genetics, both in agriculture and in livestock.

15. **The Ministry of Tourism:** In 2010, through Decree 56-10 which changes the name of State Secretariats to Ministries, and secretaries by ministers and vice ministers, the State Secretariat for Tourism, was renamed Ministry of Tourism, assuming the transformations that included the presidential disposition. The tourism sector is one of the sectors that will be most impacted by the effects of climate change. The weight that Tourism has on the Dominican economy and the consequences of climate change such as the elevation of sea level that can modify the coasts, the saline intrusion of groundwater, the increase of diseases such as dengue and malaria, the increase of storms and cyclones that increase vulnerability, so it is one of the sectors that must be prepared to plan their adaptation.

16. **The National Office of Meteorology:** After several years of being under the Ministry of Agriculture, the meteorological institution became a dependency of the Technical Secretary of the Presidency, with the degree of National Meteorological Office by Decree 1838-84. With Decree 764-03 it became a dependency of the National Directorate of Civil Aeronautics. Its mission is to act as a specialized technical body responsible for providing meteorological services to the entire country and to comply with all international commitments resulting from its affiliation with the World Meteorological Organization (WMO). Its role in the face of climate change is fundamental since it governs all the meteorological activity of the country and is in charge of maintaining a strict surveillance on the evolution of weather throughout the national territory, of air space and territorial waters and carrying out the relevant meteorological forecasts. It provides information, and advice, and is responsible for meteorological dissemination and education, it keeps the public informed about the evolution of atmospheric conditions, offers information relevant to the activity of all productive sectors dependent on climate (water resources, agriculture, posts and aeronautics) and installs and manages meteorological stations of all types at national level.

17. **National Council of Agricultural and Forestry Research / Institute of Agricultural and Forestry Research:** Law 251-12 created the Agricultural and Forestry Research (SINIAF) integrated by the Institute of Agricultural and Forestry Research (IDIAF) and the National Council of Agricultural and Forestry Research (CONIAF), the latter created by Decree 1090-04 , whose mission is to strengthen, stimulate and guide the National System of Generation, Validation, Diffusion and Evaluation of the Adoption of Agricultural and Forestry Technology. In its 2017-2020 Strategic Plan, it has among its lines of action: a) strengthening of Agrifood Health and Safety; strengthening of producer organizations (training and organization); increase the levels of competitiveness of the livestock subsector; and promote the transformation of territorial environment management to mitigate the effects of climate change and face other environmental challenges.

18. On the other hand, **IDIAF** (2016), in its study of the value chains, states that it has a project in execution on Livestock specialized in *Casa de Alto*, in *San Francisco de Macorís*, in the Duarte province, which is part of the Yuna river basin. It also has projects to develop projects related to nutrition and animal feed, one of them concern health and environment, markets and genetic enhancement, without defining intervention areas yet.

19. **Educational institutions and civil society:** Several non-governmental organizations are integrated into the productive agricultural development of the country, such as the Dominican Agribusiness Board (JAD), the Dominican Association of Landowners and Farmers (ADHA), the National Board of Livestock Breeders, the Dominican Association of Milk Producers (APROLECHE), Dominican Association of Meat Producers, the National

Council of Livestock Production (CONAPROPE) and five regional livestock federations FEGASUR, FEDEGARE, FEDEGASUR, FEGACIBAO and FEDEGANO.

20. On the other hand, the University Environmental Network (RAUDO) that includes all academic centers in the country, including the Autonomous University of Santo Domingo (UASD), the Ibero-American University (UNIBE), the Technological Institute of Santo Domingo (INTEC), National University Pedro Henríquez Ureña (UNPHU), APEC University (UNAPEC) and the Pontifical Catholic University *Madre y Maestra* (PUCMM), promotes information dissemination on climate change in universities and projects implementation. Also, several civil society institutions present CC Adaptation in the Dominican Republic in their line of work: the Dominican Institute for Integral Development, the Integral Center for Local Development, the *Plenitud* Foundation, the REDDOM Foundation, *Sur Futuro* and the *EcoMar* program. In this context, *CLIMACCIÓN* is a platform for the convergence of Dominican society, composed of people, organizations, companies, academic institutions and others, to generate a movement of ideas and actions aimed mainly at creating awareness, education and research on the phenomenon of climate change.

1.1.2 Areas of intervention

21. This project targets the Yuna Basin, which is the third highest priority watershed according to the Ministry of the Environment and Natural Resources. It is one of the largest Dominican basins with an area of 5,498 km2, a length of 201 Km and has 8 important tributaries: Yuna; Camú; Masipedro; Maimón; Chacuey; Cuaba; Blanco y Tireo. Its total rainfall varies from 1700 mm/year to more than 2200mm/year in the Cordillera Central, the Dominican Republic's central mountain range. This rainfall pattern creates two high-water periods: one in the upstream zone south of Bonao, and the in the delta of the lower Yuna which comprises the territories between several key rivers and *Los Haitises* or cockpit country (karst), where inundations are common from Nagua and Payabo rivers. The basin's importance is related to its contribution to the preservation of numerous protected areas: *Los Haitises*; *La Humeadora*; Valle Nuevo; *La Vega Vieja*, *Idelisa Bonnelly de Calventi*, Scientific Reserve *Las Neblinas*; *Ébano Verde* Scientific Reserve; the Duarte Highway, Bao River and *Mirador Del Valle* (please refer to Appendix 8.). The basin also feeds three dams, (5.3 x 108 M3 of water, producing 43.000 KW) and houses a high diversity, with globally significant ecosystems in addition to food security and rural territorial development.

22. The Yuna basin comprises nine provinces: *Monte Plata*, *Hermanas Mirabal*, Espaillat, Santiago, Samaná, Duarte, Sánchez Ramírez, *La Vega* and *Monseñor Nouel* (Figure 1), which are distributed, according to ONE (2012), in four development regions: *Cibao Norte*, *Cibao Noreste*, *Cibao Sur* and Higuamo (Figure 2). In the coastal area of Sanchez municipality, Samaná province, is where the Yuna River empties into the Atlantic Ocean. Within the provincial context, this basin is composed of territories of 27 municipalities and 50 municipal districts.

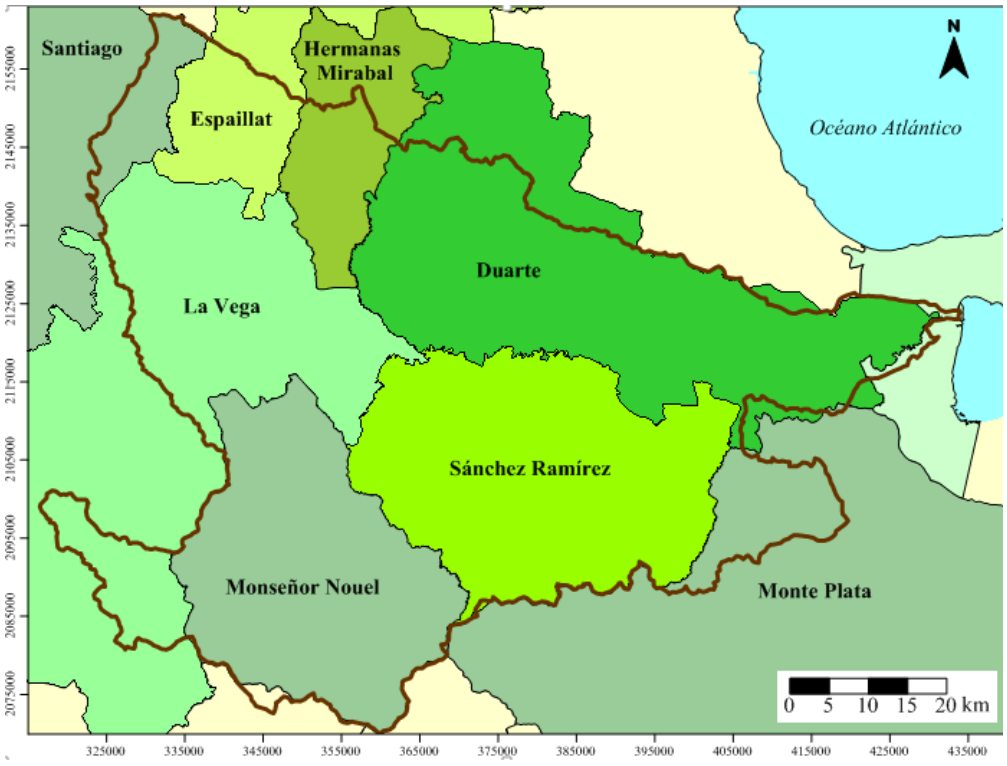

Figure 1 Provincial context of the Yuna river basin

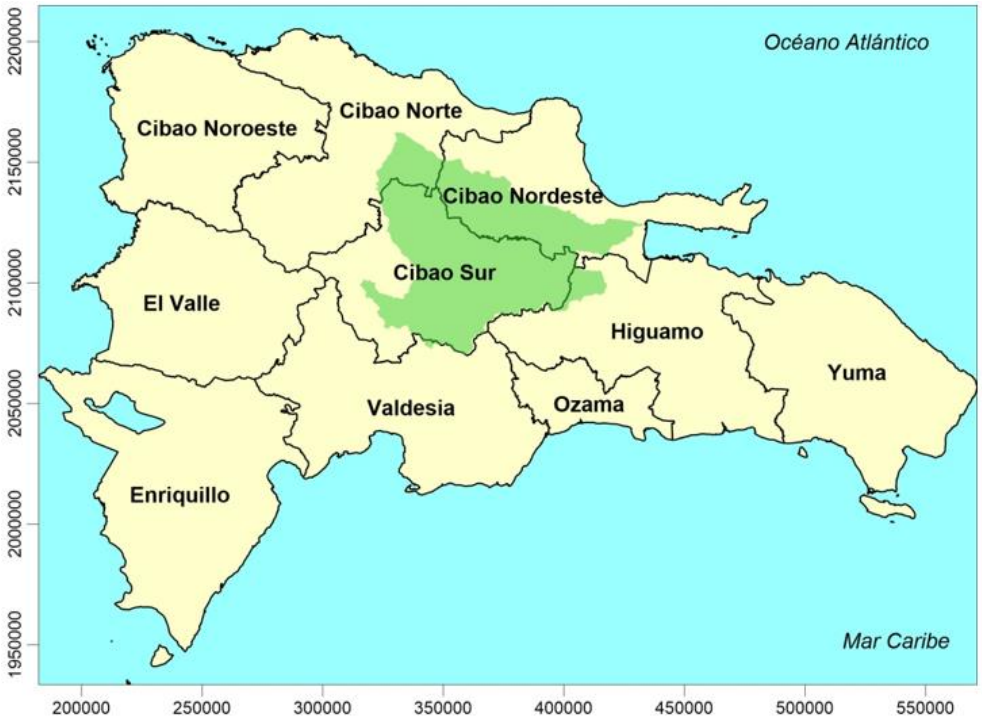

Figure 2 Development regions occupied by the Yuna river basin.

23. The estimated population in the basin territory reaches a total of 2,066,738 inhabitants, considering the municipalities and municipal districts that compose it (please refer to Appendix 8.), which represents 22.6% at the national level. According to the Atlas of Poverty in the Dominican Republic, at the provincial level, Monte Plata has the highest

percentage of poor households with 70.1%, followed by Samaná, Sánchez Ramírez and Duarte with values between 40 and 50%. *Monseñor Nouel*, *Hermanas Mirabal*, Espaillat, *La Vega* and Santiago all show levels of poverty between 20 and 30% (Morillo, 2014). In general, UNDP's Human Development Index (HDI, 2017) is categorized as a low average in most of the provinces of the basin.

24. According to the MARENA agrological classification in the Yuna river basin, existent soils range from Class I to Class VIII (Figure 5). Class VI soils occupy the largest area (36%) and are located towards the south of the basin, where the mountains predominate and the relief is more rugged. This is followed by Class II (15.7%), cultivable and flat topography, and Class V soils suitable for pastures and rice crops (14.2%). Soils Classes I, IV, and VI cover between 8 and 10%; while those of Class III cover the smallest area (4.7%).

25. According to data from the last land use and cover study (MARENA, 2012), the area occupied by the Yuna river basin has a forest cover of 1,612.09 km2, equivalent to 30.6% of the territory; agriculture covers 1,080.42 km2, equivalent to 20.5% ,and lastly, pastures cover 842.66 km2 representing 16%. Rice and cocoa crops cover altogether 1,073.87 km2 corresponding to 24.4%. This leaves 8.5% to other categories that include urban areas, dams, minor crops and areas with scarce vegetation. This distribution of land use and coverage reflects the essential characteristics of a basin with intensive agricultural use and a modest extension dedicated to grazing land for livestock production (Figure 3).

26. Pasture lands happen to be highly dynamic. If the current values on pasture land cover are compared with the two previous estimated values from MARENA (1996 and 2003), it is evident that this land category is expanding. Between 1996 and 2012, it grew more than 200%, increasing from 600km^2 to 1500 km^2.

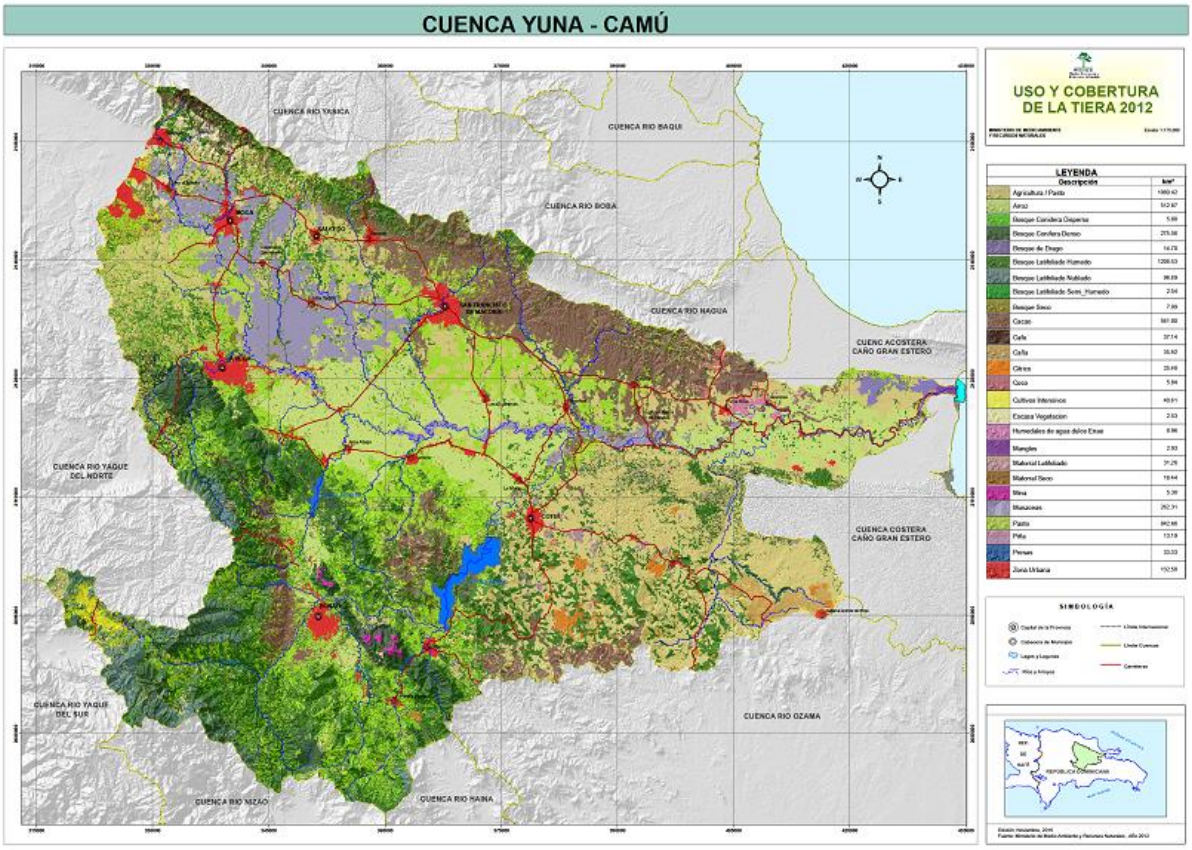

Figure 3 Land use and cover of the Yuna river basin in 2012, according to DIARENA

35. The Yuna river basin has an important livestock activity where small (<20 heads of cattle) and medium (20-100 heads of cattle) producers converge, with low presence of large producers (>100 head of cattle). Their production is based on grazing and semi-stable systems, as in much of the country. It is important to highlight that the producers that affect this basin are well organized in 15 associations and a federation (FEGACIBAO). This would facilitate the implementation of actions for transforming the basin into a pilot area, making it possible to develop a climate-smart livestock model with the potential to extend to other cattle- producing areas of the country.

36. The Yuna river basin concentrates around 16% of the area of land dedicated to cattle raising (FAO-EU Pre-census, 2015), which is why it is considered necessary to ensure that the livestock activity, especially in the upper and middle part of the basin, is developed under a model of sustainable livestock production. This would contribute to conserve the natural resources of the basin, reducing erosion, protecting water sources and increasing forest cover, through the reforestation of zones that need restauration of ecosystem functions (water and soil protection) and the implementation of silvopastoral production systems integrating tree, forage and cattle management, as a strategy to reduce CO2 and mitigate the GHG emissions generated by livestock.

1.2 THE CURRENT SITUATION

27. Traditional bovine production has centered on the unregulated and extensive use of pastures, which translates into pasture degradation, compaction and erosion of soils especially considering that 67 % of cattle farms practice open-pasture (IICA, 2006). The ongoing use of traditional production systems leads to low levels of productivity and efficiency related to the exploitation of productive resources such as: humans, natural (soil, water, and forest), markets and economies. In that regard, it should be noted that productivity levels for milk cattle (including double purpose) of 5.5 liters/cow/day (baseline PROLEFAM, 2014), while in beef cattle weight earnings are registered below 300 grams/day, translating into a fattening period greater than 48 months for a steer until slaughter.

28. While the economic growth of the sector is moderate (between 3.7% and 4.4% per annum) there is a lack of understanding of the quantity of soil or water resources needed to sustain it due to knowledge gaps. In certain watersheds of the country where studies have been made related to land use (Land Use Cover Change Analysis), such as the Artibonite's River Basin (GEF-PNUD, 2014) and the Plan Sierra for the northern part of the Yaque del Norte River, there is strong evidence of an exodus from agriculture towards livestock. In different interviews done for those initiatives, the teams documented unreliable rainfall and an increasing demand for meat as drivers of change. Logically, farmers are mitigating risks with changes in their land-use patterns.

1.2.1 Threats to Global Environmental Benefits

29. In addition to the environmental problems of a local nature described above, bovine production generates two other problems of global importance: it is an important source of greenhouse gases and causes land degradation. These problems are described below.

30. **Greenhouse Gas Emissions (GHG)** According to the latest National Greenhouse Gases Inventory (INGEI) based on 2010, the agricultural sector of the Dominican Republic produces a volume of emissions of 7 million tons of CO2eq per year, equivalent to 20% of total emissions. These emissions concern methane and other GHGs released during agricultural activities, including the raising of livestock and the cultivation of rice and other products. According to the Economic Development Plan Compatible with Climate Change (Plan DECCC, in Spanish) of the Dominican Republic, under the premises of a trend scenario, emissions from the sector would increase 20% in the next 20 years and would represent up to 9 million tons of CO2eq in 2030. Despite having a growth rate significantly slower than projected for other key sectors, the agricultural sector would contribute around 18% of total emissions in 2030 and would continue to be the third main source of GHG emissions in the country.

31. The main factor promoting a raise in methane emissions in the sector is livestock which produces a significant amount of methane due to enteric fermentation and manure management, which represent 82% of total agricultural emissions (INGEI, 2015 base 2010). Particularly, emissions for bovine cattle in Dominican Republic near 5.7 million tons of CO2 eq/year. According to data generated by FAO's Global Livestock Environmental Assessment Model (GLEAM, 2017), greenhouse gas emissions vary by system of production in the following manner: 73% (4.6 million tons of CO2 eq.) of total emissions come from stabled and semi-stabled cattle, while the remaining 27% comes from livestock pasture systems. In all systems, methane generated by enteric fermentation constitutes the main source of emissions: registering between 73% to 88%. In systems based on pasture, N2O emissions have a significant contribution of greenhouse gases: highlighting 20% and 16% of emissions coming from beef and dairy cattle respectively.

32. **Land Degradation** The livestock sector is an important source of land degradation. The unsustainable management of livestock production in large pasture areas in the country has caused the continuous degradation of the land. Traditionally, herd management does not take into account the impact of animals on vegetation, land or soil. Limited pasture rotation and high load rates have resulted in compaction, loss of fertility, and soil erosion. The practices also cause losses of organic matter in the soil and, therefore, the release of CO2 into the atmosphere. An indicator of this degradation is the increase of herbaceous and stoloniferous grasses (which are better adapted to such grazing conditions) and the lower frequency of bunch grasses, as well as a reduction in the number of species present. It has been observed that such changes in botanical composition result in a 12% reduction of annual forage production.

33. Although land degradation rates and pasture have been reduced over the past 25 years, many of the activities that make up current production systems pose new environmental challenges that must be addressed in a sustainable development context.

34. It is important to highlight that land degradation and the consequent loss of productivity of pastures and nutritional quality lead to loss of productivity in animal production. This is not only eroding farmers' incomes but also contributing to higher GHG emissions per unit of product, given the inverse relationship between herd productivity and the intensity of GHG emissions (FAO, 2013).

1.2.2 Baseline initiatives

35. There are currently several initiatives at national level that are led by the Government and carried out with technical and financial assistance from different international cooperation agencies. The following table highlights three initiatives and correspondent relevance with regard to this proposal:

Table 1 Baseline initiatives

Project title / Institution	Implementation Period / Budget	Description	Relevance for the proposed project
Model to increase the productivity level and access to markets of family dairy producers in the Dominican Republic	2013-2015 Ministry of Agriculture and CONALECHE (USD 200,000) FAO (USD 295,000)	**General Objective:** To strengthen the capacity of the National Council for the Regulation and Promotion of the Dairy Industry (CONALECHE), to improve the level of productivity and quality of the family dairy chain in the Dominican Republic. **Specific Objectives:** a. To strengthen the capacity of CONALECHE to create synergies between the public and private sectors and to establish strategic alliances between value chain actors. b. To improve the capacity of technical multipliers and leading producers of the MEGALECHE program and CONALECHE, on sustainable management of family dairy systems.	The project was executed in the provinces of Monte Plata (belonging to the Yuna basin), *El Seibo, Hato Mayor and La Altagracia*, in the Eastern region of the country. This project generated baseline studies at the family dairy farm level with a sample of 242 farms. Methodologies were developed for technology transfer in dairy farms and practices that contribute to reduce GHG emissions, such as: protein banks, silvopastoral systems, live fence management, introduction and management of pastures and forages with improved varieties, among other good practices for improving milk quality. The outcomes and lessons learned of this project will serve as inputs for the actions planned with this GEF initiative, related to sustainable livestock strategy, strengthening of technical capacities at the level of

		c. To support three (3) model dairy family farms, as units for the transfer of technology and knowledge to family farmers (men and women). d. To support three (3) milk collection centers of family producers, on good practices of collection, storage and cooling of raw milk. e. To strengthen the technical capacity of provincial inspectors of the Ministry of Public Health and CONALECHE, for the implementation of normative and regulations on the safe handling of dairy products.	producers and extension agents
Reducing Emissions from Deforestation and Forest Degradation (REDD +) - Forest Carbon Partnership Facility (FCPF)	2015-2019 Ministry of Environment and Natural Resources (MARN) The World Bank USD 3.8 million	The objective of this project is to promote the implementation of key preparation activities to develop a national REDD + strategy. **Expected outcomes:** 1) Strengthening the capacities of relevant actors. 2) Structuring and / or adapting the institutional, regulatory and technical	This project will generate a work plan for the initial design of an integrated MRV system to measure, prepare reports and verify changes in deforestation or forest degradation, as well as in forest improvement activities. This initial design will be done in a phase fashion. This WB-financed initiative includes technical support in the development of safeguards; consultancies of foreign scientists - who will validate the measurement methodology; develop

		framework in order to allow the implementation of national REDD+ strategy (ENREDD+) activities 3) Strategic and operational proposal for the compilation of national reports on CO_2 emissions from deforestation and forest degradation in the Dominican Republic. 4) Proposed approach to design the participatory National Forest Monitoring System. 5) Development and adoption of monitoring protocols on vegetative cover and carbon content. 6) Identification of potential social, environmental and economic impacts caused by the implementation of ENREDD + projects. 7) Participatory building of a ENREDD+ strategy.	context-based tools, baseline tests; and train personnel from public and private institutions to take samples and prepare reports. This is related to this GEF initiative – see Component 3, outputs 3.1.1 and 3.1.2.
Catalyzing a multi-sectoral program to support water and soil management	2017-2018 Ministry of Agriculture and Ministry of	This project is executed in two priority basins: Yaque del Norte and Ozama-Isabela (the	This project strengthens the technical capacities of the extension service of the Ministry of Agriculture and the General Directorate of

in the face of the threat of climate change in the Dominican Republic	Environment (MARN) FAO (USD 273,000) IICA (USD 50,000)	latter is linked to the Yuna basin). Expected project outcomes: (a) Having strengthened the watershed governance framework at the national level, in particular for the Ozama-Isabela basin. (b) Position the technical service of the National Soil Conservation Service, giving a clear operational strategy to this agency. (c) Channel the financing of sustainable soil and water management as well as sustainable livestock actions.	Livestock, through the training of multipliers. Multipliers train technicians and producers in sustainable soil and water management practices with a watershed approach. Good practices for soil and water conservation in livestock and agricultural farms are identified and implemented at the field level. These strengthened capacities in soil and water conservation will support the actions proposed by this GEF-financed project. See Component 2.
Strengthening the Livestock Value Chain of Dominican Republic	2016–2020 Dominican Agribusiness Board (JAD) USDA – NCBA CLUSA (USD 21 million)	**Project objectives:** 1. To improve the productivity of the livestock value chain (meat and dairy) by: increasing the use of improved techniques and technologies; the improvement of farm management; the increase in the availability of improved inputs and the use of financial services; strengthening the capacities of government	This project is implemented in 11 provinces, including three provinces of the Yuna basin. The main project actions are aimed at strengthening the dairy and meat value chain for exports, considering good practices and training of producers and extension technicians. The JAD-USDA project will include sustainable livestock management actions. The GEF-financed project will coordinate actions in the field

		institutions and key groups, and increasing the leveraging of private sector resources. 2. Extend the trade of meat and dairy products by: adding value to post-production; to increase the adoption of established standards; increase access to markets; build the links between buyers and sellers; improve post-production infrastructure; increase the use and efficiency of post-production processes; improve policies and the regulatory framework; strengthen the capacity of key organizations in this business sector.	through outputs 2.1.1 and 2.1.2. In addition, the JAD project will add more beneficiaries to the MRV system generated by the GEF project. Synergies will be further established in Project Year 1 (2018-9).

36. In addition to these initiatives, there is a mechanism to mitigate the effects of climate disasters in the form of agricultural insurance. The livestock insurance has the support of the best specialists in risk inspections and adjustments of claims. In this way, quality service is provided in the ranch/farm where the producer has his/her livestock: cattle, pigs, and sheep. The animals must be individualized within the consigned field, but it could also be agreed with the company the method of individualization of the animals. This is the most complete protection plan for animals with national coverage and covering the widest range of risks as well as the highest range of causes of loss attributed to climate disasters. Additionally, this also covers salvage costs according to the insurance modalities chosen.

1.2.3 Remaining barriers

37. While numerous efforts have been made, there are multiple barriers that impede the livestock sector's advance towards climate smart livestock management and reductions of carbon and water footprints, land conservation, as well as the protection of water resources and biodiversity. The main barriers to the climate-sustainable development of the livestock sector can be summarized as (i) Lack of integrated articulation and policy for the livestock sector, including the perspective of climate change mitigation, (ii) Lack of

information regarding livestock sector (iii) Limited knowledge management capacities at institutional level, (iv) Limited technical and management capacities of producers (v) Limited access to markets and financing for climate-smart investments. These gaps are described below:

(i) Lack of integrated articulation and policy for the livestock sector, including the perspective of climate change mitigation

38. One of the most important barriers to the limited progress of the livestock sector towards sustainability, including climate change mitigation and land degradation, is the development of an integrated policy for the sector, based on consensual concepts among the key players. Although there are sectoral initiatives, these are not well coordinated between the ministries involved and other institutions of the public sector, producer and civil society organizations, academic and research organizations, and international cooperation institutions.

39. This lack of coordination and consultation leads to duplication in some areas, while other problems are not addressed. In particular, climate change mitigation has not been effectively addressed. It is also necessary to unify the criteria among key actors for an integrated development policy in the livestock sector, which should balance the social, economic and environmental pillars. This is currently lacking.

40. MARENA and the Ministry of Agriculture currently do not have specific operational mechanisms to inter-relate climate change and livestock management issues. Neither protocols, nor tools – including logistics – are in place to facilitate this cooperation among ministries. Therefore, the production and environment sides remain as thematic silos with no cross-feeding in the field. In addition, there is an absence of strategies and plans that foster collaboration among the ministries. Policies remain sectorial, and no cross-cutting policies dealing with climate change and environment are in place.

41. Furthermore, there is a lack of coordination between the ministries and the academia and the private sector. At present, no work plan is in place to address a short, medium and long-term strategy aimed at transforming livestock into a more sustainable and low-emission activity. The link between climate change research and livestock sector needs is weak at national level

(ii) Lack of information regarding livestock sector planning

42. The country has not conducted a livestock census since the 1980s, pointing to a notable gap in the comprehensive analysis of the sector. Land use change can generally be detected using GIS information. This observation draws attention to a clear trend in the transition from agriculture to livestock. Without the census, it is impossible to distinguish between areas of scrub used as pasture and other type of pastures, nor to distinguish between bovine and caprine pastures in the Dominican geographic systems. Although there is a pre-census process in progress, it is necessary to specify the geographical definition of grazing as land use. The scenario is further complicated by the tendency of designating any type of terrain as “scrubs” or “grassland”.

43. In the absence of reliable data on livestock, it is impossible to understand the trends in the livestock sector or make an assessment on the environmental impacts of the sector,

neither an analysis of good practices to mitigate negative environmental impacts. Despite the estimates presented above, there is a considerable diversity of biophysical, socio-economic and demographic situations that characterize the livestock sector. This diversity of situations creates a gap in our understanding, which hinders the design and targeting of technical interventions and the development of financial mechanisms. Accounting and monitoring methodologies for carbon sequestration and GHG emissions have to be validated and adjusted to locally specific circumstances. These methodologies are essential to demonstrate the contributions of the sector to the achievement of the country's goals in reducing its GHG emissions. They are also necessary to implement innovative financing mechanisms based on good environmental management.

44. It is important to take into account that, in particular, there is limited data available regarding the involvement of women in cattle raising, considering that women are generally dedicated to the raising of small stock. Likewise, no specific studies have been carried out on the contribution and role of women in cattle raising at the national level. However, within the framework of the execution of the "*PROLEFAM*" family dairy project (2013-2015) executed by the National Council for the Regulation and Promotion of the Dairy Industry (CONALECHE) and the General Livestock Directorate (DIGEGA) of the Ministry of Agriculture, an analysis was made of the dairy sector in the provinces of *Monte Plata*, *El Seibo*, *Hato Mayor* and *La Altagracia*, where it was indicated that 5% of family farms are owned by women.

45. The existing capacities to estimate GHG emissions in the livestock sector consist of organizational structures and trained personnel to carry out GHG inventory, in addition to the collaboration among the institutions linked to the topic.

46. Regarding the level of governance, a Department of GHG Inventories belongs to the Directorate of Climate Change (MARENA). In addition, there is a Department of Risk and Climate Change in the Ministry of Agriculture, which has trained personnel. In the same way, the General Directorate of Livestock hosts a climate change focal point, who has been trained on GHG inventory work. In terms of personnel, in recent years 12 technicians have been trained from various institutions, with support from different initiatives, such as the CD REDD I and II of the Coalition for Rainforest Nations (CfRN). Also the Economic Development compatible with Climate Change (DECCC) Plan project, with the support of CfRN and GIZ. Additionally, the REDD-Centro American Commission of Environment and Development (CCAD)-GIZ project trained on land use and land use change, and GHG inventories for the AFOLU sector, which includes the livestock area. The Report for Results-based REDD+ project is currently underway with the support of CfRN focusing on the development of national capacities in the field of REDD+. The FCPF Readiness Project provides extensive support in the establishment of a REDD+ environment in the country, which includes the assessment of livestock lands and the creation of an MRV system in the AFOLU sector[1].

(iii) Limited knowledge management capacities at the institutional level

[1] It is expected that with the development of this pilot initiative for the Yuna river basin, the information base and the application of appropriate methodologies to estimate GHG emissions from livestock will be strengthened and made accessible to all the country's producers.

47. At the central level, the government has made significant efforts to invest in the development of the sector. This is reflected in the baseline activities. However, there are certain needs to be strengthened.

48. There are also a diversity of stakeholders with diverse interests climate change with diverse sectoral relationships. Within this complexity, there is ineffective coordination and connections. The links between the Ministry of the Environment and Natural Resources, who has worked to develop an emerging infrastructure for both policy and reporting on the nature and quantity of climate change factors, in particular greenhouse gas emissions is disconnected the sectors that produce non-forest carbon such as the Ministry of Agriculture, the General Livestock Direction, the Dominican Forestry and Agricultural Research Institute (IDIAF) among others that have unclear research agendas and disconnected research agendas that impedes the creation of synergies and collaboration. Even though the institutional landscape has evolved in the last ten years, no one agency handles a complete information portfolio about its sector that could favor actions to counterbalance greenhouse gas emissions and increase production and product diversity. Grazing is one of the significant land uses in the Dominican Republic. As such, they are the principal sector not yet united within The Ministry of Environment's framework for mitigating the effects of climate change. The National Strategy for Strengthening Human Resources and Competencies to Advance in Green Development, Low Emissions and Weather Resistance (2012), highlights that areas for the development of institutional capability is the integration of themes related to climate change and sector strategies. Synergies in this regard would benefit the Ministry of Environment and Natural Resources and all others as synergies lead to financial and technical efficiency.

(iv) Limited technical and management capacities of farmers

49. Farmers are aware of the practices that can lead them to greater financial security and carbon capture. Good practices have been studied in the region, such as breed improvement, appropriate use of cover, use of live fences, silvopastoral practices, and integration of other food sources. However, such practices are not adequately disclosed. It is estimated that the level of adaptation among producers is only 21%, which is very low for the efficient transfer of technologies. The other extension services by institutions such as the Ministry of Agriculture and CONALECHE are very limited with few extensionists for the areas under livestock production. Extension workers also do not have updated training in aspects of climate-smart Cattle Management.

v) Limited access to markets and financing for climate-smart investments

50. The financial mechanisms of the livestock sector are inefficient. Due to limited technical and management capacities, the access of individual producers and producers, to cooperatives for instance, is limited. In many cases, the business plans on which credit decisions are established, are based on erroneous assumptions about the capacities of producers, as well as their access to markets. This entails a high rate of debt default, with serious consequences for the producers involved as well as their families. To promote sustainable development in the livestock sector, especially among small family producers,

there is the need of public-private partnerships that would inject funds into the sector, under strict financial criteria and based on rigorous market studies.

51. Innovative mechanisms need to be developed that would stimulate investment in climate-smart practices and technologies, for example, through incentive schemes for the provision of ecosystem services.

52. The livestock sector operates through credit programs managed by Banco Agrícola and CONALECHE. Additionally, some milk processing industries and savings cooperatives at the provincial and regional levels have specific credit programs to finance new technologies and improvements for livestock farmers. The Ministry of Agriculture also has a mechanism to mitigate the effects of climate disasters in the form of agricultural insurance.

53. As a Council whose purpose is to promote a national dairy policy, CONALECHE is chaired by the Ministry of Agriculture and is made up of the following institutions: Ministries of Public Health and Industry and Commerce, five producers federations, a producers cooperative, the most prominent milk processing company, representatives of medium- and small-scale dairy farming, the National Board of Cattle Ranchers, the Association of Milk Producers, the Dominican Agro-Business Board, Banco Agrícola and the Milk Importers.

54. CONALECHE receives its funding from the following sources: (a) a monthly contribution from the State from the proceeds of imports of dairy products; (b) a contribution from the producers for each liter of milk sold to the milk processing plants, manufacturers of cheese and other milk products; and, (c) a contribution from the processing plants for each liter of milk sold. Of all the proceeds CONALECHE receives, 50% is distributed in the form of loans to milk producers for the promotion and development of the national livestock sector, with soft rates and terms of up to twelve years. Additionally, 40% is destined to funding DIGEGA’s livestock and animal health extension programs; while the remaining 10% funds CONALECHE's administrative expenses the promotion of the consumption of milk and milk products.

55. The rate of past due and unpaid loans from the credit program averages 15%. CONALECHE also offers direct technical assistance on good manufacturing practices, quality and safety to dairy processing plants. Furthermore, it assists small dairy processors to obtain their sanitary registry, facilitating the commercialization of quality and innocuous dairy products. Currently, CONALECHE is coordinating actions to establish a registry of milk producers at the national level, information that will serve the present initiative in the Yuna basin to update the number of producers and, at the same time, to estimate and monitor the level of GHG emissions through the MRV system. This registry of dairy producers will contribute to closing the information gap identified as one of the barriers to the development of the livestock sector.

56. The lack of public-private partnerships (PPPs) is affecting the livestock sector, especially among family farmers.

57. PPPs would inject funds into the sector, under strict financial criteria and based on rigorous market studies. In addition, iinnovative mechanisms need to be developed in order to stimulate investment in climate-smart practices and technologies, for example, through incentive schemes for the provision of ecosystem services. This idea is further developed under Component 1.

58. The entities that are being considered to finance PPPs, with an aim to promote climate-smart livestock management, are those that process and market milk and meat at the national level. First, they would benefit from procuring products of better quality and at the same time, with a lower level of GHG emissions generated per unit of milk and meat marketed. They could encourage climate-smart livestock management, by paying differentiated prices to farms certified by the government as low in GHG emissions. Both, the MARENA and the Ministry of Agriculture, together with private companies (industries), can establish incentive mechanisms for providing ecosystem services, based on the good practices implemented by the farms to become climate-smart. Such initiatives could include planting trees, protecting riverbanks, managing solid waste (manure), improving productive efficiency, among others.

1.3 THE GEF ALTERNATIVE

1.3.1 Project strategy

59. This project proposes to contribute to the reduction of greenhouse gas emissions generated by agricultural production, through the implementation of good practice models to improve productivity and cost effectiveness. Likewise, technical capacities will be strengthened at the level of the Ministries of Environment and Agriculture for the implementation of the MRV system and technical assistance for adoption of technologies and good practices for low-emission livestock. Recovery of soil, water and biodiversity in the basin are considered as co-benefits.

60. The alternative scenario involves the development, introduction and upscaling of Climate Smart Livestock Management (CSLM) on small and medium-sized farms that are engaged in intensive livestock production on natural rangelands. Dominican Republic has 2.5 million heads of cattle, of which 50% correspond to cattle for dual purposes (milk and meat), 31% exclusively for meat and 19% just for milk (ECLAC, 2016). According to the Dominican Association of Farmers (ADHA, 2010), more than 80% of dairy farms in the Dominican Republic are family owned. They contribute more than 50% of the nationally produced milk and meat, and they occupy more than 50% of the land dedicated for cattle raising, approximately 600,000 Ha, thus having a significant impact on the generation of GHG emissions from livestock activity. The project is therefore focused on small-scale farmers. This intervention will lead to fewer GHG emissions, reversal of land degradation and restoration of land and the decreased economic vulnerability of farmers.

According to FAO[2], CSLM is based on two basic principles: (i) increased efficiency in the use of resources, and (ii) increased resilience and risk management at farm and systemic levels. Through the application of these principles, CSLM contributes to improved productivity and climate change mitigation; as well as to national food security and broader development goals. Research and experience in Dominican Republic (see section 1.2.1 *Baseline,* of the Project Document) suggests that there are many low cost, high impact, simple to implement technologies and practices that can lead to CSLM. Typical examples of measures which allow increased productivity while lowering GHG emissions and land degradation are provided in Annex D regarding the overall introduction to the proposed farming system shift.

[2] Climate-smart Agriculture Sourcebook. FAO, 2013.

61. The project strategy, to mainstream CSLM into the livestock sector in the Dominican Republic, is based on 3 main pillars:

    a. **Piloting, learning and building capacity at the local level**: The Project will work with 500 selected small, and medium farmers at key sites, in the Yuna Basin, with high concentration of livestock production based on natural rangelands. Through a consultative co-innovation process with the farmers, the Project will support the adaptation and implementation of the technologies and practices, leading to the economic and environmental gains. The 500 reference farmers will adopt integrated pasture and livestock management approaches rather than focusing uniquely on 'animal management'. The results of the implementation of these technologies and practices will be monitored and evaluated in detail, against a range of economic and environmental criteria. Adoption rates, pathways of incremental changes in production practices and related constraints will be assessed with particular care to generate information and lessons learned in view of upscaling.

    b. **Replication strategy at national level: from demonstrating effectiveness to achieving impact at scale.** The fact that the adoption of CSLM practices increases the profitability of farms is at the core of this strategy. First, the project will build the groundwork to mainstream CSLM in policies and institutional Programmes by facilitating the development of a national CSLM strategy with the involvement of key actors from public, private and academic sectors and farmers' groups. Second, it will create opportunities for funding of CSLM initiatives through the development of a NAMA for the livestock sector with low GHG emissions. Third, the development of the institutional and individual capacity required to disseminate and extend the improved technologies and practices. Due to the fact that these practices are more profitable to farmers than current practices, the project will dedicate resources to their broad dissemination, through awareness raising, capacity development and extension work.

    c. **Climate Change Mitigation effect:** The mitigation effect will be achieved through a range of entry points, resulting in a reduction of emissions and carbon sequestration, as well as improvement of degraded pastures.

62. The following factors will contribute to a substantial reduction in emission intensities and overall emissions: (1) number of heads per farm will remain rather constant (in order to adequate the forage supply, number of heads cannot increase), (2) the proposal reduces the breeding overhead and increases the overall efficiency indicators of the herd (pregnancy, age at first mating, age at slaughter, etc.); (3) no nitrogen fertilizers are used to foster above ground net primary productivity (ANPP) (legumes may be introduced in the sward); (4) digestibility of diet increases significantly (due to the demonstrated impact of the increase in ANPP and the use of strategic supplementation with concentrates), which reduces acetic acid formation in the rumen as a precursor of methane; (5) even if there is a rebound effect, the increase in productivity is much larger, which means more food is produced with less emissions; (6) carbon sequestration will compensate a portion of gross emissions, contributing to a reduction in net emissions. This carbon is stored in

soils that will remain as rangelands, there is no risk of reversibility of the removals; (7) small afforestation (average 2 ha, each) for shadow and shelter in every farm, will sequester carbon in woody biomass.

63. The project will intervene in a context of strong on-going land degradation. There is wide international scientific literature showing that when organic inputs to soils increase in such circumstances, organic matter increases and so does carbon. Monitoring, Reporting and Verification (MRV) of soil carbon is not easy in the short term. The on-farm monitoring system implemented under the project will increase the understanding through: sampling and modelling of the particulate soil organic matter fraction and the change in below ground biomass. Monitoring this variable will provide an important proxy to determine how management practices address the soil organic matter pool.

1.3.2 Project objectives, outcomes and outputs

64. To respond to the barriers that hamper the project, the proposal focuses on four components aiming at the following subjects (i) Improving inter-institutional and financial efficiency and capacity to promote efficient and low emissions of livestock; consolidate and interpret knowledge, information, methodologies and lessons learned to produce practical recommendations to the sector and facilitate its replication (ii) Validate packages of technologies to stimulate climatically efficient and low-emission livestock production using scientific frameworks tested by applied science, GHG analysis and their relationship to livestock management of different types and contexts; (iii) Strengthen the Monitoring, Reporting and Verification system in the Ministry of Environment and Natural Resources to interact with the livestock and agriculture sectors, and (iv) ensure project results based management, including a monitoring and evaluation system, and a results based communication strategy.

Component 1. Institutional and financial strengthening to support a low-emissions livestock development pathway.

65. Component 1 aims to strengthen the capacity for rolling out and replicating the CSLM technologies and practices to be developed under Component 2. This includes the development of a National CSLM strategy with involvement of a wide range of actors to unify criteria on CSLM and mainstream CSLM into national and local development plans, sectoral policy and institutional Programmes. The barrier of limited finance will be addressed through the development of public-private partnerships (PPPs), opportunities to mobilize finance and create economic incentives for adoption of good practices. In addition, institutional capacities to support CSLM implementation will be strengthened through a capacity development program. Moreover, a dedicated information system will be created in to document and disseminate lessons from CSLM national and international experiences. FAO Livestock networks (such as LEAP) will support South-South and Triangular cooperation. In this way, Component 1 will contribute to overcome Barrier #1 (Lack of articulation and integrated policy) and Barrier #3 (Limited knowledge management capacities in institutions).

Component 1 is divided in two Outcomes and three Outputs:

Outcome 1.1. The National Institutional Capacity strengthened to support the implementation of a Climate-Smart Livestock Management Strategy (CSLM)

66. This outcome will establish a framework for the deployment of CSLM practices in the livestock sector. Outcome 1.1 will, first, analyze barriers, costs and identify funding sources. The project will facilitate the iterative process to prepare the national CSLM strategy. The process will be fully participatory and consultative, with a gender approach. The broad consultation process will facilitate the agreement of the main actors in the public, private and academic sectors on a set of unified and agreed upon CSLM criteria on which the strategy will be built. This process will facilitate the integration of the strategy in the sector policy, as well as in the institutional programs.

- **Output 1.1.1**. A CSLM Strategy, designed, agreed and disseminated with public and private actors in the livestock sector of the Yuna Watershed

  Main activities will be: Technical support in the design of the strategy at different dimensions, including: (1) CSLM practices for GHG mitigation and restoration of degraded pastures; (2) Ecosystem services, resilience, and other co-benefits; (3) Market certification and value chains; (4) Communication and Dissemination; (5) Socialization of the proposals through events and printed materials and facilitation of agreements

- **Output 1.1.2** Public-Private Partnerships designed to: i) pilot incentives, financial and market instruments, ii) enhancing watershed management; and iii) implementing the CSLM strategy

  Main activities will be: (1) the analysis of existing financial instruments - including a gender gap assessment; (2) the development of a financial tool to support the implementation of CSLM practices (Component 2); (3) the articulation of actors to promote public-private partnerships (PPPs) and better access to financing; and (4) the formulation of PPP agreements to use financial instruments and apply the CSLM strategy.

  The project will promote the enhancement of watershed management through the following activities: i) Technology transfer of good agricultural practices (GAP) for GHG emission reduction, such as: tree planting of livestock areas at risk of erosion, reforestation of riverbanks, soil conservation and management of solid waste in livestock farms; ii) Training of technicians and producers on the conservation of natural resources in livestock farms; iii) Promotion of participatory processes to raise awareness among stakeholders of the livestock sector and other stakeholders on the importance of the management of natural resources in the basin and its impact to mitigate GHG emissions. Lessons learned from these interventions will feed the design of a national CLSM strategy (see output 1.1.4).

- **Output 1.1.3** National and Local Public Officials Trained to effectively support the implementation of the CLSM Strategy with a gender perspective

  Main activities include: (1) Workshops to set a similar base among institutions on climate-smart livestock concepts and the CSLM strategy; (2) Capacity needs assessment to integrate CSLM strategy into institutional policies and programs; (3)

Organizing workshop to identify opportunities on how to integrate the CSLM strategy into policies and programs. Developing institutional action plans, accordingly; and (4) Organize exchange program visits to other countries with climate-smart livestock and MRV systems designed and co-financed by GEF: Ecuador and Uruguay.

- **Output 1.1.4**: A national CSLM strategy based on the lessons learned from the pilot intervention in the Yuna river, defined and agreed among key stakeholders

  This output will include the design and discussion of a roadmap to include the lessons learned from the pilot intervention, as well as a national strategy document that will be agreed among the ministries, private sector and key civil society stakeholders. The CSLM national strategy will be part of the project legacy for future scaling-up actions to be financed by the Government and/or the international cooperation.

Outcome 1.2 Knowledge shared and dissemination of lessons learned to support the CSLM strategy dissemination.

67. In response to the capacity gaps in the sector, a knowledge management platform for the livestock sector will make available the lessons learned, methodologies and results of projects relevant to livestock management, in exchange for knowledge related to climate change, in addition to technological innovations and policy changes. This component requires the development of technical capacities within the General Directorate of Livestock and CONALECHE, while linking exchanges with the information system of the Ministry of the Environment (see component 3) and with other databases from universities and research centers.

    - **Output 1.2.1** An Operational Technical Platform for the Livestock Sector, which includes information on Monitoring, Evaluation, Dissemination of Experiences and Lessons Learned.

      Key activities include: (1) Analysis and documentation of good CSLM practices, (2) Design and implementation of the technical platform, (3) Preparation of an inter-institutional protocol to ensure the operational capacity, operation, and maintenance of the system, (4) Workshops for the regional dissemination and validation of the platform, (5) Training of technicians in the system maintenance and operation

    The Department of GHG Inventories (Directorate of Climate Change, MARENA), the Risk Management and Climate Change Department (Ministry of Agriculture), and the Focal Point of Climate Change of the General Directorate of Livestock will be responsible for THE inter-ministerial coordination during project lifetime and after project closure.

    With the purpose of contributing to consolidate the coordinated actions between both Ministries, within the strategy that will be designed to promote climate-smart livestock management- institutional roles will be clearly defined. Ministries will work with

producers' organizations, academia and the private sector, in a coordinated manner, with the aim to promote a transformation of the traditional livestock production model towards a more sustainable model, low in emissions, and to contribute to the conservation of natural resources.

In addition, the project will be supported by the National Soil Conservation Service (SNCS) in matters of watershed management and natural resources. SNCS is part of a Collaboration Agreement between the Ministries of Agriculture, Environment, and the National Institute of Hydraulic Resources (INDRHI). SNCS' main purpose is to reestablish a soil and water conservation structure at the national level with capacity to reach the users of arable land in the watersheds.[3]

Component 2. Climate-smart livestock management in the field: Technology Transfer, Deployment and Validation of Practices

68. Through Component 2, the Project seeks to overcome Barrier #3 (Limited knowledge management capacities at the institutional level), Barrier #4 (Limited technical and managerial capacities of farmers) and Barrier #5 (Limited access to markets and financing for climate-smart investments). The Project will implement sustainable production models in approximately 5,000 hectares among the upper, middle and lower basins of the Yuna River. During project implementation (3 years), technical and financial support will be provided to small- and medium-scale farmers in the Yuna river basin with dairy, meat and dual purpose production systems. Component 2 seeks to generate a GHG emission reduction and increase soil and biomass carbon sequestration in project pilot farms. Silvopastoril systems and CSLM practices will be promoted among family farmers, generating socio-economic benefits through productivity and profitability increases. Co-benefits will include: support to biological corridors, and enhanced natural resource management in the basin. Field experiences will feed the knowledge management system developed under Component 1. CSLM practices will include: breeding (artificial insemination), paddock rotation, grazing management, and increase in vegetative and tree cover, increase and use of forage from live fences, coverage to lower temperature and diversify income, protein banks, and integration of cutting grass, and protection of riverbanks with bamboo and species suitable for livestock. See Annex D of this CEO Endorsement Request for more details.

    In addition to field activities, the project will strengthen institutional capacities to disseminate climate-smart livestock practices. Extension technicians will participate in a capacity development program. Selected farmers will have strengthened capacities to convert their former business model into climate-smart practices, and will receive support for developing and testing new business plans.

    The project will train existing extension agents for the livestock sector (DIGEGA-MEGALECHE), and technicians from producers' organizations (i.e. FEGACIBAO) and NGOs (from the livestock and environment sectors). The latter will contribute to strengthening field technical capacities in coordination with government extension agents (DIGEGA-MEGALECHE), with the aim to implement climate-smart livestock management, both in

[3] To this end, FAO and IICA are currently providing technical assistance to both Ministries through the Soil and Water Catalytic Project, to put the SNCS into full operation.

the Yuna basin and at national level. The project will also incorporate extension agents of the National Soil Conservation Service (Ministry of Agriculture)[4].

Outcome 2.1 Farm-level technologies have been implemented, promoting sustainable and low-emission livestock production

69. To achieve this outcome, the following outputs are proposed:

- **Output 2.1.1:** A CSLM Strategy with a gender sensitive approach tested and implemented at farm level, incorporating Mechanisms of Financial Incentives and Market Access.

  500 producers will implement livestock practices through Output 2.1.1. To achieve this target, the following key activities are foreseen: (1) Validate criteria and selection process of the farms by the Ministry of Agriculture, CONALECHE and producer organizations; (2) Selection of the farms from the articulation process between the Ministry of Agriculture, CONALECHE and producer organizations; (3) Selection and training of extension technicians; (4) Implementing the participatory process and good practices at farm level: (5) Annual planning and evaluation workshops. The project will finance the implementation of good practices in selected pilot farms including planting material, acquisition of studs and genetic material, training, and extension and management.

- **Output 2.1.2:** A Capacity Development Program for Dairy and Beef Producers, to support the adoption of CSLM Technologies and Good Practices at the farm level.

  Through this output, 700 producers, including at least 70 women, will receive continuous training on CSLM practices and approaches through a combined training program. This includes annual evaluation and planning workshops, as well as field days organized in pilot farms on a rotating basis, to share experiences and encourage farmer-to-farmer extension. Field visits will be directed to farmers who are not part of the pilot farms, and will be organized in conjunction with producer organizations. This will increase the indirect coverage of the project.

  Outcome 2.2 Field technical capacities have been improved to disseminate CSLM and Low- Emission Production Models in targeted areas.

70. The actions considered to strengthen technical capacities will be oriented towards strengthening a multidisciplinary vision of public and private organizations' human resources (Ministry of Agriculture, DIGEGA, CONALECHE, Universities, industries, producer associations). These enhanced technical capacities will support producers in developing business plans to be submitted to: i) public programs and/or commercial banks for funding; ii) certification schemes; iii) other financial tools identified by the CSLM strategy.

- **Output 2.2.1** An Extension Program with a gender sensitive approach strengthened to support the Promotion and Implementation of the CSLM Strategy and Low-Emission Livestock Models.

[4] There are currently 228 technicians nationwide (52 technicians belong to the Yuna basin), who have already been trained by FAO and IICA (through the Soils and Water Catalytic Project) on soil and water conservation, agroforestry and sustainable livestock.

Under this output, the capacities of 50 extension agents from different institutions will be strengthened. Activities include: design of the extension plan, recruitment of technical personnel among institutions in the basin; development and implementation of technically appropriate training plans on livestock and change parameters measuring in the farms and technical aspects management.

Project training programs will be developed by experts in different technical areas such as climate-smart livestock management, extension, gender, business plans development, and MRV, among others. These experts, together with academia and research centers, will conduct the trainings for extension agents; these, in turn, will be training the producers for the implementation of GAPs in climate-smart livestock management. The training programs, which should ensure the inclusion of the gender equality approach in their contents, will be officially handed to DIGEGA to incorporate into its training programs for technicians and producers. In the same manner, the training programs will be shared with universities that teach agricultural and environmental sciences, in order to update and strengthen their curricula.

- **Output 2.2.2**: Business Plans with a gender perspective, aimed at public programs or development/commercial banks, and certification schemes, to implement the CSLM Strategy

  The project will support the drafting and implementation of 10 individual business plans or partnerships, including at least in two farms led by women. Farms/Example Associations will be selected and stratified by size. Activities will include: (1) analysis of business models applied by project beneficiary farms; (2) carry out market studies and certification analysis, as applicable; (3) Training farms and associations in how to develop a business plan and to apply for financing and/or certification schemes; (4) continuous advice on the implementation of business plans.

  The business plans will target individual producers or associations of producers within the Yuna river basin, which are part of the 500 direct beneficiaries of the project. The selection of the beneficiaries will be conducted by an inter-institutional commission composed of the organizations that make up the project and with a representation of the producers. The commission, with the support of the Gender expert will define the selection criteria, ensuring compliance with the principles of social inclusion and gender equality and avoiding any type of discrimination or bias, including -but not limited to- sex, age, colour, ethnicity, language, religion, political affiliation, national or social origin, disability, economic position and sexual orientation.

  Public-private partnerships will help to guarantee the viability and sustainability of the business plans. The business plans will be one of the ways in which the results of the PPPs -established to promote the transformation of traditional livestock towards a more sustainable activity- will be reflected at a practical level. Both the public-private partnerships and the business plans will form an integral part of climate-smart livestock management strategy, at the pilot level in the Yuna basin and eventually, when it is scaled up at the national level.

Component 3. Monitoring, Reporting and Verification of the Livestock sector

71. Component 3 will address Barrier #2 (Lack of information for livestock sector planning) and Barrier #3 (Limited knowledge management capacities at the institutional level). The integrated MRV System of the MARENA will be strengthened by including links and data, analysis and reports at the national level on GHG emissions from the livestock sector. In particular, a monitoring system will be developed and implemented in 30 pilot farms to assess the results of the CSLM strategies in terms of global environmental benefits (GHG emissions, carbon sequestration and land degradation), farm income and gender issues. The farm monitoring system will combine remote-sensing information with data derived from the sampling of soil, vegetation and manure. The results and lessons will be incorporated into the development of the national livestock MRV system. Component 3 is structured into one outcome and two outputs:

    Outcome 3.1 GHG emissions from the Livestock Sector integrated into the Monitoring, Reporting and Verification (MRV) National System

    - **Output 3.1.1:** An MRV system for Measuring Emissions and Reporting Data for the Livestock Sector

      Activities will include: (1) the design of a proposal for the MRV system linked to the MARENA system, including operational protocols for data management and verification of information; (2) MRV system implementation; (3) a study on the GHG livestock-based emissions, based on the MRV methodology; and (4) training on sampling and reporting, which will be delivered to public and private institutions technical staff.

    - **Output 3.1.2:** Farm-level Monitoring System to monitor GHG emissions, Strategies, Financing and Land Degradation.

      Activities will include: (1) Establishing a GIS system that covers targeted and control farms, (2) Definition of protocols for sampling and data analysis, (3) Monitoring of variables by remote sensing, (4) Sampling and analysis of soil, manure and vegetation, (5) Analysis of CC mitigation and land restoration indicators, (6) Monitoring of socio-economic and gender variables, and (6) Development and validation of online tools for land assessment and monitoring, process information and calculate GHG emissions at farm level.

Component 4. Project Monitoring, Evaluation and Knowledge Management

72. Under this Component, a Monitoring and Evaluation (M&E) system will be implemented with Results- Based Management, supporting the overcoming of all identified barriers. In addition, extension materials on climate-smart livestock practices will be developed and validated by farmers and extension workers in the pilot farms, as well as for replication activities. A communication strategy will be developed and implemented to ensure a fluid information flow and the dissemination of project outcomes and outputs among producers, extension agents and institutions nationwide. Lastly, the project will establish and maintain links with international networks on CSLM to share lessons and results,

including FAO partnerships, and to benefit from international experiences in the field. Component 4 is structured into one outcome and four outputs:

Outcome 4.1 Project implementation based on RBM and lessons learned/good practices documented and disseminated

- **Output 4.1.1** Project Monitoring & Evaluation Plan and system, in place

  Under this output, a database tool will be developed to allow the monitoring and evaluation of the outcome, outputs and activities of the projects in accordance with GEF and FAO standards, including GEF tracking tools. The system is supported by periodic reports to the Project Steering Committee (PSC) to ensure transparency and the flow of information. Progress will be assessed at the monthly meetings of the Project Team and the semiannual meetings of the PSC to assess the problems and adapt the course of action to achieve expected outcomes, if necessary. Once the project starts, a grievance mechanism will be defined, a focal point will be designated and stakeholders will be contacted to ensure that people affected by the project can submit a complaint, in accordance with FAO's operational procedures. The Environmental and Social Risk Management Plan will be finalized at project inception and be monitored by the M&E Specialist/Assistant Coordinator, during project implementation.

- **Output 4.1.2** Project Mid-term review and Final Evaluation

  After 18 months of project execution, a mid-term review (MTR) will be carried out. Six months before the end of project implementation, the final evaluation of the project will be carried out. See more details under sub-section 12) below and in Section 3 of the FAO-GEF Project Document.

- **Output 4.1.3** Dissemination and communication products

  Under Component 2, the project, through its consultative and action research approach, will develop an affordable package of measures, practices and technologies that will be tested and refined in diverse socioeconomic and ecological conditions. This experience will be transformed into a set of products for use by extension agencies, which include information brochures, a technical manual and four videos where farmers can share their CSLM experiences. The Manual will be developed in Project Year 1 (PY1) and a preliminary version will be published for use in the pilot farms. This version will be revised during project implementation, and a final version will be published in PY3. The extension agents trained in CSLM (Output 2.1.1), will have a validated material available to disseminate the approach to new farms.

- **Output 4.1.4** A Communication Strategy implemented, including project website

  Under this output, a communication strategy will be developed and implemented to ensure a smooth flow of information with farmers, extension agents and institutional partners, in support of activities in components 1 (national strategy, public-private agreements) and component 2 (activities at farm level, field days). The strategy will ensure that information about project outcomes and lessons are disseminated to a broad audience through appropriate communication channels. Activities will include the preparation of communication materials such as posters and brochures, presence in local media (TV, AM radio, newspapers), as well as the configuration and maintenance of a project website and dedicated accounts of social networks throughout Project duration.

1.3.3 Project Stakeholders

73. The following table illustrates the role of project stakeholders:

Table 2 Project Stakeholders

Stakeholder	Mandate (related to the Project)	Role in the Project
Ministry of Environment and Natural Resources (MARENA)	Public institution responsible for the formulation of national policies related to the environment and natural resources, and to guarantee the sustainable use and management of renewable natural resources and the environment. MMA hosts the GEF Operational Focal Point and has a Directorate of Climate Change responsible for ensuring compliance and maintaining follow-up to the United Nations Framework Convention on Climate Change. MARN is the UNFCCC Focal Point.	Project executing partner and leader of the implementation through the Directorate of Climate Change, which will coordinate actions with other public and private institutions.
Ministry of Agriculture	The Ministry's Department of Risk Management and Climate Change is directly responsible, or in coordination with other entities, for climate change adaptation activities in the agricultural sector to support food security in the country.	Project executing partner. It will support livestock extension services, provide technical assistance on animal genetic improvement and upkeep MMA in the implementation of the MRV system. Involved dependencies: General Directorate of Livestock

		(DIGEGA), CONALECHE, and VITROGAN.
General Directorate of Livestock (DIGEGA)	DIGEGA is a dependency of economic and hierarchical order, within the structure of the Ministry of Agriculture. DIGEGA has traditionally played a key role in the protection and development of the national livestock. DIGEGA hosts the MEGALECHE Extension Program, which aim is to promote the organization of producers in associations and cooperatives. MEGALECHE also supports an extension system, seeks to increase the country's milk production, and promotes milk quality improvement through the transfer of simple, practical and widely tested technologies.	Project partner. The MEGALECHE Program has field extension agents who will be giving technical assistance to farms and producers' associations – the GEF project beneficiaries. MEGALECHE promotes the implementation of good practices and delivers training on sustainable livestock management and GHG emission reduction.
CONALECHE	CONALECHE elaborates and executes the dairy policy in order to promote self-sufficiency and to improve the sector's productivity and competitiveness levels. CONALECHE is oriented to develop and organize the national dairy industry, encouraging the production, industrialization, commercialization and consumption of milk and its derivatives.	Executing partner. CONALECHE's Credit Unit will be financing beneficiary farms on good practices. CONALECHE's dairy technical unit will offer technical assistance to dairy processors to improve milk quality and efficiency.
FAO	FAO is the agency of the United Nations that leads the international effort to end hunger. Climate change is one of FAO's main institutional priorities, as reflected in its Climate Change Strategy. This CC strategy translates the fundamental role of FAO into strategic actions and priorities at the global, national, regional and local levels. The main objective is to help member countries meet their commitments to address climate change.	GEF Implementing Agency. FAO will also provide specialized technical assistance during project implementation, particularly on climate-smart livestock management and GHG livestock-based emission reduction.
Dominican Institute of Agricultural and Forestry Research (IDIAF)	The IDIAF is the public institution responsible for executing the agricultural and forestry research and validation policy in the Dominican Republic.	Project partner. IDIAF has livestock researchers with experience in sustainable livestock management and measurement of GHG emissions by livestock activity. IDIAF has an experimental livestock station in the Yuna basin (Duarte province) and a soil analysis and forage

		bromatology laboratory in Santo Domingo. IDIAF will provide technical assistance in the design and implementation of the MRV system, and will deliver trainings for producers.
Banco Agrícola	Financing productive activities of the agricultural and agro-business sectors.	Financing of good practices for sustainable livestock management. Participation in the design of the financial strategy to promote sustainable livestock in project influence area.
Educational institutions	The University Environmental Network (RAUDO) covers all academic centers in the country, including the Autonomous University of Santo Domingo (UASD), the Ibero-American University (UNIBE), the Technological Institute of Santo Domingo (INTEC), the Pedro Henríquez Ureña National University (UNPHU), APEC University (UNAPEC), the Pontifical Catholic University *Madre y Maestra* (PUCMM), and the Catholic University of Cibao (UCATECI). RAUDO promotes the multiplication of information on climate change in universities and the implementation of projects.	- Support for research studies and technical consultancies. -Support for the implementation knowledge management platform and sharing lessons learned on sustainable livestock, climate change and GHG emission reduction. -UCATECI has an agreement signed with the Ministry of Environment, to promote the recovery and conservation of the basins of the Yuna and Camú rivers.
NGOs and Civil Society Organizations	The non-governmental organizations of the livestock sector are integrated into the agricultural and livestock development of the country, through the Dominican Agribusiness Board (JAD), the Dominican Association of Farmers and Farmers (ADHA), the National Patronage of Ranchers, the Dominican Association of Producers of Milk (APROLECHE), Dominican Association of Meat Producers and five regional livestock federations: FEGASUR, FEDEGARE, FEDEGANORTE, FEGACIBAO and FEDEGANO.	Project beneficiaries. The Federation of Cattle Ranchers of the Central Cibao and the Northeast (FEGACIBAO) will be a Project partner during implementation. FEGACIBAO is present in the Yuna basin with 15 associations and more than 1500 dairy producers (women and men). These producers will the project direct beneficiaries, will implement CSLM practices at farm level, and will participate in capacity development activities on how to achieve low-emissions livestock management. FEGACIBAO has a meeting room and office in the Yuna basin (Duarte province). It will support

		the articulation with the associations and the selection of producers to implement sustainable livestock practices and provide training. The Livestock Board and the ADHA will support the link with meat producers and will involve them in the implementation of sustainable livestock practices and participation in training activities.
Milk and meat processing industries.	The industry is organized through the Dominican Association of Dairy Industries (ADIL), the Association of Processors of dairy products and derivatives (ADOPROLAD) and the Association of Industrial Slaughterhouses.	Supporting the design and implementation of the financial strategy and incentives, to promote a sustainable and low-emission livestock path.

1.3.4 Stakeholder engagement

Key stakeholder involvement has been noted in the description of project Outcomes and Outputs earlier in this document and is also summarized under the project's Implementation Arrangements section. The project will ensure strong stakeholders' involvement throughout project implementation.

The project has been highly participatory since the design phase, including government agencies, private sector (processing industries), and civil society actors (producers' organizations and the national livestock federation). The project has been designed through stakeholders' involvement – and several consultation meetings and workshops were organized during its preparation phase. As a result, a preliminar Stakeholder Engagement Plan has been agreed and is detailed below. It will be further discussed and updated at project inception.

In addition, a multi-stakeholder project governance structure is reflected under Section 3 of this Project Document (see Project Implementation Arrangements). The Project Steering Committee will have government and FAO representation, and will take project decisions on a consensus-based approach (see more in Sub-section 3.2.3 below).

Stakeholder Engagement Plan

Stakeholder engagement event	**Targeted stakeholders**	**Purpose of the Event**

Inception Workshop (3rd month after first disbursement)	Technical officials from MARENA, MinAg, CONALECHE, DIGEGA, IDIAF, FEGACIBAO, and *Banco Agricola.* FEGACIBAO will participate on behalf of producers' associations working in the Yuna Basin.	To define and validate project methodologies with project stakeholders that will be used for project implementation, M&E. To confirm institutional roles of project stakeholders. To define the project the local and national entry points of the project grievance mechanism - in a participatory way.
Mid-term workshop (Month 18)	Technical officials from MARENA, MinAg, CONALECHE, DIGEGA, IDIAF, FEGACIBAO, and *Banco Agricola.* Local producers	To assess mid-term project achievements vis-à-vis expected outcome indicator targets. To assess the performance of the Project Coordination Unit and project technical structure. To identify weaknesses to be strengthened, in order to improve project effectiveness and achieve project objectives. To know, systematize and analyse producers' perceptions on project implementation, alignment with their own expectancies, and expected outcomes. To share the grievance mechanism with project staekholders.
Final Workshop (3 months before project closure)	Project co-executing partners. Technical officials from MARENA, MinAg,	To disseminate project outcomes and discuss on

	CONALECHE, DIGEGA, IDIAF, FEGACIBAO, and *Banco Agricola.*	lessons learned for future projects. To share success stories with and within producers' organizations, as well as with other national and international livestock sector actors. To assess project implementation, share Final Evaluation, consult with co-executing partners, and identify weaknesses and strengths at institutional and operational levels (local and national). To consolidate inputs for the Project Terminal Report.

1.3.5 Grievance Redress Mechanism

FAO is committed to ensuring that its programs are implemented in accordance with the Organization's environmental and social obligations. In order to better achieve these goals, and to ensure that beneficiaries of FAO programs have access to an effective and timely mechanism to address their concerns about non-compliance with these obligations, the Organization, in order to supplement measures for receiving, reviewing and acting as appropriate on these concerns at the program management level, has entrusted the Office of the Inspector-General with the mandate to independently review the complaints that cannot be resolved at that level.

FAO will facilitate the resolution of concerns of beneficiaries of FAO programs regarding alleged or potential violations of FAO's social and environmental commitments. For this purpose, concerns may be communicated in accordance with the eligibility criteria of the Guidelines for Compliance Reviews Following Complaints Related to the Organization's Environmental and Social Standards[5], which applies to all FAO programs and projects.

Concerns must be addressed at the closest appropriate level, i.e. at the project management/technical level, and if necessary at the Regional Office level. If a concern or grievance cannot be resolved through consultations and measures at the project management level, a complaint requesting a Compliance Review may be filed with the Office of the

[5] Compliance Reviews following complaints related to the Organization's environmental and social standards: http://www.fao.org/aud/42564-03173af392b352dc16b6cec72fa7ab27f.pdf

Inspector-General (OIG) in accordance with the Guidelines. Program and project managers will have the responsibility to address concerns brought to the attention of the focal point.

The principles to be followed during the complaint resolution process include: impartiality, respect for human rights, including those pertaining to indigenous peoples, compliance of national norms, coherence with the norms, equality, transparency, honesty, and mutual respect.

Project-level grievance mechanism

The project will establish a grievance mechanism at field level to file complaints during project inception phase. Contact information and information on the process to file a complaint will be disclosed in all meetings, workshops and other related events throughout the life of the project. In addition, it is expected that all awareness raising material to be distributed will include the necessary information regarding the contacts and the process for filing grievances.

The project will also be responsible for documenting and reporting as part of the safeguards performance monitoring on any grievances received and how they were addressed.

The mechanism includes the following stages:

1. In the instance in which the claimant has the means to directly file the claim, he/she has the right to do so, presenting it directly to the Project Coordination Unit (PCU). The process of filing a complaint will duly consider anonymity as well as any existing traditional or indigenous dispute resolution mechanisms and it will not interfere with the community's self-governance system.

2. The complainant files a complaint through one of the channels of the grievance mechanism. This will be sent to the Project General Coordinator (PGC) to assess whether the complaint is eligible. The confidentiality of the complaint must be preserved during the process.

3. Eligible complaints will be addressed by the Project Advisory Committee (PAC). The PGC will be responsible for recording the grievance and how it has been addressed if a resolution was agreed.

4. If the situation is too complex, or the complainer does not accept the resolution, the complaint must be sent to a higher level, until a solution or acceptance is reached.

5. For every complaint received, a written proof will be sent within ten (10) working days; afterwards, a resolution proposal will be made within thirty (30) working days.

6. In compliance with the resolution, the person in charge of dealing with the complaint, may interact with the complainant, or may call for interviews and meetings, to better understand the reasons.

7. All complaint received, its response and resolutions, must be duly registered.

Internal process

1. Project Coordination Unit (PCU). The complaint could come in writing or orally to the PCU directly. At this level, received complaints will be registered, investigated and solved by the PCU.

2. If the complaint has not been solved and could not be solve in level 1, then the Project General Coordinator (PGC) elevates it to the FAO Representative in Dominican Republic.

3. Project Steering Committee (PSC). The assistance of the PSC is requested if a resolution was not agreed in levels 1 and 2.

4. FAO Regional Office for Latin American and the Caribbean. FAO Representative will request if necessary the advice of the Regional Office to resolve a grievance, or will transfer the resolution of the grievance entirely to the regional office, if the problem is highly complex.

5. The FAO Regional Representative will request only on very specific situations or complex problems the assistance on the FAO Inspector General who pursuits its own procedures to solve the problem.

Resolution

Upon acceptance a solution by the complainer, a document with the agreement should be signed with the agreement.

Project Coordination Unit (PCU)	Must respond within 5 working days.
FAO Representation in Dominican Republic	Anyone in the FAO Representation may receive a complaint and must request proof of receipt. If the case is accepted, the FAO Representative must respond within 5 working days in consultation with FAO's Representation and Project Team. FAO Representative a.i.: Carmelo Gallardo Carmelo.gallardo@fao.org Tel: +1 809 5319681
Project Steering Committee (PSC)	If the case cannot be dealt by the FAO Representative, he/she must send the information to all PSC members and call for a meeting to find a solution. The response must be sent within 5 working days after the meeting of the PSC.
FAO Regional Office for Latin America and the Caribbean	Must respond within 5 working days in consultation with FAO's Representation. FAO Representative: Julio Berdegué RLC-ADG@fao.org; Julio.Berdegue@fao.org Tel: (56 2) 2923 2100
Office of the Inspector General (OIG)	To report possible fraud and bad behavior by fax, confidential: (+39) 06 570 55550 By e-mail: Investigations-hotline@fao.org By confidential hotline: (+ 39) 06 570 52333

1.3.6 Expected global environmental and adaptation benefits

74. The project is expected to present the following environmental benefits:

Table 3 Expected Global Environmental Benefits

Global Environmental Benefits	Target	Comment

GHG emission reduction	42,153 tons CO2-eq per year (reduction equivalent to 22% of total emissions) EI reduction: 46.4% for dairy production systems Emission profile: N2O manure: 16.3% reduction N2O feed: 67.6% reduction CH4 enteric: 13.1% reduction CH4 manure: 16.4% reduction CO2 feed: 13.5% reduction	Calculated with FAO Global Livestock Environmental Assessment Model (GLEAM)[6] EI: Emission intensity (kg CO2eq/kg of output (dairy)
Area under sustainable management	5,000 ha	Area of Project direct beneficiaries.
Carbon sequestration	5,750 (tons CO_2 year) (5,000 ha)	Based on estimations of carbon sequestration by Henderson et al. (2015)[1] and the project intervention area
Income increase	Dairy: additional US$ 6,858,190 (year) in Project area	Dairy farmers' milk price (reference): R$ 0.365
Productivity increase	18,790 tons of milk/ year (+46.3%) 538 tons of meat /year (+34.3%)	

1.4 LESSONS LEARNED

75. **Effective knowledge management and transfer**: The capacity gaps at institutional level in the livestock sector of the Dominican Republic will be undertaken by Outcome 1.2. Through this Outcome, a knowledge management platform will make available the lessons learned, methodologies and results of projects relevant to livestock management.

[6] http://www.fao.org/gleam/it/

Lessons learned from past projects will provide inputs for this current GEF proposal on sustainable livestock strategy as well as strengthening technical capacities of producers and extension agents.

76. The Outcomes and lessons learned from project "*Model to increase the productivity level and access to markets of family dairy producers in the Dominican Republic*", which aimed to strengthen the capacity of CONALECHE to improve the productivity and quality level of the family dairy chain, will contribute to the delivery of the CSLM strategy at farm level, a capacity development program for dairy and beef producers tu support CSLM technologies and an extension program to support the CSLM strategy.

77. Lessons learned from the REDD+/FCPF initiative, with the objective of preparing key activities to develop a national REDD+ strategy, will support the strengthening of the MRV system along with the farm-level monitoring system.

78. Past experiences on strengthening watershed governance frameworks and sustainable livestock management actions will, in addition, support Component 2 of this GEF proposal on the technology transfer and deployment/validation of practices in the field.

1.5 STRATEGIC ALIGNMENT

1.5.1 Consistency with national development goals and policies

79. The Project is in line with and supportive of national development strategies and plans, climate change strategies and land degradation strategies. In particular, the project is integrated with the following national development goals:

80. The **National Development Strategy**, specifically with general objectives 4.1 and 4.3 on sustainable management of the environment and adequate adaptation to climate change respectively. Within these general objectives, the following specific objectives are considered:

    1. 4.1.1: Protect and sustainably use ecosystems goods and services, biodiversity and the national natural heritage, including marine resources. The following lines of action are considered within this specific objective: 4.1.1.6 Develop monitoring and evaluation systems, evaluating and systems to assess the state of the environment and natural resources at the national, regional and local levels, based on the consolidation of an Environmental Information System that includes the valuation of natural resources in national accounts. 4.1.1.8: Restore and preserve ecosystem services, with emphasis on river basins, as well as design and implement a payment for environmental services mechanism for the communities and productive unit.
    2. 4.1.2: Promote sustainable production and consumption. The following lines of action are considered within this specific objective: 4.1.2.1 Support the development and adoption of environmentally sustainable production and consumption technologies and practices, as well as the disincentive to the use of pollutants and mitigation of damages associated with highly polluting activities. .4.1.2.2: Strengthen intersectoral coordination and public-private collaboration in the promotion of sustainable consumption and production practices. 4.1.2.7: Develop incentives and market instruments to promote the adoption of cleaner

production practices and consumption of goods and services generated under sustainable production.

3. 4.3.1: Reduce vulnerability, advance in the adaptation of the effects of climate change and contribute to its mitigation. The following lines of action are considered within this specific objective: 4.3.1.2 Strengthen, in coordination with local governments, the system of prevention, reduction and control of anthropogenic impacts that increase the vulnerability of ecosystems to the effects of climate change .4.3.1.3: Encourage the development and transfer of technologies that help adapt forest and agricultural species to the effects of climate change.

81. The **National Action Program to Combat Desertification and to mitigate the Effects of Drought (PAN-LCD)**, the Government of the Dominican Republic recognizes extensive livestock and overgrazing as causes of degradation of productive capacity of soils through processes of soil erosion and impoverishment. This initiative is relevant to PAN-LCD since its objective is to reduce GHG emissions generated by livestock production through the good management practices models for soil recovery in the Yuna basin.

82. The **National Strategy for Climate Change Adaptation in the Agricultural Sector** of the Dominican Republic, by being aligned with the totality of its results and with numerous of its corresponding activities:

    1. Outcome 1: Planning and management instruments for climate change adaptation implemented in the agricultural sector in the Dominican Republic.

       Activity 1: Design planning and management instruments, in particular, design mechanisms to improve the articulation (inter and intra) of institutions and / or producer organizations

       Activity 2: Develop financial mechanisms for small and medium farmers, including designing methodologies to prioritize activities and / or allocate resources.

    2. Outcome 2: Knowledge management system for climate change adaptation of the agricultural sector is created and functional.

       Activity 1: Develop and implement a specialized information platform on climate change in the agricultural sector. In particular, design and install a system or information platform to assess the impact of climate change in the agricultural sector.

    3. Outcome 3: Authorities and productive actors with strengthened capacities on Climate Change Adaptation in the agricultural sector.

       Activity 3: Technical Assistance, where it is proposed to provide technical assistance for the application of good agricultural practices

       Activity 4: Monitoring the use of good practices

83. **Nationally Appropriate Mitigation Actions (NAMA)** concerning the pig farming sector in the Dominican Republic. This NAMA aims to reduce GHG emissions through anaerobic digestion in pig farms. The NAMA includes the installation of 1750 bio digesters. It is estimated that this activity can reduce 0.36 MtCO2e / year during its 5 years of duration.

84. The **National Strategy to Strengthen Human Resources and the Competences to Advance towards a Green, Low Emission and Climate Resilient Development**, (2012) highlights that one of the areas for the development of institutional capacities is the integration of topics related to climate change in sectoral strategies.

1.5.2 Consistency with national communications and reports to the United Nations Convention to Combat Desertification, Convention on Biological Diversity, Stockholm Convention on POPs, United Nations Framework Convention on Climate Change (as applicable).

85. The project is consistent with Dominican Republic's Intended Nationally Determined Contribution (INDC) to the UNFCCC submitted in 2015. According to the INDC, the country intends to reduce the base year emissions by 25% by 2030. Base year estimated emissions in 2010 are 3, 6 tCO2e per capita. The reduction target covers the Agriculture and LULUCF sector among others. The proposed project would not only contribute to the reduction of emission intensity for dairy production systems, but also improve carbon sequestration in 5,000 hectares, which is considered an important contribution to CO2 removal.

1.5.3 Consistency with GEF focal area

86. The project contributes to the **Climate Change Mitigation Focal Area**.
87. The Project contributes to Focal Area Objective 2 (Demonstration of systemic impacts of mitigation options). It is fully consistent with Program 4 (Promote conservation and enhancement of carbon stocks in forest, and other land-use, and support climate smart agriculture) by promoting climate-smart livestock management approaches.
88. Contributions to GEF strategic goals will be measured through the following indicators from the GEF monitoring framework: CCM indicators 1 (Tons GHG directly and indirectly reduced or avoided), 3 (MRV system in place), 4 (Deployment of low GHG technologies and practices), 5 (Degree of support low GHG development in the policy planning and regulatory framework) and 6 (Degree of strength of financial and market mechanisms for low GHG development). The Project Management Unit will directly monitor the types and numbers of low GHG technologies and practices, the number of hectares over which they are deployed, and their adoption at the national level through policies, plans or programmes, notably the national CSLM strategy developed under the project.

1.5.4 Consistency with FAO's Strategic Framework and Objectives

89. The project is in line with the FAO Strategic Framework at corporate, regional and country levels. In particular, it contributes to the following objectives and initiatives:
90. **Corporate level**: the project is in line with Strategic Objective 2: Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner. It contributes to Organizational Outcome 2.1: Producers and natural resource managers adopt practices that increase and improve agricultural sector production in a sustainable manner; Organizational Outcome 2.2 : Stakeholders in member countries

strengthen governance – the policies, laws, management frameworks and institutions that are needed to support producers and resource managers – in the transition to sustainable agricultural sector production systems; and Organizational Outcome 2.3: Stakeholders endorse/adopt international (including regional) instruments and support related governance mechanisms for sustainable agricultural production systems.

91. **Regional level:** The project contributes to the following two regional initiatives: RI2: Family farming and inclusive food systems for sustainable rural development and RI3: Sustainable use of natural resources, adaptation to climate change and disaster risk management. The Dominican Republic is a priority country for Regional Initiative 3.

92. **Country level:** The project is in line with the FAO Country Programming Framework for the Dominican Republic. It contributes to Priority 3: Natural Resources & Risk integral management to promote a sustainable and resilient agricultural sector as well as with Outcome 3.2: The country strengthens interinstitutional mechanisms for the integral soil & water resources management in the agricultural sector.

SECTION 2 – FEASIBILITY

2.1 ENVIRONMENTAL & SOCIAL RISK ASSESSMENT

93. The project has been rated as *Moderate risk*. Appendix 5 provides the Project Risk Certification.

94. The Environmental and Social Risk Mangement Plan is included in Appendix 6.

2.2 RISK MANAGEMENT

2.2.1 Risks and mitigation measures

95. Please refer to Appendix 4 for a list of risks and mitigation measures.

2.2.2 Analysis of fiduciary risks and mitigation measures (only for OPIM projects)

96. Not Applicable

SECTION 3 – IMPLEMENTATION AND MANAGEMENT ARRANGEMENTS

3.1 INSTITUTIONAL ARRANGEMENTS

97. The Ministry of Environment and Natural Resources (MARENA) will act as the project executing entity in close consultation with other line ministries and district/local governments participating in field activities. The MARENA will have the executing and technical responsibility for the project, with FAO providing technical oversight as GEF Agency.

3.2 IMPLEMENTATION ARRANGEMENTS

98. The Food and Agriculture Organization (FAO) has been selected by the participating country as the GEF Implementing Agency for the proposed project, and as such, will provide project cycle management services as established in the GEF Policy. FAO will be responsible for providing oversight, technical backstopping and supervision of project implementation to ensure that the project is being carried out in accordance with agreed standards and requirements. Technical backstopping will be provided by FAO in coordination with government representatives participating in the Project Advisory Committee. FAO's role and responsibilities are described in sub-section 3.2.2 below.

99. The MARENA will be responsible for the overall execution of the project and will act as national execution entity, also referred to as National Operational Partner in FAO terminology. National co-executing agencies will be designated and will be supported by the Project Steering Committee (PSC) and a Project Coordination Unit. The overall responsibility for project execution implies accountability for intended and appropriate use of funds, as well as for timely delivery of inputs and outputs. One important vehicle for collaboration will be through Letters of Agreement (LoA) that will be elaborated and signed between FAO and the respective partners. This includes project co-executing entities, such as government institutions, civil society organizations, and academia - if established in the Annual Work Plans approved by the PSC. Funds received under a LoA will be used to execute Project activities in conformity with FAO's rules and procedures.

3.2.2 FAO's roles and responsibilities

FAO's role in the project governance structure

100. The Food and Agriculture Organization of the United Nations (FAO) will be the GEF Agency responsible for supervision and provision of technical guidance during project implementation. As the GEF Agency, FAO will:

- Administrate funds from GEF in accordance with the rules and procedures of FAO;
- Oversee project implementation in accordance with the project document, work plans, budgets, agreements with co-financiers and the rules and procedures of FAO;
- Provide technical guidance to ensure that appropriate technical quality is applied to all activities concerned;
- Conduct at least one supervision mission per year; and

- Report to the GEF Secretariat and Evaluation Office, through the annual Project Implementation Review, on project progress and provide financial reports to the GEF Trustee.

101. If requested by the Government involved in the proposed project, the FAO may provide direct project services. The FAO and the participating governments acknowledge and agree that those services are not mandatory, and will be provided only upon written government request. The direct project services would follow FAO policies on the recovery of direct project costs related to GEF funded projects.

102. In accordance with the present Project Document and the AWP/B(s) approved by the PSC, FAO will prepare budget revisions to maintain the budget updated in the financial management system of FAO and will provide this information to the PSC to facilitate the planning and implemementation of project activities. In collaboration with the PCU and the PSC, FAO will participate in the planning of contracting and procurement processes. FAO will process due payments for delivery of goods, services and products upon request of the PCU and based on the AWP/B and Procurement Plans that will be annually approved by the PSC.

FAO's roles in internal organization

103. The roles and responsibilities of FAO staff are regulated by the *FAO Guide to the Project Cycle, Quality for Results, 2015*, Annex 4: Roles and Responsibilities of the Project Task Force Members, and its updates.

104. The FAO Representative in Dominican Republic will be the **Budget Holder** (BH) and will be responsible for the management of GEF resources, as applicable. As a first step in the implementation of the project, the FAO Representation in Dominican Republic will establish an interdisciplinary Project Task Force (PTF) within FAO, to guide the implementation of the project.

105. The PTF is a management and consultative body that integrates the necessary technical qualifications from the FAO relevant units to support the project. The PTF is composed of a Budget Holder, a Lead Technical Officer (LTO), the Funding Liaison Officer (FLO) and one or more technical officers based on FAO Headquaters (HQ Technical Officer).

106. In consultation with the LTO, the FAO Representative in Dominican Republic will be responsible for timely operational, administrative and financial management of the GEF project resources, as applicable, including in particular: (1) the acquisition of goods and contracting of services for the activities of the project, according to FAO's rules and procedures, in accordance with the approved AWP/B; (2) process the payments corresponding to delivery of goods, services and technical products in consultation with the PSC; (3) provide six-monthly financial reports including a statement of project expenditures to the PSC; and (4) at least once a year, or more frequently if required, prepare budget revisions for submission to the FAO-GEF Coordination Unit through the Field Programme Management Information System (FPMIS) of FAO.

107. The FAO Representative in Dominican Republic, in accordance with the PTF, will give its non-objection to the AWP/Bs submitted by the PCU as well as the Project Progress

Reports (PPRs). PPRs may be commented by the PTF and should be approved by the LTO before being uploaded by the BH in FPMIS.

108. The **Lead Technical Officer (LTO**) for the project will be the Forestry Officer in the Subregional Office for Mesoamerica – SLM. The role of the LTO is central to FAO's comparative advantage for projects. The LTO will oversee and carry out technical backstopping to the project implementation. The LTO will support the BH in the implementation and monitoring of the AWP/Bs, including work plan and budget revisions. The LTO is responsible and accountable for providing or obtaining technical clearance of technical inputs and services procured by the Organization.

109. In addition, the LTO will provide technical backstopping to the PT to ensure the delivery of quality technical outputs. The LTO will coordinate the provision of appropriate technical support from PTF to respond to requests from the PSC. The LTO will be responsible for:

- Review and give no-objection to TORs for consultancies and contracts to be performed under the project, and to CVs and technical proposals short-listed by the PCU for key project positions, goods, minor works, and services to be financed by GEF resources;
- Supported by the FAO Representation in DR, review and clear final technical products delivered by consultants and contract holders financed by GEF resources before the final payment can be processed;
- Assist with review and provision of technical comments to draft technical products/reports during project execution;
- Review and approve project progress reports submitted by the GPC, in cooperation with the BH;
- Support the FAO Representative in examining, reviewing and giving no-objection to AWP/B submitted by the GPC, for their approval by the Project Steering Committee;
- Ensure the technical quality of the six-monthly Project Progress Reports (PPRs). The PPRs will be prepared by the GPC, with inputs from the PT. The BH will submit the PPR to the FAO/GEF Coordination Unit for comments, and the LTO for technical clearance. The PPRs will be submitted to the PSC for approval twice a year. The BH will upload the approved PPR to FPMIS.
- Supervise the preparation and ensure the technical quality of the annual PIR. The PIR will be drafted by the GPC, with inputs from the PT. The PIR will be submitted to the BH and the FAO-GEF Coordination Unit for approval and finalization. The FAO/GEF Coordination Unit will submit the PIRs to the GEF Secretariat and the GEF Evaluation Office, as part of the Annual Monitoring Review report of the FAO-GEF portfolio. The LTO must ensure that the GPC and the PT have provided information on the co-financing provided during the year for inclusion in the PIR;
- Conduct annual (or as needed) supervision missions;
- Review the TORs for the mid-term review, participate in the the mid-term workshop with all key project stakeholders, development of an eventual agreed adjustment plan in project execution approach, and supervise its implementation; and

- Provide comments to the TORs for the final evaluation; provide information and share all relevant background documentation with the evaluation team. Participate in the final workshop with all key project stakeholders, as relevant. Contribute to the follow-up to recommendations on how to insure sustainability of project outputs and results after the end of the project.

110. The **HQ Technical Officer** is a member of the PTF, as a mandatory requirement of the FAO Guide to the Project Cycle. The HQ Officer has most relevant technical expertise - within FAO technical departments - related to the thematic of the project. The HQ Technical Officer will provide effective functional advice to the LTO to ensure adherence to FAO corporate technical standards during project implementation, in particular:

- Supports the LTO in monitoring and reporting on implementation of environmental and social commitment plans for moderate projects. In this PROTIERRAS project, the HQ officer will support the LTO in monitoring and reporting the identified risks and mitigation measures (Appendix 4) in close coordination with the project partners.
- Provides technical backstopping for the project work plan.
- Clears technical reports, contributes to and oversees the quality of Project Progress Report(s) (PPRs – see Section 3.5).
- May be requested to support the LTO and PTF for implementation and monitoring.
- Will contribute to the overall ToR for the final evaluation; review the composition of the evaluation team and support the evaluation function.

111. The FAO-GEF Coordination Unit will act as **Funding Liaison Officer (FLO).** The FAO/GEF Coordination Unit will review the PPRs and financial reports, and will review and approve budget revisions based on the approved Project Budget and AWP/Bs. This FAO/GEF Coordination Unit will review and provide a rating in the annual PIR(s) and will undertake supervision missions as necessary. The PIRs will be included in the FAO GEF Annual Monitoring Review submitted to GEF by the FAO GEF Coordination Unit. The FAO GEF Coordination Unit may also participate in the mid-term review and in the development of corrective actions in the project implementation strategy if needed to mitigate eventual risks affecting the timely and effective implementation of the project. The FAO GEF Coordination Unit will in collaboration with the FAO Finance Division request transfer of project funds from the GEF Trustee based on six-monthly projections of funds needed.

112. The FAO Financial Division will provide annual Financial Reports to the GEF Trustee and, in collaboration with the FAO-GEF Coordination Unit, request project funds on a six-monthly basis to the GEF Trustee.

3.2.3 Decision-making mechanisms of the project

113. Project governance will be carried through 3 levels as following:

i. **Project Steering Committee (PSC):** The PSC will be composed of the MARENA, the Ministry of Agriculture, and FAO. Its main function is to guide the implementation of the project, verify and approve the annual work plans, approve the financial and technical reports, and provide strategic guidance for the project.

ii. **Project Advisory Committee (PAC):** The PAC will advise on issues/problems that arise during the implementation of the project, provide timely technical assistance to the

Project Coordination Unit and participate in meetings convened by the PSC. This committee will be composed of a representative of each implementing partner, namely, by the following institutions: MARENA, Climate Change Directorate; Ministry of Agriculture, Livestock General Directorate – MEGALECHE; CONALECHE; FEGACIBAO; Banco Agrícola, and FAO.

iii. **Project Coordination Unit (PCU):** The main function of the PCU, following the directives of the PSC, is to ensure the coordination and execution of the project through the effective implementation of Annual Work Plan(s) and Budget(s). The Project Team of will be made up of the Project General Coordinator (PGC), the Assistant Coordinator/M&E Expert, the Coordinators of Components 1, 2 and 3, and an Administrative-Financial Manager. The PCU will coordinate field activities with extension technicians of the MEGALECHE Program of the DIGEGA and field technicians of FEGACIBAO. The PCU will also coordinated the support of specialized technical assistance provided by the project partners (IDIAF) and others.

114. The **Project General Coordinator (PGC)** will be responsible for supervising and guiding the Project Coordination Unit (PCU). He/she will also be responsible for coordinating activities with all instances linked to the different components of the project, as well as with the partner institutions of the project. He will also be in charge of daily project management and technical supervision including: (i) coordinating and closely supervising the execution of project activities, (ii) day-to-day management, (iii) coordination with other related initiatives, (iv) ensure a high level of collaboration between participating institutions and organizations at the national, provincial and local levels; (v) monitor the progress of the project and ensure the timely delivery of inputs and outputs; (vi) implement and manage the project monitoring plan and its communication program.

115. The **Administrative and Financial Manager** will be responsible for the day-to-day financial management of the project, including lifting the contracts and acquiring other necessary supplies according to the approved Project Budget and Annual Work Plans. He/she will work in close consultation with the PGC and project implementing partners, particularly the FAO Representation in the Dominican Republic and the MARENA.

116. The **Assistant Coordinator/M&E Expert** will be operationally responsible for the timely delivery of the necessary inputs to produce results, reports, will organize annual project workshops and meetings to monitor the progress of the project, will prepare annual work plans and budgets, and will organize the logistics of the Mid-Term Review (MTR) and Final Evaluation (FE).

117. The following figure displays the decision-making mechanism of this project:

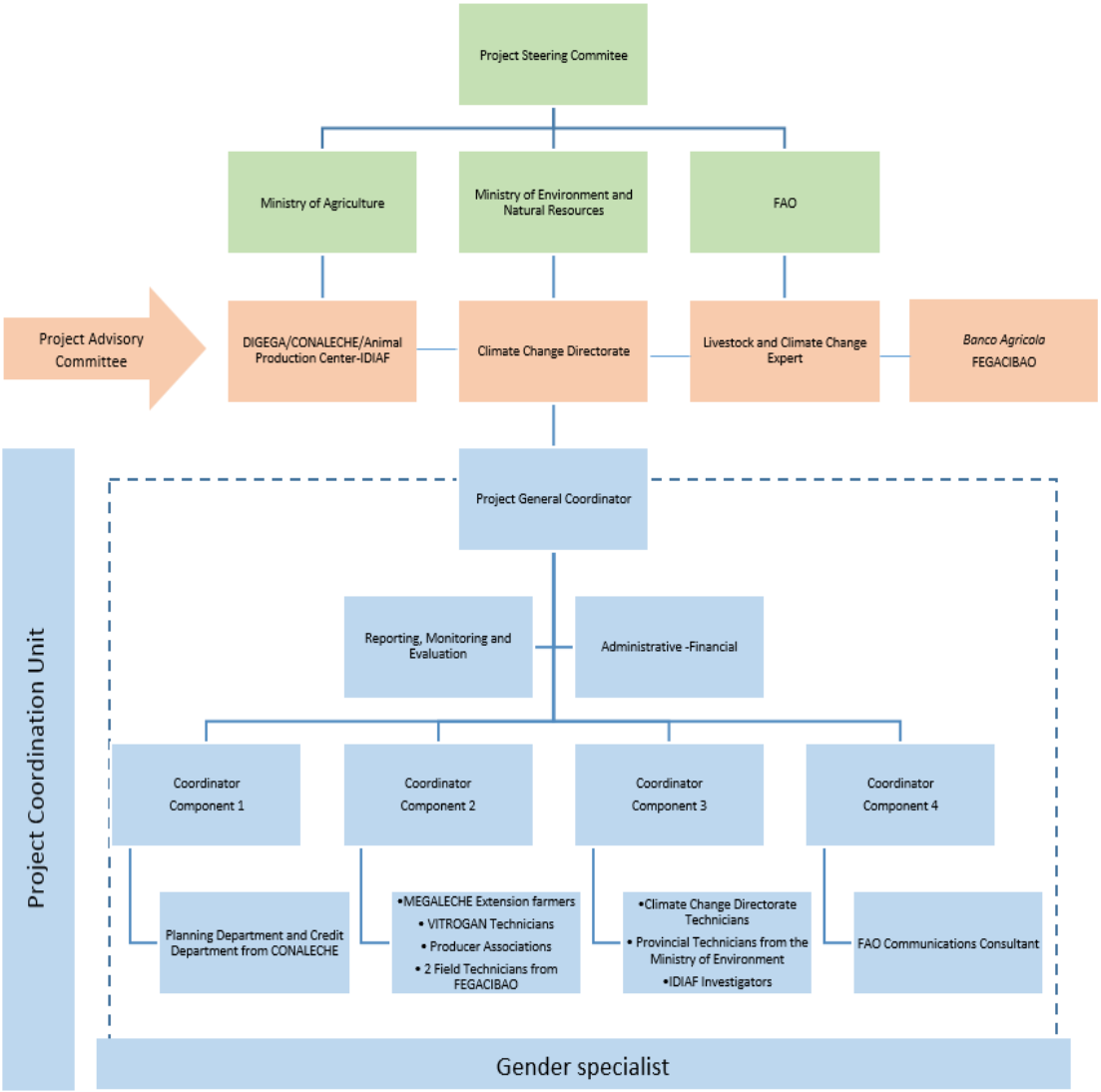

Figure 4 Decision-making mechanism of the Project

3.3 PLANNING AND FINANCIAL MANAGEMENT

3.3.1 Financial plan (by components, outcome and co-financiers)

Institution / Component	Ministerio Medio	Ministerio Agricultura	FAO	DIGEGA	Banco Agrícola	CONALECHE	IDIAF	FEGACIBAO	Total Cofin by	% Cash	% Cofin of total	GEF	% GEF of total	Total Project by	% Cofin by Outcome
Component 1												**191,206**			
Outcome 1.1	33,310			1,060			5,000		39,370	0%	0.48%	130,253	8%	169,623	23%
Outcome 1.2			15,258						15,258	0%	0.19%	60,953	4%	76,211	20%
Component 2												**658,080**		-	
Outcome 2.1	34,190	90,168	10,267	15,000	5,142,857	914,045	55,000	15,880	6,282,907	95%	77%	493,350	32%	6,776,257	93%
Outcome 2.2		17,552		5,000		400,000	16,600	5,000	438,652	91%	5%	164,730	11%	603,382	73%
Component 3									-			**375,053**		-	
Outcome 3.1	1,000,000			10,000			41,160	10,000	1,061,160	94%	13%	375,053	24%	1,436,213	74%
Component 4												**176,193**			
Outcome 4.1		5,000	7,500	5,000		7,500	5,000		30,000	0%	0.37%	176,193	11%	206,193	15%
PMC	31,050	43,740	26,975	59,040		67,176	23,400	22,680	274,061			**140,053**	9%	414,114	66%
Total	**1,098,550**	**156,460**	**60,000**	**95,100**	**5,142,857**	**1,388,721**	**146,160**	**53,560**	**8,141,408**	**91%**		**1,540,586**	**100%**	**9,681,994**	**84%**

Table 4 Financial Plan

Table 3.2: Financial plan (by components, outcome and co-financier).

Financial Plan Rep Dominicana v12abril

Table 3.3 Confirmed sources of co-financing

Sources of co-financing	**Co-financier** (source)	**Type of co-financing**	**Amount of co-financing ($)**
Recipient Government	Ministry of Environment and Natural Resources (MARENA)	Cash	1,000,000
Recipient Government	Ministry of Environment and Natural Resources (MARENA)	In-Kind	98,550
Recipient Government	Ministry of Agriculture	In-Kind	156,460
GEF Agency	FAO	In-Kind	60,000
Recipient Government	DIGEGA	In-Kind	95,100
Recipient Government	Banco Agricola	Cash	5,142,857
Recipient Government/Private	CONALECHE	Cash	1,256,545
Recipient Government/Private	CONALECHE	In-Kind	132,176
Recipient Government	IDIAF	In-Kind	146,160
Private Sector	FEGACIBAO	In-Kind	53,560
Total Co-financing			8,141,408

3.3.2 GEF Contribution

118. Total GEF contributions to the project amount to USD 1,540,586 to finance activities and provide strategic inputs to achieve Global Environmental Benefits in terms of reducing GHG emissions and carbon sequestration, as well as important environmental and socio-economic co-benefits. These will be reached through:

    1. Support the development and validation processes of the national CSLM strategy, as well as the protocols and frameworks for public-private partnerships to support the financing of the strategy
    2. Covering of (i) field coordinator and experts, workshops, supplies and materials, to implement livestock strategies at farm level, (ii) the training program to producers and extension agents, and (iii) elaboration and monitoring of business plans.
    3. Covering consultants, materials for sampling and laboratory analysis, as well as equipment to implement the farm monitoring program will be covered. Moreover, covering of the MRV system at national level, as well as technical studies on the livestock sector GHG emissions.
    4. Developing and maintaining the M&E system, financing of the implementation and final workshops, mid-term review and final evaluation, in accordance with FAO and GEF standards. As well as, providing funds to produce the technical manual and audiovisual material on CSLM. Finally, funds will cover the production of

communication materials and the establishment and maintenance of the project's website and social network channels.

119. 39% of the requested GEF contribution will cover farm-level technologies, including: i) technical assistance of Consultants to implement technologies at the farm level (Animal Production / CSLM Specialist and Farm Management / Extension Specialist and National MRV Specialist); ii) Component 3 (MRV); iii) Contracts within output 2.1, and a portion of outcome 3.1; iv) planting materials and supplies. See more details of this contribution: i) Specific technical assistance to implement GAPs that promote climate smart livestock management encompass: the establishment of silvopastoral systems, protein banks, living fences, management of paddocks and manure, genetics improvement techniques, and follow up to field activities; ii) Specific technical assistance to design an MRV system to estimate GHG emissions generated by cattle farms, including protocols, on site sampling, lab tests and follow up to field activities; iii) Procurement of planting materials (seeds and supplies) to implement silvopastoral systems in pilot farms; iv) Training sessions for producers to implement GAPs to promote CSLM, including workshop logistics (venues, meals, material reproduction, among others).

3.3.3 Government Contribution

120. **MARENA** will provide USD 1,000,000 in cash and USD 98,550 in-kind. It will contribute to cover the use of facilities and logistics of local institutions for meetings on the strategy validation and dissemination, salaries of field extension technicians, technical salaries for participation in workshops and validation and dissemination meetings within the framework of activities planned. Moreover, it will cover facilities and salaries for technical staff from forest nurseries. Finally, it will aim specialized technical assistance for the design and implementation of the MRV system, including methodologies and protocols for collecting and processing GHG emissions information from livestock activity.

121. The **Ministry of Agriculture** will grant USD 156,460 in kind. This amount, under component 2, will contribute to cover the salaries and use of utility vehicles of extension technicians and coordinators. Moreover, The Ministry of Agriculture will cover salaries of animal reproduction laboratory technicians.

122. **DIGEGA**'s contribution rises to USD 95,100 in kind. DIGEGA will contribute, under Component 1, along with MARENA, IDIAF and FAO, to cover the use of facilities and logistics of local institutions for meetings on the strategy validation and dissemination. Moreover, DIGEGA will cover salaries of field extension technicians, technical salaries for participation in workshops and validation and dissemination meetings within the framework of activities planned. Under Component 3, DIGEGA will support in part, the collection of GHG emissions information at the level of pilot farms.

123. **IDIAF** will provide USD 146,160 in kind. This contribution will cover, under Component 2, the salaries for 2 researchers and 2 laboratory technicians. IDIAF's contribution will also support Component 1.

124. ***Banco Agricola*** will grant USD 5,142,857 in cash. This contribution will essentially support Component 2 in financing technical assistance to 500 producers to adopt and implement good practices and technologies for low-emission livestock. Furthermore, this will also provide financing for business plans and certification to access Payment for Environmental Services (PES) and incentives.

3.3.4 FAO Contribution

125. FAO will provide USD 60,000 in kind resources. In particular FAO's contribution will support, under Component 1, covering the use of facilities and logistics of local institutions, salaries of technicians, technical salaries for participation in workshops and validation and dissemination meetings. Under Component 4, this amount will add to salaries of technical committee technicians and board of directors to support the definition of the plan and project monitoring system. In addition, it will cover facilities for meetings to follow up on the project, and a communications consultant, who will support the implementation of the project communication strategy.

3.3.5 Inputs from other co-financiers

126. **CONALECHE** will provide USD 1,256,545 in cash and a USD 132,176 in kind contribution. Under Component 2, CONALECHE's in cash contribution, along with Banco Agricola, will support financing technical assistance to 500 producers to adopt and implement good practices and technologies on low-emission livestock. As for the in kind contribution, it will cover salaries and use of utility vehicles of extension technicians and coordinators located in CONALECHE's decentralized offices and central office.

127. **FEGACIBAO** will contribute to Component 2, with USD 53,560 in kind resources. FEGACIBAO will provide salaries for local organization managers and producer beneficiaries from 15 associations, in addition to 100,000 forest seedlings for farm reforestation.

3.3.6 Financial management and reporting on GEF resources

128. Financial management and reporting in relation to the GEF resources will be carried out in accordance with FAO's rules and procedures, and in accordance with the agreement between FAO and the GEF Trustee. On the basis of the activities foreseen in the budget and the project, FAO will undertake all operations for disbursements, procurement and contracting for the total amount of GEF resources.

129. **Financial records**. FAO shall maintain a separate account in United States dollars for the Project's GEF resources showing all income and expenditures. Expenditures incurred in a currency other than United States dollars shall be converted into United States dollars at the United Nations operational rate of exchange on the date of the transaction. FAO shall administer the Project in accordance with its regulations, rules and directives.

130. **Financial reports**. The BH shall prepare six-monthly project expenditure accounts and final accounts for the project, showing amount budgeted for the year, amount expended since the beginning of the year, and separately, the un-liquidated obligations as follows:

    1. Details of project expenditures on outcome-by-outcome basis, reported in line with Project Budget (Appendix 3 of this Project document), as at 30 June and 31 December each year.

2. Final accounts on completion of the Project on a component-by-component and outcome-by-outcome basis, reported in line with the Project Budget (Appendix 3 of this Project Document).

3. A final statement of account in line with FAO Oracle Project budget codes, reflecting actual final expenditures under the Project, when all obligations have been liquidated.

131. **Financial statements**: Within 30 working days of the end of each semester, the FAO Representation in Dominican Republic shall submit six-monthly statements of expenditure of GEF resources, to present to the Liaison Committees and the Project Steering Committee. The purpose of the financial statement is to list the expenditures incurred on the project on a six monthly basis compared to the budget, so as to monitor project progress and to reconcile outstanding advances during the six-month period. The financial statement shall contain information that will serve as the basis for a periodic revision of the budget.

132. The BH will submit the above financial reports for review and monitoring by the LTO and the FAO GEF Coordination Unit. Financial reports for submission to the donor (GEF) will be prepared in accordance with the provisions in the GEF Financial Procedures Agreement and submitted by the FAO Finance Division.

133. Responsibility for cost overruns: The BH shall utilize the GEF project funds in strict compliance with the Project Budget (Appendix 3) and the approved AWP/Bs. The BH can make variations provided that the total allocated for each budgeted project component is not exceeded and the reallocation of funds does not impact the achievement of any project output as per the project Results Framework (Appendix 1). At least once a year, the BH will submit a budget revision for approval of the LTO and the FAO/GEF Coordination Unit through FPMIS. Cost overruns shall be the sole responsibility of the BH.

Audit

134. The Project shall be subject to the internal and external auditing procedures provided for in FAO financial regulations, rules and directives and in keeping with the Financial Procedures Agreement between the GEF Trustee and FAO.

135. The audit regime at FAO consists of an external audit provided by the Auditor-General (or persons exercising an equivalent function) of a member nation appointed by the Governing Bodies of the Organization and reporting directly to them, and an internal audit function headed by the FAO Inspector-General who reports directly to the Director-General. This function operates as an integral part of the Organization under policies established by senior management, and furthermore has a reporting line to the governing bodies. Both functions are required under the Basic Texts of FAO which establish a framework for the terms of reference of each. Internal audits of imprest accounts, records, bank reconciliation and asset verification take place at FAO field and liaison offices on a cyclical basis.

3.4 PROCUREMENT

136. At the request of the Government of Dominican Republic, FAO will procure the equipment and services foreseen in the budget (Appendix 3) and the AWP/Bs, in accordance with FAO rules and procedures.

137. Careful procurement planning is necessary for securing goods, services and works in a timely manner, on a "Best Value for Money" basis, and in accordance with the Rules and Regulations of FAO. It requires analysis of needs and constraints, including forecast of the reasonable timeframe required to execute the procurement process. Procurement and delivery of inputs in technical cooperation projects follow FAO's rules and regulations for the procurement of supplies, equipment and services (i.e. Manual Sections 502 and 507). Manual Section 502: "Procurement of Goods, Works and Services" establishes the principles and procedures that apply to procurement of all goods, works and services on behalf of the Organization, in all offices and in all locations, with the exception of the procurement actions described in Appendix A – Procurement Not Governed by Manual Section 502. Manual Section 507 establishes the principles and rules that govern the use of Letters of Agreement (LoA) by FAO for the timely acquisition of services from eligible entities in a transparent and impartial manner, taking into consideration economy and efficiency to achieve an optimum combination of expected whole life costs and benefits ("Best Value for Money").

138. The FAO Representative will prepare an annual procurement plan for major items which will be the basis of requests for procurement actions during implementation. The plan will include a description of the goods, works, or services to be procured, estimated budget and source of funding, schedule of procurement activities and proposed method of procurement. In situations where exact information is not yet available, the procurement plan should at least contain reasonable projections that will be corrected as information becomes available.

139. Before commencing procurement, the GPC will update the project´s Procurement Plan (Appendix 5) for approval by the Project Steering Committee. This plan will be reviewed during the inception workshop and will be approved by the FAO Representative in Dominican Republic. The PC will update the Plan every six months and submit the plan to the FAO Representative in Dominican Republic for approval.

3.5 MONITORING AND REPORTING

140. The monitoring and evaluation of progress in achieving the results and objectives of the project will be based on targets and indicators in the Project Results Framework (Appendix 1 and descriptions in sub-section 1.3.2). Project monitoring and the evaluation activities are budgeted at USD 150,288 (see Table 3.4). Monitoring and evaluation activities will follow FAO and GEF policies and guidelines for monitoring and evaluation. The monitoring and evaluation system will also facilitate learning and replication of the project's results and lessons in relation to the integrated management of natural resources.

3.5.1 Oversight and monitoring responsibilities

141. The monitoring and evaluation roles and responsibilities specifically described in the Monitoring and Evaluation table (see Table 3.4 below) will be undertaken through: (i) continuous monitoring and supervision visits by the project coordination unit (PCU); (ii)

technical monitoring of the indicators to measure the global benefits by the PCU and the LTO in coordination with the partners; (iii) mid-term review and final evaluation (independent consultants and the FAO Evaluation Office); and (iv) monitoring and supervision missions (FAO).

142. At the beginning of the implementation of the GEF project, the PCU will establish a system to monitor the project's progress. Participatory mechanisms and methodologies to support the monitoring and evaluation of performance indicators and outputs will be developed. During the project inception workshop (see section 3.5.3 below), the tasks of monitoring and evaluation will include: (i) presentation and explanation (if needed) of the project's Results Framework with all project stakeholders; (ii) review of monitoring and evaluation indicators and their baselines; (iii) preparation of draft clauses that will be required for inclusion in consultant contracts, to ensure compliance with the monitoring and evaluation reporting functions (if applicable); and (iv) clarification of the division of monitoring and evaluation tasks among the different stakeholders in the project. The M&E Expert (see TORs in Appendix 6) will prepare a draft monitoring and evaluation matrix that will be discussed and agreed upon by all stakeholders during the inception workshop. The **M&E matrix** will be a management tool for the GPC, and the Project Partners to: i) six-monthly monitor the achievement of output indicators; ii) annually monitor the achievement of outcome indicators; iii) clearly define responsibilities and verification means; iv) select a method to process the indicators and data.

143. The **M&E Plan** will be prepared by the M&E Expert in the three first months of the PY1 and validated with the PSC. The M&E Plan will be based on the M&E Table 3.4 and the M&E Matrix and will include: i) the updated results framework, with clear indicators per year; ii) updated baseline, if needed, and selected tools for data collection (including sample definition); iii) narrative of the monitoring strategy, including roles and responsibilities for data collection and processing, reporting flows, monitoring matrix, and brief analysis of who, when and how will each indicator be measured; iv) environmental and social risk management plan. Responsibility of project activities may or may not coincide with data collection responsibility; iv) updated implementation arrangements, if needed; v) inclusion of the tracking tool indicators, data collection and monitoring strategy to be included in the mid-term review and final evaluation; vi) calendar of evaluation workshops, including self-evaluation techniques.

144. The day-to-day monitoring of the project's implementation will be the responsibility of the GPC and will be driven by the preparation and implementation of an AWP/B followed up through six-monthly PPRs. The preparation of the AWP/B and six-monthly PPRs will represent the product of a unified planning process between main project stakeholders. As tools for results-based-management (RBM), the AWP/B will identify the actions proposed for the coming project year and provide the necessary details on output and outcome targets to be achieved, and the PPRs will report on the monitoring of the implementation of actions and the achievement of output and outcome targets. Specific inputs to the AWP/B and the PPRs will be prepared based on participatory planning and progress review with all stakeholders and coordinated and facilitated through project planning and progress review workshops.These contributions will be consolidated by the GPC in the draft AWP/B and the PPRs.

145. An annual project progress review and planning meeting should be held with the participation of the project partners to finalize the AWP/B and the PPRs. Once finalized,

the AWP/B and the PPRs will be submitted to the FAO LTO for technical clearance, and to the Project Steering Committee for revision and approval. The AWP/B will be developed in a manner consistent with the Project Results Framework to ensure adequate fulfillment and monitoring of project outputs and outcomes.

146. Following the approval of the Project, the PY1 AWP/B will be adjusted (either reduced or expanded in time) to synchronize it with the annual reporting calendar. In subsequent years, the AWP/Bs will follow an annual preparation and reporting cycle as specified in section 3.5.3 below.

3.5.2 Indicators and sources of information

147. Please see Appendix 1 (Results Framework) for a description of indicators and sources of information.

3.5.3 Reporting schedule

148. Specific reports that will be prepared under the monitoring and evaluation program are: (i) Project inception report; (ii) Annual Work Plan and Budget (AWP/B); (iii) Project Progress Reports (PPRs); (iv) Annual Project Implementation Review (PIR); (v) Technical reports; (vi) Co-financing reports; and (vii) Terminal Report. In addition, the GEF[7] tracking tool for Climate Change Mitigation will be completed and will be used to compare progress with the baseline established during the preparation of the project.

149. **Project Inception Report.** After FAO internal approval of the project an inception workshop will be held. Immediately after the workshop, the GPC will prepare a project inception report in consultation with the FAO Representation in Dominican Republic and other project partners. The report will include a narrative on the institutional roles and responsibilities and coordinating action of project partners, progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. It will also include a detailed first year AWP/B and the M&E Matrix (see above). The draft inception report will be circulated to FAO, the PSC, the Liaison Committee and the federal entities for review and comments before its finalization, no later than three months after project start-up. The report will be cleared by the FAO BH, LTO and the FAO/GEF Coordination Unit. The BH will upload it in FPMIS.

150. **Annual Work Plan and Budget(s) (AWP/Bs)**. The GPC will present a draft AWP/B to the PSC no later than 10 December of each year. The AWP/B should include detailed activities to be implemented by project outcomes and outputs and divided into monthly timeframes and targets and milestone dates for output and outcome indicators to be achieved during the year. A detailed project budget for the activities to be implemented during the year should also be included together with all monitoring and supervision activities required during the year. The FAO Representation in Dominican Republic will circulate the draft AWP/B to the FAO Project Task Force and will consolidate and submit FAO comments. The AWP/B will be reviewed by the PSC and the PCU will incorporate any comments. The final AWP/B will be sent to the PSC for approval and to FAO for final no-objection. The BH will upload the AWP/Bs in FPMIS.

[7] *GEF CCM Tracking Tool.*

151. **Project Progress Reports (PPR).** The PPRs are used to identify constraints, problems or bottlenecks that impede timely implementation and take appropriate remedial action. PPRs will be prepared based on the systematic monitoring of output and outcome indicators identified in the Project Results Framework (Appendix 1), AWP/B and M&E Plan. Each semester the General Project Coordinator (GPC) will prepare a draft PPR, and will collect and consolidate any comments from the FAO PTF. The GPC will submit the final PPRs to the FAO Representative in Dominican Republic every six months, prior to 10 June (covering the period between January and June) and before 10 December (covering the period between July and December). The July-December report should be accompanied by the updated AWP/B for the following Project Year (PY) for review and no-objection by the FAO PTF. The Budget Holder has the responsibility to coordinate the preparation and finalization of the PPR, in consultation with the PMU, LTO and the FLO. After LTO, BH and FLO clearance, the FLO will ensure that project progress reports are uploaded in FPMIS in a timely manner.

152. **Annual Project Implementation Review (PIR)**. The GPC, under the supervision of the LTO and BH and in coordination with the national project partners, will prepare a draft annual PIR report[8] covering the period July (the previous year) through June (current year) no later than July 1st every year. The LTO will finalize the PIR and will submit it to the FAO-GEF Coordination Unit for review by July 10th. The FAO-GEF Coordination Unit, the LTO, and the BH will discuss the PIR and the ratings[9]. The LTO is responsible for conducting the final review and providing the technical clearance to the PIR(s). The LTO will submit the final version of the PIR to the FAO-GEF Coordination Unit for final approval. The FAO-GEF Coordination Unit will then submit the PIR(s) to the GEF Secretariat and the GEF Independent Evaluation Office as part of the Annual Monitoring Review of the FAO-GEF portfolio. The PIR will be uploaded to FPMIS by the FAO-GEF Coordination Unit.

153. **Technical reports**. The technical reports will be prepared as part of the project outputs and will document and disseminate lessons learned. Drafts of all technical reports must be submitted by the Project Coordinator to the PSC and FAO Representation in Dominican Republic, which in turn will be shared with the LTO for review and approval and to the FAO-GEF Coordination Unit for information and comments before finalization and publication. Copies of the technical reports will be distributed to the Liaison Committee and the PSC and other project stakeholders, as appropriate. These reports will be uploaded in FAO FPMIS by the BH.

154. **Co-financing reports**. The GPC will be responsible for collecting the required information and reporting on in-kind and cash co-financing provided by all the project cofinanciers and eventual other new partners not foreseen in the Project Document. Every year, the GPC will submit the report to the FAO Representation in Dominican Republic before July 10th covering the period July (the previous year) through June (current year). This information will be used in the PIRs.

155. **GEF Climate Change Mitigation Tracking Tool**. In compliance with GEF policies and procedures, tracking tools on the climate change mitigation (CCM-2) focal area should be

[8] Prior to the preparation of the PIR report, the FAO-GEF Coordination Unit will provide the updated format as every year some new requirements may come from the GEF.

[9] The GPC, the BH, the LTO and the FAO/GEF Coordination Unit should assign ratings to the PIR every year. The ratings can or cannot coincide among the project managers.

sent to the GEF Secretariat in three stages: (i) with the project approval document by the GEF Executive Director; (ii) with the mid-term review of the project; and (iii) with the final evaluation of the project.

156. **Final Report**. Within two months prior to the project's completion date, the Project Coordinator will submit to the PSC and FAO Representation in Dominican Republic, a draft final report. The main purpose of the final report is to give guidance to authorities (ministerial or senior government level) on the policy decisions required for the follow-up of the Project, and to provide the donor with information on how the funds were utilized. Therefore, the terminal report is a concise account of the main **outputs, outcomes, conclusions and recommendations** of the Project, without unnecessary background, narrative or technical details. The target readership consists of persons who are not necessarily technical specialists but who need to understand the policy implications of technical findings and needs for ensuring sustainability of project results. Work is assessed, lessons learned are summarized, and recommendations are expressed in terms of their application to the integrated landscape management in the context of the development priorities at national and departmental levels, as well as in practical execution terms. This report will specifically include the findings of the final evaluation as described in section 3.6 below. A project evaluation meeting will be held to discuss the draft final report with the PSC and the Project Liaison Committee before completion by the Coordinator and approval by the BH, LTO, and FAO-GEF Coordination Unit.

3.5.4 Monitoring and Evaluation summary

157. Table 3.4 summarizes the main monitoring and evaluation reports, parties responsible for their publication and time frames.

Table 3.4. Summary of main monitoring and evaluation activities (*example*)

M&E Activity	Responsible parties	Time frame/ Periodicity	Budget
Inception workshop	General Project Coordinator (GPC) FAO Dominican Republic (FAODO) (Support from Lead Technical Officer -LTO and FAO-GEF Coordination Unit)	Within two months of project start up	USD 2,500
Project Inception report	GPC, M&E and FAO Dominican Republic, con with clearance by LTO, and FAOR	Immediately after the workshop	

Project level impact monitoring	GPC, project partners, local organizations	Continuous	USD 37,805 (5 % GCP+ 40% M&E and Coord.Assist)
Field level impact monitoring	GPC and Component Coordinators	Continuous	USD 16,768 (3 % GPC, Component Coordinators, 3% Technicians, 5% Farm-level monitoring system)
Supervision visits and rating of progress in PPRs and PIRs	GPC, FAO Sub-regional Office for Mesoamerica (SLM) and LTO, FAO-GEF Coordination Unit may participate in the visits if needed	Annual, or as needed	FAO visits will be borne by GEF agency fees USD 7,681 (visits shall be borne by the project's travel budget)
Project Progress Reports (PPRs)	GPC, with stakeholder contributions and other participating institutions	Six-monthly	USD 7,060 (3.5% of GPC & Assistant Coordinator)
Project Implementation Review (PIR)	Drafted by the GPC, with the supervision of the LTO and FAODO. Approved and submitted to GEF by the FAO-GEF Coordination Unit	Annual	FAO staff time financed though GEF agency fees. PCU time covered by the project budget.
Co-financing reports	GPC with input from other co-financiers	Annual	USD 1,925 (1% of the Coordinator's time and Fin.Manag.)
Technical reports	GPC, FAO (LTO, FAODO)	As needed	
Mid-term review	FAODO, External consultant, in consultation with the project team, including the FAO-GEF	Midway through the project implementation period	USD 15,000 for external consultancy

	Coordination Unit and others		
Mid-term workshop	CGP, FAODO (Support from LTO)	Immediately after Mid-term review	USD 2,500
Final Evaluation (FE)	External consultant, FAO Office of Evaluation (OED) in consultation with the project team, including the FAO-GEF Coordination Unit and others	At the end of the project (to start at least 6 months before the completion date)	USD 50,000 for external consultancy. Staff time and travel costs will be financed by GEF agency fees.
Terminal Report	GPC; FAO (FAODO, LTO, FAO TCR Reporting Unit)	Two months prior to the end of the project	USD 6,550
Terminal Workshop	GPC, FAO Dominican Republic (Support from LTO)	Immediately after the Final Evaluation	USD 2,500
Total M&E budget			**150,288**

3.6 EVALUATION PROVISIONS

158. At the end of the first 18 months of the project, the BH will arrange a **Mid-Term Review** (MTR) in consultation with the PSC, the PCU, the LTO and the FAO-GEF Coordination Unit. The MTR will be conducted to review progress and effectiveness of implementation in terms of achieving project objective, outcomes and outputs. The MTR will allow mid-course corrective actions, if needed. The MTR will provide a systematic analysis of the information provided under the M&E Plan (see above) with emphasis on the progress in the achievement of expected outcome and output targets against budget expenditures. The MTR will refer to the Project Budget (see Appendix 3) and the approved AWP/Bs for PY1 and PY2. The MTR will contribute to highlight replicable good practices and main problems faced during project implementation and will suggest mitigation actions to be discussed by the PSC, the LTO and FAO-GEF Coordination Unit.

159. An independent Final Evaluation (FE) will be carried out six months prior to the terminal report meeting. The FE will aim to identify the project impacts, sustainability of project outcomes and the degree of achievement of long-term results. The FE will also have the purpose of indicating future actions needed to expand on the existing Project in

subsequent phases, mainstream and up-scale its products and practices, and disseminate information to management authorities and institutions with responsibilities in food security, conservation and sustainable use of natural resources, small-scale farmer agricultural production and ecosystem conservation to assure continuity of the processes initiated by the Project. Both the MTR and FE will pay special attention to outcome indicators and will be aligned with the GEF Tracking tool (Climate Change Mitigation focal area).

3.7 COMUNICATION AND VISIBILITY

160. A communication strategy will be developed and implemented to ensure the fluid information exchange with producers, extension agents and institutional partners, in support of the activities of Component 1 (CLSM strategy), Component 2 (implementation of strategies at farm level, training, field visits), and Component 3 (MRV system). The communication strategy will work cross-sectionally to ensure that information on project results and lessons learned are disseminated to a broad audience through appropriate communication channels. Outputs and activities will include: information system for good CSLM practices, preparation of communication materials such as posters and brochures, presence in local media (TV, AM radio, newspapers), set-up and maintenance of a Project website and dedicated accounts of social networks throughout the project duration. FAO will provide a part-time Communications Specialist to support the implementation of the project communication and dissemination strategy.

161. The grievance mechanism established for the project will also be widely disseminated among stakeholders to ensure they are aware about the possibility of raising concerns and how to do it.

162. At the regional and global levels, the project will support the publication of journal articles on project outcome, particularly concerning advanced on-farm GHG monitoring and implementation of low-emission livestock strategies. Project results will be presented at international conferences related to climate-smart agriculture. In addition, the project will facilitate the participation of project staff in events of international research networks and professionals. A series of webinars on low-emission livestock will be carried out through a regional association of networks to connect with colleagues from other countries in the region. FAO, through its Livestock Unit, will work to disseminate project results and lessons through Global Livestock Environmental Assessment Model (GLEAM), Livestock Environmental Assessment and Performance Partnership (LEAP), and other initiatives related to Climate-smart Agriculture (CSA). Worldwide dissemination will also be ensured through cooperation with the Climate and Clean Air Coalition.

SECTION 4 – SUSTAINABILITY OF RESULTS

4.1 SOCIAL SUSTAINABILITY

164. The project will intervene in a selected pilot region, which has been chosen given the importance of family farms in maintaining local livelihoods. At farm level, a participatory approach will be applied by including the capacities, goals and aspirations of producers (including women) and their families in the design of CSLM strategies. At the territorial level, the project will support social cohesion by strengthening local producer organizations. These provide important forums for mutual learning and the articulation of local farmers' problems and concerns. Producer organizations will also facilitate technical and financial assistance, and dialogue with public sector institutions at higher levels. At the national level, social sustainability will be strengthened by including the concerns of producers in the low-emission livestock national strategy. This will be ensured through the participation of farmers' associations in the development and validation strategy, and through specific measures to increase capacities.

Gender Equality and Gender Mainstreaming

165. The Project will strengthen the integration of producers in the agriculture sector associations and directions. A special focus will be put on women's empowerment, both in producer associations and public institutions. Women-led organizations will be prioritized when selecting local partners.

166. This Project proposal will ensure gender equality in all project activities to be implemented in the Yuna River basin. This means giving the same opportunities to men and women to develop their capacities, reach their productive potential, and identify effective means to cope with shortage periods due to extreme weather conditions. Given that women find greater barriers to their economic development (in particular, due to less access to land and/or production assets, credit, employment, training opportunities, etc.), this Project will implement actions to facilitate women's participation in training, income generation activities, and job creation, as follows:

- A study will be carried out on the roles of women as agents of change for development of the livestock sector low-emissions strategy, in line with the INDC;
- Prioritize the initiatives of women's groups and associations, and direct women to leadership positions as much as possible;
- Identify and include opportunities to channel the economic empowerment of women, especially the most vulnerable, within the value chains in support of business plans;
- Prioritize decent permanent employment alternatives, and ensure that interested young women are included in production support initiatives;
- Facilitate training and income generation activities to improve nutritional status and food security;
- Carry out an integration process for young family farmers, according to their conditions and interests, promoting their improvement in courses and / or careers related to the sector, as well as their integration to national and regional initiatives, such as the Culture of Water Program from the National Institute of Hydraulic Resources (INDRHI).

- Under Component 2, Output 2.1.2, the project will launch a strategy to implement technologies at farm level that develop sustainable low-emission livestock with a gender approach, incorporating financial and market incentives. At least 10% of the beneficiary farms will be led by women;
- Likewise, Output 2.2.1 will develop an extension program with a gender focus that will promote and implement the low-emission livestock production strategy. At least 10% of the participants will be women.

167. Project activities coincide with the gender approach of the GEF-6 Climate Change Mitigation Focal Area. The Project recognizes gender differences and will determine the key actions to promote the role of women in project implementation. This has been reflected in the use of gender analysis as part of the socioeconomic assessment during project preparation, as well as the use of indicators disaggregated by gender when relevant. Lately, the Project offers an opportunity to evaluate the role of women in the deployment of low GHG technologies and options for climate change mitigation in the livestock sector. To ensure the follow-up and execution of the proposed actions for gender issues, a Gender Specialist will be contracted to supporting the design of the sustainable livestock financial strategy, selecting beneficiaries for implementation of good practices and training, and designing business plans.

4.2 ENVIRONMENTAL SUSTAINABILITY

168. The Project intervention strategy will focus on improving the environmental performance of small and medium-sized farmers who manage an important part of the country's fragile pastures. Stopping and reversing land degradation in this area will not only generate the climate change global environmental benefits and improve soil resources, but will also have a positive impact on other environmental goods and services, such as biodiversity conservation, landscape integrity and water regulation.

4.3 FINANCIAL AND ECONOMIC SUSTAINABILITY

169. The project adopts a multilevel approach to capacity building in order to ensure the financial and economic sustainability of the interventions. The livestock strategies are developed according to the real economic situation of each farm, as well as the goals and aspirations of the producers and their families. It is very probable that the time invested by the producer will be widely compensated by the increase in income. Any additional investment costs identified in the farm strategy, if applicable, will be covered by the project (e.g. Improving water availability or conducting reforestation activities). Most of the technological options supported by the project require little investment by producers. In this way, the project will work with producers to overcome the widespread skepticism about possible improvements in production systems.

170. At the national level, the project will provide public and private sector institutions with options to improve the economic opportunities linked to climate-smart livestock production. In particular, PPPs and the MRV system will allow institutions to identify and access financing sources to continue implementing the CLSM national strategy, which will, in turn, boost the economic performance of low-emission livestock models.

4.4 SUSTAINABILITY OF CAPACITY DEVELOPMENT

171. The project capacity development strategy is addressed to all key stakeholders at the local, regional and national levels. At the local level, sustainability will be guaranteed through the application of the co-innovation approach. Extension officials and producers will together develop a farm-based strategy, by assessing the productive system of each farm, and the family farmers' goals and aspirations. Extension agent will assume the role of facilitators instead of simply being technical advisors. The co-management approach has proven to be very effective in unleashing long-term improvements. It will be reinforced by farmer-to-farmer learning, dedicated workshops and field days, which have also proven to be very effective.

172. At the regional and national levels, the capacity development sustainability will be achieved by systematically including farmers' associations in project activities. These associations have great potential to spread the Project vision. At the national level, the capacities of the relevant actors will be strengthened to implement the national low-emission livestock strategy through a capacity-building program carefully adapted to the needs and situation of each institution. In particular, the capacities will be installed in the key units of the MARENA that have the mandate to implement programs for sustainable livestock development and climate change.

4.5 APPROPRIATENESS OF TECHNOLOGIES INTRODUCED and COST/EFFECTIVENESS

Technologies

173. FAO's experience has demonstrated that CSLM technologies and practices can be very profitable. Most CLSM options require minor or no investments from farmers. On the other hand, productivity, net farm income, and farm labor efficiency can increase if CSLM practices are adopted. This win-win solution has made the CLSM approach very attractive to family farmers that have learned about it. The CSLM approach supports producers in carefully analysing which options could better adapt to their farm contexts and their own capacities, including a gender perspective. Many of these practices have been successfully applied in previous FAO projects in Latin America, Asia and Africa. During project preparation, CLSM technologies and practices have been adapted to the context of family farming in the Dominican Republic. Project cost-efficient in the national context has been duly analysed during project design. Field project costs are similar to previous FAO projects in the livestock sector.

4.6 INNOVATIVENESS, REPLICATION and SCALE-UP

Innovativeness

174. Climate-smart livestock is an innovative approach that has been promoted by FAO and other organizations in the last five years. The GEF and FAO partnership has already cooperated in this regard, and two other climate-smart livestock projects have been approved in the Latin America region (Uruguay and Ecuador). FAO has informed the Government of DR on these FAO-GEF initiatives. Consequently, this is the first project in the Dominican Republic that explicitly focuses on the potential of climate change mitigation in the livestock sector. The project will make an important contribution to help the country achieve the ambitious goal of curbing specific GHG emissions from livestock.

Given the trends in global meat consumption, it is a project that is of global relevance. The full CSLM approach is detailed in Section 1 of the FAO GEF Project Document.

Replication and up-scaling

175. The project has great potential for replication and scaling up. In the Dominican Republic, the area of pastures managed by cattle producers amounts to 724,123 hectares (MARENA, 2017). The Project will intervene directly in 3,000 hectares. The Project will have an indirect impact on additional 2,000 hectares - through a close alignment with other ongoing initiatives, as well as a close collaboration with farmers' associations.

176. Further expansion will be sought through a series of complementary measures. One possibility is to seek funding related to climate change mitigation through the mechanism of National Appropriate Mitigation Actions (NAMA) of the UNFCCC. The Project will work in 500 farms as the spearhead of a much more ambitious strategy to produce more meat and more milk without an emission increase. Technical change and net income increase will stimulate farmers' adoption of CLSM practices and technologies in the wider landscape. Targeted farms are expected to become more sustainable due to this dual-purpose livestock approach (i.e. GHG emission reduction and income increase). The spill-over effect is expected to be high.

177. The national CSLM strategy to be developed within the framework of this initiative will be integrating public and private actors of national relevance (government institutions, industries, associations and federations of producers, academia, research centers, and international cooperation agencies), in order to facilitate the transfer of lessons learned that result from this pilot experience in the Yuna basin.

178. The Project will strengthen the capacities of public and private institutions, especially DIGEGA's Extension Service, in relation to the implementation of good agricultural practices (GAP) and technologies for climate-smart/low emission livestock management, articulated with the platform for the management and transfer of knowledge. Project lessons learned will be multiplied among extension agents at the national level, thus guaranteeing specialized technical assistance in climate-smart/ low emissions livestock.

179. CONALECHE and Banco Agrícola as financial entities with national scope, will offer credit to producers at a national level that require financing to implement GAP and technologies for climate-smart livestock management.

180. The project will be linked to other initiatives that are ongoing, being formulated or under pipeline, national in scope, such as livestock NAMA, and other priority country watersheds, like the "Sustainable Watershed Management Program"-funded by the Word Bank and the Ministry of Economy, Planning and Development (MEPyD), which would be directly linked to the actions and results generated from this intervention.

APPENDICES

APPENDIX 1: RESULTS FRAMEWORK

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Project Objective: To mitigate climate change and to restore degraded lands through the promotion of climate-smart practices in the livestock sector, whilst focusing on family farming.							
Component 1: Institutional and financial strengthening to support a low-emissions livestock development pathway							
Outcome 1.1 The national institutional capacity strengthened to support the implementation of a climate-smart livestock management strategy.	**Indicator 9 (CCM):** Degree of support for low GHG development in the policy planning and regulatory framework	2*		6*	Analysis of the institutions' planning documents	Willingness to participate of the institutions involved	Project Coordination Unit
	Indicator 11 (CCM): Strengthening of Financial and Market Mechanisms.	1***		4***	Analysis of planning documents and execution reports of financial mechanisms	Availability of investment funds and adequate institutional capacities	Project Coordination Unit
Output 1.1.1: A climate-smart livestock management (CSLM) strategy, designed, agreed and disseminated with public and private	National strategy document taking a gender perspective	0	Draft of the strategy document	Strategy document submitted for government consideration	Analysis of documents and reports on the strategy	Readiness of the institutions to collaborate in the elaboration of the strategy	Project Coordination Unit

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
actors in the livestock sector of the Yuna Watershed.							
Output 1.1.2: Public-Private partnerships designed to: i) pilot incentives, financial and market instruments, ii) enhance watershed management; and iii) implement the CSLM strategy.	Number of public-private partnerships established	0	1 Public-Private partnership established	2 Public-Private partnership is established	Analysis of contracts and formal agreements	Disposition of the institutions to participate in alliances	Project Coordination Unit
Output 1.1.3: National and local public officials trained to effectively support the implementation of the CLSM strategy with a gender perspective	Number of national organizations and local institutions with strengthened capacities.	0	3 National Organizations and 3 Local Institutions	6 National Organizations and 6 Local Institutions	Reports of training events	Disposition of the institutions to participate in the trainings	Project Coordination Unit
Output 1.1.4: A national CSLM strategy based on the lessons learned from the pilot intervention in the Yuna river, defined and agreed among key stakeholders.				National CSLM strategy document defined and agreed among key stakeholders			

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Outcome 1.2: Knowledge shared and dissemination of lessons learned to support the CSLM strategy dissemination.	Number of visits to the platform	0		100 visits per month	Statistics on the use of the platform	Capabilities and willingness of institutions to maintain the platform	Project Coordination Unit
Output 1.2.1: An operational technical platform for the livestock sector, which includes information on monitoring, evaluation, dissemination of experiences and lessons learned.	Number of documented experiences in the platform Number of visits to the platform	0	5 documented experiences	10 documented experiences	Analysis of publications uploaded to the platform	Availability of good practices, availability of experts for documentation	Project Coordination Unit
Component 2: Climate-smart livestock management in the field: Technology Transfer, Deployment and Validation of Practices.							
Outcome 2.1 Farm-level technologies have been implemented, promoting sustainable and low-emission livestock production	**Indicator 1 (CCM):** t CO2e directly and indirectly reduced or avoided			47,903 t CO2 eq/year	Monitoring and evaluation system; Reports of the emission monitoring system on farms		Project Coordination Unit
	Indicator 4 (CCM): Deployment of low GHG technologies and practices		1500 ha	3000 ha		Capacity and willingness of producers to adopt low	

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Output 2.1.1: A CSLM strategy with a gender sensitive approach tested and implemented at farm level, incorporating mechanisms of financial incentives and market access.	Number of producers that incorporate low emission-sustainable livestock technologies and practices		1500 hectares, 250 family farmers in the Yuna Basin including at least 25 women	3000 hectares, 500 family farmers in the Yuna Basin including at least 50 women	Analysis of wages	emissions practices, absence of extreme weather events, stable economic environment	Project Coordination Unit
Output 2.1.2: A capacity development program for dairy and beef producers to support the adoption of CSLM technologies and good practices at the farm level.	Number of trained producers (women and men) on the use of technologies and Good Agricultural Practices (GAP) for low emission livestock in 20 producer associations		1500 hectares, 39,000 animals, 350 family farmers, including at least 35 women	3000 hectares, 77,000 animals, 700 family farmers, including at least 70 women	Reports of training events		Project Coordination Unit
Outcome 2.2: Field technical capacities have been improved to disseminate CSLM and low- emission production models in targeted areas.	Indicator: Number of extension workers (men and women) trained in the application of low emission practices			30 extension officers (25 men and 5 women) trained in the application of low emission practices			

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Output 2.2.1 An extension program with a gender sensitive approach strengthened to support the promotion and implementation of the CSLM strategy and low-emission livestock models.	Number of extension workers (men and women) trained in the application of low emission practices		15 trained extension workers, including at least 3 women	30 trained extension workers, including at least 5 women	Reports of training events	Willingness of qualified extension agents	Project Coordination Unit
Output 2.2.2 Business Plans with a gender perspective, aimed at public programs or development/commercial banks, and certification schemes, to implement the CSLM Strategy.	Number of business plans with a gender perspective or certifications of producers subject to the bank or the competent authority		At least 5 business plans or certifications, including 1 for women	At least 10 business plans or certifications, including 2 for women	Analysis of business plans	Capacities and willingness of producers to adapt practices of low emissions, absence of extreme weather events, stable economic environment	Project Coordination Unit
Component 3: Monitoring, Reporting and Verification of the Livestock sector							
Outcome 3.1: GHG emissions from the livestock sector integrated into the Monitoring, Reporting and Verification National System	**Indicator 10 (CCM)** An MRV system for the livestock sector emissions installed and reporting verified data	1**		7**	Analysis of MRV system reports	Capacities of the institutions to install and maintain the MRV system	Project Coordination Unit

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Output 3.1.1: An installed MRV system for measuring emissions and reporting data for the livestock sector	Number of MRV system reports	0	1 Report	3 Reports	Analysis of MRV system reports	Capacities of the institutions to install and maintain the MRV system	Project Coordination Unit
Output 3.1.2: Farm-level monitoring system to monitor GHG emissions, strategies, financing and land degradation.	Number of farms taking part in the monitoring system		30 farms	30 farms	Analysis of MRV system reports	Capacities of the institutions to install and maintain the system; willingness of producers to collaborate	Project Coordination Unit
Component 4 : Monitoring, Evaluation and Knowledge Management							
Outcome 4.1: Project implementation based on RBM and lessons learned/good practices documented and disseminated	Number of the M&E system reports; number of regular meetings of the executive committee and advisory committee		TBD	TBD	Analysis of the M&E system reports		Project Coordination Unit
Output 4.1.1 : Project Monitoring & Evaluation Plan and system, in place	Number of project progress reports		TBD	TBD	Analysis of the M&E system reports		Project Coordination Unit

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Output 4.1.2 Project Mid-term review and Final Evaluation.	Number of evaluations carried out		Mid-term review	Final evaluation	Evaluation reports		Project Coordination Unit
Output 4.1.3 Dissemination and communication products	Number and copies of dissemination products distributed (brochures)		TBD	TBD	Reports on production and dissemination		Project Coordination Unit
Output 4.1.4 A Communication Strategy implemented, including project website	Number of appearance in local media; number of visitors to the website and social media accounts		TBD	TBD	Reports on the implementation of the communication strategy		Project Coordination Unit

*** Indicator 9 (CCM): Degree of support for low GHG development in the policy planning and regulatory framework.**

The degree of support for low GHG development in the policy, planning and regulatory frameworks will act as a proxy reflecting the strength and contribution of the enabling environment in facilitating accelerated low-GHG development in the country. It will reflect a combined assessment of two aspects of this outcome that results from GEF support: first, the strengthened planning and policy framework (mandates, priority actions, GHG reduction targets etc. defined); and second, the strengthened implementation capacity (skills/staff/resources available, budgeted programming in place), to mitigate GHG.

Guidance for Ratings (1-10):

1. No policy or strategy for climate change is in place or major development policies/strategies have marginal emphasis on climate change
2. Requisite assessments/knowledge products conducted to support sound climate change mitigation enabling policy framework
3. Policy/strategy proposed and consultations ongoing (quality is good and addresses the main climate change mitigation issues related to the relevant sectors)
4. Strong policy/strategy adopted while implementation (or capacity) is weak/in progress
5. Strong policy/strategy adopted and institutional capacity for implementing key policy directives strengthened with adequate budget allocation
6. Sub-sector and institutional plans reflect key policy targets and priority actions of main development/climate plans and capacity for implementation at sub-sector is strengthened
7. Regulatory framework developed to implement the policy/strategy (relevant regulations adopted, routine screenings conducted)
8. Strong policy and regulatory frameworks designed with financial/market/incentive based mechanisms in multiple sectors of the economy
9. Strong institutional capacity to foster innovative mechanisms, and remove constraints for low GHG development in more than one sector – GHG targets are met in more than one sector
10. Enabling policy/regulatory and planning frameworks successfully promote economy-wide GHG mitigation and low GHG development (targets enforced, market mechanism functioning well)

Answers to a number of questions may contribute to the discussion in arriving at the rating, including:

(a) Do national/sector/agency legislative policies expressly address climate change and promote mitigation, in particular?

(b) Is there a GHG inventory? Are information, studies and assessments addressing climate change, relevant to the project context available?

(c) Is there a mitigation target coded in any policy?

(d) Is there routine screening for climate change risk and mitigation potential in planning processes?
(e) Do national/sector/agency plans identify specific and priority measures for mitigation? Have responsibility/resources been assigned for implementing these measures?
(f) What economic/financial/fiscal incentives and disincentives are there? Which economic behaviors/actions or technologies do they address?
(g) Are there regulations directed towards or contribute to climate change mitigation? Which sectors/agencies do they involve?
(h) Is there adequate implementation capacity? Is there necessary climate change and mitigation related expertise available in the key institutions?
(i) Do the policy/regulatory frameworks promote market/financial mechanisms to reduce GHG emissions?

**** Indicador CCM 10 (MRV System)**

Guidance for Ratings (1-10):

1. Very little measurement is done, reporting is partial and irregular and verification is not there
2. Measurement systems are in place but data is of poor quality and/or methodologies are not very robust; reporting is done only on request or to limited audience or partially; verification is not there
3. Measurement systems are in place for a few activities, improved data quality and methodologies, but not cost or time efficient; wider access to reporting is still limited and information is partial; verification is rudimentary/non-standardized
4. Measurement systems are strong in a limited set of activities however, analyses still needs improvement; periodic monitoring and reporting although not yet cost/time efficient; verification is only upon specific request and limited
5. Measurement systems are strong for a limited set of activities and periodically report on key GHG related indicators i.e. mainstreamed into the activity implementation; reporting is improved through few pathways but limited audience and formats; verification limited
6. Measurement systems are strong and cover a greater percentage of activities – feedback loops exist even if they are not fully functioning; reporting is available through multiple pathways and formats but may not be complete/transparent; verification is done through standard methodologies but only partially (i.e. not all data is verifiable)
7. Measurement regarding GHG is broadly done (with widely acceptable methodologies), need for more sophisticated analyses to improve policy; Reporting is periodic with improvements in transparency; verification is done through more sophisticated methods even if partially

8. Strong standardized measurements processes established for key indicators and mainstreamed into institutional policy implementation; reporting is widely available in multiple formats; verification is done for a larger set of information
9. Strong Monitoring and Reporting systems – robust methodologies, cost effective and efficient, periodic; verification done to a significant degree
10. Strong MRV systems that provide quality GHG related information in a transparent, accurate and accessible to a wide audience, with feedback of information from MRV flowing into policy design and implementation

*** I**ndicator 11 CCM (Strength of Financial and Market Mechanisms)**

The degree of strength of financial and market mechanisms for low GHG development/mitigation, qualitative rating may act as a proxy to reflect the status and improvements in the availability (access), operational strength (stability) and quality, and degree of uptake across sectors of innovative financial and performance/incentive based mechanisms that incorporate and promote low GHG development or support mitigation of GHG emissions. These include credit lines and investments where GHG emissions risks have been incorporated or promote low GHG development, risk guarantees, revolving funds, and performance/incentive based market mechanisms and so on.

Guidance for Ratings (1-10):

1. No such facilities are in place
2. Assessments and technical studies for financial/performance-based mechanisms have been completed
3. Strong proposal defined with buy-in from stakeholders confirmed
4. Resources and capacity for financial/incentive mechanisms secured
5. Financial/performance based mechanism in operation with evidence of stability
6. Financial/performance based mechanism successfully demonstrated
7. Policy and enabling framework addresses any constraints to wider uptake of such mechanisms
8. Incidence of replication and scale up within and across sectors
9. Substantive replication and scale up of financial/performance based mechanisms (significant percent of sector investment flows through such mechanisms or significant volume of such investments)
10. Substantial GHG emission reduction/mitigation in associated sectors realized through the mechanismi

APPENDIX 2: WORK PLAN

Outcomes	Activities	Responsable	Year 1				Year 2				Year 3			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1: Institutional and financial strengthening to support a low-emissions livestock development pathway														
Outcome 1.1: The national institutional capacity strengthened to support the implementation of a climate-smart livestock management strategy.														
Output 1.1.1: A climate-smart livestock management (CSLM) strategy, designed, agreed and disseminated with public and private actors in the livestock sector of the Yuna Watershed.	Initial outline of the working methodology for the preparation of the strategy document and the working groups, (1) GGCI practices for GEI mitigation and restoration of degraded pastures, (2) Ecosystemic services, resilience, and other co-benefits; (3) market insertion, certification and value chains, (4) communication and dissemination	Strategy Coordinator												
	Validation workshop for the working methodology.	Strategy Coordinator												
	Preparation of inputs to guide the work of the groups	Technical experts												
	Working sessions of the groups	Strategy Coordinator												

	Prepare elements of the strategy based on group work results	Strategy Coordinator														
	Prepare a draft of the strategy based on the components	Strategy Coordinator														
	Validation workshop of the strategy document	Strategy Coordinator														
	Validation and dissemination of the strategy at regional and local level	Strategy Coordinator														
	Finalization of the strategy document and presentation to the executive committee	Strategy Coordinator														
	Presentation of the strategy document to the Government	FAO														
Output 1.1.2: Public-Private partnerships designed to: i) pilot incentives, financial and market instruments, ii) enhance watershed management; and iii) implement the CSLM strategy.	Analysis of existing financial instruments with a gender perspective to promote climate-smart livestock	Financial Systems Expert														
	Development of a financial mechanism to support the implementation of good practices (component 2)	Financial Systems Expert														
	Articulation of actors to promote public-private partnerships to improve access to financing for producers	Strategy Coordinator														

	Formulation of agreements for public-private partnerships for implementation of financial instruments and application of the strategy.	Financial Systems Expert														
Output 1.1.3: National and local public officials trained to effectively support the implementation of the CLSM strategy with a gender perspective	Institutional workshops to level concepts among organizations about the strategy.	Strategy Coordinator														
	Training workshops with needs assessment to integrate the GGCI strategy into institutional policies and programs	Strategy Coordinator														
	Training workshops to identify opportunities and develop an institutional action plan to integrate the GGCI strategy into policies and programs	Strategy Coordinator														
	Program of exchange visits to other countries with climate-smart livestock experiences: Ecuador, Uruguay	Strategy Coordinator														
Output 1.1.4: A national CSLM strategy based on the lessons learned from the pilot intervention in the Yuna river, defined and agreed among key stakeholders.	Validation workshop for the working methodology.	Strategy Coordinator														
	Validation workshop of the strategy document	Strategy Coordinator														
Outcome 1.2: Knowledge shared and dissemination of lessons learned to support the CSLM strategy dissemination.																

Output 1.2.1: An operational technical platform for the livestock sector, which includes information on monitoring, evaluation, dissemination of experiences and lessons learned.	Analysis and documentation of good climate-smart livestock practices	Specialists in extension and communication														
	Design and implementation of the technical platform	IT Specialist														
	Prepare inter-institutional protocol to ensure the operational capacity, operation, and maintenance of the system.	Strategy Coordinator														
	Workshops for dissemination and validation of the platform in the regions	Specialists in extension and communication														
	Trainings of technicians in maintenance and operation of the system	IT Specialist														
Component 2: Climate-smart livestock management in the field: Technology Transfer, Deployment and Validation of Practices																
Outcome 2.1: Farm-level technologies have been implemented, promoting sustainable and low-emission livestock production																
Output 2.1.1: A CSLM strategy with a gender approach tested and implemented at farm level, incorporating mechanisms of financial incentives and market access.	Validate criteria and selection process Ministry of Agriculture, CONALECHE and producer organizations	Component 2 Coordinator														
	Selection of the farms from the process of articulation between the Ministry of	Component 2 Coordinator														

	Agriculture, CONALECHE and producer organizations														
	Selection of extension technicians	Component 2 Coordinator													
	Trainings of the technicians who work with monitoring and verification in the farms	Technical specialists in Animal Production, Participatory Work, Ecosystem Services, Veterinarians													
	Implementation of the participatory process of implementation of practices at the farm level: 1. Training and diagnosis, 2. Formulation of property plan, 3. Implementation of the property plan	Technical specialists													
	Annual planning and evaluation workshops	Technical specialists													

Output 2.1.2: A capacity development program developed for dairy and beef producers to support the adoption of CSLM technologies and good practices at the farm level.	Training workshops for rural producers and workers with a gender profile (along with annual planning workshops)	Technical specialists in Animal Production, Participatory Work, Ecosystem Services, Veterinarians													
	Field days on innovative farms	Technical specialists													
Outcome 2.2: Field technical capacities have been improved to disseminate CSLM and low- emission production models in targeted areas.															
Output 2.2.1: An extension program with a gender sensitive approach strengthened to support the promotion and implementation of the CSLM strategy and low-emission livestock models.	Design of the extension plan	Specialist in Extension													
	Training courses in climate-smart livestock practices for technicians from different institutions	Technical specialists in Animal Production, Participatory Work, Ecosystem													

		Services, Veterinarians													
Output 2.2.2: Business Plans with a gender perspective, aimed at public programs or development/commercial banks, and certification schemes, to implement the CSLM Strategy.	Selection of farms / associations stratified by size	Specialists in farm management and markets													
	Analysis of the business models of the participating farms	Specialists in farm management and markets													
	Conduct market studies and certification systems applicable for each case	Specialists in farm management and markets													
	Training to farms / associations to develop business plan and apply for financing and / or certification	Specialists in farm management and markets													

	Continuous advice for the implementation of business plans	Specialists in farm management and markets															
Component 3: Monitoring, Reporting and Verification of the Livestock sector																	
Outcome 3.1: GHG emissions from the livestock sector integrated into the Monitoring, Reporting and Verification National System																	
Output 3.1.1: An MRV system for measuring emissions and reporting verified data for the livestock sector	Prepare a proposal for the MRV system linked to the system under implementation of the Ministry of the Environment	MRV Specialist															
	MRV System implementation	MRV Specialist															
	Study of the GEI emissions of the activities of the livestock sector based on the MRV methodology	MRV Specialist															
Output 3.1.2: Farm-level monitoring system to monitor GHG emissions, strategies, financing and land degradation	Establishment of a GIS system covering the focus farms and control farms	Research institution															
	Definition of protocols for sampling and data analysis	Research institution															
	Monitoring of variables by remote sensing	Research institution															

	Sampling and analysis of soil, feces and vegetation	Research institution														
	Analysis of mitigation indicators of climate change and land restoration	Research institution														
	Monitoring of socio-economic and gender variables	Research institution														
	Development and validation of online tools for characterization and monitoring of the properties, processing information and calculation of GHG emissions at the property	Research institution														
Component 4: Project Monitoring, Evaluation and Knowledge Management																
Outcome 4.1: Project implementation based on RBM and lessons learned/good practices documented and disseminated.																
Output 4.1.1: Project Monitoring & Evaluation Plan and system, in place	Development and updating of the M&E tool	Specialist in M&E														
	Monthly meetings of the project team	Project coordinator														
	Quarterly meetings of the executive committee	FAO														
	Annual meeting of the advisory committee	FAO														

	Preparation of annual operating plans	Project coordinator														
	Preparation of semi-annual progress reports	Project coordinator														
	Startup workshop	Project coordinator														
	End workshop	Project coordinator														
	Preparation of initial and final reports	Project coordinator														
Output 4.1.2: Project Mid-term review and Final Evaluation.	Mid Term Evaluation	FAO														
	Final Evaluation	FAO														
Output 4.1.3: Dissemination and communication products	Production of explanatory material (brochure and prospectus)	Specialists in extension and communication														

	Production of a complementary video	Specialists in extension and communication														
	Explanatory Field Manual addressed to livestock producers and extensionists, second edition at the end of the project	Specialists in extension and communication														
	Videos with narrations of the producers' experience	Specialists in extension and communication														
Output 4.1.4: A Communication Strategy implemented, including project website	Development of a communication strategy with institutions and producers	Comunications Specialist														
	Establishment and updating of a web page and accounts in dedicated social networks	Comunications Specialist														

APPENDIX 3: PROJECT BUDGET

SUBTOTAL Comp 1	191,206
SUBTOTAL Comp 2	658,080
SUBTOTAL Comp 3	375,053
SUBTOTAL Comp 4	176,193
Subtotal	1,400,532
SUBTOTAL Project Management Cost (PMC)	140,053
TOTAL GEF	1,540,586

As a matter of space, full project budget can be found here:

Oracle Budget Rep
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APPENDIX 4: RISK MATRIX[10]

	Description of risk	Impact[11]	Probability of occurance[1]	Mitigation actions	Responsible party
1	Climate Risk: Extreme weather events related to climate change and climate variability: 45% of the Northern and Eastern territory of the Yuna Camú basin is in a zone of moderate risk with respect to hurricanes and tropical storms	High	High	Design a monitoring system that can also be used as a basis for a basin-wide flood forecasting system, including the risk assessment of landslides.	National executing partners
2	Climate risk: The project target areas may experience droughts during project implementation. Climate models clearly point to a precipitation reduction in the Yuma Camú basin in the future.	High	Medium	The selection of sites in the project area in different agro-ecological zones will ensure that at least a good proportion of farmers can introduce and test technologies and practices, even if drought is experienced in one of the areas.	Project Coordination Unit. National Executing Partner(s)
3	Environmental risk: Temperature increase and rainfall reduction create propitious conditions for the increase of forest fires.	Medium Low	Medium	Forest fires in the Yuna basin can be controlled through management and surveillance measures, particularly wood burning within protected areas. To remove illegal burning in landfills, it would suffice to enforce the Environmental Management Standard for solid waste – which in Article 6.1.5 states:	Ministry of Environment and Natural Resources (MARENA)

[10] Please consult available corporate guidelines and training for information on how to complete the risk log on the ERM website.

[11] H: High; MH: Moderately High; ML: Moderately Low; L: Low

	Description of risk	Impact[11]	Probability of occurance[1]	Mitigation actions	Responsible party
				No person should cause or allow open burning of solid waste.	
4	Landslide risks: The flood area of the Yuna Camú basin covers almost 30% of the basin: • high slopes that show drastic drops over short distances, such as the Camú River, which rises to more than 2,000 m.a.s.l and descends to 120 m.a.s.l in its 50 km route to the Yuna River; • the amount of water discharged in the Yuna River is substantial and flows speed is quite high, due to the basin's dense hydrographic network; • Soils are mostly coarse, and thus, tend to remain humid or saturated – this affects their infiltration capacity during extreme weather events; • Flat topography (less than 3 m.a.s.l) and low soil permeability in the lower basin area, makes soils vulnerable to water force.	High	Medium	Design a monitoring system that can also be used as a basis for a basin-wide flood forecasting system, including the risk assessment of landslides.	Project Coordination Unit. National Executing Partner(s)
5	Geographical risk:	Low	Medium		

	Description of risk	Impact[11]	Probability of occurance[1]	Mitigation actions	Responsible party
	The Yuna Camú Basin is crossed by three well-known geological faults: the North, the Hispaniola by the center, and the San Juan-Restoration to the South. This indicates a risk to geodynamic phenomena.				
6	Social risk: Lack of farmers' interest and motivation to participate in the project	High	High	Participating producers with a genuine interest and motivation will be targeted during the selection process. In addition, the selection process is articulated with the associations of local producers that will support the deployment of field activities. The Project will implement tested measures and approaches that ensure the generation of producers' economic and financial benefits. This socio-economic feature is expected to be a strong rationale for farmers to participate in proposed climate-smart livestock activities (learning, testing, and sharing).	Project Coordination Unit. National Executing Partner(s)
7	Social risk: Lack of interest of project stakeholders in participating in the process of elaboration and validation of the Climate-Smart Livestock Management Strategy and capacity development activities.	High	Low	Most stakeholders and potential producers have participated in the project preparation phase and have endorsed the project's approach. During project year 1, all key stakeholders from the agricultural sector of the Yuna river basin will be properly identified and included. A value chain approach will be applied. As well, these stakeholders will be	Project Coordination Unit. National Executing Partner(s)

	Description of risk	Impact[11]	Probability of occurance[1]	Mitigation actions	Responsible party
				included as part of project implementation, and systematic monitoring	
8	Institutional risk: Low technical capacity of experts and institutions at national and local levels may slow the project progress down.	Low	Low	A capacity assessment was conducted during the Project formulation phase and this risk has been identified as 'low'. Adequate national experts will be identified to support project implementation. In terms of institutional capacities, the project will support capacity development activities to mitigate this risk	Project Coordination Unit
9	Health risk: Epidemic of animal diseases in the project area	Low	Medium	Project sites will be selected in different agro-ecological zones, to ensure that at least a good proportion of farmers can introduce and test technologies and practices, even if an epidemic is experienced in an area.	Project Coordination Unit. National Executing Partner
10	Health & Legal risks: Transmission of seed and seedling pests and/or diseases in the pilot farms. The project includes the provision of sowing material (seeds or seedlings) of local forage tree species	Medium Low	Medium	The Project Coordination Unit will: - Avoid undermining local seed & planting material production and supply systems through the use of seed voucher schemes, for instance • Ensure that the seeds and planting materials are from locally adapted crops and varieties that are accepted by farmers and consumers • Ensure that the seeds and planting materials are free from pests and diseases according to agreed norms, especially the	Project Coordinator. FAO Dominican Republic. National Executing partner.

	Description of risk	Impact[11]	Probability of occurance[1]	Mitigation actions	Responsible party
				IPPC (International Plant Protection Convention) • Request FAO Pesticides Division's (AGPMG) authorization for all procurement of seeds and planting materials. - Request clearance from AGPMC is required for chemical treatment of seeds and planting materials • Clarify that the seed or planting material can be legally used in the country to which it is being imported • Ensure, according to applicable national laws and/or regulations, that farmers' rights to PGRFA and over associated traditional knowledge are respected in the access to PGRFA and the sharing of the benefits accruing from their use. This is part of FAO Environmental and Social Safeguards.	

APPENDIX 5: ENVIRONMENTAL AND SOCIAL ASSESSMENT

Project Risk Certification

Entity Number: 645733

Project Title: Promoting climate-smart livestock management in the Dominican Republic

Recipient Country (ies): Dominican Republic

Estimated total budget in USD: 1,655,045 $

Risk Certification

Certified by: Van Lierop, Pieter (SLMMD)

Date: 18-Aug-2017

The table below summarizes the environmental and social risks identified in relation to the proposed action.

The proposed action is classified as: **Moderate**

Safeguard Triggered	Risk Identified	Answer	Risk Classification	Reference Guidance	Additional Description (if any)
3	3.2.1 - Would this project involve the importing or transfer of seeds and/or planting materials for cultivation?	Yes	**Moderate**	• Avoid undermining local seed & planting material production and supply systems through the use of seed voucher schemes, for instance	EL proyecto contempla facilitar material de siembra (semillas o

				• Ensure that the seeds and planting materials are from locally adapted crops and varieties that are accepted by farmers and consumers • Ensure that the seeds and planting materials are free from pests and diseases according to agreed norms, especially the IPP • Internal clearance from AGPMG is required for all procurement of seeds and planting materials. Clearance from AGPMC is required for chemical treatment of seeds and planting materials • Clarify that the seed or planting material can be legally used in the country to which it is being imported • Clarify whether seed saving is permitted under the country's existing laws and/or regulations and advise the counterparts accordingly. • Ensure, according to applicable national laws and/or regulations, that farmers' rights to PGRFA and over associated traditional knowledge are respected in the access to PGRFA and the sharing of the benefits accruing from their use. Refer to ESS9: Indigenous peoples and cultural heritage.	plantulas) de especies arboreas forrajeras locales

APPENDIX 6. ENVIRONMENTAL AND SOCIAL RISK MANAGEMENT PLAN

Environmental and Social Risk Management Plan

Entity Number: 645733

Project Title: Promoting Climate-smart Livestock Management in the Dominican Republic

Recipient Country (ies): Dominican Republic / Mesoamerica

Estimated total budget in USD: 1,540,586 $

Risk identified	Risk Classification	Risk Description in the project	Mitigation Action (s)	Progress on mitigation action	Indicators
3.2.1 Importing or transfer of seeds and/or planting materials for cultivation	Moderate risk	The project contemplates facilitating planting material (seeds or seedlings) of local forage tree species. Under Component 2, 100 thousand forest seedlings will be provided for farm reforestation.	The Project Coordination Unit will: • Avoid undermining local seed & planting material production and supply systems through the use of seed voucher schemes, for instance • Ensure that the seeds and planting materials are from locally adapted crops and varieties that are accepted by farmers and consumers		• Number of distributed seed vouchers • Number of varieties or genotypes in the target communities identified • FAO AGPMG clearance for the procurement of seeds and

			• Ensure that the seeds and planting materials are free from pests and diseases according to agreed norms. In case of importing seed or planting material it will arrive with a valid phytosanitary certificate • Request FAO Seed and Plant Genetic Resources team (AGPMG) to provide technical specifications for all procurement of seeds and planting materials. • Request clearance from AGPMC is required for chemical treatment of seeds and planting materials • Clarify that the seed or planting material can be legally used in the country to which it is being imported Ensure, according to applicable national laws and/or regulations, that		planting materials • Clearance from the Ministry of Agriculture for the legal use of imported seed/planting material

			farmers' rights to PGRFA and over associated traditional knowledge are respected in the access to PGRFA and the sharing of the benefits accruing from their use. This is part of FAO Environmental and Social Safeguards.		

APPENDIX 7. TERMS OF REFERENCE

Draft[12]

Job Title:	**General Project Coordinator (GPC)**
Programme/ Project:	Promoting Climate-smart Livestock Management in the Dominican Republic
Location:	Santo Domingo, Dominican Republic, with travel to project's intervention areas of the Yuna Basin
Expected Start Date of Assignment:	To be determined **Duration:** 35 months
Reports to:	FAO Representative Lead Technical Officer
Background	Responsible for overall coordination of the project, reporting, monitoring and evaluation, and outreach activities. The (GPC) reports to the Project Steering Committee. S/he works under administrative supervision of FAO Representative in the Dominican Republic and under technical supervision of the FAO Lead Technical Officer.
Main tasks	• Supervision of project staff and activities; • Monitoring of the progress of the project; • Close coordination with component coordinators; • Coordination of monthly team meetings; • Preparation of six-monthly progress reports, inception and terminal reports; • Maintain working relations and communication with Executive Committee, Advisory Committee, counterparts and project partners; • Communication of project results.
Key competencies / qualifications	• Advanced university degree in agronomy, natural resource management, economics, or similar; • More than 10 years of relevant work experience; • Experienced team leader and good track record of project management and coordination skills; • Expertise in natural resource management; • Demonstrated ability to communicate, including advocating to government agencies; • Strong ability to work under pressure and against tight deadlines;

[12] Consultants' Terms of Reference will be revised and validated during the project's inception.

	• Strong drafting and interpersonal skills, honesty, orientation on achievements. • Spanish and English language skills
Job Title:	**Project Finance/ Operations Officer**
Programme/ Project:	Promoting Climate-smart Livestock Management in the Dominican Republic
Location:	Santo Domingo, Dominican Republic, with travel to project's intervention areas of the Yuna Basin
Expected Start Date of Assignment:	To be determined **Duration:** 35 months
Reports to:	***FAO Representative***
Background	Under the overall supervision of the FAO Representative in Dominican Republic and in close cooperation with other FAO staff, the incumbent will provide operational support to the implementation, monitoring and evaluation of the project for timely delivery of its outcomes and outputs.
Main tasks	• Ensure smooth and timely implementation of project activities in support of the results-based work plan, through operational and administrative procedures according to FAO rules and standards; • Coordinate the project operational arrangements through contractual agreements with key project partners; • Arrange the operations needed for signing and executing Letters of Agreement (LoA) with relevant project partners; • • Undertake day-to-day management of the project budget, including the monitoring of cash availability, budget preparation and budget revisions to be reviewed by the General Project Coordinator; • Ensure the accurate recording of all data relevant for operational, financial and results-based monitoring; • Ensure that relevant reports on expenditures, forecasts, progress against work plans, project closure, are prepared and submitted in accordance with FAO and GEF defined procedures and reporting formats, schedules and communications channels, as required; • Execute accurate and timely actions on all operational requirements for personnel-related matters, equipment and material procurement, and field disbursements; • Participate and represent the project in collaborative meetings with project partners and the Project Steering Committee, as required; • Be responsible for results achieved within her/his area of work and ensure issues affecting project delivery and success are brought to the attention of higher level authorities through the BH in a timely manner,

	• In consultation with the FAO Evaluation Office, the LTO and the FAO-GEF Coordination Unit, support the organization of the mid-term review and final evaluation, and provide inputs regarding project budgetary matters;
Key competencies / qualifications	• University Degree in Economics, Business Administration, or related fields. • Five years of experience in project experience in planning, project implementation and management/administration of development programmes including the preparation, monitoring and evaluation of development projects and operations procedures • Knowledge of FAO's project management systems, and national systems. • Working knowledge of Spanish and limited working knowledge of Spanish
Job Title:	**Assistant coordinator / M+E (Comp. 4)**
Programme/ Project:	Promoting Climate-smart Livestock Management in the Dominican Republic
Location:	Santo Domingo, Dominican Republic, with travel to project's intervention areas of the Yuna Basin
Expected Start Date of Assignment:	To be determined **Duration:** 33 months
Reports to:	***FAO Representative*** ***LTO***
Background	The Assistant Coordinator/M&E supports the coordinator as well as the Field Coordinators in organizational matters and reporting. S/he is responsible for the development and maintenance of the project's M+E system (Component 4). Reports directly to the General Project Coordinator and works under administrative supervision of the FAO Representative and under technical supervision of the Lead Technical Officer.
Main tasks	• Development and maintenance of M&E tool in coordination with UGP of MGAP; • Monitor the implementation of the project Environmental and Social Management Plan - which will be finalized at project inception; • Assisting in coordination of monthly staff meetings; • Preparation of project reports; • General: Support communication with counterparts and project partners, support organization of workshops and events.
Key competencies / qualifications	• Degree in business administration, public administration, finance, economics or related field; • Familiarity with FAO or other donors' Monitoring and Evaluation procedures; • More than 5 years of experience related to M&E of projects; • Full competency and fluency in Spanish and limited working knowledge of English;

	• Strong ability to work under pressure and against tight deadlines; • Strong drafting and interpersonal skills, honesty, orientation on achievements. • Working knowledge of Spanish and limited working knowledge of English

Job Title:	**Strategy Coordinator (Component 1)**
Programme/ Project:	Promoting Climate-smart Livestock Management in the Dominican Republic
Location:	Santo Domingo, Dominican Republic, with travel to project's intervention areas of the Yuna Basin
Expected Start Date of Assignment: To be determined **Duration:** 18 months	
Reports to:	FAO Representative Lead Technical Officer
Background	The Strategy Coordinator oversees the development of a national CSLM strategy and institutional capacity-building programme. S/he reports directly to the General Project Coordinator. S/he works under administrative supervision of FAO Representative in the Dominican Republic and under technical supervision of the FAO Lead Technical Officer.
Main tasks	• Coordination of the CSLM strategy development process; • Coordination of the institutional capacity building programme on CSLM strategy • Organization of the CSLM training programme • Preparation of working methodology; • Preparation of draft and final CSLM strategy document • Coordination of institutional workshops; • Preparation of training material; • Documentation and facilitation of workshops.
Key competencies / qualifications	• University degree in agronomy, natural resource management, economics, or similar; • More than 8 years of relevant work experience; • Experienced team leader and good track record of project management and coordination skills; • Expertise in in the livestock sector is an advantage; • Strong ability to work under pressure and against tight deadlines;

	• Strong drafting and interpersonal skills, honesty, orientation on achievements. • Working knowledge of Spanish and limited working knowledge of English

Job Title:	**Field Coordinator (Component 2)**		
Programme/ Project:	Promoting Climate-smart Livestock Management in the Dominican Republic		
Location:	Santo Domingo, Dominican Republic, with travel to project's intervention areas of the Yuna Basin		
Expected Start Date of Assignment:	To be determined	**Duration:**	33 months
Reports to:	FAO Representative Lead Technical Officer		
Background	The Specialist coordinates the field activities of the project (component 2) and provides technical inputs on the innovation approach. The Specialist reports directly to the General Project Coordinator. S/he works under administrative supervision of FAO Representative in the Dominican Republic and under technical supervision of the FAO Lead Technical Officer.		
Main tasks	• Coordination of the work of the technical specialists on animal production, Farm Management and technicians and farmers • Support to extensionists during the implementation phase on application of the innovation approach; • Participate in training courses for extensionists • Participation in the selection of farms; • Training of extensionists for project farms; • Revision of annual farm plans; • Participation in planning and evaluation workshops; • Participate in training workshops and field days for farmers and farm workers with a gender perspective; • Support organization of workshops and field days; • Design and supervise monitoring of social indicators and data analysis; • Preparation of training material and revision of existing material; • Prepare section on participatory methodologies of the field manual.		

	• Participation in technical working groups on the national CSLM strategy and provides technical inputs as requested;
Key competencies / qualifications	• University degree in Agronomy or related field • More than 8 years of relevant work experience in the application of the co-innovation approach; • Experienced team leader and good track record of project management and coordination skills; • Strong ability to work under pressure and against tight deadlines; • Strong drafting and interpersonal skills, honesty, orientation on achievements. • Working knowledge of Spanish and limited working knowledge of English

Job Title:	**Field Coordinator MRV (Component 3)**		
Programme/Project:	Promoting Climate-smart Livestock Management in the Dominican Republic		
Location:	Santo Domingo, Dominican Republic, with travel to project's intervention areas of the Yuna Basin		
Expected Start Date of Assignment:	To be determined	**Duration:**	33 months
Reports to:	FAO Representative Lead Technical Officer		
Background	The Field Coordinator MRV oversees the development of a MRV system for the livestock and ruminant sector, in close coordination with the National Specialist MRV and Research Institute (IDIAF). S/he reports directly to the General Project Coordinator. S/he works under administrative supervision of FAO Representative in the Dominican Republic and under technical supervision of the FAO Lead Technical Officer.		
Main tasks	• Coordination of the work of the National technical specialists on MRV, animal production researchers (IDIAF), universities, extensionists, field technicians and farmers. • Coordination of the institutional capacity building for development and implementation of the MRV. • Support to preparation protocols and methodology for development and implementation of the MRV system. • Support to extensionists during the implementation phase on application of the MRV system.		

	• Participate in training courses for animal production researchers (IDIAF), extensionists and field technicians. • Participation in the selection of 30 pilot farms; • Support organization of workshops and field days; • Design and supervise monitoring of social indicators and data analysis; • Preparation of training material and revision of existing material;
Key competencies / qualifications	• University degree in relevant field such as agronomy, environment, natural resources management; • More than 8 years of relevant work experience; • Knowledge of UNFCCC guidelines on MRV systems; • Experienced team leader and good track record of project management and coordination skills; • Familiarity with the livestock sector is an advantage; • Strong ability to work under pressure and against tight deadlines; • Strong drafting and interpersonal skills, honesty, orientation on achievements. • Working knowledge of Spanish and limited working knowledge of English

Job Title:	**International MRV Specialist (Component 3)**		
Programme/Project:	Promoting Climate-smart Livestock Management in the Dominican Republic		
Location:	Santo Domingo, Dominican Republic, with travel to project's intervention areas of the Yuna Basin		
Expected Start Date of Assignment:	To be determined	**Duration:**	44 days
Reports to:	FAO Representative Lead Technical Officer		
Background	The MRV Specialist oversees the technical support to development of a MRV system for the livestock and ruminant sector, in close coordination with the national Specialist MRV, Animal production Specialist and Agricultural Research Institute (IDIAF). The specialist reports directly to the General Project Coordinator, in close coordination with the field coordinator MRV (component 3). S/he works under administrative supervision of FAO Representative in the Dominican Republic and under technical supervision of the FAO Lead Technical Officer.		

Main tasks	• Technical support to MARENA Climate Change Directorate for the implementation phase on application of the MRV system for the livestock and ruminant sector. • Prepare the protocols and methodology for development and implementation of the MRV system. • Conduct meetings with stakeholders as needed, • Compile background documentation; • Provide recommendations for technical support to be given to the process of development the MRV system for the livestock and ruminant sector. • Technical support to estimate mitigation potential of the good practice and actions applied in farm on component 2; • Prepare material, manuals with protocols and methodologies for implementation of the MRV system. • Conduct training on animal production for researchers (IDIAF), extensionists and field technicians • Prepare training material and revise existing material; • Prepare requirements and criteria to use for the selection of 30 pilot farms. • Present draft document for validation by MGCN; • Prepare final document based on comments and present to Project Steering Committee.
Key competencies / qualifications	• Master's degree or above in environmental management or other field relevant; • Excellent knowledge of global climate change tendencies, issues related to nationally appropriate mitigation actions, MRV; • Excellent knowledge of UNFCCC guidelines on MRV systems; • At least 8 years of experience in assessment of GHG emissions and reporting, preferably in the livestock sector; • Familiarity with the livestock sector is an advantage; • Full working knowledge of Spanish and medium working capacity in English; • Strong ability to work under pressure and against tight deadlines; • Strong drafting and interpersonal skills, honesty, orientation on achievements. • Certified knowledge of at least two UN official languages

Job Title:	**Agricultural Economist/Market and Value Chains(Components 1 and 2)**

Programme/Project:	Promoting Climate-smart Livestock Management in the Dominican Republic
Location:	Santo Domingo, Dominican Republic, with travel to project's intervention areas of the Yuna Basin
Expected Start Date of Assignment: To be determined	**Duration:** 11 months
Reports to:	FAO Representative Lead Technical Officer
Background	The Agricultural Economist / Market and Value Chains Specialist contributes to the development of a CSLM strategy and leads a working group on market entry, certification and value chains. The Specialist reports directly to the Strategy Coordinator (component 1). S/he works under administrative supervision of FAO Representative in the Dominican Republic and under technical supervision of the FAO Lead Technical Officer.
Main tasks	• Prepare background document for the working group sessions in the development process of the CSLM strategy (component 1); • Organize and facilitate working group sessions; • Consolidate working group results; • Revision of draft and final CSLM strategy document. • Prepares a background study on market insertion of CSLM products at national and international level. • Support to preparation of business plans (component 2)
Key competencies / qualifications	• University degree in economics or related fields; • More than 8 years of relevant work experience; • Very good understanding and knowledge of national and international markets and value chains related to the livestock sector in Dominican Republic; • Strong ability to work under pressure and against tight deadlines; • Strong drafting and interpersonal skills, honesty, orientation on achievements.

Job Title:	**Animal Production and CSLM Specialist (Components 1 and 2)**
Programme/Project:	Promoting Climate-smart Livestock Management in the Dominican Republic
Location:	Santo Domingo, Dominican Republic, with travel to project's intervention areas of the Yuna Basin
Expected Start Date of Assignment:	To be determined **Duration:** 11 months
Reports to:	FAO Representative Lead Technical Officer
Background	The Animal Production / CSLM Specialist contributes to the development of the national CSLM strategy, leads a working group on CSLM, and practices for GHG mitigation. He guides the work of the technicians in regarding animal production, participates in training activities and gives input to training materials. The Specialist reports directly to the General Project Coordinator, in close coordination with the CSLM strategy coordinator (component 1) and the field coordinator (component 2). S/he works under administrative supervision of FAO Representative in the Dominican Republic and under technical supervision of the FAO Lead Technical Officer.
Main tasks	• Prepare background document for the working group sessions in the development process of the CSLM strategy; • Organize and facilitate working groups; • Consolidate working group results; • Revision of draft and final CSLM strategy document. • Preparation of training material and revision of existing material; • Participate in training courses for extensionists; • Training of extensionists for project farms; • Support to extensionists during the implementation phase; • Participation in planning and evaluation workshops; • Participate in training workshops and field days for farmers and farm workers with a gender perspective; • Design and supervise monitoring of production-related indicators and data analysis; • Prepare section on animal production of the field manual.
Key competencies / qualifications	• University degree in agronomy, animal production or related fields; • Very good conceptual understanding and knowledge of CSLM;

	• Experience in the region an advantage; • More than 8 years of relevant work experience; • Strong ability to work under pressure and against tight deadlines; • Strong drafting and interpersonal skills, honesty, orientation on achievements.

Job Title:	**Farm Management and Extension Specialist (Components 1 and 2)**
Programme/Project:	Promoting Climate-smart Livestock Management in the Dominican Republic
Location:	Santo Domingo, Dominican Republic, with travel to project's intervention areas of the Yuna Basin
Expected Start Date of Assignment: To be determined	**Duration:** 11 months
Reports to:	FAO Representative Lead Technical Officer
Background	The Farm Management and Extension Specialist contributes to the development of a CSLM strategy and leads a working group on extension, capacity building, communication and dissemination. He guides the work of the technicians in regarding farm management, participates in training activities and gives input to training materials. The Specialist reports directly to the General Project Coordinator, in close coordination with the CSLM strategy coordinator (component 1) and the field coordinator (component 2). S/he works under administrative supervision of FAO Representative in the Dominican Republic and under technical supervision of the FAO Lead Technical Officer.
Main tasks	• Prepare background document for the working group sessions in the development process of the CSLM strategy; • Organize and facilitate working groups; • Consolidate working group results; • Revision of draft and final CSLM strategy document. • Preparation of training material and revision of existing material; • Participate in training courses for extensionists; • Training of extensionists for project farms; • Support to extensionists during the implementation phase; • Participation in planning and evaluation workshops;

	• Participate in training workshops and field days for farmers and farm workers with a gender perspective; • Design and supervise monitoring of production-related indicators and data analysis; • Prepare section on animal production of the field manual.
Key competencies / qualifications	• University degree in agronomy, agricultural economist or related fields; • Very good conceptual understanding and knowledge of extension services and farm management, particularly of livestock family farms; • More than 8 years of relevant work experience; • Experience in the region an advantage; • Strong ability to work under pressure and against tight deadlines; • Strong drafting and interpersonal skills, honesty, orientation on achievements.

Job Title:	**National MRV Specialist (Component 3)**
Programme/Project:	Promoting Climate-smart Livestock Management in the Dominican Republic
Location:	Santo Domingo, Dominican Republic, with travel to project's intervention areas of the Yuna Basin
Expected Start Date of Assignment:	To be determined **Duration:** 11 months
Reports to:	FAO Representative Lead Technical Officer
Background	The MRV Specialist oversees the development of a MRV system for the livestock and ruminant sector, in close coordination with the International Specialist MRV, Animal production Specialist and Agricultural Research Institute (IDIAF). The Specialist reports directly to the field coordinator MRV (component 3). S/he works under administrative supervision of FAO Representative in the Dominican Republic and under technical supervision of the FAO Lead Technical Officer.
Main tasks	• Prepare outline of a MRV system document; • Conduct consultations with key institutions and actors, • Compile background documentation; • Estimate mitigation potential of the good practice and actions applied in farm on component 2;

	• Support to preparation protocols and methodology for development and implementation of the MRV system. • Participation in the selection of 30 pilot farms • Consolidate MRV document; • Present draft document for validation by MGCN; • Prepare final document based on comments and present to Project Steering Committee.
Key competencies / qualifications	• University degree in relevant field such as agronomy, environment, natural resources management; • Knowledge of UNFCCC guidelines on MRV systems; • At least 5 years of experience in assessment of GHG emissions and reporting, preferably in the livestock sector; • Familiarity with the livestock sector is an advantage; • Full working knowledge of Spanish and limited working capacity in English; • Strong ability to work under pressure and against tight deadlines; • Strong drafting and interpersonal skills, honesty, orientation on achievements

Job Title:	**Incentive Specialist (Component 1)**		
Programme/Project:	Promoting Climate-smart Livestock Management in the Dominican Republic		
Location:	Santo Domingo, Dominican Republic, with travel to project's intervention areas of the Yuna Basin		
Expected Start Date of Assignment:	To be determined	**Duration:**	11 months
Reports to:	FAO Representative Lead Technical Officer		

Background	The Incentive Specialist contributes to the development of a CSLM strategy and leads a working group on incentive mechanism and certification for promote a CSLM. The Specialist reports directly to the Strategy Coordinator (component 1). S/he works under administrative supervision of FAO Representative in the Dominican Republic and under technical supervision of the FAO Lead Technical Officer.
Main tasks	• Design the financial mechanism and facilitate the validation process of the proposal in consultation with implementing partner within the framework of a CSLM strategy.

	• Carry out an analysis of the potential impact of the proposed financial mechanism and identify possibilities for articulation with other public incentive mechanisms. • Prepare background document for the working group sessions in the development process of the CSLM strategy (component 1); • Facilitate the institutional arrangements for the operationalization of the financial mechanism of incentives at the level of the project's intervention areas of the Yuna Basin. • Formulate the proposal to strengthen the certification mechanism in good livestock practices Consolidate working group results; • Design of the Technical Assistance and Training Plan on Incentives for Small Livestock Producers, with a gender approach. • Revision of draft and final CSLM strategy document.
Key competencies / qualifications	• University degree in economics or related fields; • More than 8 years of relevant work experience; • Experience in the design and / or application of payment for environmental services, incentive mechanisms, subsidy schemes, or similar. • Very good understanding and knowledge of national and international markets and value chains related to the livestock sector in Dominican Republic; • Strong ability to work under pressure and against tight deadlines; • Strong drafting and interpersonal skills, honesty, orientation on achievements.

Job Title:	**IT Specialist (Component 1)**		
Programme/Project:	Promoting Climate-smart Livestock Management in the Dominican Republic		
Location:	Santo Domingo, Dominican Republic		
Expected Start Date of Assignment:	To be determined	**Duration:**	160 hours
Reports to:	FAO Representative Lead Technical Officer		
Background	The IT Specialist contributes to the design and implementation an operational technical platform for the livestock sector, which includes information on monitoring, evaluation, dissemination of experiences and lessons learned. The IT Specialist reports directly to the Strategy Coordinator (component 1). S/he works under administrative supervision of FAO Representative in the		

	Dominican Republic and under technical supervision of the FAO Lead Technical Officer.
Main tasks	• Design and implement the technical platform in consultation with implementing partners, within the framework of a CSLM strategy; • Train technicians in maintenance and operation of the system/ platform; • Prepare a user guide to operate the platform, including recommendations for appropriate use and troubleshooting actions; • Support the Communications Specialist to establish and update a web page and social media accounts in dedicated social networks. •
Key competencies / qualifications	• University degree in Computer Science, Web Designer or related fields; • More than 5 years of relevant work experience; • Experience in the design, development and / or implementation of web systems with management of statistical data and reports. • Strong drafting and interpersonal skills, honesty, orientation on achievements.

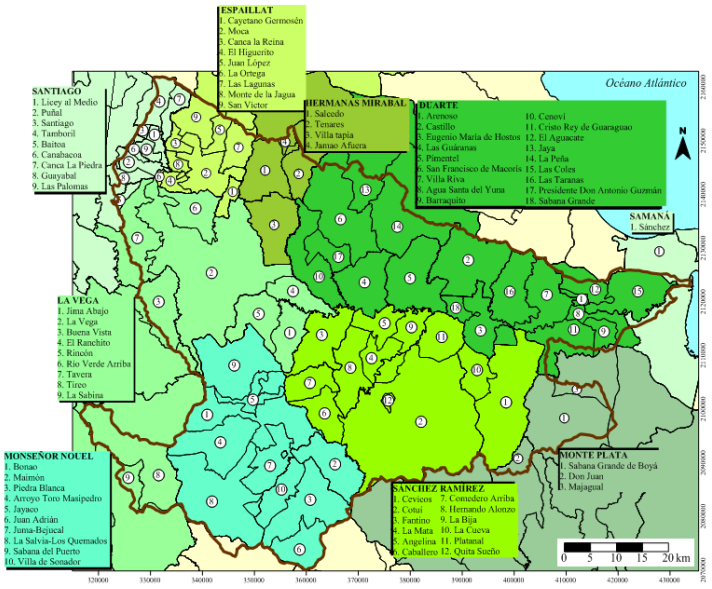
Job Title:	**Gender Specialist**
Programme/Project:	Promoting Climate-smart Livestock Management in the Dominican Republic
Location:	Santo Domingo, Dominican Republic, with travel to project's intervention areas of the Yuna Basin
Expected Start Date of Assignment:	To be determined **Duration:** 18 months
Reports to:	FAO Representative Lead Technical Officer
Background	The Gender Specialist contributes to evaluate the role of women in the deployment of low GHG technologies and options for Climate Change Mitigation in the livestock sector. The specialist reports directly to the General Project Coordinator, in close coordination with the CSLM strategy coordinator (component 1), field coordinator (component 2), field coordinator MRV (component 3) and Communication Specialist. She works under administrative supervision of FAO Representative in the Dominican Republic and under technical supervision of the FAO Lead Technical Officer.
Main tasks	• Prepare the methodology and conduct a study on the roles of women as agents of change for development in a sustainable livestock sector;

	• Support the Strategy Coordinator (Component 1) to design the financial strategy to promote CSLM; • Support the Field Coordinator (Component 2) for the selection of beneficiaries in livestock farms for the implementation of gender sound practices and training; • Support the Field Coordinator (Component 2) for the selection of beneficiaries and design of business plans; • Support the Communications Specialist to promote the role and contribution of women in the livestock sector; • Prepare final document with main results of the study on the role and contribution of women in the livestock sector, including recommendations to promote integration;
Key competencies / qualifications	• University degree in Social Sciences or other relevant discipline, preferably with a specialization in gender; • More than 5 years of relevant work experience; • Thorough understanding of the gender context in Dominican Republic, and experience working with government institutions and international or non-governmental organizations supporting gender and development work in the specific agricultural sector; • Familiarity with gender analysis tools and methodologies in the specific area of intervention; • Strong communication skills and ability to liaise with various stakeholders, including government officials and civil society; • Strong drafting and interpersonal skills, honesty, orientation on achievements.

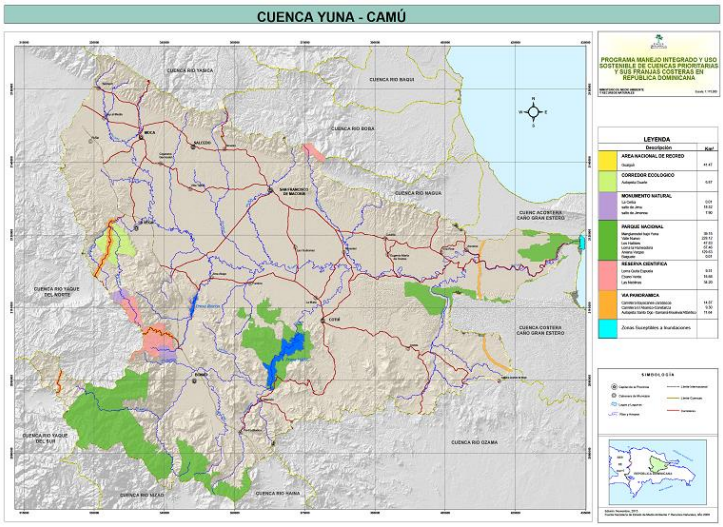
Job Title:	**Communications Specialist (partially funded by FAO)**		
Programme/ Project:	Promoting Climate-smart Livestock Management in the Dominican Republic		
Location:	Santo Domingo, Dominican Republic, with travel to project's intervention areas of the Yuna Basin		
Expected Start Date of Assignment:	To be determined	**Duration:**	18 months
Reports to:	***FAO Representative***		

Background	The Communication Specialist is responsible for the development and implementation of the project's communication strategy. S/he reports directly to the General Project Coordinator. S/he works under administrative supervision of the FAO Representative in Dominican Republic.
Main tasks	• Design of communication strategy for institutions and target groups; • Prepare project brochure; • Coordinate production of audiovisual products (4 videos); • Adapt field manuals for farmers and extensionists; • Assist in the organization of a webinar series and preparation of presentations in conferences and networking events; • Produce contents for website and social media accounts (facebook, twitter, whatsapp); • Coordinate appearances in local media.
Key competencies / qualifications	• Higher degree in communications or related fields; • More than 5 years of relevant work experience in communications or media relations with a national government agency or international private sector organization; • Demonstrated ability to develop communication tools – written, verbal, electronic, etc.; • Perfect Spanish language skills; Working knowledge of English

APPENDIX 8. MAPS OF THE PROJECT INTERVENTION AREAS



Municipalities by Provincein the Yuna river basin



Protected Areas in the Yuna river basin (source: DIARENA)

APPENDIX 9. DETAILED CARBON CALCULATION

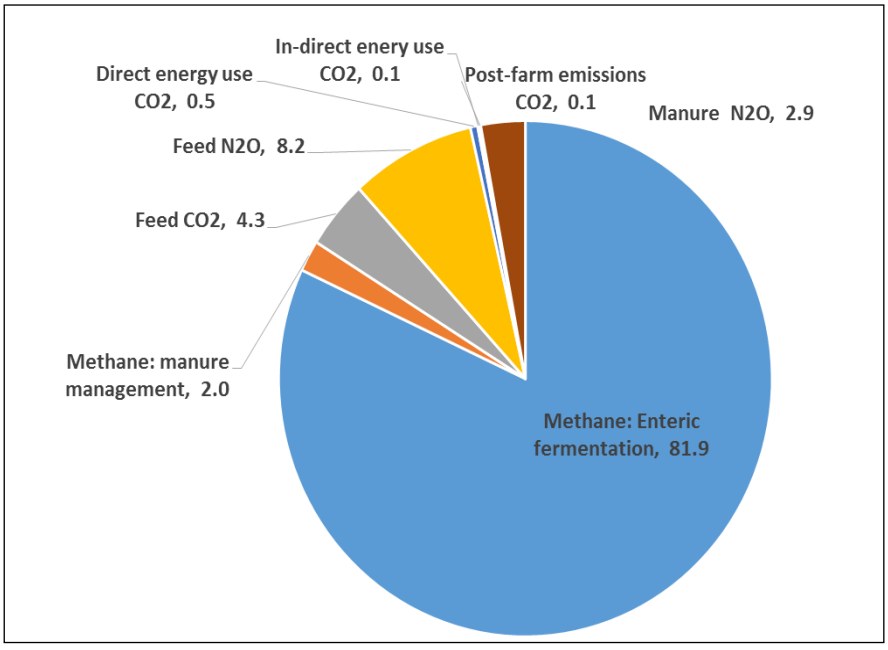
Emissions from cattle production in Dominican Republic

Total emissions: Cattle sector produces about **6.3 million tons per year**. Of which 31% and 69% is produced from dairy and beef sector, respectively.

Main sources of emissions: Main source of emissions is from methane from **enteric fermentation almost 84%** while **nitrous oxide from feed production and manure management contributes 11%.** Emissions from CO2 associated with feed production, transport and processing and energy use are negligible.

Methodology: Both the baseline and mitigation scenarios were estimated based on the number of farms targeted by the project (500 farms in the Yuna basin) targeting 77,000 animals in total. Livestock GHG emissions were estimated based on FAO's GLEAM model. GLEAM is a modelling framework that simulates the interaction of activities and processes involved in livestock production and the environment. The results include both direct (manure management and enteric methane) and indirect (feed production) sources of emissions related to dairy farming in Dominican Republic. Carbon sequestration potential was estimated based on the estimates proposed by Henderson et al. (2015) and the project area.

Figure 1: Key sources of emissions



Contribution to emissions by production system: 73% (4.6 million tons CO2 eq.) of the total emissions from cattle are produced from animals reared in mixed systems and the rest, 27%

from grazing systems. Figure 2 illustrates the contribution of various sources of emissions to GHG emissions.

In all systems, methane from enteric fermentation is the dominant source of emissions; ranging from 73%-88%. In grassland-based systems N2O emissions also contribute an important share of emissions: 20% and 16% of emissions from beef and dairy cattle reared on grassland based systems, respectively. These N2O emissions in grassland based systems is due to the large amount of manure that are deposited on pastures.T