Enhancement of agro-ecological management system through promoting ecosystem-oriented food production

Part I: Project Information

GEF ID
10819

Project Type
MSP

Type of Trust Fund
GET

CBIT/NGI
CBIT **No**
NGI **No**

Project Title
Enhancement of agro-ecological management system through promoting ecosystem-oriented food production

Countries
Turkey

Agency(ies)
FAO

Other Executing Partner(s)
Ministry of Agriculture and Forestry (MoAF)

Executing Partner Type
Government

GEF Focal Area
Land Degradation

Taxonomy
Ecosystem-based Adaptation, Climate Change Adaptation, Climate Change, Focal Areas, Mainstreaming adaptation, Livelihoods, Climate resilience, Agriculture, Forestry, and Other Land Use, Climate Change Mitigation, Sustainable Forest, Sustainable Land Management, Land Degradation, Ecosystem Approach, Sustainable Pasture Management, Integrated and Cross-sectoral approach, Sustainable Agriculture, Improved Soil and Water Management Techniques, Income Generating Activities, Sustainable Livelihoods, Restoration and Rehabilitation of Degraded Lands, Community-Based Natural Resource Management, Carbon stocks

above or below ground, Land Degradation Neutrality, Land Cover and Land cover change, Land Productivity, Strengthen institutional capacity and decision-making, Influencing models, Convene multi-stakeholder alliances, Demonstrate innovative approache, Transform policy and regulatory environments, Beneficiaries, Stakeholders, Individuals/Entrepreneurs, Private Sector, SMEs, Community Based Organization, Civil Society, Trade Unions and Workers Unions, Academia, Partnership, Type of Engagement, Participation, Consultation, Information Dissemination, Awareness Raising, Communications, Education, Behavior change, Local Communities, Women groups, Gender Mainstreaming, Gender Equality, Gender-sensitive indicators, Sex-disaggregated indicators, Capacity Development, Gender results areas, Knowledge Generation and Exchange, Access and control over natural resources, Participation and leadership, Access to benefits and services, Innovation, Capacity, Knowledge and Research, Indicators to measure change, Learning, Adaptive management, Enabling Activities

Rio Markers

Climate Change Mitigation

Climate Change Mitigation 1

Climate Change Adaptation

Climate Change Adaptation 1

Duration

36 In Months

Agency Fee($)

66,825.00

Submission Date

6/2/2021

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount($)	Co-Fin Amount($)
LD-1-1	GET	455,318.00	3,700,000.00
LD-2-5	GET	248,107.00	2,300,000.00
	Total Project Cost ($)	**703,425.00**	**6,000,000.00**

B. Indicative Project description summary

Project Objective

To develop an integrated and comprehensive agro-ecological management strategy in Bolu, Turkey.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
Component 1. Improving Enabling Environment for sustainable agro-ecosystem management	Technical Assistance	1.1 Strengthened policies and strategic plans for promotion of the Agro-Ecosystem approach *Indicators:* *- A National strategic program to incorporate integrated agro-ecosystems approaches to food production into the national agricultural and food security policies.* *- Trained national officers on implementation of agro-ecosystems approaches (10 ministerial staff, 10 provincial / extension level staff and 45 smallholders: 15 females, 30 males) (Contributing to Core Indicator 11)*	1.1.1 National Agro-Ecological Management Strategy Developed. 1.1.2. Ministerial staff, extension officers and farmers are trained on agro-ecological approaches in food production.	GET	116,268.00	1,506,780.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
Component 2. Strengthening Agro-ecosystems and Sustainable Land Management (SLM)	Investment	2.1. Promoted agroecological practices, applying integrated agroecosystem and sustainable land management practices in Bolu province. *Indicators: ?* *- A provincial level integrated agro-ecosystem management plan developed for Bolu province.* -5,000 *ha of landscapes under sustainable land management in production systems (GEF Core Indicator 4.3). This indicator will contribute to achieve national LDN target with regards to improved productivity in agricultural land* *-50 ha of natural grassland / shrub land restored (GEF Core Indicator 3.3). This*	2.1.1. Current status of agricultural production and agroecosystem management practices analyzed, and priorities defined for improvement in Bolu province 2.1.2. An agro-ecosystem management and LDN plan developed and implemented in Bolu province 2.1.3. Selected agro ecological and LDN practices practices are demonstrated at district level 2.1.4. Training programs conducted on integrated agro-ecosystem approaches and LDN	GET	290,672.00	3,013,561.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
Component 3. Scaling up best practices, monitoring and evaluation	Technical Assistance	3.1 Best practices promoted and lessons learned disseminated Indicators: *-Number of knowledge exchange products* *(Minimum 5)* *-Number of rural network members* *(300) (Contributing to Core Indicator 11)* *-Number of trained farmers (200, 100 being females) (Contributing to Core Indicator 11)* *- Approximately 10% increase in income of the targeted 10 family farmers (baseline and target to be confirmed during the project preparation phase)*	3.1.1 Policymakers are informed on value of agro-ecosystem management and LDN 3.1.2 A rural network is established as an exchange platform for upscaling 3.1.3. Knowledge products are shared and disseminated widely 3.1.4. An exit strategy developed defining options for further upscaling of best practices 3.2.1 M&E strategy developed and implemented clearly defining the expected outcomes and implementation timeframe, and objectively the verifiable indicators and means of verification.	GET	232,537.00	934,204.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
				Sub Total ($)	**639,477.00**	**5,454,545.00**
Project Management Cost (PMC)						
	GET		63,948.00		545,455.00	
	Sub Total($)		**63,948.00**		**545,455.00**	
	Total Project Cost($)		**703,425.00**		**6,000,000.00**	

C. Indicative sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Recipient Country Government	Ministry of Agriculture and Forestry	In-kind	Recurrent expenditures	1,500,000.00
Recipient Country Government	Ministry of Agriculture and Forestry	Grant	Investment mobilized	4,000,000.00
GEF Agency	FAO	In-kind	Recurrent expenditures	500,000.00
			Total Project Cost($)	**6,000,000.00**

Describe how any "Investment Mobilized" was identified

Investment mobilized from the MoAF corresponds to programs and project implemented in the target region (eg. restoration activities) and resources allocated to SLM activities in the MoAF framework. FAO co-financing corresponds to several projects implemented by FAO Turkey that are aligned with the proposed project. Above co-financing sources were identified during the consultations with the government agencies and through baseline analysis.

D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
FAO	GET	Turkey	Land Degradation	LD STAR Allocation	703,425	66,825	770,250.00
				Total GEF Resources($)	**703,425.00**	**66,825.00**	**770,250.00**

E. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount ($)

50,000

PPG Agency Fee ($)

4,750

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
FAO	GET	Turkey	Land Degradation	LD STAR Allocation	50,000	4,750	**54,750.00**
				Total Project Costs($)	**50,000.00**	**4,750.00**	**54,750.00**

Core Indicators

Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
50.00	0.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.3 Area of natural grass and shrublands restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
50.00			

Indicator 3.4 Area of wetlands (incl. estuaries, mangroves) restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
5000.00	0.00	0.00	0.00

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
5,000.00			

Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)	333109	0	0	0
Expected metric tons of CO?e (indirect)	399731	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)	333,109			
Expected metric tons of CO?e (indirect)	399,731			

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Anticipated start year of accounting	2021			
Duration of accounting	20			

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)				
Expected metric tons of CO?e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	175			
Male	190			
Total	365	0	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

Part II. Project Justification

1a. Project Description

1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description);

According to the report of IPCC in 2013, Mediterranean Region is one of the most vulnerable regions to the impacts of climate change. Therefore, we need to build resilience in the region to address it. In doing so, it is crucial to conserve and use natural resources sustainably and efficiently. Food production purely depends on natural resources, i.e. water, land and many ecosystem services. However, particularly, increasing demand on food and yield losses due to the impact of climate change have resulted in expanding intensified productivity-oriented approaches in agriculture production systems requiring high level of input usage. These practices have disturbed natural resources, vital ecosystem functions, and negatively affected biodiversity. In addition, projected population growth ahead will generate unprecedented increase in food demand anywhere between 59% to 98% by 2050 that will bring about more stress factors in agro-ecosystems, along with knock-on effects on further environmental degradation overall and positive feedback to climate change. Recent IPCC special report on 1.5 ?C global warming clearly indicates that there would be prolonged droughts, more yield losses and more habitat losses occurring and this impact would be even higher with the 2 ?C global warming scenario. In accordance with another study, by 2100, unless rapid measures taken against climate change, expected temperature increase would be more than 3 ?C. As a result, from the best case to worst case scenarios, it is obvious that climate change will hamper food security and increase vulnerability in society and in the environment at an alarming rate. Thus, a significant transformation in agricultural policies and practices is urgent and necessary to move from productivity-oriented to ecosystem-oriented practices. This evidently requires a holistic approach to address challenges related to agro-ecosystem management for a sustainable agriculture.

Climate Baseline:

According to K?ppen?s climatic classification, Bolu has a temperate oceanic climate (Cfb). Its proximity to the sea characterizes the climate within the project area, with few extremes of temperature and abundant precipitation in all months[1][1]. Bolu's climate is warm during the summer time and cold temperate during the boreal winter. The average annual temperature in Bolu is 10.6?C. The warmest month, on average, is July with an average temperature of 20?C and the coolest month is January, with

an average temperature of 0.6?C. The highest recorded temperature in Bolu is 37.8?C and the lowest -22.2?C. The average annual rainfall in Bolu is around 1080 mm (ECMFW).

According to temperature and precipitation projections produced by the Turkish State Meteorological Service, a warming of 2-3?C during summer is projected in the Western Black Sea region (where the Bolu province is located) in the Representative Concentration Pathway (RCP) 4.5 scenario by 2040. Precipitation will decrease by approximately 20% in most parts of the country except for the Coastal Aegean and the east of Eastern Anatolia during spring precipitation by 2040 in the RCP 4.5 scenario. In the RCP8.5 scenario, warming is projected to be approximately 3?C, especially in the spring and summer seasons. Decreases in autumn precipitation are expected in the whole country while summer precipitation is expected to increase by up to 40% in all coastal regions except for the Western Mediterranean region by 2040[2][2].

Turkey has a total land area of 779,452 km2 and is surrounded by seas on three sides: the Black Sea, the Marmara, the Aegean and the Mediterranean. It is one of the biodiversity rich countries in the world providing vital resources for people?s food security. Therefore, it is a challenge for Turkey to protect and use this important wealth rationally for the welfare of the future generations. Due to its three biogeographic regions[3][3] and their transition zones, and because of its climatic and geographical features changing within short intervals of space due to its position as a bridge between two continents, Turkey has a character of a small continent from the point of biological diversity. Turkey has forest, mountain, steppe, wetland, coastal and marine ecosystems and different forms and combinations of these. The ecosystem mosaic of several different ecological characteristics provides nesting and breeding areas for thousands of fauna and flora species and their populations. Another factor that increases this wealth is that two of the four migratory routes of the West Palearctic Region pass above Turkey. This makes it an important place as a feeding and breeding area for birds. Invertebrates constitute the largest number among the identified living species. The total number of invertebrate species in Turkey is estimated at 19,000, of which nearly 4,000 species/subspecies are endemic. The total number of vertebrate species identified to date is about 1,500[4][4].

Nationally and globally, there is a need for solutions that combine the increasing demand for food with sustainable management of nature, the climate and the environment. Agro-Environmental Management will acquire a holistic understanding of agro-ecosystem processes and the interaction between agricultural production, nature and environmental management.

Agriculture in Turkey plays an important role in the degradation of individual components of the environment. Reduction of soil fertility, contamination of surface- and groundwater, reduction of biodiversity and damage caused by it are evident. The agrarian landscape does not provide the appropriate ecosystem functions. It is constrained to provide attractive conditions for livelihoods of the inhabitants of rural areas.[5][5]. The farmers are offered applicable and functional techniques, technologies and support where possible. However, these are not used and exploited in an appropriate and sustainable manner. Based on the analysis of business environment, the main challenges include i) the absence of the macro environmental management systems and strategies, ii) the gaps and weaknesses related to regulatory and institutional frameworks, iii) Insufficient experience and capacities among key agriculture stakeholders in developing and implementing improved cropland management/climate smart agriculture practices on the ground.

According to National LDN report[6][6], main drivers of land degradation are as follows ; (i)inappropriate ploughing, seeding and planting in high slopes and marginal areas and (ii) insufficient land rehabilitation works . In this regard, Turkey adopted the LDN targets such as (i) promoting and supporting soil conservation farming trough offering trainings to trainers and farmers on the subject. (ii) rehabilitating approximately 20,000 km2 of agricultural lands (iii) supporting soil and fertilizer analysis and controlled applications.

In this context, to achieve multiple national LDN targets, agro-ecosystem approach can be a solution and for development and implementation of the appropriate agro-environmental management strategies. For this purpose a methodology need to be developed and put into practice as a common tool for agro-environmental management. The methodology should develop, implement and test the most appropriate practices under farm conditions. Before the implementation, there would be a need to establish the environmental indicators to be evaluated before and after the introduction of the proposed systems. The results of the subsequent monitoring of the chosen environmental indicators would confirm the functionality and accuracy of the developed management tools that can also be utilized for the implementation of the current and prospective agricultural policies.

The project demonstrations will be held in Bolu Province. The main economic activities of Bolu are based on agriculture and animal husbandry, especially the majority of the population living in the rural areas earn their living from agricultural activities. The fact that agriculture sector has such an important place is due to the fact that industry is nod developed adequately and the landforms, vegetation and natural resources are very suitable for wide range of agricultural production[7][7]

According to the census data of the 2019, the general population of Bolu province is 316,126, the urban population being 233,379 and the rural population 82,747. The ratio of the population living in the city to the total population is 73.8%, the ratio of the rural population to the total population is 26.2%.

In Bolu, 15% of the total area is agricultural land. According to land capability classification, absolute agricultural area is 88,867 hectares. This area reaches 118.130 hectares when moderate soils that can be cultivated with suitable plowing for a few specific plant species. Irrigated farming is carried out on 34,336 ha and rainfed agriculture on 83,794 ha.

Land fragmentation is major problem in the arable lands. Grains constitute a large part of the cultivated areas and wheat, barley, corn, oats and paddy are the leading grains grown. Leguminous; beans, chickpeas and vetch, and sugar beet as industrial crops are also grown substantially. Potatoes, onions, garlic and animal beets are important crops especially for small holder farmers.

Poultry livestock sector has an important place in the provincial economy. Bolu meat products (white and pink meat) has a share of about 23% in Turkey with a total of 38,514,476 units / period with broiler 1,629,462 units / period. Although variable in certain periods, 119,221 ovine and 128,850 bovine animals are recorded in the recent agricultural inventory of the province. The amount of hives with bees is 17,331,263, with annual honey production capacity of 102,260 tons.

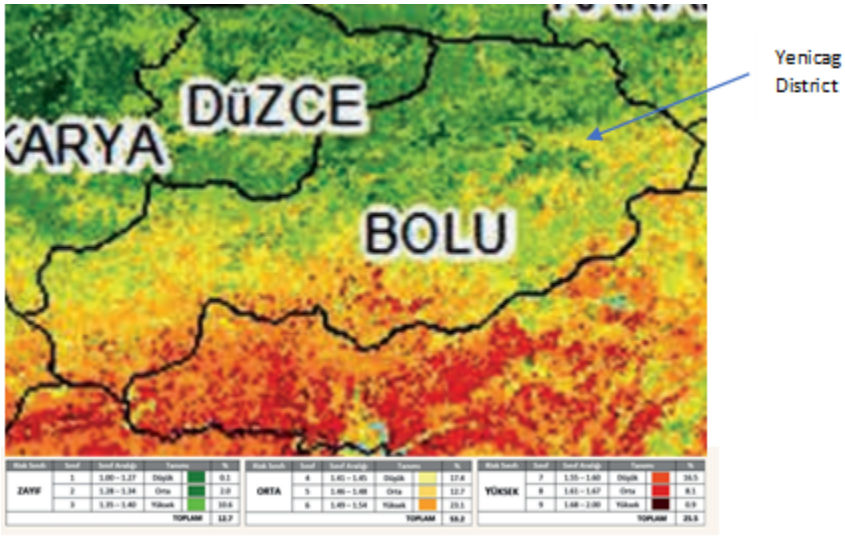
Apart from the intense agricultural activites in Bolu, the agricultural master plan (2011) and the latest report of Bolu province environmental status (2017) state that soil erosion occurs in 80% of agricultural lands. According to the recent studies on soil water erosion statistics in Turkey[8][8], in the evaluation made in terms of land use in Bolu province, it was determined that water erosion occurred in 20.90% of forest lands,51.71% of agricultural lands and 24.78% of pasture lands.

Land use and water erosion status in Bolu Province:

Land Use	**Area(ha)**	**Total Amount of Erosion (ton y?l-1)**	**Amount of Erosion per Unit Area (ton ha-1 y?l-1)**

Forest	559.658,02	584.210,22	1,04
Cropland	154.903,22	1.445.538,58	9,33
Grasslands	94.256,40	692.676,91	7,35
Others	10.112,14	73.309,88	7,25
Total	818.929,78	2.795.735,59	3,41

In line with the desertification risk map of Turkey[9][9], specifically south of Bolu Province, that is a part of Sakarya River Basin, is under moderate and high risk of desertification. This degradation not only affects the agriculture sector but also accelerates the loss of biodiversity.



For instance, Yenicaga district is dominated by rich organic soils (histosols) [10][10] which has high content of organic matter ranged from 12.5 to 91.5% that has high potential for soil carbon sequestration, but unsustainable land management practices accelerate the land degradation. Soil pollution is another main threat due to the Poultry Sector in Bolu Province. Indiscriminate dumping of

solid waste (manure) consisting of chicken manure into fields for agricultural production pollutes groundwater and surface water resources as well as soil pollution. [11][11],[12][12].

In this sense, the agroecology approach offers a desirable and affordable way to reduce soil erosion and pollution and restore agricultural lands that have been degraded by high-input agronomic practices.Sustainable intensification of production and conservation of natural resources in marginal areas can be possible only by scientific management of natural and local resources and knowledge in the most efficient manner[13][13]. In Bolu province, dissemination of agroecological farming practices will ensure optimization of combined and synergistic utilization of the different sources of organic matter (i.e. crop residue, cover crop, soil) for crop production. This is considered as an important element of the framework of environmental sustainability, and C storage which is an essential component to build the resilience of the system[14][14].

The overall objective of the project is to facilitate introduction of a holistic approach taking into account of interactions between environment, nature, climate change and agricultural practices for more sustainable and efficient management of agro-ecosystems focusing on Bolu province through this project, Turkey will be able to help make a difference by its strengthening national policies and capacities to address these interconnected challenges.

Barriers:

Barrier 1: Insufficient legal and regulatory and institutional framework

Current parameters in policy and practices regarding agro-ecosystem management do not build a foundation for sustainable environmental management in agricultural sector.

With respect to sustainable agriculture management, current policy, rules, and procedures present some important barriers that prevent stakeholders from developing and adopting new, more sustainable land management practices. One barrier is the inflexible nature of the existing policy framework, which for example, places a higher value on ?permanent? cultivation versus rotational cultivation. Current institutions and land registration mechanisms are bound by rigid definitions of agriculture land on the

one hand, forest land on the other, and may only be applied on land classified respectively. Consequently, existing policies do not recognize that, farmers may be cultivating permanent crops in forestland or protecting forests on agricultural land, sometimes in parallel and sometimes in rotation.

Secondly, inadequate land-use plans and maps at the local level is an important barrier to improved land management. Soil conversion in part because of the lack of clarity on land-use planning and policy at the local level is an important challenge. Furthermore, the true value of a healthy ecosystem services is not quantified or understood by local people. Ecosystem services of peatlands are not recognized or adequately valued. Inadequate linkages in land use policies and the absence of an overall policy for the sustainable use of land leads to conflicting land-use planning objectives.

In Turkey, there is a need to adopt a transdisciplinary approach to multifunctional agriculture in order to integrate the agro-ecological paradigm in legal regulation. This does not require a super-law that hierarchically purports to incorporate and supplant the existing legal fields; rather, it needs the creation of policies that progressively facilitate coordination among different regulations and disciplines related to the agricultural sector.

In order to overcome the insufficient regulatory framework, the project will strengthen policy and planning mechanisms to promote the Agro-Ecosystem approach (Outcome 1.1)

Barrier 2: Lack of ecosystem management perspective in agriculture

One of the significant barriers in ensuring healthy ecosystem and SLM is the lack of adequate livelihood opportunities for local populations living in rural areas. Time and again, it has been demonstrated around the world that with adequate economic incentives local communities would be willing to participate and engage in sustainable management of natural resources. Though at present, in the project region, communities are engaged in activities that provide them with certain level of income, this is neither sustainable nor adequate to prevent over- and unsustainable utilization of natural resources. There are no systematic efforts to develop the corresponding value chains for local benefits (as mentioned before, there are no management plans). This severely limits the economic benefits that can be derived by the local communities from the protected areas. The local existing business enterprises are small and weak, and do not have well functioning local organization or connection to market entities.

In this regard, the project will promote agro-ecological practices, applying integrated agroecosystem and SLM principles (Outcome 2.1). This would include development and implementation of community based natural resource management plans formulated with agro-ecosystem approaches in mind.

Barrier 3: Minimal experience among key agriculture stakeholders in developing and implementing improved cropland management and climate smart agriculture practices on the ground

In Turkey, with its large surface area and insufficient government resources and capacity, effective SLM strategies must be developed and implemented through partnerships among public institutions, local communities, private sector and civil society. These efforts must empower local stakeholders to take responsibility for results on the ground for improved cropland management. The trend is pointing in the right direction; farmers have been increasing their efforts to collaborate with each other, but a successful transition to more farmer-driven land management will require strengthened institutional capacity to improve the dissemination of agro-ecosystem management practices over large areas. There is need for capacity building in approaches of agro-ecosystem management and there is a great demand for ?proof of concept? in this regard. Turkey invests considerable amount of resources in research and development of agricultural technologies, but it could benefit from additional assistance in directing some of this targeted research to fill data and knowledge gaps with respect to climate smart practices. In particular, access to knowledge about Climate Smart Technologies[15][15] and LDN practices (such as soil conservation techniques) is limited. Improving this knowledge gap will help facilitating the needed transition to more agro-ecosystem based, resilient, sustainable and low-emission agriculture.

The ability of farmers to achieve SDGs is hampered by very low levels of capacity to plan and implement improved land management, particularly with erosion control and carbon sequestration objectives. In addition, improving the productivity of small holders while enabling smallholders to make the transition to ecosystem-oriented production will require the financing of new kinds of incentives that draw upon innovative solutions, such as diversified cropping, better varieties and rotations, pasture rehabilitation, climate friendly practices, and payments for environmental services.

The COVID-19 pandemic has affected a diversity of sectors, industries and territories in Turkey. At the national level, travels bans and circulation restrictions have affected the tourism, transportation, construction, retail and manufacturing industries. More specifically, COVID-19 has had negative consequences on agricultural production. The main challenges faced in the agricultural sector relate to

limited access to inputs and markets, difficulties in transportation of goods, difficulties accessing labor sources and limitations to extension services. These impacts have affected a variety of agri-food chains including crop production, livestock production and fisheries and aquaculture. On the crop production industry, the most notable impact is the reduction in the demand for a variety of agricultural products, mainly fresh vegetables, due to the closure of restaurants and hotels. On the livestock production industry, and in particular for the poultry sector, the closure of mass consumption points affected the income of poultry producers. Along each value chain, these impacts affect, in particular, small farmers who have limited capacity to cope with crises[16][16]. The Bolu province has experienced these and other similar challenges with the occurrence of the COVID-19 pandemic.

Therefore, the project will promote best practices and disseminate lessons learned through providing information to policy makers and farmers on the full value of agro-ecosystem approach. (Outcome 3.1)

2) The baseline scenario and any associated baseline projects,

The programs implemented by General Directorate of Agrarian Reform (GDAR), would form the main baseline for this project. The regular program of GDAR focuses on planning and management of the agricultural lands in Turkey. Under the department of Agro-Environment, and Natural Resource Protection, the GDAR has been working for the agro-ecosystem management.

Other agro-ecosystem and natural resource protection related baseline activities include:

Sustainable Land Management and Climate-Friendly Agriculture: The project objective is to improve sustainability of agriculture and forest land use management through the diffusion and adoption of low-carbon technologies with win-win benefits in land degradation, climate change, and biodiversity conservation and increase farm profitability and forest productivity. The project will achieve this objective by addressing three barriers: Barrier #1: Minimal experience among key government and civil society stakeholders in developing and implementing sustainable land management and forest management practices; Barrier #2: Famers under-exposed to innovative low carbon technologies for farming and farm waste management; Barrier #3: Inadequate enabling environment (legal, regulatory and institutional framework) and capacity for sustainable land management.

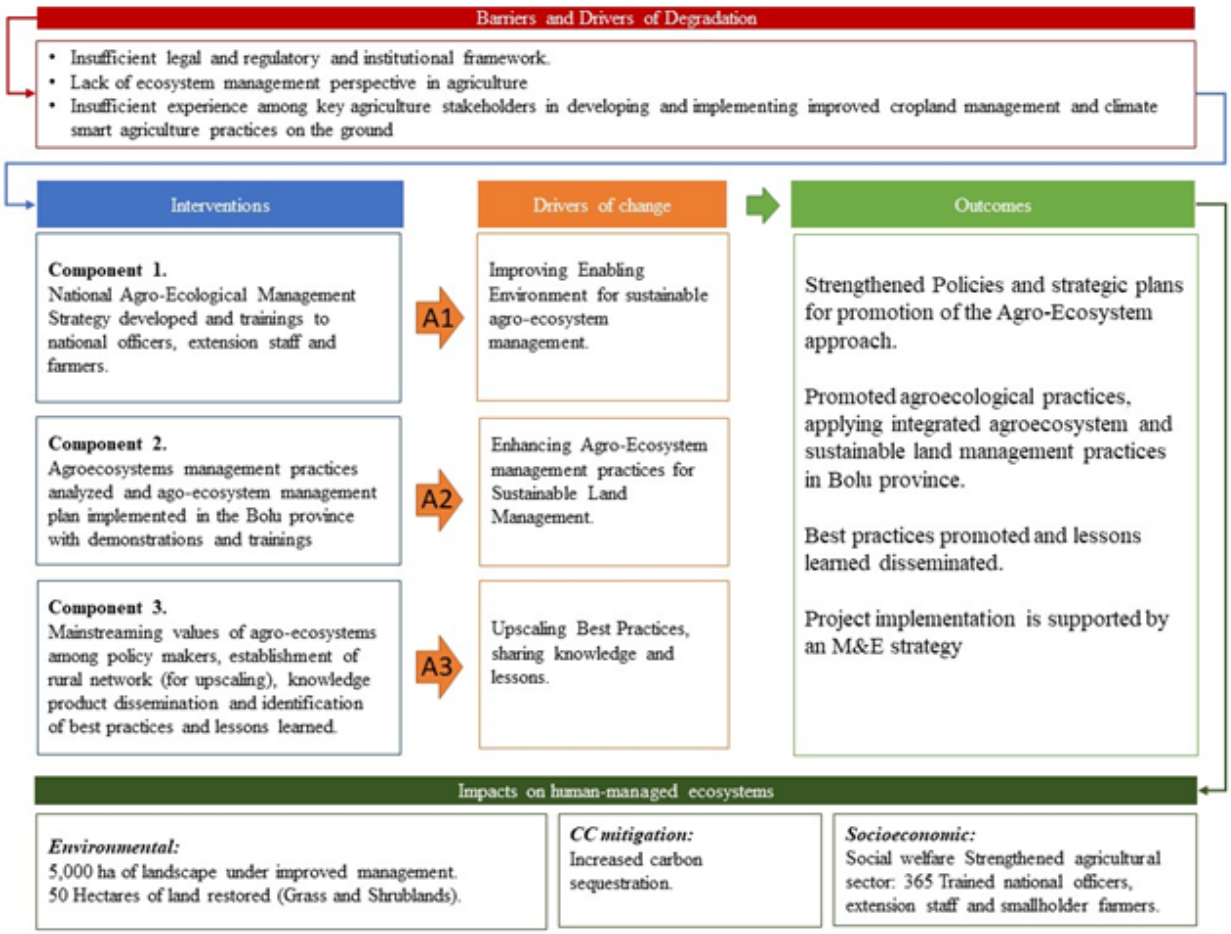
Agricultural Implications for Ecosystem Based Adaptation (EBA) to Climate Change in Steppe Ecosystem: The overall project GCP/TUR/063/EC aims to increase the resilience of societies and steppe ecosystems to the impacts of climate change. The first objective is to increase national capacity and awareness in preparation for the adoption of medium and long-term climate change ecosystem-based adaptation plans. The plans, focusing primarily on Anatolian steppe ecosystems will be gradually aligned with EU climate policy and legislation. The FAO Sub regional Office for Central Asia (SEC) has been implementing the project in close cooperation with the beneficiary institution, the Republic of Turkey?s Ministry of Food, Agriculture and Livestock (MFAL).

3) The proposed alternative scenario with a brief description of expected outcomes and components of the project;

Proposed approach and theory of change

The proposed project focuses on agro-ecosystem management interventions to enhance water and land governance at policy and local levels in the agriculture sector, and to mainstream biodiversity conservation within the Bolu Province, Turkey. This will ultimately assist in improving socio-economic wellbeing of the local community and mitigating the impacts of climate change. To improve the ecosystem in the region, it is important to understand the linkages between land, freshwater and biodiversity.

Agroecology is based on applying ecological concepts and principles to optimize interactions between plants, animals, humans and the environment while taking into consideration the social aspects that need to be addressed for a sustainable and fair food system. By building synergies, agroecology can support food production and food security and nutrition while restoring the ecosystem services and biodiversity that are essential for sustainable agriculture. Agroecology can play an important role in building resilience and adaptation to climate change. Sustainable Land Management (SLM) and other actions related to avoiding and reducing land degradation, as well as restoring degraded land, will be considered as integrated elements of agroecology and will be served by the project interventions.



Assumptions:

A1: Different Stakeholders are accounted for in the design of the management strategy. Government stakeholders participate to ensure that the management strategy is feasible and in line with national regulations.

A2: Stakeholders, including smallholder farmer, are willing to participate actively in the trainings and demonstrations and the different stakeholders commit to the implementation of the management plans. Local communities apply lessons learned in their practices and land management.

A3: Rural network targets key stakeholders and delivers key messages across multiple sectors about best practices and lessons learned from the project. The messages are up-scaled by stakeholders.

Project objective and components

The project will build on the baseline projects and add value to the existing agricultural management strategy by focusing on the interaction between the ecosystem management and agriculture sectors. The objective of the project will be to develop an integrated and comprehensive agro-ecological management strategy in Bolu province of Turkey with a focus on agricultural resources and land

degradation neutrality (LDN) to ensure the socio-economic well-being of local communities and the sustainability of natural resources. The integrated agro-ecosystem management approach resonates a transition in food systems that produce more, with more socio-economic benefits and with less environmental consequences through more efficient use of inputs.

GEF resources will be used to strengthen the enabling environment and showcase strategic practices to induce a change in the way natural resources are currently managed and land degradation is neutralized in Bolu Province. By ensuring local stakeholders are part of the decision-making processes, the proposed project will develop a model that ensures GEF-financed interventions are accepted by project beneficiaries. As project interventions show the benefits of improved management, best practices will be disseminated to ensure the proposed models are upscaled in the target area demonstrating the value of expansion in entire territories in Turkey, leading to improvements in the status of natural resources in the country.

Component 1. Improving enabling environment for sustainable agro-ecosystem management.

The integrated agro-ecosystem management is based on the construction and effective implementation of public policies and norms within the governance framework, under the principles of inclusive participation. The outcome of this component will be a strengthened enabling environment that is conducive to the application of agro-ecosystem management approach and LDN in Bolu, Turkey. The project will improve the management effectiveness of agriculture sector by establishing and implementing a collaborative agro-ecosystem management model (Output 1.1). It will support the engagement of all key stakeholders to strengthen collaborative management and establish a good governance model for the basin. During the project preparation, the existing agricultural policies and governance model will be reviewed and assessed to identify weaknesses and areas that need improvement. Based on this assessment, the agro-ecosystem management plan and governance model will be developed and implemented with the project

Output/Activity matrix for Outcome 1.1

Outputs	Proposed Activities
1.1.1 National Agro-Ecological Management Policy Developed	- Review existing agro-ecological management plans, programmes and governance model: These will be analyzed to identify specific weaknesses and areas that need improvement. This assessment will support decision making through establishment of multi-sectoral and stakeholders groups and identification of the barriers to implement Agro-Ecosystem Management. - Develop and draft a national agro-ecological management strategy based on the initial assessment and with an integrated and holistic approach.

1.1.2 Ministerial staff, extension officers and farmers are trained on agro-ecosystems approaches in agriculture	- Conduct trainings on implementation of agro-ecological management strategies and practices: This will include training of government staff *(10 ministerial staff, 10 provincial / extension level staff and 25 smallholders)* at the General Directorate and Provincial Division Directorate level, and other local stakeholders in best practices in agro-ecosystem management including biodiversity conservation. Training of trainers will be introduced as part of the provincial training programmes.
Indicators: *- A National strategic program to incorporate integrated agro-ecosystems approaches to food production into the national agricultural and food security policies.* *- Trained national officers on implementation of agro-ecosystems approaches (10 ministerial staff, 10 provincial / extension level staff and 25 smallholders)*	

Component 2. Enhancing Agro-Ecosystems and Sustainable Land Management

This component will ensure implementation of agro-ecosystem management approach at the local level in Bolu Province. Innovative approaches and techniques will be used to minimize the use of inputs in agricultural production on natural resources particularly on land resources ecological effectiveness. A handbook will be developed for ecosystem management including restoration and rehabilitation of the degraded landscapes and grasslands for sustainable agriculture and natural resource conservation. In the project site, at least 50 ha of the degraded grassland will be rehabilitated as a demonstration activity and farmer training venue. The areas to be restored and rehabilitated as landscape restoration sites will be identified during the project preparation phase through series of stakeholder consultations, field surveys, and utilization of local expertise. The activities under this component will be contributed and upscaled by using co-financing resources.

Output/Activity matrix of Outcome 2.1

Outputs	Activities
2.1.1 Current status of agricultural production and agroecosystem management practices analyzed and priorities defined for improvement in Bolu province	- Analyze agricultural production and existing local ecosystem based practices at provincial level in Bolu: This will include recommendations for development of farmer-centered approaches for the integration of conservation of the natural resource base (e.g. water, soil and biodiversity) and local actions needed to improve food security, rural livelihoods, agro-ecosystem management and Land Degradation.

2.1.2 Agro-ecosystem management and LDN plans developed and implemented at district level	- A pilot district level agro-ecological management and LDN plan paying attention to agro-product diversification and agroecological approaches, - Develop and implement agro-ecological management and LDN plan covering essential practices and activities such as the following: - Agro-ecological practices that can be adopted to local conditions (e.g. diversified crop rotations, integrated and biological pest and disease control, organic farming, support for agro-pastoral systems and agroforestry measures to minimize use of non-renewable energy etc.). - Promote sustainable land management practices for cultivated land (e.g. reduced tillage, strip cropping along contours etc.), -Conserve and promote local varieties, landraces and products to strengthen resilience of crop production, -Support measures for soil pollution control and loss of soil organic matter, -Strengthen market linkages between the small-scale farmers (family farmers) and local and regional markets, to support rural livelihoods through sustainable production of food and goods based on agrobiodiversity, - Identify and support women centric value chains to improve rural livelihoods

2.1.3 Selected agro ecological and LDN practices are demonstrated at field level in a selected district	- Conduct demonstrations of evidence-based innovative ecosystem oriented agricultural production technologies at selected district identified in Outcome 2.1.2. The demonstrations will include (to be confirmed, prioritized and specified during project preparation): - Improved land and soil management and LDN, - Develop a strategy and provide training on rehabilitation and management of pastures in the Bolu Province - Improved varieties and alternative crops that improve soil fertility and help climate change adaptation - No / reduced tillage or mulching practices as conservation agriculture practice - Supporting improved utilization of manure produced in poultry sector: This will be facilitated through preparation of a feasibility report and potentially establishment of a small farm-type biogas plant in the project area depending on the assessments and budget availability. These will be clarified during the PPG, - Ensuring effective fertilizer / manure use and management through raising awareness of the farmers and demonstrations on the improved use of fertilizer / manure distribution machines.
2.1.4 Training programs conducted on integrated agro-ecosystem approaches and LDN	Conduct practical farmer trainings on the agroecosystem based practices proposed on outputs 2.1.2 and 2.1.3.

Indicators: ?

- A provincial level integrated agro-ecosystem management and LDN plan developed for Bolu province.

-5,000 *ha of landscapes under sustainable land management in production systems (GEF Core Indicator 4.3). This indicator will contribute to achieve national LDN target with regards to improved productivity in agricultural land*

-50 ha of natural grassland / shrub land restored (GEF Core Indicator 3.3). This indicator will contribute to achieve national LDN target to improve productivity in pastureland.

- Field demonstrations on agro ecological practices (Demonstrations in 4 sites)
-Training conducted for at least 10 extension staff (and 100 smallholder farmers (40 women and 60 men) through demonstrations

Component 3. Scaling up best practices, Monitoring and Evaluation

This component will focus on both i) wide scale sharing of best practices and ii) the development of a monitoring and evaluation mechanism to facilitate monitoring of the activities and ensure that the project?s progress is tracked involving periodic evaluations to facilitate adaptive, results-based management. Similarly, project results, key lessons learnt, and achievements will be documented and disseminated for replicability and scaling up.

Output/Activity of Outcome 3.1

Outputs	Activities
3.1.1 Policymakers are informed on value of agro-ecosystem management and LDN	- Conduct high level workshop to inform the policy makers and other stakeholders on the full value of agroecology, LDN and ecosystem-oriented production
3.1.2 A rural network is established as a knowledge exchange platform for upscaling	- Identify stakeholders and farmers to establish a rural network as a knowledge exchange platform - Exchange relevant knowledge products through the platform - Conduct cross-provincial workshops with additional communities to facilitate scale-up
3.1.3. Knowledge products are shared and disseminated widely	- Develop and disseminate the following: - National strategy on agro-ecosystem management - Guide on effective and responsible use of fertilizer and water resources - A guide on biodiversity conservation - A guide on integrated management of pests and pesticide life cycle - Project visibility materials
3.1.4. An exit strategy developed defining options and strategies for further upscaling of best practices	- Based on the joint supervision at mid-term of the project cycle, prepare a sustainability plan, for the way forward, with the key stakeholders.

Indicators: *-Number of knowledge exchange products (Minimum 5)* *-Number of rural network members (300)* *-Number of trained farmers (200 farmers, 100 female)* *-Approximately 10% increase in income of the targeted 10 family farmers (Target to be confirmed during the project preparation phase)*

Output matrix of Outcome 3.2

3.2.1 M & E strategy developed with clearly defining the expected outcomes, expected implementation timeframe, and objectively verifiable indicators and means of verification	- Facilitate the following: - Project monitoring - Final Evaluation

Opportunities to mitigate impacts, deliver GEBs and contribution to green recovery and building back better

This project will build on the efforts from the Turkish Government to build back better considering that the Agricultural Service is seen as one of the key contributors to post COVID-19 economic recovery. Implementation of the improved agro-ecosystem management and natural resource protection approaches and activities will be essential elements of these efforts. This project will take the lessons learned from the current experiences accumulated during Covid 19 pandemic and build on them to promote sustainable practices for the agriculture sectors. The project will partner with the private sector, local communities and stakeholders to implement and expand good practices in the province. These activities will be a part of a Bolu Agriculture Sector Master Plan that will contribute to the conservation of biodiversity and ecosystem services and achieve Turkey`s LDN targets trough the restoration of at least 50 ha of the degraded land. SLM practices will be upscaled and promoted to prevent soil degradation, increase vegetation cover, improve the natural resource management and conservation efficiency, and reduce pollution caused by agriculture. These efforts will also contribute to minimization of soil erosion, restoring ecosystem services and biodiversity and in parallel, improving the livelihoods of small farmers who will directly benefit from these practices.

4) Alignment with GEF focal area and/or Impact Program strategies; incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing;

The proposed project builds on and complements the baseline projects discussed in section 2 above. The GEF funded activities will address the proximate drivers and underlying causes of land degradation as well as capacity constraints and policy barriers to mainstreaming agro-ecosystem management and SLM for sustainable agriculture. The objective of the GEF funded alternative is to build the capacity of smallholders and stakeholders to improve land condition by adopting agro-ecosystem management policies and practices.

While the Ministry of Agriculture and Forestry of Turkey is currently developing multiple activities that target restoration and SLM activities, an updated national action plan for agro-ecosystem management is currently lacking. In this sense, this project is of crucial importance to develop this strategy, pilot its implementation and develop the needed capacity to upscale its implementation to transform the food system through dissemination and implementations of best practices of agro-ecosystem management.

In particular, the project will build on the baseline and address the above-mentioned barriers as follows:

Outcome 1.1 will address the Insufficient legal and regulatory and institutional framework by strengthening policies and strategic plans for the promotion of the Agro-Ecosystem approach. The project will finance the development of a national agro-ecological strategy and trainings for capacity building on agro-ecosystem approaches.

The second barrier 2, about the Lack of ecosystem management perspective in agriculture will be addressed with the outcome 2.1 to promote agroecological practices, applying integrated agroecosystem and sustainable land management practices in the Bolu province. With this outcome, the project will finance the analysis of the current status of practices of agroecosystem management, develop agro-ecosystem plans, demonstrate selected practices in the field, and provide training programs on these approaches.

Finally, Outcome 3.1 will address the last described barrier: Minimal experience among key agriculture stakeholders in developing and implementing improved cropland management and climate smart agriculture practices on the ground. With this outcome, best practices will be promoted, and the project

knowledge will be disseminated so that policymakers are informed on the value of agro-ecosystem management and agro ecological practices in food production.

The project is aligned with the following specific objectives from the Land Degradation Focal Area:

•LD 1-1 Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management (SLM): Component 2 of the project address this objective as it aims to promote SLM practices to strengthen agro-ecosystems and improving the flow of ecosystem services.

•LD 2-5 Create enabling environments to support scaling up and mainstreaming of SLM and LDN: Component 1 of the project considers outputs to strengthen the national capacities to improve the management of agro-ecosystems and Component 3 aims to scale up these practices and sharing the knowledge generated by the project.

5) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF);

This project will focus on developing an integrated and comprehensive agro-ecological strategy in the Bolu province. This strategy will contribute to achieve sustainable natural resource management in production landscapes as a response to the threats described above. In parallel, the project will work to conserve Turkey?s agricultural ecosystems and achieve sustainable livelihoods. This project?s long-term solutions will foster sustainability and conservation of ecosystems by developing the national strategy document and will help to upscale the lessons learned and good practices to existing agricultural areas. In addition, the agro-ecological strategy will generate Climate Change adaptation benefits that are inherent to the type of intervention[17][17].For example, the reduction of the vulnerability of agricultural systems by increasing response capacity (as part of the implementation of the agro-ecological strategy, producers can adjust the biophysical, ecological, and socioeconomic processes to adapt to the adverse impact of climate change).

The project is expected to generate the following Global Environmental Benefits (GEB):

- ? 50 hectares of natural grass /shrubland restored (Core Indicator 3.3) Area of natural grass and shrublands restored
- ? 5,000 hectares Area of landscapes under sustainable land management in production systems (Core Indicator 4.3)
- ? 333,109 tCO2eq Carbon sequestered or emissions avoided in the AFOLU sector (Core Indicator 6.1)
- ? 365 direct beneficiaries (175 Female and 190 Male) (Core Indicator 11)

6) Innovation, sustainability and potential for scaling up.

Innovativeness: In the context of Turkey, the project is innovative as it is implementing approaches that are new to the country. The development and implementation of agro-ecosystem approach will become more integrated in national agriculture sector. In the future, ecosystem services (including biodiversity) would be an integral part of agricultural management. Other main aspects of the project have been tried elsewhere successfully and are not innovative.

Sustainability and potential for scaling up: The institutional and local level capacities built, the governance models? setup, and livelihood activities implemented will ensure the overall sustainability of the results achieved through this project. The new national level strategy on agro-ecological management and piloting of formalized ecosystem-oriented production under this project, would together provide the policy directive and on the ground, experience facilitating the scaling up of improved throughout the country. The strategy will be developed in consultation with the relevant stakeholders and in agreement with the government offices. Thus, the provisions will be in line with the national strategies and priorities. These are expected to be taken into account in the subsequent development plans to guarantee the sustainability of the benefits from the project. Communication with the relevant stakeholders will be an essential part of the project activities. In this manner, the active participation of the government will be key to upscale to good practices that result from the implementation of the project.

The activities in the context of agro-ecology and sustainable land management would be in synergy with other similar projects, this would enable the easy scaling up of piloting activities undertaken. Also, at the national level, there is a clear articulation of need to conduct valuation of ecosystem services in productive croplands (specifically biodiversity), and to develop integrated management systems (including improved food production chain development for enhanced livelihoods); piloting activities

under this project would provide a blueprint to scale up the piloted activities in the country under their regular programmatic efforts. Furthermore, it applies an integrated approach of biodiversity conservation, sustainable production systems and landscape restoration, supporting both environmental and food security, and introduces the concept of Land Degradation Neutrality in support of SDG 15.3 as well as national restoration targets.

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[1] K?ttek, 2006. World Map of thw K?ppen-Geiger climate classification. Data accessed on: 16/06/2020. Available at: http://koeppen-geiger.vu-wien.ac.at/pdf/Paper_2006.pdf

[2] Republic of Turkey (2018). Seventh National Communication to the UNFCCC. https://unfccc.int/documents/199646

[3] These are the Euro-Siberian, Mediterranean and Iranian-Turanian

[4] https://www.eea.europa.eu/soer/2010/countries/tr/nature-protection-and-biodiversity-state

[5] FAO. 2018. Biodiversity of Turkey. Contribution of Genetic Resources to Sustainable Agriculture and Food Systems. Ankara. 222 p. Licence: CC BY-NC-SA 3.0 IGO

[6] https://knowledge.unccd.int/sites/default/files/ldn_targets/turkey-ldn-country-report.pdf

[7] https://www.kentselstrateji.com/wp-content/uploads/14_Bolu_vizyonplani_small.pdf

[8]https://www.tarimorman.gov.tr/CEM/Belgeler/yay%C4%B1nlar/yay%C4%B1nlar%202020/SU%20EROZYONU%20ISTATISTIKLERI%20KITAP%20YUKSEK_1.pdf.pdf

[9]https://www.tarimorman.gov.tr/CEM/Belgeler/yay%C4%B1nlar/yay%C4%B1nlar%202018/TEKNIK%20OZET%20TR.pdf

[10] https://link.springer.com/article/10.1007/s00254-008-1206-3

[11] https://webdosya.csb.gov.tr/db/bolu/icerikler/bolu-il--2017-yili-cevre-durum-raporu-20181009094740.pdf

[12] https://www.tarimorman.gov.tr/SGB/Belgeler/Master/bolu.pdf

[13] https://www.frontiersin.org/articles/10.3389/fenvs.2014.00001/full

[14] Edmundo Barrios, Haekoo Kim, Teodardo Calles, 2021, Chapter 45- Agroecological farming, RECARBONIZING GLOBAL SOILS A technical manual of recommended management practices, page 572-585 http://www.fao.org/3/cb6595en/cb6595en.pdf

[15] In the context of this project, Climate Smart Technologies refer to a variety of actions that contribute to climate change adaptation and mitigation. For example using drought tolerant varieties for climate change adaptation and implementing sustainable land management practices (e.g improved tillage, crop rotation) to increase land quality and reduce carbon emissions.

[16] https://www.tr.undp.org/content/turkey/en/home/library/poverty/covid-19-impact-assessment.html

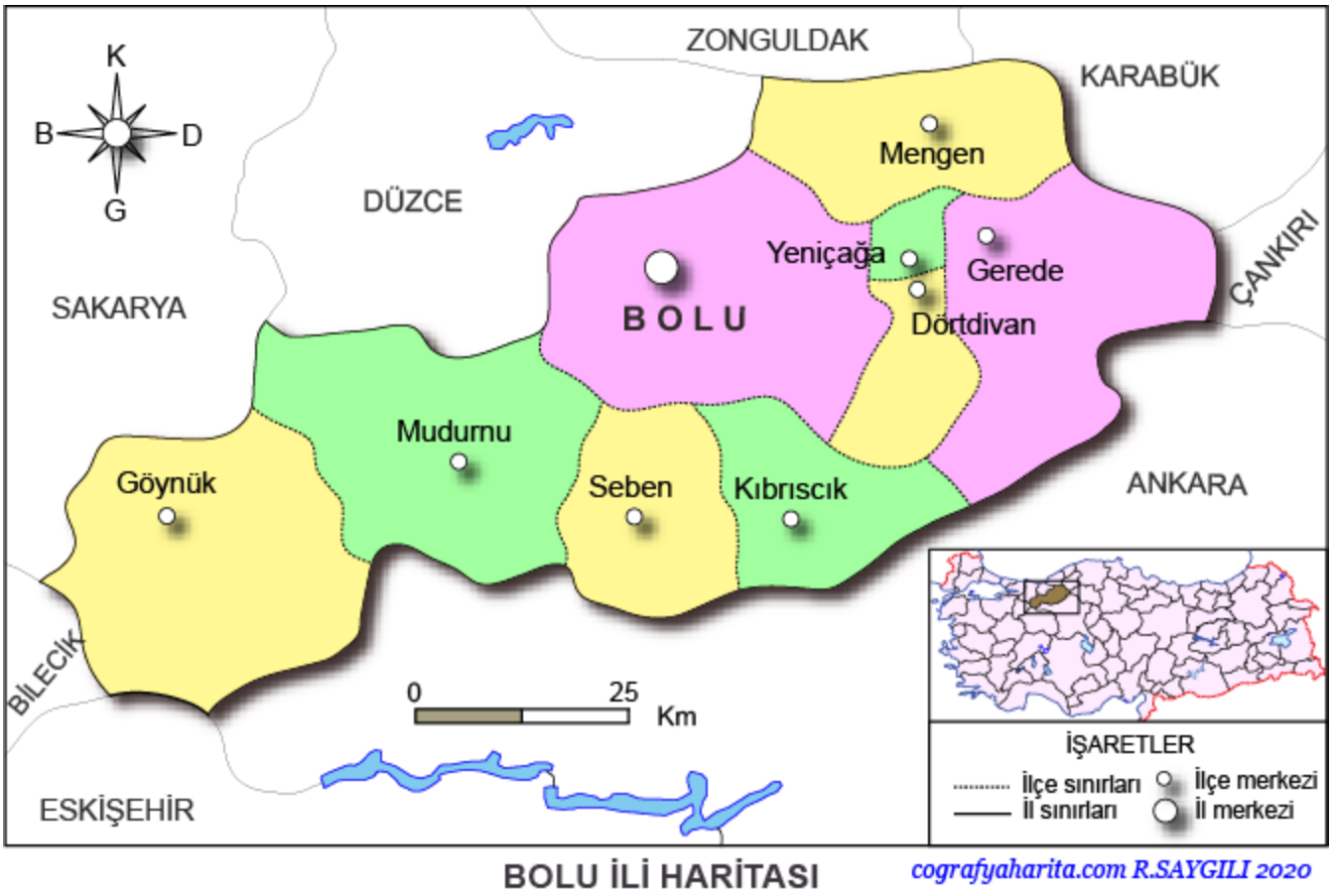
[17] http://www.fao.org/3/cb0438en/CB0438EN.pdf

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.

Bolu province is located in the Black Sea Region and its width is 832.339 ha. The average altitude is 1,000 m. The Western Black Sea climate is seen in the northern parts, and the influence of the Central Anatolian Climate is felt in the south. In addition to this general situation, local scale topographic differences (from 750 to 200 m) are also an important climate factor. Mean annual precipitation is 549 mm and mean annual temperature is 10 ^{o}C

It is located in the middle of major cities such as Ankara and Istanbul, and is 11th in the socio-economic development ranking in Turkey. The most important branches of industry; food (poultry), woodworking and forestry products, mineral goods and metal industry, heat glass and tempered glass industry, production of electrical devices, woven apparel and leather sectors.



2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

Consultations were held in July 2019 and September 2020 during project identification. The consultation meetings were organized by FAO and Ministry of Agriculture and Forestry, the participants joining from governmental organizations, local authorities and civil societies. The following stakeholders participated during these consultations:

Type of stakeholder	Name
Governmental Bodies	General Directorate of Combat Desertification, General Directorate of Research and Policy, General Directorate of Natural Conservation and National Park, Bolu Provincial Directorate of Agriculture
Academic Research Institutes and municipalities	Ankara University, Bolu Izzet Baysal University, Bolu Municipality
Civil Society Organizations and local cooperatives	Soil Science Society of Turkey, Bolu Cooperative Union, Bolu Provincial Poultry Meat Producers Association

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement

In addition to the consultations held during project identification, detailed consultations will be held during the project preparation phase with these and other stakeholders at the national and regional level, in particular with local communities and especially women, to refine the detailed project interventions. The main stakeholders and their potential role in project design and implementation are summarized below.

Stakeholder	Type of engagement	Potential engagement during Project implementation
Ministry of Agriculture and Forestry (MoAF)- General Directorate of Agrarian Reform (GDAR)	Lead Executing Agency	Lead Executing Agency

Stakeholder	Type of engagement	Potential engagement during Project implementation
Other Directorates under MoAF and other relevant govt. Ministries and respective DirectoratesCentral units of the Ministry of Agriculture and Forestry (MoAF) including General Directorate (GD) of Agricultural Reform, GD of plant Production, General Directorate of Nature Conservation and National Parks, General Directorate of Water Management, General Directorate of Combat Desertification	Direct beneficiaries	Executing Partners(Steering Committee members) linking closely with national and landscape-level stakeholders on project implementation, knowledge management, and upscaling and replication. UNCCD focal point. Project design is expected to address multi-sectoral coordination issues, and to effectively design the relevant project outputs. All relevant government partners will be consulted and engaged effectively for inputs.
Regional and sub-regional Directorates and Province Directorates of MoAF	Direct beneficiary	Local-level executing partners, and will play a key role in building on-the-ground project baseline information and designing the project components
Academic and research institutes, Municipalities	Provision of information and Technical Advisory	Expected to play a key role in capacity building and information management activities will provide inputs in developing the relevant project activities
CSOs and local cooperatives (e.g. Irrigation Unions, Farmer Unions)	Organizing consultations and providing inputs for project design.	Will play a vital role in organizing local level consultations and providing feedback and inputs into the project design
Private sector	Secondary-Beneficiary	Consultations will be held with private sector parties relevant to the value chain improvement activities, enable the design of the corresponding project output
Cooperatives	Direct beneficiary	Beneficiaries of project interventions and key organizations for the implementation of Outcome 2.3 on value chains and related capacity development.
Local communities (Women and men farmers, land users etc.)	Direct beneficiaries.	Will be involved in all relevant consultations, specifically in understanding their perspectives in the contexts of threats to the forests and involvement in the project implementation

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

The main way gender issues will be incorporated into project preparation is through the adoption and use of participatory approaches in all important decisions and activities under the project preparation phase. Women?s specific situation will be considered during project design and their needs reflected in project activities.

The project design will also ensure that adequate representation of both genders is achieved in all project activities. At least 50% women community members will actively involve in project activities. Gender-sensitive indicators such as the number of women beneficiaries, women?s training needs, type and efficiency of women?s agricultural and grazing production will be identified and incorporated into the project?s monitoring mechanism. Reporting on project activities, outputs and outcomes will be disaggregated by gender (where applicable).

Gender is central to the Food and Agriculture Organization of the United Nations? (FAO?s) mandate to achieve food security for all by raising levels of nutrition, improving agricultural productivity and natural resource management, and improving the lives of rural populations (FAO 2013, p.1). The goal of FAO?s Policy on Gender Equality is to achieve equality between women and men in sustainable agricultural production and rural development for the elimination of hunger and poverty. FAO is working with countries, other UN agencies, civil society organizations (CSOs) and bilateral and private sector partners to make progress toward achieving objectives by 2025.

The GEF recognizes that, for its project interventions to achieve their global environmental objectives, particular attention should be paid to enhancing both women?s and men?s contributions. The GEF was one of the few international financial facilities to develop an independent public participatory policy, including provisions on gender issues. In addition, the GEF Operational Strategy provides ten operational principles and overall direction to the GEF focal areas to maximize global environmental benefits. Principle 7 relates directly to public participation, including gender, and states that ?GEF projects shall provide for full consultation with, and participation as appropriate of, the beneficiaries and affected groups of people? (GEF 2008, p.7,15,16).

Gender equality is protected by international and national legal regulations in Turkey. In 1985, Turkey signed and ratified the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), and in 2000, the country signed the Additional Protocol to CEDAW. In addition, in 1995, the Turkish government signed the Beijing Declaration of the Fourth World Conference on Women, and committed itself to its Action Plan.

In Turkey, the Constitution is the fundamental document regulating and guiding all issues relating to gender equality. In addition to the Constitution, the main legal documents regulating gender policy are: the Turkish Civil Code, Labour Law and the Penal Code. Mainly the Ministry of Family, Labor and Social Policy and other governmental bodies are jointly working on women?s empowerment in their socio-economic lives. A Directorate for women?s rights and gender equality was established in 1990: the General Directorate of Women?s Status, (Kad?n?n Stat?s? Genel M?d?rl???, KSGM). Its main mission is to promote gender equality in Turkey by developing programs and policies to reduce all forms of gender-based discrimination. On 8 June 2011, the KSGM was restructured as one of the main units under the Ministry for Family and Social Policies. In addition to the KSGM and the Ministry for Family and Social Policies, there are a number of platforms composed of governmental units, civil society actors and stakeholders that are working in the field of gender equality policy.

According to, a new measure, 2017 Gender Development Index (GDI), Turkey?s GDI value is 0.755 out of 164 countries. This rate placing the country into Group 4, which covers medium-low equality in Human Development Index achievements between women and men.

Another tool reflecting gender situation is Gender Inequality Index (GII). Turkey ranks 69th out of 189 countries in terms of gender-based inequalities in three dimensions ? reproductive health, empowerment and economic activity. The GII can be interpreted as the loss in human development due to inequality between female and male achievements in the aforementioned three dimensions (UNDP, 2018). According to UNDP data, female participation in the labor market is 32.4% compared to 71.9% for men. Additional GII data is structured as follows:

	GII value	GII rank	Maternal Mortality Ratio	Adolescent Birth Rate	Female seats in parliament %	Population with at least some secondary education %		Labour force participation rate %	
						Female	Male	Female	Male

Turkey	0.317	69	16	25.8	14.6	44.9	66.0	32.4	71.9
Europe and Central Asia	0.270	-	24	25.5	20.7	78.4	85.9	45.5	70.3
High HDI	0.289	-	38	26.6	22.3	69.5	75.7	55.0	75.5

The main income generating activities exit in Bolu are agriculture and livestock. According to the Agr?culture Sector Master Plan 2002, the rate of female employment in the agriculture sector is 84.7% while this rate for the male is 37.4%. According to data of General Directorate of Turkish Employment Agency (ISKUR), In 2015, the unemployment rate was 9%, of which 54.8% were women and 45.2% were men.

Women play an essential role in agricultural production, and make up a substantial part of the agricultural labour force. However, a large number of rural women typically work as unpaid family workers, performing tasks both within their households and household plots. According to ILO?s estimates sited by the World Bank, the rate of female family workers is 25.1% and this rate is 4.3% for males. Their contribution is invisible in official statistics and is often undervalued by women themselves as perceived as a continuation of their natural role.

Men who work in agriculture have better access than women to business support services, training and education, which contribute to better work opportunities and higher pay. Women in rural areas have less access than men to productive resources and opportunities and thus lesser income. The gender gap is found in the forms of assets, inputs and services ? land, livestock, labor, education, extension and financial services, and technology ? and it imposes costs on the agriculture sector, the broader economy and society as well as on women themselves.

With the aim of identifying women?s specific needs, problems and coping strategies in the context of project objectives a gender analysis will be conducted during the PPG process. Gender analysis will be a part of the socio-economic analysis in the project site and consists of different levels. The research process will be holistic. That means each level each other and all levels should be considered together during data collection, coding and data analysis.

District level local authorities and village heads (mukhtars) as community leaders will play a key role in reaching women farmers. Women household members of community leaders will gather a small

group of women community members. Focus group discussions and in-depth interviews will be conducted with at least 50 women. The research will be conducted in women?s houses. One woman will be interviewed as a representative of a household. Men community members also will be interviewed. Village coffee houses will be the research place for men community members. On the other hand, local businesses such as restaurants, if any, will be other resources to reach community members. The public announcement can be used to reach more community members if needed or approved by local authorities.

Women?s participation in the decision-making process and their full engagement in project activities will be ensured through specific arrangements. The project will ensure that half of the beneficiaries are women (51%) and their conditions will be considered to organize activities such as specifically designed training in line with their needs, flexible training hours, appropriate timing (considering agricultural seasons) of project activities, their close interaction with women project staff and childcare services (if and when possible). In addition, at least 30% of beneficiary women participate in decision processes during the project.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes

closing gender gaps in access to and control over natural resources; Yes

improving women's participation and decision-making; and/or Yes

generating socio-economic benefits or services for women. Yes

Will the project?s results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

Private sector will be invited to join on the development and establishment income generation activities and field activities not only in the awareness raising but also will be in enabling the design the project outcomes. The project also will contribute to awareness increase in the private sector in terms of agroecological management.

Representatives of the private sector, mainly land users and women and men farmers including grazing families will be the main partners of this project. They will be direct beneficiaries in the implementation of environmentally friendly agricultural activities, alternative income generation activities, and not only increase awareness but also will be in enabling the design of the project outcomes. Equal participation of women farmers will be ensured.

There are a remarkable number of individuals industries (agricultural and others), organized industry district ones and other small enterprises in several sectors as representatives of the private sector. It is inevitable to keep in touch with them or their representatives, especially for wastewater related issues. Moreover, landowners and farmers are our key partners for agricultural practices and dissemination of innovative approaches especially firstly in Bolu. During the PPG phase, the representatives of relevant industries will be consulted to ensure their involvement and contribution to the project activities.

In addition, cooperation with agricultural producer unions, associations and cooperatives will be explored during the Project implementation. These stakeholders are key to liaise with small farmers, and ensure the sustainability of the project. Besides addressing knowledge gaps, these organizations can help farmers to access key markets for agroecological products, access to better inputs for sustainable production and connect with stakeholders willing to invest and finance small production businesses and projects.

Additional opportunities for engaging the private sector, including potential stakeholders interested in investing and granting financing opportunities for small farmers will be further explored during PPG

5. Risks to Achieving Project Objectives

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

The following potential risks and mitigation measures have been identified. These will be reviewed and updated during the project preparatory (PPG) phase.

Risk	***Rating***	***Mitigation Measure***

Decrease in project support from the government	Low	The government authorities have fully backed the development of this concept and all concerned government stakeholders will be fully involved in project preparation and implementation to ensure continued support. Moreover, the project fits into national development and environmental priorities.
Low institutional capacity at national and local level hampering project progress	Medium	To mitigate this risk, the project design incorporates institutional capacity building measures taking into account specific needs of stakeholders
Project activities are implemented in a compartmentalized fashion with little integration and coordination with all relevant government departments	Low to Medium	Under component 1, a multi-sectoral coordination and governance model will be established, within and beyond the project context, the model will ensure coordination between all relevant government actors. Consultations have been held with all relevant government departments and this process will continue throughout the project preparation and subsequent implementation to ensure that the project progress and impacts generated do not happen in isolation.
Natural changes in ecosystems and associated agrobiodiversity due to gradual changes in climate and extreme weather events.	Unknown	The monitoring system developed in the project will identify changes in ecosystems, specifically in relation to agricultural products, that are likely to be linked to climate change, so that remedial actions can be taken.
Reluctance of local population to involve and participate effectively in the project activities	Low to Medium	Local communities (through community and civil society representatives) will be involved during the project activities, especially the sustainable impacts generated, will ensure continued interest and participation of local communities

Impacts from Climate Change and other severe weather related events.	Medium	Climate Change may impact forest ecosystems and agricultural productivity in Turkey. First, increase in temperatures will significantly affect the species composition and the functions of forests and increase risk of fires and disease. In addition, climate change will have an impact on the length of plant growth season, which will be shortened due to increasing growth day rate from increasing temperatures. Risk of droughts should be considered too. To mitigate these impact from Climate Change, the project will consider these risks and use climate data during the development of the Strategy for the Agro-Ecosystem Approach. In addition, the activities that promote agroecological practices, will take into account these information too. In this case, the project will consider projections for the reduction of plant growth seasons. The project may also consider using climate resilient practices, using adapted varieties (for example more drought tolerant crops and varieties) and other practices that contribute to climate change adaptation.

Risk related to COVID-19 pandemic	Medium	As explained in the systems description above, the COVID-19 pandemic has affected agricultural production significantly. The main risks associated to the pandemic are: Limited access to inputs and markets. Difficulties in transportation of goods Difficulties accessing labor sources Limitations to extension services Reduction in the demand for agricultural products to to closures. To mitigate the above mentioned risks, during project preparation, the evolution of the pandemic will be closely monitored to allow a project design resilient to the impacts of this and other similar events. The project will consider the evolution of the pandemic in the design of all its activities. And would take into account risk mitigation measures to address mobility limitations, market restrictions and enhance demand for the agricultural production resulting from the project strategy. If new variants of COVID-19 prevail, there may be possibility that these risks persist, and that travels, and collective activities suffer from restrictions. In such cases, risks will be mitigated by avoiding as much as possible face-to-face meetings. When necessary, face-to-face meetings and consultations will be held taking into account of all biosecurity measures in line with national and FAOs standards and regulations. Furthermore, more effective use of digital tools will be explored in delivery of trainings and other services.

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

General Directorate of Agrarian Reform under the Ministry of Agriculture and Forestry will be the lead executing agency to manage and deliver the project activities with the following institutions. First, there will be a Project Steering Committee (PSC) to advise on policy decisions and coordinating inter-ministerial support; members of the PSC will be drawn from the line ministries and may include other representation as required. Secondly, the Project Management Unit (PMU) led by a Programme Coordinator will carry out activities on a day-to-day basis, oversees implementation and performance against annual work plan and budget as well as reporting; coordinate the national and field level project implementation units.

Coordination with relevant GEF-financed initiatives

The project will be tightly aligned with the decision support system for LDN being developed under the ***?Contributing to Land Degradation Neutrality (LDN) Target Setting by Demonstrating the LDN Approach in the Upper Sakarya Basin for Scaling up at National Level?*** project (GEFID 9586). The project will take advantage of the methodologies and approaches to carry out a decision support system as well as with the monitoring systems being developed to report on LDN achievement.

The project will also take advantage of the improved integration and sustainable landscape-scale management of forest, agricultural and other productive systems to enhance ecosystem services and goods, while also contributing to the buffering of protected areas and maintaining their inter-connectivity, being developed under the ?**Strengthening the Conservation of Biodiversity and Sustainable Management of Forest Landscapes in Turkey?s Kazda?lari Region?** project (GEFID 10369).

Coordination with other projects

The project funded by FAO-TCP (TCP/TUR/38) on the **Enhancement of soil and fertilizer management in Turkey** aims to promote sustainable management of soil resources for sustainable productivity and decrease of environmental pollution including GHG emissions. This project will contribute to integrated water management by enhancing fertilizer monitoring systems and related soil mapping that will help to improve the watershed management in Gediz River Basin. Moreover, the relevant capacity development program will support the increased awareness of the importance of sustainable soil amendment and its link with the management of water resources.

The FAO- TCP project (TCP/TUR/3701)?**Integrated Land Use Planning for Food Security with enhancing climate change resilience and ecosystem management**?? funded under the FAO-Technical Cooperation Program aims to develop an integrated land-use planning approach and implement it in a pilot area. This project will contribute to raising awareness of relevant stakeholders about the role of land use and management in addressing the problems of land abandonment and efficient land use together with initial steps towards the development of rural community

FAO Turkey Partnership Programme (FTPP II) on ??Leaving no one behind: empowerment of rural women??, GCP /SEC/018/TUR includes (1) the efforts to increase productivity and food security through the provision of effective rural advisory services allowing women farmers to have equal access to trainings and knowledge-sharing; and (2) an initiative assisting the Syrian refugees, in particular women, to integrate with the host communities by providing trainings to improve agricultural skills to engage in productive activities. This project will contribute to capacity building with a focus on women and youth, to ensure their participation in decision-making processes.

FAO Turkey Forestry Partnership Programme (FTFP) Boosting Restoration, Income, Development, Generating Ecosystem Services (GCP /INT/340/TUR) aims to catalyze action, support sustainable management and restoration of dryland forests and agrosilvopastoral systems. This project will contribute the compiling, managing, sharing knowledge and good practices, promoting communications and visibility of project activities to the across Africa?s Great Green Wall and throughout the global drylands.

GEF funded project on `Sustainable Land Management and Climate friendly Agriculture in konya Closed Basin (GCP/TUR/055/GFF) targets promotion of sustainable land management approaches and climate friendly practices in Konya Closed Basin in the forestry, plant production and livestock sectors. Lessons learnt and certain approaches will be utilized in implementation of this project.

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assesments under relevant conventions?

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

The proposed medium size project is consistent with the following highlighted national priorities. The action plan, strategies and reports reflect country priorities in the field of climate change mitigation, combatting desertification and biodiversity. Besides, the priority capacity needs of the country under

three RIO conventions are well reflected in National Capacity Self-assessment of Turkey. Since the proposed project covers CC mitigation, biodiversity and land degradation and chemicals, it will serve the fulfilment of Turkey?s national priorities reflected in these strategies and action plans and serve the fulfilment of her international commitment as well.

- 11th Development Plan of TURKEY 2019-2021

- National Action Program (NAP) under UNCCD
- Ministry of Agriculture and Forestry Strategical Plan for 2020-2023

- National Biodiversity Strategies and Action Plan (NBSAP) under UNCBD

- National Communications (NC) under UNFCCC

- Ministry of Forestry and Water Affairs? Strategical Plan 2017-2021

80. The project is aligned with the following national priorities;

-

11th Development Plan: Relevant objectives of the Development Plan are ?Protection and development of the water and soil resources? amount and quality, development of a management system that provide sustainable use of the water and soil resources.? ``Integrated agro-ecological management strategies, plans and action plans will be realized in an integrated approach in the scope of the conservation, development and sustainable use of the agricultural resources of the Bolu Province.? ``Protection measures will be increased to reduce land-based pollution originated from agricultural activities``

Ministry of Agriculture and Forestry Strategical Plan for 2020-2023: The Main objectives of Strategical Plan are ?To ensure the conservation, improvement and sustainable management of natural resources?, ?To ensure effective conservation and sustainable management of biological diversity.? This Strategic Plan shapes a common goal for 25 basins of Turkey and decreases the planning hierarchy from up to bottom. But, still, it is needed to downscale the practices especially with projects including demonstrative activities. As this Strategic Plan includes sub-objectives such as sustainable management of water and land resources preparation of sectoral water allocation plans, it is considered to constitute an effective protection-usage balance in Bolu and disseminate the result in Turkey.

National Water Strategy (2019-2023) aims to; (i) updated and accurate water monitoring system in line with international and international standards (ii) sustainable water management by holistic approach with ensure the balance between the conservation and use of water resources considering quantity, quality and ecosystems management (iii) ensure Sustainable supply-demand balance of water resources considering water quantity, quality, climate change and ecosystem needs for 25 river basins. In this regards, this project will contribute to implement this strategy and ensure sustainable management of water resource considering ecosystem trough developing agro-ecosystem management strategy in the Turkey

National Action Program (NAP) under UNCCD: Primary reasons for land degradation in the region include inappropriate land use, urbanization, industrialization, tourism and particularly intensive agricultural activity. Erosion has been causing significant problems, particularly in agricultural lands in the region. The proposed project will support the implementation of the LDN strategies by working with local stakeholders to demonstrate SLM practices that can be upscaled by using co-financing to support the following targets:

LDN Targets in agriculture (Pg 16 of LDN report):

- promotion and supporting soil conservation farming (including building farmer capacity)
- enforcing all relevant articles of soil law no. 5403, which sets the rules and principles for determining land and soil resources and their classification, preparing land utilization plans, preventing non-purpose utilization, and defining the tasks and obligations to ensure land and soil preservation.
- support and upscale soil and fertilizer analysis, and ensure controlled applications

The 5th National Communication to the UNFCCC: The communication lists under Forestry measures ??Maximizing sink capacity in the forestry sector?? with objectives of a) increasing carbon sequestered in forested areas by 15% until 2020 b) decreasing deforestation and forest degradation by 20% by 2020. The project?s activities, specifically under Component 2, directly contribute to these objectives.

The National Biodiversity Action Plan (NBSAP 2018-2028). This updated document establishes 7 National Objectives. The selection of the project implementation area will be aligned to these five objectives and their corresponding activities as follows:

National Objective 1: Pressures and threats on biodiversity and ecosystems will be determined, reduced to the possible lowest level or removed totally.

Action 1.1*: Struggle strategies will be continued to be improved against direct or indirect pressures on biological diversity such as habitat loss and degradation, global warming, increase of population, overconsumption of natural resources, genetic erosion and pollution.*

This proposal aims at improving the management of natural resources preventing the pressures to a biological diversity that will be tackled through the implementation agro-ecological management plan, a strategy to implement a green belt approach, training of Government staff in best practices concerning landscape restoration and management.

National Objective 2: Biological diversity components (ecosystem, species and genetic variability) will be determined, monitored, and species-specific and ecosystem-based conservation approaches (traditional and modern) will be developed by determining current condition of biodiversity.

Action 2.3: *Studies to determine and monitor endemic and endangered species; develop and implement species-specific conservation methods will increasingly be continued.*

This proposal will establish and pilot a monitoring system for the agro-ecological management. Moreover, it will establish and pilot a monitoring system for rehabilitated forests. As a part of the Agro-ecological management to be implemented, the proposal will establish biodiversity protection measures.

National Objective 3: Conservation and sustainable management of biodiversity of areas exposed to agriculture, forestry and fishing activities in the country will be ensured.

Action 3.1. *Conservation and sustainable management of biodiversity creating sources for industries of agriculture, forest, food and medicine will be ensured.*

This proposal will implement measures to improve sustainable financing of degraded grasslands such as investing in the sustainable management of restored lands. Furthermore, income-generating activities, such as ecotourism, will be implemented.

National Objective 4: Awareness of the public and administrators on ecosystem services will be raised, benefits from ecosystem services will be increased and sustainable biodiversity management will be ensured.

Objective 4.1. *Awareness of ecosystem services wilt be raised among public and private sectors, and training of specialists will be ensured.*

This proposal will include training Government staff (at least 50 govt. staff and 200 local stakeholders) at the General Directorate Water Management Division level, and other local stakeholders in best practices in biodiversity conservation and management. These practices include biodiversity monitoring, carbon measuring and monitoring as well as improved harvesting and processing techniques.

National Objective 5. Rehabilitation and restoration of ecosystems damaged due to different reasons will be ensured, measures to prevent damage to healthy ecosystems will be developed and legislative gaps thereon will be fulfilled.

Action 5.1. *Through improving ecosystem-based models, rehabilitation and restoration of degraded ecosystems (marine, forest, wetland etc.) will be provided, monitoring and inspection thereof will be performed.*

This proposal will implement sustainable measures that aim to restore 50 ha degraded grassland which will be identify during the PPG.

8. Knowledge Management

Outline the knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

Through past initiatives, implemented by government entities, FAO and various other actors a wealth of knowledge and lessons have been generated. This will feed into the project preparation process and subsequent implementation (this will be further detailed in the full project document). In terms of

capturing knowledge generated through the project, a strategy will be developed during the project preparation phase and will be implemented.

The project will strengthen existing institutional capacities within Turkey in agro-ecological management and SLM with a strong emphasis on sustainably managed agriculture. At the local level, the Project is designed to enhance the capacity of local authorities and communities to access new knowledge and implement best management practices and SLM to reduce the pressures on their key ecosystems. These capacities will be sustained through a strengthened national coordination platform and continued outreach and dissemination of good practices and management advice (Component 2 and 3). The experiences are expected to be upscaled to the national agricultural system. Opportunities for scaling up best practices will also be explored in the context of south-south cooperation, particularly on sharing of experiences with other countries. The outputs of this project can be disseminated through the FAO Turkey Partnership Program as well as through other established channels.

During project preparation, a communications specialist will be hired to understand the needs and knowledge gaps in the target audience in light of the project objectives. The consultant will prepare a comprehensive communications strategy based on the understanding of the target audience, objectives of the project and the barriers to achieving the objectives. This strategy will outline the key messages, which communication tools will be used and why, how many people will it reach and the periodicity of the communication. It will also outline a methodology to gather the target audience's response to the communication, which will give way to further evolving the communication strategy in light of what works and what doesn?t.

Based on the project baseline, the current behavior of the target audience will be identified. The barriers will allow the project preparation team to identify the incentive or knowledge required to change the current behavior to the desired behavior. The project will address these needs through project activities like developing knowledge products in regional languages (Component 3), working with the local government to provide better access to knowledge resources (Component 2 and 3) and developing products to support the capacity building plan, among others.

9. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
Medium/Moderate			

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

Section B: Environmental and Social risks from the project.

Environmental and Social Risk Classification: low risk moderate risk x high risk

Risk identified	Risk Classification	Potential impact	Mitigation Action(s) (Preliminary)
2.5 - Would this project involve access to genetic resources for their utilization and/or access to traditional knowledge associated with genetic resources that is held by indigenous, local communities and/or farmers? ? Yes	Moderate	Both genetic resources and local knowledge will be considered as local natural resources for assessment and conservation. There might be the option for collection of limited genetic resources for conservation purposes in national seed banks.	In case rare species are encountered and decided to conserve, priority would be given to conserve them in their locations. In case of vegetatively propagated crops, these will not be removed from their original locations.

5.2 - Would this project provide seeds or other materials treated with pesticides (in the field and/or in storage)? ? Yes	Moderate	In certain cases, improved varieties of certain crops (already grown in the province) may have to be demonstrated / introduced and their seeds may be already treated with pesticides.	Only the seeds treated with nationally registered pesticides would be allowed and non registered ones would not be permitted.
5.3 - Would this project provide inputs to farmers directly or through voucher schemes? ? Yes	Moderate	Incentives would be provided to farmers to promote agroecological practices. These may include seeds, tools, equipment and knowledge materials.	Only the materials that are appropriate for the agroecological approaches and the local conditions and climate would be selected and the rest would be avoided. In case of incompatibility, resistance or negative impact for acceptance, these would be stopped immediately.

Supporting Documents

Upload available ESS supporting documents.

Title	Submitted
Risk Certification MSP Turkey Bolu	

Part III: Approval/Endorsement By GEF Operational Focal Point(S) And GEF Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
Mr. Akif Ozkaldi	Deputy Minister	MINISTRY OF AGRICULTURE AND FORESTRY	5/17/2021

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place