**Country: Moldova**

**PROJECT DOCUMENT**

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| **Project Title:** | Mainstreaming biodiversity conservation into Moldova's territorial planning policies and land use practices |
| **UNDAF/CP Outcome(s):** | Outcome 3.1 Improved environmental management in significantly increased compliance with international and regional standards |

**Expected CPAP Output(s):** Output 3.1.1. National institutions are able to apply their regulatory, organizational and technical capacity to mainstream environment and natural resources management into norms, policies, programmes and budgets

**UNDP Strategic Plan Outcome:** Outcome 2: Citizen expectations for voice, development, the rule of law and accountability are met by stronger systems of democratic governance

**UNDP Strategic Plan Output:** Output 2.5. Legal and regulatory frameworks, policies and institutions enabled to ensure the conservation, sustainable use, and access and benefit sharing of natural resources, biodiversity and ecosystems, in line with international conventions and national legislation

**Executing Entity/ Implementing Partner:** Ministry of Environment (MoE); Agency Moldsilva; Ministry of Regional Development and Construction (MRDC)

**Brief Description**

The Republic of Moldova straddles three main European eco-regions – Central-European mixed forests, Pontic steppe, and East European forest steppe. It is rich in species and agro-forest biodiversity is dominant. Almost 2/3rd of the country is agricultural land. Currently, the protected area (PA) system covers 5.61% of the country's territory; PAs that correspond to the IUCN classification system account for only 1.96% of the country. The system is neither representative of species nor of habitat diversity across the terrestrial biomes, which means that effective biodiversity management outside PAs is crucial to maintaining the ecological integrity of Moldova's ecosystems. Threats to biodiversity include human encroachment through land conversion; soil erosion; pollution; non-native and/ or invasive species; unsustainable grazing; habitat fragmentation because of infrastructure development; illegal logging, collection of rare plants, hunting and fishing; and climate change. Despite the Government's reform efforts, the spatial planning framework continues to be deficient, primarily because biodiversity conservation is not taken into account. The long term solution lies in reforming the manner in which agricultural, forestry and other production activities are planned and regulated across different land units and tenure categories at the landscape scale. The objective of the project is, therefore, to mainstream biodiversity conservation priorities into Moldova's territorial planning policies and land-use practices through two components – the first will focus on modifying the land use planning and enforcement system so that it addresses biodiversity loss, and the second will demonstrate methods for conservation and sustainable use of biodiversity on communal lands outside PAs.

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| Programme Period: | 2013-2017 |
| Atlas Award ID: | 00081126 |
| Project ID: | 00090554 |
| PIMS # | 5259 |
| Start date: | end-2014 |
| End Date | end-2018 |
| Management Arrangements | NIM |
| PAC Meeting Date | |

| | |
|---|---|
| Total resources required | 5,808,904 |
| Total allocated resources: | 5,808,904 |
| x Regular | 40,000 |
| x Other: | |
| o GEF | 958,904 |
| o MoE | 460,000 |
| o MoE (In-kind) | 100,000 |
| o Moldsilva | 4,200,000 |
| o Stefan Voda District | 30,000 |
| o Soroca District | 20,000 |

Agreed by (Executing Entity/Implementing Partner):

Date/Month/Year

Agreed by (UNDP):

Date/Month/Year

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## LIST OF ACRONYMS

| | |
|---|---|
| ACSA | National Agency for Rural Development |
| ALRC | Agency for Land Relations and Cadaster |
| APA | Agricultural Producers' Associations |
| APR/PIR | Annual Project Review/Project Implementation Reports |
| ASM | Academy of Sciences of Moldova |
| AWP | Annual Work Plan |
| BAU | Business As Usual |
| BD | Biodiversity |
| BTOR | Back-to-Office Report |
| CALM | Congress of Local Authorities |
| CBD | Convention on Biological Diversity |
| CIS | Commonwealth of Independent States |
| CO | Country Office |
| CP | Country Programme |
| CPA | Central Public Authority |
| CPAP | Country Programme Action Plan |
| CSO | Civil Society Organization |
| DEP | District Environmental Plan |
| DSP | District Spatial Plan |
| EA | Executing Agency |
| EIA | Environmental Impact Assessment |
| EMM | Ecological Movement of Moldova |
| ENA FLEG | Europe & North Asia Forest Law Enforcement and Governance |
| ENPI FLEG | ENPI FLEG Regional Program "Improving Forest Law Enforcement and Governance in the European Neighbourhood Policy East Countries and Russia" |
| ERC | Evaluation Resource Center |
| EU | European Union |
| FAO | Food and Agriculture Organization |
| FMP | Forest Management Plan/Planning |
| FRMI | Forest Research and Management Institute |
| GD | Governmental Decision |
| GEF | Global Environmental Facility |
| GEFSEC | Global Environment Facility Secretariat |
| GHG | Greenhouse Gas |
| GIS | Geographic Information System |
| GIZ | Deutsche Gesellschaft für Internationale Zusammenarbeit (German Society for International Cooperation) |
| GMP | Grazing Management Plan/Planning |
| Ha | Hectare |
| HR | Human Resources |
| ID | Identity Document |
| IUCN | International Union for Conservation of Nature |
| IW | Inception Workshop |
| LD | Land degradation |
| LPA | Local Public Authority |
| LUP | Land Use Plan |
| MAFI | Ministry of Agriculture and Food Industry |
| MDL | Moldovan Leu (currency of Moldova) |
| MGS | Management Grazing System |
| MRDC | Ministry of Regional Development and Construction |
| MSBMC | Multi-Stakeholder Biodiversity Mainstreaming Committee |
| MTRI | Ministry of Transport and Road Infrastructure |
| NBSAP | National Biodiversity Strategy and Action Plan |
| NEN | National Ecological Network |
| NEX | Nationally Executed |
| NFFM | National Farmers Federation Moldova |
| NTFP | Non-Timber Forest Product |
| NGO | Non-governmental Organization |
| PA | Protected Area |

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|---|---|
| PAS | Protected Area System |
| PIF | Project Implementation Form |
| PIMS | Project Information Management System |
| PM | Project Manager |
| PMT | Project Management Team |
| PPG | Project Preparation Grant |
| PR | Progress Report |
| QPR | Quarterly Progress Report |
| RCU | Regional Coordinating Unit |
| REC | Regional Environmental Center |
| RGS | Rotational Grazing System |
| R/LPAs | Regional/Local Public Authorities |
| SBAA | Standard Basic Assistance Agreement |
| SEI | State Ecological Inspectorate |
| SEM | Sustainable Environmental Management |
| SGP | Small Grant Program |
| SO2 | Strategic Objective 2 |
| STAP | Scientific and Technical Advisory Group |
| TOR | Terms of References |
| TPS | Total Possible Scores |
| UNCBD | Convention for Biological Diversity |
| UNDAF | United Nations Development Assistance Framework |
| UNDP | United Nations Development Program |
| US$ | United States Dollars |
| WB | World Bank |
| WWF | World Wildlife Fund |

## 1. SITUATION ANALYSIS

Ecosystems and biodiversity

The Republic of Moldova is located in the south-eastern part of Europe, situated between Romania and Ukraine. The country occupies a land-locked hilly area (maximum altitude of 430 meters) spanning 3,384,300 hectares. It straddles three main European eco-regions – the Central-European mixed forests, the Pontic steppe, and the East European forest steppe. Almost 2/3rd of the country's territory is agricultural land. Approximately 15% of the country remains under some form of natural vegetation cover, much of this in a degraded state. The majority of this natural vegetation cover comprises forest ecosystems. Natural steppe habitats are almost non-existent and are nowadays used as pastureland. They occur predominantly in the north and the south of the country, and account altogether for about 65,000 hectares (approximately 1.9% of the territory). Meadow ecosystems, with rich genetic and species diversity, continue to be used for livestock grazing, and occupy about 10% of the country. Vegetation communities associated with aquatic ecosystems – notably flooded areas in the lower reaches of the Prut and Dniester Rivers – cover about 94,600 hectares (approximately 2.8% of the country). Some 3,000 rivers and streams, and 60 natural lakes are distributed across the country, with more than 95% of the water circulation flowing into one of the two major rivers in Moldova – the Prut or Dniester.

Moldova is rich in species, and agro-forest biodiversity is dominant. The country hosts 1,842 species of vascular plants and nearly 4,600 species of lower plants and fungi. This includes 13 relict genera, 126 Red Data Book species[1], and 4 species at the boundary of their natural distribution. Plant species diversity is particularly high in forests (more than 850 species), meadows (about 650 species) and steppe remnants (more than 600 species). There are about 16,540 species of animals (461 vertebrates and more than 16,000 invertebrates) reported for Moldova. This includes 55 Ponto-Caspian relict species (of which 10% are endemic to the Black Sea basin) and 116 Red Data Book species[2]. A number of large faunal species have completely disappeared from Moldova over the last centuries. While the greatest diversity of vertebrates is recorded in forests (172 species), 153 (89%) of these species are recorded from forests associated with meadows. The river corridors and associated wetlands are particularly important for migratory birds.

Forests are the most rich in terms of biodiversity in Moldova. Communities of herbaceous plants under forest canopy are significantly determined by levels of shading, and vary from 79 to 206 species; forest glades and edges support about 800 species, mostly the ones characteristic for steppes and meadows. About 500 plant species are typical for forest habitats, 172 of them are rare and 103 species are under state protection. Forest ecosystems support about 40 relict plant species. There are many threatened insect species, including 4 listed as Vulnerable Globally (according to the IUCN Red List Categories and criteria), for example *Cerambyx cerdo*. Forest habitats support almost all amphibian and reptile species of Moldova; create conditions for many bat species and majority of mammals, many of which are included in the Bern Convention[3] and Habitat Directive lists of the European Union.

Steppes that historically covered nearly 60% of the country but now only cover 1.9% of the country's territory are the worst conserved ecosystems in Moldova; remnants of primary steppes are small, fragmented and used for grazing. Existing steppe patches support more than 420 typical steppe plant species, 126 of them threatened, and two with very narrow distribution. The probability of extinction of typical steppe insect fauna is high; 16 species inhabiting steppe biotype are threatened including

[1] Two of these are also included in the Red Data Book of European Bryophytes.
[2] Thirteen of these are also included in the European Red List (1991).
[3] The Bern Convention is a binding international legal instrument in the field of nature conservation, which covers most of the natural heritage of the European continent and extends to some States of Africa. Its aims are to conserve wild flora and fauna and their natural habitats and to promote European co-operation in that field. The Convention places a particular importance on the need to protect endangered natural habitats and endangered vulnerable species, including migratory species.

*Onconotus servillei* and *Saga pedo*, while only 5 species are nationally protected. Steppes provide habitats for some rare vertebrates, such as Meadow Viper (*Vipera ursinii*), European Ground Squirrel (*Spermophilus citellus*), Speckled Ground Squirrel (*Spermophilus suslicus*), Steppe Polecat (*Mustela eversmanii*), etc. Many predatory birds nest in forestlands but forage in steppe or other open areas.

Meadows (10% of the country's territory) support 269 plant species that are typical for these ecosystems. 52 species present in the meadows ecosystems are threatened while 29 of them are under national protection. Also present in meadows are a few specific rare invertebrate species, such as Large Copper Butterfly (*Lycaena dispar*). Many amphibians listed in the annexes of the Bern Convention inhabit meadows; protected mammals hunt or live here such as the European hamster (*Cricetus cricetus*). Some birds nest in meadows, like Corn Crake (*Crex crex*), and a great number of species forage there such as the Greater Spotted Eagle (*Aquila clanga*), Short-eared Owl (*Asio flammeus*), Black Stork (*Ciconia nigra*), and Glossy Ibis (*Plegadis falcinellus*).

Aquatic/wetland ecosystems provide habitats for aquatic plant species such as *Trapa natans* and *Salvinia natans*, which are listed in the Bern Convention, and are still found in natural wetlands in southern Moldova. Wetlands support noteworthy concentrations of invertebrate species. Some mammal species, such as European Otter (*Lutra lutra*) and Eurasian Water Shrew (*Neomys fodiens*) or European Mink (*Mustela letreola*), can still be found in wetlands.

Protected Areas System (PAS)

Currently, the PAS in Moldova covers 189,385.9 hectares (or 5.61% of the country's territory). A third of it is managed by the government agency Moldsilva, and the rest is mostly located on community or private lands. Protected areas (PAs) outside Moldsilva's management have almost no effective protection (covered by law, but no management undertaken). PAs that correspond to the IUCN classification system account for only 66,048 hectares (or 1.96% of the country)[4]. Generally, the PAS is neither representative of species nor of habitat diversity across the terrestrial biomes, which means that effective biodiversity management outside PAs is crucial to maintaining the ecological integrity of Moldova's ecosystems and ensuring that their biodiversity is rationally conserved.

The aforementioned representation of biodiversity requires a landscape approach to biodiversity conservation including areas within and beyond the boundaries of PAs, to manage a mosaic of land and resource uses through protection, restoration, and mainstreaming biodiversity management into production and sustainable use, in order to deliver ecological, economic and social benefits. All areas in the PAS (including private sector that is already part of the PAS) need to have management plans and the land owners need to be part of compensation schemes in order to ensure species/habitat conservation.

Biodiversity and the main sectors

### Agriculture

Agricultural land currently occupies about 74% of the total area of Moldova; land conversion and agricultural practices result in significant threats to biodiversity. The country's heavy reliance on agriculture continues to be a major threat to the integrity of the few remaining tracts of natural ecosystems. Many species have reduced their populations and some of them have disappeared completely. Former native steppe and meadows have been converted to arable farmland and, their small remnants are subject to uncontrolled livestock grazing. Degradation is easily traced by the continuous decline of the proportion of indicator grass species in the overall vegetation cover, reduced presence of leguminous species, and substantial loss of vegetation (up to 70% in certain areas). Most of these areas are already invaded by invasive non-native shrubby/tree species (e.g. *Elaeagnus angustifolia*, *Acer negundo*, *Robinia pseudoacacia*) or, by native shrubby species that are locally invasive (e.g. *Rosa canina*,

[4] A number of PA categories namely, Geological, Paleontological, and Hydrological Nature Monuments, have limited biodiversity significance.

*Crataegus* spp.). Dry steppes, which preserve some rare and indicator taxa (e.g., several species of the genus *Stipa*), are under severe pressure from unregulated livestock grazing (mostly small and big cattle of households), and lack of sustainable management (e.g., hay-making, which in some locations is necessary for the maintenance of rare grass species, as part of a rotational system of controlled grazing).

Overall, steppes are assessed to be at a stage where the reduction of pressures and regulated management could still reverse the degradation trend (i.e. moderately degraded); yet, every year chances for this are declining. Soil erosion due to poor farming practices and improper grazing is a considerable problem, with both direct and indirect adverse impacts on biodiversity. The lack of rotational grazing and unknown carrying capacity for sheep, goats, and cattle reduces soil cover, while animals trample stream banks adding to the problem. Although wet meadows are not readily plowed and converted to cropland, compared with the steppe habitats, most wet meadow ecosystems are being drained for subsequent arable farming, or "improved" as pasture lands (e.g., seeding with non-native species that are preferred as forage). This is the main threat to Corn Crake (*Crex crex*).Wetlands (the largest ones are in the lower parts of the two main rivers) and other wet meadows harbor immense biodiversity. However, these have been drained for agriculture and are now severely degraded, having been mowed and grazed intensively for decades, while others continue to make way for farmland. The excessive use of pesticides and fertilizers in the agriculture sector, coupled with the increased sediments in water due to soil erosion, have detrimental effects on aquatic ecosystems and biodiversity. As pastures are degrading, local people are increasingly letting their animals enter into forests for grazing.

Grazing is a big issue for the country, especially in seasons when rain/water is missing. It has an impact on both the land per se and biodiversity. When the quality of pasturelands worsens because of climatic or other conditions, grazing happens in forests and/or protected areas, then it becomes illegal and unsustainable. Communities have to be offered alternative ways for grazing. Enforcement of legislation is still a problem as no alternative measures are proposed by authorities, so communities are mostly left on their own.

### Forestry

Forests of Moldova are the best preserved ecosystems out of all ecosystems and have the greatest biological diversity in the country. They are located predominantly in the central part of the country, with northern and the southern areas being less forested. According to data from the National Bureau of Statistics, in 2013, forestlands occupied 450 thousand ha, of which 363 thousand ha are forests managed by Agency Moldsilva. Forest coverage (or forest vegetation cover) thus stands at 13.7%. However, the area covered with true forest is less than these figures. Having been severely depleted in the past, the remaining natural forests are largely the result of stump or root sprouts (approximately 60% according to official data) and considered to be of poor quality and less stable than forests regenerated from seeds. There are no primary forests left in Moldova. As an example, 80% of standing oak forests is of coppice origin. Moldova's forest areas are highly fragmented with sizes ranging between 5 to 1,500 hectares.

Historic unsustainable forest management has contributed to the current state of Moldova's forests[5]. This includes selective harvesting/ extraction of the most valuable species without proper management of their regeneration, with attendant impact on structure and species composition, and afforestation and reforestation with species inappropriate to the site conditions as well as high consumption of domestic wood for primary energy and household needs.

In order to alleviate soil degradation and meet the high demand for fuelwood, forest institutions have undertaken forest extension relying on non-native species, so the Black Locust (*Robinia pseudoacacia*) has almost been naturalized and become a dominant component in almost 40% of Moldovan forest vegetation. Some other exotic species, like Box Elder (*Acer negundo*), have not been applied in

[5] Expansion of the agricultural production sector and infrastructure development are also important contributing forces.

regeneration/ extension, but have become very aggressive invasive tree species by substituting native species locally.

Extraction of large trees and undesirable forest treatments during a certain period, combined with extensive degradation of surrounding open areas (meadows, steppes) that serve as food niches, are factors that have caused some threatened species, like the Greater Spotted Eagle (*Aquila clanga*) and Saker Falcon (*Falco cherrug*), to abandon nesting sites when disturbed. Even though the forest nesting sites of these birds-of-prey remain safe in some areas, the grassland and meadows around the forests – their feeding grounds – often get plowed, forcing the adult birds to relocate.

### Infrastructure/ urban development and recreation

Moldova is a country of high population density (121.9/km$^2$). Nearly 74% of its area is agricultural land, and almost 90% of it is either somewhat formally privatized or under collective forms of farming (collections of landowner lots under joint-stock societies). The overall landscape is thus a mosaic of private or collective areas or of other types of infrastructure and very few lands are left where natural biodiversity can persist. The density of human settlements is also high (5 villages/ communities per 100 km$^2$) distributed evenly across the country, and large urban settlements prevail.

The Law on Principles of Urbanism and Land Planning (number 835 from 17.05.1996, with subsequent amendments) clearly states that any land planning needs to create a framework for balanced development and rational utilization of the land, including responsible use towards natural resources and environmental protection. This is also supported by the Law on Regional Development (Governmental Decision nr. 438 from 28.12.2006), the Concept of Sustainable Developments of Localities (GD nr. 1491 from 28.12.2001) and the Law on Provisioning Localities and Areas with Urban and Planning Documentation (GD nr. 1362 from 10.12.2001).

However, biodiversity conservation principles are poorly integrated in land planning (including at the legal/ normative level), and species/ habitat distribution and importance are almost completely neglected. Construction of new infrastructure and extension of settlements prevail over conservation and sustainable use of natural resources.

Examples of severe impacts on aquatic ecosystems include draining of wetlands (and surrounding meadows), elimination of native riparian vegetation, and impoundment and channeling of streams. Sedimentation and chemical runoff associated with urban development and unregulated recreation have negatively impacted streams, rivers, and wetlands. As a result, such species as Corn Crake (*Crex crex*) and Spotted Crake (*Porzana porzana*) have become rare in wetlands. The nesting grounds of Ferruginous Duck (*Aythya nyroca*) and Pygmy Cormorant (*Phalacrocorax pygmaeus*) have been severely damaged. Also, the habitat of the European Mink (*Mustela lutreola*) and European Otter (*Lutra lutra*) and many other species associated with wet areas along smaller lake banks, has been destroyed through unsustainable fishing and recreation, as well as unregulated use of lakes as a source of water.

Direct threats to biodiversity

Threats to biodiversity continue unabated. This is partly due to poverty-driven subsistence needs of the population (coupled with commercially-driven resource needs as well) and, partly, due to the general perception of biodiversity among ordinary citizens that is not in favor of biodiversity. These factors lead to various unsustainable approaches and practices at various levels (such as policy, educational, institutional, legal, traditions, etc.).

### Human encroachment through land conversion

Even though about half of the country's exports consist of agricultural products, Moldova still lacks a rational approach to sustainable use of existing arable lands. Most agricultural land is now privatized and, in many cases, people hold small plots of land, making a rationalized approach challenging (according to various sources, around 200,000 hectares of agricultural lands are abandoned). Encroachment is evident

in all habitats and through various schemes (e.g., long-term forest lease, need for new pasturelands, new areas for waste dumping, etc.). Communities do not fully realize the possible consequences of such practices, and more habitats are destroyed, altered, or fragmented leading to biodiversity loss.

### Soil erosion

According to official data, some 800,000 ha are degraded agricultural land and some 100,000 ha are heavily eroded. There is also a prediction of annual losses of fertile soil due to erosion across the country. This is already affecting biodiversity and will likely strongly affect it in the near future. Based on various analyses, unsustainable use of natural resources (e.g. forests, pasturelands) will lead to a significant reduction in biodiversity and further increase in deforestation, which in turn will lead to further land degradation and erosion. The Government has, however, undertaken some measures to cooperate with international organizations to arrest erosion through afforestation and reforestation programs (by creating shelterbelts of other forested areas to mitigate the effects of wind and rainwater on soil), pastureland management, enhanced agricultural land productivity, and rehabilitation of certain areas.

### Pollution

There are various sources of pollution, with municipal and industrial wastes affecting species and habitats directly. Siltation of waterways and wetlands (especially lakes) has reduced the area of wetlands and their potential to provide fish and other goods for local communities. Unauthorized dumping of waste poses a high risk not only to human health but also to ecosystems.

### Exotic (non-native) and/or invasive species

Although there is no complete list of exotic (non-native) species in Moldova, such species are present in the country, and many will probably be introduced. Many exotic species, along with some native species, have become invasive (e.g. aggressive shrubs/ trees, crop pests) producing colossal economic damage to agriculture and forestry. The introduced but invasive Black Locust (Robinia pseudoacacia) is largely used for forest extension in degraded lands, and also by some private forest owners. It is largely preferred by the local population as a fuelwood and for other household needs, which is a good example of the use of an invasive species (though the species itself can cause problems in natural habitats). Some introduced species have been reported as interbreeding with native species causing genetic pollution of native species (e.g. non-native Sika deer, Cervus nippon).

### Unsustainable grazing

Currently, most cattle in Moldova belong to communities. Although communities have pasturelands, which are mostly depleted and of poor quality (low productivity), the herds are often moved into other habitats, such as forests (according to existing legislation, grazing in forests is not allowed). Generally, grazing is almost uncontrolled and against all principles of environmental sustainability. Pastures are often sensitive issue for communities and their management represents a true challenge.

### Habitat fragmentation because of infrastructure development

Moldova's landscape includes roads, railroads or other infrastructure, which fragment the landscape. A railroad built recently through the wetlands of the Lower Prut River (also a Ramsar Site) has severely impacted not only the ecosystems and their biodiversity, but also local communities dependent on wetlands. The recent practice of granting forest leases for hunting and recreation has led to forest damage as those who lease forests build houses and other infrastructure, even though this is not endorsed by lease contracts. Overall, habitat/ ecosystem integrity is not taken into consideration in land or infrastructure planning.

### Illegal logging

Forest biodiversity is under increasing pressure from illegal logging, mainly to meet demands for fuelwood and/ or selective logging of high-quality trees. Official statistics report that approximately 0.5 million $m^3$ of wood are legally harvested per year, and there are only small volumes of illegally harvested

wood. However, analysis from ENPI FLEG Regional program has shown that the true annual consumption of domestic wood is twice that figure. Authorities have already responded by reforesting degraded lands and introducing short rotation high yielding forest energy crops (mainly black locust).

### Illegal collection of rare plants

Many species of plants are widely collected by local communities. Despite the fact that some of these plants are protected, people are collecting them in the forests and meadows for sale either along the roads near forests or in city/ town markets or directly in streets. Many rare species, such as snowdrops of the genus *Galanthus* and Lilly of the valley *Convallaria majalis*, are collected by locals every spring.

### Illegal hunting and fishing

Though Moldova is not that rich in game, hunting is a traditional occupation of a number of people. People have the right to hunt and fish during certain periods, however, neither hunting nor fishing is done sustainably. There is a huge contradiction between existing law/ regulation and its enforcement/ implementation. Illegal hunting and fishing (for sport or by poachers) is still common in the country, despite the fact that some local communities (especially in the wetland areas) are dependent on fishing and/ or hunting. Also, wildlife management is not properly undertaken.

### Climate change

Moldova is confronting more and more unstable weather conditions, and droughts and floods have become common over the last decades. At the same time, there is a low resilience of the natural habitats (and of agricultural land) to the increasing incidence of extreme weather conditions. More environmental problems in the country are reported, such as landslides, land erosion, forests/ trees dying, spread of pests/ diseases, invasions of plants and animals over agricultural lands etc. Climate change may result in deterioration of some ecosystems (namely forests) in some parts of the country with many species exhibiting reduced capacity to reproduce and increased susceptibility to other factors.

Baseline scenario and associated baseline projects

### Biodiversity and land use regulations, planning and enforcement

Moldova has three levels of government administration: national, rayon (district), and municipal (which includes urban localities or towns and rural localities or communities). Some powers and functions are exclusive to one government level, while others are shared. The regulation of land use and biodiversity conservation/ use is largely a national competency, while land use planning is shared among the three levels of government. Enforcement of biodiversity conservation and land use regulations is largely a rayon and municipal competency.

Biodiversity/Land use regulations: Under the subordination of the Government, the main institutions responsible for biodiversity/ land use regulation are the Ministry of Environment (MoE), Ministry of Agriculture and Food Industry (MAFI), and Moldsilva. MoE is the central national environmental authority that exercises quality monitoring of environmental components and regulates use of natural resources. The MoE's duties include: (i) to develop and promote policies and strategies in the field of environmental protection, rational use of natural resources, and biodiversity conservation; (ii) to integrate environmental policies in the socio-economic processes and in sections of sectoral policies based on principles of sustainable development and harmonization of legal and normative acts, plans, programs, conventions and international treaties; (iii) to carry out inventory of natural resources, regulate their use, establish limits of use on natural resources as well as discharges and pollution with hazardous environmental substances. The Ministry of Agriculture and Food Industry (MAFI) is the central national authority for the promotion of state policy in the field of agriculture and food industry. Their duties include: (i) stimulate and monitor the use of sustainable and efficient farming systems, based on maintaining and enhancing soil fertility, and of systems aimed at maintaining ecological balance and recovery of water reserves, (ii) harmonize legislation on agriculture and food industry according to EU requirements. Moldsilva is the central public authority responsible for forestry and hunting. Its duty is to

implement the constitutional national prerogatives and international ratified obligations on development, promotion and implementation of its policy in forestry and hunting, guided by international trends in socio-economic sustainable development, rural development, rural employment, sustainable forestry development, guarding forests and wildlife protection, maintenance and conservation of biodiversity, professional training, access to environmental benefits and forestry research and education.

Land use planning: The Ministry of Regional Development and Construction (MRDC) is responsible for developing state policy and legislative and regulatory framework for land use planning, architecture, urbanism, construction, production of construction materials, housing, and regional development. MRDC has developed a National Physical (Spatial) Plan, which was approved by Parliament in 2008. The plan serves exclusively as a guideline, and is composed of correlated sections representing government programs in different fields for the entire country. It outlines, at a large-scale, urban and rural infrastructure placement trends and land parceling. District and Municipal Spatial Plans (Master Plans) are initiated by a decision of the rayon or municipal council and developed by a contracted licensed design company. The district or municipal plans are approved by the interested central agencies and MRDC, and they are adopted by the district council and municipal council respectively. In 2011, MoE finalized amendments to Environmental Impact Assessment (EIA) legislation obligating large new investment projects on land to undertake full surveys of biodiversity, identify threatened species and habitats, and identify measures to exclude adverse impacts. The Agency for Land Relations and Cadastre (ALRC) is coordinating state activities related to surveying, mapping, Cadastre and GIS. ALRC is also responsible for the establishment and maintenance of the national geo-spatial data infrastructure in the country (www.geoportal.md).

Enforcement: Under the MoE, the State Ecological Inspectorate (SEI) operates at the district level to enforce environmental legislation while the Local Public Authorities (LPAs) and Municipalities are responsible for enforcement of biodiversity related legislation at a local level, as well as for enforcement of land use plans (where they exist). Moldsilva is responsible for the enforcement of forestry regulations on forest land under their jurisdiction.

### Baseline programs for conserving biodiversity outside PAs

The country's commitment to biodiversity conservation outside PAs is reflected in the planned investment of at least US$ 27.4 million in biodiversity conservation across its landscape over the project period. This can loosely be divided into four areas: investments related to (i) regulation of land use, (ii) planning of land use, (iii) enforcement, and (iv) changing the production practices of sectors driving biodiversity loss.

### Biodiversity land use regulation

At the national level, MoE will invest in excess of US$ 0.3 million over the project period for policy and regulation development and compliance monitoring role. This will include the development of national environmental standards, specifications and guidelines, and the undertaking of EIAs. The Ministry of Agriculture and Food Industry will spend US$ 0.5 million in regulating ecological agriculture[6] over the project period. Moldova has experienced a significant increase in ecologically farmed land from 80 hectares in 2003, to more than 70,000 hectares in 2012.

At the district level, the two target districts of the Republic of Moldova will invest at least US$ 0.2 million over the project period in regulation, mainly through compliance monitoring by State Ecological Inspectors.

### Land use planning

[6] Ecological agriculture is a kind of sustainable agriculture that involves completely avoiding synthetically produced mineral fertilizers and pesticides, hormones, food additives etc. Genetically modified organisms are completely prohibited. (http://www.euracadagri.com/eng/activities/yalta_doc_md.php)

At the national level, an estimated US$ 1.7 million will be spent over the project period by MRDC and the Agency for Land Relations and Cadaster on the preparation and review of urban plans in the country. The MoE, MAFI, and Moldsilva will invest in excess of US$ 8.5 million over the project period on spatial planning, forest management planning, and farm management plans. Part of this investment comes from the National Program for Creation of the National Ecological Network (2011 – 2018), and Transition to High Value Agriculture Project financed by the U.S. Millennium Challenge Corporation (2010 – 2015). The main objective of these programs is to set up a legal framework for inter-sectoral coordination in order to reduce the pressure from economic activities on the environment and human health and to support environmental restoration. MoE will also invest an estimated US$ 0.7 million over the project period on review of EIAs for large development projects. A tentative estimate of US$ 0.5 million investment will be made by the private sector in undertaking EIAs for development projects in the target districts.

At the municipal level, Local Public Authorities in the two targeted district will invest US$ 0.5 million over the project period on spatial plans, urban plans and forest and farm management plans.

### Enforcement

The two districts will invest approximately US$ 0.4 million on environmental enforcement, in particular on applying the legislation concerning biodiversity conservation and local environmental protection plans. Additionally, the Local Public Authorities will spend an estimated US$ 0.2 million on enforcement. Moldsilva will spend an estimated US$ 2 million a year (US$ 8 million over the project period) for the enforcement of forestry legislation nationally.

### Modifying production practices to be more biodiversity friendly

In the forestry sector, an estimated US$ 4 million will be invested by Moldsilva in improving forest management and maintaining/guarding the forestlands, specifically targeting reforestation/afforestation predominantly with native species in the two districts. In the agriculture sector, an estimated US$ 1.3 million over the project period is earmarked for increased soil protection and agriculture production enhancement, conservation farming and building capacity for better land management under the national Program for Land Conservation and Fertility Enhancement implemented by MAFI. An estimated US$ 0.5 million of this investment can be considered as baseline for the proposed project as reduced soil sediments and chemical runoff will have a beneficial effect on aquatic biodiversity. An estimated investment of US$ 0.1 million will be made by the private sector in the management of biodiversity on communal and private agricultural lands.

The five baseline strategic programs of the government that pertain to the use and conservation/ management of natural resources are summarized in the table below. All these together serve as the foundation for the project, also highlighting the baseline on which project activities will be built. In order to facilitate dialogue and ensure coordination with baseline projects/ programs of the targeted sectors, the project will establish a Multi Stakeholder Biodiversity Mainstreaming Committee under Output 1.3. This committee will bring together authorities tasked with natural resource and land use planning and permitting responsibilities – namely, Ministry of Environment, Ministry of Regional Development and Construction, Agency Moldsilva, Agency for Land Relations and Cadastre, Academy of Sciences, District Council of Soroca, District Council of Stefan Voda) – at a national scale.

| Title, description, implementing agency, total value (US$) of the baseline program | Elements of the program which form part of the baseline project for GEF, and problems they address |
|---|---|
| Environment Strategy for 2014-2023 (adopted by Governmental Decision nr. 301 from 24.04.2014)<br>The vision is to create a functional system (institutional, administrative, management) adjusted to EU policy and to ensure a sustainable environment. It aims at guaranteeing the right for Moldovan people to a clean and healthy environment.<br>Total budget for its implementation is US$66,033,900 annually (1% of annual GDP).<br>The costs are in line with provisions included in the EU-Moldova Association Agreement and the Deep and Comprehensive Free Trade Area (DCFTA). | Baseline element 1: Certain activities fit well into EU goals and will be covered by the EU costs.<br>Afforestation/ reforestation[7] activities will take place on degraded lands through creating forest shelterbelts, and other green areas covered with forest vegetation.<br>Pastures are mostly managed by LPAs and totally lack management, they are overloaded and almost degraded. Only 5% of such still maintain high biological value, while 70% have lost their capacity for self-rehabilitation. In addition, approximately 150 thousand ha of meadows and wetlands need ecological rehabilitation/ reconstruction and rational economic utilization.<br>Proper management of pastures would provide for economic and biodiversity benefits and to this end the project will be piloting biodiversity-friendly pasture management systems on 100 ha of land in 2 district of Moldova, enabling combination of such measures as rotational grazing, hay-making, and silvo-pastoral practices. |
| National Ecological Network (NEN) in Moldova (adopted by Governmental Decision nr. 593 from 01.08.2011)<br>The NEN aims to protect biological and landscape diversity in Moldova under Pan-European Ecological Network, also in line with the CBD requirements and "National Biodiversity Strategy and Action Plan" of Moldova.<br>Estimated costs for its implementation are US$3,857,920 and will be allocated from the state (and local) budgets, special funds, international assistance and other sources. | Baseline element 2: The project's pilot districts fit into the scope of NEN and will benefit from financial coverage and support<br>In order to create stabilization of agro/forest ecosystems and ensure connectivity, NEN will undertake afforestation/ reforestation of 30,400 ha of water protection belts by 2018. It also pledges to extend the natural protected area network to include steppe areas in the Bugeac region (pilot district Stefan Voda is part of the region, including Copceac community). This provides a good foundation for the project's activities related to mainstreaming biodiversity conservation into land use planning. |
| Strategy of Sustainable Development of the Forestry Sector of Moldova (adopted by Parliamentary Decision Nr. 350 from 12.07.2001)<br>It is the main forestry policy document in the country and has several objectives: (i) enhancing forest eco/bio potential, (ii) biodiversity conservation, (iii) forest extension, (iv) ensuring forest guarding and protection, (v) meeting socio-economic problems, and (vi) conserving rural landscapes.<br>There is no fixed funding amount, but sources are various: from forest/forestry management, state budget, credits and grants (national and international), technical assistance from donors. | Baseline element 3: Afforestation and reforestation activities of Moldsilva and associated support by state forestry enterprises<br>The aim of the Strategy is to reach 15% of forest cover by 2020 (13.7% is the current cover), so the reforestation activities of the project will add to this.<br>Extension of the forest cover will mostly take place on community or private lands, and the project focuses on community lands (mainly degraded lands). |
| National Plan for Forest Vegetation Extension 2014-2018 (Approved by GD 101/2014).<br>MoE is responsible for implementation, and LPAs will contribute through land allocation for afforestation and reforestation. Planting/afforestation will be done by Moldsilva in cooperation with MAFI. Academy of Sciences will provide necessary assistance to stakeholders and partners.<br>The initiative envisages afforestation and reforestation of 13,000 ha in total of degraded lands and water protection forest belts, including maintaining forest plantations and ensuring their protection against illegal logging, illegal grazing and prevention of other transgressions. | Baseline element 4: There are selective areas planned for afforestation and reforestation activities in the two pilot districts, and can be classified as the contribution of the partners to the project<br>Reforestation activities as part of the project will be done on community lands (including 'reserve fund' of community land), under appropriate binding agreements (supporting letters from communities/districts have been obtained).<br>The respective component of the project will also rely on Moldsilva's prior experience in similar projects (including with BioCarbon Fund of the World Bank and Japanese Project) covering even larger areas, especially when there is the political will. |

[7] In Moldova, the terms afforestation and reforestation are used interchangeably. None of the relevant laws make a clear distinction between afforestation and reforestation.

| Title, description, implementing agency, total value (US$) of the baseline program | Elements of the program which form part of the baseline project for GEF, and problems they address |
|---|---|
| The resources to support implementation come primarily from the National Environmental Fund administered by MoE. MoE will also seek other funding, including through international programs. Total budget is US$21,406,600. | |
| Urban Planning Program for the Moldovan Localities for 2013-2016 (approved by GD nr. 493 from 04.07.2013)<br>Only 33% of Moldova's urban areas and only 1% of its rural communities have urban planning documents adjusted to the new social-economic conditions. LPAs are responsible for carrying out general urban planning documents. However, LPAs are issuing urban planning certificates and construction authorizations in the absence of general urban plans, which is a violation of existing legislation.<br>Total budget of the Program is almost US$17,334,300, and will be allocated from the state budget and/or from other sources. | Baseline element 5: This fits well with the activities of the project in the two pilot districts<br>Under the GEF project, two types of plans will be developed:<br>1) District Spatial Plans (DSP) (under responsibility of MRDC) for 2 districts (Soroca, Stefan Voda)<br>2) Land Use Plans (LUP) (under responsibility of LPAs, CPAs, District Councils) for 4 communities (Zastanca, Badiceni, Talmaza and Copceac) |

Long term solution and barriers that need to be addressed

Despite the Government's reform efforts, the spatial/ territorial planning framework continues to be deficient, primarily because biodiversity conservation is not taken into account and the lack of coordination[8] has contributed to ecosystem fragmentation. The **long term solution** lies in reforming the manner in which agricultural, forestry and other production activities are planned and regulated across different land units and tenure categories at the landscape scale — so as to avoid, reduce and mitigate the pressures leading to biodiversity loss. There are two types of barriers to achieving this long term solution: (i) inadequacies in the planning and enforcement framework, and (ii) insufficient demonstrated experiences in biodiversity-compatible spatial planning and land management practices.

### Barrier 1: Absence of planning and enforcement framework to mainstream biodiversity in the wider landscape through territorial planning

In order to conserve biodiversity outside PAs, there is a need for local-level spatial plans that not only fully take into consideration biodiversity conservation considerations, but are also effectively implemented with compliance being monitored and enforced. According to official statistics, approximately 33% of urban areas and only 1% of rural communities are provided with land-use planning documents adapted to the new socio-economic conditions. LPAs, responsible for land-use planning, still issue construction authorizations in the absence of spatial plans, which is in contradiction with existing legislation and is not sustainable from an environmental/ biodiversity point of view. In addition, in the absence of spatial plans, residential areas (rural and urban) are gradually replacing areas important for biodiversity. An important barrier for mainstreaming biodiversity into territorial planning and land-use practices is the fact that there is no legal requirement in Moldova to integrate biodiversity aspects into land use plans. EIAs are only mandatory for newly designed, large scale production-type projects, and not mandatory for land-based activities already underway. Legislation does not define which habitats, species, and ecosystem goods and services need to be accounted for in territorial planning; it lacks methodologies and protocols for biodiversity mainstreaming in territorial planning. The Land Code, which regulates land and resources use, contradicts with a number of environment-related legislation and, most importantly, it lacks a realistic approach that takes into consideration biological and landscape

[8] i.e., coordination between/ among (i) central public authorities (i.e. Ministries, Agencies subordinated to the Government) dealing with natural resources and/or land planning, and (ii) central public authorities and local public authorities, which is not always good in terms of considering biodiversity or rational use of natural resources.

diversity. There are several initiatives to modify the existing Land Code (e.g., from MAFI/ACSA, FAO), so the project comes at the right time to fit into these attempts by reflecting biodiversity conservation.

Biodiversity management objectives need to be accommodated in the overarching spatial and land use plans, which will guide land use practices in the different sectors. An adaptive approach is needed, employing acceptable limits of change, which will, in turn, require putting in place a sound environmental monitoring and data management system that is currently lacking. The existing legal frame of biodiversity monitoring is not fully in place and its enforcement is still a problem, mostly because of lack of coordination among stakeholders (governmental, science/academia, NGOs, community, private) and lack of interest in and understanding for species/habitat conservation at site level. Deriving from this, a system for setting and exacting penalties for unlawful activities needs to be urgently operationalized. The financial and human resources earmarked for baseline programs related to regulation of natural resource management and land use planning are deployed and managed by sectoral ministries/ departments/ agencies (MoE, MAFI, MRDC and Moldsilva) working in silos. There is a need to harmonize and coordinate efforts across sectors, and spearhead innovative ways and means of mainstreaming biodiversity into land-use planning in an integrated and coordinated way that balances socio-economic and environmental objectives.

Several institutions are also involved at national, district and local levels in monitoring and enforcing regulations relating to agriculture, forestry and other development sectors and biodiversity conservation. These include MoE, MAFI, MRDC, SEI, LPAs, and the police. The mandates for surveillance and prosecution of unlawful land-use practices at these institutions need to be clarified and closely coordinated in order to ensure the integration of biodiversity conservation into the different production sectors' agendas. There is limited technical capacity to deal with biodiversity mainstreaming in the production sectors. Moreover, there are weak capacities for permitting, monitoring, and enforcing biodiversity-friendly development at the district level with respect to managing threats.

### Barrier 2: Inadequate demonstrated experiences in biodiversity compatible spatial planning and land management practices

Against a background of high poverty levels, the local population and most district public authorities are guided by a quick-gain philosophy with respect to livestock management, forest use and other land-use practices. While theoretical options for long-term sustainable use of the land, which ensure the conservation of biodiversity and important ecosystem services, are available, their conservation efficacy, costs and benefits have not been tested. Decision-makers lack solid information on which to base decisions regarding land use allocation and management. Without a proper assessment and planning regime for the conservation of biodiversity, managers and users have a difficult time effectively evaluating and integrating threats to biodiversity within decision-making.

The Government has not extended efforts to build know-how among local communities and district administrations in biodiversity-friendly long-term spatial planning. MRDC extensively applies GIS mapping for spatial planning, and annotated soil maps have recently been completed for a few districts. Yet capacities for use of GIS to create biodiversity layers and overlay them on economic land-use schemes are not in place. As a result, important biodiversity information is not used in the process of allocation of land to various uses. Although some maps of biodiversity priority areas exist, they are not reflected in the District Development Plans and the District Spatial Plans. Capacity to interpret and integrate the maps in the spatial plans and other relevant planning and decision-making processes is very low. The integration of biodiversity priorities into the land use (spatial) planning process therefore remains very weak.

Further, Moldova does not have operational, "on-the-ground" examples of technical interventions that sustainably promote long-term biodiversity conservation in the productive landscape outside formal protected areas. Without access to replicable demonstrations, government decision-makers and resource users do not have the tools and knowledge necessary to decrease biodiversity loss.

## 2. STRATEGY

Rationale and Summary of GEF Alternative

The Government of Moldova is requesting GEF support through this project to remove, in an incremental manner, the existing barriers to mainstreaming biodiversity conservation priorities into Moldova's district territorial planning policies and land-use practices.

### Global environmental benefits

The immediate global biodiversity benefit is stabilization of pasture (converted steppe), wet-meadow, and forest ecosystems outside protected areas in 2 administrative districts with an area of approximately 204,000 hectares. This will ensure stability of a number of threatened and indicator species: indicator grass species (*Stipa pennata* and *S. ucrainica*) at natural steppes, populations of European Ground Squirrel (*Spermophilus citellus*) and Corn Crake (*Crex crex*) for steppes; Greater Spotted Eagle (*Aquila clanga*) for forests and adjacent wet meadows; and European Otter (*Lutra lutra*) for river and lake ecosystems. In the long-term, taking into account the replication effect, the project will ensure the long-term integrity of fragile ecosystems, including steppes and wet meadows (approximately 30,000 hectares), wetlands (approximately 10,000 hectares), river floodplains and lakes (approximately 10,000 hectares) and forest ecosystems (approximately 30,000 hectares).

**Table 1. Summary of long term environmental benefits**

| State of ecosystems under baseline | Summary of GEF incremental intervention | Biodiversity Benefits |
|---|---|---|
| Land Use Planning and Regulation outside protected areas | | |
| Land use planning does not account for ecosystem values, leading to ecosystem degradation and biodiversity losses | Integration of biodiversity conservation principles into territorial planning, compliance monitoring and enforcement<br>Biodiversity harbored in forests and pastures (former steppes) incorporated as active components in DSPs, LUPs, GMPs, FMPs<br>Sustainable management methods for pastures and forests (including forests and pastures of high biodiversity value and high economic value in terms of ecosystem goods and services) identified and appropriate land use applied to pilot areas | Biodiversity harbored in pastures and forests, as well as other ecosystem services (e.g., water supply from forests and forage productivity of steppe pastures), are maintained over a target area of 204,000 ha as a result of the following:<br>Competitive pressures between land uses in pasture and forest landscapes reduced as a result of silvo-pastoral practices piloted in the project area and which enable trees and pastures to co-exist successfully in a forest and livestock production system.<br>Decrease in grazing pressure and illegal logging in forestry territories<br>Decrease in overgrazing pressure in pastures leading to improved condition of pasture ecosystems.<br>Ecological corridors established between forest blocks, including between PAs, to improve survival probabilities of threatened species (in terms of providing for shelter, food, migratory paths etc. for animals and restoration of adequate habitats for both animals and plants).<br>Certain areas managed/ maintained as habitats for indicator species. |
| Pastures (as steppe remnants) | | |
| Overgrazing of pastures results in:<br>Carrying capacity being exceeded that leads to increased erosion, loss of vegetation cover, soil compaction;<br>Formation of deep gullies in | Improved pasture management:<br>Rotational grazing to maintain pasture quality<br>Enhance pasture productivity with selected plants<br>Creation/ establishment of hay-making areas; increased fodder production allows reduced use of pastures in certain seasons<br>Proactive anti-erosion measures to stop formation of gullies | By reducing overgrazing, improved conditions created for the restoration of grassland species' diversity, while maintaining such steppe and forest populations under threat as: *Saga Pedo*, *Otis Tarda*, *Felis Silvestris* and others (full list of red list species is in Annex 4 of the UNDP Project Document).<br>LD co-benefits: Avoided soil erosion and compaction; restored and well-maintained vegetation cover; avoided drop in the ground water table; improved water quality over an area of 100 ha |

| State of ecosystems under baseline | Summary of GEF incremental intervention | Biodiversity Benefits |
|---|---|---|
| pasturelands (former steppes converted into vineyards, then restored as pastures) as a result of rainfall | | CC co-benefits: Avoided emissions, restored carbon sequestration capacity and storage potential of grassland ecosystems as a result of introduction of sustainable pasture management practices over 100 ha. |
| Abandonment of pastures by communities results in:<br>Invasion of pastures by woody plants<br>Pasturelands lose their capacity to support livestock and maintain steppe biodiversity<br>Authorities lack the capacity to reduce woody invasions and manage pastures sustainably | Improved pasture management:<br>Promotion of rotational grazing to maintain pasture quality<br>Increased investment in repair and maintenance of key pasture use infrastructure (wells) allows greater flock mobility and use of abandoned pastures<br>Rehabilitation of pasturelands by removing encroaching shrub vegetation<br>Ensure water availability and suitable species composition for sustainable pasture management | Bringing abandoned pastures back into use will reduce degradation pressures on forests, steppes and other natural landscapes which are currently extensively used for grazing due to shortage of proper pastures. This will in turn result in improved conditions for the restoration of grassland species' diversity, while maintaining steppe and forest populations under threat<br>LD co-benefit: Prevention of negative vegetation succession and restoration of original vegetation compositions.<br>CC co-benefit: Reduction in frequency and severity of fires, in turn, reducing release of GHG from pasture/steppe fires. |
| Forests (including community plantations) | | |
| Illegal logging in forests, grazing in forests<br>Highly fragmented forest regions<br>Low productive forests<br>Plantations of non-native but fast-growing species (mainly black locust)<br>Rehabilitation of degraded areas | Sustainable forest management practices:<br>Planting forest vegetation in problematic areas (degraded, eroded lands) or unused/ abandoned land<br>Application of silvo-pastoral practices (promoting pastoral forests)<br>Ensure habitat connectivity for biodiversity through establishing corridors<br>Restoration/ rehabilitation of destroyed forests | The project incremental interventions are conducive to improved habitat for red list species enabling sheltering, migration, provisioning of food and other needs for these species to survive, as well as to supporting the forest ecosystem to withstand the invasion of exotic species.<br>LD/ SFM co-benefits: increase in forest cover by 100 ha in degraded areas, reduction in drying out of forests, prevention of the decline of ground water-table in forest and adjacent lands, restoration of sequestration and other ecosystem functions of forests.<br>CC/ SFM co-benefits: forest carbon pool of the target area maintained, assisted natural regeneration and native species reforestation (at 100 ha) leads to restored carbon sequestration capacity of forests. |

Project consistency with GEF focal area strategies

The project is designed to engineer a paradigm shift from unsustainable to sustainable, biodiversity-friendly land management in the Moldovan landscape. This will be accomplished by assisting Moldova in developing policies for mainstreaming biodiversity into territorial planning, livestock/pasture management, forestry and land use. Specifically, the national legislation will be amended and a policy introduced on identification of species and habitats that must be accounted for in territorial planning and economic activities. Territorial land use plans will be developed, compliance monitored and enforced based on increased knowledge and capacities of the regulatory, planning and enforcing authorities as well as land users/ owners (production sectors). Further, in-the-field technologies and incentives will be tested that help maintain the integrity of steppe (pastures), wetland, meadow and forest species and their habitats, promoting inclusion of sound scientific approach to drafting land-use principles and practices. The project is in line with GEF Biodiversity Focal Area, Strategic Objective 2: (i.e. Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes, Seascapes and Sector) and it will specifically contribute to Outcome 2.1: Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation, through the passing of a package of modifications in land and forest legislation and related regulations and standards for mainstreaming biodiversity at national and local levels and the approval and implementation of 2 district-level Spatial Plans and 4 municipality-level

Land Use Plans (LUPs) that fully recognize biodiversity and mainstream it into the various land uses in the landscapes. The project advances the strategic targets of the UNCBD Strategic Plan for Biodiversity 2011 – 2020, in particular: 1) By 2020, at the latest, governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of natural resources well within safe ecological limits; 2) By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

Project consistency with national strategies and plans or reports and assessments under relevant conventions

This project is in line with the State Programme on Soil Improvement (2003) which promotes measures to bring about soil conservation and to increase agricultural productivity. This aims at replacing unsustainable agricultural land use practices with more sustainable farming systems. The Strategy for Sustainable Development of the Agriculture Sector (2008-2015) states that pastures and croplands should be exploited within the limits of their carrying capacities and managed to ensure the protection of flora and fauna. The project also addresses the Strategy for Sustainable Development of the National Forest Sector in the Republic of Moldova (2001). Furthermore, this project addresses the priorities of the National Biodiversity Strategy and Action Plan (NBSAP 2001), which called for action to integrate biodiversity management objectives into economic sector policies, with particular reference to agricultural sector production activities. The NBSAP identified the following interventions as being necessary: 1) introduce obligatory environmental regulations for territorial planning, taking into account ecological resilience, ecosystem vulnerability and the carrying capacity of ecosystems; 2) adapt territorial planning to accommodate biodiversity management needs; 3) reorient forest planning and management, with a view to protecting threatened habitats and species; and 4) develop and implement sectoral action plans in order to conserve and restore wetlands and other critical ecosystems. An updated NBSAP[9] was produced within a GEF/UNDP project (2011-2013) to address Aichi targets, sectors' involvement into biodiversity conservation and rational management, and ecosystems/biodiversity goods and services. The project advances the strategic targets of the UNCBD Strategic Plan for Biodiversity 2011 – 2020, in particular: Target 4: By 2020, at the latest, governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of natural resources well within safe ecological limits; and Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

In addition, the National Territorial Land Planning Scheme, which is under development by MRDC, requires that district-level territorial plans incorporate biodiversity management concerns, and ensure that measures are taken to enhance the resilience of ecosystems. Important objectives pertaining to environment protection are also stipulated by the Government Programme "European Integration: Freedom, Democracy and Welfare" (2009-2013), including inter alia the promotion of ecologically friendly land use practices and the prevention and reduction of the degradation of ecosystems.

Project objective, outcomes and outputs

[9] The project is in line with the updated NBSAP. The updated NBSAP places special emphasis on (i) assessing and integrating ecosystem services through economic valuation and (ii) mainstreaming biodiversity into development policies, plans and practices and into sectoral plans and strategies. The project specifically furthers this objective of mainstreaming biodiversity conservation into the following sectors – agriculture, forestry, livestock, and fishing – by making modifications to relevant sectoral policies and demonstrating this approach in 2 target districts. It will draw on data/ information on the economic value of ecosystem services in the Republic of Moldova generated by the updated NBSAP process. Specifically, Output 1.4 that develops a system of penalties for malfeasance to approved spatial plans will be based on an assessment of economic/ monetary values of biodiversity and ecosystem services that, in turn, builds on GEF/ UNDP's NBSAP project results.

The objective of the project is to mainstream biodiversity conservation priorities into Moldova's territorial planning policies and land-use practices. This will be achieved through two project components as described below. (The project strategy has been modified in response to comments received on the PIF from the GEF Secretariat – Annex 1)

**Component 1: Land use planning and enforcement system addresses biodiversity loss**

Output 1.1: Modifications to land and forest legislation and related regulations and standards for mainstreaming biodiversity at national and local levels

Regulation on identification of vulnerable species, habitats and ecosystem goods and services during land use planning. A comparative analysis of national and international legal/ normative frameworks for each sector – agriculture, forestry and land use planning – with regard to inclusion of biodiversity conservation will be undertaken. Relevant proposals for amending existing legislation will be developed (e.g., Law on Vegetal Kingdom, Law on Animal Kingdom, Law on land use planning etc.) so as to ensure that it becomes a requirement of land use planning exercises to identify vulnerable species, habitats, and ecosystem goods and services.

Amendment to the 1991 Land Code introducing requirements for identification and incorporation of biodiversity outside PAs in District Spatial Plans and Land Use Plans of localities. The main legal document regulating land relations and natural resource use is the Land Code, which is considered outdated and requiring new approach based on real developments. The Land Code needs to be improved with the participation of all interested stakeholders and sectors. The project will, therefore, establish a **joint working group** that will include both governmental and non-governmental institutions as well as the private sector (which is the main land holder in the country). Proposals for improving the Land Code will be developed based on a comparative analysis of existing land-use legislation and sectoral legislation, along with other environment-related legislation. As a result, biodiversity conservation will have a clear place and role in the provisions made to the Land Code in order to further halt losses in species and habitats.

Minimal standards for biodiversity conservation in pasture/livestock and hay-field management, arable farming, forest use, fishing and water-based recreation introduced in relevant sectoral legislation. The environmental agenda is not a priority for the country's development till 2020, so inclusion of minimum requirements for biodiversity conservation into the legislative framework for land use would protect an important part of existing natural diversity from being fragmented or lost. While biodiversity conservation is already included in many regulatory/ technical frameworks (e.g. forestry norms), there remain some sectors where it is still inadequately reflected (e.g., pasture management, farming/grazing) or enforcement is poor. Therefore, the legal framework in a number of sectors will be improved based on species/ habitat requirements (e.g. certain old/dying trees should be left on a felling site, grazing should be limited for a certain period, certain steppe/ pasture areas should not be grazed in early spring, etc.). Furthermore, in defining minimal standards, an integrated approach to the use of natural resources will be taken (e.g., water, forest, pasture/steppe to be regarded as interconnected and interdependent in terms of biodiversity). Special attention will be paid to the private sector, which traditionally has not been included from the environmental/biodiversity point of view, and appropriate proposals to modify the legal framework to improve participation of the private sector will be made.

Improving cooperation/ coordination among stakeholders regarding legislative improvements. Incorporating biodiversity conservation into the legislative framework will first be discussed with stakeholders, using technical meetings and interactive consultations with sectors and experts. All proposals that are developed will be discussed with key central governmental agencies related to biodiversity/ land policy and use/ management (i.e., MoE, MAFI, MRDC, Moldsilva) and local governments in pilot areas (i.e., Soroca and Stefan Voda districts). This improved coordination will help stakeholders share information, synchronize activities, reduce duplication and avoid losses in biodiversity.

A dialogue among main stakeholders (governmental, non-governmental, academic institutions / universities, community, private) that would involve all production sectors, including land planning and use, will be undertaken. Inclusion of the representatives of these main stakeholder groups in training activities (Outputs 1.5 and 2.4) is envisaged.

### Output 1.2: Monitoring system in place to track change in biodiversity in important areas, and take adaptive measures to reduce impacts

This output will strengthen the enabling environment for proper monitoring of biodiversity (rare and endangered species) in landscapes outside protected areas before and during the process of territorial planning. The monitoring approach relies on introducing species/ habitat (S/ H) Passports to landowners outside PAs in the 2 target districts of the project.

A recent GEF/ UNDP Protected Areas System Project in Moldova has developed Passports for the PA system. The Passport provides a detailed description of a species/ habitat (figures, area/ individuals, maps/ GIS, actions/ recommendations etc.) that could span state land, community land, and/ or private land. The project will replicate this experience for species/habitats outside PAs, bearing in mind that species migrate and agricultural fields, be they community or private land, can serve as habitats and/ or food niches for a number of rare species.

This will entail the following steps: (1) introduce the necessary legal amendments to make it mandatory to develop Passports for red list species identified during inventories as part of the territorial and urban planning process (outside PAs); (2) pilot the Passport approach in the two target districts – by undertaking an inventory of red list species and development of Passports for these species and their habitats (location and other species-related data); (3) develop mandatory conservation actions that the landowner/ user must undertake in order to conserve the species and/ or habitat; (4) ensure broad consultation with landowners/ users on Passports and mandatory conservation actions; (5) provide the approved Passports and mandatory conservation actions to district-level environmental inspection and Cadastre office for further monitoring; and finally (6) ensure that agreed Passports and mandatory conservation actions are included in forest management plans (FMPs) if the species is found in the forest fund, grazing management plans (GMPs), district spatial plans (DSPs), and land use plans for localities (LUPs) that will be developed by the project in the 2 target districts under Output 2.1, as well as in other planning tools (such as hunting, tourism, fishing, water use documentation).

Implementing this Passport-based approach to monitoring rare and endangered species/ habitats outside PAs and ensuring integration of appropriate actions for their conservation in DSPs, LUPs, FMPs and GMPs will require a closer dialogue between the MoE, which is responsible for managing information on biodiversity, and the ALRC, which is responsible for land and soil databases that it uses to support the territorial planning process. MRDC, Academy of Sciences, Moldsilva, and SEI will also have to be engaged in the process.

Methodological recommendations will be developed for monitoring and supervision of the DSPs, LUPs, FMPs and GMPs, especially taking into account the conservation of biological and landscape diversity. These will define the requirements for monitoring and supervision of the implementation of territorial plans, sequential steps for their implementation, required modifications to the legislative and regulatory framework, and also, where necessary, the definition of “compulsory” actions that need to be implemented by landowners/ users.

The roles and responsibilities of the involved organizations will be clearly defined such that they draw on the expertise of all these actors and are based on comparative advantage. It is anticipated that the district-level representatives of MoE will, at regular intervals, monitor the condition of rare and endangered species’ habitats and biotopes that are to be protected by landowners/ users, as well as the effectiveness of the obligations placed on the landowners/ users by the species maintenance standards. Monitoring results

will be provided to the district executive committees, MoE and ALRC. Academic institutions will also be invited to be part of the process through appropriate research and analysis.

### Output 1.3: National multi-sectoral stakeholder committee established to oversee land use plan development, implementation and enforcement

Under this output a Multi-Stakeholder Biodiversity Mainstreaming Committee (MSBMC) will be created under the Ministry of Environment. This committee will bring together authorities[10] tasked with natural resource and land use planning and permitting responsibilities, at a national scale. The MSBMC will ensure a unified approach in the development, implementation and enforcement of land-use plans by the different ministries and departments resulting in the optimum use of land in terms of biodiversity conservation, ecosystem services and socio-economic development. It will facilitate dialogue on biodiversity conservation and coordination of production and development sectors' programs and policies, and provide guidance and oversight for practices that are biodiversity-friendly. The MSBMC will be established through a special order of MoE. Chairperson of the MSBMC will be Minister of Environment (or mandated person from MoE), the Deputy Chairperson will be from the MRDC, and the secretary from the MoE. The terms of reference and membership of this committee, statutory responsibilities, plus periodicity of meetings and other requirements are in the Annex 2.

### Output 1.4: System of penalties for malfeasance to the approved DSPs and LUPs developed

Moldova has a poor enforcement system in the area of environmental protection in general, and in the area of biodiversity conservation related legislation in particular. State Ecological Inspectorate (SEI) and Moldsilva are just few of the state institutions mandated with enforcement of biodiversity-related legislation. Relevant inspection agencies of MAFI also have enforcement responsibilities in relation to agricultural ecosystems. Although fines and penalties can be effective enforcement mechanisms, in Moldova these are either insignificant and do not cover the produced damage, or are missing and/or ignored. Some examples of poor enforcement are regulation of the number of livestock at the local level and the grazing regime, and burning of vegetative residues by farmers leading to degradation and loss of agricultural ecosystems.

Therefore, the project will analyze the legislative framework and develop a proposal for a system of penalties commensurate with the loss in biodiversity. This system will reflect the new biodiversity-friendly land use practices and the clarification in the mandates of the different agencies responsible for enforcement and prosecution. Existing fines, penalties and grazing taxes will be revised (including necessary proposals to amend the Administrative Code) to maximize the efficacy of the system in preventing biodiversity-harmful activities. The fines and penalties will be increased according to the real value of biodiversity (or ecosystem) loss and be applicable evenly to all transgressors. An assessment of economic/ monetary values of biodiversity and ecosystem services (building on GEF/ UNDP's NBSAP project results) will provide the necessary rationale for this. It is extremely important to take into account that any spatial plan, prior to approval or during elaboration, needs to be in compliance with (i) national legislation, (ii) ratified conventions, and (iii) rational use of natural resources.

### Output 1.5: Government officers from key institutions trained in participatory spatial planning that integrates biodiversity conservation principles

Under this output training sessions will be conducted to promote integrated land and biodiversity/ ecosystem planning. Capacities of staff from MoE, MAFI, MRDC, Agency for Land Relations and Cadaster, LPAs, and local environmental inspectors will be strengthened through targeted training on (i) integrated spatial planning, (ii) ecosystem values; (iii) sustainable livestock management, hay-making and

[10] Such as Ministry of Environment, Ministry of Regional Development and Construction, Agency Moldsilva, Agency for Land Relations and Cadastre, Academy of Sciences, LPAs (District Council Soroca, District Council Stefan Voda)

forest use; and (iv) enforcement of spatial plans (including conflict resolution). The training will focus on improving coordination between biodiversity/ environmental-related institutions and land use/ spatial planning-related institutions and the audience will be sought to be gender balanced.

In addition, government staff from other communities within the 2 target districts, as well as from other districts, will be invited to promote replication. The impact of the project's capacity building activities will be tracked with a capacity development scorecard (see Annex 3). The following table provides topics, main target groups and experts/ institutions to be involved in the training.

**Table 2. Summary of training on participatory spatial planning that integrates biodiversity**

| Thematic Focus | Target Group | Experts/Institutions involved |
|---|---|---|
| Integrating environment/biodiversity into land/spatial planning – coordination between sectors (policymakers) at national level | Environmental/forestry/agriculture:<br>Ministry of Environment<br>Ministry of Agriculture and Food Industry<br>State Ecological Inspectorate<br>Agency Moldsilva<br><br>Land/urban/infrastructure planning:<br>Ministry of Transport and Road Infrastructure<br>Ministry of Regional Development and Construction<br>Agency for Land Relations and Cadastre | Experts in biodiversity<br>Experts in urbanism and/or construction<br>Sectoral representatives |
| Improving the legislative framework by involving key governmental institutions, coordinating activities, and developing synchronized policy | Environmental/forestry/agriculture:<br>Ministry of Environment<br>Ministry of Agriculture and Food Industry<br>State Ecological Inspectorate<br>Agency Moldsilva<br><br>Land/urban/infrastructure planning:<br>Ministry of Transport and Road Infrastructure<br>Ministry of Regional Development and Construction<br>Agency for Land Relations and Cadastre<br><br>Juridical/law:<br>Ministry of Justice | Legal experts (with background in environment or related fields)<br>Representatives of governmental institutions |
| Non-fragmented habitat approach to land use / biodiversity policy making | Environmental/forestry/agriculture:<br>Ministry of Environment<br>Ministry of Agriculture and Food Industry<br>State Ecological Inspectorate<br>Agency Moldsilva<br><br>Land/urban/infrastructure planning:<br>Ministry of Transport and Road Infrastructure<br>Ministry of Regional Development and Construction<br>Agency for Land Relations and Cadastre<br><br>Transport/Infrastructure:<br>Ministry of Transport and Road Infrastructure<br>Rail Road Agency | Experts in agriculture, forestry, environment or related to other natural resources<br>Experts in cadaster, GIS or similar fields<br>Experts in transport (ground, air, water) |
| Introducing Passport for species/habitat | Ministry of Environment<br>Ministry of Agriculture and Food Industry<br>State Ecological Inspectorate<br>Agency Moldsilva<br>Agency for Land Relations and Cadastre | Experts in biodiversity (from sectors)<br>Experts in cadaster/GIS |

**Component 2: Conservation and Sustainable Use of Biodiversity on Communal Land**

Output 2.1: Integrated district spatial plans[11] (DSPs) and land use plans[12] (LUPs) accommodating biodiversity concerns are developed for two districts

Developing biodiversity-compatible DSPs for 2 districts (Soroca and Stefan Voda). According to the Urban Planning Program for the Moldovan Localities for 2013-2016 (approved by GD nr. 493 from 04.07.2013), all localities (towns, rural communities) should develop land use plans. However, the project's target districts do not have DSPs in place. This output will develop DSPs by relying on cross-sectoral working groups, GIS technologies for biodiversity mapping, identifying sites of conflict between biodiversity and human activities, developing recommendations for managing the conflicts in a win-win manner and adapting the currently destructive economic activities, finalizing plans and submitting them to district administrations for implementation, with a clear enforcement and monitoring apparatus. S/ H Passports and mandatory conservation actions developed under Output 1.2 will be integrated into the development and implementation of the DSPs. The focus of the DSPs will be on ensuring optimal allocation of land to generate development benefits and critical biodiversity benefits in tandem. The plans will be based on an assessment of the economic valuation of biodiversity and ecosystem services in areas of high biodiversity or in critical areas e.g. ecological corridors. A recent REC project is helping selected district in developing District Environmental Plans (DEP), including in Stefan Voda. Soroca district does not have a DEP. The project will ensure that the DSP for Stefan Voda builds on priority areas of the DEP and will cooperate with REC on that.

The target districts are Soroca and Stefan Voda. Both pilot districts represent areas rich in biodiversity, with areas included in two Ramsar sites[13]. The districts are located on the border with Ukraine and along the Nistru river ecosystem. The two regions also vary in terms of economic conditions. A brief description of the two districts, including land use documentation related to the project, is provided below, and more detailed information can be found in Annex 4.

Soroca district (104,300 ha): Located in north-east Moldova, Soroca district's administrative center is the town of Soroca, surrounded by 33 villages. Approximately 60% of the total land area is used for agriculture (arable land is 53%), and only 7% is under forest cover. Approximately 63% of the population lives in rural areas and 37% in urban areas. The District Council has its own Socio-Economic Development Plan, wherein the stated priority is infrastructure and environmental protection. There is, however, no DSP that would built on the existing Socio-Economic Development Plan. There is a Land Use Plan (LUP) for Soroca town that was developed in 2012, covering a period of 25 years. There are general (cadastral) plans for localities developed from 1960 to 1990 that cover a period of 25 years. These have all expired. District authorities intend to develop Cadastral Plans for each of the 34 localities in the district, and they are seeking funds for this.

Stefan Voda district (99,838 ha). Located in south-east Moldova, Stefan Voda district's administrative center is the town of Stefan Voda, surrounded by 25 villages. Approximately 65% of the total area is used for agriculture (arable land is 56%), and approximately 9.6% is under forest cover. Stefan Voda town has a Strategic Socio-economic Development Plan. There is no DSP; however, a new LUP is envisaged to be developed in 2016. There is a general (cadastral) plan for the town, accompanied by a map, developed in

[11] District Spatial Plan (DSP) represents an expression of physical organisation of space within a district, and directed towards balanced territorial development reflecting economic, social, cultural and ecological policies of society.

[12] Land Use Plan (LUP), or urbanistic plan, is a documentation which states conditions for positioning of various activities in a given area, and is developed for a part or entire locality, or for an area/ land meant to become a locality.

[13] Ramsar Site nr. 1500 "Unguri – Holosnita" (2008) (15,553 hectares; 48º17'N 028º03'E) in Soroca and Ocnita districts; and Ramsar site nr. 1316 "Lower Dniester" (2003); 60,000 ha; 46 34'N 29 49'E; mostly located in the Stefan Voda district

1986. The rest of the localities have general plans, which were last developed in 1990, and, similar to Soroca district, have expired.

In order to increase chances for successful implementation of the 2 DSPs developed under this output, as well as to trigger replication of project results, it will be important to demonstrate biodiversity compatible land-uses through field pilots in selected communities of the two districts. These pilots are to be implemented under Outputs 2.2 and 2.3. Further, the project will produce a model of land-use planning that will be adjusted for ecological, social and economic variations across the 2 districts, with high potential for replicability in neighboring districts after the project termination.

Developing LUPs for 4 selected localities that consider biodiversity and ecosystem continuity. LUPs will be developed for 4 rural localities: Zastinca and Badiceni (in Soroca district), and Copceac and Talmaza (in Stefan Voda district). S/ H Passports and mandatory conservation actions developed under Output 1.2 will be integrated into the development and implementation of the LUPs. All these localities have general plans that have expired (e.g. general plan for Talmaza village was developed in 1977, and for Copceac village in 1982). LUPs will be developed in close cooperation with various landowners. Developing LUPs is necessary to demonstrate a practical way to shift from unsustainable to biodiversity-friendly production activities, focusing on the most threatening land-use practices, namely livestock management and forest use (as regards examples of biodiversity-friendly practices on arable land, these are expected to be demonstrated by baseline programs).

The development of DSPs and LUPs will be important for reducing threats to biodiversity from expansion of various types of infrastructure. The plans will attempt to reduce the level of intervention into natural habitats and to further a sustainable approach to human-biodiversity relations for example by giving consideration to agro-tourism.

Developing a spatially-based digital decision-making system for biodiversity conservation that is available for use in policy development, cross-sectoral spatial planning and management. This system will be developed in cooperation with the Agency for Land Relations and Cadastre (ALRC), MoE and its subordinated institutions mandated with biodiversity monitoring functions, and will be built on an existing portals/platforms by using data from existing land and/or soil registers (databases) at ALRC. Consultations during the PPG have shown that the ALRC holds a huge database and information, but what they lack is **biodiversity-related input**. This gap will be filled by a detailed biodiversity inventory and classification of all lands in the four target localities, information on the location of critical habitats and species, and thresholds for the use of biodiversity resources. All necessary scientific information will be obtained from the Academy of Sciences (mainly biodiversity-related institutes and experts), some NGOs, Moldsilva, and/or provided by other reliable sources. Eventually, such a system will (a) help local administrations (district, rural localities level) receive necessary biodiversity-related information, (b) integrate biodiversity/ ecosystems in local/ regional planning, and (c) address the disconnect between continuous land repartition and the needs for biodiversity to ensure its functions. The system will be developed as a unified system for the entire country, with an initial focus on the two selected districts and the four selected localities.

Developing Grazing Management Plans (GMP) for selected areas. Implementation of this output will support operationalization of the Zoo-technical Law which requires that LPAs develop Grazing Management Plans and provide for rational use of public pasture lands. So far, there is no such experience with implementation of this provision in Moldova, therefore the project will be instrumental in piloting efficient grazing management practices that consider the real effect that the grazing animals exert on existing pasturelands (former steppes converted into pastures) and their remaining biodiversity (namely rare plants and animals). S/ H Passports and mandatory conservation actions developed under Output 1.2 will be integrated into the development and implementation of the GMPs. The total area covered by GMPs is 2483.57 ha and will be distributed as follows:

- In Soroca district – totally 1118, 49 ha of pastureland (Zastanca – 354,69 ha, Badiceni – 763,8 ha)

- In Stefan Voda district – totally 1365,08 ha of pastureland (Talmaza – 860,27 ha, Copceac – 504,08 ha)

Developing Forest Management Plans (FMPs) for selected districts. According to Forest Code (1996) all forests should have FMPs. Normally, FMPs are elaborated for a period of 10 years and their implementation is mandatory. Forests managed by Moldsilva traditionally have FMPs, while other forest owners usually lack FMPs (except some community forestland that developed FMPs within internationally funded projects). Forest management planning is based on five major principles: i) continuity of forest functions, ii) optimal and sustainable exercise of multiple production and protection functions of the forest, iii) optimal and sustainable utilization of forest, iv) principle of aesthetics, and v) biodiversity conservation. Although FMPs contain detailed description of the site and main tree species, and the normative frame for conducting FMP reflects biodiversity conservation in general, data on rare and endangered species need to be explicitly included in the FMPs (e.g. species name, location, other data if relevant). To ensure that information on rare and endangered species in forestlands is reflected, the S/ H Passports and mandatory conservation actions developed under Output 1.2 will be integrated into the development and implementation of the FMPs. The project intends to undertake FMPs only in community forestlands. The total area to be covered by FMP in selected districts and localities is 768 ha of forest vegetation (which represents forest plantations and/or forest shelter belts), as follows:

- In Soroca district – 333 ha (Zastanca – 45 ha of forests and 11 ha of shelterbelts; Badiceni – 238 ha of forests and 39 ha of shelterbelts)
- In Stefan Voda district – 435 ha (Talmaza – 208 ha of forests and 45 ha of shelterbelts, Copceac – 106 ha of forests and 76 ha of shelterbelts)

### Output 2.2: Technologies developed, tested and appropriate infrastructure established to showcase biodiversity-compatible land uses in pasturelands[14]

In line with the LUPs developed in Output 2.1, technologies will be developed and tested and the necessary infrastructure will be put in place to demonstrate biodiversity-compatible practices at specific sites covering at least 100 hectares of pastures and dry meadows. The approach will be tested on selected communal (municipal) land by conducting the following:

Rehabilitation of pasturelands through removal of encroaching shrub/woody vegetation, and improving vegetation cover (without adversely affecting species composition and soil structure). This will be done in selected pastureland areas based on agreements received from districts and communities (see maps for each site in Annex 4), as follows:

- **Soroca district** – total area of 51 ha, of which:
  - 11 ha in Zastinca
  - 40 ha in Badiceni
- **Stefan Voda district** – total area of 49,8 ha, of which:
  - 9.4 ha of “Langa antigrindina” [Near Hail Cannon] area, Talmaza
  - 5 ha of “Statia de pompare a apei nr. 1” [Water pumping station nr. 1] area, Talmaza
  - 2.8 ha of “In coada iazului” [To lake’s tail] area, Talmaza
  - 7.6 ha of “Ezercan” area in the Lower Nistru wetlands, Talmaza
  - 20 ha in Copceac
  - 5 ha in Slobozia).

[14] Note on pasturelands in Moldova: Moldova’s pastures are former steppes that have been converted, and they still preserve some steppe species. However, these species are much reduced in population/ numbers and have a narrower distribution due to livestock and other pressures.

In Moldova many pasturelands are not properly managed and as a result these lands get invaded/ encroached by woody species (shrubs in the majority of cases). The most common species of shrubs are dog-rose (*Rosa canina* sp.), common hawthorn (*Crataegus monogyna* sp.) and silver berry (*Elaeagnus angustifolia*). Encroachment by shrubs has an adverse impact on the grass vegetation for haymaking as well as on grazing opportunities. If the shrubs are removed and the pasturelands are managed accordingly (mowed regularly if used as a haymaking area or grazed rotationally respecting the grazing period and grazing capacity) there is little chance that shrubs will emerge again.

Analyses undertaken during the PPG have shown that pasture areas in some of the selected communities are invaded by several shrub species, mainly native Dog Rose (*Rosa canina*) and/or by non-native Oleaster (*Elaeagnus angustifolia*), which have reduced the surface for grazing and altered typical steppe biodiversity/ecosystem composition. Most of these shrubs need to be removed and a control strategy needs to be undertaken on a long-term basis. However, some of the Dog Rose shrubs can be left in the field as the local population (and fauna) use the fruit for self-consumption and income-generation (e.g. sale of fruit in markets for food and/ or medicinal values). Out of the eight proposed pilot pasturelands, there are only 2 sites that need removal of shrubs and the respective costs will be the contribution of local communities.

Pasture improvement activities will maintain/ respect species composition in accordance with local conditions (e.g., alternation of dry and rainy seasons) and will utilize best adapted plant species to meet xerophytic requirements (the latter is especially important in Stefan Voda district). Both leguminous and grain species will be present and/or applied to selected areas where appropriate.

**Amelioration of actively eroded pasture/ steppes to stop their degradation.** There is a pilot area in Copceac community that is experiencing an intensive soil erosion process, in turn affecting the remaining natural steppe habitat of the country for *Stipa pennata* and *S. ucrainica*. In these areas, measures will be taken to stop and prevent erosion, such as:

- building retaining walls, using sprouts or other woody constructions from sprouts or other plant material
- using mulch to enhance erosion control (usually applying a healthy layer of mulch after finding out which mulch is best for the particular site)

**Establishing high biodiversity hay production areas**. Pastures that are restored through natural pasture maintenance methodology, without destruction of existing vegetal cover, will be used in the first two to three years as hayfield, and then as pasturelands. Using the plots as a hayfield in the initial stage will create conditions for the lead species (*Stipa sp*) to be restored, in turn creating favorable habitat for other steppe species, and increase hay productivity and quality. The project will cooperate closely with local administrations in order to guard the set-aside parcels. If needed, such areas will be fenced using various materials (wires etc.). The last two actions will be covered by local communities.

**Optimization of livestock and application of rotational grazing.** This will be done together with agreed regulated haymaking and rotational system on small-acreage areas. The restoration methodology will aim to improve and maintain natural pastures without destruction of existing vegetal cover (through pasture regulation, over-seeding and other agro-technical interventions needed for natural habitat restoration support). In order to encourage property rights in these historically open-access properties, livestock owners will be assisted in institutional strengthening through the establishment of associations. The municipalities will enter into legally-binding agreements based on the jointly-developed management plans (Grazing Management Plans, see below) with livestock owners and approved by Local Community Council, which is a community level decision-making body. The optimization of livestock numbers of the individual farmers will be based on a fair and equitable mechanism. Through this mechanism, no individual farmer will lose the right to graze, but only a reduction in number of animals allowed to graze on the specific steppe area will be enforced. The farmers will be compensated for this loss through

increased property rights on the land through longer term agreements and through moving away from an open access regime therefore allowing the individual livestock owners to plan longer term, increased productivity of the remaining livestock as the fodder will be of better quality and diversity and reduced rent payments to the municipalities for the use of the pastures..

### Output 2.3: Ecological connectivity established between and within different forest blocks

Given the threats to biodiversity in the forestry sector and the increasing fragmentation of remaining forests, building eco-forest corridors would create conditions for increased connectivity. This will ensure genetic movement among scattered groups of animals, provide access to food and water sources, which would enhance population viability in the long term. Eventually, such green habitat corridors between forest fragments will help decrease the number of conflicts with humans

Designing and implementing community forest management schemes to improve ecological connectivity in selected pilots. The Forest Research and Management Institute (FRMI), an authorized institution, will develop a scheme of forest regeneration and sustainable forest management. The species composition will be designed in line with biodiversity requirements and taking into account soil qualities (this will be linked to Output 2.2 as the testing of silvo-pastoral practices will be carried out in areas where communities graze cattle). FRMI will also evaluate costs according to technological maps/plans and design the plan for subsequent forest management by communities. It is extremely important that all norms and prescriptions in this SFM activity are consulted, understood and respected by the land owner and/or executors of planting activities. Reforestation (seedlings and planting financed from Government's National Plan of Forest Vegetation Extension) and subsequent sustainable forest management schemes will be complimented by extensive trainings, technical support in forest management, quality control, monitoring of threat reductions and biodiversity population status. The four pilot-areas have been selected for this activity, as follows (see map in Annex 4 of project Document):

(a) Ecologic corridor to PA "Bekyr Valley" Zastinca (Soroca District): This corridor will ensure connectivity from the Varancau forest area (mainly oak formations with an average age of 65 years) with the natural complexes joining the Bekyr Valley (a PA with an area of 40 ha, consisting mainly of calcareous rocks covered with forests and slopes of pasture/steppe remnants). .

(b) Ecologic corridor Badiceni-Iarova (Soroca District): This is the longest and linear-shaped corridor, ensuring connectivity from Decebal forest area (an oak formation with an average age of 70 years) through a long community forestland (belonging to Iarova and Cremenciug communities, consisting mainly of young plantations of black locust mixed with native species, such as oak, willow etc.) to Badiceni forest (a mixed plantation of various species).

(c) Copceac forest-steppe corridor (Stefan Voda district): This corridor will span 3 areas located close to each other, and will ensure connectivity and ecosystem stability on 32 ha of land. It will connect Copceacul de Sus forest with Copceac Rivulet forests and Copceac Forest near the village.

(d) Talmaza shelterbelt corridors (Stefan Voda District): Approximately 22.4 ha were selected based on land availability for reforestation and importance as an environmental protection area.

### Output 2.4: Land users trained in mainstreaming biodiversity concerns in land use practices

In order to ensure adoption of pilot approaches to mainstreaming biodiversity, the project will train land-users in biodiversity-friendly approaches in each type of land management (livestock grazing, hay-making, arable agriculture, use of forests). This will also include field training for land owners (including affected land users), private sector, farmers, cattle holders and businesses and the audience will be gender balanced. Opportunities for silvo-pastoral practices along with rotational grazing (including possible economic, social and environmental gains) will be discussed and benefits shown, taking into account agro-forestry conditions of the country. In addition, stakeholders from other communities within the 2 target districts, as well as from other districts, will be invited to promote replication. The impact of the

project's capacity building activities will be tracked with a capacity development scorecard (see Annex 3). The following table provides topics, main target groups and experts/institutions to be involved in trainings.

**Table 3. Summary of training workshops on integrating biodiversity in land use**

| Thematic Focus | Target Group | Experts/Institutions involved |
|---|---|---|
| Implementing integrated spatial planning policy that considers biodiversity/ecosystem approach and connectivity – coordination among sectors and land owners at local level | District Councils<br>Community Councils<br>State Forestry Enterprises<br>Local Cadastre specialists<br>Agro-farmers (private or collective)<br>Local ecological agencies<br>Private sector | Cadastre experts<br>Urban planning experts<br>Biodiversity experts<br>Academy of Sciences (botany, zoology, ecology/geography) |
| Applying silvo-pastoral practices: opportunities for improving pasturelands covered with woody/shrubby vegetation | Communities/villages of:<br>Soroca district<br>Stefan Voda district<br>Holders of cattle (private / family)<br>Farm groups (pasture, vineyards, orchards)<br>Community forest owners<br>Private forest owners (if any)<br>State forest enterprises (local) | Agro-forestry experts<br>Pasture management experts<br>Forestry experts<br>Biodiversity institutions<br>Legal experts |
| Considering profit from pastures: a rotational grazing approach to gain benefits (economic, social and environmental) | Communities/villages (holders of pasturelands)<br>Holders of cattle (private / family)<br>Private sector<br>Business | Pasture/livestock experts<br>Biodiversity/conservation experts |
| Improving biodiversity conservation in pilot areas: a habitat management approach to protect and restore species populations, including Passport for species/habitats | District Councils<br>Community/village personnel<br>Farmers<br>Cattle holders<br>Private agents (agriculture, forestry) | Biodiversity experts<br>Academy of Sciences (Institute of Botany, Institute of Zoology, Institute of Ecology and Geography) |
| Monitoring of protected species and ecosystems at the local levels – in protected areas and outside protected areas | Districts<br>Communities/villages<br>Farmers<br>Private sector<br>Business (agro/forestry)<br>State forestry enterprises | Experts from Ministry of Environment<br>Appropriate Institutes of Academy of Sciences<br>NGO (well-known) experts |

### Output 2.5: Secure public funds for mainstreaming initiatives

The focus will be on brokering public finance resources for biodiversity mainstreaming initiatives and aligning existing financial contributions in the forestry, agricultural and rangeland sectors to support biodiversity-friendly practices in the two districts. Further, to build the business case for increasing resources flows, valuation will be undertaken of costs/ benefits of different production systems and the new biodiversity-friendly practices within the selected landscapes and their benefits to biodiversity, ecosystem functioning and livelihoods. This information will be used by selected local governments to broker public and private resources for increased funding towards mainstreaming biodiversity concerns. Increasing funding allocation to this end will also involve review and re-alignment of existing funding to the identified production sectors. Public expenditure reviews of the agricultural, forestry and rangeland sectors in the two districts will be undertaken, negative spending will be identified and reduced, and budgets realigned to finance for example the destocking of rangeland, and rehabilitation of forests. For both new and existing (realigned) funding sources, the project will develop resource distribution criteria to ensure the most effective and efficient application of scarce resources and that adequate incentives are provided for landowners/ managers to make the move towards biodiversity-friendly practices.

Socio-Economic Benefits including Gender Dimensions

The main livelihood options of rural communities in Moldova are related to livestock husbandry, forestry, and crop cultivation. Approximately 52% of the population is rural, and almost half of these are subsistence farmers. Among the rural population, people aged 60 and over are 4.1-times higher than in urban areas. Subsistence farmer families belong to the poorest group of the Moldovan population. Most of them are single-person families (64.2%), and in 55% of the families the head of the household is a woman. By enhancing the resilience of the resource base on which these families depend, the project will deliver significant long-term economic benefits at the local level.

In the case of the business-as-usual scenario, the resilience of the ecosystems to withstand threats would keep declining, in turn affecting the rural population that depends on the ecosystem services. Specifically, spatial planning does not consider the long-term resilience of the resource base on which communities rely, and this will continue in the business-as-usual scenario.

Under the GEF alternative scenario, rural communities in 2 districts covering approximately 204,000 hectares of land and including 171,395 inhabitants, out of which 50% are women, will – through the territorial plans – receive assurance that the resource base on which they depend in agriculture (e.g. forage productivity) will be more productive in the longer term. The 18 agricultural enterprises in Soroca and 28 in Stefan Voda, which are stagnating at the moment due to low level of inputs, will have a better chance to sustain their businesses and to survive, this continuing to provide for jobs and improved livelihoods. Forest degradation and biodiversity loss is having a significant adverse impact on the population living in the pilot areas, especially for some 6,456 vulnerable families who depend on agro-biodiversity, firewood, berries, medicinal plants and other goods provided by natural ecosystems.

Further, the interest for eco- and agro-tourism is increasing in Moldova and the country is becoming more attractive for external visitors who come more often for leisure and vacation, rather than for business. Both Stefan Voda and Soroca districts have good tourism potential due to the natural heritage in these localities. There are around 10 tourism companies in the two districts and Soroca town is considered the oldest tourist route in Moldova. Therefore, the rehabilitation of pastures and forests will not only have a positive impact in terms of biodiversity conservation, but will also provide for an increase in income for families making their living from tourism-related activities.

Additional socio-economic benefits resulting from improved management of pastures are the following: 20% average increase of livestock productivity in terms of meat and milk, approximately 10,000 MDL (=$600) annual net income from agricultural biomass per ha, increased potential for bee-keeping, and improved habitat for game and associated incomes.

Further, many local level activities will be implemented by local stakeholders themselves thus increasing their capacities for mainstreaming biodiversity. Following the UNDP and GEF gender policies and strategies, special attention will be placed on gender equity. In particular, full participation of women in consultations on sustainable biodiversity use and territorial planning processes will be ensured since 11% of all the businesses in the Stefan Voda district are women-led and the equivalent number for Soroca is 25%.

The project also has the potential for generating significant benefits at the national level. The project's work in the pilot districts will demonstrate how to secure ecosystem services that are vital to Moldova's economy. While the project's work in pilot districts is a modest start, it has the potential to be replicated in other parts of the country, thereby reducing the costs associated with loss of ecosystem services.

Cost-effectiveness

Moldova lacks natural renewable resources and there is acute shortage of water and biomass resources in some regions (quality of water is poor and polluted, and there is high demand for biomass as primary energy and animal forage). Soil degradation caused by a complex of factors (among them erosion and unsustainable management) may have a detrimental impact on general development and environment in

the country and regionally. The project will add value by demonstrating a more nature-friendly approach to sustainable development.

The cost-effectiveness of the project can be justified by the impact it will have on maintaining ecosystem/ biodiversity services through the shift to more sustainable land use practices. Ecosystems/ biodiversity provide not only direct goods, but also services such as water provision and regulation, soil fertility, growth and reproduction of food species, climate regulation etc. Key sectors are benefiting from these services - agriculture, fisheries, forestry, nature-based tourism, human settlements, etc.

The general value of the food provisioning service provided by biodiversity to agriculture is highly estimated. Pasturelands in Moldova are extremely poorly managed, but they are still important as biodiversity habitats for a number of species which have persisted from former steppes (after conversion) and/ or provide food niches for other species (e.g. birds of prey that nest in forests but feed in open areas). However, if pasturelands continue to be managed as they currently are in the business as usual (BAU) scenario, this may result in irreversible damage to ecosystems in the future.

Even though shifting overgrazed and underused pastures to sustainable use (sustainable ecosystem management scenario or SEM) may imply a decrease in the value of food/ forage provided by pastures in the short and medium term, the values after 10-15 years are significantly higher than the BAU values. A continuation of BAU could lead to monetary losses for the local economy (as well as biodiversity loss) over the next 25 years. SEM requires that local people are motivated to maintain balanced/ rational breeding and grazing practices (in the short run grazing may reach its carrying capacity and is maintained at this level into the long term), and use of pastures at carrying capacity so as not to damage the ecological equilibrium.

Planting forest vegetation on degraded lands will have a positive impact in the long run as it will mitigate soil erosion and provide habitat corridors from an ecological point of view. Additionally, ecosystem/ biodiversity services will be maintained through sustainable community forestry (e.g. carbon sequestration, water and soil erosion regulation). Reforestation of 100 ha will provide additional forest provisioning services.

Innovativeness, sustainability and potential for scaling up

The project demonstrates several approaches for the first time in Moldova, including integration of biodiversity data into land use planning, economic valuation of biodiversity values when assigning land use under the newly developed LUPs, as well as regulating grazing for biodiversity values. Although reforestation approaches have been implemented in Moldova, these were mostly based on increasing forest cover and in many cases have used exotic species. The project will be targeting native species reforestation with the aim to prevent/control soil erosion and to increase the functional connectivity between isolated forest blocks.

In terms of sustainability, the project is building on a strong baseline insofar as a policy and institutional framework for mainstreaming biodiversity into territorial planning already exists. The project is about biodiversity conservation, and the planned interventions will ensure that damaging production sector practices are avoided in the most biodiversity sensitive areas, and that impacts are reduced, mitigated and offset as necessary elsewhere, thus reducing pressures on biodiversity, and enhancing conservation. The project will also be making the case for all stakeholders to view biodiversity protection as making economic as well as ecological sense. Recognition of the economic value of biodiversity together with the ownership that will be achieved in the project's products will lead to a protective stance from the relevant production sectors, and this will augur well for the sustainability of the project's products, services and benefits. Financial sustainability will be ensured through the review and realignment of public expenditure and the brokering of additional public and private funding towards biodiversity mainstreaming. The key gaps in the current process are capacity and coordination among all the spheres of Government to recognize the values of biodiversity and the ecosystem services it provides, and the

application of this recognition in the land use allocation and permitting process. These are gaps which this project is designed to address.

Replication will be achieved through the direct replication and scaling up of sustainable practices and methods demonstrated by the project. The selection of districts in two different major ecological regions[15] has been made so as to cover as much diversity as possible, and generate a diverse set of practical experiences on mainstreaming biodiversity conservation into economic activities outside protected areas. A series of workshops will be held as part of the project to trigger replication in additional districts including replicating the experience in those districts that will be developing LUPs during the project period. The project will also develop a package of modifications in land, forest and environmental legislation that will not only apply to the districts the project will be covering, but will have national coverage establishing the enabling environment for the project initiatives to replicated in all other districts of Moldova.

Stakeholder Analysis

| Stakeholders | Project Implementation Role |
|---|---|
| Ministry of Environment, including the State Ecological Inspectorate | The Ministry is responsible for the development of environmental legislation, action plans and norms and standards. It provides state control on the quality of the environment. Under the Ministry, the State Ecological Inspectorate operates on the district level to enforce environmental legislation. The Ministry will review and draft policy and legislation relevant to mainstreaming biodiversity in territorial planning and preparing minimal standards for biodiversity conservation. Further, the Ministry will identify appropriate procedures for compliance monitoring and enforcement of the territorial plans and enforcement of legislation with regard to biodiversity. The Ministry will also facilitate functioning of the project management team (PMT), especially in regard to liaison with government authorities from different sectors. Ministry will ensure coordination with other relevant projects and initiatives and will be active in monitoring of the PMT activities. |
| Ministry of Agriculture and Food Industry including the Agency for Interventions and Payments in Agriculture | The Ministry of Agriculture is responsible for development and implementation of national agricultural policy and legislation. The Ministry is directly responsible for promoting among landowners environmentally friendly–practices, including pasture management. The Ministry will play an active role in project implementation particularly in policy formulation and mainstreaming biodiversity requirements. At rayon level the Ministry has its subdivisions including agricultural extension officers that will support project activities. The Ministry will also support the project by politically influencing agricultural practice e.g. promoting among landowners environmentally friendly practices. |
| Ministry of Regional Development and Construction | The Ministry will review any spatial and land-use plan produced by the project, so that biodiversity aspects are and will further be integrated into their policy. It will promote consideration of biodiversity in the state policy and legislative and regulatory framework in planning and land use planning, architecture, urbanism, construction, production of construction materials, housing and regional development. |
| Agency for Land Relations and Cadaster | The Agency is the main responsible institution for implementing state programs on land improvements. It will help in improving legal frame (namely Land Code), including creating a joint working group for development of LUPs. With inputs from the project, they will provide assistance in ensuring congruence between land and soil regimes, and incorporating data/information related to biodiversity into their information systems (focusing on the 2 selected districts). |
| Agency Moldsilva | Moldsilva will be an important partner for the implementation of reforestation activities on degraded lands, as well as for their related duties in forest resources management. The agency will provide, through its state forestry units, technical assistance, co-financing and support in implementing project components. Also, Moldsilva will help build cooperation with local communities where it operates on forest extension. It will also help review legal or regulatory products related to land use, so that forest biodiversity is covered. |
| Local Public Authorities (LPAs) at the district and village/community | District and village/community public administrations have a significant role to play in component 2 of the project. Their responsibilities are to promote cooperation among all land users and owners, to implement biodiversity-friendly practices, participate in conflict resolution, and promote training and educational activities. The district authorities will be responsible for land use |

[15] Soroca, which in the north, is part of Euro-Asian region (forest-steppe areas); and Stefan Voda, which is in the south, is part of Mediterranean region (areas with xerophytic habitats and species).

| Stakeholders | Project Implementation Role |
|---|---|
| levels | planning. |
| NGOs: Ecological Movement of Moldova (EMM); BIOTICA Ecological Society; REC-Moldova; NGO-BIOS, NGO Congress of Local Authorities (CALM) and National Agency for Rural Development (ACSA) NGO and ProRuralInvest NGO | All NGOs will participate in stakeholder consultation and training as relevant. EMM is committed to restoring the natural balance of the environment in Moldova and will assist in the promotion and awareness raising of project activities. BIOTICA Ecological Society promotes the establishment of the National Ecological Network of Moldova, among other environmental objectives, and will be involved in the development of policies and regulations for mainstreaming biodiversity into Land Use Planning. It will also assist in the development of an annotated list of threatened species and habitats. It will provide advice on identification of areas for reforestation of degraded communal land. REC-Moldova has as an objective the promotion of cooperation between NGOs, private sector and other organizations, with government institutions in the domain of environmental protection and will be important during the project implementation in facilitating and participating in public debates on policies and regulations. NGO BIOS is a leader in the field of environmental protection, sustainable agriculture and community development in Moldova and will be involved in the development of minimal standards for biodiversity conservation in most pressing land-use practices, among other activities. CALM represents the biggest local public association of local communities in Moldova and one of its main objectives is to contribute to promoting successful models and practices in local and regional development, inter-municipal cooperation, provision of public services and good local governance. ACSA's mission is sustainable development of rural communities through setting-up and developing a professional network of information, consultancy and training service providers for agricultural producers and rural entrepreneurs. Both CALM and ACSA will assist the Government of Moldova and the project in amending the Land Code and introducing requirements for identification and incorporation of biodiversity in land-use plans. ACSA will also assist in establishing working relations with livestock farmers in order to implement jointly-developed management plans for grazing and hay-making. ProRuralInvest NGO contributes to multidimensional and ongoing development of the rural sector through promotion of rural business development and providing assistance to rural entrepreneurs. It will assist in developing and testing technologies to demonstrate biodiversity-compatible practices for pilot areas in steppes and meadows. |
| Private sector: Farmer Associations, in particular National Farmers Federation Moldova (NFFM) and Republican Union of Agricultural Producers' Associations (APA) | The private sector is regarded as one of the key partners of the project by participating in making a business case for biodiversity conservation through piloting of biodiversity-compatible land use models on private lands in line with the developed spatial plans. Rural population, farmers and farming associations are the most important stakeholders for Component 2. These stakeholders will be closely involved in the consultation meetings. Farmer associations will be involved in the implementation of demonstration activities. In particular, NFFM and APA will be involved. NFFM consists of 11 regional organizations and more than 700 local farmer associations which cover more than 27,000 farmer enterprises. The federation contributes to enhancing the legal framework related to rural economic development. It develops and implements specific programs related to ecological agriculture, rural tourism, and social and cultural development and facilitates farmer associations in different domains. APA represents the interests of the 14 regional agricultural 'producers' associations. APA includes approximately 1,200 economic agents farming 600,000 hectares. APA and NFFM will have a strong voice during the amendment of the Land Code (given that most of the land in Moldova is private), as well as in revisions to sectoral legislation that would require them to subsequently follow the minimum standards for biodiversity conservation in pasture/ livestock and hay-field management, arable farming, forest use, fishing and water-based recreation. More specifically, representatives of professional associations from each field will be participating in the working groups for development of the relevant legislation (e.g. National Federation of Agricultural Producers from Moldova, Republican Union of Associations of Agricultural Producers – UniAgroProtect, etc.). APA, specifically, will assist the project in the establishment of cooperatives of livestock owners in order to implement the jointly-developed management plans for grazing and haymaking. |

Coordination with Other Initiatives

Compared to the PIF, coordination with related initiatives has been further elaborated. The project will cooperate with a number of ongoing projects/ initiatives in the country, which are close to the project goals and locations. To leverage synergies, ensure efficiency in implementing the projects, and information exchange, the project will use existing coordination mechanisms that have been operating successfully in-country, such as the regular meetings convened by the biodiversity focal point in the Ministry of Environment, regular cluster meetings convened by UNDP, joint representatives from relevant institutions in the projects' steering committees, active participation in technical teams and public

events organized by other GEF projects. The studies conducted and information gathered under the other projects will be integrated into project implementation. The proposed project adds value to a number of related initiatives as set out below:

The EU/ UNDP project "Clima East: Sustainable management of pastures and community forests in Moldova's first National Park Orhei to demonstrate climate change mitigation and adaptation benefits and dividends for local communities" is a part of a broader EU financing package called 'Clima East: Supporting Climate Change Mitigation and Adaptation in Eastern Neighborhood Partnership Countries and Russia' (2013-2016) in cooperation with the partner countries Armenia, Azerbaijan, Belarus, Georgia, Moldova, Russian Federation and Ukraine. The Clima East Moldova project aims to demonstrate a natural resource management model in the pastures and forests of Moldova which increases ecosystems' capacity to sequester carbon under pending climate risks, while at the same time retaining biodiversity and economic values. The project targets the pastures and forest degraded lands located in the Orhei National Park area (33,792.09 ha) and its buffer zone (which was established in the framework of the UNDP/GEF project "Improving coverage and management effectiveness of the Protected Area System in Moldova"). The project is supporting development of innovative pasture and community forest management systems on the whole territory of the park, including rehabilitation of 500 ha of pastures and reforestation of 150 ha of eroded and non-productive lands. The project will help avert further deterioration of natural resources (biodiversity, land, forest), sequester carbon and reduce the emission of greenhouse gases, improve local pasture and forestry resources, promote better understanding of problems related to climate change impacts and contribute to local/regional sustainable development. This UNDP managed project is very closely linked to Component 2 of the proposed project focusing on improving pasture management. Best practices in biodiversity-compatible land uses tested in the Clima East project will be replicated in the pilot area of the proposed project. Also, the Policy component of the Clima East project will develop financial and other incentive measures for supporting sustainable pasture management and maintaining eco-system based values, which will provide useful lessons for the pilot activities of the proposed project.

The WB/GEF Project "Agriculture Competiveness" is contributing to the enhancement of agro-food sector competiveness by supporting the modernization of food safety and quality management systems, facilitating market access and enhancing agro-ecosystem resilience. Under its component "Food Quality and Safety Management System" it focuses on the modernization of the public system of quality management and food safety in compliance with food safety. Under Component "Access to Markets" support is provided to activities aimed at enhancing the degree of commercialization of selected horticultural value chains with an emphasis on sustainable farming and post-harvesting technologies and practices. The Component "Soil Conservation and Climate Resilience" support incentives to farmers for the introduction of agro-environmental practices aimed at reducing land degradation and mainstreaming coping and adaptation techniques for increased farm-level climate resilience. This project is closely linked to Component 2 of the proposed project focusing on improving land degradation issues on farm land where proposed project focus will be targeted towards biodiversity outputs.

The UNDP/GEF Project "National Biodiversity Planning to Support the Implementation of the CBD 2011 – 2020 Strategic Plan in Moldova"– the overall goal of the project was to integrate Moldova's obligations under the Convention on Biological Diversity (CBD) into its national development and sectoral planning frameworks through a renewed and participative 'biodiversity planning' and strategizing process, in a manner that is in line with the global guidance contained in the CBD's Strategic Plan for 2011 – 2020 (addressing so called Aichi targets). While the project focused on updating all aspects of the National Biodiversity Strategy and Action Plan from 2001, special emphasis was placed on (i) assessing and integrating ecosystem services through economic valuation and (ii) mainstreaming biodiversity into development policies, plans and practices and into sectoral plans and strategies. Among the sectors that the project will address are agriculture, forestry, livestock and fishing. The areas of

cooperation lie in the sectoral approach to biodiversity conservation that the NBSAP project tackled, and also data/ information from the economic value of ecosystem services in the Republic of Moldova.

The EU-funded regional project "European neighborhood and partnership instrument east countries forest law enforcement and governance II program" (2013-2016) aims at putting in place improved forest governance arrangements through the effective implementation of the main priorities set out in the St. Petersburg Ministerial Declaration and Indicative Plan of Actions for the Europe and North Asia Forest Law Enforcement and Governance (ENA-FLEG) process. The Program supports selected pilot activities to be implemented with the active involvement of governments, civil society and the private sector. Most activities will be at a country level, complemented by strategically targeted sub-regional and regional actions. The Program is supported by the European Commission and other donors contributing to a special multi-donor trust fund administered by the World Bank (WB), working in partnership with the International Union for Conservation of Nature and Natural Resources (IUCN) and the World Wide Fund for Nature (WWF).There are a number of activities that the project can cooperate with, mainly in terms of promoting good governance in local forests, forest management planning, improving the legislative framework (and also harmonizing it with EU/ international frameworks), communication activities, etc.

A GEF/UNDP SGP project called "Formation of the National Ecological Network (NEN) – contribution to the local and national level" (2014-2015) intends to support local communities of Talmaza, Popeasca and Ciobruciu (all in the Stefan Voda District) in building forest nurseries in order to ensure the establishment of forest plantations as ecological corridors, anti-erosion and diversification of the use of biological resources. All these activities will build capacities for the existing Ramsar Site "Lower Dniester". It is envisaged that the project will deliver to the Ministry of Environment a guide on the assessment of NEN core areas, reconstruction and plantation within the NEN corridors, creation of forestry nurseries for NEN enhancement in the future, building capacities for local communities and raising awareness among local population. The two projects will cooperate on establishment of ecological corridors through reforestation activities. The Talmaza locality is a focus of both projects and close coordination will be maintained to avoid overlap.

## 3. PROJECT RESULTS FRAMEWORK

| |
|---|
| **This project will contribute to achieving the following Country Programme Outcome:** Outcome 3.1 Improved environmental management in significantly increased compliance with international and regional standards |
| Country Programme Outcome Indicators: Environmental considerations integrated into sectoral policies or sector specific environment actions plans/policy documents in place |
| Primary applicable Key Environment and Sustainable Development Key Result Area: 1.Mainstreaming environment and energy |
| **Applicable GEF Strategic Objective and Program:** Strategic Objective 2 – To mainstream biodiversity in production landscapes/ seascapes and sectors |
| **Applicable GEF Expected Outcomes:** Conservation and sustainable use of biodiversity incorporated in the productive landscape and seascape |
| **Applicable GEF Outcome Indicators:** By project end, 2 districts (approx. 204,000 ha) have biodiversity-enhanced land use plans in place, and an additional 33 districts (approx. 3,180 million hectares) are indirectly influenced through transfer of lessons and experience of the project |

| Project Strategy | Objectively Verifiable Indicators | Baseline | Target[16] | Sources of verification | Risks and Assumptions (see Annex 5 for Risk Log) |
|---|---|---|---|---|---|
| Objective: To mainstream biodiversity conservation priorities into Moldova's territorial planning policies and land-use practices | Land area for which DSPs and LUPs, that deliver biodiversity benefits outside PAs are developed and under implementation | 0 ha | Approximately 204,000 ha (2 districts)<br>Additional 3,180 million hectares (33 districts) are indirectly influenced by project approach | Approved DSPs and LUPs for 2 districts; project reports, final external evaluation | MoE, Moldsilva and MRDC maintain support for project strategy and remain interested in transferring lessons to additional districts<br><br>Authorities from districts and localities other than the pilot districts are receptive to applying the project approach in their districts |
| Component 1. Land use planning and enforcement system addresses biodiversity loss | Number of sectoral regulations and methodological guidelines that facilitate the incorporation of biodiversity conservation requirements into planning and management of land use outside protected areas (to be tracked in more detail through the SO 2 Tracking Tool) | 0 | 3[17] | Approved documents printed for circulation to relevant departments | Amendments and methodological recommendation for economic land use activities receive political support<br><br>Ministry of Justice accepts project recommendations on a more effective system of penalties for malfeasance to approved DSPs, LUPs, GMPs and FMPs |
| | Recorded cases of illegal logging | Soroca: 17 cases in 2013<br>Stefan Voda: 14 cases in 2013 | Reduced by half<br><br>Reduced by half | Internal documents of MoE, Moldsilva, and MRDC | |
| | Observance of grazing norms (especially those related to stocking rates and non-use of pastures in Spring) by local land users in all pilot sites | 0% of land users observing norms in 2013 | 50% of land users observing norms | Internal documents of MoE, Moldsilva, and MRDC | |
| | Number of government staff trained in collection of biodiversity information | 0 | At least 20 officers | Trainer reports; analysis of training | |

[16] The target timeframe for all indicators is by project end i.e., 2018, unless otherwise stated.

[17] 1. Regulation on identification of vulnerable species, habitats and ecosystem goods and services during land use planning; 2. Amendment to the 1991 Land Code introducing requirements for identification and incorporation of biodiversity outside PAs in DSPs and LUPs; 3. Minimal standards for biodiversity conservation in pasture/livestock and hay-field management, arable farming, forest use, fishing and water-based recreation introduced in relevant sectoral legislation.

| Project Strategy | Objectively Verifiable Indicators | Baseline | Target[16] | Sources of verification | Risks and Assumptions (see Annex 5 for Risk Log) |
|---|---|---|---|---|---|
| | and integration of this into the development and implementation of land use plans (Note: A more detailed tracking of capacity development impacts at the systemic, institutional and individual levels will be based on the UNDP Capacity Development Scorecard) | | | evaluation forms | |
| Component 2. Conservation and Sustainable Use of Biodiversity on Communal Land | Increase in land area outside protected areas where threats to biodiversity from economic activities are controlled | 0 ha | Sustainable land uses demonstrated as follows:<br>Hay making: 100 ha<br>Grazing: 2,484 ha<br>Forestry: 14,099 ha | Field Survey, photo documentation, Final External Evaluation | District-level and community-level approval process of DSPs, LUPs, GMPs and FMPs proceeds smoothly<br><br>MoE and ALRC cooperate to make species/ habitat data available for the spatially-based digital decision-making system for biodiversity conservation<br><br>Climate change does not lead to catastrophic impacts |
| | Population of indicator species outside PAs improves at pilot sites (see table below for details on indicator species)* | See table below for baseline | See table below for targets | Field Survey, data collected by MoE and ALRC | |
| | % of local land-users in 2 districts who are conducting economic activities in ecologically sensitive areas and receive in-field training and technical assistance with implementing modified practices | 0 | 100% | Report from PMT based on feedback from land users; Final External Evaluation | |
| | Increase in public finance for biodiversity mainstreaming in land use planning in pilot areas | None | Budget allocations for biodiversity mainstreaming in pilot areas increased by 10%[18] | Annual budgets of LPAs in pilot areas | |

*** Status of indicator species in the pilot areas**

| **Species name (English/Latin)** | **Distribution / habitat** | **Protection in Moldova** | **Abundance in Moldova** | **Indicators for target regions: Baseline** | **Target** |
|---|---|---|---|---|---|
| **Feather grass** (Stipa pennata) | Widely distributed in steppes or forest-steppe areas of southeastern Europe, Russia, Kazakhstan and Western Siberia. | Not included in the National Red Book | Typically for steppes and forest-steppe areas in northern Moldova (such as Balti steppe, steppe-forest oak type, including suitable habitats of Dniester riverbanks) (Shabanova G., 2012). A rare species occurring in several districts (Rezina, Rascani, Balti, Soroca, Ungheni). | 3% of the total plant composition per 100 m3 | 10% of the total plant composition per 100 m3 |
| **Feather grass (**Stipa ucrainica**)** | Endemic to the Pontic region (East Romania, Moldova, South Ukraine, southern part of European Russia (including the foothills of North Caucasus), Northern Bulgaria). | Not included in the National Red Book | Rarely occurring and locally abundant in protected xerophyte communities of steppe forest vegetation with presence of downy oak (mainly in Bugeac steppe plains of south-west Moldova) (Shabanova G., 2012). | 7% of the total plant composition per 100 m3 | 20% of the total plant composition per 100 m3 |
| **Corn Crake (**Crex crex**)** | From Britain and Ireland east through Europe to central Siberia (its historic range is much larger and covered large areas in Eurasia) | Endangered, National Red Book | Population is in decline (Munteanu A., Cuzari T., Zubcov N., 2006). According to Institute of Zoology there can be 110-250 pairs in Moldova to nest at the moment (2013/2014); on an average, there can be 1-2 | <10 breeding males. | >40 breeding males. |

[18] The target to be re-confirmed at the inception phase

| Species name (English/Latin) | Distribution / habitat | Protection in Moldova | Abundance in Moldova | Indicators for target regions: Baseline | Target |
|---|---|---|---|---|---|
| | | | pairs per 10 ha per suitable habitat (pastureland, meadows). | | |
| **Greater Spotted Eagle** (Aquila clanga) | Migratory species: breeds from northern Europe across Asia; winters in south-eastern Europe, north-eastern Africa, Middle East and southern Asia. | Endangered, National Red Book | It does not breed/nest in Moldova for the moment (Munteanu A., pers. comm., 2014). It can rarely be observed during migration period, and only for a short time. | <2 pairs | >5 pairs |
| **European Ground Squirrel** (Spermophilus citellus) | Endemic to central and southeastern Europe (range is divided by the Carpathian Mountains). | Vulnerable, National Red Book | According to Institute of Zoology there can be around 20 colonies in the country for the moment (Munteanu A., pers. Comm., 2014). | 0 colonies | >3 colonies |
| **Speckled Ground Squirrel** (Spermophilus suslicus) | Eastern Europe (Poland, Romania, Russia, Belarus, Moldova and Ukraine). | Listed to be included in the 3rd edition of the National Red Book (2015) | More abundant than the European squirrel and according to Institute of Zoology there can be around 100 colonies for the moment (Munteanu A., pers. comm., 2014). | 0 colonies | >5 colonies |
| **European Otter** (Lutra lutra) | Widely distributed: across Europe and parts of Asia and Africa | Endangered, National Red Book | According to Institute of Zoology, there can be 1 animal per 10 km of suitable habitat (river bank, lake/pond, streams or river tributary, even in forests where it finds shelter and food) | <5 individuals | >10 individuals |

## 4. TOTAL BUDGET AND WORK PLAN

| | | | |
|---|---|---|---|
| Award ID: | 00081126 | Project ID(s): | 00090554 |
| Award Title: | Country Name Project Title: Mainstreaming Biodiversity Conservation into Moldova's Territorial Planning Policies and Land-Use Practices | | |
| Business Unit: | MDA10 | | |
| Project Title: | Country Name Project Title: Mainstreaming Biodiversity Conservation into Moldova's Territorial Planning Policies and Land-Use Practices | | |
| PIMS no. | 5259 | | |
| Implementing Partner (Executing Agency) | Ministry of Environment | | |

| GEF Outcome/Atlas Activity | Responsible Party/ Implementing Agent | Fund ID | Donor Name | Atlas Budgetary Account Code | ATLAS Budget Description | Year 1 (US$) | Year 2 (US$) | Year 3 (US$) | Year 4 (US$) | Total (US$) | Budget Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OUTCOME 1: Land use planning and enforcement system addresses biodiversity loss | NEX | 62000 | GEF | 71300 | Local Consultants | 26000 | 32000 | 8000 | 8000 | 74000 | 1 |
| | | | | 71600 | Travel | 2000 | 2000 | 1000 | 1000 | 6000 | 2 |
| | | | | 72100 | Contractual services-companies | 0 | 0 | 5000 | 5000 | 10000 | 3 |
| | | | | 74200 | Audio Visual&Print Prod Costs | 0 | 3000 | 3000 | 4000 | 10000 | 5 |
| | | | | 75700 | Trainings and Workshops | 2000 | 3000 | 3000 | 2000 | 10000 | 6 |
| | | | | | Total Outcome 1 | 30000 | 40000 | 20000 | 20000 | 110000 | |
| OUTCOME 2: Conservation and Sustainable Use of Biodiversity on Communal Land | NEX | 62000 | GEF | 71200 | International Consultants | 0 | 20000 | 0 | 20000 | 40000 | 7 |
| | | | | 71300 | Local Consultants | 13000 | 17000 | 16000 | 12500 | 58500 | 8 |
| | | | | 71600 | Travel | 40000 | 3000 | 2000 | 2000 | 47000 | 9 |
| | | | | 72100 | Contractual services-companies | 80000 | 150000 | 60000 | 0 | 290000 | 10 |
| | | | | 72500 | Supplies | 1000 | 500 | 0 | 500 | 2000 | 11 |
| | | | | 72600 | Grants | 84000 | 140000 | 28000 | 28000 | 280000 | 12 |
| | | | | 74100 | Professional Services | 0 | 0 | 0 | 5000 | 5000 | 13 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 74200 | Audio Visual&Print Prod Costs | 4000 | 4000 | 6000 | 6000 | 20000 | 14 |
| | | | | 75700 | Trainings and Workshops | 5000 | 2231 | 6000 | 6000 | 19231 | 15 |
| | | | | | Total Outcome 2 | 227000 | 336731 | 118000 | 80000 | 761731 | |
| Project management unit | | 62000 | GEF | 71400 | Contractual Services - Individ | 12600 | 12600 | 12600 | 12600 | 50400 | 16 |
| | | 62000 | GEF | 74599 | UNDP Cost recovery Charges-Bills | 9185 | 9195 | 9195 | 9198 | 36773 | 19 |
| | | 04000 | UNDP | 71400 | Contractual Services - Individ | 8400 | 8400 | 8400 | 8400 | 33600 | 16 |
| | NEX | 04000 | UNDP | 72400 | Communic & Audio Visual Equip | 700 | 873 | 800 | 800 | 3173 | 17 |
| | | 04000 | UNDP | 74200 | Audio Visual&Print Prod Costs | 807 | 807 | 807 | 806 | 3227 | 18 |
| | | | | | Sub-total management cost GEF | 21785 | 21795 | 21795 | 21798 | 87173 | |
| | | | | | Sub-total management cost UNDP | 9907 | 10080 | 10007 | 10006 | 40000 | |
| | | | | | Total Management | 31692 | 31875 | 31802 | 31804 | 127173 | |
| PROJECT TOTAL | | | | | | 288692 | 408606 | 169802 | 131804 | 998904 | |

**Summary of Funds:** [19] **(**See Annex 6 for cofinancing agreements and/ or support letters that have been obtained from project partners.**)**

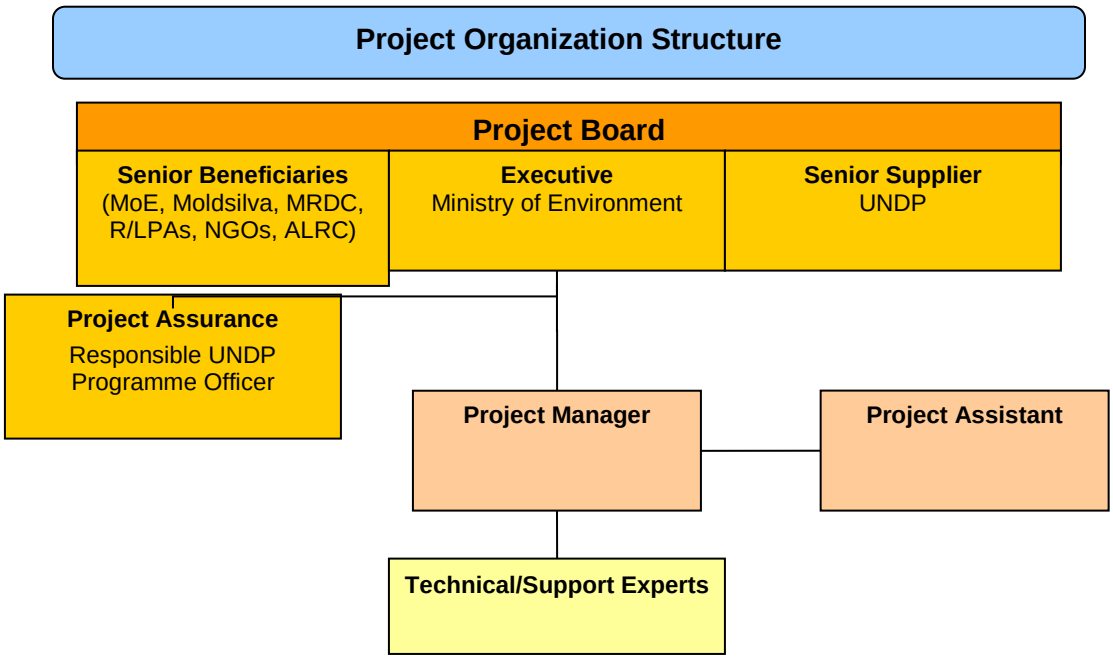
| | Amount Year 1 | Amount Year 2 | Amount Year 3 | Amount Year 4 | Total |
|---|---|---|---|---|---|
| **GEF** | 278,785 | 398,526 | 159,795 | 121,798 | 958,904 |
| **UNDP** | | | | | 40,000 |
| **MoE** | | | | | 460,000 |
| **MoE (in kind)** | | | | | 100,000 |
| **Moldsilva** | | | | | 4,200,000 |
| **Stefan Voda District** | | | | | 30,000 |
| **Soroca District** | | | | | 20,000 |
| **TOTAL** | | | | | 5,808,904 |

**Budget notes** (see Annex 7 for Terms of Reference for project consultants):

| |
|---|
| 1. Legal expert responsible for activities under Output 1.1 and Output 1.4 - 350$ *50 weeks=17,500$. Biodiversity and Ecosystem Management Expert - for activities under Output 1.2, Output 1.3 and Output 1.4 - 350$ *80 weeks=28,000$. Forestry Expert responsible for Species/habitat data input into forest management plans (Output) - 350$ *20 weeks=7,000$; Economy and Finance expert for completion the activities under Output 1.4 - 350$*16 weeks = 5600$. Communication and PR consultant - 350$ * 35 weeks = 11900$. Translation costs - 4000$ |
| 2. Travel for local consultants and project team (20000 km * 0.30) - 6000$ |
| 3. Costs related to: designing and implementation of the training programme for promoting integrated land and biodiversity/ecosystem planning (design the programme - 2500$; implementation of the programme 6 trainings * 1250$ = 7500$) |
| 5. Costs related to publication of information materials, brochures, analytical and monitoring reports etc. |
| 6. Costs of consultations, round tables and discussions with central/ local authorities and other stakeholders related to the implementation of Output 1.1, Output 1.2 and Output 1.3. Estimated nr. of meetings - 40 * 250$=10000$ |
| 7. International evaluation expert for mid-term and the final evaluations - 40000$ (Consultancy fee 3,750$ * 10 weeks=37,500$; DSA and travel - 2500$) |
| 8. Local consultant: Mid-term and final evaluation: 8000$ ($500$ * 12 weeks = 6000$. Travel and other costs - 2000$); Economy and Finance expert for assessment of the economic values of biodiversity and ecosystem services, compensatory schemes and incentives development (350$ * 30 weeks = 10500$); GIS expert for development of the spatially-based digital decision-making system for biodiversity conservation (400$ * 65 weeks = 26000$); Communication and PR consultant - 350$ * 40 weeks = 14000$ |
| 9. Cost associated with one week field visit to a neighboring country (e.g. Romania, Hungary) for approx. 20 representatives of key stakeholders to show the best practices and benefits of biodiversity-compatible district spatial (land-use) planning. (20 pers. * 1750 $ = 35000$). Costs associated with local experts and team travel (40000 km * 0.30 = 12000$) |
| 10. Costs associated with developing: biodiversity-compatible district spatial plans for 2 districts (2*70000$ = 140,000$) and community land-use plans for 4 selected communities (villages) to consider biodiversity and ecosystem continuity (4*27500$ = 110,000$); grazing management plans for 4 selected communities (7000$*4 = 28000$); pedagogical maps and reforestation schemes in selected pilots (4 corridors * 500$ = 2000$); Forest management plans (768ha * 13$/ha = 10000$) |
| 11 Office supplies |
| 12. Costs of building ecological corridors through reforestation (1600 $/ha * 100ha = 160000$). Restoration/rehabilitation costs for improving pastures/steppes/meadows (1200 $/ha * 100 ha = 120000$) implemented through small grants scheme. |
| 13. Audit costs |
| 14. Costs related to publication of information materials, brochures, analytical and monitoring reports etc. |
| 15. Costs associated with: Land users training in mainstreaming biodiversity in land use practices (10 trainings * 1250$ = 12500$); Inception workshop (5000$), other meetings (1731$) |
| 16. 60% of the salary associated costs for project manager and project assistant and shared between UNDP and GEF. |
| 17. Internet, Phone, Mobile costs |
| 18. Promotional materials to ensure project visibility including for the inception workshop |
| 19. Direct Project Costs |

[19] Summary table should include all financing of all kinds: GEF financing, cofinancing, cash, in-kind, etc...

## 5. MANAGEMENT ARRANGEMENTS




The project will establish a Project Board at the inception phase, which will be comprised of representatives of the relevant government institutions, representatives of the main relevant target groups/beneficiaries, including representatives of women's organizations, vulnerable groups and local authorities and representatives of the UNDP Country Office. More specifically, the Project Board will have 9 members representing the following institutions: Ministry of Environment (Senior Executive), Ministry of Regional Development and Construction, Agency Moldsilva, Agency for Land Relations and Cadastre, Academy of Science, UNDP Moldova, NGO, District Council of Stefan Voda and District Council of Soroca.

The Project Board will be responsible for providing general oversight to ensure achievement of results on the primary project outcomes, and making consensus strategic management decisions when guidance is required by the Project Manager, including approval of project plans and revisions, as well as meeting the requirements of the Country Programme Action Plan and Annual Work Plan. The Minister of Environment will be the Chairman of the Project Board. Project Board meetings will be organized by the Project Board as needed, but not less than once every 3 months. Formal minutes shall be prepared and adopted for each meeting of the Board, detailing any proposals made and decisions taken.

Based on the approved annual work plan (AWP), the Project Board may review and approve project quarterly plans when required and authorize any major deviation from these agreed quarterly plans. It is the authority that signs off on the completion of each quarterly plan as well as authorizes the start of the next quarterly plan. It ensures that required resources are committed and arbitrates any conflicts within the project or negotiates a solution to any problems between the project and external bodies. In addition, it approves any delegation of its Project Assurance responsibilities.

In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that ensure best value for money, fairness, integrity transparency and effective international competition. Project reviews by this group are made at designated decision points during the running of a project or as necessary when raised by the Project Manager. This group is consulted by the

Project Manager for decisions when Project Manager tolerances (normally in terms of time and budget) have been exceeded.

The project is nationally executed (NEX), in line with the Standard Basic Assistance Agreement (SBAA, 1992) and the United Nations – Republic of Moldova Partnership Framework and Action Plan 2013 – 2017 signed between UNDP and the Government of Moldova. The Ministry of Environment is the government institution responsible for the project and will act as the Executing Agency (EA).

It will assume overall responsibility for the project implementation, and the timely and verifiable attainment of project objectives and outcomes. It will provide support to, and inputs for, the implementation of all project activities. The Ministry of Environment will nominate a high level official who will serve as the national coordinator for project implementation, who will not be paid from the project funds. Also the Ministry of Environment will provide office space for project implementation and will cover all utility expenses.

UNDP will be the Senior Supplier operating according to the terms specified below. Project Assurance will be provided by the responsible UNDP Programme Officer of the Energy and Environment Cluster, a Programme Associate, and evaluators. They will ensure that objective and independent project oversight is carried out for the purpose of meeting project management targets.

Project Assurance is also the responsibility of each Project Board member, however the role can be delegated. The Project Assurance role supports the Project Board by carrying out objective and independent project oversight and monitoring functions. This role ensures that project management milestones are managed and completed appropriately.

UNDP Moldova will support the Ministry of Environment with implementation of support services according to the Agreement between the Government of Moldova and UNDP for the provision of support services of 27 May 2003, including identification and recruitment of project personnel, identification of training activities and assistance in carrying them out, procurement of goods and services, financial monitoring and reporting, processing of direct payments, supervision of project implementation, monitoring and assistance in project assessment. The Project will be implemented in line with UNDP rules and procedures (http://content.undp.org/go/userguide/results).

To improve the synergies between projects in the area of biodiversity conservation and in line with the GEF and UNDP programmatic approach, a Project Management Team (PMT) will be managing the project as part of a larger relevant programme. The PMT will be staffed with a Project Manager and Financial/ Administrative Assistant, and will assist the Ministry of Environment as well as other responsible institutions in the implementation of the project at the national level. The PMT will ensure results-based project management and successful implementation of the project within 48 months, close monitoring and evaluation of project progress, observance of procedures, transparency and efficient use of funds, quality of works, and involvement of local and national stakeholders and beneficiary communities in the decision-making processes. The PMT office will preferably be physically located within the Ministry of Environment premises.

## 6. MONITORING FRAMEWORK AND EVALUATION

The project team and the UNDP Country Office supported by the UNDP Regional Technical Advisor for Biodiversity Conservation for Europe and CIS will be responsible for project monitoring and evaluation conducted in accordance with established UNDP and GEF procedures. The Project Results Framework provides performance and impact indicators for project implementation, along with their corresponding means of verification. In addition, the GEF SO-2 Tracking Tool will also be used to track project impact (SO-2 tracking tool is submitted as a separate file). UNDP's Environmental and Social Screening tool will also be used (see Annex 8). The following sections outline the principle components of the M&E plan and indicative cost estimates related to M&E activities.

Project start

A Project Inception Workshop will be held within the first 2 months of project start with those with assigned roles in the project organization structure, UNDP country office and where appropriate/feasible regional technical policy and programme advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan. The Inception Workshop should address a number of key issues including:

- Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDP CO and RCU staff vis-à-vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms.
- Based on the project results framework and the relevant GEF Tracking Tool if appropriate, finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
- Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
- Discuss financial reporting procedures and obligations.
- Plan and schedule Project Board meetings. Roles and responsibilities of all project organization structures should be clarified and meetings planned. The first Project Board meeting should be held within the first 12 months following the inception workshop.

An Inception Workshop report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

Quarterly

- Progress made will be reported on a quarterly basis to the Project Board and will be recorded in the UNDP Enhanced Results Based Management Platform.
- Based on the initial risk analysis submitted, the risk log will be regularly updated in ATLAS. An Issue Log will be activated in Atlas and updated by the Project Manager to facilitate tracking and resolution of potential problems or requests for change.

Annually

- Annual Project Review/Project Implementation Reports (APR/PIR): This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR combines both UNDP and GEF reporting requirements.

The APR/PIR includes, but is not limited to, reporting on the following:

- Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative)
- Project outputs delivered per project outcome (annual).
- Lesson learned/good practice.
- AWP and other expenditure reports
- Risk and adaptive management
- ATLAS QPR
- Portfolio level indicators (i.e. GEF focal area tracking tools) are used by most focal areas on an annual basis as well.

Periodic Monitoring through site visits

UNDP CO and the UNDP RCU will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Board may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Project Board members.

Mid-term of project cycle

The project will undergo an independent Mid-Term Evaluation at the mid-point of project implementation (by the end of 2016). The Mid-Term Evaluation will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the UNDP Evaluation Office Evaluation Resource Center (ERC). The relevant GEF Focal Area Tracking Tools will also be completed during the mid-term evaluation cycle.

End of Project

An independent Final Evaluation will take place three months prior to the final Project Board meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Center (ERC). The relevant GEF Focal Area Tracking Tools will also be completed during the final evaluation.

During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

Audit Arrangements

The Audit will be conducted in accordance with the established UNDP procedures set out in the Programming and Finance manuals by the legally recognized auditor.

Learning and knowledge sharing

Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyze, and share lessons learned that

might be beneficial in the design and implementation of similar future projects. Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

Communications and visibility requirements

Full compliance will be maintained with UNDP's Branding Guidelines. These can be accessed at http://intra.undp.org/coa/branding.shtml, and specific guidelines on UNDP logo use can be accessed at: http://intra.undp.org/branding/useOfLogo.html. Amongst other things, these guidelines describe when and how the UNDP logo needs to be used, as well as how the logos of donors to UNDP projects needs to be used. For the avoidance of any doubt, when logo use is required, the UNDP logo needs to be used alongside the GEF logo. The GEF logo can be accessed at: http://www.thegef.org/gef/GEF_logo. The UNDP logo can be accessed at http://intra.undp.org/coa/branding.shtml.

Full compliance will also be maintained with the GEF's Communication and Visibility Guidelines (the "GEF Guidelines"). The GEF Guidelines can be accessed at: http://www.thegef.org/gef/sites/thegef.org/files/documents/C.40.08_Branding_the_GEF%20final_0.pdf. Amongst other things, the GEF Guidelines describe when and how the GEF logo needs to be used in project publications, vehicles, supplies and other project equipment. The GEF Guidelines also describe other GEF promotional requirements regarding press releases, press conferences, press visits, visits by Government officials, productions and other promotional items. Where other agencies and project partners have provided support through co-financing, their branding policies and requirements should be similarly applied.

**Table 4. M& E work plan and budget**

| Type of M&E activity | Responsible Parties | Budget (US$)<br>Excluding project team staff time | Time frame |
|---|---|---|---|
| Inception Workshop (IW) | Project Manager<br>Ministry of Environment, UNDP, UNDP-GEF | 5,000 | Within first two months of project start up |
| Inception Report | Project Team<br>UNDP CO, UNDP-GEF | None | Immediately following IW |
| Measurement of Means of Verification for Project Purpose Indicators | Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members | To be finalized in Inception Phase and Workshop. | Start, mid and end of project |
| Annual Measurement of Means of Verification for Project Progress and Performance | Oversight by Project GEF Technical Advisor and Project Manager<br>Measurements by regional field officers and local IAs | To be determined as part of the Annual Work Plan's preparation. | Annually prior to APR/PIR and to the definition of annual work plans |
| PIR | Project Team<br>UNDP CO<br>UNDP-GEF | None | Annually |
| Project board meetings | Project Manager and team | None | Following IW and thereafter. |
| Technical and periodic status reports | Project team<br>Hired consultants as needed | 3,000 | TBD by Project team and UNDP-CO |
| Mid-term External Evaluation | Project team<br>UNDP CO<br>UNDP-GEF RCU<br>External Consultants (evaluation team) | 25,000 | At the mid-point of project implementation. |
| Final External Evaluation | Project team<br>UNDP CO<br>UNDP-GEF RCU<br>External Consultants (evaluation team) | 25,000 | At least three months before the end of project implementation |
| Terminal Report | Project team<br>UNDP CO<br>UNDP-GEF RCU<br>External Consultants (evaluation team) | None | At least two months before the end of the project implementation |
| Audit | UNDP-CO | 5,000 | At least once during project |

| Type of M&E activity | Responsible Parties | Budget (US$)<br>Excluding project team staff time | Time frame |
|---|---|---|---|
| | Project team | | lifetime |
| Visits to field sites (UNDP staff travel costs to be charged to IA fees) | UNDP-CO, UNDP-GEF RCU<br>Government representatives | None | Yearly average one visit per year |
| TOTAL (indicative) COST<br>(Excluding project and UNDP staff time costs) | | 63,000 | |

## 7. LEGAL CONTEXT

This document together with the CPAP signed by the Government and UNDP which is incorporated by reference constitute together a Project Document as referred to in the SBAA and all CPAP provisions apply to this document.

Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

The implementing partner shall:

- put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
- assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

## ANNEX 1: RESPONSE TO COMMENTS FROM GEFSEC, STAP, AND COUNCIL MEMBERS

| Comments | UNDP's Response | Document Reference |
|---|---|---|
| GEFSEC comments on PIF (April 12, 2013) | (18 April 2013) | |
| 6. Is (are) the baseline project(s), including problem(s) that the baseline project(s) seek/s to address, sufficiently described and based on sound data and assumptions?<br><br>While number of related activities by the government ministries and agencies are noted in the relevant section, it is hard to understand how the proposed project and the baseline activities would coordinate and work together. Please further clarify how they are interlinked and coordinated. | The project has been designed to build on the baseline activities through increasing improving the country's capacity to coordinate production sector with conservation interventions. The current (baseline) situation is that the activities are being implemented by different ministries and agencies across the three spheres of government with little coordination with the result that the agriculture and forestry sector investments as well infrastructure/urban development and recreation activities occur without taking due consideration of biodiversity management needs. Biodiversity conservation is currently erroneously viewed as analogous with protected area management—with little understanding of the need for conservation outside PAs. Land use planning and management is not being implemented in an integrated and coordinated manner with a view to balancing production sector and conservation objectives and needs. The project is designed to address the deficit in coordination—precisely to address this problem. Interventions have been planned with this in mind:<br><br>Firstly at the national regulatory level the project will assist the Government to establish an enabling environment for mainstreaming biodiversity into land use planning, compliance monitoring and enforcement. This will be accomplished in the main by changing the legislation governing land use allocation and management, emplacing a monitoring system for the spatial plans and developing a system of penalties for malfeasance, but also through capacity building. The main actors in ensuring the establishment of an enabling environment are Ministry of Environment (MoE), Ministry of Agriculture and Food Industry (MAFI), Moldsilva and Ministry of Construction and Regional Development. There is very little coordination between these Ministries and agencies, although they are interlinked in the sense that they all are involved in land-use planning, just not in an integrated manner. The following text has been added to the barrier section: "The financial and human resources earmarked for baseline programmes related to regulation of natural resource management and land use planning are deployed and managed by sectoral ministries/departments/agencies (MoE, MAFI, Ministry of Construction and Regional Development and Moldsilva) working in silos. There is a need to harmonize and coordinate efforts across sectors, and spearhead innovative ways and means of mainstreaming biodiversity into land-use planning in an integrated and coordinated way that balances socio-economic and environmental objectives". In order to address this barrier the following output was added to the project framework: "A national multi-sectoral stakeholder committee[20] oversees land-use plan development, implementation and enforcement." This was further expanded in the description of the activities: "A coordination mechanism (multi-stakeholder committee) that brings together authorities tasked with natural resource and land use planning and permitting at a national scale will put in place. The multi-stakeholder committee will ensure a unified approach in the development, implementation and enforcement of land-use plans from the different ministries and departments resulting in the optimum use of land in terms of biodiversity conservation, ecosystem services and socio-economic development. | PIF: Table B, PIF and Part II, A: Project Overview, A1: Project Description |

[20] The terms of reference and membership of this committee, statutory responsibilities, plus periodicity of meetings and other requirements will be elaborated during the PPG stage.

| Comments | UNDP's Response | Document Reference |
|---|---|---|
| | At the district level coordination will be ensured also through the establishment of multi-sectoral stakeholder committees but these will include local stakeholders. The PIF has been revised to better describe the approach: "Integrated Spatial Plans accommodating biodiversity concerns developed for two districts[21] by multi-sectoral stakeholder committees[22] ensuring optimal allocation of land to generate optimal allocation of land to generate development benefits and critical biodiversity benefits in tandem." | |
| 7. Are the components, outcomes and outputs in the project framework (Table B) clear, sound and appropriately detailed?<br><br>April 12, 2013<br><br>The project design is largely in line with the PIF that was submitted by the country during GEF-4. The project framework is sufficiently robust but could be improved by considering the following:<br>1. Include all the key GEBs, including mainstreaming coverage target in the framework.<br>2. Develop activities to ensure financial sustainability of the initiatives.<br>3. Further clarify the incentive mechanism for the farmers and other stakeholders to promote BD friendly land use. | 1. The following outcome was adjusted to include the mainstreaming coverage target: "Enhanced conservation security in the two target districts covering 204,000 ha as a result of mainstreaming biodiversity into land use planning for the following species: European Ground Squirrel and Corncrake for Steppe, Greater Spotted Eagle for forests and adjacent wet meadows, European Otter for river and lake ecosystems."<br><br>The Global Environmental Benefits as detailed on page 9 of the PIF are presented in the framework as follows (outcome in framework in italics): Ensuring stability of a number of threatened and indicator species: indicator grass species (Stipa pennata and S. ucraunica) at natural steppes ["20% reduction in extent of degradation of steppes in target sites in two districts caused by extensive incompatible land uses e.g. overstocking resulting in an increase in status of indicator grass species (Stipa pennata and S. ucrainica)"]; populations of European Ground Squirrel (Spermophilus citellus) and Corncrake (Crex crex) for steppes; Greater Spotted Eagle (Aquila clanga) for forest and adjacent wet meadows; European Otter (Lutra lutra) for river and lake ecosystems ["Enhanced conservation security in the two target districts covering 204,000 ha as a result of mainstreaming biodiversity into land use planning for the following species:<br>European Ground Squirrel and Corncrake for Steppe<br>Greater Spotted Eagle for forests and adjacent wet meadows<br>European Otter for river and lake ecosystems."]<br>In the long-term, taking into account the replication effect, the project will ensure the long-term integrity of fragile ecosystems, including steppes and wet meadows [approx. 30,000 ha], wetlands [approx. 10,000 ha], river floodplains and lakes [approx. 10,000 ha] and forest ecosystems [approx. 30,000 ha] [Enabling policy and institutional environment for mainstreaming BD principles within the State programs and rayon level land use and forest management framework resulting in: Reduction in unsustainable grazing, logging and recreation loads on steppes and wet meadows [approx. 30,000 ha], wetlands [approx. 10,000 ha], river floodplains and lakes [approx. 10,000 ha] and forest ecosystems [approx. 30,000ha]. The SO-2 Tracking Tool will be used to track the progress.].<br><br>2. In order to ensure the financial sustainability of the initiatives the following output has been added to Component 2: "Secure additional budgetary finances (from public funds) for BD Mainstreaming | Table B, PIF and Part II, A: Project Overview, A1: Project Description |

[21] The districts are: Soroca and Stefan Voda and Telenesti. The district selection will be confirmed during the PPG stage. The pilot districts will represent two (northern and southern) of the three major ecological regions – northern, central and southern. These regions also vary in terms of economic conditions. Thus this Component will produce a model of land-use planning that will be adjusted for the ecological, social and economic varieties, with high potential for replicability at the neighbouring districts beyond the project.

[22] The terms of reference and membership of this committee, statutory responsibilities, plus periodicity of meetings and other requirements will be elaborated during the PPG stage.

| Comments | UNDP's Response | Document Reference |
|---|---|---|
| | initiatives and align existing financial contributions in the forestry, agricultural and rangeland sectors to support BD-friendly practices in the two districts:<br>Brokerage of public finance resources for BD mainstreaming initiatives<br>Re-alignment of existing financial streams".<br>In the description of the activities the following was added: "Further, to build the business case for increasing resources flows, valuation will be undertaken of costs/ benefits of different production systems and the new BD-friendly practices within the selected landscapes and their benefits to biodiversity, ecosystem functioning and livelihoods. This information will be used by selected local governments to broker public and private resources for increased funding towards BD Mainstreaming. The process of increased funding allocation towards BD Mainstreaming by the project will also involve a process of review and alignment of existing funding to the identified production sectors: Public Expenditure Reviews of the agricultural, forestry and rangeland sectors in the two districts will be undertaken, negative spend will be identified and reduced, and budgets realigned to finance for example the destocking of rangeland, rehabilitation of forests. For both new and existing (realigned) funding sources, the project will develop resource distribution criteria to ensure the most effective and efficient application of scare resources and that adequate incentives are provided for landowners/managers to make the move towards BD-friendly practices." It is believed that if the incentives are right, the private sector will engage in the initiatives. With increased funding towards biodiversity mainstreaming and targeted to the establishment of incentives for the farmers and landowners to engage in important initiatives that will be demonstrated by the project, the sustainable financing will be improved.<br><br>3. The incentives to promote BD-friendly land-use have been to some extent covered by the response to the previous comment. The project also is following a two-pronged approach in the process of moving towards a more biodiversity-friendly landscape: through the 'stick' approach by the development of legislation and improved monitoring and enforcement capacity and through providing the right incentives ('carrot' approach) for landowners and stakeholders to make the move from a BD-damaging to a BD-friendly land-use practice. The project does have limited funding and cannot set up an elaborate incentive scheme but the project will during the PPG phase look at possibility of assisting Government in the setting up of such schemes. On a more project-level, the description of incentives for farmers engaged in overgrazing of steppes and meadows has been improved. The project will address overgrazing through the reduction of livestock numbers of the individual farmers. This will be based on a fair and equitable mechanism. The following was added to further clarify the incentive mechanism for the farmers: "Through this mechanism no individual farmer will lose the right to graze the lands but only a reduction in number of animals allowed to graze on the specific steppe area will be enforced. The farmers will be compensated for this loss through increased property rights on the land through longer term agreements and through moving away from an open access regime therefore allowing the individual livestock owners to plan longer term, increased productivity of the remaining livestock as the fodder will be of better quality (low milk yield, less reproductive efficiency, delayed maturity and poor animal growth rate are major constraints for animal productivity due to imbalance nutrition – provision of balance nutrition can perk up the animal productivity, in some cases up to 50%), and reduced rent payments to the municipalities for the use of the steppes. The possibility of further compensating livestock owners | |

| Comments | UNDP's Response | Document Reference |
|---|---|---|
| | for reduced stocking rates on critically important steppes through the provision and establishment of artificial pastures to remove loads on steppe or alternative livelihoods schemes will be investigated during PPG stage". The reforestation activities will mainly take place on degraded land and its implementation has benefit for all, seeing that the land is currently lying idle. | |
| 10. Is public participation, including CSOs and indigenous people, taken into consideration, their role identified and addressed properly?<br><br>April 12, 2013<br><br>The public participation section is rather general. Please further elaborate existing CSOs and farmers association that the project may collaborate. | A more elaborate description of CSOs and farmer associations has been added to the revised PIF. | PIF: Part II, A: Project Overview, A2: Stakeholders |
| 12. Is the project consistent and properly coordinated with other related initiatives in the country or in the region?<br><br>April 12, 2013<br><br>As noted above, please further clarify how the project will build on the "baseline projects" and coordinated. | Please see response to Question # 6. | |
| 13. Comment on the project's innovative aspects, sustainability, and potential for scaling up.<br>- Assess whether the project is innovative and if so, how, and if not, why not.<br>- Assess the project's sustainability strategy and the likelihood project outcomes will be sustained or not based on the evidence in the literature.<br>- Are there measures to secure the institutional and financial stability of the project?<br>- Assess the potential for scaling up the project's intervention strategy and critique the plan for scaling up.<br><br>April 12, 2013 | The following has been added to the description of the sustainability of the project: "The project has financial sustainability written into it, through the review and realignment of public expenditure and the brokering of additional public and private funding towards BD Mainstreaming. The key gaps in the current process are capacity and coordination among all the spheres of Government to recognize the values of biodiversity and the ecosystem values it provides and the application of this recognition in the land use allocation and permitting process – which this project is designed to address".<br><br>The following was added to the scaling up/replication part of the revised PIF: "The project will also develop a package of modifications in land and forest legislation that will not only apply to the districts the project will be covering, but will have national coverage establishing the enabling environment for the project initiatives to replicated in all other districts of Moldova". | PIF: Part II, A: Project Overview, A1: Project Description |

| Comments | UNDP's Response | Document Reference |
|---|---|---|
| The innovative element is well taken.<br><br>The financial sustainability of the project initiative is expected to be further elaborated.<br><br>On the scaling up/replication, the project could highlight the role of development of the legislation/policies at the national level. | | |
| STAP Comments | | |
| None | | |
| GEF Council Comments | | |
| None | | |
| GEFSEC comments on PIF (August 26, 2013) | | |
| On the linkage with the Aichi targets, please also clarify the number of the target (e.g. target 1 on....) that the project will contribute to. | The project advances the strategic targets of the UNCBD Strategic Plan for Biodiversity 2011 – 2020, in particular: Target 4: By 2020, at the latest, governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of natural resources well within safe ecological limits; and Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced. | The respective Project Document on page 19, Sub-Chapter "Project consistency with GEF focal area strategies" |

## ANNEX 2: TERMS OF REFERENCE FOR THE MULTI-STAKEHOLDER BIODIVERSITY MAINSTREAMING COMMITTEE

### 1. Background

Successful implementation of the project will depend substantially on strong collaboration between the project partners, governmental decision-makers and other stakeholders. The implementing body, which is the UNDP, and project partners have agreed to establish a Multi-stakeholder Biodiversity Mainstreaming Committee (MSBMC). The MSBMC will be established through a special order of the Ministry of Environment and will be chaired by its representative.

### 2. Function

The MSBMC is the national coordination mechanism to provide necessary assistance and guidance to the PMT on the development, planning, implementation, monitoring and evaluation of the project activities at the national and local level (in pilot districts).

### 3. Specific Responsibilities and Deliverables

The MSBMC brings together authorities tasked with natural resource and land use planning to:

a) Ensure a unified approach in the development, implementation and enforcement of land-use plans from the different ministries and departments resulting in the optimum use of land in terms of biodiversity conservation, ecosystem services and socio-economic development.
b) Facilitate the dialogue on biodiversity conservation and coordination of production and development sectors' programs and policies.
c) Provide guidance and oversight for practices that are biodiversity-friendly and applicable to the country (and the pilot areas).
d) Contribute to the identification and mobilization of national and local stakeholders that may be essential for successful project implementation.
e) Review and approve, according to GEF/UNDP's rules, technical and financial documentation (such as annual/ quarterly work plans, budgets, implementation reports, others) as well as changes to such.
f) Assist the PMT in addressing obstacles during project implementation that might arise and work with the partners to eliminate such.

### 4. Membership and Functioning

4.1. The MSBMC will consist of members of the following organizations or their mandate representative, as follow:
Ministry of Environment (Chairperson)
Ministry of Regional Development and Construction (Deputy chairperson)
Ministry of Environment (Executive Secretary)
UNDP Moldova
Agency Moldsilva
Agency for Land Relations and Cadastre
Academy of Sciences
District Council Soroca
District Council Stefan Voda
NGO community
Private (agriculture, forestry)

4.2. The MSBMC will meet at least twice a year, or when necessary, in order to ensure the normal activity of the project

4.3. The meetings can be called by the chairperson, by the PMT or upon the call of 1/3 of its members

4.4. The dates of meetings will be fixed by a coordinated decision and communicated to the members in writing at least 2-3 weeks in advance.
4.5. The quorum necessary for decision making is 51% of its members.
4.6. The Executive Secretary will organize the necessary administrative support, including drafting/ circulating of agendas, minutes and other materials.
4.7. Direct costs of meetings, including transportation and accommodation, will be covered by the project budget.

## ANNEX 3: CAPACITY ASSESSMENT SCORECARD

This scorecard has been designed specifically for this project, as a tool to measure success in terms of developing national capacity to mainstream biodiversity conservation considerations into territorial planning. While, the tool is conceptually based on the UNDP Capacity Development Scorecard, it is different in its substantive focus and the indicators. This is because the UNDP Capacity Development Scorecard is meant to assess the development of capacities vis-à-vis the management of protected areas, whereas this project is about biodiversity mainstreaming into territorial plans and does not deal with protected areas.

Table 1 tries to be as objective as possible in its selection of indicators. Each indicator is scored from 0 (worst) to 3 (best), with an explanation of what each score represents for the particular indicator. The tool then estimates the baseline situation/ score for each indicator (cell marked in red), Tables 2 through 5 provide a quantitative summary of the total possible scores, baseline scores, the baseline score as a percentage of the total possible score, and the target score as a percentage of the total possible score. The scorecard will be completed twice during the project implementation: at the mid-term and at the end of the project to measure the progress.

**Table 1: Scorecard**

| Strategic Area of Support | Capacity Level | Indicator | Scores | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Worst (Score 0) | | Marginal (Score 1) | | Satisfactory (Score 2) | | Best (Score 3) | |
| 1. Capacity to conceptualize and formulate policies, legislations, strategies and programmes | Systemic | There is a strong and clear legal mandate for mainstreaming biodiversity into territorial planning | There is no legal framework for biodiversity mainstreaming into territorial plans | | There is a partial legal framework for biodiversity mainstreaming into territorial plans, but it has many inadequacies | 1 | There is a reasonable legal framework for biodiversity mainstreaming but it has a few weaknesses and gaps | | There is a strong and clear legal mandate for biodiversity mainstreaming into territorial plans | |
| 1. Capacity to conceptualize and formulate policies, legislations, strategies and programmes | Institutional | There is an institution responsible for mainstreaming biodiversity concerns into territorial planning that is able to prepare effective strategies and plans to this end | Territorial planning institutions do not have clear plans or strategies for mainstreaming biodiversity concerns into territorial planning | 0 | Territorial planning institutions do have strategies and plans for biodiversity mainstreaming, but these are old and no longer up to date or were prepared in a top-down fashion | | Territorial planning institutions have some sort of mechanism to update their strategies and plans, but this is irregular or is done in a largely top-down fashion without proper consultation | | Territorial planning institutions have a clears strategy and plan for biodiversity mainstreaming into territorial plans that have been developed with adequate participation and are regularly updated | |

| Strategic Area of Support | Capacity Level | Indicator | Scores | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Worst (Score 0) | | Marginal (Score 1) | | Satisfactory (Score 2) | | Best (Score 3) | |
| 2. Capacity to implement policies, legislation, strategies and programmes | Systemic | There are adequate skills for mainstreaming biodiversity concerns into territorial planning | There is a general lack of planning and management skills | | Some skills exist but in largely insufficient quantities to guarantee effective planning and management | 1 | Necessary skills for effective biodiversity mainstreaming into territorial plans do exist but are stretched and not easily available | | Adequate quantities of the full range of skills necessary for effective biodiversity mainstreaming into territorial plans are easily available | |
| 2. Capacity to implement policies, legislation, strategies and programmes | Systemic | There is a fully transparent oversight authority for the Territorial Planning institutions that has the capacity to monitor and enforce biodiversity mainstreaming into territorial plans | There is no oversight at all of Territorial Planning institutions | | There is some general oversight, but it lacks capacity to specifically monitor and enforce compliance with biodiversity considerations | 1 | There is a reasonable oversight mechanism in place providing for regular review of biodiversity considerations but it lacks transparency (e.g. is not independent, or is internalized) | | There is a fully transparent oversight mechanism in place providing for regular review of biodiversity considerations | |
| 2. Capacity to implement policies, legislation, strategies and programmes | Institutional | Territorial planning institutions have regularly updated, biodiversity-compatible territorial plans that have been prepared with effective participation of land users | Territorial planning institutions do not have biodiversity-compatible territorial plans | 0 | Territorial planning institutions have biodiversity-compatible territorial plans, but these are not developed through consultations with land users | | Territorial planning institutions have biodiversity-compatible territorial plans, developed through consultations with land users, but there is no process for regular review and updating of the plans | | Territorial planning institutions have biodiversity-compatible territorial plans, developed through consultations with land users, and there is a process for regular review and updating of the plans | |
| 2. Capacity to implement policies, legislation, strategies and programmes | Institutional | Human resources are well qualified and motivated to mainstream biodiversity concerns into territorial plans | Human resources (HR) are poorly qualified and unmotivated | | Human resources qualification is spotty, with some well qualified, but many only poorly and in general unmotivated | 1 | HR in general reasonably qualified, but many lack in motivation, or those that are motivated are not sufficiently qualified. | | Human resources are well qualified and motivated | |

| Strategic Area of Support | Capacity Level | Indicator | Scores | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Worst (Score 0) | | Marginal (Score 1) | | Satisfactory (Score 2) | | Best (Score 3) | |
| 2. Capacity to implement policies, legislation, strategies and programmes | Institutional | Biodiversity-compatible territorial plans are implemented in a timely manner effectively achieving their objectives | There is very little implementation of biodiversity-compatible territorial plans | 0 | Biodiversity-compatible territorial plans are poorly implemented and their objectives are rarely met | | Biodiversity-compatible territorial plans are usually implemented in a timely manner, though delays typically occur and some objectives are not met | | Biodiversity-compatible territorial plans are implemented in a timely manner effectively achieving their objectives | |
| 2. Capacity to implement policies, legislation, strategies and programmes | Institutional | Territorial Planning institutions are able to adequately mobilize sufficient funding, and human and material resources to effectively implement the biodiversity mainstreaming mandate | Territorial Planning institutions typically are severely under funded and have no capacity to mobilize sufficient resources | | Territorial Planning institutions have some funding and are able to mobilize some human and material resources but not enough to effectively implement their biodiversity mainstreaming mandate | 1 | Territorial Planning institutions have reasonable capacity to mobilize funding or other resources but not always in sufficient quantities for fully effective implementation of their biodiversity mainstreaming mandate | | Territorial Planning institutions are able to adequately mobilize sufficient quantity of funding, human and material resources to effectively implement their biodiversity mainstreaming mandate | |
| 2. Capacity to implement policies, legislation, strategies and programmes | Institutional | The process of collecting biodiversity information (led by ASM) and the process of developing territorial plans (led by the Ministry of Regional Development) are well integrated so the former can feed in the right information at the right time into the latter | Only the standard land use planning process is occurring in the district, with no biodiversity information being collected | | Both processes are occurring but are taking place independent of the other and are not coordinated | 1 | There is agreement in principle on coordinating the 2 processes, but there is a lack of clarity in the normative documents guiding the 2 processes and no practical guidelines/ protocols on how to coordinate | | The two processes are well coordinated | |

| Strategic Area of Support | Capacity Level | Indicator | Scores | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Worst (Score 0) | | Marginal (Score 1) | | Satisfactory (Score 2) | | Best (Score 3) | |
| 2. Capacity to implement policies, legislation, strategies and programmes | Individual | Individuals in Territorial Planning institutions are appropriately skilled for biodiversity mainstreaming into territorial plans | Individuals have no skills for biodiversity mainstreaming into territorial plans | | Individuals have some or poor skills for biodiversity mainstreaming | 1 | Individuals are reasonably skilled but could further improve for optimum match with job requirement | | Individuals are appropriately skilled for biodiversity mainstreaming | |
| 2. Capacity to implement policies, legislation, strategies and programmes | Individual | Individuals in Territorial Planning institutions are highly motivated for biodiversity mainstreaming | No motivation at all | 0 | Motivation uneven, some are but most are not | | Many individuals are motivated but not all | | Individuals are highly motivated | |
| 2. Capacity to implement policies, legislation, strategies and programmes | Individual | There are appropriate systems of training, mentoring, and learning in place to maintain a continuous flow of new staff with the capacity to mainstream biodiversity in territorial plans | No mechanisms exist | 0 | Some mechanisms exist but unable to develop enough and unable to provide the full range of skills needed | | Mechanisms generally exist to develop skilled professionals, but either not enough of them or unable to cover the full range of skills required | | There are mechanisms for developing adequate numbers of the full range of highly skilled professionals able to mainstream biodiversity in territorial plans | |
| 3. Capacity to engage and build consensus among all stakeholders | Systemic | Biodiversity-compatible Territorial Plans have the political commitment they require | There is no political will at all, or worse, the prevailing political will runs counter to the interests of biodiversity mainstreaming into territorial plans | | Some political will exists, but is not strong enough to make a difference | 1 | Reasonable political will exists, but is not always strong enough to fully support biodiversity mainstreaming into territorial plans | | There are very high levels of political will to support biodiversity mainstreaming into territorial plans | |

| Strategic Area of Support | Capacity Level | Indicator | Scores | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Worst (Score 0) | | Marginal (Score 1) | | Satisfactory (Score 2) | | Best (Score 3) | |
| 3. Capacity to engage and build consensus among all stakeholders | Systemic | Biodiversity-compatible Territorial Plans have the public support they require | The public has little interest in Biodiversity-compatible Territorial Plans and there is no significant lobby for it | | There is limited support for Biodiversity-compatible Territorial Plans | 1 | There is general public support for Biodiversity-compatible Territorial Plans and there are various lobby groups such as environmental NGO's strongly pushing for them | | There is tremendous public support in the country for Biodiversity-compatible Territorial Plans | |
| 3. Capacity to engage and build consensus among all stakeholders | Institutional | Territorial Planning institutions can establish the partnerships needed to achieve biodiversity mainstreaming objectives | Territorial Planning institutions operate in isolation | | Some partnerships are in place but there are significant gaps, and existing partnerships achieve little | | Many partnerships in place with a wide range of agencies, NGOs etc, but there are some gaps, partnerships are not always effective and do not always enable efficient achievement of biodiversity mainstreaming objectives | 2 | Territorial Planning institutions establish effective partnerships with other agencies and institutions, including provincial and local governments, NGO's and the private sector to enable achievement of biodiversity mainstreaming objectives in an efficient and effective manner | |
| 4. Capacity to mobilize information and knowledge | Systemic | Territorial Planning institutions have the biodiversity information they need to develop and monitor biodiversity-compatible territorial plans | Information is virtually lacking | | Some information exists, but is of poor quality, is of limited usefulness, and is not always available at the right time | | Much information is easily available and mostly of good quality, but there remain some gaps in quality, coverage and availability | 2 | Territorial Planning institutions have the biodiversity information they need to develop and monitor territorial plans | |

| Strategic Area of Support | Capacity Level | Indicator | Scores | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Worst (Score 0) | | Marginal (Score 1) | | Satisfactory (Score 2) | | Best (Score 3) | |
| 4. Capacity to mobilize information and knowledge | Individual | Individuals working on territorial planning work effectively together as a team | Individuals work in isolation and don't interact | | Individuals interact in limited way and sometimes in teams but this is rarely effective and functional | 1 | Individuals interact regularly and form teams, but this is not always fully effective or functional | | Individuals interact effectively and form cross-disciplinary functional teams | |
| 5. Capacity to monitor, evaluate, report and learn | Systemic | Society monitors the state of biodiversity mainstreaming into territorial plans | There is no dialogue at all | | There is some dialogue going on, but not in the wider public and restricted to specialized circles | 1 | There is a reasonably open public dialogue going on but issues that particularly magnify the conflict between economic activities and biodiversity considerations are not discussed. | | There is an open and transparent public dialogue about the state of biodiversity mainstreaming into territorial plans | |
| 5. Capacity to monitor, evaluate, report and learn | Institutional | Territorial Planning institutions have effective internal mechanisms for monitoring, evaluation, reporting and learning | There are no mechanisms for monitoring, evaluation, reporting or learning | | There are some mechanisms for monitoring, evaluation, reporting and learning but they are limited and weak | 1 | Reasonable mechanisms for monitoring, evaluation, reporting and learning are in place but are not as strong or comprehensive as they could be | | Institutions have effective internal mechanisms for monitoring, evaluation, reporting and learning | |

**Table 2: Quantitative summary of Total Possible Scores**

| Strategic Areas of Support | Total Possible Scores | | |
|---|---|---|---|
| | Systemic | Institutional | Individual |
| 1. Capacity to conceptualize and formulate policies, legislations, strategies and programme | 3 | 3 | - |
| 2. Capacity to implement policies, legislation, strategies and programmes | 6 | 15 | 9 |
| 3. Capacity to engage and build consensus among all stakeholders | 6 | 3 | - |
| 4. Capacity to mobilize information and knowledge: Technical skills related specifically to the requirements of GEF SO-2 and SP-4 | 3 | - | 3 |
| 5. Capacity to monitor, evaluate and report and learn at the sector and project levels | 3 | 3 | - |
| Total | 21 | 24 | 12 |
| Note: "-" means no indicator was selected for that level. | | | |

**Table 3: Quantitative summary of Baseline Scores**

| Strategic Areas of Support | Baseline Scores | | |
|---|---|---|---|
| | Systemic | Institutional | Individual |
| 1. Capacity to conceptualize and formulate policies, legislations, strategies and programme | 1 | 0 | - |
| 2. Capacity to implement policies, legislation, strategies and programmes | 2 | 3 | 1 |
| 3. Capacity to engage and build consensus among all stakeholders | 2 | 2 | - |
| 4. Capacity to mobilize information and knowledge: Technical skills related specifically to the requirements of GEF SO-2 and SP-4 | 2 | - | 1 |
| 5. Capacity to monitor, evaluate and report and learn at the sector and project levels | 1 | 1 | - |
| Total | 8 | 6 | 2 |
| Note: "-" means no indicator was selected for that level. | | | |

**Table 4: Quantitative summary of Baseline Scores as a % of Total Possible Scores**

| Strategic Areas of Support | Baseline Scores as % of TPS | | |
|---|---|---|---|
| | Systemic | Institutional | Individual |
| 1. Capacity to conceptualize and formulate policies, legislations, strategies and programme | 33% | 0% | - |
| 2. Capacity to implement policies, legislation, strategies and programmes | 33% | 20% | 11% |
| 3. Capacity to engage and build consensus among all stakeholders | 33% | 67% | - |
| 4. Capacity to mobilize information and knowledge: Technical skills related specifically to the requirements of GEF SO-2 and SP-4 | 67% | - | 33% |
| 5. Capacity to monitor, evaluate and report and learn at the sector and project levels | 33% | 33% | - |
| Total | 38% | 25% | 17% |
| Note: "-" means no indicator was selected for that level. | | | |

**Table 5: Quantitative summary of Target Scores as a % of Total Possible Scores**

| Strategic Areas of Support | Target Scores as % of TPS | | |
|---|---|---|---|
| | Systemic | Institutional | Individual |
| 1. Capacity to conceptualize and formulate policies, legislations, strategies and programme | 100% | 100% | - |
| 2. Capacity to implement policies, legislation, strategies and programmes | 100% | 87% | 67% |
| 3. Capacity to engage and build consensus among all stakeholders | 83% | 100% | - |
| 4. Capacity to mobilize information and knowledge: Technical skills related specifically to the requirements of GEF SO-2 and SP-4 | 100% | - | 100% |
| 5. Capacity to monitor, evaluate and report and learn at the sector and project levels | 100% | 100% | - |
| Total | 97% | 97% | 84% |
| Note: "-" means no indicator was selected for that level. | | | |

## ANNEX 4: PILOT DISTRICT AND SITE DATA SHEETS (INCLUDING MAP)

During the PPG, a participatory process was undertaken to select sites. The results of that process are summarized in the table below. All statistics are official from the National Bureau of Statistics, Agency for Land Relations and Cadastre, Agency Moldsilva and the Ministry of Environment as well as based on discussions with biodiversity experts.

| Criteria | Stefan Voda | Soroca | Telenesti |
|---|---|---|---|
| District area | 99,838 ha | 104,299 ha | 84862 |
| Pastureland | 7,421 ha | 11,709 ha | 12715 |
| Forests | 8,494 ha | 15,421 ha | 12353 |
| Forest plantations | 1,077 ha | 792 ha | 705 |
| Marshes | 901 ha | 867 ha | 310 |
| Ramsar Sites | 60,000 ha<br>Lower Dniester (Nistru de Jos) (2003); covers mainly one district: Lower Dniester (Nistru de Jos). Ramsar site no. 1316. 20/08/03; Tighina, Slodozia; 60,000 ha; 46 34'N 29 49'E; This complex of relict and transformed habitats of the Dniester floodplain includes meandering zones with almost closed river loops typical for the northwest of the Black Sea basin, lakes and oxbows formed by river roaming, specific ash communities and unique old stand floodland poplar forest, Fraxineto-Populeta (albae). The site supports many globally endangered and vulnerable bird species among which 2 are nesting (Crex crex, Phalacrocorax pygmaeus), 4 are present on migration (Branta ruficollis, Aythya nyroca, Circus macrourus, Haliaeetus albicilla), 1 regular visitor (Pelicanus crispus) and fish such as the Danube Salmon (Hucho hucho), the European Mud-minnow (Umbra kramer) and various species of sturgeons. The wetland is an important site for freshwater migratory fish as it supports more than 90% of the species of the region and offers a high diversity of biotopes: riverbed spawning ground, areas of pelagic spawning and nursery. Construction of dams in the Dniester valley has affected the terrestrial, aquatic and intermediate ecosystems and large areas of important meadow spawning grounds were lost. Grazing is also considered as an important disturbance. There are recognized paleontological and archaeological value since the discovery of fossils and places such as tumuli, Cimmerian, Ghetic, Sarmatic and Slavic memorials. The creation of a Lower Dniester National Park is under discussion. | 15,553 ha<br>Unguri-Holosnita (2005); mainly in Soroca (some in Ocnita): Unguri-Holosnita. Ramsar site no. 1500. Elevation: 51 m - 245 m average: 150 m. Area: 15,553 ha. 14/09/05; Soroca, Ocnita, High rocky, crumbling-sloughing slopes and narrow flood-land of the Dniester River's left bank, in northeastern Moldova near the border with Ukraine. The Dniester includes wide, shallow segments here with little islands, small rivers and short creeks feeding the stream and forming steep canyons. Fluvial forests are formed by poplar associations with an admixture of willows, ash and elm, with riparian willow formations. The most numerous waterfowl and waders during forage and seasonal migrations are ducks, e.g. Anas platyrhynchos, A.querquedula and A. strepera, which also predominate amongst wintering birds. Agriculture provides the main sources of economic life, supplemented by livestock farming and traditional fishing, which is losing its economic value as fish resources became scarce as a result of strong variations of discharge levels from the Novodnestrovsk hydropower station. There are more than 60 sites of cultural, geological, paleontological and archaeological interest, along with a settlement of Old Believers in the village of Pocrovca. The BIOTOCA Ecological Society in Chisinau was helpful in the preparation for this site designation. | None |

| Criteria | Stefan Voda | Soroca | Telenesti |
|---|---|---|---|
| Biodiversity areas under direct human pressure [23] | Major risk | Major / medium risk | Lower risk |
| Plant key-species presence | Stipa pennata and S. ucrainica documented | Stipa pennata and S. ucrainica likely to be occurring | No record[24] |
| Animal key-species presence | European ground squirrel (**Spermophilus citellus**) and speckled ground squirrel (**S. suslicus**) were either documented in all districts or seen in some localities across the districts | | |
| Assessment / scoring | 7 points | 9 points | 3 points |

DISTRICT 1: SOROCA (NORTH REGION; TOTAL AREA 104,298.98 HA)

| Biotope Type / Name | Area (ha) | Ownership / Property | Species Diversity / composition | Protected / indicator taxa | Land use practices | Services provided |
|---|---|---|---|---|---|---|
| **Agro-ecosystems** | | | | | | |
| Arable land | 62984.31 | Private / Communal | Agricultural biodiversity, less as habitats for natural biodiversity | Some animal species nest in forests, but feeding on agricultural lands | Crop cultivation, farming | Food provision, energetic biomass (heating, cooking), household needs |
| Pastureland * | 11708.98 | Communal | Some typical steppe species still persist on pastures (but there is no monitoring, based only on old data) | European ground squirrel (Spermophilus citellus), speckled ground squirrel (S. suslicus), corncrake (Crex crex), Feather grasses (Stipa) etc. | Grazing | Domestic animal feeding |
| Sliding land | | Communal | No data | No data | | |
| Ravines | | Communal | Could be place for a number of plant animal diversity occasionally using ravines | No data | | |
| **Forest ecosystems** | | | | | | |
| Protected oak forest | 237 | Moldsilva | Important habitat for numerous Red List species | More than 250 species of vascular plants from which 12 species of rare plants are included in Red Book of Moldova: Dryopteris carthusiana, Gymnocarpium dryopteris, Melitis sarmatica, Phyllitis scolopendrium, Polystichum aculeatu Trifolium panonnicum, Cephalanthera damasonium, Doronicum hungaricum, Fritillaria meleagroides, Galanthus nivalis, Pulsatila grandis, Scopolia carniolica.<br>Also the area includes 19 rare and endangered | Biodiversity protection, Recreation | Recreation / tourism in PAs |

[23] According to data from Ecological Society BIOTICA
[24] Other Stipa likely to be occurring

| Biotope Type / Name | Area (ha) | Ownership / Property | Species Diversity / composition | Protected / indicator taxa | Land use practices | Services provided |
|---|---|---|---|---|---|---|
| | | | | mammals, from which 6 are included in the Red Book (Crocidura leucodon, Nyctereutes procyonoides, Mustela ermine, Martes martes, Lutra lutra, Felis silvestris); 60 rare and endangered bird species, from which those included in the Red Book are Aquila clanga, Aquila pomarina, Ardeola ralloides, Asio flammeus, Branta ruficollis, Bubo bubo, Ciconia nigra , Circaetus gallicus Circus cyaneus, Circus macrourus , Circus pygargus, Columba oenas Cygnus Cygnus, Cygnus olor, Tetrax tetrax, Plegadis falcinellus Platalea leucorodia, Picus viridis Phalacrocorax pygmaeus, Pelecanus onocrotalus, Pernis apivorus, Pelecanus crispus, Pandion haliaetus Oxyura leucocephala, Otis tarda, Neophron percnopterus, Monticola saxatilis, Milvus milvus, Haliaeetus albicilla, Hieraaetus pennatus, Falco cherrug, Egretta alba); 2 Red Book reptile species (Coronella austriaca, Vipera berus) and 8 rare insect species (Lucanus cervus, Cerambyx cerdo, Morimus funereus, Scolia maculata Xylocopa valga, Callimorpha quadripunctaria, Iphiclides podalirius, Zerynthia polyxena) | | |
| Dry oak with cherry formations | 9795.34 | Moldsilva | Important systems for a number of plant and animal diversity | Oaks serve as nesting habitat for predator birds (e.g. Aquila clanga), feeding niches for many species | Wood production, fruits collection, lease, recreation | Wood/timber, NFTPs Recreation / tourism in PAs and non-PAs |
| Plantations | 791.66 | Moldsilva / Communal / Private | Low diversity, however important wood supply for local communities | Low importance as conservation | Wood/timber production, grazing | Energetic wood |
| **Water and wetland ecosystems** | | | | | | |
| River / lake(s) | 2189.77 | | Fish species, waterfowls, river/water mammals | Some protected species use riverbank habitats as passage or migratory ways | Fishing, irrigation, recreation | Water, food (fish, game) |
| Wetlands / Marshes | 867.16 | Communal / Private /Moldsilva / MTRI | High rocky, crumbling-sloughing slopes and narrow flood-land of the Dniester River's left bank, in northeastern Moldova near the border with Ukraine. The | Mostly birds (as resting/nesting areas), many reptiles and invertebrates. Among plants 90 species are rare out of which 31 are included in the Red Book. Most endangered are: Dryopteris carthusiana, Gymnocarpium dryopteris, Melitis sarmatica, Phyllitis | Crop cultivation, fishing, hunting, timber, recreation | Water supply (drinkable and irrigation), energy biomass, pasturing, hunting |

| Biotope Type / Name | Area (ha) | Ownership / Property | Species Diversity / composition | Protected / indicator taxa | Land use practices | Services provided |
|---|---|---|---|---|---|---|
| | | | Dniester includes wide, shallow segments here with little islands, small rivers and short creeks feeding the stream and forming steep canyons. Fluvial forests are formed by poplar associations with an admixture of willows, ash and elm, with riparian willow formations. The most numerous waterfowl and waders during forage and seasonal migrations are ducks. | scolopendrium, Polystichum aculeatum, Trifolium panonnicum, Cephlanthera damasonium, Doronicum hungaricum, Fritillaria meleagroides, Galanthus nivalis, Pulsatila grandis, Scopoli carniolica, Asplenium scolopendrium, Cephalanthera damasoniun. Among animal species included in the Red Book are Crocidura leucodon, Ardeola ralloides, Anas platyrhynchos, Anas querquedula and Anas strepera Aquila pomarina, Aquila clanga Branta ruficollis, Ciconia nigra , Ciconia nigra, Circaetus gallicus , Circus cyaneus, Circus macrourus, Circus pygargus, Cygnus Cygnus, Cygnus olor, Egretta alba, Falco cherrug, Haliaeetus albicilla, Hieraaetus pennatus, Milvus milvus, Monticola saxatilis Neophron percnopterus, Oxyura leucocephala, Pandion haliaetus, Pelecanus crispus, Pelecanus onocrotalus , Phalacrocorax pygmaeus, Platalea leucorodia | | |
| **Calcareous rocky slopes** | | | | | | |
| Petrofite xerophytic vegetation | | Communal / Moldsilva | Typical steppe diversity may occur on steppe remnants as well as on agricultural fields around | Reliable data are for Stipa capillata and Stipa lessingiana. Not excluded European ground squirrel (Spermophilus citellus), and, speckled ground squirrel (S. suslicus) may be there too. Rare reptiles are present (Coronella austriaca, Coluber jugularis). | Grazing where available | Partially as pastures |
| Karsts | | Communal / Moldsilva | Provides habitat for karst cave biodiversity | Greater Horseshoe Bat (Rhinolophus ferrumequinum) | Visitors | Toursim |

| Threat to be addressed | Statistics / data per country or/and pilot sites | Actions / Measures to be undertaken for prevention and/or elimination of threats |
|---|---|---|
| Soil degradation | Sliding land – 666,18 ha, ravines – 242,67 ha, no other data available. Circa 10% of the district land area is covered with forest type soils. | The project will contribute to the reduction in soil degradation through (see also Output 2.2.) (i) reforestation of areas that are degrading because of erosion, and (ii) amelioration of areas where active erosion is occurring (as in Stefan Voda district, for instance). Generally, in terms of sustainability the loss in soil quality and humus might be stopped by applying a rational land use management plan, without disturbing established ecological equilibrium, and avoiding all types of pollution. An eco-agriculture in terms of sustainability would also be a solution too for agricultural production. |
| Abusive | Officially, pasturelands and grazing are organized by | The project will contribute to a regulated (rational) grazing through the improvement of existing |

| Threat to be addressed | Statistics / data per country or/and pilot sites | Actions / Measures to be undertaken for prevention and/or elimination of threats |
|---|---|---|
| grazing | communities themselves. But uncontrolled/illegal grazing can occur on other lands (forest shelterbelts, abandoned vineyards, ravines, on harvested plantations in autumn). It does affect almost every lot/area of available land, especially in dry seasons; also, it leads to loss in organic fertilizers, which influence soils quality and its compactness. | pasturelands (former steppe and/or partially forestlands) in pilot areas. Management Grazing Plans (MGPs) will be developed for each locality. Rotational Grazing System (RGS) is highly desirable and thus will be promoted, so that some areas are left for higher biomass production. Grazing should be limited in early spring, at least for some time, instead provisional lands can be used for grazing. Hay Making Areas will be established either voluntarily or by available lands, as part of MG and/or RGS. Awareness among local communities needs to be conducted (e.g. the impact on soil structure, biodiversity loss, interrelationships etc.) so that sustainability effect is being brought to communities and final users. Promoting the creation of pastoral forests would be an option. |
| Exotic/invasive species | Data are in accordance with IUCN's Invasive Species Database, matching 61 species occurring in Moldova, of which 6 are exotic/introduced species. Natural biodiversity is under pressure and/or can be substituted locally. | Control (which is more expensive) and prevention (which can avoid losses) actions are needed. The project will tackle the need for Exotic/Invasive Species Management Plans in pilot areas, so communities will themselves develop them according to damage/losses they have because of exotic/invasive species. The project will also pledge for an integrated pest management (given the fact that controlling invasive species can be done using physical, chemical and biological approach). Such exotic species as Oleaster will simply be removed from the pilot areas. The other species, native Dog Rose, will also be removed from pilot areas and controlled, so that only small patches of it would be left in the field (it needs to be taken into account that fruits of God Rose are used by locals as food) |
| Illegal logging | While officially authorized volumes for harvesting are around 500,000 m3, the other statistics (ENPI FLEG, 2011) refer to around 1,000,000 m3 of wood consumed from domestic sources (mainly as fuelwood). | The project will contribute to reducing it through prevention measures and providing opportunities in the short/medium run by undertaking FMPs and in the long run through reforestation. Planting trees in new areas (mainly degraded or under some forms of erosion) will help solve a number of problems: economically (wood/timber, soils stability), social (provision with various forest products) and ecologically (stability, habitats, shelter). Conducting FMP will increase the chances for illegal logging, given the fact that community forestlands (where FMP will be carried out) is a week sector compared with state forestry sector. |
| Direct pollution | Industrial pollution and dumping of household waste in natural areas is common. No reliable control is applied. There is no system of integrated prevention of pollution. However, authorities started to focus on medium and long-term waste management and decrease in pollution. | The project will address it and will contribute to the reduction in pollution through improved DGPs and LUPs. The project will make efforts for inclusions of data/information in and for making provisions towards prevention and control of pollution, involving small or medium businesses into selective collection and/ or processing of waste would be a solution and applying rational approaches. |
| Uncontrolled / unorganized recreation | No official statistics exist, but people traditionally use natural areas (forests, or other natural areas) for recreation during spring to autumn, especially on holidays. | This will be addressed by making provisions in the DSPs and LUPs. An organized tourism (such as agro-tourism, eco-tourism, rural-tourism) will be proposed as alternative to reduce the impact from uncontrolled/unorganized tourism. The project will make use of existing resources/database on touristic infrastructure and sights (including PAs) in the region. Areas that are the most visited need to have an organized tourist/ visitor management system (e.g., demarcated areas for food preparation, water disposal/ collection, hygiene). Small and medium size business can be involved in managed recreation to minimize impact. |

DISTRICT 2: STEFAN VODA (SOUTH-EASTERN REGION; TOTAL DISTRICT AREA: 99,838 HA)

| Biotope Type / Name | Area (ha) | Ownership / Property | Species Diversity / composition | Protected taxa | Land use practices | Services provided |
|---|---|---|---|---|---|---|
| **Agro-ecosystems** | | | | | | |
| Arable land | 58088 | Private, communal | Agricultural biodiversity, less as habitats for natural biodiversity | Some animal species nest in forests, but feeding on agricultural lands | Crops cultivation, orchards, vineyards, farming, grazing | Food, biomass |
| Pastureland | 7421 | Communal | Some typical steppe species still persist on pastures (but there is no monitoring, based only on old data) | European ground squirrel (Spermophilus citellus), speckled ground squirrel (S. suslicus), corncrake (Crex crex) can be present. Stipa ucrainica can be found (cf. Postolache Gh., 2014) | Grazing | Forage |
| **Forest ecosystems** | | | | | | |
| Xerophyte forests ("Girnet" forests) | 8494 | | Composed of semi-arid oak formations of Quercus pubescens. | Such forests intercalate with steppe biodiversity, including rare species typical for steppes, which can use forests as shelter | Management, grazing | Wood / timber, habitats |
| Lowland forests | | Moldsilva | Includes native poplar fluvial forests, riparian forests with willow formations, alluvial ash-dominated forests | Rare ash community Fraxineto-Populeta (albae), unique old stand floodland poplar forests<br>Rare Red Book plants: Lunaria rediviva, Salvinia natans, Trapa natans.<br>Red Book animals: Felis silvestris, Hieraaetus pennatus, Pernis apivorus, Asio flammeus, Aythya nyroca, Zamenis longissimus, Coronella austriaca, Pelobates fuscus | Management (fuel wood, less as timber) | Wood, timber, bruits/berries, habitats |
| Plantations | 1077 | Communities, private, Moldsilva | Artificial mono-dominant plantings of acacias for anti-erosion and wood production purposes (short-rotation) | Not important for protected species | Management, grazing | Wood biomass, carbon storage, soil protection |
| **Water and wetland ecosystems** | | | | | | |
| River / lake(s) | 3892 | State | Important site for freshwater migratory fish as it supports more than 90% of the species of the region and offers a high diversity of biotopes. | Ramsar site nr. 1316 Lower Dniester (Nistru de Jos); Tighina, Slodozia; 60000 ha<br>Plants: Trapa natans, Salvinia natans, Nymphaea alba, Thelipteris palustris, Vitis sylvestris, Sternbergia colchiciflora, Crambe tatarica, Convolvulus lineatus, Maianthemum bifolium, Euonymus nana<br>Animals: Mammals: Crocidura leucodon, Mustela ermine, Martes martes, Lutra lutra, Felis silvestris<br>Globally endangered and vulnerable bird species | Fishing, irrigation, recreation | Water, food (fish, game) |
| Wetlands / marshes | 901 | Communities, privates, Moldsilva | Important for freshwater diversity (plants, migratory fish, migratory and/or nesting birds); It is exceptional for its diversity of algae, phyto- and zooplankton | | Crop cultivation, fishing, hunting, timber, recreation | Water supply (drinkable and irrigation), energy biomass, pasturing, hunting |

| Biotope Type / Name | Area (ha) | Ownership / Property | Species Diversity / composition | Protected taxa | Land use practices | Services provided |
|---|---|---|---|---|---|---|
| | | | and water vegetation. The combination of wetland and upland natural habitats, with agricultural lands create ideal conditions for high number and diversity of bird species. The wetland supports high faunal species diversity, including nationally threatened species. | (Crex crex, Phalacrocorax pygmaeus, Branta ruficollis, Aythya nyroca, Circus macrourus, Haliaeetus albicilla, Pelicanus crispus, Aquila pomarina, Ardeola ralloides, Ciconia nigra, Circaetus gallicus, Circus cyaneus, Circus pygargus, Cygnus Cygnus, Cygnus olor, Egretta alba, Falco cherrug, Pandion haliaetus, Pernis apivorus, Danube Salmon (Huchohucho), European Mud-minnow (Umbra kramer).<br><br>IUCN red-listed species: insects (Osmoderma eremita, Sago pedo), amphibians (Bombina bombina, Hyla arborea, Emys orbicularis), mammals (Myotis dasycneme, M. bechsteini, Nyctalus lasiopterus, Mustela lutreola, Lutra lutra) | | |
| **Steppe (remnants) ecosystems** | | | | | | |
| Steppe patches with feather grass | ? | Communities | There are such remnants, which are either used as pasturelands or/and are in a silvo-steppe mosaic with steppe tree formations. Steppe patches are part of so-called Bugeac steppe, which reaches Black Sea. | Home or food habitat to many rare plant and animal species | Grazing | Forage |

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| Threat to be addressed | Statistics / data per country or/and pilot sites | Actions / Measures to be undertaken for prevention and/or elimination of threats |
|---|---|---|
| Soil degradation | Slightly eroded - 14573 ha, moderate eroded - 7969 ha, highly eroded - 2417 ha. Level of erosion 31,6% (34,9% per country), level of highly eroded soils 3,1% (4,5% average per country) | The project will contribute to reducing soli degradation through (see also Output 2.2.) (i) Reforestation of areas that are degrading because of erosion, and (ii) amelioration of areas where active erosion is occurring (as in Copceac, for instance). Generally, in terms of sustainability the loss in soil quality and humus might be stopped by applying a rational land use management plan, without disturbing established ecological equilibrium, and avoiding all types of pollution. Eventually, it needs to rely on nature-friendly approach. An eco-agriculture in terms of sustainability would also be a solution too for agricultural production. |
| Abusive grazing | Pasturelands and grazing are organized by communities themselves. But uncontrolled/illegal grazing occurs on other lands (forest | The project will contribute to a regulated (rational) grazing through the improvement of existing pasturelands (former steppe and/or partially forestlands) in pilot areas. Management Grazing |

| Threat to be addressed | Statistics / data per country or/and pilot sites | Actions / Measures to be undertaken for prevention and/or elimination of threats |
|---|---|---|
| | shelterbelts, abandoned vineyards, ravines, on harvested plantations in autumn). It does affect almost every lot/area of available land, especially in dry seasons; also, it leads to loss in organic fertilizers, which influence soils quality and its compactness. | Plans (MGPs) will be developed for each locality. Rotational Grazing System (RGS) is highly desirable and thus will be promoted, so that some areas are left for higher biomass production. Grazing should be limited in early spring, at least for some time, instead provisional lands can be used for grazing. Hay Making Areas will be established either voluntarily or by available lands, as part of MG and/or RGS. Awareness among local communities needs to be conducted (e.g. the impact on soil structure, biodiversity loss, interrelationships etc.) so that sustainability effect is being brought to communities and final users. Promoting the creation of pastoral forests would be an option. |
| Direct pollution | Industrial pollution and dumping of household waste in natural areas is common. No reliable control is applied. There is no system of integrated prevention of pollution. However, authorities started to focus on medium and long-term waste management and decrease in pollution. | The project will address it and will contribute to the reduction in pollution through improved DGPs and LUPs. The project will make efforts for inclusions of data/information in and for making provisions towards prevention and control of pollution, involving small or medium businesses into selective collection and/ or processing of waste would be a solution and applying rational approaches. |
| Dams construction (if continued) | The dams, built during soviet era (around 1960$^{th}$) in the Dniester valley, have affected the area. The consequences still affects the terrestrial, aquatic and intermediate ecosystems; wetlands can be lost as ecosystems and habitats for great diversity | The practice of building dams and creating drainage system for an improved agriculture and agro-food production should not be allowed in any cases. An important step towards maintaining environmental stability in the region is to make communities as well as national/republican authorities understand that this may destroy the wetlands and/or can become the irreversible point for their survival. |
| Exotic species | Data are in accordance with IUCN's Invasive Species Database, matching 61 species occurring in Moldova, of which 6 are exotic/introduced species. Natural biodiversity is under pressure and/or can be substituted locally. | Control (which is more expensive) and prevention (which can avoid losses) actions are needed. Management plans (national and local) are needed for each invasive and/or exotic species that affect natural habitats. Controlling invasive species can be done using physical, chemical and biological approach. An integrated pest management needs to be taken into account too, depending from case to case and local conditions. |
| Illegal logging | While officially authorized volumes for harvesting are around 500,000 m3, the other statistics (FLEG, 2011) refer to around 1,000,000 m3 of wood consumed from domestic sources (mainly as fuelwood). According to ENPI East FLEG, the wood consumption is higher in southern districts and the price for wood is rather high that local communities can afford. | The project will contribute to reducing it through prevention measures and providing opportunities in the short/medium run by undertaking FMPs and in the long run through reforestation where needed. Planting trees in new areas (mainly degraded or under some forms of erosion) will help solve a number of problems: economically (wood/timber, soils stability), social (provision with various forest products) and ecologically (stability, habitats, shelter). Conducting FMP will increase the chances for illegal logging, given the fact that community forestlands (where FMP will be carried out) is a week sector compared with state forestry sector. |
| Uncontrolled / unorganized recreation | No official statistics exist, but people traditionally use natural areas (forests, or other natural areas) for recreation during spring to autumn, especially on holidays. | This will be addressed by making provisions in the DSPs and LUPs. An organized tourism (such as agro-tourism, eco-tourism, and rural-tourism) will be proposed as alternative to reduce the impact from uncontrolled/unorganized tourism. The project will make use of existing resources/database on touristic infrastructure and sights (including PAs) in the region. Areas that are the most visited need to have an organized tourist/ visitor management system (e.g., demarcated areas for food preparation, water disposal/ collection, hygiene). Small and medium size business can be involved in managed recreation to minimize impact. |

**Map of the Republic of Moldova with pilot districts highlighted**