



# GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

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## PART I: PROJECT INFORMATION

Project Title:	Promoting Sustainable Land Management (SLM) Through Strengthening Legal and Institutional Framework, Capacity Building and Restoration of Most Vulnerable Mountain Landscapes		
Country(ies):	The Former Yugoslav Republic of Macedonia	GEF Project ID: <sup>1</sup>	9759
GEF Agency(ies):	UN Environment	GEF Agency Project ID:	01564
Other Executing Partner(s):	Ministry of Environment and Physical Planning of Macedonia (MoEPP),	Submission Date:	March 27, 2017
GEF Focal Area(s):	Land Degradation	Project Duration (Months)	48
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP <input type="checkbox"/>	
Name of parent program:	N/A	Agency Fee (\$)	347,942

## A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES<sup>2</sup>

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
LD-2 Program 3	GEFTF	1,320,500	11,000,000
LD-3 Program 4	GEFTF	2,342,045	13,300,000
<b>Total Project Cost</b>		<b>3,662,545</b>	<b>24,300,000</b>

## B. INDICATIVE PROJECT DESCRIPTION SUMMARY

**Project Objective:** To develop and strengthen national policy and institutional capacity for sustainable land management (SLM) and to contribute to achieving the national land degradation neutrality target with integrated landscape management in north-western mountainous ecosystems of Macedonia.

Project Components	Financing Type <sup>3</sup>	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
Component 1 Strengthened legal and institutional framework and capacity building for SLM.	TA	1.1 Strengthened policy, legal and regulatory framework to support land degradation neutrality target implementation in Macedonia	1.1.1 Gap analysis of existing legal, institutional and capacity needs of land management sector including key opportunities and threats to achieving Land Degradation neutrality (LDN) at national scale in Macedonia 1.1.2 LDN baseline for set of indicators recommended for tracking progress towards LDN (land cover, land productivity, and carbon stocks above and below ground) is mapped and established, including the LDN trends and drivers leading to identifying priority areas for action 1.1.3 Developed guidelines for revision of Macedonia's legal and institutional framework for sustainable land use and management practices in line with Macedonia's National Programme for Adoption of EU Acquis other key national strategies. 1.1.4 LDN is achieved through inclusion of LDN targets into selected policies and commitments and innovative financing sources are mapped out. 1.1.5 National Integrated Land Use Strategy developed to promote SLM and LDN efforts.	GEFTF	1,255,730	8,331,430

<sup>1</sup> Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

<sup>2</sup> When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCF](#).

<sup>3</sup> Financing type can be either investment or technical assistance.

		<p>1.2 Increased capacities and support for sustainable land management and LDN in the country <i>[Increased score in the Capacity Development Scorecard for the Ministry of Environment and Physical Planning and Pilot municipalities]</i> <i>[Baseline and targets for each will be established during the PPG phase]</i></p>	<p>1.1.6 Land utilisation and ecosystems services valuation for forest and grasslands ecosystems in the pilot sites in the north-western part of Macedonia 1.1.7 Pilot municipalities' "Local Environmental Action Plans", including sustainable land management considerations, updated 1.1.8 The national erosion map updated, the Rulebook defining the methodology for recognition of erosive zones and zones affected by erosion prepared and applied in the pilot sites</p> <p>1.2.1 State Committee on Land Management ensuring integration of SLM and LDN aspects in national framework and mainstreaming into relevant policies established</p> <p>1.2.2 Relevant resource managers of the Ministry of Environment and Physical Planning; the Ministry of Agriculture, Forestry and Water Economy; and Aranchinovo, Jegunovce, Lipkovo, Saraj, and Zelino municipalities capacitated in land use planning, SLM practices, ecosystem restoration, and use of economic instruments</p>			
Component 2 Implementation of sustainable land and forest management practices for reducing the effects of land degradation on ecosystem services in three pilot sites in the most vulnerable mountainous region	Investment and TA	2.1 Uptake of SLM and SFM measures avoids and reduces land degradation generating sustainable flows of agro- and forest ecosystem services <i>[10,000 ha land under SLM practice and 5,000 ha of forest in Zheden Massif under SFM]</i>	<p>2.1.2 Priority actions for reforestation and sustainable forest management are implemented to accelerate optimized use of forest and non-forest land by communities and local government on 5,000 hectares at pilot sites</p> <p>2.1.3 Ecological friendly material, measures and activities for erosion control (e.g. protective belts and windbreaks) piloted in selected sites.</p> <p>2.1.4 Introduction of ecological approaches for torrent control (at the 3 pilot sites)</p> <p>2.1.5 Degraded land in hilly mountain regions of the pilot sites rehabilitated with a community-based methodology</p> <p>2.1.6 Locally validated SLM practices (namely more efficient organic residues management, erosion control on agricultural land, maintenance of soil organic matter), developed, tested and disseminated</p> <p>2.1.7 Local land owners/resource users in Arachinovo, Strachintse, Lipkovo and Zheden Massif pilot sites trained in Sustainable Land Management to achieve local LDN targets</p>	GEFTF	1,998,713	12,265,713
Component 3	TA	3.1 Improved	3.1.1 Production of knowledge management	GEFT	233,695	2,545,713

Knowledge management, and public awareness		understanding of benefits of SLM practices for mitigating erosion and land degradation applicable for Macedonia (mainly Agronomic, Vegetative and Management practices) and ability to replicate lessons learned	products based on training and exchanges under Outcome 1.2 and best practice arising from Outcome 2 to ensure SLM and LDN through a cross-sectoral multi-stakeholder landscape approach to managing competing uses of mountain lands.  3.1.2 Development of three bankable project proposals for replication of sustainable land management practices in other regions identified as vulnerable.  3.1.3 Communication and outreach campaign with an emphasis on ecological and economic benefits of sustainable management of land and forests of Macedonia.  3.1.4 A web-based national SLM and LDN knowledge management hub established	F		
Subtotal					3,488,138	23,142,856
Project Management Cost (PMC) <sup>4</sup>				GEFTF	174,407	1,157,144
<b>Total Project Cost</b>					<b>3,662,545</b>	<b>24,300,000</b>

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: (N/A)

#### C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
Recipient Government	Ministry of Environment and Physical Planning	Grant	5,000,000
Recipient Government	Ministry of Environment and Physical Planning	In kind	8,000,000
Recipient Government	Ministry of Agriculture, Forestry and Water Economy	In kind	3,500,000
Recipient Government	Arachinovo Municipality	In kind	500,000
Recipient Government	Lipkovo Municipality	In kind	300,000
Recipient Government	Saraj Municipality	In kind	500,000
Recipient Government	University of Skopje	In kind	1,000,000
Recipient Government	University of Tetovo	In kind	1,000,000
Donor Agency	Swiss Government	In kind	2,000,000
GEF Agency	UN-FAO	In kind	2,000,000
GEF Agency	UN Environment	In Kind	500,000
<b>Total Co-financing</b>			<b>24,300,000</b>

#### D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS <sup>a)</sup>

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) <sup>b)</sup>	Total (c)=a+b
UNEP	GEFTF	FYROM	Land Degradation		3,662,545	347,942	4,010,487
<b>Total GEF Resources</b>					3,662,545	347,942	4,010,487

a) Refer to the [Fee Policy for GEF Partner Agencies](#).

#### E. PROJECT PREPARATION GRANT (PPG)<sup>5</sup>

Is Project Preparation Grant requested? Yes  No  If no, skip item E.

<sup>4</sup> For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

<sup>5</sup> PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF up to \$2m (for MSP); up to \$100k for PF up to \$3m; \$150k for PF up to \$6m; \$200k for PF up to \$10m; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

**PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS**

Project Preparation Grant amount requested: \$ 91,324					PPG Agency Fee: 8,676		
GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee <sup>6</sup> (b)	Total c = a + b
UNEP	GEF TF	FYROM	Land Degradation		91,324	8,676	100,000
<b>Total PPG Amount</b>					<b>91,324</b>	<b>8,676</b>	<b>100,000</b>

**F. PROJECT’S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS<sup>7</sup>**

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	15,000 Hectares benefiting from SLM and SFM practices

**PART II: PROJECT JUSTIFICATION**

1. *Project Description.* Briefly describe: 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; 2) the baseline scenario or any associated baseline projects, 3) the proposed alternative scenario, GEF focal area<sup>8</sup> strategies, with a brief description of expected outcomes and components of the project, 4) [incremental/additional cost reasoning](#) and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and [co-financing](#); 5) [global environmental benefits](#) (GEFTF) and/or [adaptation benefits](#) (LDCF/SCCF); and 6) innovation, sustainability and potential for scaling up.

**Overview & Environmental Context**

The Former Yugoslav Republic of Macedonia (from hereafter referred to as Macedonia) is located in the central part of the Balkan Peninsula. It is a landlocked country having an area of 25,713 km<sup>2</sup>, representing one of the smallest countries in Europe. It is bordered by Serbia and Kosovo (under UNSCR 1244/99) to the North, Bulgaria to the East, Greece to the South, and Albania to the West. Large and high mountainous massifs characterise the country’s topography, with the average elevation of 829.7 meters above sea level, with a mean slope of 15.1°. Mountain relief with very steep slopes dominates in the Western part of the country.

Total cultivated land in the Republic of Macedonia is 510.000 ha. 190.000 farms (around 80% of the total farms) are individual agricultural holdings- family farms with an average farm size of 1,7 ha. Around 440.000 household members working on individual agricultural holdings and 141.000 seasonal engaged people. Plant production represents the primary value of the agricultural production- 73%. Horticulture production, cereals and industry crops represent 80% of the cultivated area.

Livestock production accounts total value of 27 % of the agricultural production. The biggest share in the value of animal production has milk, followed by pork, cattle, sheep and goats. The “agriculture and forestry” sector is one of the key economy sectors and plays a major role in the social and economic stability of the country. It includes primary agriculture production, forestry, hunting and fishery. In 2013, approximately 18.7% of the entire “working force” was engaged in agriculture, forestry and fishery<sup>9</sup>. The share of the primary agricultural production in the GDP amounts from 8.9% to 12.8 %, during the period 2005 – 2012. In 2012 exports of agri-food products accounted to almost USD 510 million. The most important export product groups are tobacco (with a share of 23.9%), beverages (14.9%), vegetables (10.7%) and fruits (10.6%)<sup>10</sup>. The share of the organic farming area is about 0.25% of the total agricultural land.<sup>11</sup> National strategy with an action plan for organic agriculture of the Republic of Macedonia emphasises goals to develop organic farming and products, strengthening cooperation with relevant stakeholders and strengthening of the market for organic products. The forestry sector’s contribution to the economy is approximately 0.7% of the GDP. Macedonia’s economy is highly dependent on its natural resources.

<sup>6</sup> PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

<sup>7</sup> Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the Corporate Results Framework in the GEF-6 Programming Directions, will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCF.

<sup>8</sup> For biodiversity projects, in addition to explaining the project’s consistency with the biodiversity focal area strategy, objectives and programs, please also describe which Aichi Target(s) the project will directly contribute to achieving

<sup>9</sup> Labour force survey, Skopje: State statistical office of the Republic of Macedonia, 2014

<sup>10</sup> Macedonia – Economic Report 2015, Embassy of Switzerland in the Republic of Macedonia. June 2016.

<sup>11</sup> Environmental trends and perspectives in the Western Balkans: future production and consumption patterns, 2010. EEA.

***Institutional Context:*** The Ministry of Environment and Physical Planning (MoEPP) performs environmental tasks related to the legal harmonisation process; the preparation of national strategies and action plans; inspection and enforcement including intervention if needed against the bigger polluters; and nationwide monitoring, information systems and cadastre. MoEPP sets the overall framework for policies and legislation. Ministry of Environment and Physical Planning of Macedonia (MoEPP) and Ministry of Agriculture, Forestry and Water Economy (MAFWE) are each responsible for different aspects of achieving sustainable land management practices in Macedonia. MoEPP is the host to the UNCCD National Focal Point and is responsible for implementation of the National Action Programme.

The Ministry of Agriculture, Forestry and Water Management (MoAFWM) has jurisdiction over agriculture and forestry; use of agricultural land, forests and other natural resources. MoAFWM is responsible for plant protection products, seeds and new forms of reproduction, and has the authority to oversee nitrate pollution originating from agricultural activities and prevention of pollution from pesticides. MoAFWM is responsible for forest law enforcement. ‘Macedonian Forests’, the public enterprise, was created by the Government in 1998 and is responsible for managing the state-owned forests. In addition to MoEPP and MAFWM as the administrative bodies with the lead role in the field of sustainable land management, certain State administrative bodies have jurisdiction in terms of land degradation and desertification.

According to the Law on Local Self-Government, the local self-government units (LSGUs) are competent for regulation and performance of affairs of public interest of local relevance, specified by law. The LSGUs are responsible for general environmental protection measures including land degradation issues. Almost every municipality in the country has adopted its strategy document on sustainable development, which is called “Local Environmental Action Plan”. More than 50 % of the municipalities have environmental inspectors and staff devoted to the environment. There are limitations on the implementation of the decentralisation process in the country due to budget and human capacity constraints in several municipalities.<sup>12</sup> Many of the issues related to land degradation and desertification need to be treated on the local governmental level, while the main legal and policy framework is designed on a national level. In this respect, the better link between both levels is needed for the achievement of satisfactory results.

According to the register of non-governmental organisations in Macedonia, there are approximately up to 200 environmental NGOs, out of which there are 60 NGOs listed as “ecological associations”. Many NGOs continue to be active on a local level, mostly focusing on public gatherings for small campaigns, spreading information on the environmental status and trying to provide a local debate and forum for solving local problems.

***Legislation:*** There is a large amount of national legislation that has been developed, particularly within the framework of the accession process to the European Union, whereby the Government has transposed most of the EU Acquis. Legislation about sustainable land management practices and land use issues are in the regulatory framework of Nature and Environment, Water Management legislation, Agriculture and Fisheries, Forestry and Hunting and other related legislation. Major legislations relevant for this project are contained in Law on Environment (“Official Gazette of the Republic of Macedonia” no. 42/14) and Law on Nature Protection (“Official Gazette of the Republic of Macedonia” no. 41/14), Law on Forests (“Official Gazette of the Republic of Macedonia” no. 43/14), and Law on Agriculture and Rural Development.

The majority of the obligations within EU legislation on nature conservation have been transposed into the Law on Nature Protection, which also contains obligations from relevant ratified international agreements. Full implementation of the Law is still to be achieved with the adoption of several by-laws. The Law on Nature Protection regulates the protection of nature through protection of biological and landscape diversity and protection of natural heritage within and outside protected areas.

“Law on Agriculture and Rural Development” is the highest legal act for agriculture. By the Law, a National Strategy for Agriculture and Rural Development was prepared, which provides the Macedonian Government with a multi-annual guidance for the development of Macedonian agriculture and rural regions.

All activities of managing the forests (growing, use and protection) are regulated by the Law on Forests. The Law on Forest (2009) recognise two types of ownership: state and private. In the Law on Forest, it is prescribed that state forests are managed by the ‘Macedonian Forests’ organisation, while the management of the private forest, recently (Changes on the Law on Forest, 2011) was passed to the licensed entities. 90% of the forests are state forest while 10% are private forests. To facilitate the planning and management of the forests, they are divided into 187 Forest Management Units (FMUs). The ‘Macedonian Forest’ is responsible for managing most of them (175 FMUs). ‘Macedonian Forest’ manages 90% of the state forests, while the rest belong to national parks. The law on Forest stipulates that “based on the general forest management plan, the users of forests shall adopt special forest management plans for each forest management unit” (Law on Forests, 2009). Because the private forests are small and fragmented, the most of the private forest owners are not obliged to make a forest management plan. According to the data gathered from the forest management plans, about 8% of the total area of forests is not covered by management plans. These areas are mainly degraded forests, shrub lands and forest bear land, and some smaller part under crops and cultivated plantations, which are not covered by any forest management unit.<sup>13</sup> The management plans are prepared

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<sup>12</sup> Environmental Performance reviews The former Yugoslav Republic of Macedonia Second Review, UNECE, 2010.

<sup>13</sup> Stojanovski, V., Stojanovska, M., Stojanova, B., Nedanovska, V. (2015) Forest Land Ownership Change in FYR Macedonia. COST Action FP1201 FACESMAP Country Report, European Forest Institute Central-East and South-East European Regional Office, Vienna

and implemented by the 'Macedonian Forest' without consultation with private forest owners about their needs and interests.<sup>14</sup>

Strategies and Plans: Macedonia has developed some strategic plans relevant for sustainable land management practices, and soil conservation, including: National Action Plan for Combating Desertification of the Republic of Macedonia (final but not yet adopted by the Government); National Strategy for Sustainable Development 2009-2030; National Water Strategy, 2011-2041; National Biodiversity Strategy and Action Plan; National Agriculture and Rural Development Strategy (NARDS), 2014-2020: The strategy has the objective of increasing international competitiveness of the country, necessary for a sustainable economic growth and increased employment; National Strategy for Sustainable Forestry Development (NSSFD), 2006-2026; and Spatial Plan of Republic of Macedonia, 2002-2020. The country still does not have an LDN strategy, however activities on developing the National LDN Target Setting Leverage Plan are currently taking place under support of the Global Mechanism.

### **Environmental Problems**

Increasingly, Macedonian's green cover and agricultural areas are exposed to degradation due to climate change, urbanisation, illegal logging, forest fires, and general improper management of soil resources, which is further elaborated under the 'Threats and Barriers' section. Despite its economic and environmental strategic importance for the country, land management has largely been neglected, causing serious repercussions in many different economic sectors as well as overall environmental and human well-being. Regarding land degradation and erosion, Macedonia is one of the most vulnerable countries in Europe. Soil pollution by fertilisers and pesticides, loss of soil organic matter (due to mono-cropping, low organic fertiliser use), and soil compaction of the upper soil layers due to the both dryness and intensive rainfalls are the major land degradation issues in Macedonia. In rural areas and around villages there are numerous unregulated waste disposal sites (about 200 ha), which cause an increase in contamination of soil.<sup>15</sup> The unsustainable agricultural practices are the main source of soil pollution and soil fertility loss. The soils under intensive agriculture production on sloppy terrains with heavy texture and shallow soil profile in the North-Eastern parts of Macedonia, where two of the pilot sites are located, are the most vulnerable soils to soil fertility loss. (See map 5, Annex A).

Erosion is the second most dominant land degradation type, affecting up to 96% of all territory of the country. Of this, an area of 9,423 km<sup>2</sup> or 36.65% of the total state area is in the highest categories (I–III)<sup>16</sup> of erosion, with 8% bare land<sup>17</sup>. The predominant form of soil erosion in Macedonia is water erosion caused by several factors and accelerated significantly by human activities<sup>18</sup>. The natural conditions in Macedonia (climate conditions, topographical characteristics, vegetation cover, and geology), and deforestation are the main contributors to the high rate of erosion. There are high losses of topsoil, humus and nutrients from the agriculture land located on slopes. Intense and concentrated rains cause landslides, soil erosion and local floods. Approximately 17 million m<sup>3</sup> of arable soil is lost every year. Maintaining 'good agricultural and environmental condition' through SLM practices (the protection of soil against erosion, the maintenance of soil organic matter and soil structure, and the safe-guarding of landscape features) reduces soil erosion by half.<sup>19</sup>

The damage caused by floods directly affects the already fragile agriculture and local rural economies. It is stated that the occurrences of extreme hydrological events (floods and droughts) have increased in frequency and intensity over the past decades due to climate change<sup>20</sup>. For example, during the last three decades regional floods caused by the biggest rivers in Macedonia, caused an estimated total damage worth USD 193.8 million. Other prominent types of soil erosion in Macedonia are high rates of landslides and landfalls, exacerbated by torrent rains (increased in past decades due to climate change) and human activities including illegal loggings, and forest fires, Landslides are especially prevalent in the North-Western mountainous region of the country, as illustrated in the map in Annex A. In 2015, there were 89 recorded landslides in the North-Western part of Macedonia, causing huge economic and human losses. Further, analyses show that soil in urban and industrial areas is contaminated with heavy metals and organic chemicals. Mining sites represent 27 % of all sources of contamination<sup>21</sup>.

While overall whole Macedonian territory is under threat of land degradation, the mountain lands mostly in the North-Western and North-Eastern parts of Macedonia are particularly vulnerable. In August 2016, the state of emergency has been declared in the Macedonian capital Skopje and neighbouring mountain districts located in the North-west regions of Macedonia, a day after

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<sup>14</sup> Stojanovska, M., Miovska, M., Jovanovska, J., Stojanovski, V. (2013) The process of forest management plans preparation in Republic of Macedonia: Does it comprise governance principles of participation, transparency and accountability?, Forest policy and Economics. Elsevier, Volume 49, December 2014, Pages 51–56

<sup>15</sup> IPARD Rural Development Programme, 2014-2020

<sup>16</sup> Boardman J., Poesan J., (2006) Soil Erosion in Europe, Chapter 1.24 Macedonia

<sup>17</sup> UNCCD NAP Macedonia, 2016

<sup>18</sup> Ibid.

<sup>19</sup> Borrelli, P., Paustian, K., Panagos, P., Jones, A., Schütt, B. & Lugato, E. (2016) Effect of Good Agricultural and Environmental Conditions on erosion and soil organic carbon balance: A national case study. Land Use Policy.

<sup>20</sup> UNCCD NAP Macedonia, 2016

<sup>21</sup> Blinkov I., Miladinovic M., Barriers to Sustainable Land Management in the Republic of Macedonia , Regional workshop on land degradation, Belgrade 2006

23 people died in flash floods caused by a storm.

Land cover and land use also change a challenge intensifying the land degradation problems, defined as soil sealing. In period 2000-2006, the situation in the landscape of Macedonia can be characterized by a net increase in artificial areas and water bodies whereas a net decrease in arable land, permanent crops, pastures-mosaics and semi-natural vegetation. In absolute figures, changes in forested land and agriculture (consumption and formation) are the two most powerful drivers of change in the Macedonia<sup>22</sup>. Unfortunately, the high-quality land has usually been converted to artificial land and soil sealing instead of utilising for agricultural use.<sup>23</sup> The land management system in Macedonia is not integrated with resources management system. There is no co-ordination between enterprises who manage land.

#### Land Degradation in Arachinovo-Strachintsi; Lipkovo; and Zheden Massif

Macedonia's UNCCD NAP identifies the mountain areas near the Arachinovo-Strachintsi villages (Arachinovo and Gazi Baba municipalities), Lipkovo municipality and Zheden Massive (Saraj, Jegunovce, and Zelino municipalities), among the worst affected municipalities regarding land degradation in Macedonia country. Extensive erosion has taken place in the five municipalities, due to topographic and geological factors as well as deforestation, overgrazing and unsustainable agricultural practices (Artificial fires, mono-cultivation, excess use of fertilisers and pesticides, decreasing size of the farm holdings and plot sizes<sup>24</sup>. Locations of the pilot sites (referred in the text as "north-western part of the country") are provided in Annex A.

Arachinovo-Strachintsi villages cover an area of about 116 km<sup>2</sup> with a population of 84,000 (Arachinovo 24 km<sup>2</sup> area with 12,000 inhabitants, Gazi Baba 92 km<sup>2</sup> area with 72,000 inhabitants). Arachinovo and Gazi Baba city centres were mostly affected by flash floods and torrents from the surrounding mountain areas. There were some afforestation attempts done in the past, through different projects and initiatives. However, most of them were unsuccessful due to improper selection of species used.

Lipkovo municipality, covering of 267km<sup>2</sup> with 27,058 inhabitants, is one of the poorly developed regions and there is no industrial activity on its territory. Main economic activity is agriculture, and 95 % of the active population is involved in it. There is an area of 22,599 ha for agriculture, from which 8,256 ha or 36.5 % is cultivable soil which is irrigated by Lipkovo hydro system. Pastures have an area of 4,375 ha or 19.3 %, and the forest is the most dominant land use with an area of 9,968 ha or 44.2 %<sup>25</sup>. Bare lands in this municipality are the result of uncontrolled extensive forest exploitation by the local inhabitants. The annual cut of wood mass is 80.384 m<sup>3</sup>. The total area covered with forests is 13,380 hectares with a total of the wood mass of 376,476m<sup>3</sup> <sup>26</sup>. In addition, between 2004 – 2011, there were 73 registered forest fires in this municipality, causing over 3,000 ha of burned forest and over US\$ 15 million of damages<sup>27</sup> Also, soil quality of about 20,000 ha of cultivable land is mostly affected by the improper use of agrochemicals, communal solid waste and from heavy metals pollution disseminated through different pathways from abandoned mine facilities<sup>28</sup>. As a result, 57,8% of the Lipkovo Municipality is under severe erosion (please refer to Annex A - Map 4 – Lipkovo Municipality Erosion Map), and the Local Environmental Action Plan of 2011 identifies the need for rehabilitating and re-vegetating the affected areas in order to prevent further erosion, as well as to install good agricultural practices. There have been some efforts to remediate the most affected sites since the area was identified as mining related hot spot is threatening the environment as well as public health and safety, both in a local and transboundary context requiring immediate attention. However, there was no follow-up since then<sup>29</sup>.

Zheden Massif: Zheden Planina itself has an area of 109 km<sup>2</sup>, out of which 50% is under Category II of soil erosion according to the National Erosion Map. The massive is in three municipalities (Saraj 229 km<sup>2</sup> area with 35,408 inhabitants, Jegunovce 117 km<sup>2</sup> area with 10,673 inhabitants, and Zelino 201 km<sup>2</sup> with 27,563 inhabitants). Saraj, Jegunovce, and Zelino municipalities have extensive bare land (around 18,000 ha) due to extensive deforestation and erosion. According to Corine land cover maps of 2000 and 2006, around 1,578 ha of forest and 692 ha of pastures area have been converted to 1,841 ha semi-natural vegetation, and bareland and the rest have been converted to artificial areas, water bodies and arable land.<sup>30</sup> This mountain is of exceptional importance because it contains Spring Rashce, the biggest source of drinking water in Macedonia and the capital Skopje. Therefore, the Skopje City Council developed the spatial plan of the protection zones of Zheden Massif<sup>31</sup>. Zheden mountain range possesses significant geomorphological and biodiversity features, and given the size, status of forests and near the villages, the most appropriate category for protection is Nature Park<sup>32</sup>.

#### **Threats, and Barriers**

<sup>22</sup> Overview of land cover & change 2000-2006, European Environment Agency.

<sup>23</sup> UNCCD NAP Macedonia, 2016

<sup>24</sup> Ibid.

<sup>25</sup> State Statistical Office of the Republic of Macedonia <http://www.stat.gov.mk>

<sup>26</sup> Local Environmental Action Plan for Lipkovo Municipality, 2011

<sup>27</sup> Ibid.

<sup>28</sup> Ibid.

<sup>29</sup> Feasibility Study for Lojane Mine - Czech-UNDP Trust Fund, Procurement 03/ENVI, 2007

<sup>30</sup> Land cover changes are based on CORINE 2000 and 2006 raster images.

<sup>31</sup> Spatial Plan of the region of protection zones of Rasche springs (Official Gazette of the Republic of Macedonia no. 98/02)

<sup>32</sup> Ibid.

The main causes of land degradation in Macedonia are unsustainable agricultural practices, and unsustainable forestry (degradation of forests, deforestation, and forest fires) However, since Macedonia highly depends on agriculture and forestry sector for its economic and social development, it is crucial that land degradation is addressed through application of sustainable management practices.

Unsustainable agricultural practices: Agriculture land covers 51% of the total country surface, out of which 22% are classified as arable land and 29% as permanent pastures. The major problems causing soil degradation in rural areas are poor agricultural practices, especially inefficient irrigation schemes, the overuse of chemical fertilisers and pesticides, and mono-cultivation. The farmers usually apply the same practice for one crop, despite differing natural conditions of the field. Same land cultivation, same fertilisation practice are used for different conditions (for flat lowland and sloped and hilly areas, for irrigated and non-irrigated land, etc.) The most common soil cultivation practice is moldboard plowing that is permanently mixing soil top layer, exposing it to increased aeration and create soil organic matter loss due to more intensive processes of organic matter degradation. The plowing of sloped areas is usually along the slope instead of across the slope that causes losses of the soil by erosion, losses of natural vegetation and biodiversity. This practice decreases land productivity and significantly increases the risk of land degradation<sup>33</sup> Moreover, about 30,000 – 80,000 ha of irrigated agricultural land is vulnerable to salinization and land degradation. Also, abandonment of agricultural areas has in some places contributed to a reduction of erosion, but in mountain areas, lack of maintenance of terraces has increased erosion. Intensification of agriculture (higher fertiliser and pesticide use, semi-natural grassland conversion to arable land and new irrigation developments) is posing a severe threat to the biological diversity of the country. Traditional management of grasslands and low input, high crop diversity mixed farming, which was maintained on high nature value habitats, has ceased in many marginal but environmentally valuable areas. Also, the country experiences an intensive urbanisation and expansion of some settlements, at the expense of agricultural land.<sup>34</sup> Excessive application of fertilisers, especially in highly erosion-prone soils, decreases the soil fertility. Fertiliser use in Macedonia increased from 14,100 tonnes to 29,500 tonnes between 2002 and 2014<sup>35</sup>.

The combination of natural vulnerability (sloping terrain, vulnerable soil structures and occurrence of intensive rains), inappropriate land use (destruction of natural flora, conversion of grasslands for cash crop cultivation, establishment of large fields involving the destruction of former shelterbelts, landscape elements and field margins) and farming practices (overgrazing, use of monocultures, limited application of organic materials, ploughing of steep slopes, lack of soil conservation tillage techniques, insufficient land use for winter cover crops) contribute to the acceleration of erosion processes. Permanent loss of the humus layer in the soil due to intensive monocultures without crop rotation practices especially with intensive monocultures is a major threat to soil quality leading to low yields and permanent loss of humus cover in some cases.<sup>36</sup>

North-Western mountain region is specifically threatened by erosion<sup>37</sup>, and this proposed project will specifically rehabilitate three pilot areas of this region: Arachinovo-Strachintsi villages (Arachinovo and Gazi Baba municipalities), Lipkovo municipality and Zheden Massif (Saraj, Jegunovce, and Zelino municipalities). These three locations are among the most affected by extensive erosion, due to deforestation, and unsustainable agricultural practices. Also, recent flooding events in the North-Western mountain region between 2011 and 2016 affected more than 10 000ha of agriculture land area leading to further soil degradation in these regions. Zeden Massif is also under threat for further soil degradation, and it is important to rehabilitate the degraded land as this mountain is the source of drinking water for the capital of Skopje.

Deforestation and Degradation of Forests: The total wood mass in Macedonia is estimated about 74 million m<sup>3</sup>, and the total annual increment represents 1.8 million m<sup>3</sup> with an average annual increment on one hectare of 2.02 m<sup>3</sup>. Out of the total forests and forest land area, 8% are not planned<sup>38</sup>. Law on Forest amendment from 1998, indicates that “high nature value” forests (17,617 ha before 1998) lost their status as forest for special purposes and became part of economy forests management units. The total tree cover loss<sup>39</sup> for the period 2001-2014 in the municipalities of Arachinovo, Jegunovce, Lipkovo, Saraj, and Zelino was 0.3 ha, 111 ha, 564 ha, 28 ha, and 597 ha respectively. Deforestation in these municipalities increases the intensity of erosion. Arachinovo and Lipkovo Municipality were severely hit by floods in 2016 and 2015, causing not only economic losses but taking away 23 lives. It is believed that the floods have such a severe impact because of large bare-land surfaces caused by extensive deforestation, where the soil does not have retention capacities anymore. Legislation and practice in Forestry of the Republic of Macedonia do not still recognise forests with various statuses within one forest management unit. Besides that, the current Rulebook for the preparation of forest management plans is not suitable for other forests than economic

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<sup>33</sup> UNCCD NAP Macedonia, 2016

<sup>34</sup> IPARD Rural Development Programme, 2014-2020

<sup>35</sup> Fertilizers consumption in nutrients (N, P2O5, and K2O), FAOSTAT.

<sup>36</sup> IPARD Rural Development Programme, 2014-2020

<sup>37</sup> UNCCD NAP Macedonia, 2016

<sup>38</sup> Ibid.

<sup>39</sup> Data extracted from Global forest watch database. The tree cover loss is calculated for the canopy density larger than 30% for the period 2001-2014.

ones, related to the sustainable measures. Therefore, the total area “high nature value” forests that are crucial for soil and water protection in the Republic of Macedonia is zero<sup>40</sup>.

Forest fires and illegal logging represent important problems in Macedonia. As a result of drought conditions and human neglect, 2,791 fires in the last 15 years destroyed 128,181 ha (9,156 ha annually) of forest and forest land<sup>41</sup>. Total 1,687,620 m<sup>3</sup> of wood mass was burned causing economic damages of US\$ 75 million<sup>42</sup>. Illegal logging is also a long lasting problem, about 200,000 m<sup>3</sup> are illegally cut each year<sup>43</sup>. The North-Western region of the country has strong precipitation events, which after forest fires cause high sediment inputs, destruction landscapes and of aquatic habitat and downstream flooding described above. All these lead to economic and environmental losses, especially in the North-Western region of Macedonia, which is the biodiversity “hotspot” in the country and contains some identified high nature value forests. <sup>44</sup> There is no clear border between state and private ownership, and in many cases, both sides are making “mistakes” in harvesting. This is also a kind of basis for illegal activities. Moreover, due to the political conflict causing civil arrest in 2001, natural resources were severely exploited, especially forests. The civil arrest mostly took place again in the North-Western region of Macedonia where this project will rehabilitate degraded land in three pilot areas above described. As can be seen from Map 2 (see Annex A), the municipalities described above have the highest number of landslides caused by extensive deforestation, causing vast economic and human casualties during severe storms and rains.

**Climate Change:** Rainfall is the most important climatic factor in determining areas at risk of land degradation and potential desertification. The variability and extremes of rainfall lead to soil erosion and land degradation in Macedonia. On the one hand, torrent floods are frequent in Macedonia. These floods often but not exclusively are the result of natural conditions, bad land cover especially low forest closeness (high percentage of degraded forest and shrubs), high erosion processes on the catchments, rare but very intensive short time rainfalls, unbalanced water regime, etc. The most significant torrential (flash) flood in Macedonia keep occurring in the North-Western region of Macedonia endangering human lives and causing large damages to infrastructural facilities (roads, bridges, etc.), causing agricultural losses, etc. The latest torrential floods in the North Western region (August 2015 and 2016) caused 23 deaths and millions of dollars in damages. On the other hand, drought and aridity phenomena are increasing, where the total value of the yield reduction caused by drought was US\$ 85 million. Droughts between 2007 and 2009 caused about 50-60 % decrease in crop production in non-irrigated areas. These droughts also caused about 60,000 ha of riverside forests to die. The forestry sector is expected to experience a high level of impact from climate change, especially boreal forests, where those impacts could be dramatic regarding damage. The major sources of exposure (and associated impacts) for forests in the country are increasing temperatures, precipitation decreases, increasing frequency of forest fires, and changes in forest productivity. The most important factors that cause constraints in agricultural production are water deficit, aridity, and the emergence of a period of drought, i.e. increase of regions with an arid climate. Climate change will have a negative impact in almost all important agricultural regions.<sup>45</sup> Second National Communication identified that subalpine and alpine pastures (located in the north-western part of the country) would be the most threatened by the global warming<sup>46</sup>.

### Barriers

**Long term solution** envisaged by this project is to expand sustainable land management practices, contribute to achieving the national land degradation neutrality target with integrated landscape management especially in the north-western mountain regions of Macedonia. However, to implement the above stated long-term solution, there are some identified barriers that need to be addressed.

*Weak institutional and regulatory framework and lack of capacity in applying and promoting sustainable land management practices:* SLM practices in Macedonia are inadequate and sustainable land management are still not well integrated into other areas of policy-making and implementation. At present, the institutional and regulatory context is weak. Macedonia does not have a harmonised legislation on land management between central and local levels. Responsibility for land management is dispersed and poorly coordinated among many institutions and across sectors and levels of government. The capacity of the MoEPP and municipalities is limited for addressing non-compliance and weak enforcement of existing legal framework. Moreover, local authorities have a weak role and limited capacity in monitoring and enforcement of Law on Environment; Law on Nature Protection; Law on Organic Agriculture; Law on Agricultural Land; Law on Agriculture and Rural Development, related regulations and environmental guidelines. Decision makers both at the national scale and local scale do not have the capacity to understand socio-economic losses from degraded land and the trade-offs among different land utilisation schemes. Unfortunately, regulations on urban planning, water management, forestry and agricultural sector do not recognise the importance of the ecosystem services of mountain lands and tend to approach the issues in a fragmented manner. Regulation on ‘Good Agricultural Practice’ (minimum requirements for nutritional

40 Blinkov I., Miovska M., Sokolovska K., Protective Forests in the Republic of Macedonia, country report- GTZ-SWG - Technical discussion: ”Implementation of a concept for Sustainable Forest Management”

41 UNCCD NAP Macedonia, 2016

42 Ibid.

43 Illegal logging and trade of illegally derived forest products in the UNECE Region: Causes and Extent – Country Report of the Republic of Macedonia, 2013.

44 National Biodiversity Strategy and Action Plan of Macedonia, 2014-2019

45 IPARD Rural Development Programme, 2014-2020

46 Second National Communication on Climate Change to UNFCCC – Macedonia, December 2008.

ingredients management, pesticide use, avoidance of land abandonment, maintaining permanent pastures) is lacking. Both the MoEPP and the MoAFWE have limited capacities to oversee and critically review and monitor reclamation and rehabilitation. There is not any comprehensive guideline in local language for sustainable land management nor a guideline for the private sector for rehabilitation of degraded sites.

*Limited models, technologies and knowledge for applying SLM in practice on the ground:* Macedonia has limited experience, knowledge, resources and capacity at the local level to apply SLM. Clear procedural and regulatory provisions for utilising land rehabilitation are absent in the country. There is a lack of good practices of land conservation measures and activities. The funds available for rehabilitation of public lands are limited, and there are no financial incentives for the promotion of SLM in the agricultural sector and other sectors. Existing programs do not support sustainable land management approaches, and as a result, there is very little experience in Macedonia in implementing practices such as the sustainable use of chemicals and land cultivation technologies, and the use of agroecological techniques such as landscape planning, windbreaks, crop rotation, soil filtering in mountainous ecosystems. Soil erosion is the most widely spread type of land degradation across the country, especially in areas with diversified relief forms and significant human activities. The actual soil erosion map showing the erosion zones is out of date and should be updated. There is a wide set of various methods, techniques and material (e.g. blankets made of natural fibre, biodegradable polyesters, etc.) that can be used for erosion and torrent control in affected areas. However, these materials are not widely used due to lack of awareness and knowledge. Although windbreaks play a significant role in reducing erosion on agricultural zones, they have been mostly destroyed. The unsustainable soil cultivation practices (plowing in line with the slope, permanent soil cultivation with moldboard plow, constant depth of plowing in long period, use of heavy machinery, cultivation out of the optimal period, over irrigation, no application of manure or other organic matter etc.) are promoting soil degradation processes as erosion, organic matter loss, salinization and reduce soil productive capacities. The implementation of the good agricultural practices is not at the satisfactory level, neither is the implementation of the agro-ecological measures. The management of organic residues in the country is very inefficient.

*Low public awareness and insufficient knowledge and understanding of the importance of SLM:* Macedonia is constrained by knowledge gaps in scaling up best practices in sustainable land and forest management. National and municipal government officials have limited capacity for persuading private sector land developers and users towards sustainable land management practices. Knowledge products, guidelines on best SLM practices applicable for Macedonia are not available in local language. There is an inadequate recognition of the degradation of mountain lands and the costs of degradation. Awareness among natural resource managers and farmers on the importance of soil and benefits of SLM practices is limited. Overall awareness for conservation of natural resources and environmental protection is weak.<sup>47</sup> The environmental monitoring and information system is inadequate.

### **The baseline scenario and any associated baseline projects**

The Macedonian Government is engaged in intensive work for the preparation for accession to the European Union. Pre-accession support programmes are being implemented in agriculture and have a major impact on land management. In 2013 the government initiated the preparation of the National Action Programme (NAP) to protect land and combat land degradation and preparation of a 10-year strategy. The NAP evaluates general environmental conditions and sets priorities regarding the country's efforts to meet obligations under UNCCD. The NAP has been fully developed, however, is still waiting for Government's adoption. Due to the financing structure, there is little funding for implementation of sustainable land management practices. There are a few numbers of people working in charge of implementation of the NAP and other legal and strategic documents about achieving sustainable land management practices and land degradation neutrality (LDN). Currently, the only direct measure existing for sustainable forestry practices is the "Programme for extended reproduction" under responsibility within the Ministry of Agriculture, Forestry and Water Economy (MAFWE). Each year the Government within the budget of MAFWE plans direct investments for various activities such as afforestation and other silvicultural activities, burned area preparation for planting, pests and diseases control, and various scientific activities. The action "Tree Day - Plant Your Future" began in 2008 and the first four years, until 2011, was conducted in two seasons - spring and autumn. In the last five years afforestation is carried out only in the autumn due to the lack of funding. In the past 16 stocks almost 13,000 hectares planted with over 35 million seedlings. A total of 503.89 hectares with 2,611,143 million seedlings were planted on 30th of November 2016 in the frame of the 17th Action "Tree Day - Plant Your Future" in the Republic of Macedonia. The action was implemented in 60 locations in 30 municipalities.

The total expenditure for protection of soil, ground water and surface water, and forests in Macedonia is around 1.1 million US\$/year, excluding the expenditures of research and development activities; educational, training and other similar activities; administrative activity; and monitoring and control equipment, analysis and expenditures on equipment maintenance. Public expenditure share of this amount is around 35%<sup>48</sup>. MoEPP's annual core budget allocated for overall nature and land conservation is around 1.0 million US\$/year. Most of the large-scale activities are done through donor funded projects and initiatives mentioned below. The government of Macedonia's efforts will remain fragmented, land degradation barriers identified in the barriers sections will not be overcome with these interventions. Mountain landscapes continue to be subjected to impacts from competing land uses. Without a comprehensive approach, land use will remain unsustainable in Macedonia.

<sup>47</sup> IPARD Rural Development Programme, 2014-2020

<sup>48</sup> Environmental protection expenditures (2015), State Statistical Office of the Republic of Macedonia

**Projects:** Macedonia has implemented some projects and initiatives as an intervention based on laws and regulations related to land management, and forestry. However, these projects have failed to maintain an integral focus on revising the existing legislation to include SLM considerations, develop tools and methodologies on both national and local level in order to ensure sustainability in using SLM practices and finally execution of SLM techniques on the ground that allow for practical learning and directly impact the state of land. Such comprehensive approach has not been tackled in any project up-to-date. The baseline projects include the following:

Since December 2014, FAO has been providing technical assistance to the Ministry of Agriculture, Forestry and Water Economy to develop its capacity to implement a National Land Consolidation Programme. The project enables the Ministry to gain practical experience with different approaches to land consolidation, allowing farmers to consolidate the fragmented parcels of their land, which is considered as a barrier to apply modern practices of soil and water conservation one of the factors of unsustainable and inefficient<sup>49</sup>. These experiences will also guide proposals for amending the legal framework to make land consolidation procedures more efficient. The project will also assist the country in preparing future land consolidation projects in the context of European Union accession and co-funding for rural development. Around, US\$ 1.5 million will be spent between 2017 and 2020 by this Project.

Funded by Global Soil Partnership and implemented by FAO, the project Macedonian Soil Information System or “MASIS” started in 2015, whose objective is to consolidate soil research into an accurate, up-to-date, and fully functioning information system – based on state-of-the-art digital soil mapping techniques. The second phase will include development of spatial geodatabase within MASIS which led to the production of a national soil map compliant with both European and global standards. Approximately US\$ 500,000 will be spent in Macedonia between 2017 and 2020.

Funded by SIDA, EU, GIZ and implemented by FAO and a number of Macedonian NGOs, Promotion of sustainable agricultural practices, energy efficiency and utilization of renewable energy sources in rural communities of the Republic of Macedonia, is currently implemented and contains a component on promoting sustainable agricultural practices – institutional and legal framework development, capacity building, public awareness raising. MAFWE has supported the establishment of civil association - Network for Rural Development of the Republic of Macedonia (RDN was established on March 20, 2010) as part of the activities under the SIDA funded Macedonian program for support of Agricultural advisory services. The project budget for the period 2017-2020 is about US\$ 350,000 million.

IPA Funded Project Upgrade of institutional and administrative capacities in line with Common Agricultural Policy (CAP) requirements (2,830,000 EUR), whose objective is to upgrade the established institutional and administrative capacities of the national relevant structures for agriculture and rural development towards requirements of the EU accession process. Around US\$ 3 million will be spent in Macedonia between 2017 and 2020. Under this program, the restoring, preserving and enhancing ecosystems dependent on agriculture and forestry’ priority will focus on promoting the use of environmentally friendly farming practices, protection and enhancement of biodiversity, landscape, water and soil both within high nature value and traditional agrarian areas, also mitigation of climate change.

In addition, Ministry of Environment and Physical Planning of Macedonia is currently implementing the LDN activities and by September, the country should have completed a LDN Leveraging Plan, and LDN assessment; baseline established and mapped to define the LDN frame of reference, legal and institutional aspects analysed and drivers. Therefore this proposed GEF project would be continuation of LDN mainstreaming, though further setting LDN targets and measures and inclusion into selected national policies and strategies.

The projects mentioned above are implemented at the national scale and include the municipalities suggested for pilot projects. Currently, there are not any specific land conservation projects by the pilot municipalities except the government funded, above mentioned, “Tree day – Plant Your Future” activities that occur on an annual basis, and the regular municipal activities such as spatial planning, land use plans, etc. Between 2013 and 2016, 32ha, 62ha and 18ha were afforested in the Municipalities of Lipkovo, Saraj and Arachinovo respectively. The annual municipal budgets for implementation of land management and environmental protection measures are approximately totalling US\$ 150,000 per year.

#### **The proposed alternative scenario, with a brief description of expected outcomes and components of the project**

In order to tackle the above mentioned issues, but also to ensure the sustainability and facilitate integrated approach in application of land management practices, this project proposes an integrated land management approach, ensuring SLM through comprehensive legal and institutional strengthening, addressing degraded land directly with rehabilitation and restoration pilot activities and gain the necessary skills and know-how for scaling-up activities. Achieving these objectives requires collaboration with a wide range of stakeholder to improve the enabling environment for such an approach, including regulation and enforcement within the framework of multi-stakeholder and cross-sectoral land use planning and management.

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<sup>49</sup> UNCCD NAP Macedonia, 2016

The Government of Macedonia is requesting GEF support to remove the existing barriers to strengthening the capacity and skills of national and local government institutions and other stakeholders in the country to undertake SLM approaches. Three components are planned:

**Component 1 – Strengthened legal and institutional framework and capacity building for SLM.** This component will enable a strengthened legal and institutional framework to support land degradation neutrality target implementation in Macedonia at national scale through review of existing national legislation and institutional set-ups in Macedonia; development of guidelines for revision of legal and institutional framework; and dissemination to the stakeholders. The LDN baseline will be established and mapped to define the LDN frame of reference, including the LDN trends and drivers, which will lead to identification of priority areas for action to achieve LDN. In order to enable an adequate national framework to facilitate achievement of LDN, key policy and technical measures to establish LDN will be identified and the relevant national policies will be submitted for revision to include LDN. In order to facilitate achieving LDN targets, the institutions will be supported to integrate these targets into selected policies and commitments and innovative financing sources will be mapped out. On the local level, municipalities' Local Environmental Action Plans (LEAP) will be used as the entry point for leveraging SLM and LDN at the local scale. The current LEAPs of the pilot municipalities will be reviewed and updated with an emphasis on sustainable land management and LDN considerations. A gap analysis of the existing legal, institutional and capacity needs of land management sector at the national scale for Macedonia will be completed with reference to the key opportunities and threat to achieving LDN. This analysis will be the desk review of all available legal and institutional setup in the country and will prioritise necessary legal and institutional changes that need to take place for SLM practices to be reached and LDN achieved. The review will also include relevant plans, policies documents, on-going or planned projects in the field of sustainable land management. The guidelines for revision of legal and institutional framework including sustainable management practices will be developed. This guideline will especially provide recommendations how the SLM policies and implementation will be coordinated between central and local administrations. The suggestions in these guidelines will define the legal and institutional changes that need to take place to clearly define responsibilities and coordination of land management among central, and local administrations as well as among different sectors responsible for land management. The project will promote land degradation neutrality at local scale through the development of Integrated Land Use Management Plans for the three pilot sites. The plans will serve for ensuring optimal allocation of land resources to generate critical ecosystem services and development benefits simultaneously. Land utilisation and ecosystems services valuation for the forest and grassland ecosystems in the pilot sites will take place. Valuation will serve the purpose of providing economic evidence for decision makers, programs, policies and actions to protect or restore ecosystems and their services. A coherent and coordinated approach is needed to reduce pressures on land from competing land uses. Therefore, a national committee on land management will be established to integrate SLM and LDN aspects into relevant sectoral policies.

Under this component, relevant ministerial and municipal resources managers will be capacitated in land use planning, SLM practices, ecosystem restoration, and use of economic instruments. In particular, the Ministry of Agriculture, Forestry and Water Economy will be involved as project partners and will be capacitated in land use planning as well as all other components and outputs of the project. The project will support municipalities in implementing new laws and regulations and in building capacities on land degradation. Capacity building will include numerous training, experience and knowledge sharing and technology transfer for SLM approaches including enhancing flood prevention measures, sustainable forestry, soil fertility and overall prevention of soil degradation through integrated sustainable use of land resources and conservation efforts. In addition, emphasis will be placed on programs to strengthen the capacities of relevant government agencies dealing with land and soil to enable them to develop sustainable land planning strategies and action plans for the three pilot sites municipalities, to design, replicate and scale up good SLM practices, to work on developing and implementing integrated approaches to the restoration of land within local and national land use action plans, and to use appropriate and sustainable economic instruments such as valuation of natural resource assets and ecosystem services for production landscapes when creating development strategies and local action plans. Elaboration of soil erosion map indicating prone areas and quantifying the intensity of erosion is essential for successful implementing of measures for diminishing of the intensity of erosion. The soil erosion map will be updated using field mapping, and modern geospatial modelling and IT supported GIS technologies. The developed model and identified erosion zones will be validated with field measurement. For effective land management and protection against Land Degradation and Desertification of the areas prone to soil erosion, after its identification and delineation, these zones should be recognised as “erosive zones”. The erosive zones are foreseen by the Law on water. The next step will be the preparation of a Rulebook which will define methodologies of identification and proclamation of erosive zones, and will stipulate a detailed guide of prohibited and recommended land management activities in erosive zones, as well as control and monitoring. For better control of the activities within the erosive zones, the local authorities will be in charge of administrating prohibited and recommended land management activities in erosive zones. The local authorities will be capacitated for this responsibility.

**Component 2 – Implementation of sustainable land and forest management practices for reducing the effects of land degradation on ecosystem services in three pilot sites in the most vulnerable mountainous region.** This component aims at increasing uptake of SLM measures, which will eventually lead to reductions in land degradation and enhance ecosystem services. The project focuses on the issue of soil erosion, as one of the most dominant types of land degradation mostly caused by torrent rains and floodings and human activities including poor agricultural practices, illegal loggings, and forest fires. The

planned interventions in Component 2 will introduce SFM and SLM practices in selected pilot sites. The component will demonstrate sustainable and integrated forest management in at least 5,000 ha of Zheden massif, which is under Category II of soil erosion according to the National Erosion Map, resulting in improved habitat status. Reforestation activities will undertake three small-scale projects in the Arachinovo-Strachintse, Lipkovo and large parts of Zeden Planina pilot sites for sustainable management and ecosystem restoration of approximately 400 hectares of highly degraded sites on government-owned lands within the five municipalities. The designated areas are degraded forest land and pasture and will best showcase rehabilitation techniques. There are a wide set of various methods techniques and material used for erosion and torrent control in affected areas. Selection of appropriate techniques and material for erosion and torrent control needs sufficient level of knowledge and expertise. In this regard, use of environmentally friendly biodegradable materials for erosion control (e.g. blankets made of natural fibre, biodegradable polyesters, etc.) is one of the efficient methods for erosion control. Demonstration plots will be developed for increasing the awareness and transferring know-how on the use of such new technology. Windbreaks and protective belts provide shelter from the wind and to protect soil from erosion. Apart from their primary function of protection, they have additional positive side effects e.g. influence on microclimate through decreasing of temperature amplitude, depletion of evapotranspiration and soil water conservation, increased yield of agricultural crops and provide habitat for wildlife. Therefore, protective belts and windbreaks in pilot municipalities will be reconstructed and upgraded.

Gullies and shallow landslides frequently occur in the selected pilot sites. They could be managed using natural materials and specific techniques. These actions need systematic approach and need long term planning. Community-led rehabilitation of degraded land will increase the ownership for implementation and maintenance. The project will also demonstrate community base rehabilitation activities. SLM practices, which are locally validated, should be tested and promoted in other parts of the North Western mountainous region of Macedonia and other parts of the country that were identified as vulnerable. These measures will enable better control of the activities on the farms, better protection of the soil and limiting soil degradation processes. The organic waste is a valuable source of organic matter and energy. The burning of organic matter (spring yard waste, pruning residues etc.) is very common practice. Also unregulated disposal of organic waste and decaying in open areas is causing environmental pollution. This organic matter is a valuable resource for maintaining soil organic matter and reducing land degradation. The incentives for proper management of organic residues will help in awareness-raising about its benefits. In order to increase to replication potential, visits to demonstration sites will be organised for the farmers who experience similar challenges in their practices to further build-up knowledge and confidence in adopting SLM technology and farming in other 10 identified municipalities in the country. Local land owners and resources users in the five municipalities in the most vulnerable regions trained in SLM approach. Management of the water is one of the important factors to prevent land degradation, particularly in the irrigated areas (salinization, irrigation erosion, over-exploitation of the water). Therefore, water management organizations as well as water users associations will also be included in these training.

**Component 3 – Knowledge management and public awareness.** The third component of the proposed GEF project will improve understanding of benefits of SLM and LDN practices to scale up the SLM and LDN for future activities and sites. It will bring together the results of the project, more efficient approaches to rehabilitation of degraded land and sustainable land management and LDN approach by private sector land developers and users. Production of knowledge management products based on best practice arising from Components 1 and 2 will ensure SLM and application of LDN principles through a cross-sectorial multi-stakeholder landscape approach to managing competing uses of mountain lands as well as other regions of the country identified as vulnerable to soil degradation. This output will result will compilation of results of the project, and global best SLM practices that can be tailored and applied to Macedonia, and disseminated to some different sectors that are involved directly or indirectly in soil and land resources and management. The project will assist in the development of three bankable SLM project proposals and develop fund-raising options for further scaling up of results in the North Western mountainous part of Macedonia as well as . This output will contribute to long-term sustainability of application of sustainable land management practices in Macedonia; the proposals will be developed, and donor assistance will be sought. The output will also organise fund raising activities by sharing project achievements, and the possible follow-up actions to all major donors in the region. It will also develop and implement a communication and knowledge management campaign to raise public awareness and disseminate and replicate the results of the project with the aim of LDN. Communication and outreach campaign will emphasise the importance of soil and its protection and potential ecological and economic benefits. The communication activities will comprise capturing and disseminating lesson learned in multi-media format (videos, manuals, guidelines and interactive maps), and will build upon the efforts made through the activities implemented with the support of the Global Mechanism in 2017 that have initiated the awareness raising process on LDN. The campaign will portray the positive social and economic impacts of sustainable land management practices. Finally, the project will set up a web portal, to be maintained by MoEPP, to provide managed access to developers, applicants for various land use permits, EIA consultants, and regulatory authorities both at central and local government levels, NGOs and community members.

#### **Incremental cost reasoning and expected baseline contributions from the baseline, the GEF TF, and Co-financing**

**Scenario without the GEF investment:** The baseline for the project rationale is mainly founded on efforts and actions implemented by the government institutions in cooperation with international funds and agencies. Without the GEF investments, unsustainable land use practices and deforestation will continue to threaten ecosystem integrity and function in the whole country, and in particular, will worsen in the most vulnerable mountain regions. National and local policies and strategies

regarding land degradation and management will not be harmonised and strengthened with effective SLM. Further on, without the GEF investment, there will be no site rehabilitation of most vulnerable mountain regions and therefore no demonstration of SLM practices. Finally, there would not be any public awareness, knowledge management products or fund-raising for SLM and as such no chance of scaling up the SLM in the country. As a result of inaction, unsustainable land management practices and deforestation will continue to threaten ecosystem integrity and function, especially in the biodiversity hot-spot in the most vulnerable mountain regions of the country. Ecosystem degradation in pilot areas has affected livelihoods, agricultural productivity for decades and the loss of forest habitat has affected wildlife populations, with some species coming close to extinction and remaining threatened today. Also, the degradation of these areas has caused economic losses as well as taken lives due to landslides<sup>50</sup>.

Scenario with the GEF investment: GEF funds will serve as a catalyst to develop a coherent and coordinated approach to reduce pressures on land as a natural resource from competing for land uses in forestry and pasture, through reversal of land degradation and development of instruments and mechanisms for integrated land use management and SLM issues, while simultaneously supporting country's efforts in achieving LDN. More specifically, the GEF investment will facilitate strengthened policy, legal and regulatory frameworks that will harmonise state legislation, develop suggestions and guidelines for the development of missing legislation considering the best land use practices and EU legislation, and development of a National Integrated Soil Management Strategy. This will be done through establishing the state Committee on Land Management that will ensure the necessary amendments to the national framework is undertaken and the issues of SLM are mainstreamed into relevant policies. The implementation of project activities on both national and local level will ensure vertical and horizontal coordination, while the capacity building of both national and local level authorities will make sure the knowledge and experience are shared and the scaling up and replication of the activities are secured. The proposed GEF project will capacitate relevant ministerial and municipal resource managers to use SLM in land use planning, as well as its demonstration in three pilot sites, and the local municipalities, land owners and resource users will be trained. The project will result in improved institutional and technical capacities and increased awareness among stakeholder at all institutional levels and the wider public on sustainable land use and soil conservation measures. By the end of the project, project stakeholders will have increased access to environmental information and will be participating more widely in decision-making and implementation of SLM programs. The project will implement all activities with equal inclusion and representation of both genders. This project will, as a result, reduce pressures on natural ecosystems (especially forestlands and pasture), improve management of community resources, that way secure food and reduce land use conflicts and improve the wellbeing of local citizens.

The Government of Macedonia, as well as bi-lateral donors, and CSOs will provide co-financing for the project. The GEFTF and co-finance funding will jointly support the objectives and the outcomes of the project. The project will lead to environmental and social benefits on both national and global level, and the incremental cost reasoning will be based on the sliding scale approach; the GEF is planned to contribute to approximately 15% of the overall budget, and the co-finance funding with 85%<sup>51</sup>. Co-finance by the Government will be provided in cash and in-kind. University of Skopje and University of Tetovo, Faculties of Forestry, Agriculture and Natural Sciences has decades of research on sustainable agricultural practices, land use, sustainable land management and forestry etc, and these two universities will contribute to the second and third component of this project through providing technical knowledge; supporting awareness-raising activities and development of educational materials for SLM. The total in-kind contribution of the two universities to the project throughout the execution of the project is expected around US\$ 2 million. The pilot municipalities have committed a total of US\$ 1.3 million co-finance for the project as staff time, and other in-kind contribution which will support the project execution in these municipalities. Estimated in-kind contribution from the three municipalities that will directly be engaged during rehabilitation projects are as follows: US\$ 500,000 from Arachinovo-Municipality, US\$ 300,000 from Lipkovo Municipality and US\$ 500,000 from Saraj Municipality. The three municipalities will contribute through direct work on the pilot sites as well as the contribution of all available data that exists on the locations.

### **Global environmental benefits**

This project will reduce current resource degradation, of land and forests. This will result in more productive landscapes and consequently, improvements in local livelihoods, such as food security and increased incomes for men and women in the project area. The sustainable management of forest and pastures for moderating runoff will reduce the current rates of flooding that affects downstream populations and improves the landscape's ability to capture and store water under the ground and create further opportunities for sub-surface water storage through physical interventions.

Adoption of SLM and SFM practices that will reduce land degradation and secure ecosystem services over an area covering directly over 15,000 ha in the three targeted municipalities, which will help to reduce the main threats to ecosystem functions and services, and indirectly in whole Macedonia through scaling up and dissemination activities. The project will reduce land

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<sup>50</sup> Casualties of the Floods in 2016 <http://www.euronews.com/2016/08/07/flash-flooding-in-macedonia-leaves-more-than-20-people-dead>

<sup>51</sup> Co-financing amounts will be confirmed during the PPG phase.

degradation that is happening due to over exploitation of wood and timber. Sustainable land use and forest management practices will help to conserve and restore natural habitats important for biodiversity, and reforestation of degraded lands will increase carbon sequestration, and this contributes to climate change mitigation objectives. The mountainous region, where the pilot projects will take place, is part of the Greater Mediterranean Region - considered to be a biodiversity hotspot and centre of endemism, where restoration of the forest/woodland ecosystem and support to its conservation would, therefore, contribute to both regional and global biological conservation benefits.

The project sites have an approximate population of 120,000 people, and since the intervention will be implemented directly with the communities, it is expected that their direct participation in the project activities will contribute to the raising of their awareness of the values of biodiversity, and how to conserve and use resources sustainably within agricultural production landscapes.

The project will contribute to achieving the LDN target in Macedonia through developing the LDN baseline and revising the institutional framework to include LDN considerations. Furthermore, the project will establish the LDN targets and define key policy and technical measures to reach LDN. The project is aligned with the GEF6 Programming Directions, namely the LD-2 Program 3: Landscape Management and Restoration and LD-3 Program 4: Scaling-up sustainable land management through the Landscape Approach. The project will focus on land management options that increase and maintain agricultural productivity and deliver multiple environmental benefits at landscape scale, but will also ensure efforts are made to scale-up policies, practices, and incentives for improving production landscapes with environmental benefits, and encourage wider application of innovative tools and practices for natural resource management at scale.

### **Innovativeness, Sustainability and Potential for Scaling Up**

**Scaling Up:** Scaling up will be secured through component 3 of this project: Scaling up from the pilot activities; public awareness raising; production of knowledge materials of best practices. Throughout project implementation, there will be strong collaboration between experts, local government institutions and departments, the central government, NGOs and direct beneficiaries that will assist in mainstreaming approaches and capacities to diverse stakeholders. Several of the project outputs will help to upgrade the country's land management, especially through learning by doing strategy where SLM practices and new technical approaches and capacities will be transferred to other local government units. Scaling up will be ensured through developing the necessary tools and practices for SLM that will be demonstrated at three municipalities, and then mainstreamed through the strengthened national legal and regulatory framework to allow for further replication in other affected areas in Macedonia. The project will capacitate both local (Aranchinovo, Jegunovce, Lipkovo, Saraj, and Zelino) and national level resource managers and relevant authorities (MoEPP and Ministry of Agriculture, Forestry, and Water Economy) in land use planning, SLM and SFM practices, ecosystem restoration, and use of economic instruments in order to ensure scaling up throughout Macedonia is facilitated. The recently initiated LDN target setting process will develop an action plan which is expected to be implemented in Macedonia. This process will be an important platform to further disseminate the project's lessons learned. Furthermore, the project will develop several plans and documents on national level, that will allow for application of similar activities in other regions of the country. The awareness raising component of the project will ensure the public is fully informed of the benefits of SLM and SFM.

**Sustainability:** As the project builds a strong enabling environment taking into account the needs of the government sector and focusing on building their capacities for long-term effective management, the actions proposed are expected to be sustainable. The project is designed to involve different sectors of the government by building on their comparative advantage and their core mandates, which will further ensure sustainability. By focusing on financial sustainability (Output 3.1.2 - Development of three bankable project proposals for replication of sustainable land management practices), and scaling up from demonstration models (Output 3.1.1. Production of knowledge management products based on best practice arising from Outcomes 1 and 2 above to ensure SLM through a cross-sectorial multi-stakeholder landscape approach to managing competing uses of mountain lands), project design has a strong focus on sustainability. Also, the project will work closely in true partnership with the private sector in its search for integrated land use planning and management of competing land uses. The project will work in parallel with the Enabling Activity for 2018 reporting for UNCCD and the activities on developing the National LDN Target Setting Leverage Plan and awareness raising activities supported by the Global Mechanism.

**Innovativeness:** Project activities to strengthen legal and institutional frameworks, to undertake capacity building for SLM, and to demonstrate and scale-up SLM practices all constitute new approaches in Macedonia, as there have been almost no efforts to date to create a national, comprehensive and effective approach to the problem of land degradation in the country and especially in the most vulnerable mountainous areas. The project's effort to support the government, local authorities and the private sector to build such an approach based on the acceptance that this is a shared responsibility in the first such attempt in the country. Furthermore, the project will catalyse the efforts to achieve LDN targets through revision of the national policy framework and inclusion of the LDN in the Local Environmental Plans that will facilitate integration of LDN in the land management efforts on the local level.

2. *Stakeholders*. Will project design include the participation of relevant stakeholders from [civil society organisations](#) (yes  /no ) and [indigenous peoples](#) (yes  /no )? If yes, identify key stakeholders and briefly describe how they will be engaged in project preparation.

Key stakeholders are identified below together with their respective roles in the project.

Stakeholder	Expected Role in Project Preparation
Ministry of Environment and Physical Planning	Responsible for all environmental protection matters at the state level. The Ministry will provide the enabling conditions for implementation of all project activities at national and local levels
Ministry of Agriculture, Forestry and Water Economy	The Ministry is in charge of overall legislative and management matters on agriculture, forestry and water resources at the state level and will support and assist with the design of SLM demonstrations and capacity building at national and local levels.
Municipalities of the pilot sites	Local administrations will assist with the day to day management of all public works within the area of jurisdiction including water and waste networks; reforestation activities etc. therefore they will assist with the design of the activities of pilot testing.
Academic and research institutions ( the University of Skopje, University of Tetovo, Institutes of Biology, Ecology and Technology, National Academy for Science and Arts)	Building on existing experience, academic and research institutions are considered as a very important source of local expertise to be brought in on the various project components, but mainly on the technical component. During the PPG phase will exhaustively identify these actors, explore existing and planned linkages with the private sector for support on rehabilitation planning, executing and post rehabilitation monitoring.
Private Sector (especially private landowners and forestry companies)	Both private sector and landowners are stakeholders in the project as it affects their land use and development practices. SLM and SFM principles will be mainstreamed into their operations as they work with the guidance provided by land use plans and sector development plans. The representatives of the private sector will be invited to project design meetings for their inputs.
CSOs	Some CSOs have been very active in the implementation of projects contributing to land reclamation and rehabilitation and would, therefore, be considered as important partners for the replication of project outcomes. So far Balkan Foundation for Sustainable Development and Macedonian Ecological Society have been consulted in preparation of this PIF. Further on, additional CSOs will be consulted during the design of the project activities and will be invited to validation workshops.

3. *Gender Equality and Women's Empowerment*. Are issues on [gender equality](#) and women's empowerment taken into account? (yes  /no ). If yes, briefly describe how it will be mainstreamed into project preparation (e.g. gender analysis), taking into account the differences, needs, roles and priorities of women and men.

The project will adopt UN Environment's commitment to gender equality and women's empowerment and take into account the differences, needs, roles and priorities of men and women. The project will also acknowledge that women are often the most vulnerable to land degradation such as that resulting from poor management of agricultural and forestry sector, and will be proactive in seeking women's input to local innovations for sustainability, particularly those with a focus on rehabilitation and restoration – Component 2.

Gender equality and women's empowerment will be mainstreamed into project activities, ensuring that women have an equal voice in project implementation, as well as governance and an active role during the whole project. Women will participate equally with men in any dialogue or decision-making initiated by the project and will influence decisions that will determine the success of the project and ultimately the future of their families.

Further to overall mainstreaming of gender equality measures and the fostering of women's participation in the general conduct of the project, the PPG will identify more specifically the areas for women's participation at the outcome level. There will be a budget allocated during the PPG phase for mainstreaming gender equality during the project.

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

The following risks have been identified. However, risks will be validated and re-assessed during the PPG:

Risk	Level of Impact	Mitigation Measures
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Insecurity and political unrest may result in considerable delays and postponement of project implementation	Medium	The current political situation in Macedonia is stable, but the potential for a spontaneous upsurge in violence is real. The project team will provide continuous monitoring of the security and political situation in the country and update the project board on a regular basis, so there is sufficient lead time for adequate response actions and adjustment in project strategy.
Rehabilitation of disused and abandoned land surfaces may encounter resistance from landowners (public and private) and political figures	Low	The project will work to reduce the likelihood of this risk occurring by ensuring that initiatives will be designed and implemented with the full participation of stakeholders from the public sector, namely municipalities and from the private sector, fostering an understanding of the need for striking the right balance between planned and occurring land use and safeguarding of ecosystems for the services they provide. If the risk arises, the project will stress the economic case for sustainable natural resource use versus the development of certain sectors in sensitive areas delivering critical ecosystem services. It will also put into effect an effective communication strategy and stakeholder involvement plan which is expected to lead to an appreciation, and defence, of what the project is proposing.
Insufficient knowledge about modern technologies and technical approaches, such as GIS, remote sensing, computer modelling, environmental valuation, cost-benefit analysis, and social impact assessment	Medium	The project will support training and coordination with the central government to support the introduction and use of new technology, as well as the transfer of knowledge and skills from the extension services of the central government to the new staff in local (municipal) governments. Also, the project will pursue coordination and development of training modules with other ongoing projects of similar topic.
Unclear roles of stakeholders in the execution of the project may result in lack of commitment/buy-in from local communities and therefore may result in failure of demonstration projects	Low	A stakeholder engagement plan will be drawn up during the PPG phase, and community stakeholders will be engaged with during the PPG phase to ensure their buy-in into the project. During project implementation, the project will actively engage local communities and will raise awareness through communication campaigns.
Climate change impacts (e.g. increased flooding; more severe droughts; forest fires) may negatively affect project activities for ecosystem restoration and effective SLM practices	Medium	Integrated land use plans will include hazard mitigation measures to minimize the impacts of droughts (e.g. through better water management and adoption of drought tolerant crops), to reduce the risk of forest fires (through education and improved enforcement regarding the intentional setting of fires), and to reduce the threat of flooding (through improved land management and retention / restoration of vegetative cover).

**5. Coordination.** Outline the coordination with other relevant GEF-financed and other initiatives.

A thorough analysis of initiatives with similar coverage of the area, scope or involved agencies will be carried out during the PPG phase (so as to keep it up to date) to ensure maximum complementarities and synergies, and to avoid duplication of efforts particularly with other GEF projects and other projects under preparation. Some initiatives were identified related directly to land degradation and which can contribute through technical, capacity and data to support the proposed project.

The project will build on and coordinate with the following on-going projects:

GEF-funded project Support for the Development of National Action Program Aligned to the UNCCD 10 Year Strategy and Reporting Process under UNCCD, implemented by UNEP is currently in its final phase before adoption by the Government. The main objective of this project the adoption of the NAP with the UNCCD 10 – Year Strategy; also, the project aims to strengthen human and scientific capacity for NAP alignment; establish and strengthen the policy and institutional framework for NAP alignment and implementation; establish the finance and technology framework of NAP implementation. There will be extensive collaboration with this project because the NAP provides baseline information on the national status of land degradation and sets out the goals and priorities of combating land degradation and soil loss.

GEF-funded project Achieving Biodiversity Conservation through Creation and Effective Management of Protected Areas (PAs) and Mainstreaming Biodiversity into Land Use Planning, whose objective is to support the expansion of national protected areas system and enabling capacity conditions for effective management and mainstreaming of biodiversity conservation into production landscape is currently implemented by UNEP. Component 3 of this project deals with mainstreaming biodiversity into land use planning, and some of the project outputs such as 3.1.1.1 - Preparation of national erosion and drought sensitivity map, and identification of high-risk zones and their impact on biodiversity, and 3.1.1.2 - Develop database of soil erosion risk, soil sealing rate and loss of soil organic matter on 3 pilot sites in Macedonia and analysis their impact on biodiversity, as well as development of supporting documents for revision of the Forest Management Plan, preparation of the forest vegetation maps and some other outputs will be of great benefit for the proposed GEF project and the collaboration will be established once the project starts.

GEF-funded project Catalysing Market Transformation for Industrial Energy Efficiency and Accelerate Investments in Best Available Practices and Technologies in the Former Yugoslav Republic of Macedonia, whose objective is to accelerate market transformation for industrial energy efficiency by strengthening policy, regulatory and institutional frameworks and supporting increased diffusion of and investment in best available industrial energy efficiency practices and technologies. This project will work also touch upon the agricultural practices as well as forestry sector and transformation to sustainable practices. Therefore certain outputs of this project will act as a pool of resources and information as well as collaboration to avoid overlapping and to ensure information is used in the most efficient way.

Activities supported by the Global Mechanism on raising awareness and initial activities to support achieving of the LDN that include development of the National LDN Target Setting Leverage Plan, mobilization of the senior government and major international partners to endorse and actively support the LDN target setting process and securing the multi-stakeholder engagement to ensure full participation of key stakeholders throughout the LDN target setting process.

**The Ministry of Environment and Physical Planning of Macedonia** will be the lead executing partner of the project, and will ensure that the project meets its objectives and achieves planned outputs and outcomes; lead the project oversight (Steering Committee); provide technical inputs and executes project activities (work program planning, preparation of procurement plans, maintaining records of all project-related documentation, preparation of progress reports, management of consultant activities, management of deliverables, knowledge management, preparation of a web-site, consultation with project stakeholders, etc.) Ministry of Agriculture, Forestry and Water Economy of Macedonia (MoAFWE) will take responsibility in project oversight, and execution of the project activities. The MoAFWE will be represented in the Project steering committee and will lead the project activities that fall under its mandate. In accordance with the letter of endorsement, UN Environment Europe Office will provide management and technical support services for the project activities through its Vienna Programme Office, which is UN Environment's hub for its activities in Balkan countries. UN Environment Europe office will provide services to ensure that project management is compatible with UN Environment's financial and procurement standards. The services will include (i) solutions for administrative issues (identification and/or recruitment of the project personnel; (ii) procurement (commodities, consultancy and services); (iii) organization and facilitation of training activities, seminars and workshops; (iv) processing of direct payments. In addition, UN Environment Europe Office will facilitate collaboration and exchange of information both in and outside of the UN system as it relates to project activities; establishment of partnership with the relevant MEA secretariat focal points in the region, external partners to leverage capacity building support and facilitate access to project relevant technology. on biodiversity related issues, particularly with and in support of biodiversity-related MEAs.

6. *Consistency with National Priorities.* Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes  /no  ). If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, etc.

The project is consistent with some national strategies and policy statements of which the following are considered the most salient.

**UNCCD National Action Programme (NAP) to protect land and Combat Land Degradation:** This project is directly in line with the objectives of Macedonian developed NAP (still pending government's adoption). The draft NAP has identified a number of priority objectives regarding the protection of land, mostly which are in line and coherence of this project objectives and outputs: 1) Setting of a sound legal and strategic framework for Drought, Land Degradation and Desertification (DLDD), in line with the EU Acquis, 2) Strengthening of administrative and operational capacities for DLDD issues, 3) Awareness raising of the public for issues related to DLDD, 4) Creation of suitable environment for implementing modern techniques, methodologies and techniques for mitigation of LDDD, 5) Mobilization of international financial support for DLDD activities.

**National Biodiversity Strategy and Action Plan (NBSAP)** –Macedonia is the signatory of the Convention on Biological Diversity (CBD) and has just recently developed with the support of UNEP/GEF an NBSAP The current draft clearly presents sustainable management and use of natural ecosystems and resources as well as ecosystem restoration as priority areas. Targets under these priorities state that by 2020, rehabilitation plans ought to be implemented in at least 20% of degraded sites that will safeguard the sustainable delivery of ecosystem services. Furthermore, it intends to mobilise the private sector to implement plans for sustainable consumption and production to mitigate or prevent negative impacts on ecosystems' carrying capacity through the use of natural resources.

**National Agriculture and Rural Development Strategy (NARDS), 2014-2020** - The Ministry of Agriculture, Forestry and Water Economy in 2015 finalised its strategy for the sector, which flagged the main challenges faced at the national level and particularly the need to ensure the sustainable management and use of natural resources (land, forest, water, genetic resources, fisheries and aquaculture resource) in response to climate change impacts, land degradation, overgrazing, unsuitable cropping patterns, overuse of forest resources, over-exploitation of fisheries vulnerable stocks. Accordingly, its 14 objectives, the third being the promotion of sustainable use of natural resources and genetic resources.

**National Strategy for Sustainable Development 2009-2030** - National Strategy for Sustainable Development identifies land degradation caused by unsustainable land management as of national concern hampering accession into EU, which is the

national top political priority<sup>52</sup>. NSDS report considers (i) the update of existing database and degraded and abandoned sites as the first step towards rehabilitation and (ii) the development of a prioritization scheme for degraded zones/areas requiring urgent intervention, then developing and implementing adequate conservation actions in these areas, which would include namely rehabilitation and development of appropriate land use plans. Relevant to land degradation and rehabilitation, the NSDS also sets targets for 2030 for the development and implementation of regional development plans in addition to setting up targets for the rehabilitation of extremely degraded land and soil by 20%.

**Third National Communication on Climate Change – 2014** – this document clearly outlines that climate change poses a huge risk to many sectors, especially forestry and agricultural. Third National Communication on Climate Change explicitly states that land should be conserved using innovative sustainable land management tools to mitigate ever-increasing damages caused by climate change in the country.

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

This project will establish a knowledge management system under Component 3 that will collate and disseminate experiences and information gained during project’s implementation. The project will review and strengthen the enabling environment for the effective management of land use in the mountainous ecosystems and elements of the enabling environment will be tested in three pilot sites, evaluated and refined before being rolled out for replication. In other words, the project will have an immediate impact on a small number of problem sites, but its ultimate impact will be nationwide through replication and dissemination of the lessons and knowledge gained. Also, the project will set up a web portal, to be maintained by MoEPP, to provide managed access to developers, applicants for various land use permits, EIA consultants, and regulatory authorities both at central and local government levels, NGOs and community members. All those involved in the permitting, operating and management of land use, will be able to stay up to date with the latest statistics, developments and technical advances. The portal will become a source of advice and guidance, built initially on the results of the pilot projects but becoming increasingly valuable through the accumulation of experience and knowledge.

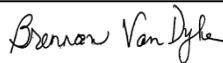
**PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**

**A. RECORD OF ENDORSEMENT<sup>53</sup> OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):**  
 (Please attach the [Operational Focal Point endorsement letter](#)(s) with this template. For SGP, use this [SGP OFF endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Bashkim Ameti	Minister	MINISTRY OF ENVIRONMENT AND PHYSICAL PLANNING OF MACEDONIA	11/15/2016

**B. GEF AGENCY(IES) CERTIFICATION**

**This request has been prepared in accordance with GEF policies<sup>54</sup> and procedures and meets the GEF criteria for project identification and preparation under GEF-6.**

Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Brennan Van Dyke Chief, Strategic Donor Partnerships and Global Funds Coordination  UN Environment		March 27, 2017	Ersin Esen Task Manager	+41-22-917 8196	Ersin.Esen@unep.org

**C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (APPLICABLE ONLY TO NEWLY ACCREDITED GEF PROJECT AGENCIES)**

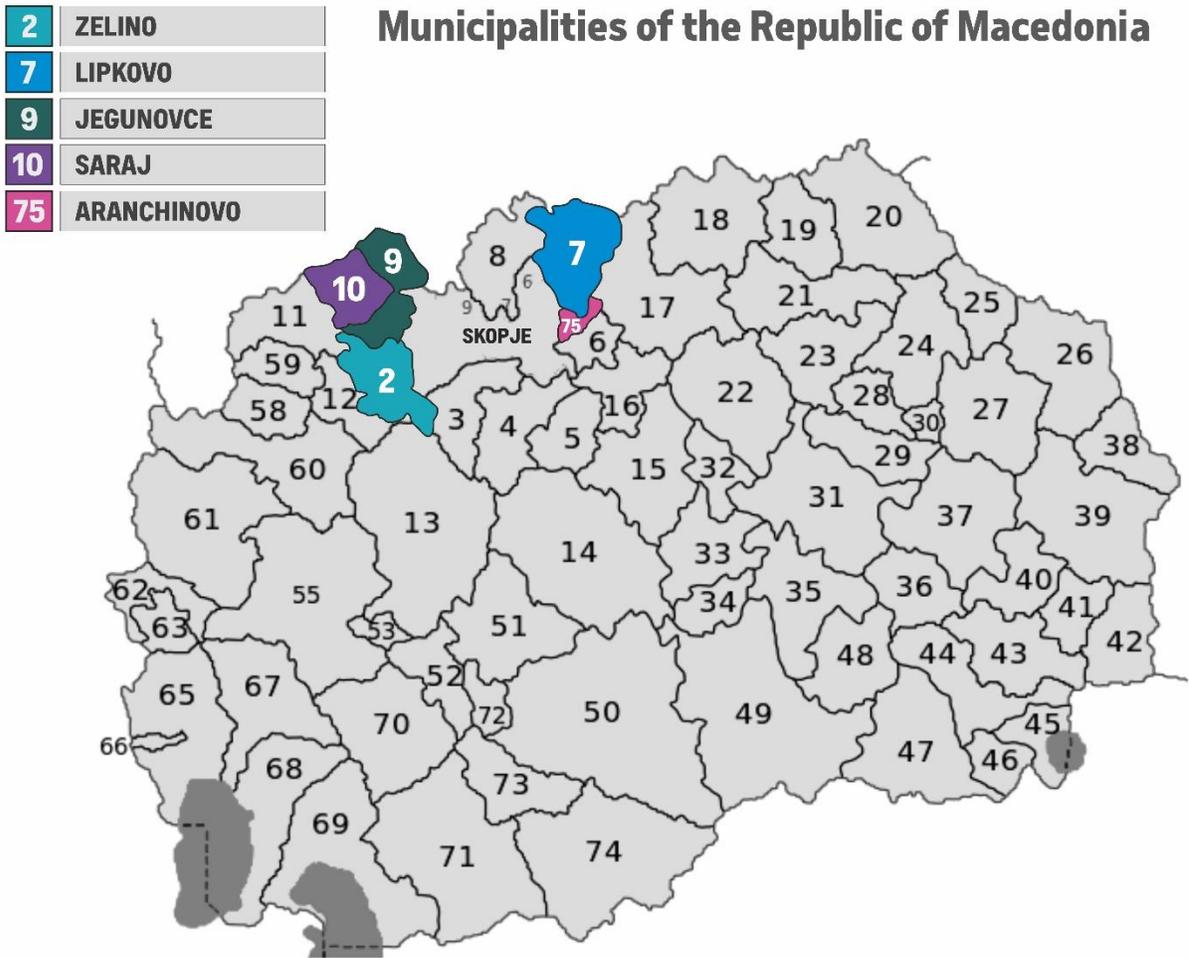
For newly accredited GEF Project Agencies, please download and fill up the required [GEF Project Agency Certification of Ceiling Information Template](#) to be attached as an annex to the PIF.

<sup>52</sup> National Strategy for Sustainable Development in the Republic of Macedonia, 2008

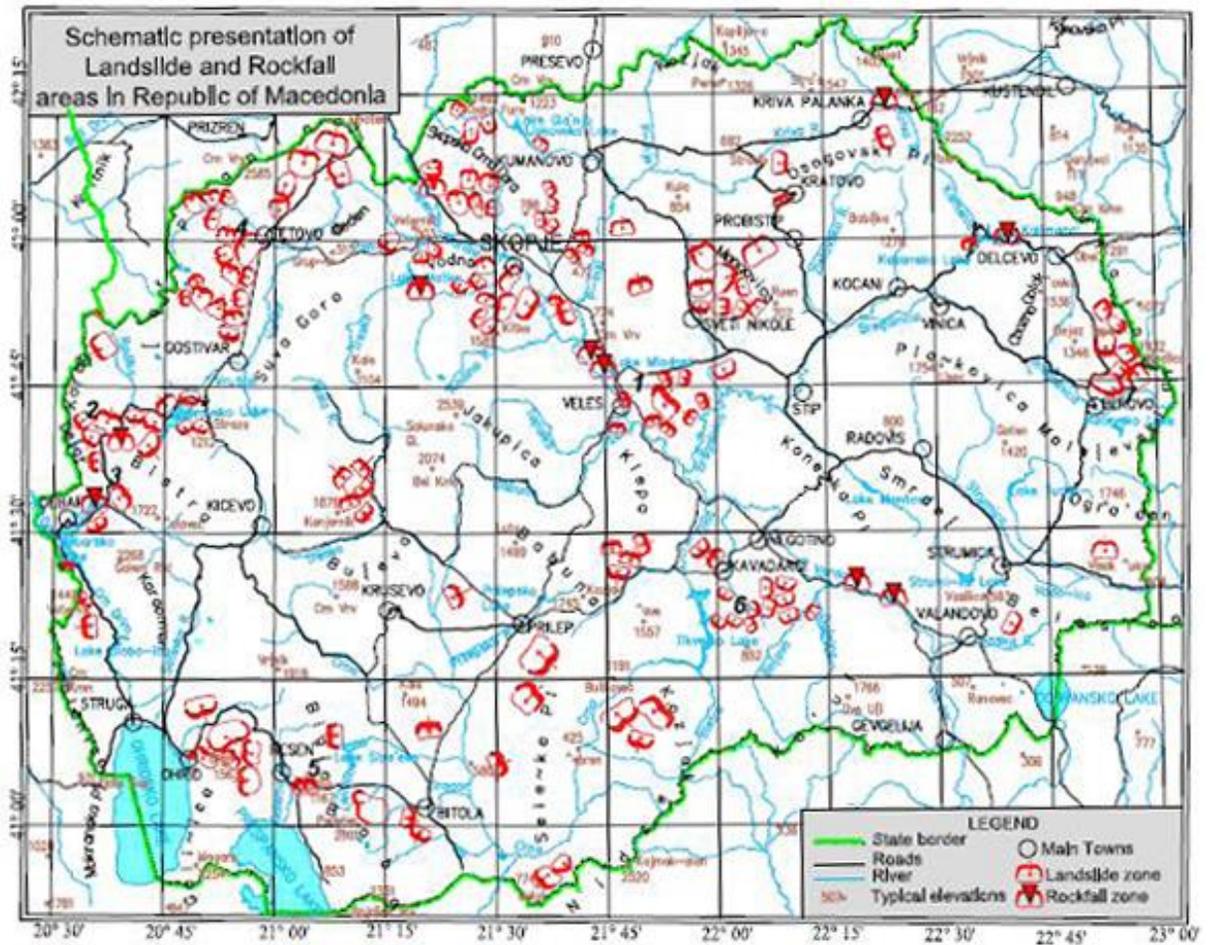
<sup>53</sup> For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

<sup>54</sup> GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

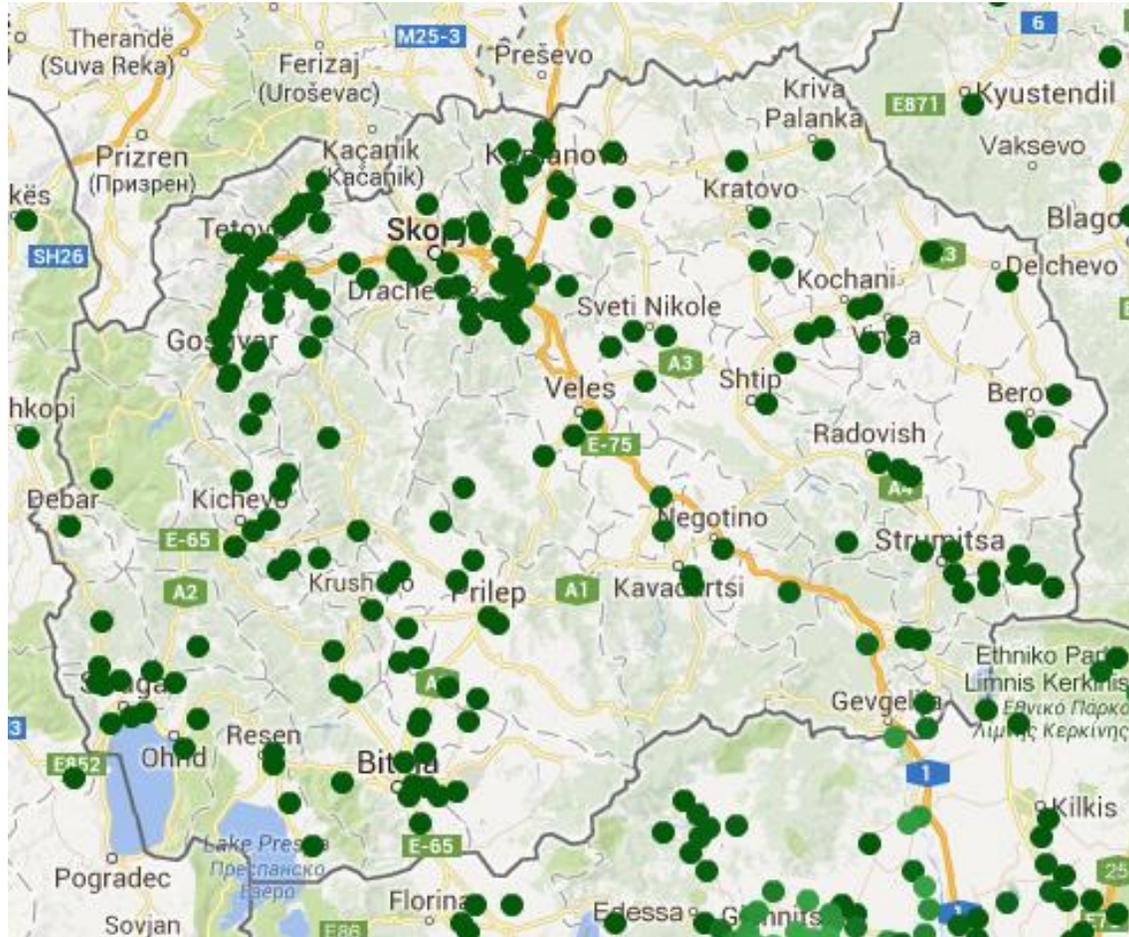
Map 1: Location of the Municipalities of the Pilot Sites



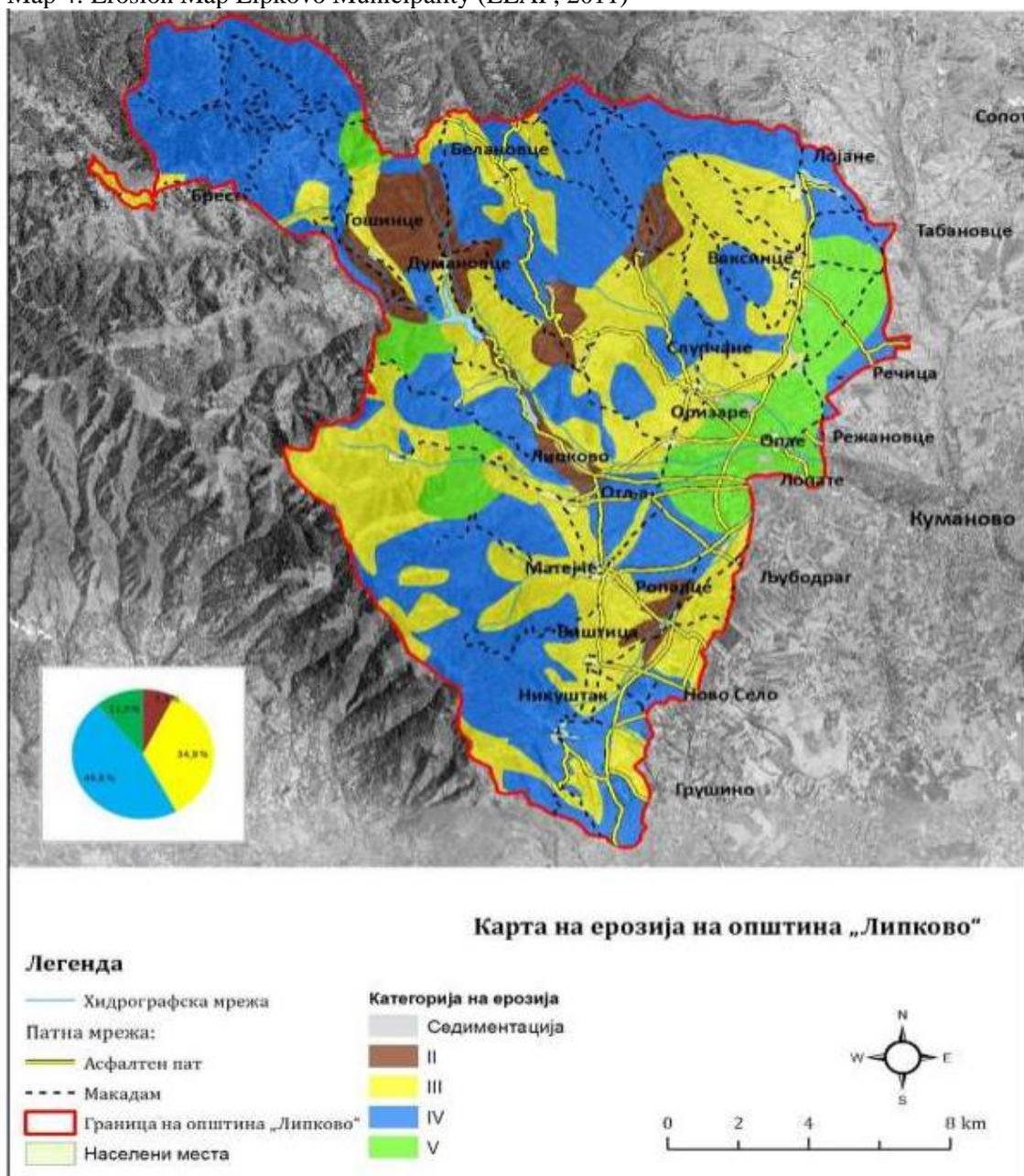
Map 2: Landslides in Macedonia



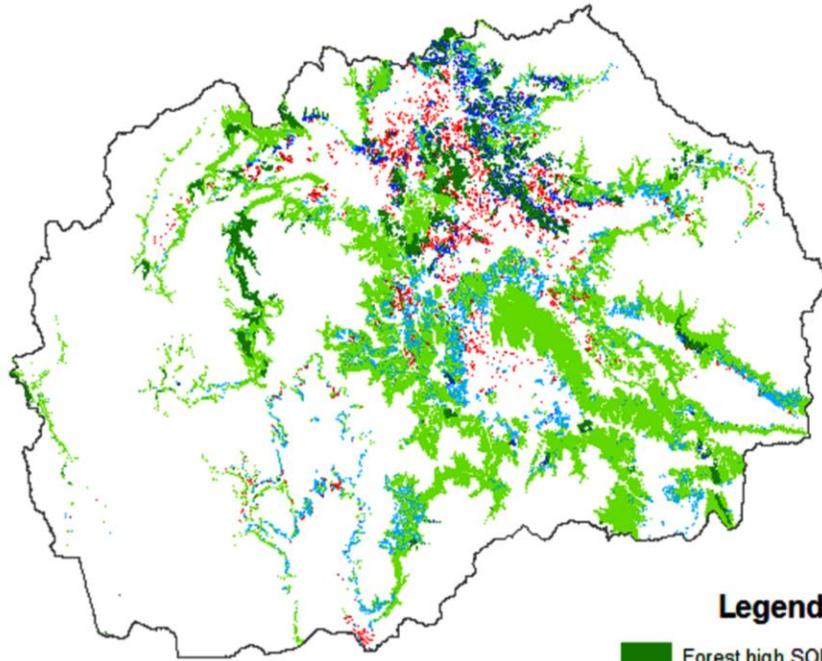
Map 3: Flood events in Macedonia 2007-2014



Map 4: Erosion Map Lipkovo Municipality (LEAP, 2011)



Map 5: Vulnerable areas to soil fertility loss (SOM in the legend stands for soil organic material)



0 5 10 20 30 40 Kilometers

**Legend**

-  Forest high SOM decline
-  Forest low SOM decline
-  Pasture high SOM decline
-  Pasture low SOM decline
-  Arable high SOM decline
-  Arable low SOM decline