



GEF-6 REQUEST FOR ONE-STEP MEDIUM-SIZED PROJECT APPROVAL

TYPE OF TRUST FUND: GEF TRUST FUND

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PART I: PROJECT IDENTIFICATION

Project Title:	Growing Green Business in Montenegro		
Country(ies):	Montenegro	GEF Project ID: ¹	9672
GEF Agency(ies):	UNDP	GEF Agency Project ID:	5488
Other Executing Partner(s):	Ministry of Tourism and Sustainable Development	Submission Date:	November 6, 2017
GEF Focal Area(s):	Climate Change	Project Duration (Months)	36 months
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>		
Name of Parent Program:	not applicable	Agency Fee (\$)	73,310

A. FOCAL AREA STRATEGY FRAMEWORK AND PROGRAM²:

Focal Area Objectives/programs	Focal Area Outcomes	Trust Fund	(in \$)	
			GEF Project Financing	Co-financing
CCM-1 Program 2	Policy, planning and regulatory framework foster accelerated low GHG development and emissions mitigation Financial mechanisms to support GHG reduction are demonstrated and operationalized	GEFTF	771,690	4,643,490
Total project costs			771,690	4,643,490

B. PROJECT FRAMEWORK

Project Objective: to promote private sector investment in low-carbon and green ³ businesses in Montenegro						
Project Components/ Programs	Financing Type ⁴	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Confirmed Co-financing
Component 1: Policy development and business support services for green start-ups and SMEs	TA	Outcome 1: Green business policies, supporting mechanisms and capacities in place	1.1. Study and Roadmap for policy and incentive options for green businesses in agriculture, tourism and energy sectors 1.2. Eco-Fund's regulatory provisions developed and advisory services provided to diversify its funding base 1.3. Green Business Incubator established 1.4. Entrepreneurs supported through the	GEFT F	305,000	2,000,000

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

² When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCF](#) and [CBIT programming directions](#).

³ In this project, the terms "green" and "low-carbon" investments are used interchangeably and refer to private investment in projects which lead to direct reductions of GHG emissions. The term "green businesses" used in the project refers to the businesses undertaking such investments, however the main emphasis will be on businesses in the three priority economic sectors of Montenegro, i.e. energy, agriculture and tourism.

⁴ Financing type can be either investment or technical assistance.

			Green Business Incubator (50 existing and potential, including at least 20% women) 1.5. Training workshops to develop green business skills delivered (3 workshops training a total of 50 specialists, including 20% women)				
Component 2: Green business financing	TA	Outcome 2: Innovative green businesses financing enabled	2.1. Capacities created within IDF to implement/ enhance green business financing 2.2 (a) Financing mechanism (performance-based payment scheme) designed and implemented	GEFT F	110,000	200,000	
	Inv		2.2 (b) Financing mechanism (performance-based payment scheme) designed and implemented	GEFT F	200,000	2,368,490	
Component 3: Raising awareness of green business practices and financing opportunities	TA	Outcome 3: Increased awareness of entrepreneurs on green business practices and financing green business projects	3.1: Awareness-raising activities conducted (150 existing and potential entrepreneurs, and 100 stakeholders from public institutions, industry experts and academia) 3.2. Green Business Incubator communication tools developed (reaching 300 entrepreneurs) 3.3. Project monitoring and evaluation	GEFT F	88,000	30,000	
Subtotal						703,000	4,598,490
Project Management Cost (PMC) ⁵ (DPC cost is USD 20,000)				GEFT F	68,690	45,000	
Total GEF Project Financing						771,690	4,643,490

⁵ 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.

C. SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE

Please include confirmed co-financing letters for the project with this form.

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
Recipient Government	Ministry of Tourism and Sustainable Development	Grant	1,000,000
	Ministry of Tourism and Sustainable Development	In-kind	30,000
Other	Investment and Development Fund of Montenegro	Loans	2,358,490 ⁶
Recipient Government	Municipality of Cetinje	In-kind	510,000
	Municipality of Cetinje	Grant	700,000
GEF Agency	UNDP	Grant	45,000
Total Co-financing			4,643,490

D. TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES), FOCAL AREA AND PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee ^{a)} (b)	Total (c)=a+b
UNDP	GEFTF	Montenegro	Climate Change	N/a	771,690	73,310	845,000
Total Grant Resources					771,690	73,310	845,000

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

E. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS⁷

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	<i>hectares</i>
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	<i>hectares</i>
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	<i>Number of freshwater basins</i>
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	<i>Percent of fisheries, by volume</i>

⁶ Based on the co-financing letter from the Investment and Development Fund of Montenegro committing 2,000,000 Euros, which is equal to US\$2,358,490 based on the October 2017 exchange rate of 0.848.

⁷ 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, SCCF and/or CBIT.

4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO _{2e} mitigated (include both direct and indirect)	20,400 tCO _{2e} – direct 81,600 tCO _{2e} - consequential
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	metric tons
	Reduction of 1000 tons of Mercury	metric tons
	Phase-out of 303.44 tons of ODP (HCFC)	ODP tons
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	Number of Countries:
	Functional environmental information systems are established to support decision-making in at least 10 countries	Number of Countries:

F. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? NO

G. PROJECT PREPARATION GRANT (PPG)⁸

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

PART II: PROJECT JUSTIFICATION

1. Project Description

Briefly describe: a) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; b) the baseline scenario or any associated baseline projects, c) the proposed alternative scenario, GEF focal area⁹ strategies, with a brief description of expected outcomes and components of the project, d) incremental/ additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF/SCCF, CBIT and co-financing; e) global environmental benefits (GEFTF), and adaptation benefits (LDCF/SCCF); and 6) innovation, sustainability and potential for scaling up.

1. Montenegro’s Second National Communication (NC) on Climate Change¹⁰ to the UNFCCC forecasts continued increase in Montenegro’s greenhouse gas (GHG) emissions. In particular, emissions from energy production and use (accounting for 70% of all national GHG emissions) are projected to increase 2.4 times in the business-as-usual scenario and 1.7 times in the mitigation scenario by 2020 as compared to the 1990 level (Figure 1)¹¹. According to the most recent International Energy Agency (IEA) statistics for 2012, the energy intensity of Montenegro exceeds the EU average by about 3.4 times, thereby indicating substantial potential to improve efficiency of the economy and potential for GHG emission abatement. Indeed, Montenegro’s Nationally Determined Contribution (NDC) sets an ambitious goal to reverse the above trend and achieve a 30% reduction in national GHG emissions by 2030 against the baseline level of 1990.

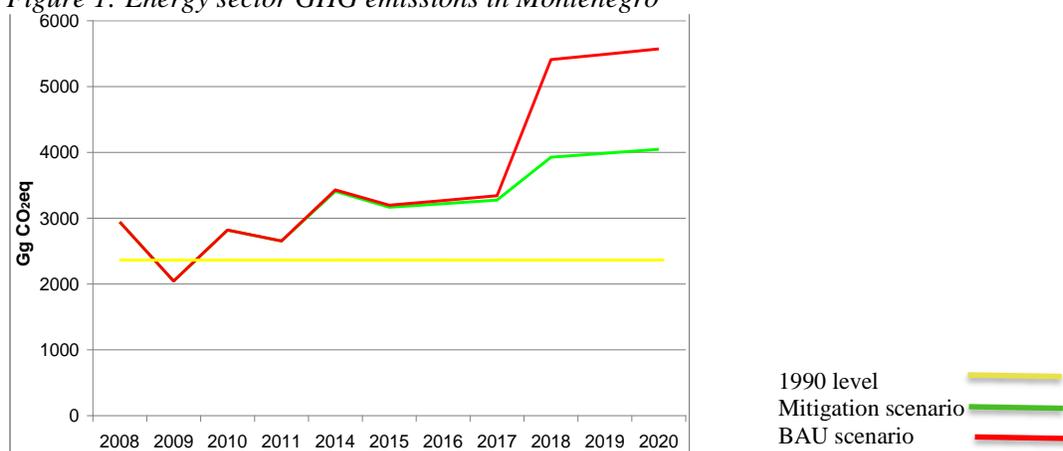
⁸ PPG of up to \$50,000 is reimbursable to the country upon approval of the MSP.

⁹ 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.

¹⁰ <http://unfccc.int/resource/docs/natc/mnenc02.pdf>

¹¹ This updated analysis is consistent with an earlier forecast for Montenegro’s GHG emissions presented in the INC (2010): <http://unfccc.int/resource/docs/natc/mnenc1.pdf>

Figure 1: Energy sector GHG emissions in Montenegro¹²



Source: 2nd NC to UNFCCC (2015)

2. The mitigation scenario reflects the Government of Montenegro's commitment to contribute to climate change mitigation by continuing, among others, the implementation of dedicated national policies promoting energy efficiency and renewable energy. However, as Figure 1 illustrates, even full realization of the mitigation scenario is not sufficient to achieve the NDC target. Stabilization of GHG emission levels in Montenegro and country's transition to a truly low-carbon development pathway therefore requires additional mitigation efforts to decouple GHG emission from economic growth.
3. Montenegro has a large potential for reducing energy demand and GHG emissions through more efficient energy use. The country's high energy intensity is, among other reasons, due to the widespread use of electricity for heating and inefficient building structures that almost completely lack insulation. There is significant scope for private investment in energy efficiency in the public and residential sectors in Montenegro, including based on an energy service company (ESCO)-model, which could bring double and possibly triple economic, environmental and social dividends for the country. Recent assessment puts the value of the market potential for energy efficiency investment in Montenegro's residential sector at 1.8 billion Euro and the corresponding GHG emission reduction at 184,000 tCO_{2e}/year¹³. However, the number of barriers detailed below, including the absence of appropriate legal framework for private investment in energy efficiency, hamper the realization of this vast potential.
4. Likewise, opportunities for investment in renewable energy are plentiful in Montenegro due to its abundant wind, solar, bioenergy and hydro resources. However, apart from hydro power and the traditional use of fuel wood by the households for heating and cooking, the use of other renewable energy sources has not taken off in Montenegro (see Figure 2).

¹² The abrupt increase in GHG emissions in 2017 in both BAU and mitigation scenario is expected after commissioning of new coal-fired Pljevlja power plant. Project is slightly delayed, but is a high priority for the Government of Montenegro; likely launch is in 2019-2020.

¹³ Eco Ltd (2015) Regional: Assessment of the Residential Energy Efficiency Investment Potential in the Western Balkans – Task 3: Recommendations Analysis, Prepared for EBRD by Eco Ltd, London, March 2015

Figure 2: Installed and potential for renewable energy capacity in Montenegro

	 Biomass	 Solar PV	 Wind	 Small Hydro
Installed Renewable Electricity Capacity 2012 in MW	0	< 1	< 1	8.7
Technical Potential for Installed Renewable Electricity Capacity in MW	600	12,800	400	200

Source: UNDP Renewable Energy Snapshots 2012

5. To encourage investments in renewable energy-based power generation, the Ministry of Economy introduced in 2011 new premium feed-in tariffs for electricity purchased from renewable energy sources. Power purchase contracts are signed with the energy market operator (CGES A.D.), which are valid for 12 years and paid monthly. The power purchasing price during the contract period is automatically adjusted annually for inflation. As a result of the favorable renewable energy investment framework and overall good technical potential (Figure 2), investment in renewable energy is rising, but concentrated in a few sectors. The largest area of interest is in small hydro power development followed by wind.
6. Investment in solar and biomass are very scarce, despite considerable (actually, the largest) potential. Solar still high pay-back period in Montenegro. As Montenegro is a mountainous country, plains are scarce but fertile and there is potential competition between solar and agricultural users. Currently, the Energy Law does not provide for installation of solar panels on the ground, only on the roofs of buildings, which limits the potential pool of projects. As a result, projects are small, have higher transactions costs and less viable. Regarding biomass, lack of investment is due in part to the insecurity of the energy supply (biomass value chain is still not efficient and is underdeveloped).
7. Between 2013 to 2015, seven new small hydro power plants (SHPPs) were constructed (10 MW) and an additional four are expected to be commissioned in late 2017 to early 2018 (12 MW). In addition, concessions have been granted and construction begun on two wind farms (in Ulcinj/Bar and Niksic/Šavnik) with a planned total capacity of 118 MW. For solar PV, to date four projects with total capacity of 108 kW received energy permits (in addition to UNDP's own building with grid-connected solar PV installation with total capacity of 136 kW).
8. Apart from energy efficiency and renewable energy, opportunities for private investment in low-carbon economic growth in Montenegro also exist in areas such as municipal and agricultural waste management, as well as sustainable transport. Waste and road transport sectors cumulatively are responsible for 18% of the national GHG emissions. Montenegro's Technology Needs Assessment (TNA)¹⁴ identified and prioritized a range of feasible climate change mitigation actions in the transport sector, such as the promotion of low-carbon vehicles and intelligent transport systems, which offer good GHG emission reduction potential but also require sizable investment, and can only be delivered via partnership and involvement of the private sector.
9. With the poverty rate at 8.6% and unemployment at over 17%¹⁵, accelerating economic growth, poverty reduction and job creation are the key development priorities presented in the Montenegro's Economic Reform Program (2015-2017). The Government of Montenegro's main focus in the near and medium-term is, therefore, on removing barriers to economic growth and increasing the competitiveness of the economy, primarily in areas identified in the Montenegro Development Directions 2013-2016: *Tourism/Transport, Energy, and Agriculture and Rural Development*. As noted above, these are also the main sectors where there

¹⁴ http://www.unfccc.me/uploads/Dokumenta/TNA_Montenegro_final-ENG.pdf#page=29

¹⁵ <https://www.cia.gov/library/publications/the-world-factbook/geos/mj.html>

is potential for GHG emissions reduction and, therefore, opportunities to promote green and low-carbon economic growth are the most prominent.

Small- and Medium-sized Enterprise (SME) Sector in Montenegro

10. As of 2016, the Montenegrin SME sector consists of over 28,000 non-agricultural enterprises¹⁶ and there are almost 48,000 “family agricultural holdings” (i.e. family farms), which are not registered officially as SMEs (hence the latest available data are from the 2010 agricultural census¹⁷). The contribution of SMEs to the economy is well above EU averages, with SME turnover at 77% and value added at 67% of the total. Together, the total number of SMEs in Montenegro is more than 71 000, raising the proportion of SMEs to 99.95% of all businesses¹⁸.
11. Services are the largest sector of the economy by number of enterprises, comprising 42% of the total followed by trade at nearly 34%, construction at 10.4% and manufacturing 7.9%¹⁹. Registered agricultural enterprises are just 1.2% of the total. However, if the nearly 48,000 farming households mentioned above were included in the count, the proportion of agricultural enterprises would be significantly higher. Within the service sector, accommodation and food services form the greatest percentage at 12.1% of the total. The importance of the service sector is that it is connected to tourism, which is one of the key drivers of the Montenegrin economy.

Root causes of and barriers to investment in low-carbon economic growth

12. There are a number of root causes behind slow economic growth, in particular “green investment”, which translate into specific barriers impeding low-carbon investment in Montenegro. Without addressing the root causes, it is difficult to expect substantial investment in the low-carbon activities. Based on the findings of the survey conducted by the Montenegrin Employers Federation (MEF)²⁰ and also as informed by UNDP’s experience in the tourism sector through the GEF-funded UNDP-implemented project “Towards Carbon Neutral Tourism in Montenegro”, an analysis of business barriers and underlying root causes to low-carbon investment has been conducted, as presented below and summarized in the Table 1.
13. **Barrier 1: Insufficient pipeline of bankable low-carbon projects ready for implementation:** Low-carbon investment opportunities in Montenegro’s key economic sectors – energy, agriculture and tourism – are not yet being actively pursued by the private sector due to a number of root causes ranging from generally low level of environmental awareness among Montenegrin business to the lack of specific technical skills and knowledge, as well as low financial returns on certain type of investment. For example, while there exists significant potential for solar energy in Montenegrin tourism industry, based on a detailed economical calculation it has been concluded that the solar energy systems are more expensive on a lifecycle basis than conventional heating systems even if the prices for heating fuel increase²¹. As the main source of heat in Montenegro is electrical heating systems and because heating is a social issue, electricity prices are low as they are cross-subsidized and therefore most electricity “fueled” heating systems are cheaper than solar, based on lifecycle costs. By contributing to the development of affordable EE/RES financing mechanisms, an eventual energy tariff reform could be more easily adopted and implemented. In the absence of such financial mechanisms to support the end-user with EE/RES measures, it is not feasible politically to implement tariff reform.

¹⁶ Montenegro Statistical Agency. “Number and structure of enterprises in Montenegro: 2016”. Podgorica: 2017 (in Montenegrin)

¹⁷ Montenegro Statistical Agency. Agricultural Census 2010. Available at: <https://www.monstat.org/eng/page.php?id=58&pageid=58>

¹⁸ Given that the Montenegrin business sector is almost entirely comprised of SMEs, the terms “green SMEs” and “green businesses” are used interchangeably in this project, and it also includes newly registered SMEs (i.e. start-ups)

¹⁹ Montenegro Statistical Agency. “Number and structure of enterprises in Montenegro: 2016”. Podgorica: 2017 (in Montenegrin).

²⁰ Montenegrin Employers Federation. *Strategic Policy Framework for Enabling Business Development in Montenegro - 5 Business Killers*. Available at: <http://bit.ly/1CHjfl>

²¹ <http://www.oe-eb.at/en/osn/DownloadCenter/Studies/Renewable-Energy-Sector-Montenegro.pdf>

14. Further, facilities operators lack a basic understanding of the issues and technical expertise required to prepare and carry out such investments. Project development barriers also include insufficient project planning and pre-feasibility assessment capacities among the companies, in particular SMEs.
15. Similarly, in the agricultural sector, obsolete and inefficient technological and production capacity offers good prospects for cost-effective GHG emission reduction and improved productivity but, due to low skills, little knowledge and minimal relevant examples in the country, project ideas are slow to materialize.
16. Low financial literacy among SMEs and their limited knowledge of potential and existing funding sources and mechanisms is yet another root cause. The financial climate of Montenegro is characterized by a lack of information on, and insufficient use of, alternative financial resources (e.g. soft and commercial loans, performance based grants, guarantees, equity investment by third-parties, etc.): 92 % of enterprises think that the main source of financing is self-financing.
17. Another root cause stems from the fact that many low-carbon investment projects are “first of its kind”. These projects face additional regulatory and administrative barriers because the Government has minimal experience (e.g. with issuing permits, concessions, licensing and various approvals for such projects) and this contributes additional risks for investors.
18. **Barrier 2: Limited access to debt finance at acceptable terms:** According to EIB’s recent assessment of the financial needs of SMEs, in Montenegro there exists a funding gap for loans, which is driven both by the conservative lending practices of banks and the informal practices of borrowers²². Most SMEs can secure a loan, however it may not be on acceptable terms (e.g. amount, collateral requirements or maturity, for the borrower. Agricultural enterprises, startup businesses, enterprises based in the northern part of the country and informal enterprises in particular face challenges in accessing funding.
19. Lending conditions, especially of commercial banks, are not adapted to the needs of SMEs. In particular, the majority of enterprises cannot afford the high requirements for collateral and equity. Access to financial resources is particularly constrained for start-ups.
20. One of the root causes of this barrier, in particular as it relates to access to finance for low-carbon projects, involves the conservative lending practices of the banks stemming in part from their lack of familiarity and experience with low-carbon investment. Local banks and micro-finance organizations (MFIs) lack basic knowledge and skills to appraise such projects, and do not have in-house capacities to develop and market dedicated green loan products to potential clients. In addition, the banking sector lacks sufficient (or rather any) experience to appropriately assign risks to low-carbon investments. Further, many companies, in particular SMEs and RES start-ups, lack sufficient capital to meet the banks’ minimum requirements regarding equity contribution and, therefore, are not able to secure their loan.

²² EIB 2016. “Assessment of financial needs of SMEs in the Western Balkans countries”.

Table 1: Barriers and root causes

Business Barriers	Root Causes	Proposed strategy to address
Barrier 1: Insufficient pipeline of bankable low-carbon projects	<p>1.1. Low level of general awareness about low-carbon investment opportunities among private sector, in particular SMEs</p> <p>1.2. Low financial literacy of SMEs and limited knowledge about potential/available funding sources and mechanisms</p> <p>1.3. Limited capacities among SMEs to identify and prepare quality projects</p> <p>1.4. Additional regulatory and administrative barriers due to the fact that low-carbon projects are often “first of its kind”</p>	<p>Component 3 “Raising awareness of green business practices and financing opportunities” of the project will address root causes 1.1 and 1.2</p> <p>Component 1 “Policy development and business support services for green start-ups and SMEs” of the project will address root causes 1.3 and 1.4</p>
Barrier 2: Limited access to finance at acceptable terms	<p>2.1. Insufficient financial sector’s readiness and appetite to finance low-carbon projects</p> <p>2.2. Lending conditions are not adapted to SME needs, in particular high equity and collateral requirements</p> <p>2.3. Not all green/low-carbon projects are sufficiently financially attractive (low returns/long pay-back)</p>	<p>Component 2 will work with the Investment and Development Fund (IDF) of Montenegro to help address root causes 1.1, 1.4, as well as 2.1, 2.2 and 2.3. In particular, the performance-based payment mechanism is meant to compensate low-carbon project developers for additional risks (stemming from root cause 1.4) or insufficient returns and create a track record of real-life projects thus building awareness of SME sector about existence of real business opportunities (root cause 1.1), as well as awareness and confidence of financial sector regarding real environmental and financial performance of such projects. Based on this information and cases, the banking sector will be in a strong position to categorize such projects, assess risks, and adjust requirements and terms of their financial products accordingly.</p>

Relevant baseline initiatives

21. *Environmental Fund of Montenegro (Eco-Fund)*: Based on Montenegro’s Law on Environment Protection, ecological fees are charged to polluters in Montenegro in some areas of emission to air, ozone depleting substances and waste. These fees are being settled by the Environmental Agency of Montenegro and charged by the Ministry of Finance. Once paid to the Ministry of Finance and accumulated in the state budget, there is no further direct allocation of these funds to environmental and GHG emission reduction related projects. Further, the current polluter-pays billing system is inefficient and results in far less fees being paid and charged (e.g. collected fees in 2015 amounted only to about 4%, and 20% in 2016). Therefore, and based on the Law on Environment Protection, there is a general consensus among stakeholders (with the key stakeholder being the Ministry of Tourism and Sustainable Development) that the Eco-Fund should be established to be a central place for administering polluter-pays fees and supporting environmental and GHG emission reduction projects. The mandate of the Eco-Fund shall be to provide support to the implementation of environmental and energy (energy efficiency, renewables) strategies and policies of Montenegro via different financial mechanisms and thus contribute to the achievement of Montenegro’s environment and climate change goals.
22. In cooperation with relevant ministries, through the on-going GEF-financed “Towards Carbon Neutral Tourism” project, a “Situational Analysis of the Montenegrin Legislative, Financial and Institutional Framework for the Establishment of the Eco Fund” Study has been developed (June 2017) with clear findings and recommendations on i) the methods and legal status of the establishment of a self-sustaining Eco-Fund, ii) areas of work (environment and climate change/energy), and iii) possible revenue streams (polluter pays mechanisms in the area of soil, water, air, waste, etc.) and possible financial mechanisms of the Eco-Fund

(grants, loan subventions, soft loans, revolving funds, ESCO financing mechanism). Based on the current status of fees, the Eco-Fund, once established, could administer 1.7 million Euros in its initial year of operation with a potential of up to 18 million Euros annually in the upcoming years if other polluter-pays mechanisms are adopted and enforced.

23. *Investment and Development Fund of Montenegro (IDF)*: The IDF of Montenegro was established by the Law on Investment and Development Fund of Montenegro (“Official Gazette of Montenegro” No. 88, dated December 31, 2009). The IDF was established with the purpose of encouraging and facilitating economic development of Montenegro. By establishing the IDF, the Government of Montenegro provided an efficient mechanism for supporting economic development. Support to SMEs is a key component of the fund’s activities along with infrastructure development and environmental protection. The Fund has special lines dedicated to groups that traditionally have difficulty accessing credit, including startup businesses, businesses owned by young entrepreneurs, women-led businesses, and small farmers, though the latter accounts for only 2.3% of the IDF’s loan portfolio.
24. The Fund’s core businesses are granting loans and extending guarantees, performing activities pertaining to the sale of capital in Fund’s portfolio and other activities aimed at supporting economic development. Moreover, the Fund is established, as defined in Article 2 of the Law on Investment and Development Fund of Montenegro, with “the purpose of supporting and facilitating economic development of Montenegro through: completing privatization process by sale of capital generated in the process of ownership transformation, supporting micro, small and middle companies and entrepreneurs, supporting infrastructure project, water supply projects, waste waters treatment and environmental protection, as well as financing project of local, regional and state-level importance.” The organizational structure can be found under <http://www.irfcg.me/images/ENDOC/organizational%20structure.pdf>. Currently, the Fund provides credit and guarantee support to SMEs with annual operations of approximately 35 to 40 million Euro.
25. The Fund has dedicated financing programs offering concessional loans for youth, women, start-ups (the size of loans are between 10,000 and 50,000 Euro; loans can cover up to 50% of the total investment value of the projects, and reduced interest rates are applicable for projects located in under-developed regions of the Northern and Central Montenegro). IDF also has a dedicated credit line funded by the European Investment Bank for projects falling under category “climate change and energy efficiency”; however, to date, only few applications under this window have been received and only one or two accepted. Generally, there is a lack of understanding of “climate change” and “energy efficiency” projects among both IDF staff and SMEs in Montenegro. Related, there is a lack of promotion of “climate change and energy efficiency” loans. Montenegro is a small country and is a small market, therefore foreign EE/RES investors/companies are not present there, while domestic industry is indeed not aware about “climate change mitigation and energy efficiency”, what it means and how it works. IDF staff has limited capacities to pro-actively source and identify eligible projects, in particular to ascertain climate change benefits, and also does not have sufficient knowledge and skills to effectively promote this product among its clients.
26. *Cetinje Business Zone and Cetinje Business Center*²³ are being developed by the Municipality of the Old Royal Capital of Cetinje. The business zone located in the area where former Yugoslavian giant of Electroindustry OBOD Cetinje once was; the zone offers over the 130,000 m² of space and infrastructure, including for potential investors to develop their businesses. Further, the Municipality provides a comprehensive incentive package, depending on the size of the investment and location (see Table 2). For example, for a hypothetical solar panel production plant the amount of incentives the Municipality of Cetinje would be providing is estimated at 16,800 Euro per employee. Within this Zone, the following content is envisioned: cultural (movie studio, galleries, ateliers, etc.); service and commercial (hotel, fair area, business incubator, distribution center, etc.); and industry and production activity (innovation centers, IT industries, hi-tech, production sites, etc.).

²³ <http://www.cetinje.me/dokumenti/InveCT/InveCT-brousraENG.pdf>

Table 2: Incentives offered by the Municipality of Cetinje

NUMBER OF NEWLY CREATED JOBS	Exemption from tax on profit (Income tax) for the first 8 years of operation	Exemption from personal income tax and contributions for social security	Personal Income Tax	For every tenth employee, Old Royal Capital Cetinje finances salary of one intern	Reduction of compensations for municipal utility equipment	Reduction of taxes on real estate (property)	Personal Assistant from the Cabinet of Mayor	Free of charge assistance in preparing a Business plan
20-50	100%	100%	100%	YES	80%	100% for the first two years	NO	YES
50-100	100%	100%	100%	YES	90%	100% two years + 50% next two years	NO	YES
101+	100%	100%	100%	YES	100%	100% four years + 50% two years	YES	YES

27. The Municipality of Cetinje and UNDP also jointly implement the “*Beautiful Cetinje*” project aimed at the economic revitalization of the Old Royal Capital through the reconstruction of cultural heritage buildings, as well as preparing infrastructure and premises for the Cetinje Business Zone with energy efficient considerations, provision of vocational trainings on EE and RES, support to small businesses, and encouragement of green design ideas and innovations in the urban environment.
28. WeBSEFF, a financing facility established by the European Bank for Reconstruction and Development (EBRD), provides credit lines to partner banks in the Western Balkans to on-lend to private and public entities for EE and small-scale RE projects. WeBSEFF provides financing of up to Euro 2.5 million and, in addition, offers grant incentives of up to 10% of the loan amount for private companies, however WeBSEFF has not been very active in Montenegro since its establishment in 2009. WeBSEFF covers Bosnia and Herzegovina, Serbia, Montenegro, FYR Macedonia, as well as other countries out of which Montenegro has the most underdeveloped industrial sector. Therefore, and given the low energy prices, low awareness on EE/RES measures and project implementation, WeBSEFF did not focus on Montenegro nor did the demand from Montenegro require more focus.
29. Overall, under the baseline the Government, at national and local level, supported by international and national development agencies, implements a series of programs to boost economic growth and job creation, with a particular focus on under-developed rural areas in the North and Center of the country. However, the baseline efforts and mitigation scenario (as illustrated in Figure 1) falls short of realizing the existing GHG emission mitigation potential and achieving the 30% GHG emission reduction objective stated in Montenegro’s NDC.

Project Alternative Scenario

30. The project objective is to promote private sector investment in low-carbon and green businesses in Montenegro. The project will use a combination of policy de-risking (implementation of favorable policy framework and provision of business support services) and financial de-risking instruments (improving access to finance for innovative green businesses and partnerships, in particular agriculture, tourism and energy sectors). Overall, the project will stimulate low-emission economic growth and green job creation in Montenegro.

Component 1 Policy development and business support services for green start-ups and SMEs

Outcome 1.1: Green business policies, supporting mechanisms and capacities in place

31. Under Component 1, the project will focus on strengthening capacities of the Ministry of Tourism and Sustainable Development, and other relevant ministries, to establish an understanding and recognition of policy incentive options for green businesses in agricultural, tourism and energy sectors. The goal is to enable the development of a roadmap, and for its further adoption and implementation in the Montenegrin policy framework and thereby contribute to a better investment environment. The project will also support the Government of Montenegro to operationalize its Environmental Fund (Eco-Fund) by providing technical assistance to develop necessary internal acts and rulebooks to enable collection of fees based on the polluter-

pays mechanism. Moreover, the project will generate capacities of relevant institutions and Eco-Fund staff in environmental finance and sources of additional capitalization. Finally, with the aim to increase capacities, knowledge and skills among existing and potential entrepreneurs on green business opportunities the project will work closely with Municipality of Cetinje, and complement the baseline activities of the EBRD BAS, Cetinje Business Center and UNDP's "Beautiful Cetinje" program, by providing technical assistance for the establishment and operationalization of Green Business Incubator. The incubator will be used as a platform to provide training to entrepreneurs (with a particular focus on gender), as well as individual mentoring and advisory services (in particular to start-ups), including support with obtaining required business permits and licensing. The incubator will also facilitate networking and connecting entrepreneurs with relevant technical knowledge and know-how within Montenegrin and international academia and research institutions.

Output 1.1: Study and road-map for policy and incentive options for green businesses in agricultural, tourism and energy sectors

32. **Activity 1.1.1: Development of a study on the introduction of policies and incentives for green businesses in the agricultural, tourism and energy sectors.** The project will support the development of a Study on an overview of possible and suitable policies and incentives for Montenegro covering three prioritized sectors by the Government of Montenegro – agriculture, tourism and energy. This Study will identify specific policies, which could contribute to green economic growth and investments into green businesses, such as provision of targeted fiscal, financial and procedural incentives, and will elaborate on the advantages and disadvantages of each suggested policy and mechanism. It will also reflect on financial mechanisms suitable for green business policy support and will draw on lessons and experience with implementing performance-based payment mechanism under Component 2 of the project.
33. **Activity 1.1.2: Elaboration of a roadmap for the adoption of policy and incentive options for green businesses in agricultural, tourism and energy sectors.** Based on the recommendations from the Study, a roadmap for introduction of policies and incentives for green business in agricultural, tourism and energy sectors will be elaborated. With the aim to implement the Study's findings by further contextualizing, adopting and enforcing policy incentives for green business in the agriculture, tourism and energy sector, a workshop for at least 10 decision makers from the Ministry of Tourism and Sustainable Development and other relevant institutions in Montenegro will be organized. The workshop will develop a roadmap with Ministry representatives allocating roles and responsibilities based on which further steps shall be taken to implement the Study's findings into relevant line-ministries' policy frameworks.

Output 1.2: Eco-Fund's regulatory provisions developed and advisory services provided to diversify its funding base

34. **Activity 1.2.1: Strengthen existing and develop new internal acts for the operationalization of the Eco-Fund.** The project will, building on the activities of the GEF-supported *Towards Carbon Neutral Tourism* project (resulting, among others, in the establishment of Montenegro's Eco-Fund, expected in mid-2018), provide technical assistance to the Ministry of Tourism and Sustainable Development by co-drafting relevant internal acts necessary to strengthen the Eco-Fund's position in regards to mandate of work (valid and justifiable financing of green business projects) and the Eco-Fund's transparency in regards to project evaluations (necessary technical and procedural methodologies and funding criteria). This will be conducted by assessing the Government's and Ministry's objectives regarding the Eco-Fund, and by further suggesting its support in the area of environment protection and green growth, based on experience and lessons learned from similar Funds in the South-East Europe region and global best practices. Moreover, the project will support the Eco-Fund to develop necessary rulebooks (e.g. a rulebook on fees for emission to air, waste and/or water) to enable collection of fees based on the polluter-pays principle and thus enable the Fund to scale-up their funding base.
35. **Activity 1.2.2: Provide advisory services for at least 5 staff of the Eco-Fund and relevant institutions on diversification of its funding sources.** This activity will build the capacities of relevant institutions and Eco-

Fund staff regarding green business and environmental finance and potential sources for additional capitalization of the Fund. The project will provide the services of external consultant/advisors to Eco-Fund's staff in the form of on-the-job training and regular consultations.

Output 1.3: Green Business Incubator established

36. **Activity 1.3.1: Provide technical assistance for the establishment of the Green Business Incubator.** Through this activity, the Municipality of Cetinje²⁴ and their business zone, as well as other private sector and academic stakeholders, will be supported to establish the Green Business Incubator. The Incubator will be used as a platform to provide training to entrepreneurs (with a particular focus on gender), individual mentoring and advisory services (in particular to start-ups), including support with obtaining required business permits and licensing for existing and potential green businesses. The Incubator will advocate and communicate green business opportunities and benefits to investors and the general public. In addition, the Incubator will act as a hub for information sharing and knowledge dissemination among its stakeholders (private sector, public sector, academia, general public). Assistance will be provided to develop, together with other stakeholders, the Incubator's statute, define its mid-term and long-term objectives and goals, organizational structure and other required formal, organizational and logistical requirements. The project will also engage one Incubator staff member to conduct project management activities.
37. **Activity 1.3.2: Support Green Business Incubator in establishing partnerships and formal business relations with stakeholders.** To ensure its self-sustainability beyond the project period, this activity will provide technical assistance and advice on establishing formal partnerships with various stakeholder groups in Montenegro (e.g. IDF, Eco-Fund, faculties, Montenegro's Chamber of Commerce and the private sector) and regional and international organizations with the goal of positioning and mainstreaming the Incubator's services, develop its networking, and build capacities and capabilities of its staff. During the final year of project implementation, guidelines with advice for replicating the Green Business Incubator's lessons learned will be produced by the Municipality of Cetinje and the Green Business Incubator, and disseminated via the final project Conference (Activity 3.1.2.) and via the Municipality of Cetinje's and the Green Business Incubator's webpage.

Output 1.4: Entrepreneurs supported through the Green Business Incubator (50 existing and potential, including at least 20% women)

38. **Activity 1.4.1: Identify/specify sector needs and set-up roster of experts for mentoring and advisory services.** To develop and tailor the Incubator's specific green business portfolio of services to the needs of agricultural, tourism and energy industries, a market needs analysis (including desk review, interviews with market actors, experience from the region) will be conducted. This analysis will be used to specify sector needs and to ensure that these are reflected in the Incubator's services.
39. **Activity 1.4.2: Deliver green business advisory services for existing and potential entrepreneurs from across Montenegro.** Based on the findings from Activity 1.4.1, eligibility criteria for experts will be developed and a call for applications of vetted experts will be made to select a pool of experts for green business advisory services. Detailed criteria for the selection of experts will be defined during project implementation and approved by the Project Board. In addition to the Incubator's green business services, general business services such as marketing advisory, business registration procedure, permits and licensing advisory, introduction of ISO standards (such as ISO 90001, ISO 50001), IT and Human Resources management, will also be part of

²⁴ During project idea development and based on meetings with representatives of Municipality of Cetinje, this municipality has been identified as the logical focus on which to establish the Green Business Incubator due to: i) the municipality has already established the Cetinje Business Zone and Cetinje Business Center (knowledge and capacities within municipality in place), ii) infrastructure already in place (zone offers over the 130,000 m² of space) for green business development, iii) the municipality has developed and provides a comprehensive incentive package (paragraph 14), iv) the municipality representatives are highly motivated to establish and support the Green Business Incubator (municipality is providing co-financing to the project), and v) successful cooperation with UNDP on other projects.

the portfolio of services to help strengthen start-ups/entrepreneur market understanding and help in market positioning (co-financed). The same eligibility criteria and selection process for experts will be conducted. The goal is to provide least 50 (including at least 30% women) existing and potential entrepreneurs with individual business advisory services. Services will be provided on a first-come first-served basis, and will be promoted through channels assured via Activity 1.3.2 and Component 3. The Incubator will also provide assistance to end-users/SMEs for green business project/application development under Activity 2.3.

Output 1.5: Training workshops to develop green business skills delivered (3 workshops training a total of 50 specialists, including at least 20% women)

40. **Activity 1.5: Develop and deliver training Modules for technical specialists.** Based on the identified sector needs under Output 1.4, three training modules (one each for agriculture, tourism and energy) will be developed and delivered to relevant technical specialists from SMEs. The range of training topics to be covered will be determined by a gap assessment (Output 1.4) and will include subjects such as the implementation of the Energy Management Standard (ISO 50001), efficient solar irrigation, nearly zero/low energy consumption buildings in tourism. The key purpose of the training is to help address capacity and knowledge-related barriers among SMEs, and help them identify a pipeline of viable green investment projects.

Component 2 Green business financing

Outcome 2: Innovative green businesses financing enabled

41. Component 2 will work with the IDF to enhance the existing and to design new financial products for green businesses. Under this Component, technical assistance will be provided to assist IDF in marketing, sourcing, and appraising green loan applications, to design and introduce new financial products, as well as internal policies mainstreaming green business finance in IDF's overall portfolio. In addition, recognizing that even at highly concessional terms, IDF's loan financing package remains significantly under-utilized, the project will design and implement a complementary performance-based payment mechanism for priority economic sectors (agriculture, tourism and energy) whereby projects leading to GHG emission reductions will be eligible for additional compensation (in the form of a grant) based on and subject to independent verification of GHG emissions reductions achieved. Results of the performance-based payment scheme will be analyzed and widely disseminated among Montenegrin financial sector. The purpose of the performance-based payment mechanism is to address identified barriers to green/low-carbon investment (Table 1), as follows:
- Compensate green/low-carbon project developers for additional risks and uncertainties they are facing given that these projects are "first of its kind" in Montenegro, and often have insufficient financial returns to make them financially viable thus incentivizing entrepreneurs to pursue such business opportunities;
 - Establish track record of real-life performance of the various categories of the green/low-carbon projects (in terms of both environmental impacts and financial returns), which the financial sector can then use to adjust their risk assessments, lending strategies and requirements for various categories of projects thus directly addressing root causes 2.1 "Insufficient financial sector's readiness and appetite to finance low-carbon projects", and 2.2 "Lending conditions are not adapted to SME needs".

Output 2.1: Capacities created within IDF to implement/enhance green business financing

42. **Activity 2.1.1: Provide technical assistance to enhance green business finance.** Technical assistance will be provided to support IDF to align and enhance its products to related to green business financing. The project will support improvement of the IDF's green financing portfolio (i.e., programme for financing environmental protection, energy efficiency and renewable energy projects); and increasing their capacity to review loan offerings, update associated policies and procedures, and produce marketing to make it more attractive to end-users. Moreover, assistance will be provided to support the IDF with aligning its internal policies and regulations on mainstreaming green business finance (e.g. targets for green financing in portfolio, etc.).

43. **Activity 2.1.2: Provide training to IDF's staff to implement and market green business financing options.** This activity will include tailored training seminars and on-the-job training for IDF staff on topics such as green business benefits, green business financing risks and opportunities and IDF's green business financing portfolio. This capacity development will support and incentivize loan officers to proactively identify relevant potential projects in their respective portfolios. Loan officers receiving training in identifying and assessing CC and EE projects will be empowered to pro-actively look for such projects; this will help them to meet their targets and achieve higher annual bonuses. At least 10 IDF staff (and other relevant institutions) will gain skills and experience with implementation of IDF's green financing portfolio and receive support to market it effectively.

Output 2.2: Financing mechanism (performance-based payment scheme) designed and implemented

44. **Activity 2.2.1: Develop internal acts/rulebook, methodology and eligibility criteria for new financial mechanism (performance-based payments).** The project will support the development of internal acts/rulebook, methodology and eligibility criteria for performance-based granting to complement IDF's existing Programme for financing environmental protection, energy efficiency and renewable energy projects and thus make it more attractive and favorable to end-users/clients. The performance-based scheme is a financial incentive intended to motivate end-users to achieve and maintain green business targets including, for example, GHG emissions reduction, energy efficiency improvements, renewable energy share, increased production rates per energy consumed, efficient water irrigation or decreased production-based waste generation, based on ex-post evaluation of achievements²⁵. There is currently no performance-based payment offering from IDF (non-existent in Montenegro), whereas in other countries (e.g. Bosnia and Herzegovina) it has proven to be a good tool for green business financing due to its motivational impact. This activity will also define and develop IDF's monitoring and verification procedures so as to monitor and capture its clients' green business results upon which performance-based payments will be evaluated.
45. **Activity 2.2.2: Implementation of performance-based payment scheme.** Based on the developed performance-based payment scheme, the project will support project preparation (via Incubator and project experts), procurement and project implementation. Between 10 and 20 green business performance-based investments will be financed by project funds of up to a total of US\$200,000. The project funds are intended to be disbursed based on UNDP's public call as performance-based payments to eligible applicants, i.e. IDF's green business portfolio clients (which can prove the successful implementation and achievements of results through implemented green business investments financed by IDF loan products). The amount of project funds allocated to each successful applicant will be a maximum of 20% of the loan amount and shall not exceed US\$20,000 (see Table 3). The exact amount of investments will be determined in line with established eligibility criteria and based on received applications.
46. The Project Board will endorse the methodology and eligibility criteria to be developed by the Project, based on which the applicants will be chosen. The eligibility criteria factors may include (for example and not limited to):
- IDF client with active loan product
 - Achieved GHG emission reduction (minimum 20% against the project baseline)
 - Project readiness and feasibility to complete the project within 1 year from receipt of the loan (for example feasibility study, technical specification, main design), and/or degree of linkage to existing green business project (e.g. reinvestments into existing green solutions, such as additional energy efficiency measures, additional renewable energy measures, increased coverage of agriculture irrigation, purchase of small electrical supply vehicles etc.)
 - Co-financing ratio by end-user (if parallel investments are complementary and feasible)

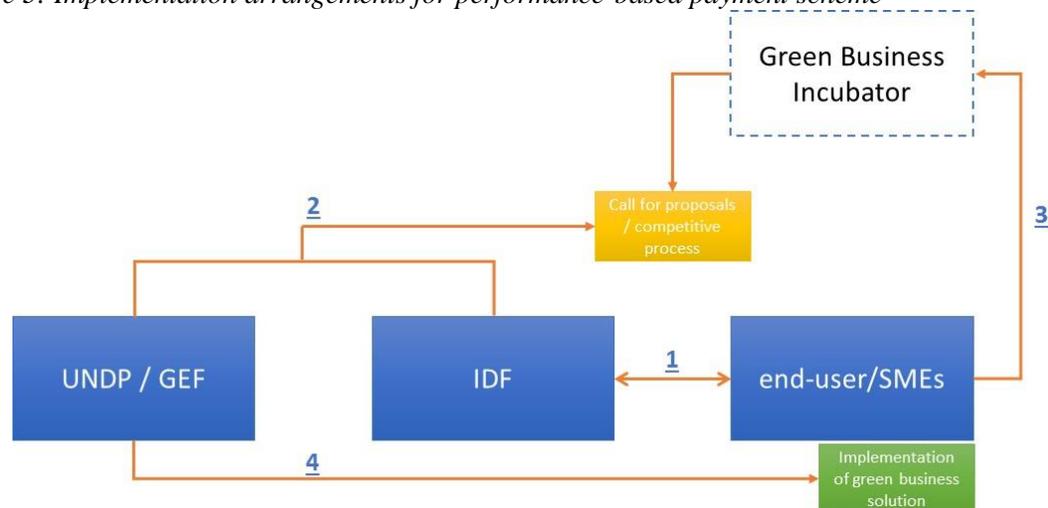
²⁵ The timing of activities is explained under Activity 2.2.2.

- Expected GHG emission reduction (but also, if relevant, more specifically, for example kWh energy saved, % of renewables achieved, water distribution efficiency m³/kWh, units of products produced per kWh, etc. depending on the project type).
47. The call for proposals will include a remark that potential applicant can be supported by the Green Business Incubator, upon request by potential applicant, to receive advisory services and expertise for the development of green business project ideas. The size of the performance-based payments will be proportional to GHG emission reduction achieved. During project implementation, different performance-based payment schemes aligned to IDF’s loan products will be developed for different green business project types (e.g. for agriculture, tourism and energy sector) to better reflect feasible and achievable GHG reductions of different sectors.
48. The proposed formula for performance-based payment for energy sector projects is presented in the Table 3, and an illustrative approach to implementation of the performance-based payment scheme for energy sector projects is given in Figure 3. Projects resulting in elimination of GHG emissions would gain the highest benefits from the performance-based payment since GHG emission reduction is the key pre/post indicator/benchmark. Renewable energy projects generally require more incentives than energy efficiency projects, as explained in the baseline section, however it is also worth noting that energy efficient lighting projects (e.g. LED) will result in 80% saving and GHG emission reduction, which is quite high. However, during project implementation, different performance-based payment schemes aligned to IDF’s loan products will be developed for different green business project types e.g. for agriculture, tourism and energy sector, to better reflect feasible and achievable GHG reductions of different sectors; while the table 3 reflects only a possibility how a performance-based payment could be structured.

Table 3: Proposed formula for performance-based payment

Achieved GHG emission reduction against baseline [%]	Maximum performance-based payment amount for proposed energy sector projects	
	[%]	[US\$]
100	20	20,000
90	18	18,000
80	16	16,000
70	14	14,000
60	12	12,000
50	10	10,000
40	8	8,000
30	6	6,000
20	4	4,000

Figure 3: Implementation arrangements for performance-based payment scheme



49. Once IDF’s green financing options are developed and strengthened, loan products (including performance-based payments) are marketed and loan application are submitted by potential clients (project end-users, SMEs) to IDF to whom green business loans are provided (Step 1, project implementation year I). Based on information from IDF on its portfolio of clients, UNDP will conduct a call for proposals (Step 2, in the beginning of year II) and select on a competitive basis several projects from eligible applicants. Once the projects are implemented and performance in terms of achieved GHG emission reduction is monitored and independently verified, performance-based payments will be made (Step 4, year III). End-users will be encouraged to use Green Business Incubator services for application/project idea development (Step 3).

50. Proposed timeline for the implementation of Activity 2.2.2 is:

Year 1	Year 2	Year 3
<ul style="list-style-type: none"> ○ Design of the scheme and its approval by the Project Board ○ Provision of Green Business Incubator services for application/project idea development ○ Marketing of the scheme and pro-active engagement with SMEs to solicit applications ○ Joint UNDP-GEF and IDF Call for proposals and selection of eligible applicants 	<ul style="list-style-type: none"> ○ Signature of contracts with selected applicants and advance payments (up to 20%)²⁶ ○ Implementation of projects 	<ul style="list-style-type: none"> ○ Monitoring project performance and release of performance-payments

51. For managing fund transfer, UNDP will use one of the following potential options to be finalized prior to signature of the UNDP Project Document:

a) eligible beneficiaries to be selected and paid through the standard Request for Proposal (RfP) process, with payments linked to tCO₂ emissions reductions delivered and verified, and underpinned by an institutional contract (e.g. similar to an emissions reduction purchase agreement or ‘ERPA’) between UNDP and each of the selected GHG emission reduction suppliers;

b) payments fully administered by IDF and/or Chamber of Commerce through a Letter of Agreement (LoA) with UNDP, similar to current practices used in other projects including the GEF-funded UNDP-implemented project on low-carbon tourism.

²⁶ Payment under the institutional contract will be structured as follows: payment for agreed amount of CO₂ emission reductions will be made in two installments: 20% upon contract signature, and 80% upon project completion and certification of the achieved GHG emission reductions.

Component 3 Raising awareness of green business practices and financing opportunities

Outcome 3.1. Increased awareness of entrepreneurs and financial sector on green business practices and financing green business projects

52. This component will focus on increasing the awareness of entrepreneurs and the Montenegrin banking sector regarding green business practices and financing green business projects to address numerous awareness-related barriers as presented in Table 1. While developing and strengthening green business financing mechanisms it is of substantial importance to communicate with, and create understanding by, potential users and stakeholders. Therefore, in cooperation with the Montenegrin Chamber of Commerce, which will be the key channel to communicate and promote green business practices and financing opportunities on the Montenegrin market, together with the Ministry of Tourism and Sustainable Development, IDF, Eco-Fund and Green Business Incubator, awareness-raising activities such as workshops for existing and potential entrepreneurs in the northern, central and southern regions of Montenegro and a “Green business good practices and opportunities” Conferences will be supported by the project. Further, the project will assist the Green Business Incubator to develop its promotional material and communication tools.

Output 3.1: Awareness-raising activities conducted (150 existing and potential entrepreneurs and 100 stakeholders from public institutions, industry experts and academia)

53. **Activity 3.1.1: Conduct at least three workshops on existing green business financing opportunities in Montenegro.** This activity will provide at least three workshops to existing and potential entrepreneurs in the northern, central and southern regions of Montenegro with the aim of promoting and communicating green business financing possibilities and Government policy incentives (planned and/or undertaken). The Montenegrin Chamber of Commerce will be used as key channel in promoting and organizing the event. Key event participants shall be IDF, Eco-Fund, Ministry of Tourism and Sustainable Development, commercial financial institutions and Green Business Incubator. The targeted audience is existing and potential entrepreneurs.
54. **Activity 3.1.2: Knowledge management / conduct at least one conference on green business good practices and opportunities in Montenegro.** One conference on green businesses best practices shall be organized to communicate the related benefits and advantages of economic growth, environment and human development; and to disseminate knowledge gained from the project activities. This will be either a closing conference, or a conference during project implementation and one closing conference held towards the end of the project. The conference might include three sessions, each focusing on green businesses in different sectors (i.e. agricultural, tourism and energy sectors). The conference shall be organized by the Montenegrin Chamber of Commerce, Ministry of Tourism and Sustainable Development and Green Business Incubator. The targeted audience are public institutions, private sector, faculties and general public.

Output 3.2: Green Business Incubator communication tools developed (reaching out to 300 entrepreneurs)

55. **Activity 3.2.1: Develop Green Business Incubator promotional material and communication tools.** This activity will enable Green Business Incubator with the right tools to communicate and promote its objectives, goals and services to industry stakeholders (entrepreneurs) and the general public. A website (domain, content development and servicing during project duration), promotional material and a communication/promotion strategy will be developed. The goal is to develop effective communication tools that will enable the Incubator and entrepreneurs to more easily access and communicate with each other. Outreach to 300 existing and potential entrepreneurs is targeted. A database template with information on existing and potential entrepreneurs will be developed and regularly updated by Incubator staff.

Output 3.3: Project monitoring and evaluation

56. **Activity 3.3.1: Monitoring and evaluation of project activities.** Through this activity project achievements and indicators will be closely monitored and evaluated in accordance with project results framework on periodic and annual bases throughout project implementation to ensure the project effectively achieves intended results.

Global Environmental Benefits

57. The project will result in direct and consequential GHG emission reductions. A GHG emission analysis has been conducted based on bottom up approach and by using empirical data from previous similar GEF-supported projects facilitating green investments in Montenegro (see Annex C).
58. Component 2 will result in direct GHG emissions reductions by support green investment via performance-based payment scheme, of approximately 20,400 tCO₂ over the investment life-cycle (20 years).
59. Table 4 shows expected CO₂ emissions reduction during the project duration in three priority sectors.

Table 4: Direct GHG emissions reduction, per sector²⁷

Sector	GHG emission reduction per project, tCO ₂ /a	Number of projects	Investment life-cycle	Total, tCO ₂
Energy:				
<i>EE</i>	58	5	20	5,800
<i>Fuel switch</i>	96	5	20	9,600
Agriculture	24	5	20	2,400
Tourism	26	5	20	2,600
TOTAL				20,400

60. To estimate consequential GHG emission reduction, the estimated direct reductions are multiplied by a replication factor – with the expectation that, as the portfolio of green business investments supported by IDF and Eco-Fund will increase at least by a factor of 4, over a 10-year period after project completion. Aggregated GHG emissions reductions are summarized in Table 5 and detailed the GHG emission reduction calculation approach is given in Annex C.

Table 5: Aggregated GHG Emission Reductions: Direct and Consequential

GHG Emission Savings (tCO ₂)	2018-2020	2020-2040
Direct (project duration)	20,400	-
Consequential	-	81,600

Innovation, sustainability and potential for scaling up

61. **Innovation:** The use of performance-based payments to stimulate investment in GHG emission reduction in energy sector has already been quite well established, e.g., under the Kyoto Protocol flexible mechanisms. However, the innovative aspect of this project is that such performance-based payment approach will be used for the first time to incentivize investment in climate change mitigation in agricultural and tourism sectors, and will also generate real-life data about the environmental performance of such projects. To do to, appropriate methodologies and tools will be developed to monitor and verify GHG emission reductions, which to date are not sufficiently developed.

²⁷ Refer to Annex C for detailed calculations and adopted assumptions.

62. **Sustainability:** The main objective of the project, which underpins its sustainability, is to help identify, unleash and support new business opportunities for low-carbon and green investment via a combination of policy and financial de-risking instruments, as follows:
- Component 1: The project will work with the Government to prepare the roadmap for policies and incentives to reduce and/or compensate for the additional risks, which such investors currently face. Regarding the latter: it will help strengthen, expand and diversify the Eco-Fund’s funding base and inform its programming strategy and modalities thus promoting sustainable source of finance for green investment in Montenegro after project completion. Based on the results and lessons of the pilot performance-based payment scheme (under Component 2), recommendations will be made for Eco-Fund to adopt similar and/or modified approaches to incentivizing green investment in partnership with the IDF.
 - Component 1: Provision of the business support services for green start-ups and SMEs under the umbrellas of the Cetinje business zone will continue after the project end with support of the Municipality of Cetinje (as reflected in the project co-financing structure).
 - Component 2 will work with the Investment and Development Fund to implement pilot performance-based payment scheme. Sustainability of the proposed scheme (and/or modified scheme based on lessons learnt, e.g. inclusion of other financial institutions beyond IDF) will be ensured by making recommendations to the Eco-fund to adopt similar financial support mechanism so that Eco-Fund continues providing performance-based payments to green business in conjunction with IDF loans and/or other financial intermediaries after the project ends. Such recommendations and roadmap for their implementation will be developed under Component 1.
 - Component 3: will contribute to sustainability of the projects by reaching out to the wider Montenegrin SMEs and banking community to present examples of bankable green/low-carbon investments and advocate for their wider adoption.
63. **Potential for scaling-up:** Montenegro’s TNA assesses full market potential for deployment of prioritized low-carbon technologies in Montenegro at over 2 billion Euro for 25 years or about 90 million Euros/year. This signals the substantial potential for low-carbon investment after the project ends. Given the structure of Montenegrin economy, heavily dominated by SMEs (over 98%), the project’s scale-up strategy is to focus and enable green investment by SMEs, which will help unlock this potential and facilitate replication.
64. Indeed, Montenegro’s National Investment Commission and the Government adopted in December 2016 a “Single Project Pipeline”, the key document outlining investment potential and priorities in the energy, transport, environment and social sectors. The pipeline, in particular, states that in Montenegro’s Energy Sector’s investment potential is estimated approximately at 110 million Euro for energy efficiency and at 2.01 billion Euro for renewable energy. The project will play an important role in creating enabling environment and facilitating scaling-up of low-carbon investment in the priority sectors identified by the Government.

2. Child Project? *If this is a child project under a program, describe how the components contribute to the overall program impact.*

N/a

3. Stakeholders. *Will project design include the participation of relevant stakeholders from civil society organizations (yes /no) and indigenous peoples (yes /no)? If yes, elaborate on how the key stakeholders engagement is incorporated in the preparation and implementation of the project.*

65. The key stakeholders were closely involved and consulted during project development. Meetings with the Ministry of Sustainable Development and Tourism, Ministry of Agriculture, Ministry of Economy, National Parks, IDF, and the EBRD were held to gather information on the baseline activities of these stakeholders and to secure their interest and commitments for collaboration, including for co-financing. Additional stakeholders, representing civil society and CSOs, NGOs, trade unions, Chamber of Commerce, and other beneficiaries were contacted and will be fully involved since the starting of project preparation activities.

66. Montenegro consists of several ethnic groups, with Montenegrins being the largest ethnicity, and Serbs, Albanians, Bosniaks and Roma representing smaller minority groups. There are no "indigenous people" in Montenegro, as defined by international conventions and protocols. During project implementation, extensive consultative processes will be organized, and all stakeholders will serve as information providers and for raising public awareness of this project. In particular, the following CSOs will be invited to collaborate in the design and implementation of outreach activities under Component 3: NGO Natura (Kolasin), NGO Expeditio (Kotor), NGO Digitalizuj.me, NGO Biciklo.me.

4. Gender Equality and Women's Empowerment. *Are gender equality and women's empowerment taken into account (yes X/no)? If yes, elaborate how it will be mainstreamed into project implementation and monitoring, taking into account the differences, needs, roles and priorities of women and men.*

67. As of 2016, women comprised just 9.6% of business owners in Montenegro, in contrast to about 30% of businesses in the EU. With the support of the International Labor Organization, the MEF conducted a Women's Entrepreneurship Development (WED) assessment, which found that "women are not sufficiently recognized as equal players in the economic arena, which leads to a worse starting position when establishing and later during the development of their own business."²⁸ This is largely due to the fact that traditional gender roles discourage women from starting businesses; and many women are expected to stay home to care for the household and family. Partly as a result of the traditional gender roles, household assets are usually owned by male members of the household. As a result, female entrepreneurs have less flexibility in offering equity or collateral to obtain a loan. However, attitudes are changing for the better for female entrepreneurship. IDF and UNDP are supporting female-owned businesses and encouraging more women to consider entrepreneurship as a means of supporting themselves and their families through their on-going projects (i.e. credit line for women entrepreneurs by IDF and UNDP's Programme on Gender Equality and Women Empowerment). Building on IDF and UNDP on-going efforts, the project will target women both as beneficiaries and decision-makers in designing and implementing green business support activities. Relevant activities and indicators have been added to mainstream gender dimension in the project strategy and result framework, as described below.

68. Component 1 "Policy development and business support services for green start-ups and SMEs" will seek to ensure that at least 40% of decision makers in the Ministry of Tourism and Sustainable Development that understand and recognize policy and incentive options for green businesses are women by pro-actively identifying and inviting female staff of the Ministry to take active action in relevant activities of the project. Further, women will comprise at least 20% of entrepreneurs to be trained and assisted through Green Business Incubator, which is twice as much as national average. This will be done by soliciting active participation of women through partnership with the UNDP gender programme and disseminating information about available training opportunities via the UNDP gender network in Montenegro.

69. Under Component 2 "Green business finance" the project will provide training to implement and market green business financing mechanisms to staff of IDF and other relevant financial institutions ensuring that at least 40% of training participants are women.

70. Further, the target has been set up to ensure that, from among final beneficiaries of performance-based payments under this component, at least 10% should be women-led SMEs, i.e. in line with the national average.

71. Finally, within Component 3 "Raising awareness on green business practices and financing opportunities," advocacy and awareness raising activities will be designed in such a way as to ensure that women constitute at least 20% of entrepreneurs to be reached out. This will be ensured by a) involving a gender NGO in advocacy and awareness work of the project; b) identifying appropriate means and channels for communication and

²⁸ <http://poslodavci.org/en/publications/the-assessment-of-the-environment-for-women-entrepreneurship-in-montenegro>

information dissemination and c) specifically highlighting and encouraging women participation in invitation letters and marketing/communications channels (web-site, social media, electronic and print media).

5. Benefits. Describe the socioeconomic benefits to be delivered by the project at the national and local levels. Do any of these benefits support the achievement of global environment benefits (GEF Trust Fund) and/or adaptation to climate change?

72. The key socio-economic benefits of the project will be in the form of new job and revenue generating opportunities stemming from investment in green businesses. While national analysis of employment effects from green investment in Montenegro has not yet been undertaken, similar research in the EU shows significant job creation opportunities from green investment in tourism, agriculture and clean energy. According to the European Commission Communication²⁹:

- Tourism and recreation in Natura 2000 sites are estimated to directly support around 8 million jobs corresponding to 6% of the total employment in the EU
- Increased investment in insulation and energy efficiency will have a positive impact on job creation in the construction sector: in Montenegro 14,600 workers are employed in construction industry (7% of the total) and will need up-skilling
- There are opportunities for job creation in the agricultural sector, in particular through quality production, organic farming, landscape management, green farm/eco-tourism, green (environmental) services and/or infrastructure in rural areas.

6. Risks. Indicate risks, including climate change, potential social and environmental future risks that might prevent the project objectives from being achieved, and if possible, propose measures that address these risks:

Risks	Impact & Probability	Mitigation Measures
Investment climate in Montenegro deteriorates/does not improve due to weak policy and regulatory framework and their insufficient enforcement	I: medium P: low	Although the continuing transition has not yet eliminated all structural barriers, the government generally recognizes the need to remove impediments in order to remain competitive, reform the business environment, and open the economy to foreign investors. Montenegro is also a candidate for European Union membership and is taking active steps to become a member of North Atlantic Treaty Organization (NATO), which are critical measures to improve attractiveness of the country for private investment. The country has also declared itself an “Ecological State” in the Constitution. However, as noted above, implementation and enforcement of the related policies and measures is often lagging behind. Therefore Component 1 of the project is designed to address this risk by providing training and other institutional support to national and municipal authorities.
Climate change is predicted to have a negative impact on Montenegro’s key economic sectors, such as energy	I: medium P: medium	IPCC estimates that the average temperature rises under a business as usual scenario are 2.4 – 6.4 degrees Celsius temperature rise by the year 2100 with future warming and related changes varying region to region. Rising temperatures will increase energy demand for cooling in summer, the period when domestic (mainly hydro-based) power capacities are at their lowest level. Hence diversifying energy base with other types of RE and improving energy efficiency are the key adaptation measures in the energy sector that this project will support.
Lack of private sector interest to invest in green/low-carbon businesses	I: medium P: high	The risk is high because indeed Montenegro’s business community is largely unaware about existing business opportunities in the green sectors, and the local banking sector also views the risks of such investment as very high. Consultations with Cetinje Business Zone and Chamber of Commerce confirmed that there are interested entrepreneurs, however it was not possible at that stage to assess “readiness” of their project ideas.

²⁹ Green Employment Initiative: Tapping into the job creation potential of the green economy

Risks	Impact & Probability	Mitigation Measures
		Therefore, the project will address this risk by identifying and actively promoting opportunities for green investment in Montenegro and abroad, as well by working with local financial industry to educate and raise their awareness in this area. Finally, incentives and dedicated financial support through IDF is also expected to generate private interest to invest.
Eco-Fund not established by project initiation	I: high P: low	The risk impact is high because one significant part of project component 1, as well as project's sustainability beyond project period, focuses on further strengthening of the Eco-Fund, which is scheduled to be established by mid-2018. However, risk potential is low since through the on-going GEF-5 project the establishment of the Eco-Fund is being supported and the main legal provisions for its set-up are in place; all government key stakeholders are supporting this activity led by the Ministry of Tourism and Sustainable Development. The project will contribute to position and strengthen Eco-Fund's role in supporting green businesses and thus its mandate within Montenegro's government institutions; and will adapt its goals if not established and support its establishment and further strengthening throughout project duration.

7. Cost Effectiveness. Explain how cost-effectiveness is reflected in the project design:

73. The project has been designed to play a catalytic roles and leverage at least US\$4 million of co-finance for low-carbon investment from IDF during project implementation, as well as an additional US\$18 million during the next 10 years after project completion from the National Eco-Fund. This would yield a co-financing ratio of 1:5 and a leveraging ratio of 1:23.
74. From the total requested GEF financing (US\$771,690), US\$200,000 has been allocated for use as performance-based payments under Outcome 2 for green/low-carbon projects in accordance with established criteria and complementary to IDF loans at the ratio of at least 1:5. In addition, US\$503,000 will be used for technical assistance activities in accordance with the Project Results Framework and US\$68,690 (i.e. 10% of the net budget) will be used for project management.
75. Based upon a total GEF grant of US\$ 771,690, the cost per tonne of GHG emissions reduction is approximately US\$37/tonne for direct emissions. These are costs are considerably lower than the price that economic models have estimated is needed to meet the 2°C climate stabilization goal³⁰ and are also much lower than the value of enacted carbon taxes or similar carbon pricing mechanism in existence in EU and other countries around the world.³¹
76. The combined direct and consequential global benefits of the project have been assessed at around 102,000 kilotons of CO_{2eq}. The total GEF funding request of US\$771,690 this corresponds to an abatement cost of less than US\$8 per tonne of CO₂ reduced for direct and consequential emissions reductions combined.

8. Coordination. Outline the coordination with other relevant GEF-financed projects and other initiatives.

77. The project will benefit from the analysis of sectoral GHG emissions and reduction potential conducted under the Montenegro's First Biannual Update Report (final), Second Biannual Update Report (on-going), 3rd National Communication to UNFCCC (on-going). In particular, the results of these assessments will be used

³⁰ 85\$/tCO₂ according to The Stern Review. "The Economic of Climate Change" (2007): available at http://mudancasclimaticas.cptec.inpe.br/~rmclima/pdfs/destaques/sternreview_report_complete.pdf

³¹ World Bank 2017. State and Trends of Carbon Pricing. <https://openknowledge.worldbank.org/handle/10986/28510>. This report presents (in Figure 3, page 14) a range of carbon pricing across the world. EU ETS is in the lower part of the range (6\$/tCO_{2e}), but this is because EU states are increasingly switching towards carbon taxes, which are as high as 140\$/tCO_{2e} in Sweden or 36\$/tCO_{2e} in France. Other important GEF donors (Norway, Switzerland are in between).

to guide project assessment and selection for the provision of performance-based payment scheme under Component 2.

78. The project will work in synergy and learn from UNDP's experience in the tourism sector through the GEF-funded UNDP-implemented "Towards Carbon Neutral Tourism in Montenegro" (TCNT) project (on-going, to be completed in 2018). The TCNT project is aimed at reducing GHG emissions from Montenegro's tourism sector through a range of activities, including, *inter alia*, by supporting the tourism sector to identify and implement cost-effective mitigation options. The TCNT project has accumulated valuable experience and insight into the potential for low-carbon investment in tourism, including the type of projects, their investment needs and estimated GHG mitigation impacts (See Annex C for details). The TCNT project also supports the Government in establishing the Eco-Fund; and this project will build on and complement these efforts.

9. Institutional Arrangement. *Describe the institutional arrangement for project implementation.*

79. The Ministry of Sustainable Development and Tourism (MSDT) is the government institution responsible for the implementation of the project and will act as the Implementing Entity/Responsible Partner. UNDP is the Executing Entity/Implementing Partner for the project and accountable to the GEF for the use of funds. The project is a direct implementation modality (DIM) project³², in line with the Standard Basic Assistance Agreement (SBAA, 2006) between the UNDP and the Government of Montenegro, and the Country Programme Action Plan (CPAP) for 2012-2016.
80. The overall responsibility for the project implementation by the Ministry of Sustainable Development and Tourism (MSDT) implies the timely and verifiable attainment of project objectives and outcomes. The MSDT will provide support to, and inputs for, the implementation of all project activities.
81. Working closely with the Ministry of Sustainable Development and Tourism, the UNDP Country Office (UNDP-CO) will be responsible for: (i) providing project assurance services to government (ii) recruitment of project staff and contracting of consultants and service providers; (iii) overseeing financial expenditures against project budgets approved by PSC; and (iv) ensuring that all activities including procurement and financial services are carried out in strict compliance with UNDP/GEF procedures. A UNDP staff member will be assigned with the responsibility for the day-to-day management and control over project finance.
82. A Project Board will be established at the inception of the project to monitor project progress, to guide project implementation and to support the project in achieving its listed outputs and outcomes. It will be co-chaired by UNDP and MSDT. The MSDT, as the key governmental agency in charge of spatial planning, tourism development, environmental protection and climate change policies, will ensure that other governmental agencies are duly consulted and involved as per their mandate such as the Ministry of Economy, Ministry of Finance and the Ministry of Transport, Maritime Affairs and Communications and pilot municipalities. The Board can also include representatives of national and regional tourism organizations and the CSD, by ensuring, however, that the Board will remain sufficiently lean to facilitate its effective operation. Other participants can be invited into the Board meetings at the decision of the Board. The Board will meet regularly (at least twice a year) to review project progress, discuss and agree on project work plans. One of the key tasks of the Board will be to ensure coordination and synchronization of central and local-level activities supported by the project. In this respect, the Board will serve as a platform for key project stakeholders and beneficiaries to regularly get together and design a joint strategy of work on the project.

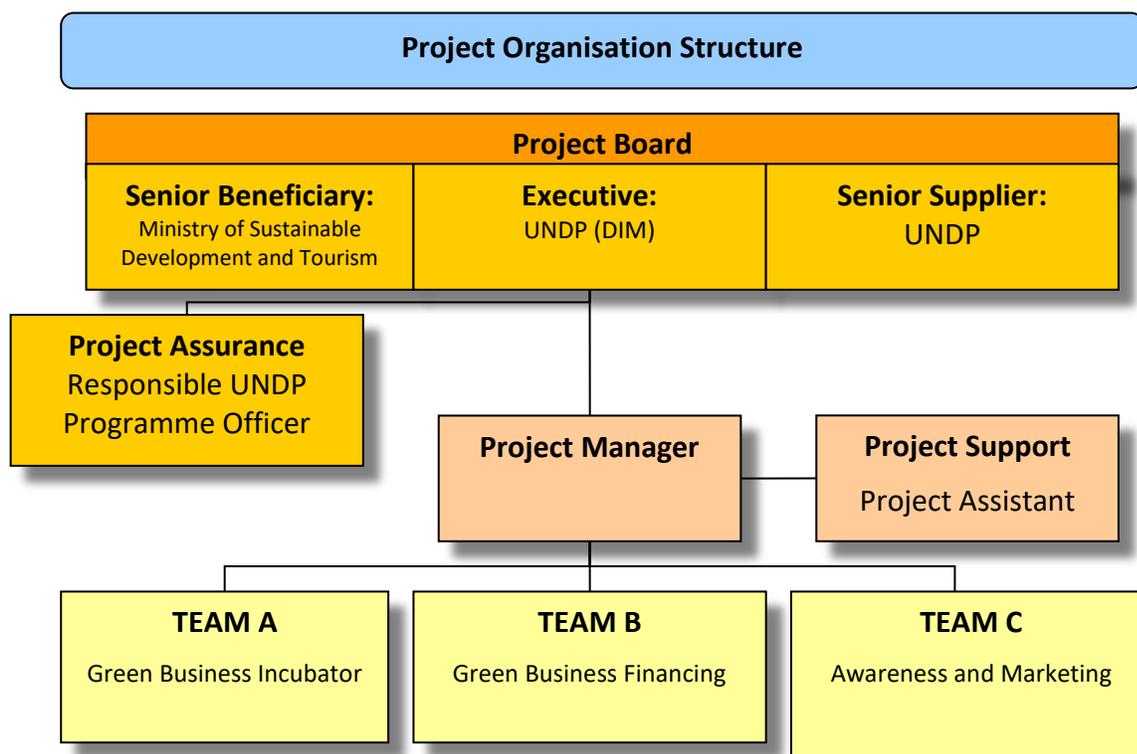
³² The Government of Montenegro requested the project to be directly implemented by UNDP. Please refer to the Letter of Endorsement to this project.

83. The final list of the Project Board members will be completed at the outset of project operations and presented in the Inception Report by taking into account the envisaged role³³ of different parties in the Board. The project manager will participate as a non-voting member in the Board meetings and will also be responsible for compiling a summary report of the discussions and conclusions of each meeting.
84. The day-to-day management of the project will be carried out by a Project Management Unit (PMU) under the overall guidance of the Project Board. The PMU will be established in Podgorica and will consist of a full time Project Manager, Administrative Assistant and three Key Experts responsible for specific areas, as elaborated in the organizational chart below. Public outreach, establishment of the contacts and co-operation with the key local and international stakeholders and expert institutions as well as ability for adaptive management and new innovative approaches will be of utmost importance and will be emphasized in the recruitment. This core team will be complemented during the project implementation by short-term legal, technical and financial experts to support the identified specific areas of work. Contacts with experts and institutions in other countries that have already gained experience in developing and implementing similar measures are also to be established. The Project Manager will report to UNDP and the Project Board. The project personnel will be selected on a competitive basis in accordance with the relevant UNDP rules and procedures and in consultation with the UNDP-GEF Regional Technical Adviser.
85. At the outset of project operations, a project inception report will be prepared in co-operation with the key stakeholders, local and international expert(s) engaged in leading or supporting the implementation of the project. The inception report will include detailed work plans for each subcomponent (output) of the project at the specific activity level and elaboration of the required resources and stakeholders to be involved for reaching the stated targets. These output specific work plans will provide the main basis for day-to-day management, implementation and monitoring of the progress of the project, complemented by the annual monitoring to be done at the Outcome level by the PIRs.
86. The UNDP Country Office in Montenegro currently manages a programme portfolio of total value of over \$10.5 million. It offers the following dedicated staff capacity for project implementation support in the area of environment and energy: (i) Environment and Economy Analyst who oversees programme implementation on a daily basis, including quality assurance and monitoring and evaluation; (ii) Climate Change and Energy Programme Manager – oversees the implementation of projects in the field of Climate Change and Energy on a daily basis, including quality assurance and monitoring and evaluation; (iii) Environment and Economy Assistant – assists with budget revisions, quarterly reporting, auditing and recruitment procedures; (iv) Finance Analyst - reviews the budgets and monitors project delivery status; (v) Head of Operations Unit - assures compliance with overall fiduciary standards of UNDP; (viii) UNDP Resident Representative, who liaise at high-level with the Government and will negotiate key policy changes proposed by the project.
87. UNDP Montenegro will maintain the oversight and management of the overall project budget. It will be responsible for monitoring project implementation, timely reporting of the progress to the UNDP Regional Co-ordination Center and the GEF as well as organizing mandatory and possible complementary reviews and evaluations on an as-needed basis. It will also be responsible for procurement of the required expert services and other project inputs and administer the required contracts. Furthermore, it will support the co-ordination and networking with other related initiatives and institutions in the country.
88. To successfully reach the objective and outcomes of the project, it is essential that the progress of each project component will be closely monitored both by the key local stakeholders and authorities as well as by project's international experts, starting with the finalization of the detailed, component-specific work plans and implementation arrangements and continuing through the project's implementation phase. The purpose of this

³³**Senior Supplier:** individual or group representing the interests of the parties concerned which provide funding for specific cost sharing projects and/or technical expertise to the project. **Senior Beneficiary:** individual or group of individuals representing the interests of those who will ultimately benefit from the project.

is to facilitate early identification of possible risks to successful completion of the project together with adaptive management and early corrective action, when needed.

- 89. To accord proper acknowledgement to the GEF for providing funding, a GEF logo should appear on all relevant GEF project publications, including any hardware purchased with GEF funds. Any citation on publications regarding projects funded by GEF should also accord proper acknowledgement to GEF in accordance with the respective GEF guidelines.
- 90. The international experiences and lessons learned from facilitating environmentally sustainable tourism sector development, including those from the other UNDP managed projects in Montenegro have been taken into account in the design of this new project. During implementation, care will be taken to ensure that adequate communication and co-ordination mechanisms are in place.



10. 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.

- 91. As noted above, the proposed project will work in close collaboration with other ongoing GEF-funded projects in Montenegro and in the region broadly. Knowledge-sharing among these initiatives will take place via regular personal and electronic contact and, where possible, participation by project management and partners in face-to-face meetings to be hosted by the UNDP Istanbul Regional Hub or elsewhere.
- 92. At the global, regional, and national levels, UNDP is actively developing comprehensive communications strategies for all of its projects. These strategies include various forms of outreach via a diverse array of media, to different audiences – from news briefs posted on UNDP websites, to publication and dissemination of longer technical reports and studies of lessons learned, to placement of stories in national television and print media

outlets in Montenegro, to participation in meetings and exhibitions, to use of social media where available. The new project will employ all of these forms of outreach. It is expected that the project will have a dedicated staff person or consultant responsible for communications and knowledge management.

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

93. The project will directly support Montenegro's NDC to UNFCCC, which is expressed in 30 % GHG emission reduction by 2030 compared to the 1990 base year. The emission level of GHG for Montenegro from sectors covered by INDC was 5,239,000 tCO₂e in 1990 and Montenegro pledges to reduce it at least by 1,572,000 tCO₂e kilotons, to the level below or at 3,667,000 tCO₂e. According to the NDC, the reduction is meant to be achieved by increasing energy efficiency, improving industrial technologies, increasing the share of renewables and modernizing the power sector. The National Climate Change Strategy is the main planning tool along with its action plans for the implementation of Montenegro's INDC until 2030, the Strategy specifically refers to the need to accelerate private investment in low-carbon activities, which is also the key objective of the project.
94. Project's design, in particular the selection of prioritized sectors and technologies, has been informed by the findings of the comprehensive Technology Needs Assessment (TNA) exercise conducted by Montenegro in 2012.

12. M & E Plan. *Describe the budgeted monitoring and evaluation plan.*

95. The project results as outlined in the project results framework will be monitored annually and evaluated periodically during project implementation to ensure the project effectively achieves these results.
96. Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy. While these UNDP requirements are not outlined in this project document, the UNDP Country Office will work with the relevant project stakeholders to ensure UNDP M&E requirements are met in a timely fashion and to high quality standards. Additional mandatory GEF-specific M&E requirements (as outlined below) will be undertaken in accordance with the GEF M&E policy and other relevant GEF policies.
97. In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Report. This will include the exact role of project target groups and other stakeholders in project M&E activities including the GEF Operational Focal Point and national/regional institutes assigned to undertake project monitoring. The GEF Operational Focal Point will strive to ensure consistency in the approach taken to the GEF-specific M&E requirements (notably the GEF CCM Tracking Tool) across all GEF-financed projects in the country. This could be achieved for example by using one national institute to complete the GEF Tracking Tools for all GEF-financed projects in the country, including projects supported by other GEF Agencies.

M&E Oversight and monitoring responsibilities

98. Project Manager: The Project Manager is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Manager will ensure that all project staff maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Manager will inform the Project Board, the UNDP Country Office and the UNDP-GEF RTA of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.
99. The Project Manager will develop annual work plans based on the multi-year work plan included in Annex A, including annual output targets to support the efficient implementation of the project. The Project Manager will ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring the results framework indicators are monitored annually in time for evidence-based reporting in the GEF PIR, and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g. gender strategy, KM strategy etc..) occur on a regular basis.
100. Project Board: The Project Board will take corrective action as needed to ensure the project achieves the desired results. The Project Board will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project's final year, the Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.
101. Project Implementing Partner: The Implementing Partner is responsible for providing any and all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes, and is aligned with national systems so that the data used by and generated by the project supports national systems. UNDP will be the Project Implementing Partner for this project in line with approved UNDP's Direct Implementation Modality (DIM) for Montenegro.
102. UNDP Country Office: The UNDP Country Office will support the Project Manager as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Board within one month of the mission. The UNDP Country Office will initiate and organize key GEF M&E activities including the annual GEF PIR, the independent mid-term review and the independent terminal evaluation. The UNDP Country Office will also ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality.
103. The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the UNDP POPP. This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken annually; that annual targets at the output level are developed, and monitored and reported using UNDP corporate systems; the regular updating of the ATLAS risk log; and, the updating of the UNDP gender marker on an annual basis based on gender mainstreaming progress reported in the GEF PIR and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. annual GEF PIR quality assessment ratings) must be addressed by the UNDP Country Office and the Project Manager.
104. The UNDP Country Office will retain all M&E records for this project for up to seven years after project financial closure in order to support ex-post evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GEF Independent Evaluation Office (IEO).
105. UNDP-GEF Unit: Additional M&E and implementation quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate as needed.

106. **Audit:** The project will be audited according to UNDP Financial Regulations and Rules and applicable audit policies.³⁴

Additional GEF monitoring and reporting requirements

107. Inception Workshop and Report: A project inception workshop will be held within two months after the project document has been signed by all relevant parties to, amongst others:

- Re-orient project stakeholders to the project strategy and discuss any changes in the overall context that influence project implementation including the formulation of detail criteria for selection of municipalities and participation in the final decision on their selection
- Discuss the roles and responsibilities of the project team, including reporting and communication lines and conflict resolution mechanisms;
- Review the results framework and finalize the indicators, means of verification and monitoring plan;
- Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP in M&E;
- Update and review responsibilities for monitoring the various project plans and strategies, including the risk log; Environmental and Social Management Plan and other safeguard requirements (for moderate and high risk projects only); the gender strategy; the knowledge management strategy, and other relevant strategies;
- Review financial reporting procedures and mandatory requirements, and agree on the arrangements for the annual audit; and
- Plan and schedule Project Board meetings and finalize the first year annual work plan.

108. The Project Manager will prepare the inception report no later than one month after the inception workshop. The inception report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board.

109. GEF Project Implementation Report (PIR): The Project Manager, the UNDP Country Office, and the UNDP-GEF Regional Technical Advisor will provide objective input to the annual GEF PIR covering the reporting period July (previous year) to June (current year) for each year of project implementation. The Project Manager will ensure that the indicators included in the project results framework are monitored annually in advance of the PIR submission deadline so that progress can be reported in the PIR. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR.

110. The PIR submitted to the GEF will be shared with the Project Board. The UNDP Country Office will coordinate the input of the GEF Operational Focal Point and other stakeholders to the PIR as appropriate. The quality rating of the previous year's PIR will be used to inform the preparation of the subsequent PIR.

111. Lessons learned and knowledge generation: Results from the project will be disseminated within and beyond the project intervention area through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project. The project will identify, analyse and share lessons learned that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region and globally.

³⁴ See guidance here: <https://info.undp.org/global/popp/frm/pages/financial-management-and-execution-modalities.aspx>

112. GEF Focal Area Tracking Tools: The following GEF Tracking Tool will be used to monitor global environmental benefit results: Climate Change Mitigation.
113. The baseline/CEO Endorsement GEF Focal Area Tracking Tool will be updated by the Project Manager/Team and shared with the mid-term review consultants and terminal evaluation consultants (not the evaluation consultants hired to undertake the MTR or the TE) before the required review/evaluation missions take place. The updated GEF Tracking Tool will be submitted to the GEF along with the completed Terminal Evaluation report.
114. Terminal Evaluation (TE): An independent TE will take place upon completion of all major project outputs and activities. The terminal evaluation process will begin three months before operational closure of the project allowing the evaluation mission to proceed while the project team is still in place, yet ensuring the project is close enough to completion for the evaluation team to reach conclusions on key aspects such as project sustainability. The Project Manager will remain on contract until the TE report and management response have been finalized. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the UNDP Evaluation Resource Center. As noted in this guidance, the evaluation will be ‘independent, impartial and rigorous’. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final TE report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board. The TE report will be publically available in English on the UNDP ERC.
115. The UNDP Country Office will include the planned project terminal evaluation in the UNDP Country Office evaluation plan, and will upload the final terminal evaluation report in English and the corresponding management response to the UNDP Evaluation Resource Centre (ERC). Once uploaded to the ERC, the UNDP IEO will undertake a quality assessment and validate the findings and ratings in the TE report, and rate the quality of the TE report. The UNDP IEO assessment report will be sent to the GEF IEO along with the project terminal evaluation report.
116. Final Report: The project’s terminal PIR along with the TE report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

Table 6: Mandatory GEF M&E Requirements and M&E Budget

GEF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget ³⁵ (US\$)		Time frame
		GEF grant	Co-financing	
Inception Workshop	UNDP Country Office	3,000	3,000	Within three months of project document signature
Inception Report	Project Manager and Chief Technical Advisor	5,000	None	Within two months of inception workshop
Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP	UNDP Country Office	None	None	Quarterly, annually

³⁵ Excluding project team staff time and UNDP staff time and travel expenses.

GEF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget ³⁵ (US\$)		Time frame
		GEF grant	Co-financing	
Monitoring of indicators in project results framework by UNDP MNE	Project Manager	Per year: 4,000 Total: 12,000	Per year: 6,000 Total: 18,000	Annually
GEF Project Implementation Report (PIR)	Project Manager and UNDP Country Office and UNDP-GEF team	None	None	Annually
Supervision missions	UNDP Country Office	None ³⁶	None	Annually
Oversight missions	UNDP-GEF team	None ²¹	None	Troubleshooting as needed
<i>Knowledge management</i>	<i>Project Manager</i>	7,700 (1% of GEF grant)	10,000	<i>On-going</i>
GEF Secretariat learning missions/site visits	Project Manager and UNDP-GEF team	None	None	To be determined.
<i>Annual audit costs</i>	UNDP Country Office and Project team	Per year: 4,000 Total: 12,000	None	Annually
Final GEF Tracking Tool to be updated by the Ministry of Foreign Trade and Economic Relations	Project Manager	5,000	None	Before terminal evaluation mission takes place
Independent Terminal Evaluation (TE) included in UNDP evaluation plan	UNDP Country Office and Project team and UNDP-GEF team	20,000	None	At least three months before operational closure
TOTAL indicative COST Excluding project team staff time, and UNDP staff and travel expenses		64,700	31,000	

³⁶ The costs of UNDP Country Office and UNDP-GEF's participation and time are charged to the GEF Agency Fee.

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

A. Record of Endorsement³⁷ 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 OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)

B. GEF Agency(ies) Certification

This request has been prepared in accordance with GEF policies ³⁸ and procedures and meets the GEF criteria for a medium-sized project approval under GEF-6.					
Agency Coordinator, Agency name	Signature	DATE (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Adriana Dinu, Executive Coordinator, UNDP-GEF		November 6, 2017	Marcel Alers, Principal Technical Adviser	+1 212-906-6199	marcel.alers@undp.org

³⁷ 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.

³⁸ GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, SCCF, and CBIT

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

<p>This project will contribute to the following Sustainable Development Goal (s): list relevant SDG goal (s) SDG 7: Affordable and clean energy - Ensure access to affordable, reliable, sustainable and modern energy for all SDG 13: Climate action - Take urgent action to combat climate change and its impacts</p>
<p>This project will contribute to the following country outcome included in the UNDAF/Country Programme Document: By 2021, people of Montenegro benefit from sustainable management of natural resources, combating climate change and disaster risk reduction. By 2021, people of Montenegro benefit from an enabling institutional and regulatory framework for sustainable and inclusive economic growth based on innovation, entrepreneurship and competitiveness</p>
<p>This project will be linked to the following output of the UNDP Strategic Plan: Outcome 1: Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for poor and excluded people.</p>
<p>Applicable Output Indicators from the UNDP Strategic Plan Integrated Results and Resources Framework: <i>Employment rate</i> <u>Baseline (2015):</u> Employment rate: 43.2%; male, 48.9%; female, 37.8% South, 50%; central, 49.2%; north, 27.5% Youth (15-24), 18.8% <u>Target (2021):</u> Employment rate: 48%; male, 53%; female, 43% South, 53%; central, 52%; north, 35% Youth (15-24), 29%</p>

	Objective and Outcome Indicators	Baseline³⁹	End of Project Target²⁴	Assumptions⁴⁰
Project Objective: To promote private sector investment in low-carbon and green businesses in Montenegro	Number of new development partnerships with funding for improved energy efficiency and/or sustainable energy solutions targeting underserved communities/groups and women	N/a	1 new partnership with IDF 20 new partnerships with businesses	Private companies are interested in pursuing green investment and have required knowledge, skills and capacities to identify and carry out such business opportunities
	tCO _{2eq} direct emissions reductions (attributable to the project-facilitated green investments made during the project's supervised implementation period, totaled over the respective lifetime of the investments)	0	20,400 tCO _{2eq}	Estimation over green business investments lifetime (20 years) Green financing enabled Continued support of IDF Timely startup of Eco-Fund

³⁹ Baseline, mid-term and end of project levels must be expressed in the same neutral unit of analysis as the corresponding indicator.

⁴⁰ Risks must be outlined in the Feasibility section of this project document.

	Objective and Outcome Indicators	Baseline³⁹	End of Project Target²⁴	Assumptions⁴⁰
	Number of project beneficiaries, including % of women	N/a	3,000 (including 10% - women)	Mainstreaming gender and encouraging women participation in project activities and as beneficiaries of project outputs.
	Volume of additional public and private investment mobilized for low GHG development	N/a	<i>Public:</i> US\$20,000,000 <i>Private:</i> US\$4,000,000	<i>Public:</i> Commitment and capacities at Eco-Fund, Ministry of Tourism and Sustainable Development, and IDF to implement and scale-up new financing mechanisms. <i>Private:</i> Private companies are interested in pursuing green investments and have the required knowledge, skills and capacities to identify and carry out such business opportunities.
Component 1: Policy development and business support services for green start-ups and SMEs	Number of decision makers in the Ministry of Tourism and Sustainable Development that understand and recognize policy and incentive options for green businesses in agricultural, tourism and energy sectors	0	10 (4 women)	Commitment at Ministry of Tourism and Sustainable Development to create capacities, increase knowledge and skills on policy incentive options for green businesses
	Level of capitalization of the Eco-Fund	0	3,000,000 Euro	Commitment and capacities at Eco-Fund and Ministry of Tourism and Sustainable Development to adopt and to enforce polluter-pays mechanisms
	Number of existing and potential entrepreneurs trained and assisted through the Green Business Incubator (green business services delivered)	0	100 (including 20% - women)	Learning opportunities offered by Green Business Incubator lead to green business growth Local authorities' and stakeholder's commitment to support the establishment and operationalization of Green Business Incubator
Component 2: Green business financing	Number of IDF staff, and other relevant institutions, trained to implement and market IDF's green business financing	0	10 (including 30% women)	Commitment at IDF and relevant institutions to create capacities, increase knowledge and skills to implement and market IDF's green business financing
	Number of green business investments supported via performance-based payment	0	20 (including 10% women-led SMEs)	Commitment and capacities at IDF to implement performance-based payments
Component 3: Raising awareness of green business practices and financing opportunities	Number of direct green business stakeholders (existing and potential entrepreneurs and technical specialist) reached out to by awareness raising activities	0	300 (including 20% - women)	Adequate promotional and communication tools enabled.

ANNEX B: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used)

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/CBIT Trust Funds or to your Agency (and/or revolving fund that will be set up)

N/a

ANNEX C: GHG EMISSIONS REDUCTION CALCULATIONS

For the bottom-up GHG emission reduction analysis, three different sectors have been analyzed: agricultural, tourism and energy sectors. Within these sectors, the most feasible green/low-carbon investment opportunities typical for South-East Europe and Montenegro have been identified:

- increased efficiency of water irrigation system (agriculture sector)
- various energy efficiency and renewable energy investments in tourist accommodations (tourism sector) and buildings retrofits (increasing energy efficiency),
- fuel switching (fossil to biomass) projects for existing SMEs/entrepreneurs (energy sector).

It has been assumed that the project will support five agricultural, five tourisms, and ten energy sector (i.e. five energy efficiency and five fuel switching) projects.

The following input data and assumptions have been used to estimate GHG emission reduction.

Table C.1 Inputs and assumptions for direct GHG emission calculation

Parameter	Input Data	Source
Montenegro's grid emission factor	0.571	Official Montenegro Authority's Documents
Useful life-time of investment, years	20	Equipment specification (average)
Number of projects implemented through project investment activities (performance-based payments), #	10	Project results framework
Number of projects implemented during project period based on technical assistance project activities (support to strengthening IDF's and Eco-Fund green business financial mechanisms portfolio), #	10	Project results framework

Energy sector

The energy sector GHG emission reduction calculation has been undertaken based on empirical data from UNDP Bosnia and Herzegovina's Green Economic Development (GED) project based on findings from 86 retrofitted buildings. Typical measures (recorded in 70% of cases) include thermal cladding of outer walls, insulation of roof and ceiling, as well as, in some cases, the replacement of old windows with new EE windows. These measures contribute to energy savings of up to 60%. In addition, mechanical measures such as thermostatic valve installation, fuel and boiler replacement (including fuel switch to biomass and/or other appropriate renewable sources) and calorimeter installation are also implemented in 45% of cases. The empirical results, monitored via EMIS (Energy Management Information System), show that the average CO₂ emission reduction per building is 58 t CO₂ annually, resulting in a total of 290 t CO₂ reduced (five projects), and a total amount of 5,800 t CO₂ over a 20-year horizon.

The average CO₂ emission reduction per fuel switch project has been based on GED project empirical data and adjusted for Montenegro (grid emission factor):

- Average consumption of typical SME building in South-East Europe: 200 kWh/m²⁴¹
- Average m² of net heated surface: 800m²
- Average system efficiency: 0.75⁴²
- Grid emission factor for Montenegro: 0.571⁴³

⁴¹ Source: estimation based on average consumption in public (220 kWh/m² annually) and residential buildings (180 kWh/m² annually) in South East Europe based on outputs from „Support to BiH to meet the requirements of the Energy Community Treaty with special focus on Energy Efficiency and Renewable Energy“ project in BiH“ (2012).

⁴² Source: empirical experiance from similar projects in Montenegro and the region

⁴³ Source: Power Utility of Montenegro (EPCG), and Local Energy Action Plan of the Municipality of Kotor (<http://kotor.me/uploads/assets/kabinet/2016/jan/lokalni-energetski-plan-opstine-kotor-nacrt.pdf>)

- Emission factor for Light Fuel Oil (LFO): 0.267⁴⁴
- Usage ratio of electricity and LFO: 60:40⁴⁵

Given the above data, the average CO₂ emission reduction potential per fuel switch project in Montenegro should amount 95 t CO₂ annually, resulting in a total of 480 t CO₂ reduced annually (five projects), and a total amount of 9,587 t CO₂ over a 20-year horizon.

The annual emission reduction from energy sector projects is therefore about 769 t CO₂, while total amount of 15,387 t CO₂ is expected to be reduced over a 20-year horizon.

Tourism sector

Expected CO₂ emission reduction from the tourism sector has been evaluated based on empirical data from GEF-5's *Towards Carbon Neutral Tourism* project where a total number of 12 projects has been analyzed and the average emission reduction per project calculated at 26 tCO₂ annually. Overview of analyzed CO₂ emission reduction projects in the tourism sector in Montenegro is given in Table C.2.

Table C.2 GHG Emission Reductions in Tourism sector in Montenegro

Eco-Certified Hotels	Annual CO₂ Reduction (tCO₂)	TCNT Investment (€)	Total investment (€)	Investment lifetime (years)	Lifetime CO₂ reductions (tCO₂)
Hotel Residence - Upgrade of photovoltaic system	33.78		26,000	15	507
Hotel MClub - Upgrade of photovoltaic system	15.29		13,000	15	229
Hotel Lighthouse - Walls insulation and windows replacement	65.86		147,500	20	1,317
Hotel Palata Venezia - heat insulation	2.51		7,125	15	38
Hotel Onogost - EE measures in reconstructions (walls, windows, room heating)	84.20		135,000	20	1,684
Hotel Krna - Solar water heating system	11.39		7,500	15	171
Hotel Krna - Solar water heating system	15.29		13,000	15	229
Apartments Val Maslina - Roof insulation and solar water heating	7.84		9,300	20	157
Apartments Klinci - Installing of photovoltaic system	37.54		26,000	15	563
Apartments Biljana - Installing of photovoltaic system	15.29		13,000	15	229
Apartments Sea Point - Installing of photovoltaic system	22.52		15,600	15	338
Apartments Sutomore - Solar water heating system	6.00		6,000	15	90
TOTAL	317.51		419,025		5,552

Given the above data, the average CO₂ emission reduction potential per tourism sector project in Montenegro should be 26 t CO₂ annually, resulting in a total of 130 t CO₂ reduced annually (five projects), and a total amount of about 2,600 t CO₂ over a 20-year horizon⁴⁶.

Agricultural sector GHG

GHG emission reduction within the agriculture sector has been assessed based on expected replacement of old pumping system with new, energy efficient (EE) pumping system. Based on expertise and knowledge from similar projects, the average annual electricity consumption of an agricultural water pump system with installed capacity of 100 kW amounts about 100,000 kWh, resulting in 60 t CO₂ emission in Montenegro. A conservative approach to increase the pumps efficiency has been taken: assuming 40% increase in energy efficiency by replacing the old pumps system with a new EE system, and resulting in 24 tCO₂ emissions reduction annually. The exact calculation approach is given in Table C.3.

⁴⁴ Source: IPCC

⁴⁵ Source: empirical experience from similar projects in Montenegro and the region

⁴⁶ 20- year lifetime horizon has been adopted for calculation since the most typical low-carbon investment in tourism facilities (PV and SWH systems) under current market conditions typically come with 20 year warranties, hence 20 years would be more appropriate lifetime

Table C.3 GHG Emission Reductions in agricultural sector in Montenegro

Old system		
water pumps system installed capacity ⁴⁷	100	kW
Annual electricity consumption ⁴⁸	105.120	kWh
Baseline CO _{2e} emission	60	tCO ₂
New EE system		
water pumps system installed capacity ⁴⁹	60	kW
Annual electricity consumption ⁵⁰	63.072	kWh
Expected CO _{2e} emission	36	tCO ₂
CO _{2e} emission reduction (baseline CO ₂ – expected CO ₂)	24	tCO ₂ /a
Horizon	20	years
Number of projects	5	
Total expected CO_{2e} reduction (t CO_{2e}, 20-year horizon)	2,400	

Given the above data, the average CO₂ emission reduction potential per agricultural sector project in Montenegro should be 24 t CO₂ annually, resulting in a total of 120 t CO₂ reduced annually (five projects), and a total amount of about 2,400 t CO₂ over a 20-year time horizon.

Overview of GHG emission reduction calculation

Table C.4 shows expected CO₂ emission reduction during project duration in three priority sectors.

Table C.4 Direct GHG emission reduction, per sector

Sector	GHG Emission Reduction per project, tCO ₂ /a	Number of Projects	Investment life-cycle	Total, tCO ₂
Energy:				
EE	58	5	20	5,800
Fuel switch	96	5	20	9,600
Agriculture	24	5	20	2,400
Tourism	26	5	20	2,600
TOTAL				20,400

To estimate consequential GHG emission reduction, the estimated direct reductions are multiplied by a replication factor – with the expectation that, as the portfolio of green business investments supported by IDF and Eco-Fund will increase at least by a factor of 4, over a 10-year period after project completion. Overall GHG emission reductions are summarized in Table C.5.

Table C.5 Aggregated GHG Emission Reductions: Direct and Consequential

GHG Emission Savings (tCO ₂)	2018-2020	2020-2040
Direct (project duration)	20,400	-
Consequential	-	81,600

⁴⁷ Source: experience from similar projects in agricultural sector

⁴⁸ Source: experience from similar projects in agricultural sector (based on average 30% utilization throughout the year and 40% throughout the day)

⁴⁹ Source: experience from similar projects in agricultural sector

⁵⁰ Source: experience from similar projects in agricultural sector (based on average 30% utilization throughout the year and 40% throughout the day)