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United Nations Development Programme
Russian Federation – UNDP Trust Fund for Development
Country: Republic of Armenia
PROJECT DOCUMENT

Project Title: Addressing climate change impact through enhanced capacity for wildfires management in Armenia

Sustainable Development Goal 13/Target 13.1: Climate Action: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

UNDAF Outcome 7/CPD Outcome 4 (Outputs 4.1/4.2/4.3): By 2020, sustainable development principles and good practices for environmental sustainability resilience building, climate change adaptation and mitigation, and green economy are introduced and applied.

UNDP Strategic Plan Outcome 5: Countries are able to reduce the likelihood of conflict and lower the risk of natural disasters, including from climate change.

UNDP Strategic Plan Output 5.2: Effective institutional, legislative and policy frameworks in place to enhance the implementation of disaster and climate risk management measures at national and sub-national levels.

Implementing Partner: Ministry of Nature Protection of the Republic of Armenia

Responsible Partner: United Nations Development Programme

Brief Description

This project will help address the critical issue of forest and wild fire risks exaggerated under the climate change, by supporting national partners building necessary technical capacity and establishing sustainable practices of monitoring, prevention and coordination of roles and responsibilities during suppression of forest fires. The project thus will contribute to the application of sustainable forest management practices enhancing carbon sink, as well as conservation of carbon in agriculture lands and protection of forest ecosystems' rich biodiversity.

The stated objectives can be ensured through provision of assistance for improvement and enforcement of the relevant policy and regulatory framework, strengthening forest fire early warning and monitoring systems, establishment of clear roles and responsibilities of corresponding national structures, and developing their technical capacity to execute their mandates. The project will provide for contemporary equipment, technologies, and other capacities to consolidate the efforts of respective stakeholders at regional and national levels.

The project will involve forest neighbouring communities in all project activities as key stakeholder and steward for sustainable management of forest resources, including assistance in transfer and application of climate change mitigation innovative technological solutions, e.g. production of pellets and bricks; energy efficient stoves, involving them in agroforestry system through cooperation with technology accelerator, thus generating income, and jobs.

The project builds on a number of past and current UNDP activities in the area of sustainable management of natural resources and disaster risk reduction. The project foresees significant cooperation with the Russian Federation, both through technical and advisory support and in terms of technology transfer.

Programme Period:	2017-2020	**Total resources required:**	$3,270,000
Atlas Project ID:	00102520	Total allocated resources:	
Output ID:	00104555	• Russia - UNDP TFD:	$1,000,000
Start date:	September 2017	• UNDP (parallel funding):	$1,930,000
End date:	September 2020	• Government (in kind):	$120,000
Management arrangements:	Support to NIM	• Other (parallel funding):	$220,000
LPAC Meeting Date:	19 May 2017		

Agreed by the Implementing Partner:

Artsvik Minasyan
Minister of Nature Protection

12.09.2017 _____
Date/Month/Year Signature

Agreed by

Bradley Busetto
UN Resident Coordinator/
UNDP Resident Representative

12.09.2017 _____
Date/Month/Year Signature

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I. DEVELOPMENT CHALLENGE

Armenia is located in the northern part of the subtropical climatic zone with intensive solar radiation and warm weather conditions. The country's scarce forest resources are often located next to intensively cultivated agricultural lands and grasslands and are greatly exposed to anthropogenic and climate change impact. The forecast of air temperature and rainfall changes according to the Third National Communication on Climate Change shows clear trends of further aridization for the major part of country. This will further increase the frequency and intensity of forest and wildfire.

Key figures. In the past few decades, increasing number of wildfires have caused serious damage to forest ecosystems, grasslands and livelihood of local communities. Over 100 cases of forest fire have been registered in the territory of the Republic of Armenia (RA) for the period 2001-2010, resulting in 1324 ha of burned areas, including 1172 ha covered by forests and 152 ha non-forested areas within the forest estate[1].

The following statistics indicate the dynamics of fires and burned areas since 2009:

Year	Cases of Fires	Burned Area in hectares	Area covered by forests in hectares
2009	17	18.7	7.5
2010	50	846.9	786.1
2011	56	472.6	421.2
2012	63	239.3	170.4
2013	23	109	39.4
2014	44	65	28.1
2015	41	1,326.9	89.7

In total, 294 cases of forest and wildfire were registered in the period of 2009-2015 period covering 3078,4 ha area, including 1542,4 ha of forests [2]. The forest burned during the period of 2001-2015 constitutes 0,57% of the total forest-covered area of Republic of Armenia.

The main cause of forest and wildfires is burning of agricultural residues after harvest in the lands adjacent to forests. It mainly happens during most dangerous period in terms of the probability of wildfires, from July to September, when the major heat waves are observed. In the years 1980-2012, the number of heat waves for the mentioned period has increased by 40% as compared to the years 1948-1980. Moreover, there are clear indication that the number of fires and the burned areas could grow rapidly due to aridization of climate expected under regional scenarios for climate change and continuous degradation of forest ecosystems of the RA due to accumulation of dry material in forests and, including due to pest outbreaks.

Negative effects of forest fires. Armenia is considered by the International Union for Conservation of Nature (IUCN) as one of the 25 worldwide biodiversity hotspots. Most of the high biodiversity hotspots in the territory of the RA are linked to forests or forestlands. For this reason, it is important to analyse the nature of vegetation fires, to develop knowledge and a forward-looking policy, appropriate legislation, and corresponding capacities to prevent wildfires and apply efficient methods fire suppression.

Wildfires expose considerable risk for the local communities and population. Smoke pollution caused by the fires in the vegetated area also greatly affects human health.

Public attention to forest fires has considerably increased after the implementation of the "Adaptation to climate change impacts in mountain ecosystems of Armenia" UNDP-GEF/00051202 project in southern Armenia. The project proved that the prevention of forest fires strongly depends from building appropriate awareness in local communities, establishing good coordination between actors on all levels and technical enhancement of forest fighting groups in Syunik marz. OSCE initiated the "Enhancing National Capacities on Fire Management and Wildfire Disaster Risk Reduction in the South Caucasus" project within the framework of the Environment and Security (ENVSEC) initiative in 2009. UNDP and OSCE collaborated on the topic of forest and wildfire effectively. Collaboration was extended also on regional level within the Black See Cross Border

[1] "Adaptation to climate change impacts in mountain ecosystems of Armenia" UNDP/GEF/00051202 project materials

[2] Environment and natural resources in RA, 2009-2016

Cooperation in the “Streams suppress fires” program, intended to set up a cooperation framework in forest fire risk assessment and the development of actions for fire prevention in various types of forests (2013-2015).

The forests in Armenia are distributed rather unevenly - 65% are located in the north and north-east, 25% - in the south-east, and the rest - in the central part of the country. The country is characterized by subtropical climate with high solar radiation, complicated topography with large vertical and horizontal dissection values, which contributes to the risk of wildfire development. Considering growing impact of climate change, the combined effect of forest type and weather conditions can increase the fire danger class.

The risks imposed by climate change to natural ecosystems and settlements are prioritized in the Intended Nationally Determined Contributions of Armenia under the Paris Agreement. The reduction of the negative impact of forest fires on forests and ecosystems can be considered as combined adaptation and mitigation measure with synergic effect on conservation of greenhouse sinks. The measure can be considered appropriate under Article 5 of the Paris Agreement which calls Parties’ actions ‘to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases as referred to in Article 4, paragraph 1 (d), of the Convention, including forests.

Forecasts. According to the Second National Communication on Climate Change, the vulnerability of Armenia’s forest to climate change will increase considerably by 2030: possible losses of forested areas due to forest fires are assessed to stand at 1200-1300 ha, leading to reduction of carbon accumulation by 650-700 ton annually[3].

According to the Third National Communication on Climate Change, the temperature will continue to increase in all seasons of the year (see the table below). However, according to the worst-case scenario, starting from the mid-21th century (2041-2100) the temperature will rise at a more rapid rate. In this case it is very likely that, by 2100, the average annual temperature in Armenia will exceed the baseline (1961- 1990) by 4.7 ^{0}C.

Table Projected changes in annual and seasonal average temperatures in the territory of Armenia compared to the average for 1961-1990, ^{0}C

Seasons	1961-1990 average	Scenarios	2011-2040	2041-2070	2071-2100
Winter	-5.3	RCP, 6.0	1.4	2.6	3.6
		RCP, 8.5	1.7	2.8	4.4
Spring	4.3	RCP, 6.0	1.3	2.4	2.7
		RCP, 8.5	1.4	2.7	3.9
Summer	15.7	RCP, 6.0	1.9	3.0	3.8
		RCP, 8.5	2.1	4.0	6.0
Autumn	7.2	RCP, 6.0	0.8	2.3	3.0
		RCP, 8.5	1.4	3.2	4.4
Year	5.5	RCP, 6.0	1.3	2.6	3.3
		RCP, 8.5	1.7	3.2	4.7

The figure below presents spatial distribution maps for annual mean temperature for the 1961-1990, and projections for 2071-2100. It is expected that, by 2100, temperature will increase in most regions of Armenia. Increased temperature in mountainous regions demonstrates an apparent retreat in negative temperatures (blue-coloured areas, see figure b)[4]. For instance, 2100 annual mean negative temperatures will be maintained only in the highlands of Aragats, Geghama, and the Zangezur mountains. In general, seasonal and annual temperature and precipitation change trends are similar. It should be noted that maximum temperature growth is observed during the summer.

These projections are quite disturbing also in terms of forest and wildfires, as such climatic change will trigger the occurrence of dry climate, droughts, and hot winds.

[3] Second National Communication on Climate Change, RA, 2010

[4] Third National Communication on Climate Change, RA, 2015

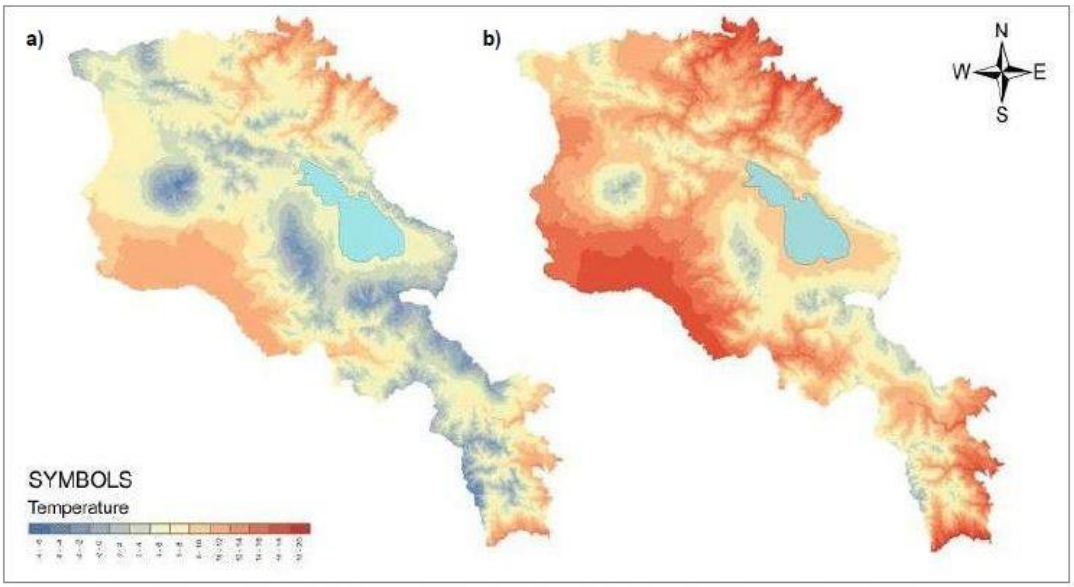


Figure . Distribution of annual average temperature in Armenia in (a) 1961-1990 and (b) projections for 2071-2100, RCP 8.5 scenario

II. STRATEGY

Theory of change (ToC).It is expected that revision and update of corresponding policy and legislation on forest and wildfires, establishment of operative-functioning early warning system under the auspice of Inter-Governmental Task Force (co-ordinated by MoES) along with development of capacities, alternative entrepreneurship and innovation based technologies will end-up with well-educated, trained and equipped forest and wildfire fighting community, sustainable forest management approaches and resilient environment.

The diagram in the **Annex I** shows a theory of change with the linkages between the development challenge, pathways of changes, indicators and desired change.

The Sendai Framework for Disaster Risk Reduction 2015-2030 calls for considering the shared responsibility between the central Government and national authorities, sectors and stakeholders, as appropriate to national circumstances. The importance of accounting of local and specific characteristics of disaster risks is important, while determining the measures to reduce risk to strengthen the sustainable use and management of ecosystems and implement integrated environmental and natural resource management approaches that incorporate disaster risk reduction.

In 1998, the Government of the RA adopted the Decree N 589 (11.10.1998) “On Approving the Forest Fire Safety Rules of RA”, where the fire danger period is stated as period between disappearance of the snow cover in spring and formation of snow cover in late autumn or winter. During the fire danger period, both individuals and organizations should respect the forest fire safety general rules. The general rules stand for particular measures and instructions as to how to manage forest fires in the fire danger period, e.g. loggers have clear instructions how to act in the logged areas in order to minimize the fire danger and bear responsibility for their own activities. The Decree also refers to agriculture as the major source of forest fires that should be properly addressed. Recognizing the importance of addressing forest and wildfire issues, the government of Armenia has introduced certain legislative changes.

With assistance from the UNDP, The Government of Armenia has adopted a Decree on “Approving the national target program and the list of comprehensive activities for improving fire safety in forests and other plant-covered areas” (No. 563-A dated 29 May 2013) intended for improving fire safety in forests and other plant-covered areas.

The Government of Armenia has approved the national policy on wildfire management in forestlands, specially protected natural areas, agricultural lands, and settlements in accordance with the GoA Degree No 45-A dated 22 January 2015.

The potential risk of exaggeration of forest fires urges the authorized organizational units of the Ministry of Nature Protection, the Ministry of Agriculture and the Ministry of Emergency Situations to coordinate their actions and to closely cooperate with forest neighbouring communities to enhance preventive and early response measures.

Overall Goal / Expected impact: Revised and updated policy and legislation for prevention wildfires as part of sustainable forest management system, as well as established operative-functioning early warning system under the auspices of the Inter-Governmental Task Force coordinated by the MoES of Republic of Armenia.

Project Purpose / Expected Outcome: Well-educated, trained and equipped forest and wildfire fighting community-based rescue team for prevention and mitigation of forest and wildfire risks. Alternative entrepreneurship and innovation based activities for the prevention and mitigation of wildfire risks.

Project Objectives/Components:

1. **Policy, regulatory framework, early warning system**
2. **Equipment, training, capacity building, demonstration, alternatives**
3. **Climate change technology accelerator (CCTA)**

The project will support activities to address the necessary revision and updating of the current policy and legislation documents, normative acts and/or standards related to forest and wildfire management. The Inter-Governmental Task Force will be supported to enhance its coordination between different actors responsible for implementation of forest fire prevention measures, monitoring and early warning system, building on existing experience in the country and best international practice.

The curricula in respective educational establishments will be updated to include best international practices related to forest fire management under increasing risk of climate change. Field trainings for rescue teams and local community members, including provision of essential equipment and training on practical use of firefighting equipment will be conducted.

The project will support alternative innovative approaches (pellet and brick production, development of an agroforest system, climate change technology accelerator, etc.), thus increasing the local communities' capacity and responsibility for sustainable management of forest resources.

In the course of the project, the accelerator will identify and promote at least two innovative technological business ideas and ensure private investments of at least USD 1mln for commercialization of these innovations.

III. RESULTS AND PARTNERSHIPS

Expected Results

The project proposes to revise and update policy and legislation for prevention wildfires as part of sustainable forest management system, as well as to establish operative-functioning early warning system under the auspices of the Inter-Governmental Task Force coordinated by the MoES. The project's goal is to develop well-educated, trained and equipped forest and wildfire fighting community-based rescue team for prevention and mitigation of forest and wildfire risks. Alternative entrepreneurship and innovation based activities for the prevention and mitigation of wildfire risks also will be demonstrated and supported by the project.

Component 1.

Revised and updated policy and legislation documents, normative acts and/or standards related to forest and wildfire management.

Activities:

1.1: Legislation and normative documents

Forest and wildfire monitoring, prevention and fighting-related policies, strategies and legislations are scattered across a number of laws, by-laws, decrees and legislative documents that should be clarified to identify the inefficiencies and gaps.

The Decree No 45-A dated 22 January 2015 has approved the national policy on wildfire management in forest lands, specially protected natural areas, agricultural lands, and settlements set list of activities for the 2015-2019 period. That was the first policy document directly addressing the issue of forest and wildfire in the country. However, the implementation of the envisaged measures needs to be supported by the corresponding regulatory documents.

In particular, the fire safety rules should be developed and introduced in specially protected areas (Ministry of Nature Protection) and in agricultural lands (Ministry of Agriculture).

The importance of forest and wildfire prevention and control is not properly stated in the 2005 Forest Code. There are several statements on fire prevention in different articles, but it is very important to include an article on "forest fire reduction, prevention and control" in the forest protection part. Appropriate amendments should also be made to the National standard ՀՈՍ 350-2012 on "Safety in emergency situations: Forest fire monitoring and forecasting: General demands."

The national legislation and normative documents improvement must be reviewed to comply with international best practices in the area of forest and wildfire prevention and control. Further development of collaboration with Global Fire Monitoring Center (GFMC) as an international partner and Black See Cross Border Cooperation and Eurasian Economic Union Partners as a regional partner would be of particular value. Aside from the spheres of policy and legislation, one of the benefits of this networking would be the revision of existing national criteria for the identification of the classes of forest fire. The existing forest fire danger classes (5 classes) that were worked out decades ago on the basis of the vegetation cover do not reflect the current status of forest ecosystems any more. Forest fire danger classes need verification to a large extent, as there are new, internationally accepted and mostly quantitative characteristics based on temperature, humidity and wind. The climate change risk should be seriously considered as well.

There is an urgent need to merge the efforts of different stakeholders and, wherever possible, clarify the responsibilities of relevant organizational structures and units.

The efficiency of enforcement of current laws and rules as well ones to be introduced strongly depends on clarity of responsible entities. For instance, the statement in the amendment to Article 21 of the Law of the RA "On atmospheric air pollution" (1994) dated 14 September 2011 (14.09.11 AL-250-N) stating "*It is prohibited to burn household and industrial waste, as well as plant residue in natural environment, in settlements or in their vicinity, and boiler houses, ovens and other locations not meant specifically for their burning."* is weakly enforced as it was not supported with corresponding regulatory directives.

Forest and wildfire management (inventory, reduction, prevention, monitoring and control) organizational units are scattered across several Ministries and other structural units. Lack of coordination between these units, which is common in such situations, essentially hinder the proper functioning of that system. The common National forest and wildfire information system (NFIS) should be developed on the basis of the improved system of forest and wildfire statistical data acquisition, collection, analysis and exchange in national, regional and international contexts.

1.2: Early warning and monitoring systems through remote sensing

The forest and wildfire prevention, monitoring and firefighting is not possible without introduction of modern early warning system based on the application of well-developed geo-information technologies using remote sensing (RS), drones and ground-based components. The ground component should be based on operative data obtained from local administration, local communities or rescue team members specifically assigned for the task of forest and wildfire monitoring. The operative integration of remote and ground-based data on the unified GIS-based platform will facilitate prompt analysis to reflect the situation and act as a reliable source for decision-making. The unified information platform should be developed, maintained and coordinated by Inter-Agency Task Force on Fire Management within the Ministry of Emergency Situations (MoES).

The RS component technology will require corresponding hardware and software components and professional knowledge to interpret the acquired data. The combination of available satellite data with various internet-based RS data sources would provide objective and solid background for further, detailed monitoring of forest and wildfires based on drone technology. This technology has already been developed and tested in the country for emergency cases and situations. Taking into account the fact that forest and wildfires in Armenia usually cover areas mostly from tens to one hundred hectares, drone technology would be highly recommended for the monitoring and prevention of forest and wildfires. The application of the GIS platform for the

integration of remote and ground-based data, as well as the system supporting decision-making would require investments both in hardware and in software.

In addition, an early warning system should be established for emergency response information to the local population, tourists and visitors, especially in the high touristic season when heat waves are frequent and the danger of forest and wildfire is high. The forest fire early warning and response system in the country should be improved, in particular, the risk of forest and wildfire under changing climate conditions should be integrated into forest management plans and curricula.

The well-developed network of continuously monitored forest and wildfire fuel sampling plots will be important for planning preventive measures. On the basis of stratified vegetation maps of the dominant vegetation types, a network of sample plots and transect lines will be developed for the regular measurements of forest and wildfire fuel availability and condition. Standard approaches for inventorying surface fuel biomass will be applied in every representative location. Based on the knowledge of the spatial extent of the fuels the forest area management bodies can design strategies of fire prevention, detection and suppression, planning of optimal use of fire-fighting resources, development of the maps including available water resources and roads for organization of the fire suppression activities.

Thus the modelling of forest and wildfire fuel conditions with average climatic data and actual weather parameters and their further processing by means (and data) of modern geo-information technologies (RS, drones, GIS) would provide solid basis for the early warning, monitoring and response system.

Component 2.

Developed forest and wildfire fighting community-based rescue team and regional administrative capacities (including the institute of volunteers) for prevention and mitigation of forest and wildfire risks. Developed and supported alternative entrepreneurship-based activities for the prevention and mitigation of wildfire risks.

Activities:

2.1. Equipment for extinguishing forest fires

The list of equipment and tools for extinguishing of forest and wildfire recommended for the mountainous regions like Armenia is indicated below. Armenian forests and nearby grasslands are situated mostly on tough topographic areas with high dissected horizontal and vertical surface. In such conditions, forest and wildfire extinguishing demands mobile and flexible tools and equipment.

As such, small, artificial water reservoirs in upper stream watersheds of rivers could serve as unique means to extinguish forest and wildfires in highly dissected areas where access to firefighting and agricultural machinery is limited. Establishment of such water reservoirs at the beginning of forest and wildfire danger season would be an excellent indicator for the better preparedness for forest and wildfires in mountain terrain. The number and locations of such reservoirs should be based on the identified forest fire and wildfire locations on GIS-based analyses through integration of forest fuel model, RS and drone data, as well as ground truth information.

Another technique could be to use the tractor, with its plough's primary function in forest and wildfire suppression through application of heavy construction-style equipment to move large amounts of earth or remove vegetation. The tractor can create fuel breaks, safety zones and fire lines and facilitate access to previously inaccessible areas.

Based on initial assessment, the following community-based early response equipment and tools are suggested for provision to firefighting rescue teams:

- Backpack pumps and fire swatters suitable for extinguishing and smothering surface fires;
- Brush hooks and combi-tools designed to effectively remove surface and ladder fuels;
- Collapsible water tanks;
- Protective firefighting uniforms improving issues related to the health and safety of fire fighters;
- Backpack sprayers;
- Lights (torch, flashlight, headlight);

- Machinery to dig deep buffer trenches between un-burned forests and burned grasslands and forests, armed with hoes and fire rakes.

2.2. Capacity development

The project will suport the development of relevant educational material, adding forest and wildfire prevention and monitoring module to the curricula of “Forestry and Landscape Gardening” specialization at the Armenian National Agrarian University (ANAU).

The project will asssist in the introduction of the subject of “Forest and Wildfire Managment” in the curricula of the Crisis Management State Academy and will provide trainings to forest and nature conservation sectors’ employees (e.g. Ministry of Emergency Situations; Ministry of Agriculture; “Hayantar” SNCO; Ministry of Nature Protection; Bio-resources management agency), as well as to local communities.

The project will also support the development of cooperation platforms and networking between MoES structures (Rescue service, Hydro-meteorological centre, Crisis Management State Academy), MoA, MoNP, NGOs, volunteer rescuers/fire fighters, foresters and local community members for the professional knowledge and experience exchange.

Another important component of capacity development is theoretical and practical on-site training for fire rescuers/fire fighters and foresters on forest and wildfire fighting. Thus the project will ensure adapting and applying theoretical knowledge in concrete natural conditions: on different terrain and under different weather-climatic conditions.

Forest and wildfire suppression and extinguishing guidelines should be prepared and delivered to the high-risk communities, the staff of forest enterprises, as well as the personnel of specially protected areas. At the beginning of the forest and wildfire high danger period, meetings and explanatory activities will be conducted with the communities at risk on their “Code of Behaviour” and actions in different situations.

The enforcement of legislation to ban agricultural waste burning on local level through increased public awareness on wildfire/forest fire and risk reduction is important.

A network of public awareness signs, with corresponding text and picture information, should be developed and optimally distributed in forest and wildfire danger areas.

Formation and contribution of volunteer rescuer/fire-fighting teams at the local level in communities located near forests are another major activity under the capacity building component.

This activity also includes active participation in the regional and international forest and wildfire prevention and monitoring-related collaboration programs, projects and/or activities, and development of regional and international contacts and networking to address country-specific problems in all aspects of forest and wildfire management.

2.3. Investment ideas to reduce wildfire risk

Based on existing local experience and best international practices, the project will facilitate the development of innovative ideas and technological solutions to reduce the risk of wildfire, to increase preparedness and to improve local livelihoods. The best ideas and solutions will then be transformed into community-level micro demonstration projects. Community innovations and best practices incubated by the UNDP-GEF Small Grants Programme (SGP) and other UNDP projects will be considered for replication and scaling-up.

Investment examples may include establishment of community-based pellet production unit(s) to process residual straw (a by-product from the production of cereal crops) and other agricultural biomass that is largely burnt by the farmers in the field, into pellets (heating granules). Uncontrolled burning of biological waste by farmers in forest-adjacent communities is a major factor driving the increase in wildfires. In particular, stubble and straw that are not used for forage are traditionally burnt in the nearby farmlands. Besides, residual forest biomass such as staples, dry branches - major substances contributing to the expansion and propagation of forest and wildfires - can also serve as feedstock for pellet production in forest-adjacent communities.

Production of pellet and brick fuels on the basis of collected organic residue will contribute to the reduction of illegal logging for fuelwood, as well as serve as an alternative source of affordable energy and raw material to produce bio fertilizers - a new source of income generation for local

population. Below are photos of the Biomass pellet machine and ready pellets already piloted by UNDP Armenia through SGP.

Another innovative approach might be the establishment of demonstration agroforest systems. Agroforestry systems involve growing woody herbaceous species and perennials in association with food crops and livestock on the same piece of land. These systems are known to increase ecological diversity within a landscape unit and optimize the use of limited resources through the integration of complementary components. A principal advantage of these systems is the reduction in the length of the fallow period and the potential for continuous and intensive cropping. Agroforestry may also enable relatively more intensive use on steep lands and marginal soils, which cannot be used otherwise. This technique will increase soil humidity and mitigate the impact of drought and hot wind, which is essential to decrease the probability of wildfire.

Funding mechanisms for investment projects. In order to reduce "entry costs" and avoid reinventing a grant delivery/disbursement mechanism where a successful model already exists, the project may build on the rich operational and technical expertise of the SGP country programme in Armenia and leverage additional funding. The project will make best use of the well-established and highly successful SGP mechanism of Multi-Stakeholder National Steering Committee (composed of national government representatives, UNDP Country Office and civil society members representing NGOs/CBOs, academia, science and private sector). SGP's bottom-up approach in the formulation of project ideas and methodologies in reaching out the remote and vulnerable forest-adjacent communities will be applied to ensure the successful implementation of the community-based projects. SGP will contribute to project participatory formulation, strong community involvement, co-funding and post-project monitoring. UNDP-GEF project on "Mainstreaming Sustainable Land and Forest management in Mountain Landscapes of North-Eastern Armenia" will also invest into the community development component.

SGP experience to support local innovative ideas, e.g. pellet production or establishment of "forest gardens" as a means of rehabilitation of degraded forest lands and pastures can generate employment and income to the local communities through planting of both fruit trees and forest species. Within "Mainstreaming Sustainable Land and Forest management in Mountain Landscapes of North Eastern Armenia" (2016-2019) ongoing UNDP project rehabilitation of around 5000ha degraded forest and pasture lands, as well as establishments of agroforestry systems through local employment-guarantee schemes is envisaged.

Component 3.

Established sustainable mechanism for the promotion of innovations and replication of technological solutions in Climate Change adaptation and mitigation activities related to agriculture and forestry sector.

Activities:

3.1. Start-up teams, innovators, scientists, engineers, researchers, and entrepreneurs to move their products to the market, create new ventures, and promote innovation and entrepreneurship in Armenia

The Russian-Armenian University and the Silicon Valley-based Smartgate Venture Capital have recently come up with an initiative to set up the Armenia Startup Academy (ASA) to target incubation and acceleration of start-up projects through engagement of its resources. The ASA is working on setting up two major tracks of activities: Entrepreneurial and Start-up Track. The Start-up track program includes such educational and mentorship inputs as metrics, market selection and validation, go-to-market strategy, building the team, scaling the business, etc.

The ASA is currently in the process of establishing partnerships with leading acceleration and entrepreneurship education institutions in the Silicon Valley and Middle East to enhance the acceleration capabilities and get a global and regional outreach. Draper University and Singularity University will support with educational programs and provide curriculum support and tuition fee discount.

UNDP as leading development partner advocating for Climate Change consideration in development of Armenia will join its efforts with ASA to establish a special Climate Change window targeting technological solutions in agriculture and forestry sector. The current pipeline of considered projects already includes initiatives targeting CC related tasks and targets. Amongst them are

- A company specialized in real time imaginary. It provides persistent, real-time visual information about the location from stratosphere, whenever and wherever needed to identify and filter anomalies and incidents (e.g. forest fires and other visually identifiable natural disasters and phenomena).
- Team developing automatically identify /AI/ video monitoring system to AI (based on artificial intelligence) target incidents within an observable proximity and alarm and communicate on them as and when necessary.

Currently "Support to Small and Medium Enterprises Development in Armenia" (SMEDA) project, which is co-funded by the European Union and the German Federal Ministry for Economic Cooperation and Development (BMZ) work on Science and Technology Entrepreneurship (STEP) programme in Armenia. While UNDP will establish respective links with the SMEDA project, CCTA will stand up as first attempt to institutionalise flow of ideas and technologies under the Climate Change logic and umbrella targeting agriculture and forestry issue in Armenia. As a by-product, CCTA will establish a practice of Climate Change externality and additionality considerations during the evaluation of the costs and benefits for respective technologies and disseminate this practice.

It is expected, that in 3 years, this window will gradual expand to consider other technological solutions addressing Climate Change mitigation and adaptation beyond agriculture and forestry sector. CCTA will use proactive and reactive strategies to solicit innovative ideas such as announcements and head and technology hunting.

The overall work flow of activities includes but is not limited to the following:

- Supporting students in forming initiative groups/SMEs proposing technological and business solutions to address climate change adaptation and mitigation issues;
- Soliciting and screening existing projects from initiative groups/SMEs proposing solutions to address climate change adaptation and mitigation issues related to prevention of forest fires;
- Working on developing and implementation of acceleration curriculum, professional advice and proposing resources required for supporting introduction and scale up application, or respective innovative technologies;
- Working on improving the investment absorption capacity of the involved projects and facilitating access to funding for the next stage of expansion.
- Access to seed funding for the best start-up companies will be ensured trough either the above-mentioned Smartgate.vc or newly set-up impact fund. Smartgate.vc is $2m seed fund seeking investing $60k (in 2 tranches) per project in seed stage startups. Successful graduates of the ASA will have guaranteed funding by the Fund. Currently The Fund partners will seek to engage co-investments from professional investors and angels.

UNDP Armenia CO is currently working on partnerships with several fund managers on setting up a dedicated impact fund to support the projects to be sourced from ASA and other accelerators.

Certain inputs under Component 3 could be provided to facilitate setting up and mobilizing resources for this dedicated impact fund.

- Linkages with potential investors - CCTA will make sure that there are at least two innovative technological business ideas linked to private investors and least USD 1mln attracted for commercialization of these innovations.

CCTA will come to help start-up teams, innovators, scientists, engineers, researchers, and entrepreneurs to move their products to the market, create new ventures, and promote innovation and entrepreneurship in Armenia.

Resources Required to Achieve the Expected Results

The project will require distinct human and material resources to achieve the expected results. The UNDP Sustainable and Resilience (SGR) portfolio and UNDP-GEF ongoing "Mainstreaming sustainable land and forest management in north-eastern mountain landscapes of Armenia" project staff based on theory of change of the proposed project proposal and established experience of 'support to NIM' modality will follow and monitor project execution towards the desired outcomes. The required key resources, such as people (including UNDP staff time from the country), purchases, partnerships, etc. that would be required to deliver the adequately estimated, costed and included in the detailed budget of the project (**Annex 2**). Government of Armenia (MoES and MoA) will co-fund the project by $120.000: mostly to support project activity 1.2. (Early warning and monitoring systems through remote sensing-$80,000) , 2.1.(Equipment for extinguishing forest fires-$20,000) and travel/office costs ($20,000). From the other funds $220,000 will be raised for start-up teams, innovations, research, etc. The UNDP-GEF ongoing SLM/SFM project implementation for 2016-2019 period will provide $1,930,00 parallel funds.

Partnerships and links to UNDP's ongoing activities

The project will be implemented in close cooperation with the Ministry of Emergency Situations, Ministry of Agriculture, Ministry of Nature Protection and Ministry of Territorial Administration and Development.

The project will establish multifaceted cooperation with the Russian Federation, as per the following:

- Russian-Armenian (Slavonic) University (RAU) is a unique institution in the South Caucasus region, being under the joint authority of the Russian Federation and the Republic of Armenia. The RAU was established in 1997, while the first intake of students was held in February 1999. Starting from 2002, scientific centres, institutions and problem research groups have been developing within the university and have started offering post-graduate courses to the students.
  The Russian-Armenian University and the Silicon Valley-based Smartgate Venture Capital have recently come up with an initiative to set up the Armenia Startup Academy/ (ASA) to target incubation and acceleration of start-up projects through engagement of its resources (valued at about US$2000 per month). RAU will provide the ASA and CCTA with a 200 sqm space furnished with co-working desks and necessary equipment, including whiteboards, library, etc. RAU has also committed to $50,000 annual funding for the period of 2017-2019.

- Ministry of the Russian Federation for Affairs for Civil Defence, Emergencies and Elimination of Consequences of Natural Disasters (EMERCOM) has extensive experience in forest and wildfire policy issues, rescue services, development of System of Disaster Management (SDM), organizing the training of the population, and governing agencies and SDM forces for disaster management and response that could be very valuable for the project management and Armenian partner Ministry and agencies.

- The Federal Agency for Forestry (Rosleskhoz) of Russian Federation has extensive experience in all aspects of forest management, including forest inventory, exploitation, protection, seed farm, reforestation and forest rehabilitation as well as forest monitoring and economy. This experience is rather valuable and applicable for local conditions as

Armenian forest administration and management are implementing about the same approaches and steps.

- Early warning systems introduced in Armenia and piloted in Tavush region, technologically designed and developed in the 'Telegraph equipment plant' JSC Kaluga (Russian Federation). The early warning system designed by that factory has been widely tested and used on federal and regional levels in the Russian Federation.

- The establishment of an early warning system in Armenia is a priority for the GoA. Thanks to already established partnership between MES of RA, 'Telegraph equipment plant' JSC Kaluga, and UNDP Armenia, early warning systems were installed in 8 rural communities and 3 cities throughout Armenia (in Syunik and Lori regions).
  This partnership could be further extended through the replication of activities in other regions of Armenia.

- The "Intergovernmental council for the forest industry and forestry" of CIS countries (Armenia, Belarus, Kazakhstan, Kirgizstan, Moldova, Russia, and Tajikistan) was founded in 1998 to enhance the collaboration in forest industry and forestry-related topics. The Council is formed from members of managerial staff of ministries, agencies and/or other structures or partner countries and is aimed at developing mechanisms for cooperation between ministries and agencies.
  "Armforest" SNCO participates in all the activities of this council as the responsible agency from the RA. Forest and wildfires are also within the scope of common interest of partners in the Council and thus this important topic could serve as a solid platform for specific collaboration and exchange of experiences. This is particularly important in light of the new level of partnership between countries that are members of the Eurasian Economic Union.

The project will build on a number of UNDP Armenia programmatic interventions, including:

- The UNDP-GEF ongoing project "Mainstreaming Sustainable Land and Forest management in Mountain Landscapes of North Eastern Armenia" (2016-2019), which will allocate over $700,000 for inventory, mapping of forest & land resources in Lori and Tavush, revision of 10 forest enterprise management plans, training, workshops and consultations. Over a $1,000,000 will be allocated for restoration of degraded forests, sustainable management of degraded pastures, hay areas, and carbon stock assessment and procurement of field equipment. Another $200,000 will be allocated for community project implantation. UNDP will also contribute a car and cover the salary of a driver for this project.
- Under the EU (DGECHO) funded "Strengthening Community Based Resilience and Environmental Emergency Preparedness Capacities in Armenia" project (2016-2018) UNDP will provide parallel funding under the following activities:

a) Early warning regional management system will be installed in Syunik and Lori regions, in Kapan, Stepanavan and Dilijan cities, as well as in 21 rural communities. The MoES will cover the operational costs, as the system is becoming a part of the national early warning system.
b) In partnership with MoES, UNDP will develop and test DRR and Emergency Response plans to become a unified model for disaster preparedness and response. UNDP will organize a simulation exercise to test the community preparedness and response capacities based on the Disaster Risk Reduction and Emergency Response plans.
c) UNDP will contribute to the integration of the educational component on forest fire management capacity building into the existing training modules as well as into the educational curriculum of Crisis Management State Academy, thus strengthening the capacity development of the representatives of MoES, rescuers, community administration representatives, and so on.

- The project will also benefit from additional resources of the UNDP-GEF Small Grants Programme through allocations designed to support community-based investment projects creating alternative livelihood opportunities for local people, as well as innovative technological solutions and management approaches that reduce wildfire risk and address Climate Change adaptation and mitigation in 2017-2018.

- The Project Management Unit will leverage financing from additional projects managed both by governmental agencies of RA and international organizations.

Risks and Assumptions

The chosen strategy, change of pathway and the assumptions on which the project results depends carry certain risks that could threaten the achievement of results. The key risks of project execution and potential negative social and environmental impacts will be mitigated: **Annex 3 (Social and Environmental Screening)** and **Annex 4 (Risk analysis).**

Stakeholder Engagement

The project will be implemented in close cooperation with the Ministry of Nature Protection, Ministry of Agriculture, and Ministry of Emergency Situations. These institutions have specific interest in the project on account of the potential impacts or benefits that they may encounter from the project, or more importantly through existing statutory obligations and responsibilities that they are responsible for. The principle and governing stakeholder institutions for the project are the Ministry of Nature Protection (MNP) and the Ministry of Agriculture (MoA).

The MoNP is a national designated authority responsible for coordination of implementation of the country's commitments under major Rio Conventions, namely the UNCBD, UNFCCC and UNCCCD. MoNP has comprehensive regulatory authority over the conservation and sustainable use of natural resources, including management of most of protected areas in Armenia, ranging from policy development on the one end to operational licensing for resource utilization and environmental inspection, on the other.

The Ministry of Agriculture (MoA) is the national authority responsible for forest and pasture management, including policy making and monitoring, with a number of obligations in the land management sector. The roles and functions of the major institutional stakeholders that would be involved, or could be potentially involved in the projects are summarized in the table below:

Stakeholders and target groups	Anticipated roles to play
Ministry of Nature Protection (MoNP) of Republic of Armenia *-Biodiversity Policy Division* *-Bio-resources Management Agency* *-Environment Legal Department* *-State Environmental Inspectorate* *-State non-commercial organizations (e.g. Dilijan National Park SNCO)*	Within the limits of its powers, the design and monitoring of state policy programmes and strategies related to conservation and reasonable use and reproduction of natural resources (with the exception of extractable resources) of the Republic of Armenia's environment, including mineral resources, land, water, air, flora and fauna, as well as specially protected nature areas. Provision of State Management for prevention or reduction of harmful effects on environment, including mineral resources, land, water, air, flora and fauna, including specially protected nature areas, as well as conservation of specially protected nature areas, reasonable use and reproduction of natural resources (with the exception of extractable resources)
Ministry of Agriculture (MoA) of Republic of Armenia *-Forestry department of MoA* *- Hayantar SNCO* *-"State Forest Monitoring Centre" SNCO*	Design and implementation of monitoring of programs in forest conservation, protection, reproduction and use, as well as efficient use of forest resources. Design and implementation monitoring of programs in compliance with legislation aimed at increase of productivity and reclamation of agricultural lands' use. The subject and aim of "Hayantar" SNCO activities is implementation of state programs for conservation, reproduction and use of State Forest Fund of Republic of Armenia. The subject and aim of "State Forest Monitoring Centre" SNCO activities is implementation of state forest monitoring
Ministry of Emergency	Ministry of Emergency Situations (MoES) through its rescue team

Situations of Republic of Armenia *-Rescue service* *-State fire and technical safety inspection*	and services, state fire and technical safety inspection, regional and local operative infrastructures and particularly as co-ordinator of Inter-governmental task force on forest and wild fires acts as one of key partner and stakeholder in the project.

Knowledge

The project will consistently use the existing channels, including UNDP website and the websites of partners, along with the social media tools to share updates about the results and implementation status of the project. In the meantime the knowledge products of the project, such as early warning system and education/training curricula promoting forest and wild fire management and created by the project will be open and available for all the interested parties. Next to this, the project will ensure that all the public events are widely covered by media and the most popular media outlets regularly get feeds from the project to provide the stakeholders updated content about the project and its lessons learnt.

Gender Mainstreaming

The project corresponds to UNDP Gender Marker GEN-2 score, in line with the respective output(s) of the 2016-2020 Country Programme Document signed with the Government of Armenia. Gender equality and women's empowerment parameter is aimed to be a significant objective of the output(s). In particular, the project will focus on the following:

a) Advocate for strengthening participation of women in decision-making on climate adaptation, mitigation and disaster risk reduction. This includes building capacities for gender balanced participation in the formulation and implementation of policies, programmes and strategies.
b) Promote gender equality for resilience, including in disaster risk reduction, climate mitigation and adaptation.

Sustainability and Scaling Up

The project's intervention logic is galvanized by the development strategy of Armenia, as well as the country's development vision for sustainable development and good practices for environmental sustainability resilience building, climate change adaptation and mitigation, as well as green economy introduction. The project is fully supported by all the relevant state stakeholders and is backed up by the knowledge networks, consultations and technical cooperation by all the related state agencies. This will undoubtedly ensure the sustainability of the project by providing strong government commitment and smoothly operating regulatory framework.

Next to national priorities, the project will build strong local ownership by applying participatory methods and community engagement mechanisms. Strong ownership, intervention strategy responding to the local needs, coupled with the measures of retaining the benefits and income in the communities will strengthen the sustainability of the project. While the project's approach is community-oriented and focuses on the specificities of the community, UNDP's experience in the country has proven that it can be easily adopted to tackle the rural development challenges in other countries as well.

IV. PROJECT MANAGEMENT

Cost Efficiency and Effectiveness

In order to be cost-effective and work with high effectiveness the project management will rely to evidence on similar approaches in the country in order to deliver maximum results with available resources. By using theory of change analyses different options to achieve the maximum results with available resources will be explored. UNDP SGR portfolio management approach will be used to improve cost effectiveness by leveraging activities and partnerships with other initiatives/projects. Project management board, SGR portfolio and project implementation unit with other stakeholders and partners will conduct joint operations on monitoring of project activities or procurement process to increase the effectiveness.

Project Management

The project will be implemented through 'support to National Implementation Modality'. UNDP will provide the Implementing Partner with the following major support services for the activities of the project in accordance with UNDP corporate regulations: (i) Identification and/or recruitment of project personnel; (ii) procurement of goods and services; (iii) financial services, based on the Letter of Agreement (Annex 6) on DPC costs.

UNDP will ensure the accountability, transparency, effectiveness and efficiency of the project. The UNDP Country Office will ensure also the financial oversight, including approval of expenditures and independent audits, monitoring and mid-term and final evaluation of progress and results.

The Ministry of Nature Protection will be the Implementing Partner of the Project. The representative of MNP, acting as the National Counterpart, shall represent the interests of the Republic of Armenia and will be consulted on all substantive issues related to the execution of project activities.

UNDP will provide support services to the Implementing Partner in accordance with the Letter of Agreement to be signed with MNP which will be annexed to this project document.

A Project Steering Committee (PSC) will be established to oversee the management of the project. The PSC will be represented by the implementing agency, the key partners, including project beneficiaries and UNDP Armenia. Regular PSC meetings will be organized to monitor the execution of the program activities. PSC meetings will take place as necessary, but at least once a year. PSC will monitor project progress, provide political oversight, and offer general advice for project implementation to make sure the project is consistent with national development priorities.

SUMMARY BUDGET

Project Components	Total funds required (USD)
Component 1 Policy, legislation, normative acts, early warning systems	163,600
Component 2. Equipment, training, capacity building, alternatives, demonstration	421,600
Component 3. Start-up teams, innovators, scientists, engineers, researchers, and entrepreneurs to move their products to the market, create new ventures, and promote innovation and entrepreneurship in Armenia	316,800
Sub-total Programme	***902,000***
Component 4. Project implementation costs	98,000
Total	**1,000,000**
Russian Trust Fund contribution	1,000,000

V. RESULTS FRAMEWORK

Intended Outcome as stated in the UNDAF/Country Programme Results and Resource Framework:
UNDAF Outcome 7/CPD Outcome 4 (13). By 2020, sustainable development principles and good practices for environmental sustainability resilience building, climate change adaptation and mitigation, and green economy are introduced and applied

Outcome indicators as stated in the Country Programme Results and Resources Framework, including baseline and targets:
Indicator 7.1: No. of innovative tools/approaches introduced to promote environmental sustainability and resilience principles. Baseline: 0; Target: 20
Indicator 7.2: No. of communities benefiting from innovative disaster risk reduction/resilience measures and practices Baseline: 0; Target: 500
Indicator 7.3: No. of hectares of rehabilitated landscapes and areas demonstrating sustainable use practices, Baseline: 0; Target:20,000
Indicator 7.4: No. of policy documents and legal acts for, and carbon dioxide-equivalent emission reduction from, application of climate change adaptation and mitigation. Baseline: 0; Target: 90 Kilotons carbon dioxide - equivalent; 10 policy documents and legal acts.

UNDP Strategic Plan Outcome 5. Countries are able to reduce the likelihood of conflict and lower the risk of natural disasters, including from climate change.

Project title: Addressing climate change impact through enhanced capacity for wildfires management in Armenia
Atlas Project Number: 00102520/00104555

EXPECTED OUTPUTS	OUTPUT INDICATORS	DATA SOURCE	BASELINE		TARGETS (by frequency of data collection)				DATA COLLECTION METHODS & RISKS
			Value	Year	Year 1	Year 2	Year 3	Year 4	FINAL	
Output 4.1 *Regulatory framework of social, environmental and economic sectors is updated to better address environmental sustainability and resilience principles.*	***4.1.1.*** *No. of approved legal documents addressing environmental sustainability and resilience.*	*Reports from secretariats of relevant conventions* *United Nations system international databases and reports (annual)*	0	2017	0	2	4	7	13	Official reports, UNDP website.

Output 4.2 *Innovative climate change and disaster-risk reduction/resilience measures and practices applied and replicated across the country.*	***1.4.2.*** *No. of measures and practices applied; no. replicated. 40% communities incorporated disaster-risk reduction and risk analyses into local development strategies* ***4.2.1.*** *At least 150 rural communities apply innovative tools* ***4.2.1.*** *20 cities apply innovative tools* ***4.2.1.*** *At least 30 rural communities and cities apply innovative climate change and disaster-risk adaptation measures (including gender and disability considerations)* ***4.2.1.*** *Additional 20 communities replicated*	*Periodic assessment of data collection instruments and indicators (annual)*	0	2017	4 4 0 0 0	16 16 4 5 4	80 50 6 10 6	100 80 10 15 10	200 150 20 30 20	Official report; Government, national disaster-risk reduction platform; UNDP.
Output 4.3 *Government uses innovative mechanisms and tools for evaluation and decision-making over the conservation and sustainable use of natural resources**.***	***4.3.1.*** *No. of innovative tools and practices developed, approved and applied. Natural resources used or returned to sustainable management mode.* *At least 3 national-level interventions conducted for improved decision-making.* ***4.3.1.*** *5,000 ha degraded mountain ecosystems restored in sustainable manner.*	*Sustainable development goals progress reports; Government progress reports and speaking engagements (annual)*	0	2017	0 0	0 1000ha	1 2000ha	2 2000ha	3 5000ha	*Website of the Ministries of Nature Protection and Agriculture; national reports, including communication to conventions.)*

VI. MONITORING AND EVALUATION

In accordance with UNDP's programming policies and procedures, the project will be monitored through the following monitoring and evaluation plans:

Monitoring Plan

Monitoring Activity	Purpose	Frequency	Expected Action
Track results progress	Progress data against the results indicators in the RRF will be collected and analysed to assess the progress of the project in achieving the agreed outputs.	In the frequency required for each indicator.	Slower than expected progress will be addressed by project management.
Monitor and Manage Risk	Identify specific risks that may threaten achievement of intended results. Identify and monitor risk management actions using a risk log. This includes monitoring measures and plans that may have been required as per UNDP's Social and Environmental Standards. Audits will be conducted in accordance with UNDP's audit policy to manage financial risk.	Quarterly	Risks are identified by project management and actions are taken to manage risk. The risk log is actively maintained to keep track of identified risks and actions taken.
Learn	Knowledge, good practices and lessons will be captured regularly, as well as actively sourced from other projects and partners and integrated back into the project.	At least annually	Relevant lessons are captured by the project team and used to inform management decisions.
Annual Project Quality Assurance	The quality of the project will be assessed against UNDP's quality standards to identify project strengths and weaknesses and to inform management decision making to improve the project.	Annually	Areas of strength and weakness will be reviewed by project management and used to inform decisions to improve project performance.
Review and Make Course Corrections	Internal review of data and evidence from all monitoring actions to inform decision making.	At least annually	Performance data, risks, lessons and quality will be discussed by the project board and used to make course corrections.
Project Report	A progress report will be presented to the Project Board and key stakeholders, consisting of progress data showing the results achieved against pre-defined annual targets at the output level, the annual project quality rating summary, an updated risk long with mitigation measures, and any evaluation or review reports prepared over the period.	Annually, and at the end of the project (final report)	
Project Review (Project Board)	The project's governance mechanism (i.e., project board) will hold regular project reviews to assess the performance of the project and review the Multi-Year Work Plan to ensure realistic budgeting over the life of the project. In the project's	Annually	Any quality concerns or slower than expected progress should be discussed by the project board and management actions agreed to

	final year, the Project Board shall hold an end-of project review to capture lessons learned and discuss opportunities for scaling up and to socialize project results and lessons learned with relevant audiences.		address the issues identified.

Evaluation Plan

Evaluation Title	Partners (if joint)	Related Strategic Plan Output	UNDAF/CPD Outcome	Planned Completion Date	Key Evaluation Stakeholders	Cost and Source of Funding
Project Final Evaluation	All project partners	National and sub-national systems and institutions enabled to achieve structural transformation of productive capacities that are sustainable and employment - and livelihoods-intensive	By 2020, sustainable development principles and good practices for environmental sustainability resilience building, climate change adaptation and mitigation, and green economy are introduced and applied	September 2020	All project stakeholders	$9,200 project budget

VII. MULTI-YEAR WORK PLAN [56]

All anticipated programmatic and operational costs to support the project, including development effectiveness and implementation support arrangements, need to be identified, estimated and fully costed in the project budget under the relevant output(s). This includes activities that directly support the project, such as communication, human resources, procurement, finance, audit, policy advisory, quality assurance, reporting, management, etc. All services which are directly related to the project need to be disclosed transparently in the project document.

EXPECTED OUTPUTS	PLANNED ACTIVITIES	Planned Budget by Year				RESPONSIBLE PARTY	PLANNED BUDGET		
		Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020		Funding Source	Budget Description	Amount
Activity 1 ***Policy, legislation, normative acts, early warning systems*** **Baseline:** 1.1. No. of policy documents and legal acts for, and carbon dioxide-equivalent emission reduction from, application of climate change adaptation and mitigation; *Baseline: 0; Target:* 90 Kilotons carbon dioxide- equivalent; 10 policy documents and legal acts. **Indicators:** 1.1. No. of approved legal documents addressing environmental sustainability and resilience.	1.1. Legislation and normative documents	0	18,000	17,000	1,000	UNDP	TFD	72100 Contractual Services-Companies 71300 Local Consultants	36,000
	1.2. Early warning and monitoring systems through remote sensing	5,000	46,200	56,200	20,200	UNDP	TFD	72100 Contractual Services-Companies 71300 Local Consultants 71600 Travel	127,600
	Sub-Total for Activity 1								**163,600**
Activity 2 ***Equipment, training, capacity building, alternatives, demonstration.***	2.1 Equipment for extinguishing forest fires.	10,000	130,000	100,000	16,000	UNDP	TFD	72100 Contractual Services-Companies	256,000

[5] Cost definitions and classifications for programme and development effectiveness costs to be charged to the project are defined in the Executive Board decision DP/2010/32

[6] Changes to a project budget affecting the scope (outputs), completion date, or total estimated project costs require a formal budget revision that must be signed by the project board. In other cases, the UNDP programme manager alone may sign the revision provided the other signatories have no objection. This procedure may be applied for example when the purpose of the revision is only to re-phase activities among years.

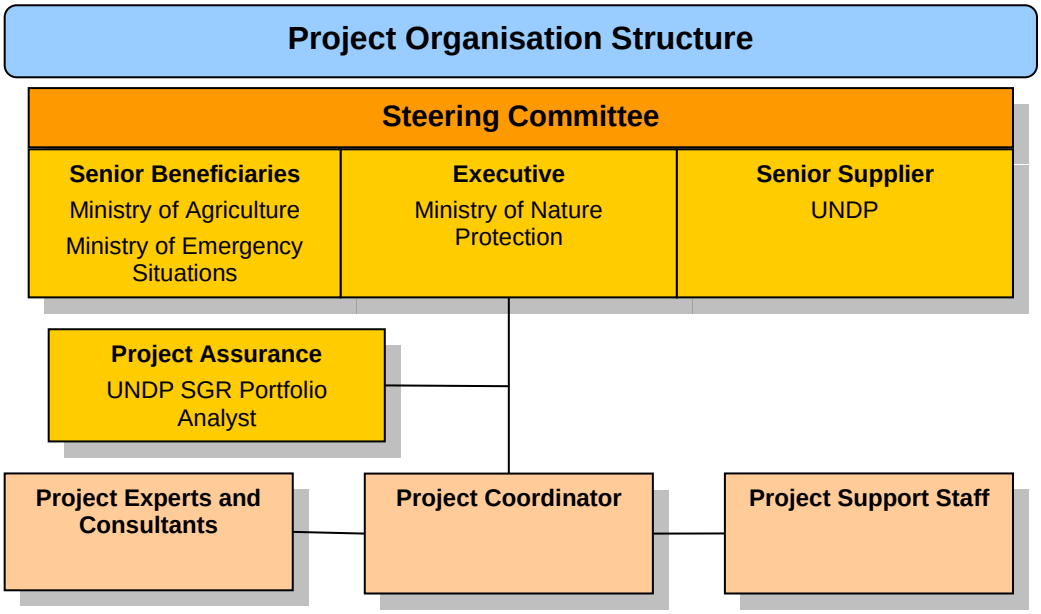
Baseline: 2.1. No. of innovative tools/approaches introduced to promote environmental sustainability and resilience principles. Baseline: 0; Target: 20 ; 2.2. No. of communities benefiting from innovative disaster risk reduction/resilience measures and practices Baseline: 0; Target: 500. Indicators: 2.1. No. of measures and practices applied; no. replicated. 40% communities incorporated disaster-risk reduction and risk analyses into local development strategies 2.2. At least 150 rural communities apply innovative tools 2.3. 20 cities apply innovative tools 2.4. At least 30 rural communities and cities apply innovative climate change and disaster-risk adaptation measures (including gender and disability considerations) 2.5. Additional 20 communities replicated	2.2 Capacity building.	0	20,200	21,200	19,200	UNDP	TFD	72100 Contractual Services-Companies 71400 Contractual Service Ind.	60,600
	2.3 Investment ideas to reduce wildfires risk.	5,000	37,000	42,000	21,000	UNDP	TFD	72100 Contractual Services-Companies 71600 Travel 74500 Miscellaneous Expenses	105,000
	Sub-Total for Activity 2								**421,600**
Activity 3 ***Climate change technology accelerator*** **Baseline:** 3.1. No. of innovative tools/approaches introduced to promote environmental sustainability and resilience principles. *Baseline:* 0; *Target:* 20 ; 3.2. No. of hectares of rehabilitated	3.1 Start-up teams innovators, scientists, engineers, researchers, and entrepreneurs to move their products to the market, create new ventures, and promote innovation and entrepreneurship in Armenia.	5,000	100,000	90,000	35,000	UNDP	TFD	72100 Contractual Services-Companies 71300 Local Consultants 74200 Audio visual printing production costs	230,000

landscapes and areas demonstrating sustainable use practices, *Baseline: 0; Target:20,000*. Indicators: 3.1. No. of innovative tools and practices developed, approved and applied. Natural resources used or returned to sustainable management mode. 3.1. At least 3 national-level interventions conducted for improved decision-making. 3.1. 5,000 ha degraded mountain ecosystems restored in sustainable manner.	3.2. Audit	0	0	0	3,600	UNDP	TFD	74100 Prof. services (Audit)	3,600
	3.3. Evaluation	0	0	0	9,200	UNDP	TFD	71200 International consultants	9,200
	3.4. General Management Support	4,000	31,000	29,000	10,000	UNDP	TFD		74,000
	Sub-Total for Activity 3								**316,800**
Activity 4 **Project implementation costs**	4.1. Staff (including 1 SC holder)	3,600	16,000	16,000	12,400	UNDP	TFD	71400 Contractual Service Ind.	48,000

	4.2. Travel and Office costs	7,000	14,000	14,000	6,000	UNDP	TFD	71600 Travel 72200 Eq. and furniture 72400 Comm. And audiovisual eq. 72500 Supplies 72800 IT eq. 73100 Rental and maint.- premises 74200 Audiovisual print. Prod.	41,000
	4.3. Direct Project Costs	1,000	3,000	3,000	2,000	UNDP	TFD	74500 Miscellaneous	9,000
	Sub-Total for Activity 4								**98,000**
PROJECT TOTAL								**1,000,000**	

VIII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

Following structure is planned for implementation of this project:



UNDP Sustainable Growth and Resilience (SGR) Portfolio Analyst will provide quality assurance over project implementation.

UNDP, as responsible partner, will establish a project team, which will carry out the envisaged activities to reach the project outputs. The project team will be managed by the National Project Coordinator (NPC), who will coordinate project activities and serve as the financial authorizing officer.

NPC will report to UNDP SGR Portfolio Analyst and will be responsible for all project operations. S/he will ensure the proper use of funds and that project activities are implemented in accordance with the agreed project document and project work plans.

Management of project funds including budget revisions, disbursements, record keeping, accounting, reporting, and auditing will follow UNDP rules and procedures.

NPC will be responsible for the project daily planning, implementation quality, reporting, timeliness and effectiveness of the activities carried out. NPC will be supported by support staff and experts.

IX. LEGAL CONTEXT AND RISK MANAGEMENT

LEGAL CONTEXT STANDARD CLAUSES

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of (country) and UNDP, signed on (date). All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner."

RISK MANAGEMENT STANDARD CLAUSES

Government Entity (Support to NIM)

1. Consistent with Part VI on Programme Management of the Country Programme Action Plan (CPAP) 2016-2020 between the Government of Armenia. UNDP as the Responsible Party shall comply with the policies, procedures and practices of the United Nations Security Management System (UNSMS.)

2. UNDP agrees to undertake all reasonable efforts to ensure that none of the [project funds][7] [UNDP funds received pursuant to the Project Document][8] are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via hthttp://www.un.org/sc/committees/1267/aq_sanctions_list.shtml. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

3. Consistent with UNDP's Programme and Operations Policies and Procedures, social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (http://www.undp.org/ses) and related Accountability Mechanism (http://www.undp.org/secu-srm).

4. The Responsible Party Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

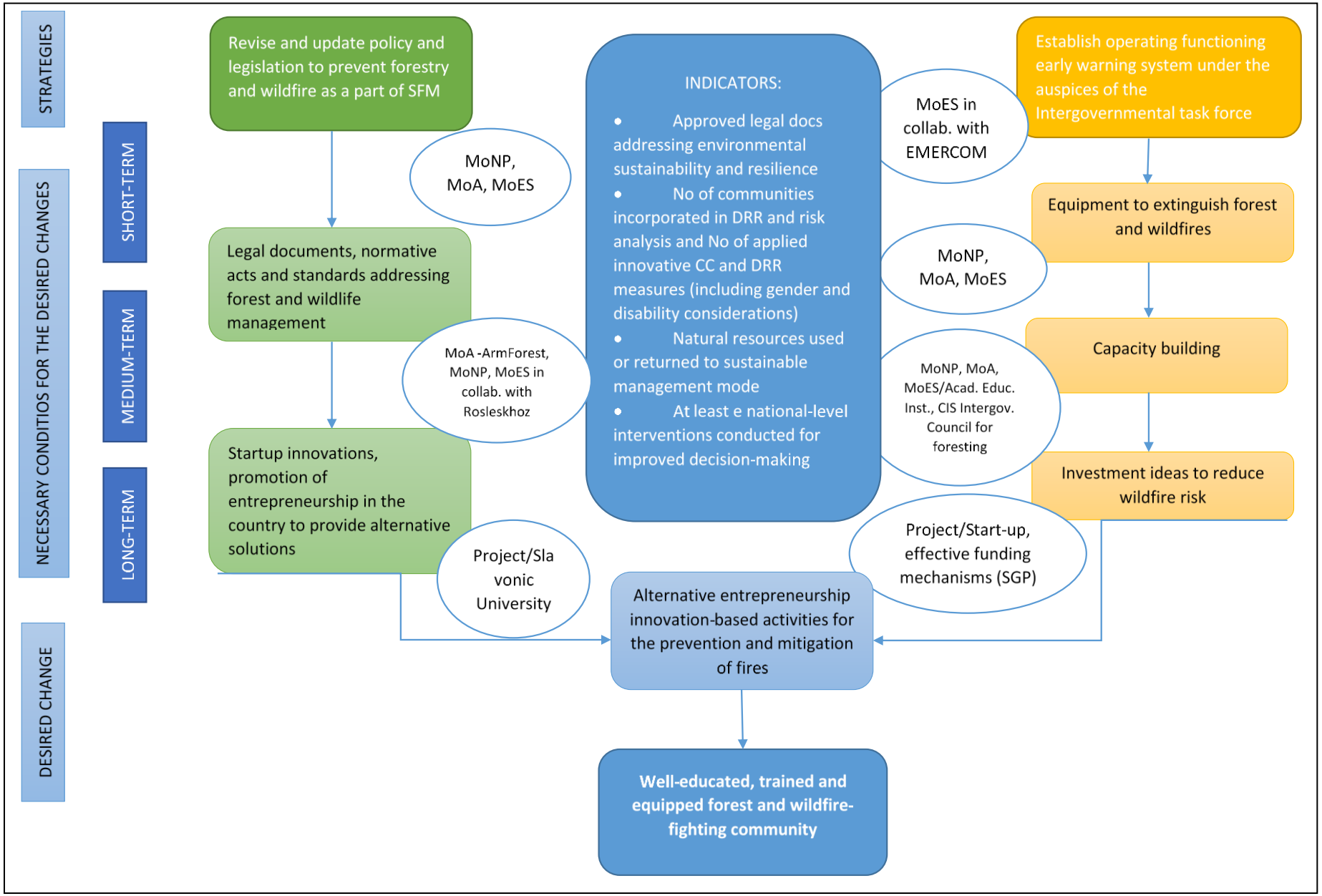
5. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

X. ANNEXES

[7] To be used where UNDP is the Implementing Partner

[8] To be used where the UN, a UN fund/programme or a specialized agency is the Implementing Partner

Annex 1. Theory of Change for Forest and Wildfire Prevention in the Republic of



Annex 2. Social and Environmental Screening

Project Information

Project Information	
1. Project Title	Addressing climate change impact through enhanced capacity for wildfires management in Armenia
2. Project Number	Atlas Project ID: 00102520
3. Location (Global/Region/Country)	Armenia

Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?
Briefly describe in the space below how the Project mainstreams the human-rights based approach
The centrality of human rights is underlying the Project goals and objectives towards sustainable development, poverty alleviation and ensuring fair distribution of development opportunities and benefits. The human rights-based approach, as a key engagement principle in pursuing development outcomes, is mainstreamed by meaningful, effective and informed participation of project stakeholders in the formulation/design, implementation, monitoring and evaluation of Project's outputs and impact. The project directly contributes to the right to work ICESCR Art 6.1, the right to an adequate standard of living ICESCR Art 11, as well as the elimination of discrimination against women UN CEDA Art 14.
Briefly describe in the space below how the Project is likely to improve gender equality and women's empowerment
The project will address gender issues by promoting full and equitable participation of men and women in the establishment of early warning system and policy/curricula development, particularly through their involvement in the investments and capacity building activities that will provide sustainable livelihoods and ecosystem services upon which they depend. The project will equally consider both men and women as potential project beneficiaries. Investments which will facilitate unification of the families will be considered as a priority.
Briefly describe in the space below how the Project mainstreams environmental sustainability
The project will support 150 rural communities and 20 cities to apply innovative tools, among which 30 rural communities and cities will apply innovative climate change and disaster risk adaptation measures. Also 5,000 ha mountain ecosystems will be restored in sustainable manner. The project will ensure creation of green jobs as alternative to extensive use of natural resources (uncontrolled forest logging, fuel-wood extraction, etc.) as a means of survival for dwellers of remote communities. The project will contribute to the poverty eradication, fair distribution of social benefits and environmental protection principles and targets adopted by the government

of Armenia and reflected in the “Armenia Development Strategy 2014- 2025”.

Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? *Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any “Yes” responses).If no risks have been identified in Attachment 1 then note “No Risks Identified” and skip to Question 4 and Select “Low Risk”. Questions 5 and 6 not required for Low Risk Projects.*	**QUESTION 3: What is the level of significance of the potential social and environmental risks?** *Note: Respond to Questions 4 and 5below before proceeding to Question 6*			**QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?**
Risk Description	***Impact and Probability (1-5)***	***Significance (Low, Moderate, High)***	***Comments***	***Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.***
Risk 1: Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	I = 2 P =1	**Low**	Referred to SESP Attachment 1: Standard 1, Question 1.2	Introduction of early warning system and well trained/equipped teams and local community members will mitigate possible impact from forest and wild-fire on the environment from the continuous aridization process in the country.
Risk 2 ….	I = P =			
Risk 3: ….	I = P =			
	QUESTION4: What is the overall Project risk categorization?			
	Select one (see SESP for guidance)			**Comments**
	Low Risk	☑		

	Moderate Risk	☐	
	High Risk	☐	
	QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?		
	Check all that apply		**Comments**
	Principle 1: Human Rights	☐	
	Principle 2: Gender Equality and Women's Empowerment	☐	
	1. Biodiversity Conservation and Natural Resource Management	☑	
	2. Climate Change Mitigation and Adaptation	☑	
	3. Community Health, Safety and Working Conditions	☑	
	4. Cultural Heritage	☐	
	5. Displacement and Resettlement	☐	
	6. Indigenous Peoples	☐	
	7. Pollution Prevention and Resource Efficiency	☑	

Final Sign Off

Signature	***Date***	***Description***
QA Assessor		UNDP staff member responsible for the Project, typically a UNDP Programme Officer. Final signature confirms they have "checked" to ensure that the SESP is adequately conducted.
QA Approver		UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have "cleared" the SESP prior to submittal to the PAC.
PAC Chair		UNDP chair of the PAC. In some cases PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks		
Principles 1: Human Rights		**Answer (Yes/No)**
1.	Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	***No***
2.	Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups?[9]	***No***
3.	Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?	***No***
4.	Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them?	***No***
5.	Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project?	***No***
6.	Is there a risk that rights-holders do not have the capacity to claim their rights?	***No***
7.	Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process?	***No***
8.	Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals?	***No***
Principle 2: Gender Equality and Women's Empowerment		
1.	Is there a likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls?	***No***
2.	Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	***No***
3.	Have women's groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment?	***No***
4.	Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? *For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being*	***No***
Principle 3: Environmental Sustainability: Screening questions regarding environmental risks are encompassed by the specific Standard-related questions below		
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management		
1.1	Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats)and/or ecosystems and ecosystem services? *For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes*	***No***
1.2	Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	**Yes**
1.3	Does the Project involve changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of	***No***

[9] Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority.References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.

	access to lands would apply, refer to Standard 5)	
1.4	Would Project activities pose risks to endangered species?	***No***
1.5	Would the Project pose a risk of introducing invasive alien species?	***No***
1.6	Does the Project involve harvesting of natural forests, plantation development, or reforestation?	***No***
1.7	Does the Project involve the production and/or harvesting of fish populations or other aquatic species?	***No***
1.8	Does the Project involve significant extraction, diversion or containment of surface or ground water? *For example, construction of dams, reservoirs, river basin developments, groundwater extraction*	***No***
1.9	Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)	***No***
1.10	Would the Project generate potential adverse transboundary or global environmental concerns?	***No***
1.11	Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area? *For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route, potentially in sensitive areas. These are indirect, secondary, or induced impacts that need to be considered. Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.*	***No***
Standard 2: Climate Change Mitigation and Adaptation		
2.1	Will the proposed Project result in significant[10]greenhouse gas emissions or may exacerbate climate change?	***No***
2.2	Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change?	***No***
2.3	Is the proposed Project likely to directly or indirectly increase social and environmental vulnerability to climate change now or in the future (also known as maladaptive practices)? *For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding*	***No***
Standard 3: Community Health, Safety and Working Conditions		
3.1	Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities?	***No***
3.2	Would the Project pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	***No***
3.3	Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)?	***No***
3.4	Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure)	***No***
3.5	Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions?	***No***
3.6	Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases or communicable infections such as HIV/AIDS)?	***No***
3.7	Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning?	***No***
3.8	Does the Project involve support for employment or livelihoods that may fail to comply with national and international labor standards (i.e. principles and standards of ILO fundamental conventions)?	***No***
3.9	Does the Project engage security personnel that may pose a potential risk to health and safety of	***No***

[10]In regards to CO_2, 'significant emissions' corresponds generally to more than 25,000 tons per year (from both direct and indirect sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.]

	communities and/or individuals (e.g. due to a lack of adequate training or accountability)?	
Standard 4: Cultural Heritage		
4.1	Will the proposed Project result in interventions that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: Projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	***No***
4.2	Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes?	***No***
Standard 5: Displacement and Resettlement		
5.1	Would the Project potentially involve temporary or permanent and full or partial physical displacement?	***No***
5.2	Would the Project possibly result in economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	***No***
5.3	Is there a risk that the Projectwould lead to forced evictions?[11]	***No***
5.4	Would the proposed Project possibly affect land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?	***No***
Standard 6: Indigenous Peoples		
6.1	Are indigenous peoples present in the Project area (including Project area of influence)?	***No***
6.2	Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples?	***No***
6.3	Would the proposed Project potentially affect the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the Project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)? *If the answer to the screening question 6.3 is "yes" the potential risk impacts are considered potentially severe and/or critical and the Project would be categorized as either Moderate or High Risk.*	***No***
6.4	Has there been an absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	***No***
6.5	Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	***No***
6.6	Is there a potential for forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources?	***No***
6.7	Would the Project adversely affect the development priorities of indigenous peoples as defined by them?	***No***
6.8	Would the Project potentially affect the physical and cultural survival of indigenous peoples?	***No***
6.9	Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	***No***
Standard 7: Pollution Prevention and Resource Efficiency		
7.1	Would the Project potentially result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	***No***
7.2	Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)?	***No***

[11] Forced evictions include acts and/or omissions involving the coerced or involuntary displacement of individuals, groups, or communities from homes and/or lands and common property resources that were occupied or depended upon, thus eliminating the ability of an individual, group, or community to reside or work in a particular dwelling, residence, or location without the provision of, and access to, appropriate forms of legal or other protections.

7.3	Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs? *For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol*	***No***
7.4	Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health?	***No***
7.5	Does the Project include activities that require significant consumption of raw materials, energy, and/or water?	***No***

Annex 3. Risk Analysis

#	Description	Date identified	Type	Impact and probability	Countermeasures / Management response
1.	Proposed enabling legal and institutional framework is not modified/adopted or adoption is not timely.	September 2017	Operational	I = 4 high P = 3 medium	The Government of Armenia has initiated the reform of its environmental policies. Inevitably, the fundamental changes to the roles of the state under a reformed land management and forest management system will be difficult unless there is clear political understanding of the need for these changes, and a full commitment to making this.
2.	Lack of coordination among public institutions, private sector partners, NGOs and resource users undermine partnership approaches and implementation of cooperative governance arrangements.	September 2017	Financial Operational	I = 3 medium P = 3 medium	Training will be provided to stakeholders on governance and conflict resolution. Activities will be designed and implemented in a win-win manner, beneficial to all, as far as possible. The sustainable development of the landscape will be emphasized with arguments that are supported with long-term economic forecasts.
3.	Long-term sustainability of the results achieved by the project can be at risk due to lack of adequate management and financial resources, after the completion of the project.	September 2017	Operational Financial	I = 3 Medium P = 3 medium	Set of measures of promoting and enforcing sense of ownership and responsibility in local communities and governance bodies towards set-up structures.

Annex 4. TOR's of key management positions

1. Technical Task Leader

TERM OF REFERENCE

Post Title: **Technical Task Leader**

Project title: Addressing climate change impact through enhanced capacity for wildfires management in Armenia

Starting Date: **September, 2017**
Duration: **One year with possible extension based on successful performance**
Contract type: **Service Contract (SC), full time position**
Duty station: **Yerevan, Armenia**

Background:

This project will help address the critical issue of forest and wild fire risks exaggerated under the climate change, by supporting national partners building necessary technical capacity and establishing sustainable practices of monitoring, prevention and coordination of roles and responsibilities during suppression of forest fires. The project thus will contribute to the application of sustainable forest management practices enhancing carbon sink, as well as conservation of carbon in agriculture lands and protection of forest ecosystems' rich biodiversity.

The stated objectives can be ensured through provision of assistance for improvement and enforcement of the relevant policy and regulatory framework, strengthening forest fire early warning and monitoring systems, establishment of clear roles and responsibilities of corresponding national structures, and developing their technical capacity to execute their mandates. The project will provide for contemporary equipment, technologies, and other capacities to consolidate the efforts of respective stakeholders at regional and national levels.

The project will involve forest neighbouring communities in all project activities as key stakeholder and steward for sustainable management of forest resources, including assistance in transfer and application of climate change mitigation innovative technological solutions, e.g. production of pellets and bricks; energy efficient stoves, involving them in agroforestry system through cooperation with technology accelerator, thus generating income, and jobs.

The project builds on a number of past and current UNDP activities in the area of sustainable management of natural resources and disaster risk reduction. The project foresees significant cooperation with the Russian Federation, both through technical and advisory support and in terms of technology transfer.

Scope of work:

Under overall guidance of the UNDP SGR portfolio manager, the Project Technical Task Leader is selected on competitive basis and operated with the authority to run the project technical and operational activities on a day-to-day basis. Technical Task Leader's prime responsibility is to provide technical guidance and oversight for all project activities to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost.

Duties and responsibilities:

- To develop detailed Project work plan, relevant activities and budgets as per the project outcomes and outputs and contribute to ensuring efficient and timely implementation of those activities under the guidance of the Project Board (PB) and UNDP;
- To organize PB and other meetings as well as annual and final review meetings as required by UNDP, and act as the secretary to the PB;

- To make recommendations for modifications to the project budget and, where relevant, submit proposals for budget revisions;
- To provide substantive support in identifying and recruiting the competent staff and subcontractors, formulate task's technical specifications, participate in selection process;
- To provide technical backstopping and guidance to the national team of experts and subcontractors, to lead, supervise, and monitor technical expert's teamwork to ensure timely delivery of outputs and conduct their performance appraisal;
- To monitor and analyze the adequacy and content of the technical reports and the project deliverables to achieve main outcomes/outputs;
- In cooperation with international and local experts, to provide technical assistance and support with identification and selection of best approaches for introducing integrated sustainable land and forest management practices in Armenia;
- To liaise and collaborate with national and local governments, scientific institutions, NGOs and international organizations in defining the potential of best available practices and technologies for alternative income generation practices in forest dependent communities, including non-timber forest product use, alternative heating, etc.;
- To provide substantive support in the development and maintenance of the project monitoring plan in line with the requirements indicated in the project document and specific METTs (management effectiveness tracking tools); support in developing TOR for mid-term and final evaluations and draft management responses;
- To ensure that all relevant information is made available in a timely fashion to UNDP and relevant stakeholders regarding activities carried out nationally;
- To prepare quarterly, semi-annual and annual progress and other reports in line with the project requirements for UNDP and RTF, including Project Inception, Project Implementation Report (PIR), for implementing partner and the PB members; To support portfolio in elaboration of Results Oriented Annual Report (ROAR) and other UNDP specific reporting;
- To liaise with the Government, regional and local authorities, relevant civil society organizations, international partners to ensure participatory approach and synergy along the implementation process for achievement of the project objectives and necessary co-financing level; to ensure the project utilizes best practices, experiences and lessons from similar on-going and conducted activities in Armenia
- To ensure timely provision of information and maintenance of UNDP Atlas reporting (logs) tools on permanent basis;
- To ensure maintenance and update of the project office inventory records in line with UNDP rules and regulations;
- To support the UNDP and the PPA in preparing meeting/event supporting technical documentations, informative notes, thematic papers and case studies, media reports, briefing and presentations in close cooperation with the UNDP communication associate;
- To support the UNDP in providing guidance and technical expertise on the formulation of strategic notes, analytical reviews, project ideas and concept proposals in the subject area;
- To organize and facilitate mid-term and final evaluation missions, international expert's missions, audit process, etc.
- To conduct Project workshops and contribute to and participate in, portfolio meetings upon necessity; disseminate related materials and delivery of presentations as necessary;
- Perform other relevant duties as required by the Project and UNDP.

Professional Skills and Experience:

Education:

Advanced University Degree in forestry, natural sciences, natural resource management, and other relevant discipline. A relevant University degree in combination with qualifying experience in the area may be accepted in lieu of the advanced university degree.

Experience:

- 5 (five) years of related working experience in implementation of projects in forestry and community based natural resource management areas is required.
- Demonstrated experience and good knowledge of the national forest policy framework, climate change related agenda and mitigation/adaptation activities related to mountain forest ecosystems. Prior relevant experience with UNDP and other internationally funded projects in SLM/SFM sector is an asset.
- Experience in facilitating consultative processes and negotiating with high-level decision makers, forest enterprises and wide range of other stakeholders in the area of natural resources management;

Competencies:

- Proven ability to promote cooperation between and negotiate with a range of stakeholders, and to organize and coordinate multi-disciplinary technical teams;
- Strong leadership and team-building skills;
- Strong interpersonal skills with ability to establish and maintain effective work relationships with people of different social and cultural backgrounds;
- Self-motivation, ability to work under time pressure and handle multiple activities and tasks concurrently;
- Proven knowledge of communication tools, excellent writing skills, track record with producing high quality research/analytical reports and papers;
- Ability to express ideas clearly in both verbally and in writing;
- Ability to work independently and to participate effectively in a team based information sharing.

Language Skills:

Fluency in Armenian and English

Technical skills:

Good computer literacy, knowledge of MS office software and web based applications. Ability to work with office equipment.

2. Project assistant

TERM OF REFERENCE

Post Title: **Project Assistant**
Project Duration: **2017 - 2020**
Starting Date: **Immediately**
Contract type: **Service Contract (SC), full time position**
Duration: **1 year with possible extension based on successful performance**
Duty Station: **Yerevan, Armenia (frequent field visits may be required)**

- **Background:**

This project will help address the critical issue of forest and wild fire risks exaggerated under the climate change, by supporting national partners building necessary technical capacity and establishing sustainable practices of monitoring, prevention and coordination of roles and responsibilities during suppression of forest fires. The project thus will contribute to the application

of sustainable forest management practices enhancing carbon sink, as well as conservation of carbon in agriculture lands and protection of forest ecosystems' rich biodiversity.

The stated objectives can be ensured through provision of assistance for improvement and enforcement of the relevant policy and regulatory framework, strengthening forest fire early warning and monitoring systems, establishment of clear roles and responsibilities of corresponding national structures, and developing their technical capacity to execute their mandates. The project will provide for contemporary equipment, technologies, and other capacities to consolidate the efforts of respective stakeholders at regional and national levels.

The project will involve forest neighbouring communities in all project activities as key stakeholder and steward for sustainable management of forest resources, including assistance in transfer and application of climate change mitigation innovative technological solutions, e.g. production of pellets and bricks; energy efficient stoves, involving them in agroforestry system through cooperation with technology accelerator, thus generating income, and jobs.

The project builds on a number of past and current UNDP activities in the area of sustainable management of natural resources and disaster risk reduction. The project foresees significant cooperation with the Russian Federation, both through technical and advisory support and in terms of technology transfer.

2. Duties and Responsibilities:
Under the overall guidance and direct supervision of the UNDP Programme Policy Advisor on Environmental Governance and the Technical Task Leader for "Mainstreaming Sustainable Land and Forest Management in Mountain Landscapes of North-eastern Armenia" Project, the Project Assistant will provide support for implementation of tasks associated with the day-to-day management and operation of the project. S/he will be responsible for providing the following administrative and financial management support functions.

- Provides support to the Technical Task Leader for "**Addressing climate change impact through enhanced capacity for wildfires management in Armenia**" Project in planning, daily implementation, coordination and monitoring of annual work plan activities; liaising with Government entities and other stakeholders on consultations, providing information related to the expected project outputs;
- Complies, analyses, summarizes data and records of Project activities;
- Provides support in preparation of budget revisions, monthly, quarterly, progress and financial reports, briefing notes, outcome board materials;
- Maintain Atlas logs on a quarterly basis;
- Provides assistance to the project experts' team through information dissemination, technical backstopping, report preparation, translations, information gathering and research, drafting information for web-pages and ensure regular updates;
- Provides support to project management during the audits and evaluations;
- To assume administrative responsibility for organization of seminars, press conferences, workshops, advisory board meeting and other public campaign. Draft agendas; prepare leaflets, information note, press releases for media and stakeholders. Takes notes and draft minutes of working meetings, workshops, advisory board meetings, etc. To draft correspondence relating to assigned project areas; clarifies, follows up, responds to requests for information, ensuring proper communication and information exchange within the Project Team.
- To ensure accurate observance of administrative rules, regulations and procedures within the framework of Project and in line with UNDP SOPs for SC/IC/Procurement/Finance.
- Make all necessary arrangements for procurement/recruitment within the framework of the project. Support in preparation of procurement /recruitment plans, selection notes, expert evaluation documents.
- Makes logistical arrangements for missions and expert's visits, prepares briefing kits and background materials;
- Ensures maintenance of records on assets management. Acts as the custodian for office furniture, including maintenance of inventory records, preparation of detailed reports as required; participates in Physical verification process.
- Maintains accurate records of leave taken and due for all Project personnel.

- To draft request for payments, to ensure smooth financial operation of AWP activities as a whole and follows up on all financial transactions.
- To maintain financial records, monitors and reconciles expenditures, balances, payments, statements, other data for day-to-day transactions and reports, prepares requisitions.
- Perform other duties as required.

Competencies:

Corporate Competencies:

- Demonstrates commitment to UNDP's mission, vision and values.
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability.

Functional Competencies:

Knowledge Management and Learning

- Shares knowledge and experience
- Actively works towards continuing personal learning, acts on learning plan and applies newly acquired skills.

Development and Operational Effectiveness

- Ability to perform a variety of specialized tasks related to Results Management, including support to design, planning and implementation of programme, managing data, reporting.
- Ability to provide input to business processes re-engineering, implementation of new system, including new IT based systems.

Leadership and Self-Management

- Focuses on result for the client and responds positively to feedback
- Consistently approaches work with energy and a positive, constructive attitude
- Remains calm, in control and good-humored even under pressure
- Demonstrates openness to change and ability to manage complexities.

Required qualifications and skills:

Education: University degree in social, natural sciences, business administration, economics, other related disciplines.

Experience: 3 years of relevant administrative experience is required at the national or international level. Prior relevant experience with UNDP and/or GEF funded and implemented projects will be an asset.

Computer skills: Experience in the usage of computers and office software packages (MS Word, Excel, etc.) and knowledge of spreadsheet and database packages, experience in handling of web based management systems.

Languages: Fluency in English and Armenian.

Skills:

High level of integrity and professionalism, demonstrated initiative, tact and high sense of responsibility and discretion.

Result oriented; ability to work under pressure and in circumstances of diverse interests. Demonstrated strong team spirit.

Excellent written and oral communication skills.

Annex 5. Minutes of the LPAC meeting

Minutes of Local Project Appraisal Committee (LPAC) meeting on
"Addressing climate change impact through enhanced capacity for wildfires management in Armenia" project,
Ministry of Nature Protection of RA, Yerevan
19 May 2017, 10:00 a.m. – 12:00 p.m.

List of meeting participants

	NAME	***POSITION***
1.	Mr. Artsvik Minasyan	Minister of Nature Protection of RA
2.	Mr. Khachik Hakobyan	Deputy Minister of Nature Protection
3.	Mr. Gagik Manucharyan	Head of the Division of Environment Protection Policy of MoA
4.	Mr. Arthur Petrosyan	Head of Forest Department of the Ministry of Agriculture
5.	Mr. Artem Tarzyan	Head of the Bio-resources Management Agency, Ministry of Nature Protection (MoNP)
6.	Mr. Vrej Gabrielyan	Deputy Head of the Rescue team of MoES
7.	Mr. Ruben Petrosyan	Deputy Head of "ArmForest" SNCO
8.	Mr. Areg Karabeghyan	Advisor to the Minister of Nature Protection
9.	Mr. Armen Martirosyan	UNDP Armenia Sustainable Growth and Resilience (SGR) portfolio analyst
10.	Ms. Dianna Harutyunyan	UNDP CC Project Coordinator
11.	Mr. Hovik Sayadyan	Technical Task Leader of the UNDP-GEF "Mainstreaming Sustainable Land and Forest management in Mountain Landscapes of North Eastern Armenia" project

RA Minister of Nature Protection Mr. Artsvik Minasyan welcomed meeting participants and gave the floor to Mr. Armen Martirosyan, UNDP Armenia Sustainable Growth and Resilience (SGR) portfolio analyst.

Mr. Martirosyan welcomed the meeting participants and introduced the two ongoing UNDP-lead and UNDP-Russian Trust Fund (RTF)-supported projects: "Integrated Support to Rural Development: Building Resilient Communities" (45 pre-boundary villages of Tavush region) and "Integrated rural tourism development". Mr. Martirosyan briefed on the status of "Addressing climate change impact through enhanced capacity for wildfires management in Armenia" project proposal. Mr. Hovik Sayadyan, Technical Task Leader of the UNDP-GEF "Mainstreaming Sustainable Land and Forest management in Mountain Landscapes of North Eastern Armenia" project presented the draft project document.

Afterwards, the floor was opened for discussion.

Mr. Khachik Hakobyan, Deputy Minister of Nature Protection, mentioned that it will be useful to incorporate "Green Technologies " concept into the project document and check out some related activities that the MoNP hads already conducted.

Mr. Gagik Manucharyan, Head of the Division of Environment Protection Policy of MoA, welcomed the planned activities on the application of drones in forest fire and wildfire monitoring and operative use. He also mentioned about some "Green technolog" applications that the MoNP is working with.

Mr. Vrej Gabrielyan, Deputy Head of the Rescue team of MoES, highlighted the three important components of forest fire risk prevention and early warning systems: (1) Prevention system development (e.g. development of Crisis Academy capacities), (2) Responsive component empowerment - professional and technical capacity building (e.g. equip helicopter with auxiliary water tanks to carry 2500l water to extinguish forest fires on high altitudes or in dissected areas), and (3) Equiping the existing local voluntary groups with minimal fire extinguishing facilities and equipment, as they are very mobile and operative along with regular rescue teams or forest enterprises staff.

Mr. Gabrielyan mentioned that there are trained volunteers in 107 forest-dependent communities to handle forest fires according to guidelines, but they are missing the simplest fire extinguishing tools and equipment. The same way they trained personnel on the usage of drones, but those trained people have never worked with drones. Thus, the introduction of drones is a very important novelty for operative and daily work.

Mr. Ruben Petrosyan, Deputy Head of “ArmForest” SNCO, mentioned that the project resources shouldn’t be split into many parts; they should instead be concentrated to solve particular tasks. He highlighted the importance of technical tool and, first of all, the importance of drones. He suggested considering reallocation of some resources from start-up activities towards purchasing tools and equipment, if possible.

Mr. Hakobyan stressed the importance of forest fire extinguishing machinery and equipment in Armenia, where the landscape is very complicated and the surface is highly dissected. He brought the example of Khosrov State Reserve where 2 years ago it was impossible to use fire extinguishing truck due to complicated terrain. In some very isolated areas there is even no mobile connection, so it may be worth thinking about radio connection means.

Mr. Areg Gharabegyan, Advisor to the Minister of Nature Protection, also commented on the importance of providing minimal technical support to local fire extinguishing teams and seriously considering the mobile disconnection issue in certain areas.

Mr. Martirosyan agreed on the necessity to provide more technical tools to the local staff, and provide additional details on the start-ups, entrepreneurial and innovative approaches, as they can trigger developments in the sector and pull more resources for new ideas and technologies. He brought some examples on climate window opportunities that exist in “Green technologies” start-up.

Mr. Minasyan mentioned that he is in favor of start-ups, entrepreneurial and innovative approaches. He also stated that any kind of forest- and wildfire-related risk should be thoroughly studied and the reasons understood and correctly interpreted.

Mr. Minasyan expressed his gratitude for the project idea and project document development and expressed the commitment of MoNP to support the project in close collaboration with MoA and MoES. He further requested to consider to the extent possible all the highlighted issues and ideas during project implementation.

Dmitry Mariyasin
UNDP Deputy Resident Representative in Armenia

Annex 6: Letter of Agreement on Direct Project Services

1. Reference is made to consultations between officials of the Government of *Armenia* (hereinafter referred to as "the Government") and officials of UNDP with respect to the provision of support services by the UNDP country office for nationally managed programmes and projects. UNDP and the Government hereby agree that the UNDP country office may provide such support services at the request of the Government through its institution designated in the relevant programme support document or project document, as described below.

2. The UNDP country office may provide support services for assistance with reporting requirements and direct payment. In providing such support services, the UNDP country office shall ensure that the capacity of the Government-designated institution is strengthened to enable it to carry out such activities directly. The costs incurred by the UNDP country office in providing such support services shall be recovered from the administrative budget of the office.

3. The UNDP country office may provide, at the request of the designated institution, the following support services for the activities of the programme/project:

(a) Identification and/or recruitment of project and programme personnel;

(b) Identification and facilitation of training activities;

(a) Procurement of goods and services;

4. The procurement of goods and services and the recruitment of project and programme personnel by the UNDP country office shall be in accordance with the UNDP regulations, rules, policies and procedures. Support services described in paragraph 3 above shall be detailed in an annex to the programme support document or project document, in the form provided in the Attachment hereto. If the requirements for support services by the country office change during the life of a programme or project, the annex to the programme support document or project document is revised with the mutual agreement of the UNDP resident representative and the designated institution.

5. The relevant provisions of the SBAA between the Authorities of the Government of Armenia and the United Nations Development Programme (UNDP), signed by the Parties on 8 March 1995, including the provisions on liability and privileges and immunities, shall apply to the provision of such support services. The Government shall retain overall responsibility for the nationally managed programme or project through its designated institution. The responsibility of the UNDP country office for the provision of the support services described herein shall be limited to the provision of such support services detailed in the project document.

6. Any claim or dispute arising under or in connection with the provision of support services by the UNDP country office in accordance with this letter shall be handled pursuant to the relevant provisions of the SBAA.

7. The manner and method of cost recovery by the UNDP country office in providing the support services described in paragraph 3 above shall be specified in the annex to the project document.

8. The UNDP country office shall submit progress reports on the support services provided and shall report on the costs reimbursed in providing such services, as may be required.

9. Any modification of the present arrangements shall be effected by mutual written agreement of the parties hereto.

For the Government

Artsvik Minasyan
Minister of Nature Protection
of the Republic of Armenia

Date: 12.09.2017

Signed on behalf of the UNDP

Bradley Busetto
UN RC/UNDP RR

Date: 12.09.2017

DESCRIPTION OF UNDP COUNTRY OFFICE SUPPORT SERVICES

1. Reference is made to consultations between the Ministry of Nature Protection, the institution designated by the Government of Armenia and officials of UNDP with respect to the provision of support services by the UNDP country office for the nationally executed project "Addressing climate change impact through enhanced capacity for wildfires management in Armenia" RF-UNDP TFD Project ID 00104555.

2.In accordance with the provisions of the letter of agreement signed and the project document, the UNDP country office shall provide support services for the Project as described below.

3.Support services to be provided:

	Description of services	Reimbursement amount based on the Universal Price List 2017 used by UNDP for cost recovery with other UN Agencies (in USD)	UNIT
1	Payment Process	34.48	Per voucher
2	Credit card payment	36.30	Per transaction
3	New vendor creation in ATLAS	18.04	Per vendor
4	Payroll validation	35.11	Per person, quarterly
5	Leave monitoring	5.02	Per person, quarterly
6	IC and SC recruitment, including	205.96	Per person
6a	Advertisement	41.19	
6b	Short listing	82.38	
6c	Contract Issuance	82.38	
7	Issue IDs	34.18	Per ID
8	F10 Settlement	28.29	Per item
9	Ticket request	27.80	Per ticket
10	Hotel reservation	12.50	Per booking
11	Visa request	22.80	Per person
12	Vehicle Registration	33.20	Per item
13	Procurement process involving local CAP or RACP/ACP	475.27	Per case
13a	Identification and selection	237.63	
13b	Contracting/Issue PO	118.82	
13c	Follow-up	118.82	
14	Procurement not involving review bodies	192.05	Per case
14a	Identification and selection	96.02	
14b	Contracting/Issue PO	48.01	
14c	Contract follow-up	48.01	
15	Disposal of equipment	241.68	Per lot