Reporting Agency:	**UNDP**
Country:	**Armenia**
	STANDARD PROGRESS REPORT
No. and title:	**"Addressing climate change impact through enhanced capacity for wildfires management in Armenia" UNDP-RTFD 0010455**
Reporting period:	**January – December 2018**

I. PURPOSE

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 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.

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.

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

Partners: The Implementing Partner is the RA Ministry of Nature Protection (MNP). The Responsible Party of the Project is the United Nations Development Programme. Senior beneficiaries of the project are the Ministry of Agriculture and the Ministry of Emergency Situations.

Funds: The Project is funded by Russia-UNDP Trust Fund for Development.

II. RESOURCES AND FINANCIAL PERFORMANCE

Total Project budget, Russia-UNDP TFD	2018 initial budget, Russia-UNDP TFD	2018 revised budget, Russia-UNDP TFD	2018 delivery, USD	2018 delivery, %	Total budget, 2017-2020, USD	Total delivery, %
Activity 1. Policy, legislation, normative acts, early warning systems	64,200.0	47,713.0	47,713.0	100%	163,600.0	29.2%
Activity 2. Equipment, training, capacity building, alternatives, demonstration.	187,200.0	235,285.87	235,285.87	100%	421,600.0	55.8%
Activity 3. Climate change technology accelerator.	131,000.0	142,065.0	142,065.0	100%	316,800.0	44.8%
Activity 4. Project implementation costs	33,000.0	24,081.35	24,081.35	100%	98,000.0	24.6%
Total	**415,400.0**	**449,145.22**	**449,145.22**	**100.00%**	**1,000,000.0**	**44.9%**

III. RESULTS, PROGRESS

In the reporting period, the Project activities were accomplished in accordance with the drafted 2018 AWP and directed toward achievement of the corresponding indicators that adequately measure progress toward the Project objective and outcomes, described in the attached **Annex I. Results Framework**.

Component 1: Revised and updated policy and legislation documents, normative acts and/or standards related to forest and wildfire management.

Output 1.1 Legislation and normative documents

- National consultant has been contracted to conduct analysis of legislation related to wildfire management, with the aim of identification of main public institutions at national, regional and local levels involved in wildfire monitoring, prevention and fighting, their rights and responsibilities under different circumstances, as well as reviewing existing coordination mechanisms to clarify the roles of different public administration entities to improve forest and wildfire management (inventory, reduction, prevention, monitoring and control). The scope of work of national consultant also included development of background for consequent legislative changes and drafting of protocols on distribution of responsibilities and functions among different parties involved in wildfire management and firefighting.
- The results of the analysis of legislation related to wildfire management, with the aim of identification of main public institutions at national, regional and local levels involved in wildfire monitoring, prevention and fighting, their rights and responsibilities under different circumstances, as well as the review of existing coordination mechanisms to clarify the roles of different public administration entities to improve forest and wildfire management (inventory, reduction, prevention, monitoring and control) conducted by the Project National Expert have been communicated to national counterpart through series of workshops and local meetings with forestry enterprises and protected areas.
- The results of above-mentioned activities will become the basis for development of recommendations regarding the necessary legislative changes for improved wildfire management procedures, as well as for development of official protocols on coordination and implementation of firefighting operations, as foreseen by results framework of the Project. Due to delay with Project implementation, respective targets set for 2018 will be achieved in 2019.

Output 1.2 Early warning and monitoring systems through remote sensing

- Meetings were held with representatives of Instigate Robotics, High Intelligence and Yerevan Engineering Association to discuss potential technical solutions for monitoring of forest fire danger and firefighting. Automatic sensors were offered by mentioned companies as a means for permanent monitoring of the situation in forests, including soil moisture, air temperature, wind speed, etc.
- A meeting was held with Acopian Center for the Environment of the American University of Armenia to learn from the Center's experience in development of disaster monitoring systems and awareness raising. Particularly, the Center conducted studying of tailing dams in Syunik marz using GIS applications, as well as organized energy efficiency summer courses. It was agreed to held more meetings to identify whether the center can support Project efforts related to monitoring of forest fire danger, as well as awareness raising on forest fire risks. Energy efficiency summer course can help with identification/improvement of alternative technologies on use of biomass for fuel production, that can help with enforcement of the ban on burning of agricultural residues.
- Meetings were held with State Forest Monitoring Center to discuss the potential options related to wildfire monitoring, including use of censors, drones and remote sensing. The Center has significant experience in application of remote sensing in monitoring of forests of Armenia, and it can potentially also be involved in wildfire monitoring.
- UNECE/FAO Forestry and Timber Section has been contacted to provide insight on existing global expertise on wildfire danger monitoring. Global Fire Monitoring Center in Freiburg, Germany, and

Regional Fire Monitoring Center in Skopje, Macedonia, have been recommended as the leading centers of knowledge in this regard. Series of conference calls have been organized with representatives of the Centers to identify potential topics of cooperation with the Project.

- An International Expert has been contracted to develop wildfire danger monitoring system for Armenia. The tasks of the expert included the following:
  - Revision of Armenia's existing national forest fire danger classes (5 classes) to reflect the status of forest ecosystems, verification of these based on new internationally accepted and mostly quantitative characteristics based on temperature, humidity and wind.
  - Development of recommendations on improvement of national forest and wildfire information system based on improved system of forest and wildfire statistical data acquisition, collection, analysis and exchange in national, regional and international contexts, and improved integration of the system in national crisis management system.
  - Revision of existing early warning system and development of recommendations on its improvement, based on application of well-developed geo-information technologies using remote sensing, drones and ground-based components.
  - Provision of recommendations on integration of remote and ground-based data on the unified GIS-based platform to facilitate prompt analysis to reflect the situation and act as a reliable source for decision-making.
  - Training of respective officials on interpretation of acquired remote sensing data.
- The results of work of the International Expert have been discussed with representatives of MNP, MES, and other interested parties during individual meetings, and a workshop has organized with larger group of participants to present the proposed design of forest fire information system to be established within the framework of the Project for improved monitoring and management fire-related risks.

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.

Output 2.1 Equipment for extinguishing forest fires

- A meeting was held with Deputy Minister of Nature Protection Khachik Hakobyan and Deputy Head of Rescue Service Vrej Gabrielyan to coordinate Project activities with the establishing of Russian-Armenian Humanitarian Center and avoid overlaps in the procurement of firefighting equipment. Following the meeting, data on 2004-2017 wildfires in Armenia was taken from the Ministry of Emergency Situations to identify the regions with highest level of risk and develop intervention plans accordingly.
- There has been conducted preliminary inventory of machinery and other equipment available in different public administration institutions, private companies, including mining and construction companies, as well as communities, that can be used for wildfire prevention and firefighting.
- Assessment of scale, frequency and distribution of wildfires in Armenia, as well as identification of respective landscape of affected areas has been conducted to inform quantity and technical characteristics of machinery and equipment necessary for wildfire prevention and firefighting, based on consultations with relevant stakeholders, including the Ministries of Nature Protection, Emergency Situations and Agriculture, etc.

- There have been identified logistical options for use of machinery and equipment, including distribution different parts of the country and potential routes for reaching different potential wild fire hotspots. Logistical solutions available in potential distribution areas, including local capacities related to maintenance and storage of wildfire fighting machinery and equipment have been assessed.
- Follow-up meeting has been held in the Ministry of Nature Projection together with representatives of Caucasus Nature Fund and Environmental PIU to discuss the characteristics of firefighting vehicles, that need to be purchased for forest enterprises and protected areas. Based on the results of the discussion, terms of reference have been drafted for procurement of 3 firefighting pickup trucks.
- Visits have been organized to dfifferent regions of the country to meet with representatives of local protected areas and forestry enterprises and discuss the idea of establishing 12 wildfire management districts in Armenia, based on the findings of preliminary analysis of wildfire management system of Armenia conducted within the framework of Wildfire Management Project. Another objective has been the discussion of the preliminary list of firefighting machinery and equipment, procurement of which is planned under the Project. Representatives of local branches of the Rescue Service of MES have also been invited and participated in some of the meetings.
- Contract has been signed with the winner of previously announcement tender for supply of three firefighting vehicles, equipped with necessary tools and machinery for a crew of 5 firefighters. The vehicles will be supplied by the end of October 2018.
- Technical specifications for procurement of firefighting tools, equipment, radio sets, and other necessary items have been developed by the Project and approved by the Project Board. Tender for procurement of necessary tools and equipment for 360 firefighters has been organized and the procurement is expected to be finished by the beginning of 2019.

Output 2.2 Capacity development

- There has been conducted assessment of training needs of public administration institutions' employees with firefighting functions and firefighting volunteers on wildfire prevention and firefighting, with emphasize on use of respective machinery, including management and field levels.
- Draft terms of reference for development and adding of forest and wildfire prevention and monitoring module to the curricula of "Forestry and Landscape Gardening" specialization at the Armenian National Agrarian University (ANAU) and assistance to the introduction of the subject of "Forest and Wildfire Management" in the curricula of the Crisis Management State Academy has been developed.
- Training needs of employees of forestry enterprises and protected areas, with emphasize on use of respective tools and equipment, as well as coordination mechanisms during the firefighting operations, have been assessed during the visits to forestry enterprises and protected areas, conducted in August.
- The draft terms of reference for development and adding of forest and wildfire prevention and monitoring module to the curricula of "Forestry and Landscape Gardening" specialization at the Armenian National Agrarian University (ANAU) and assistance to the introduction of the subject of "Forest and Wildfire Management" in the curricula of the Crisis Management State Academy

has been discussed with representatives of above-mentioned institutions and respective tender has been announced. Based on the results of the tender, where the only bid amount exceeded planned budget, the procurement process has been stopped and will be restarted in the beginning of 2019 after revision of the ToR.

Output 2.3 Investment ideas to reduce wildfire risk

- Potential cooperation on conduction of behavioral change interventions to address the issue of burning of agricultural residues was discussed with SDG Innovation Lab. Based on the initial assessment of fire data provided by MES it was decided to focus on Kotayk marz, where the frequency of fires on agricultural lands was the highest. Additional data was requested from MES, with details at community level, to continue the planning process.
- Based on the analysis of obtained data on wildfires in Kotayk marz, further consultations have been held with SDG Innovation Lab to determine potential interventions tackling the problem of burning of agricultural residues. It has been preliminary decided to divide the marz into three clusters, and different interventions will be designed for each, including awareness raising, establishing of briquette production, etc. The efficiency of each intervention will be assessed based on monitoring of satellite images and data of MES, and the results will be used to make a decision on the best option for using at national level.
- National Expert has been contracted to conduct assessment of briquette production potential in Kotayk region of Armenia, including:
    - Analysis of firewood consumption in Kotayk region of Armenia and estimation of available straw and organic residuals' potential, based on the experience of other regions of Armenia.
    - Analysis of wildfire statistics in Kotayk region, particularly in agricultural lands, as well as available biomass volume and firewood consumption trends to inform pre-selection of community cluster for establishing of briquette production facility.
    - Identification of potential partners for establishing briquette production in Kotayk region, through analysis of available information sources, interviewing of community members from pre-selected cluster.
    - Identification of organizational model and technical requirements and characteristics needed for organizing briquetting production in Kotayk region and ensuring efficiency.
    - Conduction of primary financial analysis of briquette production to identify the minimal and maximal production capacity of the facility needed for sustainable operation and ensuring attractiveness for potential partners and investors.
    - Training and supporting of selected community cluster members in establishing organizational model needed for production of briquettes.
- Based on the findings of the analysis conducted by the National Expert, six villages have been shortlisted for implementation of pilot project on production of fuel briquettes. Visits to these have conducted to meet local administrations and discuss the possibility of cooperation. Final decision on selection of beneficiary community will be made in the beginning of 2019.
- Implementation of the above-mentioned pilot project in Kotayk region will be aimed achieving the targets set under the results framework of the Project on application of innovative tools and innovative climate change and disaster-risk adaptation measures. Targets set for 2018 will be achieved in 2019 due to delay with the beginning of Project implementation.

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.

Output 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

- Within the framework of Climate Change Technology Accelerator preparatory activities there has been organized a Thinkathon to present the initiative, climate change related challenges in agriculture and forestry sectors, as well as to familiarize with potential solutions offered by IT and tech community.
- Following the Thinkathon, there was organized a Hackathon in collaboration with ImpactAim Venture Accelerator and Innovative Solutions and Technologies Center, during which IT and tech teams developed solutions for existing challenges in forestry and agriculture sectors. The scope of the challenges facing the agriculture included issues such as the calculation and prediction of agricultural losses caused by natural hazards, an online platform that facilitates the path to market for farmers, efficient usage of water resources, smart packaging, online advisory services for farmers, as well as development of local smart systems and greenhouse technologies. Innovative solutions in the field of forestry include several issues of concern to the public: monitoring tools of illegal logging, new technologies for reforestation, as well as forest fire solutions, prevention, and risk assessment. As a result of the two-day Hackathon, the following ideas were announced winners:
    - The Best solution in agriculture (2000 USD) prize was awarded to Smart City and Forest Berg teams;
    - The Best solution in forestry (2000 USD) prize was handed over Datathon team;
    - The Most Innovative Idea (1000 USD) prize was given to team members of Baskcleaner.
- Call for application to CCTA has been announced in July. The application form was created considering impact and business components. The form was developed by the joint efforts of the team and was made public through Gust (www.gust.com) platform, which facilitates the process of application submission as well as the evaluation for all. In general, there were received 29 applications from 6 countries, 17 applicants were interviewed out of which 10 ventures were selected. The final selected ventures are: *Datathon, ArAgIL, ZEST (France), ForestBerg, Smart City, UCAR, Baskcleaner, Forest Guard, Fitolight, Persistence Data Mining, Inc (USA).*
- Climate Change Technology Accelerator (CCTA) was launched on September 5, 2018 in partnership with Innovative Solutions and Technologies Center (ISTC) Foundation, Founders Institute Yerevan and Enterprise Incubator Foundation. The core mission of CCTA is to establish a 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. 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.
- Starting from September 5th the acceleration program comprised of the following components:
    - Weekly Sessions (Technology, Business and Impact Tracks)
    - 1 to 1 meetings with Field and Impact experts

- Pitch decks trainings
- Use of the resources provided via ISTC and FI
- Attendance for Roadshows and exhibitions
- Demo Day/Graduation day

- The curriculum of Climate Change Tech Accelerator consisted of three main tracks, which were framing the ventures development, including 16-week Business Track, 6-week Technological track and 4-week Impact Track
- One on one meetings provided teams with the opportunity to separately meet with the field and impact experts to discuss issues they face. There where organized more then 10 meetings, where experts were: Hovik Sayadyan, Hovhannes Sayadyan, Arthur Dolmajian, Armen Martirosyan, Gayane Hovsepyan.
- Demo Day November - on November 1 all startup teams attended the first Demo Day of Climate Change Technology Accelerator, where all organizer sides and partners from the Government, development, private and tech sectors came together to share their vision and experience on how to tackle Climate Change challenges. During the Demo Day ventures of CCTA presented the projects, which they developed and demonstrated all capacity gained during several weeks of acceleration.
- Roadshow of the CCTA has been organized to WebSummit as part of the planettech track, the biggest tech summit in the world, and has ensured perfect visibility for CCTA teams. Seven ventures out of ten were selected to go through the experience of Web Summit as ALFA Startups. Each startup had its stand and personalized schedule of those exhibiting 3 days, during which the startups were presented to the attendees, startupers and investors.
- A 3-day Workshop with experts of Climate Kic and 2 more Business Tracks was organized in December to finalize the Acceleration program for 2018.

Project management

- The Project has prepared the procurement plan for Y2018 and presented it to the UNDP Procurement Unit.
- The Project actively participates in program meetings, initiatives, seminars and discussions organized by UNDP to ensure the up-to-date management of the project.
- Project Board Meeting has been held on July 12, during which the draft 2018 annual work plan of the Project has been discussed and approved, as well as there has been presented the approved budget of Project. Presentation of the results of the analysis of wildfire management system in Armenia, with recommendations on necessary equipment and related logistical solutions, has also been conducted during the meeting.

IV. GENDER MAINSTREAMING RESULTS

Gender mainstreaming framework

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:

- 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.
- Promote gender equality for resilience, including in disaster risk reduction, climate mitigation and adaptation.

Results for the reporting period

During the Project implementation equal opportunities have been ensured and promoted for men and women to participate in respective activities. Particularly, under Activity 3, Climate Change Technology Accelerator, 11 out of 27 members of 9 startup teams are women. In addition, women lead the development of innovative solutions in 5 teams out of 9.

V. RISKS LOG

The risk logs are updated and elaborated in the attached **Annex II. Updated risk log from ProDoc and SESP risks**.

VI. INTERNATIONAL, BILATERAL COLLABORATION WITH OTHER COUNTRIES

Under its Climate Change Technology Accelerator component, the Project has participated in regional workshop on Partnerships for innovations in development, where representatives of Armenia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan and Uzbekistan have presented their perspectives on international trends and experience on creating an innovation conducive environment, as well as innovations within UNDP.

VII. COMMUNICATION AND VISIBILITY

Project activities and its results have been covered by major national media, including internet-based ones, TV, etc. Links to some of the articles and photos are provided in Annex III.

VIII. PRODOC CHANGES, HORIZON SCANNING

In order to better reflect the activities planned under the Project and to ensure high quality of monitoring and evaluation therefore, it is proposed initiating consultations on amendment of output indicators and targets set under the Results framework of the Project, particularly those related to Output 4.1 Regulatory framework of social, environmental and economic sectors is updated to better address environmental sustainability and resilience principles, as well as Output 4.2 Innovative climate change and disaster-risk reduction/resilience measures and practices applied and replicated across the country.

IX. ANNUAL VALIDATION OF RESULTS (FIELD VISIT) AND QUALITY ASSURANCE

See **Annex IV. Annual validation of results (field visit) and quality assurance.**

X. FUTURE WORK PLAN

See **Annex V. Expected outputs and AWP for 2019.**

Annex I. 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**	**RESULTS**	**DATA COLLECTION METHODS & RISKS**
			Value	**Year**	**Year 2**		
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	2	0	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*	*Periodic assessment of data collection instruments and indicators (annual)*	0	2017	16 16 4 5	0 0 0 0	Official report; Government, national disaster-risk reduction platform; UNDP.

	(including gender and disability considerations) ***4.2.1.*** *Additional 20 communities replicated*				4	0	
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 1000ha	0 1,600 ha	*Website of the Ministries of Nature Protection and Agriculture; national reports, including communication to conventions.)*

Annex II. Updated risk log from ProDoc and SESP risks

#	Description	Risk Category	Impact & Probability	Risk Treatment / Management Measures	Risk Owner
1	Proposed enabling legal and institutional framework is not modified/adopted or adoption is not timely.	Operational	Delay and/or undermining of implementation of certain activities, particularly related to development of forest fire information system. P = 3 I = 4	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. Updated on 30 September 2018: No change	Project
2	Lack of coordination among public institutions, private sector partners, NGOs and resource users undermine partnership approaches and implementation of cooperative governance arrangements.	Financial Operational	Potentially decreased efficiency of forest fire information system and implementation of firefighting operations. P = 3 I = 3	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. Updated on 30 September 2018: No change	Project
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.	Operational Financial	Undermining of Project results after its completion. P = 3 I = 3	Set of measures of promoting and enforcing sense of ownership and responsibility in local communities and governance bodies towards set-up structures. Updated on 30 September 2018: No change	Project
4	The internal political crisis which led to significant changes in Government, may cause delays in project implementation and delivery.	Political	Potential delays in coordination of activities with respective public institutions. P = 2 I = 4	The risk is continuously monitored by project. Updated on 30 September 2018: Risk minimized thanks to effective cooperation between the Project and the new Government.	Project

Annex III. Links to main publications on Project activities and results

- Innovative solutions for environmental and agricultural challenges
- https://www.facebook.com/pg/UNDPArmenia/photos/?tab=album&album_id=1765258213555440
- Climate Tech hackathon in Armenia reveals winners
- Запущен конкурс инновационных решений для противостояния в последствии изменения климата
- https://armenpress.am/arm/news/952859.html?fbclid=IwAR2g68JJ0FkDhjgtcCx7z9DKAGR9nmyLROFOhUYhSg96CGM1KwsbVDX1J3g
- https://www.a1plus.am/1647640.html?fbclid=IwAR0lqUQTRFzffJ9CAzXaQ4fAhBfvZIEIADqthr_jAiiNgKpEzfNKc04ryG4
- https://hetq.am/hy/article/97703?fbclid=IwAR3dwH9AUXKH47HGyQj3w_KuJH_BPgelbophf4GhEKA9-QEqvRc7Bd1XspI

Annex IV. Annual validation of results (field visit) and quality assurance

Date of visit: 23 November 2018

Subject and venue of visit: 00102520, Addressing climate change impact through enhanced capacity for wildfires management in Armenia

Purpose of the field visit: Discussion of the Project progress towards development of forest fire information system.

Outcomes	Update on outcomes	Outputs	Update on outputs	Reasons if progress below target	Recommendation and proposed action
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.	Activities towards enhancing of wildfire management capacities in Armenia implemented during 2018 to support resilience building and climate change adaptation, including development of the design of forest fire information system, that can be integrated into existing forest management information and early warning systems of Armenia;	Output 4.1 Regulatory framework of social, environmental and economic sectors is updated to better address environmental sustainability and resilience principles.	Analysis of respective policies and legislation conducted and recommendations on amendment of these developed and discussed with stakeholders.	Delay with the beginning of the project implementation due to political changes in Armenia. Targets set in the Project Documents are not reflecting the content of Project activities.	Conduct revision of respective targets to make these more realistic and reflect the activities under given component of the Project.
		Output 4.2 Innovative climate change and disaster-risk reduction/resilience measures and practices applied and replicated across the country.	Analysis of the statistics of wildfire on agricultural lands conducted and preparatory activities undertaken for implementation of pilot project on production of fuel briquettes in Kotayk region of Armenia.	Delay with the beginning of the project implementation due to political changes in Armenia. Targets set in the Project Documents are not reflecting the content of Project activities.	Conduct revision of respective targets to make these more realistic and reflect the activities under given component of the Project.
		Output 4.3 Government uses innovative mechanisms and tools for evaluation and decision-making over the conservation and sustainable use of natural resources.	Supporting development of innovative solutions for tackling of climate change related issues in agriculture and forestry.	n/a	n/a

PROGRESS TOWARDS RESULTS

Overall, the progress towards results is satisfactory given the delay with Project implementation. Particularly, there has been finalized procurement of firefighting equipment for respective units of the Ministry of Nature Protection, including firefighting trucks, as well as respective tools and instruments. Designing of forest fire information system is progressing well and should be finalized by the end of 2018, while startup teams are developing innovative solutions for climate change related issues related to forestry and agriculture, within the framework of Climate Change Technology Accelerator.

Participants in the field visit: Arman Martirosyan, Vardan Melikyan, Nikola Nikolov

Prepared by (Project Coordinator): _____

Vardan Melikyan, Technical Task Leader

Approved by: _____

Armen Martirosyan, SGR Portfolio Analyst

UNDP "Addressing climate change impact through enhanced capacity for wildfires management in Armenia" UNDP-RTFD Project
Annual Work-Plan - Y2019

Project ID: 00102520
Output ID: 00104555

Activities		2019												Y2019 Budget, USD
		Q I			QII			Q III			QIV			
		1	2	3	4	5	6	7	8	9	10	11	12	
Outcome 1. Policy, legislation, normative acts, early warning systems														
1.1. Legislation and normative documents														78,300.00
1.1.1	Development and introduction of fire safety rules in specially protected areas and agricultural lands													
1.1.2	Development of collaboration with Global Fire Monitoring Center (GFMC) and Black See Cross Border Cooperation and Eurasian Economic Union Partners, as well as Georgia, Iran, Turkey and Lebanon													
1.1.3	Revision of existing national criteria for the identification of the classes of forest fire													
1.1.4	Development and integration of National forest and wildfire elements into existing information systems													
1.1.5	Including an article on "forest fire reduction, prevention and control" in the forest protection part of Forest Code													
Output 1.2 Early warning and monitoring systems through remote sensing														
1.2.1	Integration of forest and wildfire risk into forest management plans and curricula													
1.2.2	Operative integration of remote and ground-based data on the unified GIS-based platform													
Outcome 2. Equipment, training, capacity building, alternatives, demonstration.														
Output 2.1 Equipment for extinguishing forest fires.														224,300.00
2.1.1	Provision of firefighting equipment, tools and gear to respective units of MNP and MES and volunteer groups													
2.1.2	Provision of firefighting all-terrain truck to respective units of MNP													
Output 2.2 Capacity building														
2.2.1	Participation in regional and international forest and wildfire prevention and monitoring-related collaboration programs, projects and/or activities													
2.2.2	Development and adding forest and wildfire prevention and monitoring module to the curricula of "Forestry and Landscape Gardening" specialization at ANAU													
2.2.3	Assistance to introduction of "Forest and Wildfire Management" subject in the curricula of the Crisis Management State Academy and training of forest and nature conservation sectors' workers													

2.2.4	Support to the development of cooperation platforms and networking between MES structures, MoA, MNP, NGOs, volunteer rescuers/fire fighters, foresters and local community members													
2.2.5	Enforcement of ban on agricultural waste burning at local level through increased public awareness													
2.2.6	Development of forest and wildfire suppression and extinguishing guidelines and delivery of these to high-risk communities, the staff of forest enterprises, as well as the personnel of specially protected areas													
2.2.7	Formation and contribution of volunteer rescuer/fire-fighting teams at the local level in communities located near forests													
2.2.8	Theoretical and practical on-site training for fire rescuers/fire fighters and foresters on forest and wildfire fighting													
Output 2.3 Investment ideas to reduce wildfires risk.														
2.3.1	Development of behavioral change exercise to address the issue of burning of agricultural residues													
2.3.2	Implementation of pilot project on briquette production in Kotayk region													
Outcome 3. Climate change technology accelerator														
Output 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.														
3.1.1	Establishing of a special Climate Change window targeting technological solutions in agriculture and forestry sector within ASA													
	Closing of batch 1, and design of the 2nd call for CCTA													
	Public awareness and promotion, social profile and positioning													
3.1.2	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													**105,900.00**
	ClimateTech Challenge - Hackathon													
	International Solicitation, program communication													
	Climate Tech Incubator program													
	Climate Tech Accelerator program													
	Websummit, Investment pitches, Roadshow for startups													
	Closing Ceremony, Demodays													
4. Project Management														
4.1	Ongoing Procurement/Recruitment Processes (TOR development, RFQ/RFP, Evaluation, Contracting etc.)													
4.2	Project M&E and Reporting (Quarterly, semi-annual and annual standard project progress reports)													**25,700.00**
4.3	Conducting Project Board meetings													
													Total	**434,200.00**