ADAPTATION FUND

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Adaptation Fund Board
Project and Programme Review Committee
Thirty-seventh Meeting
Bonn, Germany, 7-8 April 2026

PROPOSAL FOR ARMENIA, GEORGIA

ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: Regional Project

Countries/Region: Armenia and Georgia
Project Title: Increased climate resilience of South Caucasus Mountain communities and ecosystems through wildfire risk reduction
Thematic Focal Area: Disaster risk reduction and early warning systems
Implementing Entity: United Nations Development Programme (UNDP)
Executing Entities: Ministry of Environment of Armenia; Ministry of Environmental Protection and Agriculture of Georgia; UNDP
AF Project ID: AF00000163
IE Project ID:
Requested Financing from Adaptation Fund (US Dollars): 19,701,000
Reviewer and contact person: Ahmad Ghosn
Co-reviewer(s):
IE Contact Person:

Technical Summary	The project "Increased climate resilience of South Caucasus Mountain communities and ecosystems through wildfire risk reduction" aims "To prevent and reduce the frequency, scale, and impact of climate-related wildfires and enhance ecosystem integrity and community resilience across the mountain forest regions". This will be done through the four components below: Component 1: Strengthened regional and national regulatory and institutional frameworks for climate-resilient wildfire management (USD 2,126,000). Component 2: Improved wildfire prevention, preparedness, and response capacity (USD 9,080,000) Component 3: Enhanced wildfire data, recovery, and decision-support systems (USD 3,352,000). Component 4: Gender-responsive and socially inclusive wildfire resilience (USD 2,612,000) Requested financing overview: Project/Programme Execution Cost: USD 740,000 Total Project/Programme Cost: USD 17,910,000 Implementing Fee: USD 1,791,000 Financing Requested: USD 19,701,000

	The first technical review raises several issues, such as shortening the proposal document length to AF limit; revising components financing table to include allocated budgets at output level; clarifying the role/s of EEs; providing more details on project activities and related USPs; quantifying project benefits and substantiating its cost effectiveness; providing list of applicable technical standards; providing detailed list of consultation and participants and clarifying consultations with communities/ vulnerable groups and stakeholders with a gender merit; revising project outcomes sustainability discussion; aligning E&S checklist table with AF format; providing project ESMP; revising detailed budget presentation and providing standalone table for EC breakdown; providing dedicated AF core indicators tables and revising alignment with AF RF as per related updated AF guidance; among other Clarification Requests (CRs) and Corrective Action Request (CARs) raised in the review. The second technical review finds that most of the CARs and CRs raised in the first review are addressed. However, few remaining issues need to be further addressed including shortening document length to the AF limit; providing supporting justification for the IE's role as an EE; reducing the IE execution costs to the AF allowed limits; providing summary table of the consultations; adding environmental and social management plan (ESMP); revising the AF RF alignment table; among others as indicated in the review.
Date	**3 March 2026**

Review Criteria	**Questions**	**First Technical Review Comments 3 February 2026**	**Second Technical Review Comments 3 March 2026**
Country Eligibility	1. Are all of the participating countries party to the Kyoto Protocol and/or the Paris Agreement?	**Yes.**	-
	2. Are all of the participating countries developing countries particularly vulnerable to the adverse effects of climate change?	**Yes.** Armenia and Georgia are both vulnerable to adverse CC effects including drought, erratic rainfall, floods, heatwaves, forest wildfires, among others. In both countries, wildfires have become frequent and severe over the past two decades and are projected to intensify in sensitive and shared mountain forest ecosystems.	- **Note:** Computer screen dashboard page numbers of the track change version are referenced in the review, unless otherwise specified.
Project Eligibility	1. Have the designated government authorities for the Adaptation Fund	**Yes.** As per the Endorsement letters listed below: Armenia: 26 December 2025	-

	from each of the participating countries endorsed the project/programme?	Georgia: 22 December 2025	
	2. Does the length of the proposal amount to no more than One hundred (100) pages for the fully-developed project document, and one hundred (100) pages for its annexes?	**No.** Proposal length is 110 pages. Annexes amount to 82 pages (excel sheets Annex pages estimated). **CAR1:** Please reduce proposal length to 100 pages (taking into consideration additional pages that may be added to address review comments). Note: Part I "Project Background and Context" is too lengthy (30 pages) and can be significantly reduced to help meet AF proposal length requirements (e.g.: remove "Summary", pp. 2-4, (no need for it, just move para 5 and TOC after "Objectives"), delete figures that are well explained in text, revise paragraphs to be briefer without losing key context/, etc. **CAR2:** Page 1 of Part I indicates that the project proposal was submitted before. Kindly indicate last submission date. **CR1:** Add/ attach Annexes to the proposal document. **CR2:** Please consider revising the project objective statement to *"To prevent and reduce the frequency, scale, and impact of climate-related wildfires and enhance ecosystem*	**CAR1: Not Cleared.** The proposal length is still 104 pages (excluding table of contents and lists of tables, figures and abbreviations). **CAR2: Cleared.** See p. 1. The proposal was submitted in 2/19/2020. **CR1: Not Cleared.** Only Annexes titles are listed. No Annexes are attached. **CR2: Cleared.** See para 83, p. 37.

		integrity and community resilience across the mountain forest regions of Armenia and Georgia". (Note: how objective will be achieved can be noted in separate statements and in components description in Part IIA). **CR3:** Move para 5 that lists the components (with some re-editing) and the Theory of Change (TOC) after Objectives. **CAR3:** In the project component financing table pp. 32-34, please provide allocated amounts at <u>output</u> and component levels. Also, provide table number and heading. **CAR4:** In the Project Calendar (p.34), Terminal Evaluation is currently scheduled for April 2032, which is before the Project closing date of June 2032. Please note that the Terminal Evaluation should be scheduled within 9 months <u>after</u> the final closing date of the project. Please revise. **Editorial notes: To improve the quality and clarity of the proposal document, please consider the following:** 1. Add table of contents, lists of abbreviations, tables & figures (will not be counted towards the proposal length).	**CR3: Cleared.** See para 84, pp. 37-38. **CAR3: Cleared.** See Table 2, pp.40-42. **CAR4: Cleared.** See p. 43. <u>Note:</u> please add table number and heading. **Editorial Notes:** 1. Add table number and heading for all tables (e.g.: project calendar, national standards, project results framework, AF alignment table, etc.), adjust table numbering sequence accordingly and reflect in the list of tables includes. 2. Conduct another quick round of editing/ proofreading after addressing the review comments. 3. Ensure consistency among the various proposal document versions (i.e., TC, clean & pdf versions).

		2. Spell out abbreviations when first used across the document/ annexes and refer to figures, tables, annexes at related discussions. Also, add page numbering. 3. Revise Table 1 layout to align mitigation measures with respective/ related causes/ origin, etc. 4. Ensure that all tables are numbered and with proper headings (e.g.: components financing, project calendar, measures for financial & project/program risk management, M&E plan, project RF, alignment with AF RF, budget/s, etc.) and reflect in related lists. 5. Para 38, p.13 refers to Annex 10. There is no Annex 10. Also, para 225, p. 65 refers to Annex 7 on consultations. There is no Annex 7. Please double check references to annexes across the document. 6. In Part III, revise the letter numbering of disbursement schedule section to "H" instead of "I". 7. Conduct a thorough round of editing/ proofreading to the document.	
	3. Does the regional project / programme support concrete adaptation actions to assist the participating countries in addressing the adverse	**Yes.** See Part IIA, and project results framework, pp. 34-43. Besides developing policy, legislative, institutional, etc. reforms to integrate CC into national and regional wildfire management frameworks, the project	

	effects of climate change and build in climate resilience, and do so providing added value through the regional approach, compared to implementing similar activities in each country individually?	involves several concrete actions. These include wildfire drills; developing 2 fire forecasting models integrated with hydrometeorological systems; Implementing active preventive measures for over 50,000 ha of high-risk forest ecosystems by stablishing fuel breaks, forest thinning, coppice restoration, pest/ disease monitoring, etc.; establishing/rehabilitating 10 recreational zones; equipping 60 firefighting brigades; establishing 2 national wildfire training centers & 2 EWSs; institutionalizing 10 innovation pilots (IT, UAV, sensors, biofuels, ecotourism, firebreak trails); establishing 2 FMIS platforms & 6 air quality monitoring stations along the countries border; rehabilitating 30,000 ha of degraded forest ecosystems; implementing 10 livelihood recovery & 20 community-based initiatives; among others as discussed in Part IIA and detailed in the project RF. However, more details on the project activities, roles of executing entities, USPs, among others are needed. **CAR5:** Please address the following: 1. The executing entities indicated on p.1 include Ministry of Environment of Armenia, Ministry of Environmental Protection and Agriculture of Georgia, and UNDP. Please specify in the components description (Part IIA) the	**CAR5: Not fully cleared.** 1. Please specify the activities executed by each entity. Para 88, p. 43 (TC document) is too general and does not sufficiently address the requested. If, UNDP is the sole executing entity, please indicate so.

		components/ outputs/ activities executed by each of these entities. In this respect, kindly note that as per the AF requirements, the IE (UNDP) execution cost ceiling is limited to 1.5% of the total cost of "executed activities". 2. Please provide more details on the activities including site locations and supported by related quantification (e.g., no. of direct/ indirect beneficiaries, no. of EWSs/ FMISs etc., no. of trainings/ trainees, etc.), as applicable, to demonstrate the size of work and substantiate allocated budgets. Itemize the activities under each output (e.g.: Activity1.1.1, 1.1.2, etc.) and provide more details on each. (Note: some details can be extracted from the project results framework, budget notes, etc.). **CAR6:** The lack of sufficient details on the activities as presented in Part IIA coupled with the nature of some and the discussion noted in the ESMF Annex 3 regarding further screening/ assessment of the activities under Outputs 1.3, 2.2, 2.3, 3.4 and 4.1, etc., imply unidentified subprojects (USPs) which are usually not encouraged by AF and require compliance with related specific requirements. Please clearly indicate all USPs under related components, along with a brief	2. Under output 3.2, please specify how many monitoring stations will be established. **CAR6: Not fully cleared.** Please briefly specify in Part IIA discussions which outputs activities constitute USPs, clearly indicate that they will be managed in compliance with AF requirements, and refer to ESMF Annex for more details.

		discussion on how they will managed to comply with the AF requirements, guidance for which can be found at https://www.adaptation-fund.org/wp-content/uploads/2021/05/Updated-guidance-on-USPs-.pdf	
	4. Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy of the Fund?	**Yes.** See Part IIC, pp. 45-48. However, more quantification of the benefits is recommended. **CR4:** Please quantify the project benefits where possible under the three areas (economics, social, environmental) and under the benefits to vulnerable groups (number of direct/ beneficiaries disaggregated by gender, areas of protected/ rehabilitated, EWS established, jobs created, etc. - related info can be extracted from the project results framework) and if/as possible, tag an estimated dollar value to these benefits. Also, in para 153, p. 47, please refer to the gender assessment and action plan as appropriate.	**CR4: Cleared.** See pp. 55-59.
	5. Is the project / programme cost-effective and does the regional approach support cost-effectiveness?	**Yes.** See Part IID, pp. 48-49. However, it seems that the cost-effectiveness is compared against not action. More details are needed among other issues noted below. **CR5:** In paras 158, p. 48, and para 162, p. 49, Please add references to the indicated benefit-cost ratios as footnotes. Also add, if possible, the estimated total dollar values as related to the project.	**CR5: Cleared.** See para 148, p. 59, and para 152, p. 60.

		CR6: Please clearly indicate in the discussion that the cost effectiveness is compared against no-action alternative. More importantly, please add a table to demonstrate the cost-effectiveness of the project planned interventions against no-action alternative supported with estimated dollar value of losses avoided/ benefits gained, where/as possible.	**CR6: Cleared.** See Table 2, pp. 61-62.
	6. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments? If applicable, it is also possible to refer to regional plans and strategies where they exist.	**Yes.** See Part IIE, pp. 50-53. However, please double check the relevance of UNCCD related national action plans/ strategies and include (with dates) if it is the case. **CAR7:** The project interventions include rehabilitation of degraded forest ecosystems/ land, which would imply the relevance of UNCCD related national action plans. Please double check and include (with dates) if it is the case.	**CAR7: Cleared.** See para 166, p. 63, and para 175, p. 64.
	7. Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the	**Not fully addressed.** See Part IIF, pp. 53-55. Only a general brief general para on applicable standards is included in Para 196, p. 53, and more details are needed.	

	Environmental and Social Policy of the Fund?	**CAR8:** Please provide a detailed list of the national standards indicated in Para 196, p.53 for both countries along with dates, project outputs/ activities they apply to, measures to ensure compliance, etc. **CR7:** Paragraphs 197-206, pp. 54-55, do not seem to be related to Part IIF. Please delete and use at other related sections if/ as needed.	**CAR8: Cleared.** See paras 189-193, pp. 66-67. **Note:** please add table number for the listed applicable national standards. **CR7: Cleared.** Paras 197-206 are deleted.
	8. Is there duplication of project / programme with other funding sources?	**No.** See Part IIG, pp. 55-62. However, some revisions need to be made to related projects Table 2, pp. 56-59. **CR8:** The status of several listed project as indicated in the last column of Table 2 "Potential alignment with the project" contradicts the project dates provided. Also, the dates/ duration of GCF projects (items 1&2 in the list) need to be confirmed not estimated. Please revise the table to clearly indicate the listed project dates and status (completed, ongoing/ under implementation, etc.), and reflect consistently in the last column Table 2, if/ as needed.	**CR8: Cleared.** See Table 3, pp. 70-74.
	9. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?	**Yes.** See Part IIH, pp. 62-64. However, some clarifications are needed. **CR9:** In Part IIH, please address the following:	**CR9: Cleared.** See para 203, p. 77, and para 223, p. 79.

		1. Specify the project activities designed/ dedicated to deliver learning and knowledge management aspects. 2. Clarify the entities responsible for tracking experiences gained, how this will be done, when the tracking will take place, and source of associated cost.	
	10. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations?	**Yes.** See Part II"I", pp. 64-65, and Annex 5. However, more details are needed among other issues related to the consultations with local communities/ vulnerable groups and stakeholders with a gender remit. **CAR9:** Please address the following: 1. Clarify the consultations conducted with local communities/ vulnerable groups. Paragraph 222, p. 64, refers to "local community meetings/ visits" but no details are provided neither in Part II"I" nor Annex 5. Also, indicate whether future consultations will be conducted during project implementation with key stakeholders and local communities/ vulnerable groups. 2. Neither the consultations list in Table 3, pp.64-65, nor Annex 5 reveals participation of stakeholders with a gender remit. Please clarify how the project gender related issues were substantiated in the absence of such stakeholders. Note: "*Stakeholders with a gender*	**CAR9: Cleared.** See para 226, pp. 79-80.

		remit are individuals or organizations, such as government agencies, NGOs, community-based groups, academic institutions, and international organizations, that focus/work on promoting gender equality and addressing gender-specific issues". **CAR10:** Please provide a summary table of the conducted consultations. The table should include: consultation date, consulted entity/ group/ community, number of participants disaggregated by gender, key topics discussed, outcomes and how these outcomes were considered in project design.	**CAR10: Not Cleared.** Please provide a summary table of conducted consultations, including those of the earlier submission. The table should include consultation date, consulted entity/ group/ community, number of participants disaggregated by gender, key topics discussed, outcomes and how these outcomes were considered in project design.
	11. Is the requested financing justified on the basis of full cost of adaptation reasoning?	**Yes.** See Part IIJ, pp. 65-67. However, see below comment. **CR10:** Please add a brief para to indicate that the project will be able to achieve its planned adaptation objectives/ outcomes solely based on the requested AF funds and irrespective of any additional co-financing from other donors.	**CR10: Cleared.** See para 229, p. 81.
	12. Is the project / program aligned with AF's results framework?	*See the below "item 9 under Implementation Arrangements" of the review for related comments.*	-
	13. Has the sustainability of the project/programme outcomes been taken into account when designing the project?	**Yes.** See Part IIK, pp. 67-69. However, amendments are required. **CAR11:** Please revise Part IIK to discussion to address the key areas of sustainability (economic, social,	**CAR11: Cleared.** See para 243-247, pp. 83-84.

		environmental, financial) under dedicated headings and explain the arrangements through which the sustainability under these key areas will be ensured, including the sustainability of the O&M of infrastructures/ systems planned to be developed by the project. Also, discuss the opportunities/ potentials for the replication/ scaling up of the project outcomes with other funds after its completion/ end.	
	14. Does the project / programme provide an overview of environmental and social impacts / risks identified, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	**Not fully.** See Part IIL, pp. 69-71. The AF E&S checklist table need to be aligned with AF format and requirements, among other issues noted below. **CAR12:** Please align AF E&S checklist table with AF format (in column 1 list AF E&S principles, in column 2 indicate if no further assessment is needed, In column 3 list the risks of each E&S principle and their level (no risk, low, medium, high), indicate what further assessment is needed for those not marked in column 2, and arrangements to ensure compliance for all E&S principles. Also refer to GAP and ESMF/ ESMP and flag USPs at related principles. Please note that according to AF ESP guidance, principles 1 (Compliance with the Law), 4 (Human Rights), and 6 (Core Labor Rights) often require ongoing screening, assessment, and monitoring	**CAR12: Not fully cleared.** 1. Remove UNDP principles from column 1. Only keep AF E&S principles are. 2. No reference to ESMP (to be added) is made. 3. USPs are not flagged

		throughout project implementation phase. **CR11:** Ensure alignment of the mentioned risks with those discussed in Part IIIC, ESMF and ESMP (to be provided).	**CR11: Cleared.** Note: ensure alignment with ESMP (to be added/ included).
	15. Does the project promote new and innovative solutions to climate change adaptation, such as new approaches, technologies and mechanisms?	**Yes.** See Part IIB, pp. 43-45.	-
Resource Availability	1. Is the requested project / programme funding within the funding windows of the programme for regional projects/programmes?	**Yes.**	-
	2. Are the administrative costs (Implementing Entity Management Fee and Project/ Programme Execution Costs) at or below 10 per cent of the project/programme for implementing entity (IE) fees and at or below 10 per cent of the project/programme cost for the execution costs?	**Yes.** IE fee is 10% and execution costs are at 4.1%. However, further clarification on UNDP execution costs portion is needed. **CAR13:** Please specify the execution cost portion for UNDP and clarify on what basis it was calculated. In this respect, kindly note that as per the AF requirements: "In case IE is serving as EE, which is acceptable only under exceptional circumstances and must be well-justified, execution cost should be limited to 1.5% of the part of the project executed by the implementing entity. If actual execution costs of the IE exceed	**CAR13: Not Cleared.** Based on execution costs breakdown in Table 14, pp.103-106 (clean version) and IE response, it is clear that the project will be fully executed by UNDP/ UNDP COs. In view of this, the following need to be addressed: 1. Indicate on p.1 that UNDP is the EE and reflect the same in Part IIIA. 2. Justify IE involvement as EE in line with Decision B.18/30 *"written*

		the 1.5% cap a justification should be provided".	*request by recipient country, involving designated authorities"* **3.** Reduce execution costs to 1.5% of total project cost.
Eligibility of IE	1. Is the project/programme submitted through an eligible Multilateral or Regional Implementing Entity that has been accredited by the Board?	**Yes.** UNDP has been accredited by the Board. Accreditation Expiration Date: 11 October 2029	**-**
Implementation Arrangements	1. Is there adequate arrangement for project / programme management at the regional and national level, including coordination arrangements within countries and among them? Has the potential to partner with national institutions, and when possible, national implementing entities (NIEs), been considered, and included in the management arrangements?	**Yes.** See Part IIIA, pp. 72-76. However, some clarifications/ revisions are needed. **CAR14:** Please revise the project management arrangements to further clarity the reporting line among involved entities and reflect this as appropriate the project management organization chart. **CR12:** Kindly note that the terms "implementing/ implementation" and "executing/ execution" refer to two different roles in AF fund terminology. Therefore, revise the use of these terms across the document to ensure that they are not used interchangeably. For example, "implementing partner" in para 251, p.72, should be "execution partner". **CR13:** Para 251, p. 72, states "The UNDP BPPS Executive Coordinator, in consultation with UNDP Regional Bureau Director, retains the right to	 **CAR14: Cleared.** See paras 273 and 275, p. 94; Figure 18 **"**Project Implementation Diagram", p. 92; and IE response. **CR12: Cleared.** See Part IIIA, pp. 90-95. **CR13: Cleared.** Statements deleted.

		revoke the project DOA, suspend or cancel this AF project". Please delete or clarify, as this reads as article of a contractual agreement which would require consent of both parties. Also, paragraph 252, p. 72, refers to "The suggested multi-pillar model for the Climate and Health Project", please delete/ revise/ clarify. **CR14:** In Part IIIA, please briefly reflect on the gender responsive elements of the implementation arrangements.	**CR14: Cleared.** See para 272, p. 94.
	2. Are there measures for financial and project/programme risk management?	**Yes.** See Part IIIB, pp. 76-77. However, more details are needed. **CAR15:** Please revise Part IIIB table to Include a dedicated column that specify the "risk categories" (financial, environmental, social, institutional, etc.) and a column to indicate expected risk level/ rate after applying the "Mitigation Action". Also, add table number and heading.	**CAR15: Cleared.** See Table 6, p. 95.
	3. Are there measures in place for the management of for environmental and social risks, in line with the Environmental and Social Policy of the Fund? Proponents are encouraged to refer to the Guidance document for Implementing Entities on compliance with the	**Not fully addressed.** See Part IIIC, p. 77, and Annex 3. An ESMP is needed, among other issues noted/ flagged below. **CR15:** In Part IIIC, please provide a brief discussion on the project anticipated risks as per the initial E&S assessment. Also, include a brief discussion how the "yet to be assessed" E&S risks associated with the project USPs will be managed to	**CR15: Cleared.** See Para 278, p. 96.

	Adaptation Fund Environmental and Social Policy, for details.	ensure compliance with the AF requirements (Refer to this link for guidance: https://www.adaptation-fund.org/wp-content/uploads/2021/05/Updated-guidance-on-USPs-.pdf). **CAR16:** The ESMF annex doesn't provide much information beyond what is discussed in the proposal, except for general guidelines for compliance with AF E&S principles (Section 6.3, pp. 15-18), the GM, brief statements on potential risks associated with the activities under Outputs 1.3, 2.2, 2.3, 3.4 and 4.1, and staff involved in ESMF implementation. No detailed ESMP is provided as per AF requirements to clarify how the project related E&S risks will be managed. Please provide summary ESMP Matrix/ table in Part IIIC. This Matrix/ table would typically include the AF E&S principle, the project component output/ activity related to the risk, the risk, risk mitigation measures, monitoring frequency to ensure compliance with mitigation measures, responsible entity/ies, and allocated budgets to implement mitigation measures and related monitoring. Also, indicate in the table whether site specific ESMPs are needed for USPs.	**CAR16: Not Cleared.** Please provide a consolidated summary ESMP Matrix/ table in Part IIIC. This Matrix/ table would typically include the AF E&S principle, the project component output/ activity related to the risk, the risk, risk mitigation measures, monitoring frequency to ensure compliance with mitigation measures, responsible entity, and allocated budgets to implement mitigation measures and related monitoring. Also, indicate in the table whether site specific ESMPs are needed for USPs.

		CR16: In Part IIIC, please discuss the GM in a dedicated brief paragraph and refer to Annex 3 for further details. **CR17:** the ESMF implementation cost in Annex 3, includes midterm and final evaluations which should be part of M&E budget. Please revise to avoid duplication. Also, conduct a round of editing/ proof reading to the ESMF Annex.	**CR16: Cleared.** See para 286, p. 97. **CR17: Cleared.** Midterm and final evaluation lines removed from ESMF budget. See ESMF Annex 3.
	4. Is a budget on the Implementing Entity Management Fee use included?	**Yes.** See Part IIIG, G2 section Table, pp. 107-108. <u>Please add table number and heading.</u> https://www.adaptation-fund.org/generic/costs-and-fees/	**-**
	5. Is an explanation and a breakdown of the execution costs included?	**No.** only a general breakdown and explanation is provided at the end of the Part IIIG, G1 section budget table, p. 100. **CAR17:** Please provide a standalone table for execution cost break down indicating the amount (along with execution cost item covered) allocated to each executing entity. <u>Note:</u> *"Execution costs include the main items supported by the AF for project management including consultant services, travel and office facilities, etc. covering the direct costs for administration of the day-to day activities. Specific costs include staffing costs, and project related activity expenditures (M&E costs; costs related to drafting progress/ financial reports; consultation with project stakeholders*	**CAR17: Cleared.** See pp. 127-132. <u>Please see CAR13 above</u>.

		(meetings/ workshops); communication, travel)". *https://www.adaptation-fund.org/generic/costs-and-fees/*	
	6. Is a detailed budget including budget notes included?	**Yes.** See Part IIIG, G1 section, pp. 94-110. However, some revisions are recommended, among other clarifications noted below. (Note: add table number and heading). **CR18:** In Part IIIG, G1 section, please provide a more simplified budget table based on Annex 6 to reflect total expenditure at activity level (not at yearly basis) for the project regional component and country level projects. Also, integrate budget notes text (not numbers) in the table (delete columns 3,4,5,6 & 7 in current table to have space for notes), and provide a brief paragraph to refer to Annex 6 for further details (i.e., budget lines, yearly allocations, etc.). **CR19:** The budget table and Annex 6 indicate that all budget expenditures for components and execution costs are fully managed by UNDP (no transfers made to national executing entities). Please provide a brief paragraph to clarify the financial arrangements/ mechanism governing budget management in this respect.	**CR18: Cleared.** See pp. 117-127. **CR19: Cleared.** See para 264, p. 91, and the IE response, which indicates that ***"****At the request of the National Executing Entities, UNDP Country Offices in Armenia and Georgia will provide execution support to the National Executing Entities, ….*", which confirms UNDP's role as executing entity for the project. See CAR13 above.

		CR20: Clearly indicate, as appropriate, in the budget notes or implementation/ execution costs, the costs associated with ESMF/ESMP and Gender Action Plan implementation.	**CR20: Not Cleared.** Unable to track/ find neither in TC document version nor in the clean version. Please clarify.
	7. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators, in compliance with the Gender Policy of the Fund?	**Yes.** See Part IIID, pp. 77-79. However, few revisions/ clarifications are needed as indicated below. **CR21:** The proposed M&E budget allocates a total of USD 80,000 for the Mid-Term Evaluation and Final Evaluation. This amount is 0.45% of the project total cost($17,910,000). In this respect, kindly note the AF recommends this % to be between 1-2% for projects with total costs between $5M-$10M. Since the project total cost is over $10M, use your judgement to revise the amount allocated to the evaluations proportionate to the above range if/ as needed. **CAR18:** Reference to the Project Completion Summary in Part IIID is mandatory as per the AF requirements, see https://www.adaptation-fund.org/projects-programmes/project-performance/). Please include in the Part IIID discussions. **CR22:** the Mid-Term and Final Evaluations costs are included the ESMF implementation cost (see ESMF Annex). Please revise ESMF to avoid	 **CR21: Cleared.** Mid-term and Final Evaluation budget has been increased to USD 100,000. See Table 7, p. 99-100. **CAR18: Cleared.** See para 305, p. 99. **CR22: Cleared.** ESMF revised and costs deleted. See CR17 above.

		duplication. *https://www.adaptation-fund.org/generic/costs-and-fees/*	
	8. Does the M&E Framework include a break-down of how implementing entity IE fees will be utilized in the supervision of the M&E function?	**Yes.** See Part IIID, M&E plan table, p.79.	-
	9. Does the project/programme's results framework align with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?	**Yes. However, additional.** See Part IIIE, pp. 81-91, and Part IIIF, pp. 92-94. The core indicators in Part IIIE need to be presented as standalone tables and revised to align with related AF requirements. Also, the AF alignment table in Part IIIF requires revisions to align with AF requirements, among other issues noted below. **CR23:** In the project results framework, please clearly indicate the direct and indirect beneficiaries (disaggregated by gender) and ensure consistency with those of related AF core indicator. Also, ensure that other targets indicated in project results framework are consistent with those mentioned in related core indicators tables. **CAR19:** In Part IIIE, revise current AF core indicators tables to include a dedicated table for each indicator (note: add tables headings and numbers) and align with AF related requirements.	**CR23: Cleared.** See p. 101. Note: Add table number and heading. **CAR19: Not Cleared**. Please address the following: 1) For the core indicator on income, kindly provide the total expected income gains or

		Related guidance on this can be found at: Methodologies for reporting Adaptation Fund core impact indicators (78 kB, DOC) Methodologies for reporting Adaptation Fund core impact indicators (152 kB, PDF) **CAR20:** In the AF alignment table in Part IIIF: 1. Reflect grant amounts at outcome and output levels and ensure that total at each level adds up to components total cost. 2. The output associated with outcome 6 (table upper part) is not reflected at output level (table lower part), please ensure consistency. 3. Outcomes associated with outputs 2.1 & 7 (i.e., outcomes 2&7) are not reflected at outcome level (table upper part), please ensure consistency. 4. Outcome 2 indicator in the Alignment Table (lower part-output level), pp. 92-93: "Extent to which national and local institutions in Armenia and Georgia apply preventive measures and operate functional wildfire forecasting and early warning systems to reduce ignition risks", is not consistent with the indicator mentioned in the	losses avoided for the 2,400,000 expected beneficiaries in Armenia and Georgia. 2) In addition, please disaggregate the data by country, including the number of beneficiaries in each country and the corresponding expected income gains or losses avoided. The current combined estimate makes it difficult to assess the expected outcomes at the country level. 3) Similarly, for the core indicator on "Natural habitats protected or rehabilitated," the estimated 3,100,000 hectares of forests is presented as a combined figure for Armenia and Georgia. Kindly provide country-level estimates to clearly indicate the expected contribution of each country. **CAR20: Not Cleared.** Please add amounts at AF outcome level. Also, add totals at AF outcome and AF output levels (total for each should add up to total components cost). Refer to the latest AF guidance found at: Results Framework Alignment Table (Amended in November 2025) (77 kB, DOC). Note: add table number and heading.

		project results framework table, p. 84: “Value of new resources planned and leveraged by the governments of Armenia and Georgia as a result of the project for scaled up action to reduce wildfire risks and increase resilience to wildfires (USD)”. Please revise to ensure consistency. 5. Align the outcomes mentioned in the AF RF alignment table with those that are correctly presented in the TOC Figure 1, p.4, top row (Outcomes 1,2,3,5,6,7,8); etc. 6. Please revise alignment table to address the above and align with the latest AF guidance found at: Results Framework Alignment Table (Amended in November 2025) (77 kB, DOC)	
	10. Is a disbursement schedule with time-bound milestones included?	**Yes.** See Part IIIH, p. 108. However, please add table number and heading and revise section letter numbering to “H” instead of “I”. Also, revise the amounts in the disbursement schedule to whole numbers (no decimals). **CAR 21:** Please revise the figures/ amounts in the disbursement schedule to whole numbers (i.e. no decimals). Also, revise section letter numbering to “H” instead of “I”, and add table number and heading.	**CAR21: Cleared.** See Table 16, p. 108 (clean version).

ADAPTATION FUND

FULLY DEVELOPED PROPOSAL FOR REGIONAL PROJECT/PROGRAMME

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme:	Increased climate resilience of South Caucasus Mountain communities and ecosystems through wildfire risk reduction
Countries:	Armenia and Georgia
Thematic Focal Area[1]:	Disaster risk reduction and early warning systems
Type of Implementing Entity:	Multilateral Implementing Entity
Implementing Entity:	UNDP
Executing Entities:	Ministry of Environment of Armenia Ministry of Environmental Protection and Agriculture of Georgia UNDP
Amount of Financing Requested:	19,701,000.00 (in U.S Dollars Equivalent)

Letters of Endorsement (LOE) signed for all countries: Yes ☒ No ☐

NOTE: LOEs should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: https://www.adaptation-fund.org/apply-funding/designated-authorities

Stage of Submission:

☒This proposal has been submitted before including at a different stage (pre-concept, concept, fully-developed proposal)

☐ This is the first submission ever of the proposal at any stage

In case of a resubmission, please indicate the last submission date: 2/19/2020

Please note that fully-developed proposal documents should not exceed 100 pages for the main document, and 100 pages for the annexes.

[1] Thematic areas are: Food security; Disaster risk reduction and early warning systems; Transboundary water management; Innovation in adaptation finance.

Contents

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List of Abbreviations

- **AF**: Adaptation Fund
- **BN**: Budget Note
- **CCA**: Climate Change Adaptation
- **CO**: Country Office (UNDP)
- **CTA**: Chief Technical Advisor
- **DA**: Designated Authority
- **DRM**: Disaster Risk Management
- **DRR**: Disaster Risk Reduction
- **EE**: Executing Entity
- **ESFM**: Environmental and Social Management Framework
- **ESP**: Environmental and Social Policy
- **ESPs**: Environmental and Social Principles
- **EWS**: Early Warning System
- **FMIS**: Forest Management Information Systems
- **GAP**: Gender Action Plan
- **GCF**: Green Climate Fund
- **GRM**: Grievance Redress Mechanism
- **IE**: Implementing Entity
- **IRH**: Istanbul Regional Hub (UNDP)

- **IUCN**: International Union for Conservation of Nature
- **LOE**: Letters of Endorsement
- **M&E**: Monitoring and Evaluation
- **MEPA**: Ministry of Environmental Protection and Agriculture of Georgia
- **MoE**: Ministry of Environment of Armenia
- **MoU**: Memorandum of Understanding
- **NFA**: National Forestry Agency (Georgia)
- **NFI**: National Forest Inventory
- **NIE**: National Implementing Entity
- **PPR**: Project Performance Report
- **QPRs**: Quarterly Progress Reports
- **RCP8.5**: Representative Concentration Pathway 8.5 (Climate scenario)
- **SDG**: Sustainable Development Goal
- **SES**: Social and Environmental Standards (UNDP)
- **SESP**: Social and Environmental Screening Procedure
- **SOP**: Standard Operating Procedures
- **UAV**: Unmanned Aerial Vehicle (Drones)
- **UNDP**: United Nations Development Programme

Project Background and Context:

Overview of South Caucasus region (Armenia and Georgia)

South Caucasus Profile

1. This project will be implemented in the South Caucasus region, with project activities focused on the Republic of Armenia and Georgia. Both countries are situated to the South of the High Caucasus Mountain range that runs West to East along the Russian border. They are surrounded by Turkey to the West, Iran to the South and Azerbaijan to the East. Armenia is landlocked, whereas Georgia enjoys access to the Black Sea coast.

2. Armenia is a mountainous nation of 29,743 km^2, with 76% of its territory at 1,000–2,500m elevation. Divided into ten units (*Marz*) and Yerevan, its 2025 population was 3.075 million (35.9% rural).[2] Socio-economic challenges include a 26.4% poverty rate[3] and 13.9% unemployment, with youth unemployment at 26.3%.[4] As a top-25 global biodiversity hotspot[5] Armenia faces high anthropogenic pressure, leading to habitat loss and degraded ecosystem services.

3. Georgia covers 76,284 km^2, with 70.6% consisting of natural-farming areas (forests, pastures) and 15.8% agricultural land.$^{[5]}$ The country is 38% rural with a population of 3.9 million; as of 2024, the absolute poverty rate is 9.4%.[6] Over half the land (54%) exceeds 1,000m elevation, and forests cover 44.5% of the territory, 97% of which are mountain forests.[7] Only 3% of the forested area consists of lowland forests.[8]

Profile of Forests in the South Caucasus

4. The South Caucasus contains a diverse range of sub-tropical, temperate, and coniferous forest landscapes. These forests are structured into distinct elevation zones: broad-leaved forests (50–900 m), coniferous forests (900–1,700 m), and high mountain subalpine or krummholz forests extending up to 2,800 m.[9] This vertical zonation supports a rich variety of biodiversity, though forest health and density vary significantly between the Republic of Armenia and Georgia due to differing geographical conditions and historical anthropogenic pressures.

5. In Armenia, forests cover approximately 11.2% of the territory (334,100 ha), consisting of 283,600 ha of natural growth and 50,500 ha of plantations. These ecosystems are highly diverse, hosting 110 tree and 152 shrub species, with oak, beech, and hornbeam making up 81.3% of the cover. Forest distribution is concentrated in the northeast (62%) and southeast (36%), with only 2% remaining in central regions. While historical evidence suggests up to 30% of the country was once forested, the post-1991 energy system collapse triggered a surge in illegal logging and community timber use. Today, reliable data on these depleted resources remains limited, and the remaining 5.3% of pine cover is found mostly in plantations rather than natural stands.

6. In Georgia, forests occupy a much larger share of the territory at 44.5% (3,100,500 ha), representing some of the last intact temperate forests of global ecological importance. Approximately 98.5% of these are of natural origin, with over 60% situated above 1,000 m and

[2] UNFPA Armenia / Armstat
[3] World Bank Poverty & Equity Brief
[4] World Bank Data
[5] As a part of the Caucasus-Anatolian-Hyrcanian Temperate Forests Ecoregion, which is listed by WWF as a Global 200 Ecoregion, the forests of Armenia have been identified as a global conservation priority. Additionally, significant shares of Armenia's territory belong to the Caucasus and the Irano-Anatolian biodiversity hotspots identified by Conservation International.
[6] Georgia's first biennial transparency report, 2024
[7] 2024 Population Census of Georgia Preliminary results
[8] Georgia's 5th national communication to the UNFCCC, 2024
[9] See Forest Habitat Restoration in Georgia (2015). http://www.cleanup.ge/documents/tkis_habitati-2015_eng.pdf

nearly half growing on steep slopes exceeding 26°. According to the 2023 National Forest Inventory (NFI), the Colchic foothills are dominated by chestnut and beech, while the Lesser and Greater Caucasus ranges feature dark coniferous forests of oriental spruce and Caucasian fir. However, 35.4% of Georgia's forest area is degraded, primarily due to unnaturally low stand density and climate-driven threats like pests, diseases, and forest fires.[10]

Figure 1. Overview of forest and landscapes in the South Caucasus Region (Source: Grid Arendal)

Climate

7. *Armenia's* climate is influenced by the Caucasus Mountains, and ranges from dry sub-tropical to cold alpine. The average annual air temperature is 5.5°C, but ranges from 12-14°C to below zero at altitudes above 2,500 m. Summers are temperate: the average temperature at the end of July is 16.7°C, while in Ararat valley it ranges between 24-26°C. The recorded absolute highest temperature is 43.7°C. Winters are cold. January is the coldest winter month, with an average temperature of -6.7°C, but with lowest minimum recorded at -42°C. Winters in the northeastern and southeastern parts of the country are temperate.

8. Armenia's average annual precipitation is 524 mm (1960-2015), over 40% occurring April through June; with average annual precipitation of 200 to 250 mm in low-land areas, and 800 to 1,000 mm at higher altitudes.

9. *Georgia* has a diverse climate, with two distinct climatic zones separating the East and West. On the West coast, along the Black Sea, the climate is humid and subtropical, with average annual temperatures of 14°C to 15° C and extremes from -15°C to 45°C. The East is more varied, with a dry subtropical climate in the plains and an alpine climate in the mountains.

10. The Greater Caucasus Mountain Range plays an important role in moderating Georgia's climate and protects the nation from the penetration of colder air masses from the north. The Lesser Caucasus Mountains partially protect the region from the influence of dry and hot air masses from the south. The average annual temperature is 11ºC to 13°C in the plains, and 2ºC to 7°C in the mountains, with a minimum of -25°C and -36°C, respectively.

11. Annual precipitation in Georgia is 400 to 600 mm in the plains, and 800 to 1,200 mm in the mountains. Precipitation in Western Georgia tends to be consistent throughout the year, although it can be particularly heavy during the autumn months. The foothills and mountainous areas experience cool, wet summers and snowy winters, with snow cover often exceeding 2 meters in many regions. Annual precipitation in Eastern Georgia ranges from 400-1,600mm, and is considerably less than in Western Georgia.

[10] First National Forest Inventory in Georgia, Report 2023

Figure 2. Average temperatures in the South Caucasus (Source: ENVSEC[11])

Figure 3. Average precipitation in the South Caucasus (Source: ENVSEC (2011))

Historic Climate Change

12. There is significant evidence that the climate has been changing over recent decades across the South Caucasus region in both Armenia and Georgia.

Temperature

13. In Armenia, temperatures have been rising steadily over recent years. The Fourth National Communication to the UNFCCC, submitted in 2020, reports an average temperature increase of approximately 1.23°C over the period 1929–2016. There is also substantial seasonal variation, with summer temperatures increasing more notably than in winter. In recent decades, the number of heat-related extreme events has grown. According to the same document, the number of summer days (days with maximum temperature above 25°C) increased at all altitudes during 1935–2016, especially at 1000-1500 m where the number rose by approximately 4.3 days per decade. Meanwhile, the duration of heat waves increased by about 2.0-7.6 days per decade, depending on altitude.

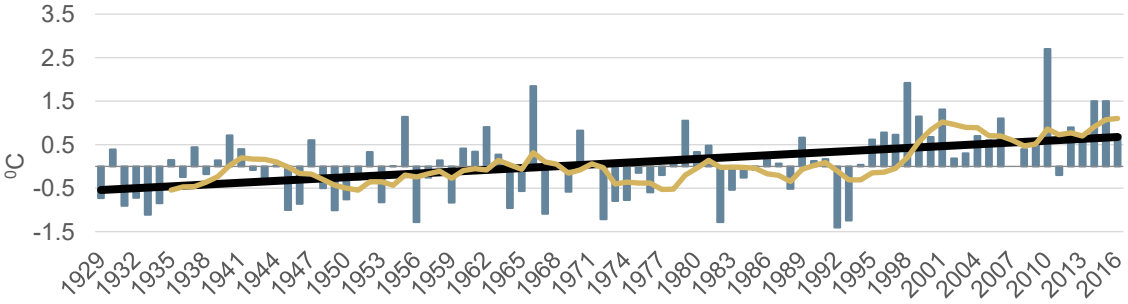


Figure 4. Deviation of the mean annual temperature (0C) in Armenia from 1961-1990 baseline average[12]

14. In Georgia, the average daily temperature has shown a consistent increase across the entire country when comparing the two 30-year periods of 1961-1990 and 1991-2020. The annual mean surface air temperature has risen by nearly 1 degree, with an overall average increase of 0.79 [0.33 to 1.24]°C across the region. This rise is 0.30°C greater than the temperature increase reported in the Fourth National Communication, which analyzed the changes between the periods of 1956-1985 and 1986-2015 (5th NC, 2024).

[11] See http://www.envsec.org/publications/climatechangesouthcaucasus.pdf
[12] Armenia's Fourth National Communication to UNFCCC (2020)

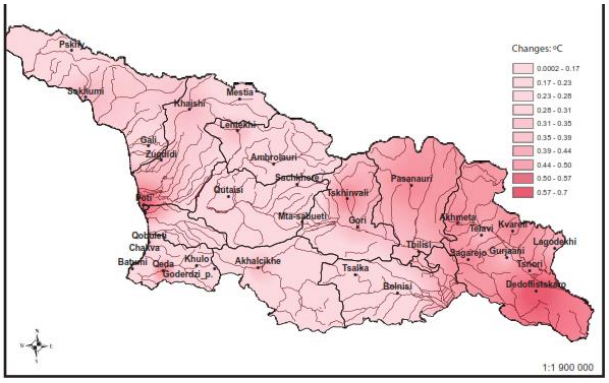


Figure 5. Spatial distribution of changes in temperature in Georgia 1961-85 vs. 1966-2010 averages[13]

Precipitation

15. There has been a decreasing precipitation trend in Armenia, with an overall decline of about 9% over the period 1935-2016.[14] There is also significant spatial variation: precipitation has decreased markedly in the Ararat Valley and central regions, while slight increases have been observed in the southern and north-western regions and in the western part of the Lake Sevan basin. The average number of consecutive dry days has increased by 0.3-1.6 days/10 years, with the highest average number of consecutive dry days observed in Meghri (up to 61 days) and Ararat (up to 58 days)[15]. Over the period 1935-2012, the number of dry days increased across almost all climatic zones of Armenia, with the greatest increases in the dry subtropical zone.[16]

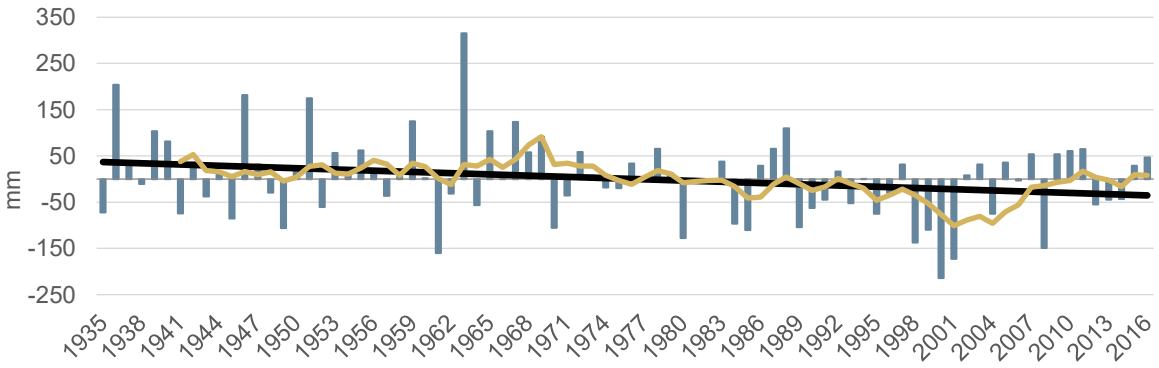


Figure 6. Deviation of average annual precipitation in Armenia from the 1961-1990 baseline average[17]

16. Changes in the precipitation patterns across Georgia exhibit temporal instability and spatial heterogeneity, yet they still display certain consistent trends. Overall, there has been a noticeable decline in precipitation levels across the region in recent years. Specifically, during the timeframe (1956-2015) analyzed in the Fourth National Communication (2021), an increase in precipitation was primarily noted in Western Georgia, while Eastern Georgia experienced predominantly decreasing trends. However, the analysis of data from 1961 to 2020 indicates that recent trends show a decline in precipitation across most of the country. Despite this, similar to previous periods, the variability in annual precipitation totals remains largely unreliable, with no definitive trends

[13] Georgia's Third National Communication to the UNFCCC
[14] Armenia's Fourth National Communication to UNFCCC (2020)
[15] Armenia's Third National Communication to UNFCCC (2015)
[16] Armenia's Third National Communication to UNFCCC (2015)
[17] Armenia's Fourth National Communication to UNFCCC (2020)

emerging. Across most of the region (with some exceptions), fluctuations in annual precipitation are generally within the range of ±10-15%.

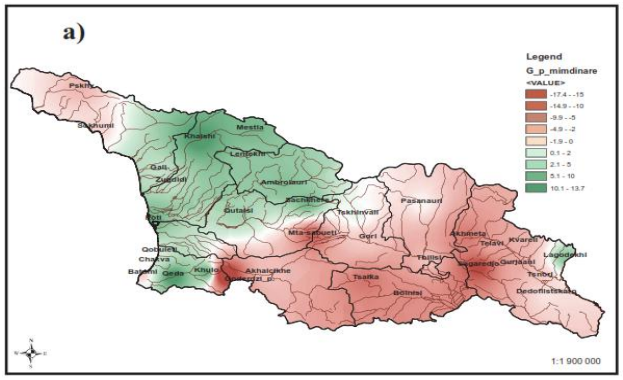


Figure 7. Changes in precipitation in Georgia (1986-2010 relative to 1961-85) [18]

Projected Future Climate Change

Temperature

17. n *Armenia*, the Fourth National Communication to the UNFCCC projects temperature increases of about 1.7°C by 2040, 3.7°C by 2070, and 5.2°C by 2100 under the RCP8.5 (high emissions) scenario, and increases of approximately 1.3°C, 2.5°C, and 3.2°C by the same horizons under the RCP4.5 (medium emissions) scenario.[19] There are clear indications that the already hot and dry summer conditions will worsen, creating significant impacts across sectors like water resources, agriculture, and forests. Temperature increases are projected to accelerate significantly after 2040. As a result, annual mean negative temperatures will persist only in the highest elevations of the Aragats, Geghama, and Zangezur mountain ranges.

18. In Georgia, current climate change was assessed based on observations of 33 stations of hydro meteorological network of Georgia, in the period of 1961-2010, while the forecast scenarios for 2021-2050 and 2071-2100 were developed using regional climate model RegCM454. According to the scenarios average annual temperatures are expected to increase by 0.8°-1.4°C by 2050 and 2.2°-3.8°C toward 2100 with the greatest increases in the Northwest mountains. There will also be an increase in the number of hot days with the average number of hot days increasing by 50 (which may double in some mountain areas), with more frequent heat waves June-August.

Precipitation

19. Annual precipitation changes in Armenia are projected to remain relatively flat, with inconsistent signals across climate models and scenarios. However, seasonal changes are more pronounced: according to RCP8.5 scenario, summer precipitation is projected to decline by around 10-23% by 2100 compared to the 1961-1990 baseline, while winter precipitation is expected to increase modestly. These shifts suggest drier and hotter summers, combined with wetter and hotter winters, with important implications for agriculture, water availability, and wildfire risk.

[18] Georgia. Third National Communication to the UNFCCC
[19] Armenia's Fourth National Communication to UNFCCC (2020)

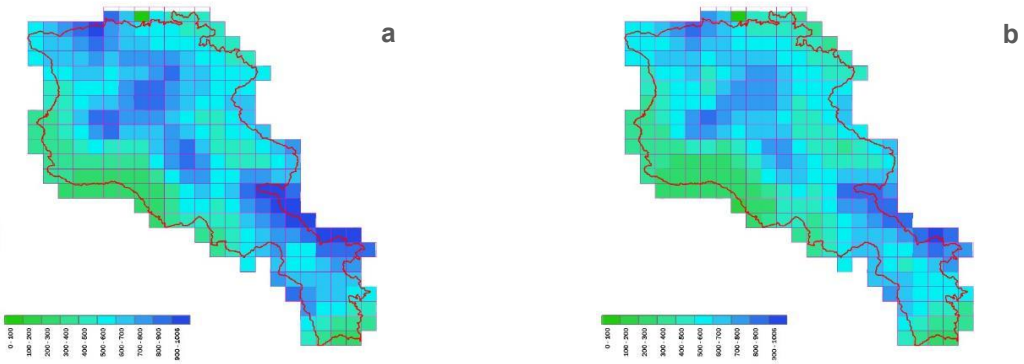


Figure 8. Distribution of average annual precipitation (mm) in Armenia for the periods of 1961-1990 (a) and 2071-2100 (b) according to the METRAS model and RCP8.5 scenario[20]

20. In *Georgia,* there is likely to be an overall increase in precipitation compared to historic averages over the period to 2050, followed by a period of more significant decline in overall precipitation levels (of up to 24%) in the period to 2100.

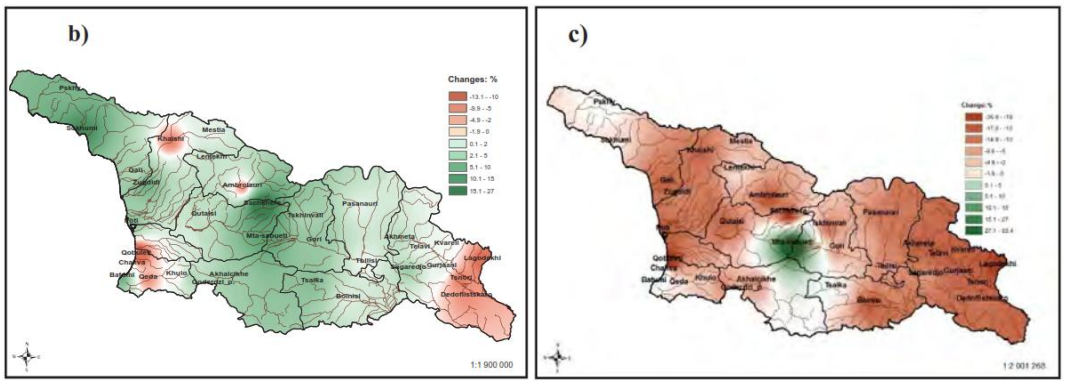


Figure 9. Projected changes in precipitation in Georgia vs historic baseline in (b)2050 and (c)2100[21]

21. Relative humidity is also predicted to decline across the majority of stations over the period to 2100, which has significant implications for wildfire risk.

Impacts of Climate Change

22. The higher temperatures and lower precipitation/drying associated with climate change directly damage forest ecosystems. This occurs not only due to increased drought (and subsequent increasing in evapotranspiration), decreased relative humidity, stronger winds and fire risk but also from the wider degradation and the increased prevalence of pests and diseases. Livelihoods, particularly in rural areas, are affected, e.g. through lower forest productivity, forest loss, loss of biodiversity and impacts on tourism, and Infrastructure is directly at risk. Human and animal health is impacted due to increased heat stress.

23. One of the key drivers of degradation is drought and forest fires, both of which have been intensified by the effects of climate change. In addition, problems caused by pests and diseases are becoming increasingly urgent. As climatic conditions become more favourable for their spread, the active period of pests is prolonged. Significant damage from pests and diseases has already been recorded in the forests, which not only undermines forest ecosystems but also increases wildfire risks. Weakened and dried trees become highly flammable, and in the event of a fire, they can significantly amplify the scale of losses.

[20] Armenia: Fourth National Communication to the UNFCCC
[21] Georgia: Third National Communication to the UNFCCC

24. It is therefore crucial to monitor the occurrence of pests and diseases and to implement timely and effective measures to mitigate the risk of damage. The project will focus on addressing these interconnected challenges – reducing the growing wildfire risk in mountain ecosystems associated with rising temperatures, declining precipitation and humidity, and the compounding impact of pest- and disease-induced forest dieback. By addressing this risk, the project will improve the resilience of mountain forest communities and address the wider challenges of climate change impacts on their livelihoods.

25. Fire damage can lead to secondary disasters such as landslides, mudflows or floods especially in mountain terrain as the loss of tree cover can destabilize soil integrity on steep slopes. Fires on terrain contaminated by unexploded ordnance and land mines – both remnants of previous conflicts – can pose an additional threat to personnel involved in firefighting and civilians.[22]

26. Forest fires in both countries are caused by a combination of natural and anthropogenic factors. The main anthropogenic factors are proximity to the residential areas, practice of burning agricultural areas, absence of fire breaks, and violation of forest use rules. A smaller portion of forest fires are solely due to natural causes (e.g. extreme heat, lightning). High temperatures and low precipitation increase the probability and impacts of man-made fires.[23]

Table 1. Causes of forest wildfire (Project team analysis)

Causes/origins of wildfires in South Caucasus	Root causes	Drivers of exacerbated probability/scale/impact	Mitigation measures – Adaptation solutions
Agricultural residue/field burning	Cultural practice Lack of awareness Lack of residue uses	Lack of fire breaks near fields Lack of fire controls for burning Climate change and variability Combustible material Poor forest management Weak firefighting response (e.g. tools), suppression equipment	Farmer education and awareness Enforcement and fines Training in field management Fire breaks/field gap construction Mineralization Productive uses of agricultural residues Improved fire response capacity
Irresponsible forest users/ tourism	Lack of awareness Deliberate vandalism	Lack of zoning and facilities Climate change and variability Forest drying/combustible material Poor forest management Weak firefighting response (e.g. tools), suppression equipment	Improved signage More robust enforcement/fines Recreational zones/fire pits Awareness raising Early warning/risk communication Improved fire response capacity
Landfills	Poor solid waste management	Climate change and variability Forest drying/combustible material Poor forest management Weak firefighting response (e.g. tools), suppression equipment	Improved solid waste management collection and disposal
Electricity cables (transmission, transport)	Siting close to forest areas	Climate change and variability Forest drying/combustible material Poor forest management Weak firefighting response (e.g. tools), suppression equipment	Improved siting
Natural causes (lightning)	Natural phenomena	Lower precipitation and humidity Increased temperatures Pest outbreaks / deceases Poor forest management	Improved forest management Residue removal Pest and decease control Firefighting access and water

27. Human activity is the primary driver/cause of wildfires in both countries, accounting for up to 90% of all incidents. For example, according to one report, at least 60% of forest fires in Armenia had

[22] Proposal for a National Fire Management Policy of Georgia, ENVSEC, 2014
[23] Decree of Georgian Government N 4 on approval of the Disaster Risk Reduction strategy 2017-2020 and Action Plan, January 11, 2017

human origins between 2007-2011, with only 2% being identified as being of purely natural causes.[24]

28. However, perceptions of the anthropogenic causes of fire risk among local populations are much lower, suggesting that more can be done to improve awareness. The following chart shows the perceptions among forest communities in one of the project locations in Syunik province in southern Armenia as to the perceived causes of forest fire.

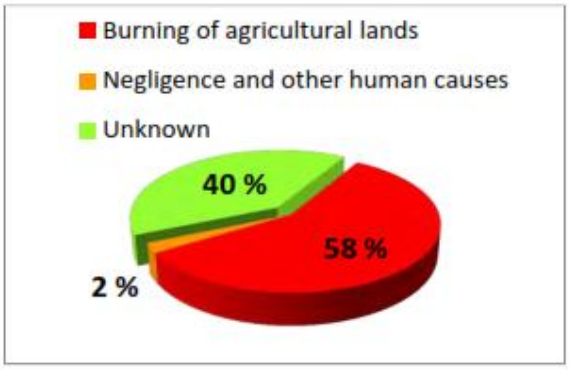


Figure 10. Causes of forest fire in Armenia (UNDP/GEF 2012)

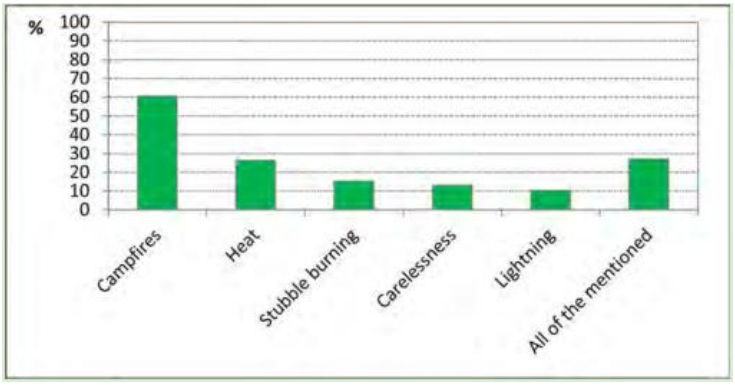


Figure 11. Perceptions of the causes of forest fire in Syunik Province, Armenia (UNDP/GEF 2012)

Historical Trends

29. During 2014-2019, several scientific studies were conducted to identify rare forest ecosystems in Armenia and assess their vulnerability to climate change. Findings highlight that forest ecosystems are highly sensitive to upward shifts of vertical zones, driven by temperature increases and ecosystem changes, and increasingly exposed to forest fires, pests, and diseases.

30. Official statistics confirm a marked increase in both the number and extent of forest and field fires, driven by human activities and climate change factors such as rising temperatures, longer dry periods, and declining precipitation. Between 2010-2018, 419 forest fires were recorded in Armenia, a sixfold increase compared to the 72 cases registered in 2001-2009. The area affected also grew dramatically, from 732 ha in 2001-2009 to 6,108 ha in 2010-2018. Major fire events, such as those in 2017 in Khosrov Forest State Reserve and in Vayots Dzor and Aragatsotn forestry areas, illustrate the scale of recent losses.

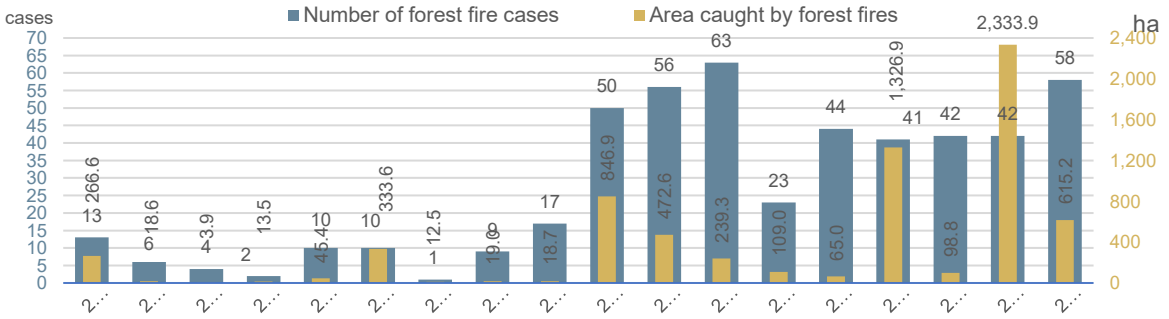


Figure 12. Number of forest fires and areas caught by forest fire in Armenia, 2001-2018[25]

31. While fire incidence rose between 2007-2012, a subsequent decline was observed due to awareness-raising campaigns and adaptation measures, including fire prevention, suppression, and rehabilitation efforts. However, extreme heat years such as 2015 and 2017 saw unprecedented wildfires, burning about 3,661 ha. These years were among the hottest summers

[24] See https://www.un.am/up/library/Wildfire%20Management_eng.pdf
[25] SC data, 2001-2018 (Environment and Natural Resources in RA)

recorded over the past century, underscoring the growing influence of climate extremes on wildfire occurrence.

32. Climate change has also intensified forest vulnerability to pests and diseases, which in turn creates favourable conditions for wildfires. Since 2000, infected forest areas have expanded significantly, with much of the response relying on aerial chemical spraying. These measures, while reducing outbreaks, also pose risks to forest fauna. The combined rise in wildfires, pest outbreaks, and disease prevalence signals a growing vulnerability of Armenia's forests to climate change.

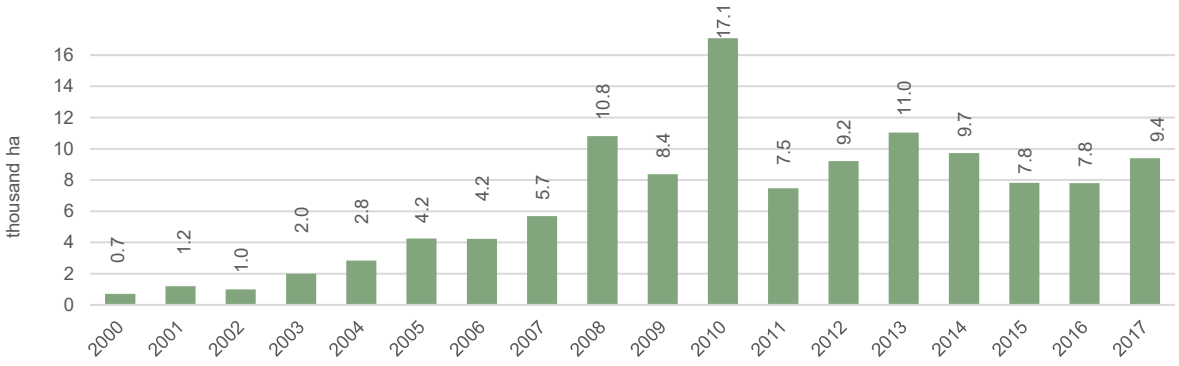
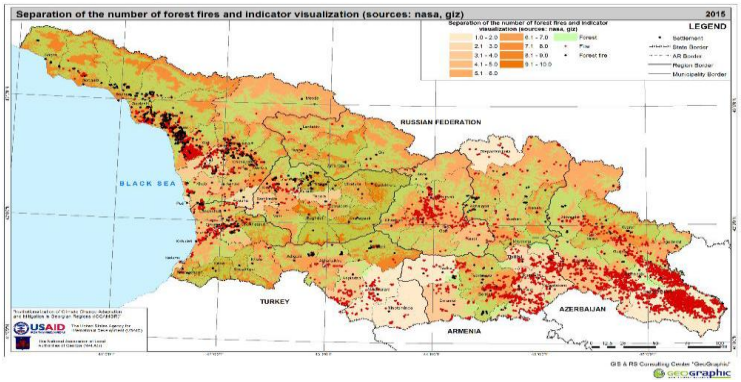


Figure 13. Forest areas in Armenia affected by disease, 2000-2017[26]

33. Looking ahead, xerophyte vegetation on southern slopes and shrubs in lower forest zones are projected to be especially vulnerable due to declining humidity and precipitation. Drier-adapted vegetation will increasingly penetrate forest ecosystems, hindering natural regeneration, reducing annual tree growth, and driving shifts from dense forest to sparse stands and eventually semi-desert landscapes.

34. Wildfires in Georgia are emerging as an increasingly critical environmental and socio-economic challenge. This trend is driven not only by their growing frequency but also by the intensifying scale of the ecological and economic losses they cause. Climate change has fundamentally altered fire dynamics, erasing the boundaries of a traditional fire season. Whereas in the past, wildfire risk was largely confined to the summer and hotter months, today it remains persistently high year-round due to prolonged drought periods, reduced humidity, and the cumulative effects of forest degradation. These shifting conditions place additional pressure on vulnerable ecosystems, threaten biodiversity, and exacerbate carbon emissions, underscoring the urgent need for comprehensive prevention and management measures.

35. From 2000 to 2015, a total of 6,000 fires were recorded in Georgia (see Figure 14). Over the period 1998-2011, the average number of forest fires registered was approximately 25 per annum with an average annual area of destroyed forest of 270 ha.



[26] SC data (Environment and Natural Resources in the Republic of Armenia, 2000-2017)

Figure 14. Geographic distribution of wildfires in Georgia 2000-2015 (Source: USAID)

36. Over the past two decades, Georgia has experienced an increasing frequency and scale of wildfires. Major incidents were recorded in 2006 (765 ha), 2008 (1,270 ha) and 2010 (430 ha), indicating growing fire risks[27]. Between 2011 and 2019, the National Forestry Agency, Emergency Management Service and Agency for Protected Areas reported rising numbers and impacts of wildfires, notably due to the severe 2017 fires linked to high temperatures and drought. Protected Areas, covering 9.55% of the country (half of which are forests), were also affected: 79 fire cases occurred between 2012–2018 across 6,967 ha, mainly in coniferous and broadleaf forests of semi-arid regions such as Borjomi-Kharagauli, Tusheti, Algeti and Mariamjvari, which remain among the most fire-prone zones[28]

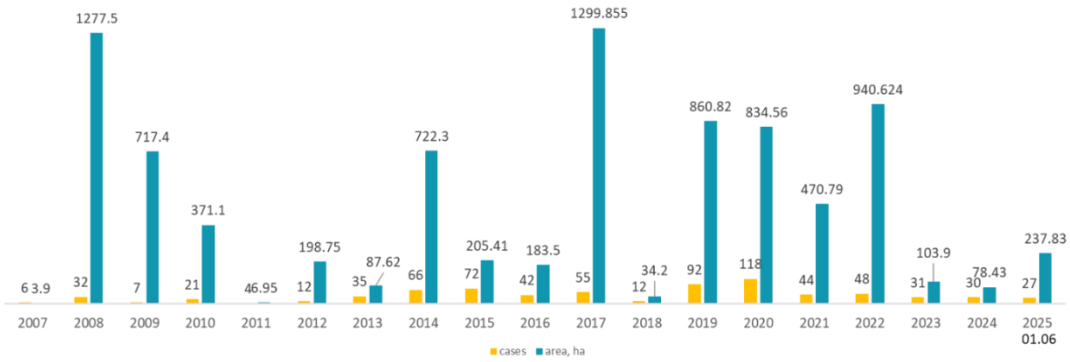


Figure 15. Wildfire cases on the forest lands managed by NFA of Georgia

Projected Future Changes

37. Wildfire risk is projected to increase under all climate change scenarios, along with other risks to the sustainability of forest resources in the South Caucasus. Continued aridification, increasing frequency of strong winds and higher summer temperatures are expected to significantly raise the probability and intensity of forest fires, particularly in the central, southern, and south-eastern forested areas of Armenia.

38. At the regional level, Armenia and Georgia face shared climate-related security challenges linked to fire risk, including transboundary fires. The frequency, intensity, and severity of wildfires are projected to rise, posing environmental, social, and economic risks. Strengthened cross-border co-operation – particularly in community fire management, joint training, and intergovernmental co-ordination – is vital to reduce risks and enhance resilience in the South Caucasus.

39. In Georgia, modelling suggests that the increasing occurrence of extreme dry spells and heat waves currently observed are already increasing fire risk. Whilst climate modelling-based predictions (general circulation models), suggest that extreme weather periods favouring the recurrence of more frequent and larger fires and higher associated damages will aggravate in the coming years and decades.[29]

Socio-Economic Impact of Forest Fires

40. While government agencies record the area of forest lost and any details of death and injury (for example the death of a forest ranger in the 2018 Borjomi National Park), there is little consideration of losses that affect livelihoods or the wider economic value of forests (e.g. timber, forest products, tourism, grazing etc.). One of the cases where the damage was assessed is the wildfire that occurred in the Borjomi Gorge in 2008. According to the assessment commission, the fire affected 950 ha, causing damage estimated at GEL 1,250,000,000 (Minutes of the Assessment

[27] Source: National Forestry Agency of Georgia, May 2019
[28] Source: Agency of Protected Areas of Georgia, May 2019
[29] The Georgian Road Map on Climate Change Adaptation, NALAG, 2016

Commission N1 of 13 November 2008), equaling to around USD 750,000,000, per exchange rate of 31 December 2008.

41. Forest fires are only one component of economic damage associated with climate change. It is estimated that climate change has the potential to degrade between 21-34% of Armenia's forested lands. An economic valuation (based only on timber and firewood values) estimates that this would be in the range of USD 230-370 million or equivalent to 0.04% of GDP lost each year in forestry revenues, on average each year between 2010-2100. Note that this excludes other types of socio-economic losses and livelihoods.[30]

Pests and Diseases

42. As of 2025 pest and disease incidence in Armenia's forested areas remains a significant concern. In total, approximately 9,000 hectares of forest were affected by leaf-eating pests and related diseases, with three forest enterprises (Aragatsotn, Hrazdan, and Vayots Dzor) reporting about 3,000 hectares of infected area. These outbreaks mainly involved defoliating insects and foliar diseases, which contribute to weakened tree vitality and increase vulnerability to secondary infections and environmental stress.

43. Compared with previous years, the data indicate a stabilization of pest-affected areas following control interventions, but no significant reduction in overall extent – suggesting persistent and cyclical pest pressures linked to climatic factors such as warmer, drier summers. The uniform distribution of approximately 3,000 hectares per region reflects both consistent monitoring coverage and recurring infestation patterns in the same forest massifs. Strengthened surveillance, early warning systems, and integrated pest management remain priorities to curb further spread and avoid cascading effects on forest regeneration and resilience.

44. The spread of pests and diseases in Georgia has a negative impact on forest condition. Five woody species were recorded that respond negatively to environmental factors and are represented by the largest number of standing dead trees; these are Colchic boxtree (91.5% of the total population is dead), common chestnut (17.6% of the total population is dead), Caucasian pine (8.7% of the total population is dead), Georgian oak (8% of the total population is dead) and Oriental spruce (6.8% of the total population is dead).

45. Beyond the long-standing pests and diseases that have been inflicting damage on forests for years (e.g., bark beetle in Samtskhe-Javakheti, chestnut blight in Imereti), recent observations reveal the emergence of new invasions, which unequivocally attest to the adverse impacts of climate change[31].

Selection of Project Sites

46. The selection of project sites has been guided by a multi-criteria framework that integrates climate risk, wildfire risk, ecosystem vulnerability, socio-economic value, and opportunities for transboundary cooperation. In earlier stages of project preparation, specific forest regions were identified as priority territories. However, following consultation with government agencies and other local stakeholders, it was agreed that the scope should be expanded to encompass the entire territories of Armenia and Georgia.

47. This strategic decision reflects the reality that both countries are relatively small in area, yet both are characterized by widespread forests, protected areas, and forest-adjacent communities across all regions. Wildfire risk is not confined to a few hotspots but is increasing throughout both countries because of rising summer temperatures, prolonged droughts, declining precipitation, and growing anthropogenic pressures. Recent wildfire events across multiple regions of both Armenia and

[30] The Socio-Economic Impact of Climate Change in Armenia (2009) https://www.undp.org/content/dam/armenia/docs/Report%20SOI%20of%20CC.pdf

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Georgia demonstrate that effective wildfire prevention, preparedness, and response capacity must be strengthened nationwide rather than confined to selected provinces.

48. The nationwide approach ensures that capacity-building, institutional strengthening, and knowledge transfer reach all forest enterprises, protected area administrations, local governments, and communities in both countries. It also maximizes the impact of the project by mainstreaming wildfire management practices into broader national forest and climate policy frameworks, while providing a consistent baseline of training, infrastructure, and monitoring systems.

49. At the same time, the project will retain flexibility to implement site-specific demonstration and pilot activities in high-risk areas, such as Lori, Kotayk, Aragatsotn, Vayots Dzor, and Syunik in Armenia, and Samtskhe-Javakheti, Kakheti, and Shida Kartli in Georgia. These locations have historically experienced large-scale forest fires and will serve as focal points for testing innovative approaches that can later be scaled nationwide.

50. Given the shared ecosystems and cross-border fire risks, a central feature of this project is the establishment of coordination mechanisms between Armenia and Georgia. Forests and protected areas straddle the state border, and wildfires in one country can easily spread to the other. Both governments recognize that given the increasing frequency, scale, and intensity of wildfires, neither Armenia nor Georgia will be able to manage these risks alone. The project will therefore invest in institutionalized bilateral cooperation frameworks, such as:

- Joint monitoring, early warning, and data-sharing systems on wildfire risks and climate conditions,
- Coordinated fire prevention measures in shared border forests, including harmonized silvicultural and land-use practices,
- Cross-border training, simulation exercises, and the development of shared response protocols,
- Establishment of a permanent Armenia-Georgia wildfire coordination platform to ensure long-term collaboration beyond the life of the project.

51. By covering the entirety of both Armenia and Georgia and strengthening cross-border coordination, the project responds to the urgent need to build systemic wildfire management capacity across the South Caucasus. This approach recognizes that climate and wildfire risks transcend administrative and national boundaries, and require a comprehensive, cooperative response to safeguard ecosystems, biodiversity, and rural livelihoods throughout the region.

Justification for Nationwide Scope of the Project

52. *Climate Rationale*. Both Armenia and Georgia are experiencing widespread increases in wildfire risk due to climate change, with higher summer temperatures, prolonged droughts, and declining precipitation recorded across all regions. Restricting the project to a limited number of sites would fail to address the systemic and nationwide nature of the threat, undermining long-term resilience.

53. *Cost-Effectiveness*. A nationwide approach ensures that investments in capacity building, early warning systems, and institutional strengthening benefit all forest enterprises and protected areas, avoiding duplication of efforts and ensuring a unified response. Establishing a national baseline of wildfire management standards reduces long-term costs, as localized interventions alone would need continuous expansion to cover new high-risk areas.

54. *Regional Cooperation*. Covering both Armenia and Georgia in full maximizes opportunities for cross-border learning, harmonized practices, and shared infrastructure (e.g., fire monitoring systems, training curricula, and joint exercises). The project will directly support the development of bilateral coordination mechanisms between the two countries, recognizing that neither country can manage the rising wildfire risks alone. Joint structures for planning, prevention, and emergency response will be established, ensuring institutionalized and sustained collaboration. This contributes directly to regional stability and aligns with priorities identified by OSCE, EU, and other regional frameworks for South Caucasus climate security.

55. *Learning and Replication*. Demonstration activities in historically high-risk areas (e.g., Lori, Vayots Dzor, Syunik, Samtskhe-Javakheti, Kakheti) will generate practical lessons, but scaling is built in from the start, ensuring rapid replication nationwide. This model provides a replicable approach for other small countries or regions with cross-cutting wildfire risks.

56. *Alignment with National Priorities*. Both Armenia and Georgia have emphasized forest fire management as a national adaptation priority in their Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs). A nationwide approach ensures the project is directly embedded into these national frameworks and contributes to achieving both countries' forest conservation and climate resilience targets.

Baseline

Armenia – Forest Sector Institutions and Policies

57. In Armenia, the forest sector is primarily managed by the Ministry of Environment, which takes responsibility for wildfire risk reduction among other aspects of forestry management. Within the Ministry, there are a number of relevant divisions, the most relevant of which are the the Forest Policy Department and Specially Protected Areas of Nature and Biodiversity Policy Department. The Ministry overseas a number of external agencies of relevance to the project, including Eco-Patrol Service, Hayantar State Non-Commercial Organization (SNCO), "Hydrometeorology and Monitoring Center" SNCO, "Khosrov Forest" State Reserve" SNCO, "Zangezur" Biosphere Complex" SNCO, "Reserve Park Complex" SNCO, "Lake Arpi" National Park SNCO, "Dilijan" National Park" SNCO, "Sevan" National Park" SNCO.

58. Currently, about 75% of forest areas, including 13 sanctuaries (out of total 27), are managed by "Hayantar" and its 17 branches, located in all regions of the country, with the exception of Ararat and Armavir regions.

59. In *Armenia*, wildfire response is managed centrally through the Rescue Service of the Ministry of Internal Affairs and its regional and local units. The RS is a fully vertically integrated structure, with all local emergency services managed directly from the Ministry, rather than with the involvement of local authorities. The RS cooperates with the Eco-Patrol Service and Hayantar structures at the local level to manage wildfire risk reduction and response.

60. Communities in Armenia play an ad hoc role in supporting wildfire response. The role of the public tends to be confined to wildfire identification. Local authorities provide support to respective agencies during larger scale wildfire firefighting operations.

61. The National Forest Policy of the Republic of Armenia is the key document governing sustainable management and conservation of forests and forest areas. The objectives of the National Forest Program are to protect forest ecosystems, rehabilitate degraded forest ecosystems, continuous and effective use of forest resources and implementation of the policy on sustainable forest management. The National Forest Program, approved in 2005 included a plan of action with specific deadlines that covered the period up to 2015. A new program has been drafted in 2020, but has not yet been approved, even though the 2014 National Development Strategy stresses the importance of forestry management.

Georgia Institutions and Policies

62. The Ministry of Environmental Protection and Agriculture of Georgia (MEPA) is an executive authority responsible for governance, oversight, and the promotion of development in the fields of environmental protection, agriculture, and rural development. Within its central apparatus, the Ministry includes the Forestry Policy Department and oversees several specialized agencies, including the National Forestry Agency (NFA), the Agency for Protected Areas (APA), the National Environment Agency (NEA), the Environmental Information and Education Centre (EIEC), and the Department of Environmental Supervision (DES).

63. Forest resources are managed separately by the NFA and APA, though both operate under a common policy framework. The National Forestry Agency is authorized to manage nearly two million ha of forest in Georgia, encompassing activities such as maintenance, restoration, renewal, regulation, and inventory. The functions for managing forest fires are legally separated between the forest management authorities and the Emergency Management Agency. The NFA and APA are responsible for wildfire prevention on the territories under their management. They ensure preparedness for initial response, participate in fire suppression operations under the direction of the Emergency Management Agency, and oversee the restoration of damaged areas.

64. Emergency wildfire response is managed through the Emergency Management Agency (EMS) under the Ministry of Internal Affairs. The EMS has a vertically integrated structure delivering national response services through its own structures at the local level. The EMS is responsible for prevention, preparedness and response of emergency situations, organizing restoration activities within the emergency zones, and implementation of national plan on civil protection. The firefighting and Rescue Forces Department is responsible for firefighting and rescue activities. The department acts through Tbilisi division, Adjara AR division, and 9 regional divisions. The EMS takes responsibility for wildfire response and suppression with the NFA and APA as supporting institutions.

65. Governing law for emergency management, including wild forest fires, is the Law on Civil Safety. The latter defines the scale of emergencies (national and local) based on which specific roles assigned to each member of National Civic Protection System. Forest Code of Georgia (2020) defined main restrictions and Rules for Forest Protection, Maintenance, and Restoration – Established under Forest Code and Sub-law (Governmental Decree N383 27.07.2021), set out general safety requirements, prohibitions, and preventive measures for forest fire management.

66. In accordance with the new Forest Code, local self-governments may acquire the status of forest owners and managers. Pursuant to the Code, by January 1, 2030, the Government of Georgia is obliged to elaborate criteria for defining “forests of local significance” and establish the procedures for their transfer to municipalities. At present, there are only three cases in Georgia where local self-governments are involved in forest management—through protected landscapes (Tusheti, Aragvi, and Tana-Tedzami). Nevertheless, their role is expected to expand in the future, and they must be adequately prepared to assume these responsibilities. With respect to emergency management, including forest fire response, their functions are defined by the Local Self-Government Code and the Law of Georgia on Civil Safety, under which they are formally involved in the process. In practice, where significant wildfires occur, local municipalities generally are engaged to provide support in the response to the EMS and NFA.

67. The forestry sector in Georgia is framed by a number of recent reform processes:

- In 2012, the GoG undertook comprehensive sector reform through the adoption of the National Forest Concept – Georgia’s first national forest policy which sets the current regulatory and institutional framework for sustainable forest management.
- In 2013, the National Forest Program (NFP) process was launched to support Forest Sector Reform. The Programme is implemented through broad stakeholder participation, including representatives of state institutions, parliament, NGO, academic institutions, international organizations, private sector, as well as patriarchate of Georgia. The NFP thus provides a comprehensive and participatory platform for advancing sustainable forest governance and policy reform in Georgia
- In 2020, the Parliament of Georgia adopted the new Forest Code, which constitutes the main legislative framework for the sector. The Code defines the principles of sustainable forest management, introduces a comprehensive system for forest planning, and establishes rules and procedures for fuelwood supply, as well as other regulatory mechanisms. It also ensures alignment

with international commitments, strengthens institutional responsibilities, and provides a legal basis for effective forest governance and oversight.

- In 2023, Georgia completed its first National Forest Inventory (NFI) to update quantitative and qualitative data on the country's forests, establish a permanent sampling network for continuous monitoring of forest characteristics, support political and strategic decision-making, strengthen research institutions, and enhance reporting at the national, regional, and international levels.

Regional Coordination

68. The Governments of Armenia and Georgia have long recognized the importance of regional cooperation in disaster risk reduction and environmental management. The 1993 Declaration on Economic Cooperation included provisions for joint action in national security, environmental protection and disaster response, while the 1997 Agreement on Prevention and Elimination of Consequences of Natural and Manmade Emergencies – though officially expired in 2005 – is still informally referenced in cooperation between the two countries. In 2001, an Agreement on Friendship, Cooperation and Mutual Security further emphasized the role of the Armenian-Georgian Intergovernmental Economic Council, which convenes periodically to address thematic issues, including those related to forests and wildfire risks. However, these agreements have not been systematically updated to reflect the accelerating climate and wildfire challenges faced by both countries

69. Under the EU-funded ENPI East FLEG II Programme, a draft Memorandum of Understanding (MoU) on forestry cooperation was prepared, highlighting joint needs in sustainable forest management and capacity building. The MoU outlined commitments to strengthen forest monitoring and protection, including joint action against pests, diseases and wildfires in border areas, and the establishment of shared databases and early warning systems. Although the draft MoU was never formalized, it remains an important basis for renewed dialogue. Recent regional strategies, including the OSCE-adelphi cooperation framework, reinforce the value of transboundary information sharing and community-based fire management in northern Armenia and southern Georgia

70. Despite these frameworks, proactive cross-border planning remains limited. Interoperability of systems, joint training, and harmonized risk modelling are underdeveloped, with cross-border exercises typically linked to externally funded projects rather than embedded national practice. Both Armenia and Georgia lack sustained technical platforms to coordinate early warning and response capacities, though new proposals emphasize integrating hydrometeorological forecasting, wildfire smoke monitoring, and joint use of Unmanned Aerial Vehicle (UAV) and satellite-based tools. Successful cooperation has nevertheless occurred during emergencies: in 2017, more than 70 Armenian firefighters supported Georgia in suppressing a large wildfire in Borjomi National Park. These experiences highlight both the solidarity between the two countries and the urgent need for institutionalized, well-resourced and gender-responsive cross-border cooperation mechanisms in line with Adaptation Fund safeguards.

Forest Fire Risk Forecasting and Data

71. Several efforts have been undertaken over recent years to strengthen the information systems that support wildfire risk identification, forest monitoring and wildfire damage impact assessment. These break down into the following:

- *Wildfire risk forecasting*. The ministries of environment and forest agencies in both countries are formally responsible for assessing wildfire risk. Armenia has piloted a fire danger forecasting model adapted from Russian practice, supported by United Nations Development Programme (UNDP) and the Government of the Russian Federation, while Georgia has drawn upon Canadian models and classifications. Both approaches combine meteorological, soil, and forest inventory data to map potential hotspots. However, neither system is fully operationalized due to institutional and

financial constraints. The Hydrometeorology and Monitoring Center in Armenia has proposed advancing these models through real-time mobile weather stations, smoke and air quality monitoring, and UAV-based detection to localize forecasts and better support fire operations.

Ministry of Environmental Protection and Agriculture of Georgia and its respective agencies (NFA, NEA) are responsible to assessing the fire risk within forests. The National Forestry Agency assesses fire risk in two ways. During forest inventory, fire hazard classes (I-V) are identified. In addition, in 2023 the NFA developed and, through an official order, adopted the Rule for Forest Fire Risk Assessment, which must be carried out annually and serve as the basis for updating forest fire management plans at the forest district level. Nevertheless, the establishment of a risk assessment system based on climatic parameters remains a challenge. Although the methodology is outlined in Government Decree No. 383 (Rules for Forest Protection, Maintenance, and Restoration), its practical implementation has not yet been achieved due to a lack of technical resources.

- The "Mapping Forest Fire Risks in Georgia", funded by USFS/USDA and implemented by NACRES NGO, aimed to strengthen the capacity of Georgia's national institutions, private companies and experts, responsible for forest management to better prevent and manage forest fires. The project's overarching objective is to support the integration of sustainable forest management practices inside the PAs of Georgia by providing the necessary data and effective fire management tools. The project envisages (i) developing a forest fire forecast methodology that will be adapted to the country's conditions and (ii) facilitating its implementation by sharing USFS methodology and experience. In addition, the objective is to develop a forest fire risk model based on the elaborated forest fire forecast methodology for the pilot site within the Algeti NP, Borjomi-Kharagauli NP, Vashlovani and Tusheti Protected areas. The project envisions developing a forest fire forecast methodology tailored to the country's conditions and facilitating its implementation by sharing the USFS methodology and experience. In addition, the purpose of the project is to develop a forest fire risk model for the pilot area based on the elaborated forest fire forecast methodology. While the project has not yet been formally finalized, its implementation is currently on hold.

  UNDP and the Government of Georgia, with funding from the Green Climate Fund (GCF) and the governments of Switzerland and Sweden, are implementing a seven-year programme aimed at reducing the risk of climate-driven disasters in Georgia. The initiative seeks to decrease the exposure of Georgia's communities, livelihoods, and infrastructure to climate-related natural hazards through a well-functioning nationwide multi-hazard early warning system and risk-informed local action. In 2021, Georgia became a member of the European Centre for Medium-Range Weather Forecasts (ECMWF) to enhance its forecasting capabilities. A total of 79 new hydrometeorological stations and posts have been installed and integrated into Georgia's existing monitoring network, significantly improving the accuracy of hydrometeorological observations. An additional 77 stations are planned for the future.

  However, the project focuses only on improving data availability for risk assessment and does not address forest fire management.
- *Forest inventories*. Until recently, both countries lacked reliable forest inventories, a legacy of post-Soviet institutional decline. In Georgia, the process was resumed in 2013, and to date, forest management level inventories (FMI) has been carried out, and forest management plans have been prepared for 55% of the territory. According to the long-term plan, full coverage is to be achieved by 2030. Furthermore, in 2021–2023 the country conducted its first National Forest Inventory (NFI), making information on key forest indicators available at the national level. Armenia began its first-ever NFI in 2022 with FAO and ADA support; once completed, it will provide the foundation for a national MRV system and underpin evidence-based forest and wildfire policy.
- *Wildfire damage and impact assessment*. Both governments currently rely on satellite imagery (e.g. MODIS, VIIRS) to identify thermal anomalies and estimate burned areas. Armenia has started

to complement this with UAV-based post-fire vegetation health assessments and GIS-based severity classification. Still, neither Armenia nor Georgia has an operational system for assessing the economic damages of wildfires. Damage evaluations remain ad hoc and are usually driven by NGOs or global platforms such as Global Forest Watch. The absence of integrated economic assessment frameworks hampers the ability to quantify losses and justify prevention investments.

- *Forest management information systems*. Both countries are developing Forest Management Information Systems (FMIS) to consolidate spatial and statistical data. Armenia's efforts link to the design of a future National Forest Monitoring System and MRV architecture, while Georgia is integrating its FMIS with the NFI and UNFCCC reporting obligations. However, at present, FMIS and broader environmental information systems remain siloed, with limited integration across agencies and little tailoring of outputs to support operational decision-making in wildfire risk reduction. For monitoring sustainable forest management, both Armenia and Georgia have officially adopted sets of criteria and indicators to assess and guide the implementation of sustainable forestry practices.

Wildfire Risk Management Capacity

72. In both countries, wildfire risk reduction is integrated at the local level into Forest Management Plans (FMPs). These are developed and managed by the local forestry agencies and set out the overall approach to forest management, or which wildfire risk is a small subset. In terms of wildfires, the FMPs include measures to reduce risk (e.g. forest thinning, pest control, removal of combustible material) and support response (water sites, access, mineralized strips). They also set out overall roles and responsibilities for the Forest Management Agencies and their coordination with other agencies (including emergency services) in case of fire. In practice, the implementation of FMPs is constrained by a lack of funds and capacity. There is also a concern that FMPs do not exist for all forest or protected area agency sites in either Armenia or Georgia, and where they do exist, they are often based on outdated forest inventory information.

73. In 2023, the NFA of Georgia developed rules for the preparation of forest fire management plans and approved them by order of the Head of Agency. In 2024, the preparation of forest fire management plans began, and to date, plans have been developed for all forest districts. A forest fire management plan is prepared for a specific forest district and is based on the main phases of emergency management – prevention, preparedness, response, and recovery – following the guidelines of the forest management authority and ensuring the exercise of legally mandated powers. The forest fire management plan is not a static document and requires further development and updating in response to changes in natural conditions and other external factors, as well as updates in regulatory standards, new technologies, and research findings. Reviewing and updating forest fire management plans is recommended on an annual basis. In practice, the implementation of FFMPs is constrained by a lack of funds and capacity.

74. Early warning systems for communicating wildfire risk to populations in Armenia and Georgia remain underdeveloped. While national hydrometeorological services and Ministries of Environment issue general fire risk warnings based on hot and dry weather, these are usually broad and not tailored to specific local risks or to influencing behaviour. They tend to be oriented more toward public institutions rather than the communities who are often the primary source of ignition. Limited progress has been made in developing targeted communication channels. New opportunities identified in recent studies include mobile-based citizen reporting and alert systems, integration of community monitoring networks, and the use of AI-powered detection (camera traps, drones, satellite imagery) that can feed into location-specific warnings. Cross-border strategies supported by OSCE and others highlight the need for harmonized early warning between Armenia and Georgia to address shared transboundary fire risks.

75. Awareness and compliance with fire safety rules continue to be challenges in both countries. Communities in and around forests often disregard restrictions on agricultural residue burning,

campfires, or recreational fire use. Although local emergency services periodically organize awareness campaigns for farmers, tourists, or hunters and install signage in forested areas, behaviour change has been limited. Weak enforcement of existing legislation, low fines and penalties, and insufficient local oversight are contributing factors. Modern approaches such as leveraging mobile applications, social media, and interactive wildfire risk maps remain largely unexplored. At the same time, recreational zoning and regulated infrastructure for cooking or tourism remain underdeveloped, leading to uncontrolled fire use in natural areas. Emerging proposals emphasize integrating awareness into sustainable trail building, ranger education, and youth outdoor programmes, as well as expanding cooperation between Armenia and Georgia to develop coordinated risk communication and joint community training programmes.

Wildfire Identification and Response Capacity

76. In both Armenia and Georgia, wildfire identification still relies primarily on local communities and rangers, who raise alarms through emergency hotlines (e.g. 911 or 112) or by contacting forest services directly. There is no fully centralized or automated system for wildfire detection using remote sensing, despite the availability of satellite data streams (e.g. MODIS, VIIRS, Copernicus EFFIS) and pilot efforts to integrate these into dashboards. Mountainous terrain complicates the use of ground-based visual systems, and the few existing observation towers are underutilized. While stakeholders often view identification as less critical than response capacity – given the relatively small size of both countries and active community engagement – delays in detection still translate into slower mobilization and larger burned areas. Recent proposals therefore emphasize multi-source systems combining satellite feeds, IoT sensors, AI-enabled fire cameras, and UAVs, which could significantly shorten detection-to-response times. The bigger challenge, however, remains effective inter-agency coordination and communication once an alarm is raised, with fragmentation across EMS, forestry, and local authorities repeatedly cited as a bottleneck.

77. Both Armenia and Georgia face chronic gaps in fire response capacity and equipment. While emergency services have larger machinery, forest rangers and protected area staff – often the first responders – lack adequate tools and protective gear. Field assessments show much of their equipment (pumps, PPE, radios) is outdated or non-functional. The World Bank's review of Armenia's Fire and Rescue Service highlighted degraded infrastructure, aging fleets, and insufficient backup systems. Mountain areas lack all-terrain vehicles for patrols and operations, and neither country has national aerial firefighting capacity, relying instead on international support during major events like the Borjomi and Khosrov fires (2017). Communities often step in with tractors and bulldozers, underscoring the need for organized community fire management. Low pay and staff turnover further weaken response capacity, calling for investment in both equipment and workforce retention.

Community Livelihoods and Resilience

78. Mountain forest communities in Armenia and Georgia are both highly vulnerable to climate change (heatwaves, droughts, fires) and contributors to wildfire risks through unsustainable farming, grazing, and recreation. The tension between collective forest preservation and individual reliance on forests for livelihoods remains central. Forests serve as safety nets – providing fuelwood, food, and income – especially during crises, but weak governance and poor enforcement of fire restrictions exacerbate degradation. Communities, lacking incentives or institutional support, face the worst post-fire impacts: soil erosion, water scarcity, and economic losses. Regional strategies call for community-based fire management, sustainable fuelwood alternatives (e.g. efficient stoves, coppice systems), and diversified livelihoods to reduce pressure on forests. Gender-responsive measures are crucial, as rural women face greater impacts from forest loss and energy insecurity.

Pest and Disease Control

79. Forest health in both countries is increasingly threatened by pests and diseases, which weaken tree stands, reduce resilience to drought and fire, and accelerate forest degradation. In Armenia alone, over 1,400 species of forest pests and around 200 pathogens have been recorded, of which

about 30 insect species and 10 diseases are considered highly destructive. Outbreaks of oak defoliators, bark beetles, and fungal infections such as Dutch elm disease have periodically caused widespread damage, particularly in low-vitality plantations and monoculture stands. Pest and disease outbreaks are strongly influenced by climatic variability – warmer winters and extended droughts create favourable conditions for mass proliferation – leading to cascading impacts on forest regeneration and fire vulnerability.

80. Institutional responses remain fragmented and under-resourced. Surveillance is largely manual, relying on forest rangers' observations and ad hoc reporting to local forestry branches, with limited diagnostic or forecasting capacity. While past structures, such as the state forest protection stations, coordinated aerial spraying and monitoring, these systems collapsed after the 1990s and have not been comprehensively replaced. Currently, pest management is reactive rather than preventive, and there are no integrated systems linking pest and disease monitoring to wildfire risk forecasting or forest management information systems. Strengthening early detection, introducing digital and remote sensing tools for monitoring vegetation stress, and embedding pest and disease control into community fire management and forest restoration programmes are critical. Gender-responsive approaches can also play a role, as women often hold local ecological knowledge and are key actors in nursery management and community-based surveillance.

Adaptation Solution: Reversal of the Problem

81. Reducing the accelerating climate-change-related risks of wildfires in Armenia and Georgia requires a comprehensive regional approach that combines institutional strengthening, modern information systems, and community-level resilience. Experience shows that neither country can address these risks in isolation, and that sustained cross-border coordination mechanisms are urgently needed. Priority areas for intervention include:

- *Legal, regulatory, and institutional strengthening for prevention, operations, and recovery*. Both countries' wildfire-related legislation and bilateral agreements remain outdated and fragmented. Updating and harmonizing these frameworks, while embedding wildfire prevention, firefighting operations, and post-disaster recovery into national disaster risk reduction, climate, and forestry policies, will create a stronger enabling environment. Specific actions will include revising enforcement of residue burning bans, clarifying institutional mandates between emergency services, forest agencies, and municipalities, and establishing a legal basis for volunteer brigades. At the regional level, renewed Memoranda of Understanding and joint action plans will formalize bilateral cooperation and establish structured coordination platforms under the Intergovernmental Economic Council.
- *Advanced observation, data, and recovery systems across the disaster cycle*. While Armenia and Georgia have piloted wildfire forecasting models, they remain underutilized and not yet institutionalized. The project will build integrated Forest Management Information Systems (FMIS) that capture and analyze data from hydrometeorological services, forest inventories, satellite feeds, UAVs, smoke and air quality monitoring stations, and post-fire ecological assessments. Linking forecasting with real-time detection will improve prevention and early warning, while post-fire data integration will enable ecological and economic loss assessments to inform structured recovery planning. Cross-border interoperability of these systems will facilitate resource allocation, support joint emergency operations, and strengthen reporting to UNFCCC and NDC processes.
- *Community-based risk reduction, firefighting capacity, and recovery solutions*. Local communities and rangers remain the first responders, yet they lack adequate tools, training, and incentives to prevent or contain fires. Building on OSCE-supported community fire management models, interventions will strengthen prevention through awareness campaigns, recreational zoning, fuel management, and forest health measures such as pest and disease monitoring. Firefighting operations will be modernized through the provision of all-terrain vehicles, water supply points, protective gear, interoperable communications systems, and the establishment of joint training

facilities with standardized curricula. Recovery frameworks will include soil stabilization, reforestation with climate-resilient native species, and livelihood recovery measures such as eco-tourism, briquetting, and sustainable forest product enterprises.

- *Gender-responsive and socially inclusive approaches across all interventions*. Experience demonstrates that wildfire management will not be effective unless women, youth, and vulnerable groups are engaged as active participants. The project will therefore embed gender-responsive outreach into awareness campaigns, train and equip women and youth to join community brigades and reforestation teams and ensure that recovery measures address differentiated needs and vulnerabilities. Monitoring frameworks will be updated to include gender- and age-disaggregated indicators, guaranteeing equitable participation and benefit-sharing. By mobilizing traditionally underrepresented groups, the project expands human resources for wildfire prevention, suppression, and recovery, while strengthening equity and social cohesion.

Barriers to the Adaptation Solution

82. Despite growing recognition of climate-induced wildfire risks, Armenia and Georgia continue to face multiple barriers that constrain effective wildfire prevention, preparedness, firefighting operations, and post-disaster recovery. These barriers span legal and institutional frameworks, information and technology systems, community capacity and awareness, and the inclusion of vulnerable groups. They are deeply rooted in fragmented governance structures, outdated tools, limited investment, and insufficient regional cooperation. The following sections present the key barriers organized according to the four components of the proposed project.

Legal, Regulatory and Institutional Capacity Barriers

- *Incomplete policy and regulatory frameworks*. National legal frameworks for wildfire management remain incomplete and insufficiently adapted to the realities of climate change. Armenia's Disaster Risk Management and Population Protection Law, which will come into force in 2027, requires more than forty secondary acts to operationalize wildfire-related provisions, including specific rules on agricultural residue burning and the establishment of volunteer brigades. Until these regulations are in place, wildfire management will remain largely reactive. Georgia's Forest Code (adopted in 2020) has strengthened forest governance, but its operational mechanisms for wildfire prevention, suppression, and recovery remain underdeveloped.
- *Challenges in institutional cooperation*. The roles of forest agencies and emergency services overlap in practice but are not clearly delineated in law. Forest rangers and protected area staff often act as de facto first responders but lack legal recognition, adequate training, and appropriate equipment for this role. Emergency services retain the official mandate but are overstretched during peak fire seasons. This duplication leads to inefficiencies and leaves critical response gaps. At the regional level, outdated bilateral agreements between Armenia and Georgia (dating back to the 1990s) do not incorporate climate change risks, standardized operating procedures, or mechanisms for joint planning and mutual assistance.
- *Limited capacity to plan and respond*. Responsibilities for wildfire risk management are spread across multiple institutions (EMS, forest agencies, local authorities), resulting in fragmented planning. Opportunities for multi-stakeholder drills and joint simulations are rare, limiting learning and the streamlining of procedures. The World Bank's optimization study found Armenian fire and rescue stations largely under-equipped, lacking seismic resilience, modern ICT systems, and training infrastructure. Language, equipment interoperability, and inconsistent protocols further complicate international assistance.
- *Lack of equipment and technology*. Much of the firefighting gear in both countries is outdated or non-functional – from protective clothing to pumps and communications devices. UAVs, fire cameras, and smoke detection sensors are only beginning to be introduced. Critical gaps include

all-terrain vehicles for mountain operations and the complete absence of national aerial firefighting capacity, forcing reliance on international support.

Data Analysis, Forecasting and Communication Barriers

- *Underdeveloped monitoring and forecasting systems*. While Armenia has piloted a Russian-based fire danger model and Georgia a Canadian-based system, neither has been scaled up or institutionalized. GIS, remote sensing, and damage assessment tools are underutilized, leaving gaps in integrating wildfire data into MRV systems and NDC reporting.
- *Weak early warning systems*. Current risk warnings are generic (radio/TV announcements or even faxes to ministries) and not tailored to specific user groups. There is limited use of mobile platforms or social media to deliver actionable advice, and messaging rarely promotes behaviour change.
- *Poor data management and interoperability*. Forest inventory data, hydrometeorological monitoring, and economic impact assessments are collected by different institutions, with no common standards or interoperability. This prevents the integration of wildfire data into FMIS, greenhouse gas inventories, or NDCs. Frequent restructuring of agencies in both countries further undermines data continuity, leading to gaps in institutional memory and the loss of valuable datasets.
- *Low uptake of innovative technologies*. While UAVs, drones, and AI-enabled sensors offer significant potential to improve early detection and reduce monitoring costs, their adoption is constrained by limited funding and the absence of mechanisms to pilot, validate, and institutionalize such innovations. Academic institutions and private sector actors have shown interest in developing IT and high-tech wildfire solutions, but without formal engagement frameworks, these opportunities remain underutilized.

Local Capacity, Awareness, and Incentive Barriers

- *Weak local response capacity*. Local capacity for wildfire risk reduction remains severely constrained. Most forest enterprises and municipalities lack formal fire risk management plans. Preventive measures such as forest thinning, coppice restoration, and pest and disease control are rarely applied. Infrastructure essential for fire suppression, such as access roads, mineralized firebreaks, and water storage facilities (including small reservoirs), is insufficient or poorly maintained. Community brigades, though often mobilized informally during fire events, lack training, protective gear, and financial support, limiting their effectiveness.
- *Limited economic incentives for conservation*. Communities in mountain forest regions remain heavily dependent on forests for fuelwood, grazing, and unregulated tourism. This dependence creates few incentives for sustainable practices. Alternative livelihood opportunities are scarce, and forest-based enterprises such as briquetting, non-timber forest products, or eco-tourism are yet to be developed to full potential. As a result, unsustainable use continues to degrade forest ecosystems and increase the risk of anthropogenic wildfires.
- *Low awareness of fire risk and behaviour*. Awareness of wildfire risk and safe practices is low among local populations. Despite signage and periodic campaigns, cultural practices such as agricultural residue burning remain widespread. Tourists and recreational users frequently disregard restrictions, lighting fires for cooking and camping in unmanaged areas. Existing awareness campaigns are generic and lack a focus on changing behaviour. Engagement with schools, youth networks, and local leaders remains limited, reducing opportunities to instill long-term behavioural change.
- *A cycle of vulnerability*. Communities increase wildfire risks through unsustainable practices, suffer from their consequences through loss of resources and livelihoods, and remain poorly equipped to manage and recover from fire events. Breaking this cycle requires both capacity-building and the creation of new economic incentives that align community wellbeing with forest resilience.

Gender and Social Inclusion Barriers

- *Exclusion of women, youth, and vulnerable groups from wildfire management.* Wildfires affect men and women differently, yet wildfire management systems in Armenia and Georgia remain largely gender-blind. Women, youth, and marginalized groups are often excluded from decision-making processes despite their disproportionate vulnerabilities. Women in rural areas bear the burden of energy insecurity, relying on fuelwood for cooking and heating. When wildfires occur, they are disproportionately affected by the loss of household resources, increased care responsibilities, and reduced livelihood opportunities.
- *Limited youth engagement as agents of change*. Youth are often overlooked as agents of change in wildfire prevention and response. While they possess the capacity to engage in awareness campaigns, community brigades, and innovation, there are few institutional mechanisms to support their involvement. Similarly, marginalized groups, including the elderly and the poor, often face higher risks but lack access to information and decision-making spaces.
- *Gender norms and data gaps constrain participation.* Gender norms and cultural barriers limit women's participation in volunteer brigades, forestry agencies, or emergency services, even though their involvement has been shown to enhance community resilience in comparable contexts. The absence of gender-disaggregated data further obscures differentiated vulnerabilities and reduces the capacity of governments to design inclusive policies.
- *Reinforcement of inequalities in wildfire systems.* Without targeted interventions, wildfire management systems will continue to reinforce inequalities, excluding critical perspectives and resources from prevention, preparedness, and recovery efforts. Addressing this barrier requires systematic gender and inclusion analyses, tailored training and participation opportunities, and the mainstreaming of equity considerations into laws, policies, and monitoring systems.

Project Objectives

83. The project objective is: "*To prevent and reduce the frequency, scale, and impact of climate-related wildfires and enhance ecosystem integrity and community resilience across the mountain forest regions of Armenia and Georgia.*" This objective is grounded in established efforts, specifically building upon the OSCE-supported cooperation framework for fire risk reduction in Northern Armenia and Southern Georgia, the World Bank's optimization study of Armenia's fire and rescue services, and the recommendations of hydrometeorological and forestry agencies for joint monitoring and forecasting systems. It is also fully aligned with the Adaptation Fund's Environmental and Social Policy and Gender Policy, ensuring inclusive, equitable, and climate-resilient outcomes.

84. The project will address climate change challenges by reducing the risk of wildfire outbreaks, building institutional and community capacity for effective response, and ensuring systematic recovery and adaptation after fire events. It will achieve this through a comprehensive national approach integrated within a regional cooperation framework, structured around four components:

- Strengthened regional and national regulatory and institutional frameworks for climate-resilient wildfire management,
- Improved wildfire prevention, preparedness, and response capacity across forested regions,
- Enhanced wildfire data, recovery, and decision-support systems covering both countries,
- Gender-responsive and socially inclusive wildfire resilience embedded into local practices.

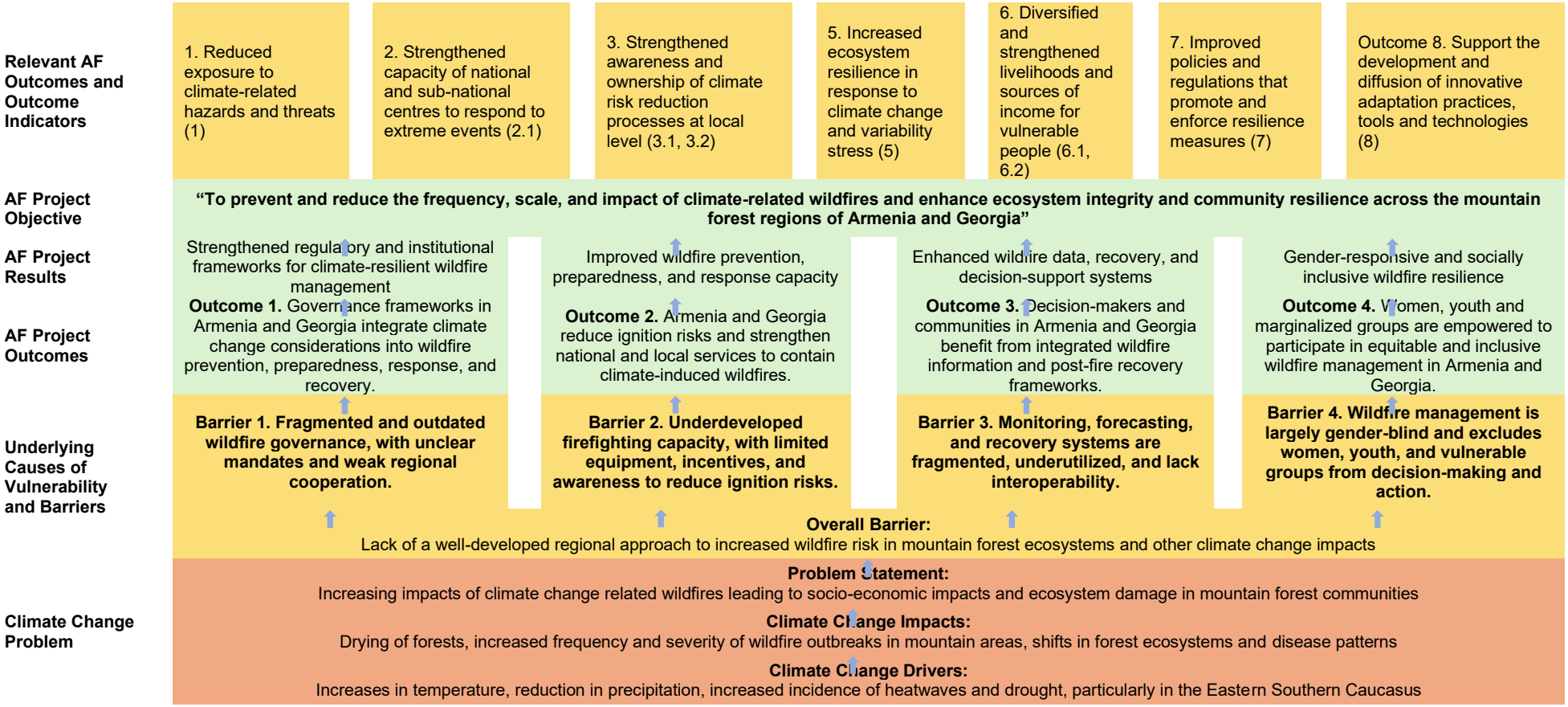

Figure 16. Theory of Change for the proposed project

85. The project will deliver the following results:

- *Strengthened regional and national regulatory and institutional frameworks for climate-resilient wildfire management*. Legal and policy frameworks in Armenia and Georgia will be revised to integrate climate change considerations into wildfire prevention, preparedness, response, and recovery. Roles and responsibilities of emergency services, forest agencies, and communities will be clarified, a legal basis for volunteer brigades established, and bilateral agreements between Armenia and Georgia renewed. Institutionalized national and regional coordination platforms will ensure predictable and well-resourced cooperation, embedding cross-border collaboration into formal mechanisms.
- *Improved wildfire prevention, preparedness, and response capacity.* Fire danger forecasting models will be operationalized and integrated with hydrometeorological and forest data. Complementary prevention measures, including pest and disease monitoring, coppice management, and recreational zoning, will reduce ignition risks. Awareness campaigns and behaviour change interventions will target forest users, farmers, and tourists. At the same time, national and local firefighting capacity will be modernized with new vehicles, protective gear, water storage capacities and supply systems, and communications equipment. Regional training centers and joint drills will enable systematic training and interoperability across both countries.
- *Enhanced wildfire data, recovery, and decision-support systems*. Armenia and Georgia will develop or enhance interoperable FMIS, integrating UAVs, sensors, and satellite imagery. These systems will be linked to cross-border smoke and air quality monitoring platforms, supporting evidence-based decision-making and national climate reporting (UNFCCC, NDCs). Post-disaster recovery mechanisms will be established with standardized methodologies for damage assessment, soil stabilization, and reforestation with climate-resilient species (including the development of simulation software for forest maintenance and restoration measures designed to foster climate-resilient forest ecosystems). Livelihood recovery will be promoted through sustainable forestry, eco-tourism, and use of renewable energy sources combined with energy-efficient technologies.
- *Gender-responsive and socially inclusive wildfire resilience*. Women, youth, and vulnerable groups will be actively engaged in wildfire prevention, firefighting, and recovery. Their roles in community brigades, nurseries, and awareness campaigns will be expanded, while gender-differentiated risks and capacities will be systematically addressed in all interventions, in line with the Adaptation Fund Gender Policy.

Table 2. Project Components and Financing

Project Components	Expected Outcomes	Expected Outputs	Countries	Amount (US$)
1. Strengthened regional and national regulatory and institutional frameworks for climate-resilient wildfire management	**Outcome 1:** Governance frameworks in Armenia and Georgia integrate climate change considerations into wildfire prevention, preparedness, response, and recovery.	**Output 1.1:** National Disaster Risk Management (DRM) and forestry laws revised, with secondary acts and enforcement mechanisms to operationalize wildfire prevention and response, including ex-ante cost/benefit analyses to prioritize prevention over suppression. National coordination platforms established and linked under the Intergovernmental	Armenia, Georgia	1,803,000

Project Components	Expected Outcomes	Expected Outputs	Countries	Amount (US$)
		Economic Council to provide structured bilateral cooperation. **Output 1.2:** Institutional mandates clarified, with coordination mechanisms established across emergency services, forest agencies, and local authorities. **Output 1.3:** Armenia-Georgia MoU on forestry and wildfire management renewed and operationalized, including harmonized operating procedures and joint action plans, including cross-border SOPs for fires, pests and diseases.		175,000 148,000
Total Component 1				2,126,000
2. Improved wildfire prevention, preparedness, and response capacity	**Outcome 2:** Armenia and Georgia reduce ignition risks and strengthen national and local services to contain climate-induced wildfires.	**Output 2.1:** Fire danger forecasting systems updated/developed, operationalized and integrated with hydrometeorological and vegetation data. **Output 2.2:** Preventive measures introduced, including pest and disease monitoring, coppice management, and recreational zoning in fire-prone areas, including hiking trails serving as firebreaks and pilots for residue-to-biofuel production. **Output 2.3:** National firefighting capacity strengthened through modernization of fleets, provision of protective gear and water storage solutions and supply systems, and establishment of regional training centers with cross-border drills and community led preparedness programs	Armenia, Georgia	1,955,000 1,451,000 5,674,000
Total Component 2				9,080,000
3. Enhanced wildfire data, recovery, and decision-support systems	**Outcome 3:** Decision-makers and communities in Armenia and Georgia benefit from integrated wildfire information and post-fire recovery frameworks.	**Output 3.1:** Interoperable Forest Management Information Systems developed in both countries, integrating UAV, sensor technologies, and satellite imaginary data with innovation accelerators/hackathons for apps, AI detection. **Output 3.2:** Cross-border smoke and air quality monitoring networks established, linked to UNFCCC and NDC reporting. **Output 3.3:** Standardized methodologies developed for assessing ecological and economic wildfire damages and systematic post-fire investigations for lessons-learned, guiding evidence-based recovery.	Armenia, Georgia	1,674,000 325,000 185,000

Project Components	Expected Outcomes	Expected Outputs	Countries	Amount (US$)
		Output 3.4. Post-fire rehabilitation implemented, including soil stabilization, reforestation with climate-resilient species, and livelihood recovery through sustainable forestry and eco-tourism, including sustainable wood alternatives to reduce pressure on natural forests.		1,168,000
Total Component 3				3,352,000
4. Gender-responsive and socially inclusive wildfire resilience	**Outcome 4:** Women, youth and marginalized groups are empowered to participate in equitable and inclusive wildfire management in Armenia and Georgia.	**Output 4.1:** Women and youth trained and equipped to participate in community brigades, nurseries, and prevention campaigns. **Output 4.2:** Gender-responsive behaviour-change campaigns implemented to reduce anthropogenic fire risks and promote community-based wildfire preparedness among farmers, tourists, and forest users, including unified campaign identity and geo-targeted hazard notifications. **Output 4.3**: National wildfire management monitoring and evaluation frameworks updated to include gender- and age-disaggregated indicators and to facilitate equitable participation and benefit sharing based on gender and social inclusion analysis of wildfire risks. **Output 4.4:** Communities in Armenia and Georgia, including women, youth, and marginalized groups, implement integrated wildfire prevention, preparedness, and recovery actions that strengthen resilience, enhance livelihoods, and reduce household losses	Armenia, Georgia	50,000 1,045,000 215,000 1,302,000
Total Component 4				2,612,000
5. Project/Programme Execution cost				740,000
6. Total Project/Programme Cost				17,910,000
7. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)				1,791,000
Amount of Financing Requested				19,701,000

Table 3. Projected Calendar

Milestones	Expected Dates
Start of Project/Programme Implementation	January 2027
Mid-term Review (if planned)	October 2029

Project/Programme Closing	June 2032
Terminal Evaluation	October 2032

PART II: PROJECT JUSTIFICATION

A. Describe the project/programme components, particularly focusing on the concrete adaptation activities, how these activities would contribute to climate resilience, and how they would build added value through the regional approach, compared to implementing similar activities in each country individually. For the case of a programme, show how the combination of individual projects would contribute to the overall increase in resilience.

86. The project aims to address the increasing risk of wildfires in forest ecosystems across the South Caucasus, while also promoting sustainable forest management, protecting biodiversity, and building the capacity of forest communities to adapt to climate change. It is structured around four integrated components:

- Strengthening regional and national regulatory and institutional frameworks for climate-resilient wildfire management,
- Improving wildfire prevention, preparedness, and response capacity,
- Enhancing wildfire data, recovery, and decision-support systems,
- Mainstreaming gender-responsive and socially inclusive wildfire resilience.

87. The synergy of these four components across Armenia and Georgia will create a coherent, resilient regional wildfire management system, significantly enhancing overall regional resilience by linking legal reforms, operational capacity, data systems, and social inclusion. The components are described in more detail below.

88. The project's Outcomes, Outputs and Activities presented below will be executed jointly by the Ministry of Environment of Armenia and the Ministry of Environmental Protection and Agriculture of Georgia as national Executing Entities, with UNDP acting as the Executing Entity for selected regional cross-border, technical assistance, and knowledge management and coordination functions. National-level activities implemented within each country will be executed by the respective ministry and its subordinate agencies. UNDP execution will deliver regional coordination, specialized technical support, joint Armenia–Georgia mechanisms, regional knowledge products, and cross-border capacity-building actions, in line with Adaptation Fund requirements.

Component 1. Strengthened regional and national regulatory and institutional frameworks for climate-resilient wildfire management

89. Wildfire governance in Armenia and Georgia remains fragmented, outdated, and underprepared for the accelerating impacts of climate change. Both countries have legal frameworks addressing forestry, disaster risk, and protected areas, but these frameworks are incomplete, poorly enforced, and not sufficiently aligned with the realities of rising temperatures, prolonged droughts, and climate-induced ecosystem stress.

90. Responsibilities between emergency services and forest agencies frequently overlap, leaving operational gaps, while municipalities and communities lack the regulatory tools to prepare for wildfire threats. At the regional level, cooperation between Armenia and Georgia is still guided by outdated agreements from the 1990s that do not reflect modern climate risks.

91. Component 1 addresses these systemic barriers by embedding climate change into forestry and DRM laws, clarifying institutional mandates, strengthening bilateral agreements, and creating structured coordination platforms. Together, these actions will

provide the legal and institutional foundation for climate-resilient wildfire management in both countries and ensure that cooperation across borders is predictable, effective, and sustainable.

Outcome 1. Governance frameworks in Armenia and Georgia integrate climate change considerations into wildfire prevention, preparedness, response, and recovery.

92. Effective wildfire governance requires strong laws, clear institutional mandates, and predictable cooperation between agencies and across borders. At present, Armenia and Georgia operate under fragmented and outdated frameworks that do not reflect climate change realities. This outcome addresses those gaps by modernizing DRM and forestry legislation, clarifying institutional roles, renewing bilateral agreements, and creating structured platforms for coordination. Together, these measures will transform wildfire management from a reactive response to a proactive, climate-informed system that reduces risks for ecosystems and communities.

93. **Output 1.1.** National DRM and forestry laws revised, with secondary acts and enforcement mechanisms to operationalize wildfire prevention and response. National coordination platforms established and linked under the Intergovernmental Economic Council to provide structured bilateral cooperation.

- *Adaptation activities*: In Armenia, revise the Forest Code and adopt the 40+ sub-legal acts under the Disaster Risk Management Law (effective 2027) to explicitly address wildfire risk, regulate residue burning, and integrate prevention measures at municipal level. Develop guidelines for municipalities to prepare community wildfire management plans. In Georgia, embed wildfire risk into the implementation of the Forest Code and Disaster Risk Reduction (DRR) strategies, ensuring coherence with the National Forest Inventory. Develop biodiversity sector guidelines for integrating wildfire risk into protected area management. Conduct economic and financial analyses comparing the costs of prevention measures with the losses and recovery costs associated with large-scale wildfires. Establish wildfire coordination platforms in both countries, linking emergency services, forestry, hydrometeorological services, and municipalities. Create a bilateral Wildfire Coordination Group under the Intergovernmental Economic Council, with regular meetings, scenario planning, and drills. Implementation of the activities will be supported by one senior regional DRM/forestry technical advisor and a minimum of two national legal experts in each country, working in parallel over multiple consultation cycles. The activity will deliver approximately 10-15 concrete legal and procedural outputs (including revised mandates, sub-legislative acts, and SOPs), validated through 4-6 structured stakeholder consultations and workshops in Armenia and Georgia. Direct engagement will involve 25-30 national-level officials and technical staff, ensuring that revised instruments are operationally usable and budgeted for enforcement in wildfire-prone regions rather than remaining policy-only documents.
- *Resilience contribution*: By embedding climate risks into national legal frameworks, the countries move from reactive crisis management to proactive prevention. Clearer enforcement discourages unsafe practices, reduces ignition, and builds adaptive capacity. Provision of evidence for decision-makers to prioritize prevention and resilience-building measures over costly suppression, aligning investments with climate-smart policies. Improves decision-making speed and efficiency, ensuring climate-informed responses are coordinated across agencies.
- *Regional added value*: Harmonized legal standards (e.g. fire classification, residue burning bans) create consistency in enforcement across borders, allowing joint prevention campaigns and improved mutual assistance. Enabling Armenia and Georgia to harmonize

cost-benefit standards for wildfire prevention, making joint investment in preventive actions more politically and financially viable. Creates a permanent institutional framework for joint action, moving away from ad hoc responses to structured regional cooperation.

94. **Output 1.2**. Institutional mandates clarified, with coordination mechanisms established across emergency services, forest agencies, and local authorities.

- *Adaptation activities*: Map and clarify the roles of emergency services, forestry agencies, hydrometeorological and other respective services, and municipalities. Develop protocols for resource mobilization, reporting, and joint planning. Build coordination platforms at national level. The activities will focus on translating agreed coordination arrangements into day-to-day practice by linking 6–8 national institutions per country through formalized workflows and information exchange routines. It will be delivered through multiple inter-agency technical sessions and coordination meetings, directly involving 30-40 institutional representatives at national and sub-national levels. Particular emphasis is placed on operational alignment in border and mountainous regions, where overlapping mandates and response timing are most critical, and where clarified coordination yields the highest efficiency gains.
- *Resilience contribution*: Stronger institutional architecture reduces duplication and delays, ensuring rapid mobilization of resources to protect ecosystems and communities.
- *Regional added value*: Clarified and aligned mandates between Armenia and Georgia create conditions for interoperability, enabling joint operations across both countries, and particularly, in transboundary regions.

95. **Output 1.3**. Armenia-Georgia MoU on forestry and wildfire management renewed and operationalized, including harmonized operating procedures and joint action plans.

- *Adaptation activities*: Update and adopt the ENPI FLEG II draft MoU. Expand its scope to include climate-informed fire prevention, suppression, and recovery. Develop bilateral SOPs for wildfire management, as well as pest and disease control, particularly, in border regions and prepare annual action plans. Operationalization of the Armenia–Georgia MoU will be delivered through a structured bilateral process comprising 6-8 technical coordination meetings, joint drafting sessions, and validation events. These will engage 30-40 technical and operational staff from forestry, emergency response, and environmental agencies. Outputs will include finalized cross-border SOPs and communication protocols tested against realistic wildfire and forest health scenarios, ensuring that cooperation mechanisms are usable during active wildfire events rather than remaining declarative.
- *Resilience contribution*: Creates predictable cooperation, joint risk mapping, and efficient mobilization of resources for increasingly severe climate-driven wildfires.
- *Regional added value*: Institutionalizes collaboration and ensures resources are pooled rather than duplicated, allowing economies of scale and mutual aid.

Component 2. Improved wildfire prevention, preparedness, and response capacity

96. Despite increasing wildfire risks, prevention and preparedness systems in Armenia and Georgia remain underdeveloped. Fire danger forecasting models exist but are not operationalized or do not match the needs of respective agencies, pest and disease monitoring is fragmented, and fuel management practices such as thinning and coppice restoration are applied sporadically.

97. Human behaviour, particularly agricultural residue burning, unmanaged recreational fires, and hunting practices, remains a leading source of ignition, exacerbated by weak enforcement and limited awareness campaigns. At the same time, national firefighting

services are constrained by outdated vehicles, limited protective equipment, and inadequate training systems, particularly in mountain terrain.

98. Component 2 builds resilience by combining proactive wildfire prevention measures with strengthened response capacity. It will operationalize climate-informed forecasting systems, expand preventive forest management, introduce recreational zoning and awareness campaigns, and modernize firefighting fleets, equipment, and training systems. Joint exercises and standardized curricula will ensure that brigades across Armenia and Georgia can operate effectively together in transboundary emergencies.

Outcome 2. Armenia and Georgia reduce ignition risks and strengthen national and local services to contain climate-induced wildfires.

99. Preventing and containing wildfires in a changing climate requires a combination of proactive measures to reduce ignition risks and strong operational capacity to respond when fires occur. Currently, both countries face serious deficits in forecasting, prevention, and firefighting equipment. This outcome strengthens prevention systems through forecasting, pest and disease monitoring, and awareness campaigns, while also modernizing fleets, equipment, and training centers. By combining prevention and preparedness with enhanced operational capacity, Armenia and Georgia will reduce the frequency, scale, and impacts of wildfires.

100. **Output 2.1.** Fire danger forecasting systems updated/upgraded/developed, operationalized and integrated with hydrometeorological and vegetation data.

- *Adaptation activities*: Upgrade and operationalize national fire danger forecasting systems through enhanced data integration, analytics, and decision-support tools, building on existing hydrometeorological infrastructure and remote sensing data. The activity will systematically utilize and customize available products and services from international and regional providers (e.g. NASA, JRC/Copernicus Emergency Management Service, VIIRS-based fire products, and related open-access platforms), ensuring cost-effectiveness and technical robustness. This includes integration/localization of satellite-based fire danger indices, vegetation condition and fuel moisture indicators, and near-real-time meteorological inputs into national hydrometeorological platforms and Forest Management Information Systems. Targeted use of UAV data and mobile observations will be applied for calibration, validation, and pilot testing. Specialists from hydrometeorological services, forestry agencies, and emergency services will be trained to interpret forecasts, thresholds, and risk maps and to translate them into prevention, preparedness, and suppression planning and implementation. This activity will operationalize forecasting and early warning through deployment and integration of 10-14 monitoring and data inputs (including automated weather stations, fire danger indices, and satellite-derived indicators) into existing national systems. Implementation includes hands-on technical training for 20-30 system users, focused on interpretation and operational decision-making rather than model development alone. The scale of deployment is sufficient to provide actionable coverage for all targeted high-risk regions, directly supporting emergency preparedness at sub-national level.
- *Resilience contribution*: Improved fire danger forecasting strengthens anticipatory capacity by enabling earlier warnings, risk-based preparedness, and climate-informed decision-making, reducing the exposure and vulnerability of forests, protected areas, and adjacent communities to more frequent and intense climate-driven wildfire events. By leveraging proven international products and focusing on prevention-oriented decision support, the activity enhances long-term resilience while minimizing recurrent operational costs.

Regional added value: Shared forecasting methodologies and cross-border early warning protocols will allow both countries to anticipate and respond jointly to transboundary wildfire risks. Use of common data sources and analytical products enables harmonized forecasting methodologies, shared indicators, and interoperable risk maps across Armenia and Georgia. This will help creating a common operational picture of wildfire danger, supporting coordinated early warning and information exchange, and strengthening joint preparedness for transboundary wildfire risks while avoiding duplication of analytical investments.

101. **Output 2.2**. Preventive measures introduced, including pest and disease monitoring, coppice management, and recreational zoning in fire-prone areas.

- *Adaptation activities*: Expand pest/disease monitoring; implement thinning and coppice restoration in degraded forests; establish fire-safe recreational zones with designated cooking areas and fire bans in forests and protected areas. Develop pilot schemes to produce biofuels from agricultural residues as an alternative to open burning. Construction and maintenance of hiking trails in fire-prone forest areas, designed both as firebreaks and as a tool to channel tourist flows into safe zones. Trails will include fire-safety signage, designated fire-safe rest areas, and eco-tourism infrastructure (viewpoints, guided tours) that promote responsible recreation while discouraging risky behaviors like unmanaged campfires. Preventive measures will be implemented across 8-12 priority forest and landscape sites selected based on fire history and exposure, covering several thousand hectares of high-risk forest land. Activities will be carried out by local forest services and ranger units, supported by technical guidance and site-specific planning. Pilot applications (e.g. trail-based firebreaks, fuel load reduction, residue use) are designed to demonstrate replicable prevention models rather than one-off interventions.
- *Resilience contribution*: Enhances ecosystem resilience by reducing fuel loads and ignition risks from tourism and unmanaged activities. Prevents field residue burning – one of the main human causes of wildfires – while supporting renewable energy and alternative livelihoods. Trails act as firebreaks and access routes for suppression crews, guiding tourists into managed areas with fire-safety controls. They also boost local economies through eco-tourism, reducing reliance on fuelwood and unsustainable land use.
- *Regional added value*: Joint pest/disease data sharing and common zoning standards prevent cross-border spread of outbreaks and harmonize management in shared landscapes. Knowledge-sharing on biofuel technologies between Armenia and Georgia can stimulate regional markets and provide scalable models for rural communities across the South Caucasus. Jointly designed cross-border eco-trails (e.g., linking protected areas in northern Armenia and southern Georgia) promote a shared tourism brand while standardizing fire-safe recreational infrastructure. Regional coordination ensures trails also function as bilateral firebreak corridors and training grounds for community brigades and park rangers.

102. **Output 2.3**. National firefighting capacity strengthened through modernization of fleets, provision of protective gear and water supply systems, and establishment of regional training centers with cross-border drills.

- *Adaptation activities*: Upgrade all-terrain firefighting fleets; equip brigades with PPE, radios, and mobile water reservoirs; create regional training centers with standardized curricula; conduct bilateral cross-border drills.

  Modernization of response capacity will support dozens of frontline response units through provision of personal protective equipment, pumps, water storage solutions, and mobile supply systems. Capacity building will be delivered through regional and cross-border

training cycles, benefiting approximately 400-600 firefighters, rescue personnel, and forest rangers. Joint drills are sized to test interoperability under realistic conditions, with participation scaled to mirror actual response configurations in high-risk regions.

- *Resilience contribution*: Builds robust suppression capacity, enabling rapid and safe containment of climate-induced wildfires.
- *Regional added value*: Shared training and drills ensure interoperability, enabling brigades to operate seamlessly across borders.

Component 3. Enhanced wildfire data, recovery, and decision-support systems

103. Reliable data and structured recovery systems are essential for evidence-based climate adaptation, yet both are lacking in Armenia and Georgia. Current wildfire information systems are fragmented across forestry, hydrometeorological, and disaster management institutions, with little integration or interoperability. Both countries rely heavily on freely available global satellite imagery but lack the infrastructure to analyze and apply this data to national decision-making. Post-fire recovery is largely ad hoc, with no standardized methodologies for assessing ecological or economic damages, limiting access to climate finance and undermining long-term resilience.

104. Component 3 addresses these gaps by strengthening wildfire data, monitoring, and recovery systems. Interoperable Forest Management Information Systems will be developed to integrate UAV, sensor, and satellite data with national forest inventories and hydrometeorological services.

105. Cross-border smoke and air quality monitoring networks will be established to manage transboundary impacts, while standardized methodologies for damage assessment will guide post-fire rehabilitation. By linking ecological restoration with community livelihood recovery, this component ensures that both ecosystems and people can rebound more effectively from climate-induced wildfire events.

Outcome 3. Decision-makers and communities in Armenia and Georgia benefit from integrated wildfire information and post-fire recovery frameworks.

106. Wildfire risk management in the South Caucasus has been hampered by fragmented data, weak monitoring systems, and the absence of standardized recovery frameworks. These limitations prevent decision-makers from planning effectively and leave communities without structured support after fires. This outcome addresses these challenges by building interoperable Forest Management Information Systems, establishing cross-border monitoring of smoke and air quality, developing common damage assessment methodologies, and implementing ecological and livelihood recovery measures. By integrating data, monitoring, and recovery, Armenia and Georgia will be better able to learn from each fire season and adapt for the future.

107. **Output 3.1.** Interoperable Forest Management Information Systems developed in both countries, integrating UAV, sensor, and satellite data.

- *Adaptation activities*: Link the forest inventories, hydrometeorological data, and wildfire detection (UAVs, satellites) into FMIS. Train officials in data analysis for decision-making. Organize acceleration programs, innovation challenges, and hackathons to stimulate the development of IT and hi-tech wildfire management solutions. These initiatives would engage universities, research institutes, start-ups, and private companies in both countries to co-develop mobile apps for real-time community fire reporting linked to FMIS, AI-driven early fire detection using satellite and UAV data, decision-support dashboards for emergency services and forest agencies, and low-cost sensor networks for smoke and fire monitoring in remote areas. Interoperable FMIS deployment will integrate UAVs,

satellite data, ground sensors, and GIS platforms into a single operational workflow, supporting near-real-time monitoring in priority regions. The activity includes innovation accelerators and hackathons engaging 30-40 specialists and developers, generating usable digital tools rather than prototypes. System design prioritizes scalability and long-term institutional ownership, ensuring that investments extend beyond the project period.

- *Resilience contribution*: Provides evidence-based planning tools to anticipate, prevent, and respond to wildfires under climate change. By fostering innovation ecosystems, Armenia and Georgia accelerate the uptake of cutting-edge technologies that improve wildfire risk detection, early warning, and decision-making. These tools enhance the adaptive capacity of institutions and communities, ensuring faster, data-driven responses to climate-induced wildfire risks.
- *Regional added value*: Interoperable systems ensure comparable datasets and harmonized decision-making across both countries. Joint innovation programs create cross-border collaboration among Armenian and Georgian start-ups, tech hubs, and universities, pooling talent and resources. Harmonized digital tools (apps, platforms, AI models) ensure interoperability across borders, enabling shared monitoring and coordinated responses in transboundary forest areas. By positioning the South Caucasus as a regional hub for wildfire innovation, these programs also attract international partners and investment.

108. **Output 3.2**. Cross-border smoke and air quality monitoring networks established, linked to UNFCCC and NDC reporting.

- *Adaptation activities*: Establish joint monitoring stations; connect to UNECE LRTAP and national health systems. Provide data to inform cross-border health advisories. Air quality and smoke monitoring will focus on key wildfire-related pollutants ($PM_{2.5}$, PM_{10}, NO_x, SO_2, CO, selected GHG proxies), with data streams integrated into national environmental monitoring systems. 15-25 technical staff will be trained in data handling and interpretation, ensuring routine institutional use. Monitoring density and siting are calibrated to provide meaningful coverage for border regions most affected by transboundary smoke transport.
- *Resilience contribution*: Improves understanding of fire impacts on human health and informs adaptive policies.
- *Regional added value*: Shared monitoring prevents fragmented responses to transboundary smoke events.

109. **Output 3.3**. Standardized methodologies developed for assessing ecological and economic wildfire damages, guiding evidence-based recovery.

- *Adaptation activities*: Develop and institutionalize joint methodologies for burned area mapping, ecological damage assessment, and economic loss valuation. Enhance capacities to conduct systematic post-fire investigations after major wildfire events. These would go beyond ecological and economic damage assessment to examine ignition sources (anthropogenic or natural), the sequence of events and fire spread, the effectiveness and timeliness of response measures, the adequacy of equipment and coordination during suppression, and lessons learned for prevention, preparedness, and response. This activity will deliver standardized assessment protocols, digital tools, and reporting templates applicable across both countries, replacing ad-hoc post-fire evaluations. 20-30 specialists will be trained to apply these tools consistently, enabling comparable damage assessments across events and years. The scale of training and standardization supports routine institutionalization rather than pilot-only application.

- *Resilience contribution*: Ensures recovery planning is evidence-based, guiding efficient investment in ecosystem restoration and community support. Post-fire investigations create a structured learning loop for wildfire governance. By understanding ignition causes and response bottlenecks, Armenia and Georgia can adapt institutional protocols, improve coordination, and invest in the most effective prevention and suppression measures. This reduces future vulnerability and avoids repeating costly mistakes.
- *Regional added value*: Harmonized methodologies create comparability in reporting and strengthen regional access to climate finance. Sharing post-fire investigation findings between Armenia and Georgia enables cross-border learning on fire dynamics and human behavior, harmonizes approaches to fire cause analysis, and supports the development of joint prevention strategies in border forests. Coordinated investigations also create a regional knowledge base that can feed into the Forest Management Information Systems (FMIS) and help attract further climate finance.

110. **Output 3.4**. Post-fire rehabilitation implemented, including soil stabilization, reforestation with climate-resilient species, and livelihood recovery through sustainable forestry and eco-tourism.

- *Adaptation activities*: Stabilize soils in burned areas; reforest with native climate-resilient species; implement pest/disease control post-fire; support livelihood diversification (eco-tourism, efficient stoves); develop simulation software for forest maintenance and restoration measures designed to foster climate-resilient forest ecosystems; supporting/promote alternative methods for sourcing wood, such as agroforestry and fast-growing plantations, to mitigate the pressure on natural forests. Post-fire rehabilitation actions will be implemented on several hundred hectares of priority burned areas, selected based on erosion risk, ecological value, and recovery potential. Activities will engage local forest services, nurseries, and community workers, ensuring availability of planting material and follow-up maintenance. The intervention scale is sufficient to demonstrate landscape-level recovery benefits rather than isolated plot restoration.
- *Resilience contribution*: Restores ecosystems, reduces erosion, and helps communities adapt to post-fire vulnerabilities.
- *Regional added value*: Coordinated rehabilitation in shared mountain ecosystems creates ecological continuity and regional climate resilience.

Component 4. Gender-responsive and socially inclusive wildfire resilience

111. Wildfires in Armenia and Georgia disproportionately affect women, youth, and vulnerable groups, who often bear the brunt of energy insecurity, livelihood disruptions, and post-disaster recovery burdens. Yet these groups remain underrepresented in wildfire decision-making, prevention, and response. Gender-blind approaches risk overlooking critical local knowledge and the differentiated needs of men and women in forest communities. The Adaptation Fund's Gender Policy requires that climate adaptation projects ensure equitable participation, benefits, and opportunities across all social groups.

112. Component 4 addresses this by embedding gender-responsive and socially inclusive approaches into wildfire management systems. It will generate the first systematic gender and social inclusion analysis of wildfire risks in both countries and ensure that women and youth are trained and equipped to participate in brigades, nurseries, and awareness campaigns.

113. Gender-sensitive outreach materials will be developed and monitoring systems updated with gender- and age-disaggregated indicators. By engaging women, youth, and vulnerable groups as active agents of resilience, Component 4 enhances the effectiveness

and sustainability of wildfire prevention, response, and recovery efforts across the South Caucasus.

Outcome 4. Women, youth and marginalized groups are empowered to participate in equitable and inclusive wildfire management in Armenia and Georgia.

114. Climate-induced wildfires affect men and women differently, yet wildfire management systems in both countries have historically been gender-blind and exclusive. Women often face greater energy insecurity, youth lack opportunities to engage in decision-making, and marginalized groups are excluded from planning and recovery. This outcome ensures that wildfire resilience is built inclusively, with gender and social perspectives integrated into all activities. It focuses on conducting systematic gender and inclusion analyses, training women and youth to play active roles, producing gender-responsive awareness campaigns, and embedding equity indicators into monitoring frameworks. These measures will ensure that wildfire adaptation is socially just, locally grounded, and more effective.

115. **Output 4.1**. Women and youth trained and equipped to participate in community brigades, nurseries, and prevention campaigns.

- *Adaptation activities*: Provide tailored training for women and youth in firefighting brigades, reforestation, and awareness-raising; engage scouts and youth networks. Targeted training and engagement will directly involve 300-400 women and youth across 20-25 communities, focusing on practical roles in prevention, nursery operations, and restoration. Participation levels are designed to create critical mass at community level, enabling sustained local action rather than one-off awareness activities.
- *Resilience contribution*: Expands human resources for prevention and suppression while empowering underrepresented groups.
- *Regional added value*: Shared experiences across borders foster peer learning and inclusive resilience in border communities.

116. **Output 4.2**. Behaviour-change campaigns implemented to reduce anthropogenic fire risks among farmers, tourists, and forest users, including unified campaign identity and geo-targeted hazard notifications.

- *Adaptation activities*: Design awareness campaigns targeting farmers (residue burning), tourists (campfires), and hunters; use signage, schools, TV/radio, and social media; engage women and youth in campaign design for inclusivity; develop a unified recognizable campaign mascot; establishing or enhancing a hazard messaging system, with the possibility of sending targeted notifications to the population of specific areas. Design outreach materials addressing the differentiated roles of men (agriculture), women (household energy), and youth (tourism). Disseminate via schools, media, and community events. Risk-reduction campaigns will be implemented at scale through multi-channel dissemination, including geo-targeted alerts and localized outreach, reaching tens of thousands of people annually in wildfire-prone areas. Messaging intensity will be calibrated to peak fire-risk periods, maximizing behavioral impact relative to campaign cost.
- *Resilience contribution*: Shifts community practices away from risky behaviours, addressing a major driver of wildfires in the region. Improves awareness and adoption of safe practices, reducing ignition risks.
- *Regional added value*: Harmonized campaigns across both countries ensure consistent messaging in shared tourist and border regions. Harmonized materials across countries ensure consistent messaging in shared ecosystems.

117. **Output 4.3**. National wildfire management monitoring and evaluation frameworks updated to include gender- and age-disaggregated indicators and to facilitate equitable participation and benefit sharing based on gender and social inclusion analysis of wildfire risks.

- *Adaptation activities*: Integrate gender/age-disaggregated indicators into Monitoring and Evaluation (M&E) frameworks; involve women and vulnerable groups in participatory evaluations. Conduct participatory assessments of differentiated vulnerabilities and roles of women, youth, and vulnerable groups; integrate findings into all components. Updated M&E frameworks will introduce gender- and age-disaggregated indicators applied across all project outputs, with capacity building provided to 15-20 staff responsible for data collection and reporting. Indicator design will align with Adaptation Fund reporting requirements to minimize parallel systems and transaction costs.
- *Resilience contribution*: Ensures inclusive benefits are tracked and adaptive management applied. Ensures adaptation measures address those most affected by climate-induced wildfire risks.
- *Regional added value*: Harmonized frameworks strengthen joint reporting to the Adaptation Fund and other international platforms. A joint gender analysis enables both countries to apply inclusive practices adapted to regional contexts.

118. **Output 4.4.** Communities in Armenia and Georgia, including women, youth, and marginalized groups, implement integrated wildfire prevention, preparedness, and recovery actions that strengthen resilience, enhance livelihoods, and reduce household losses.

- *Adaptation activities*: Support community-led wildfire risk assessments, preparedness planning, and recovery initiatives that integrate ecosystem-based and livelihood-oriented approaches. Build the capacity of women, youth, and vulnerable groups to design and implement wildfire prevention and post-fire livelihood recovery measures. Provide tools, training, and small grants for community-based demonstration projects on fire-resilient land management, reforestation, and sustainable income generation. Facilitate knowledge exchange between Armenian and Georgian communities on wildfire risk reduction and recovery best practices. The UNDP/GEF Small Grants Programme (SGP) will serve as the most suitable mechanism for delivering grants to local CSOs and Community-Based Organizations (CBOs) due to its established network, local trust, and proven ability to foster nature-positive, grassroots actions. A national NGO or local foundation will be commissioned for grant-making to manage complex, multi-community needs for fire-resilient land management and livelihood recovery demonstration projects. The Low Value Grants (LVGs) modality will be used for direct financing where rapid deployment or specific institutional buy-in is required. The competitive, transparent, and multi-layered selection process, managed by the SGP National Steering Committee, will explicitly prioritize interventions that *i)* integrate ecosystem-based approaches (like using fire-resistant native species for reforestation); *ii)* involve women, youth, and vulnerable groups in both design and implementation, ensuring the principle of Leaving No One Behind is upheld; *iii)* include knowledge exchange and capacity-building as part of the implementation, ensuring successful community adaptation actions are documented and shared for replication. Integrated resilience actions will be implemented in 20-25 communities, combining planning, small-scale investments, and livelihood-linked recovery measures. The depth of support per community is designed to deliver visible risk-reduction outcomes, while maintaining sufficient geographic spread to demonstrate replicability.

- *Resilience contribution:* These activities strengthen community resilience by reducing vulnerability to climate-induced wildfires and supporting adaptive, climate-resilient livelihoods through improved skills, resources, and institutional support.
- *Regional added value*: The cross-border collaboration between Armenia and Georgia fosters harmonized wildfire risk management practices and shared learning across similar ecological and socio-economic contexts. Harmonized frameworks strengthen joint reporting to the Adaptation Fund and other international platforms, promoting regional cooperation, data comparability, and collective progress toward climate adaptation goals

B. Describe how the project would promote new and innovative solutions to climate change adaptation, such as new approaches, technologies and mechanisms.

119. This project is designed to introduce and scale new approaches, technologies, and mechanisms for climate change adaptation in Armenia and Georgia, with significant added value from the regional dimension. While both countries have made progress in modernizing forest and disaster risk governance, wildfire management remains largely reactive, underfunded, and technologically outdated. By piloting innovative solutions and embedding them in national and bilateral systems, the project will catalyze a transformation from crisis response to proactive, climate-resilient risk management. Below are presented the respective details for different project activities.

120. Governance and financing mechanisms

- The project will introduce economic and financial analyses comparing the costs of preventive measures against the losses associated with suppression and post-disaster recovery. This evidence-based approach to wildfire economics will allow governments to redirect resources toward prevention and resilience – a mechanism rarely applied in the region.
- By establishing a legal framework for volunteer brigades and integrating them into national DRM systems, the project will introduce a new governance model that mobilizes communities as formal partners in prevention and response.
- Bilateral agreements between Armenia and Georgia will be renewed with climate-informed operating protocols for prevention, early warning, and post-fire recovery – moving regional cooperation away from outdated ad hoc agreements to predictable, institutionalized frameworks.

121. Wildfire prevention and sustainable land use

- Construction of multi-functional hiking trails in fire-prone areas will serve as firebreaks and access routes for suppression crews, while guiding tourists into safe, managed areas. This approach combines wildfire risk mitigation with the promotion of responsible eco-tourism, creating a novel adaptation mechanism that also diversifies rural economies.
- The project will pilot the conversion of agricultural residues into biofuels, reducing the widespread practice of open burning that is a major source of ignition. This approach not only prevents fires but also creates renewable energy and alternative rural livelihoods.
- Preventive forest management will be strengthened through pest and disease monitoring linked to fire danger indices and through ecosystem-based practices such as coppice management, thinning, and establishment of green fuel breaks around vulnerable communities.

- Recreational zoning in protected areas will introduce new approaches to managing tourism-related fire risks, balancing economic use of forests with climate adaptation needs.

122. Technologies for data, detection, and decision-making

- Both countries will move beyond reliance on low-resolution, global satellite data by developing interoperable Forest Management Information Systems (FMIS) capable of integrating UAV, sensor, and high-resolution satellite imagery. These FMIS will also serve as platforms for integrating socioeconomic and biodiversity data, ensuring holistic decision-making.
- Cross-border smoke and air quality monitoring networks will be established for the first time in the region, linking wildfire management to public health surveillance and UNFCCC/NDC reporting obligations.
- The project will pioneer the use of acceleration programs, hackathons, and innovation challenges to stimulate IT and hi-tech solutions. These will engage start-ups, universities, and tech firms in Armenia and Georgia to co-develop mobile fire reporting apps, AI-driven early detection systems, and decision-support dashboards for emergency services.

123. Post-fire recovery and learning mechanisms

- Standardized methodologies for post-fire damage assessments will integrate ecological, economic, and social dimensions, including the valuation of ecosystem services such as carbon sequestration and biodiversity. This will allow governments to better plan recovery and access climate finance.
- Systematic post-fire investigations will be conducted to analyze ignition sources, evaluate suppression effectiveness, and identify institutional bottlenecks. This structured learning process will generate continuous improvements in prevention and response.
- Recovery will adopt nature-based solutions, including soil stabilization, riparian buffer restoration, and reforestation with climate-resilient native species, linked to livelihood recovery through eco-tourism, sustainable forestry, and efficient household energy technologies.

124. Gender and social inclusion

- The project will promote women- and youth-led enterprises in nursery management, seed collection, restoration, and eco-tourism. This approach integrates gender equity with climate adaptation and creates new rural livelihood opportunities.
- Gender-sensitive early warning systems will be developed, ensuring messages are tailored to reach women, elderly, and marginalized groups through accessible communication channels.
- Cross-border youth exchange programs will promote joint learning on wildfire resilience, creating a new generation of climate adaptation leaders in the South Caucasus.

125. By implementing these innovations jointly across Armenia and Georgia, the project leverages economies of scale, ensures interoperability, and creates a regional innovation ecosystem that would not be achievable through isolated national projects. Shared FMIS platforms, cross-border monitoring networks, and regional acceleration programs will foster knowledge transfer and stimulate joint research, positioning the South Caucasus as a regional leader in wildfire adaptation innovation.

C. Describe how the project would provide economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations.

Describe how the project would avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy of the Adaptation Fund.

Economic Benefits

126. The project will deliver substantial economic benefits by reducing direct wildfire-related losses and generating new livelihood opportunities for vulnerable mountain forest communities in Armenia and Georgia. Historically, large fires in both countries have destroyed thousands of ha of forest and agricultural land, with severe consequences for timber, non-timber forest products, agricultural productivity, and rural incomes. Each major fire event also requires significant state expenditures for emergency suppression and international assistance, diverting funds from development priorities. By strengthening prevention and preparedness systems, the project will reduce these costly losses and redirect resources towards long-term adaptation.

127. Concrete economic benefits will be created through new green value chains. The conversion of agricultural residues into biofuels will not only address one of the main causes of wildfires – open-field burning – but also create renewable energy sources and local employment. Establishing hiking trails as firebreaks will provide another dual benefit: while serving as preventive infrastructure, they will also attract eco-tourism, generating income for local communities through guiding, hospitality, and services. Community-based enterprises in nursery management, sustainable forest product processing, and eco-tourism will diversify local livelihoods and reduce economic dependence on unsustainable fuelwood extraction.

128. At the household level, the introduction of sustainable energy options (biofuels, briquettes, energy-efficient stoves, solar heaters) will lower expenditures on firewood and/or natural gas, ease household energy burdens, and create alternative job opportunities, especially for women and youth. The combination of avoided fire damages and new livelihood opportunities will improve economic security, particularly in rural mountain areas where poverty rates are higher and options for income diversification are limited.

129. The project will reduce wildfire-related economic losses by shifting expenditure toward prevention and early action. Deployment of 10-14 early warning and monitoring inputs and preventive management across 8-12 high-risk forest sites (several thousand hectares) is expected to reduce suppression and damage costs, with conservative avoided losses estimated at USD 3-5 million over the project lifetime.

Social Benefits

130. The project will directly benefit communities living in wildfire-prone mountain forest regions across Armenia and Georgia, which are among the most vulnerable to climate change impacts. These populations often face limited economic opportunities, dependence on natural resources for energy and livelihoods, and weak local governance structures. Wildfire events exacerbate these vulnerabilities by destroying homes, disrupting livelihoods, threatening human health, and causing migration or displacement.

131. By enhancing wildfire preparedness and response capacity, the project will directly improve safety and quality of life. The establishment of volunteer brigades, trained and equipped to act as first responders, will empower communities to protect themselves and their forests, building self-reliance and local ownership. These brigades will also help to improve trust and cooperation between communities and state institutions, strengthening social cohesion.

132. Awareness campaigns and behaviour-change interventions will target risky practices such as agricultural residue burning, unmanaged campfires, and grazing fires.

By providing communities with the knowledge and means to manage risks, the project will foster long-term resilience and reduce the likelihood of fire outbreaks. Youth will particularly benefit from structured opportunities to engage in community resilience through brigades, eco-tourism development, and potential participation in IT- and innovation-focused wildfire solutions. This will also reduce the drivers of rural outmigration.

133. For vulnerable households, the social benefits will also include reduced exposure to health risks linked to wildfire smoke, improved security of assets and housing, and greater stability of local food systems. The project thus contributes directly to safeguarding social well-being and reducing vulnerability to climate shocks.

134. The project will deliver significant public health benefits by reducing the frequency, scale, and intensity of wildfires – a major source of fine particulate matter ($PM_{2.5}$), carbon monoxide, and other toxic pollutants that severely degrade air quality across Armenia and Georgia. Through improved prevention, early detection, and rapid response capacities, the project will substantially lower smoke emissions and the duration of fire events, resulting in cleaner air for surrounding communities. This reduction in pollution will help decrease respiratory and cardiovascular illnesses, eye and skin irritations, and other wildfire-related health impacts that disproportionately affect children, the elderly, and individuals with pre-existing conditions.

135. In parallel, the project's investments in pest and disease control, post-fire soil stabilization, and reforestation with climate-resilient native species will improve local microclimates, enhance air filtration, and promote healthier living environments in mountain communities that currently face heightened exposure to wildfire-related air contaminants.

136. Capacity-building and equipment support will directly benefit 400–600 frontline responders (firefighters, rescue staff, forest rangers), improving occupational safety and response readiness in wildfire-prone areas. Behaviour-change campaigns and community-level preparedness actions will reach tens of thousands of residents annually in high-risk rural and border regions. Cross-border coordination mechanisms and standardized procedures will reduce response delays and improve service delivery in at least 20-25 priority communities.

Environmental Benefits

137. The project will generate wide-ranging environmental benefits by conserving forests, restoring degraded ecosystems, and reducing greenhouse gas emissions. Armenia and Georgia are home to globally significant mountain forest ecosystems that are critical for biodiversity, water regulation, soil protection, and carbon sequestration. Wildfires, exacerbated by climate change, threaten these functions, leading to biodiversity loss, erosion, sedimentation of rivers, and release of large amounts of CO_2.

138. Through preventive measures such as fuel load management, coppice restoration, pest and disease monitoring, and establishment of hiking trails as firebreaks, the project will reduce the occurrence and severity of wildfires. This will preserve forest cover, maintain ecosystem services, and protect water catchments essential for downstream agriculture and hydropower. In addition, reforestation and natural regeneration in burned areas will restore degraded ecosystems, improve soil stability, and enhance biodiversity.

139. By promoting sustainable energy alternatives and reducing unsustainable fuelwood extraction, the project will also alleviate pressure on forest resources. Reduced wildfire emissions and improved forest carbon sequestration will contribute to Armenia's and Georgia's national commitments under the Paris Agreement, supporting NDC implementation. In Armenia, the project contributes to the goal of reaching 20.1% forest

cover by 2050, while in Georgia it aligns with sustainable forestry and land restoration priorities.

140. Preventive measures and strengthened response capacity will reduce wildfire severity across thousands of hectares of forest ecosystems, while post-fire rehabilitation on several hundred hectares will stabilize soils, reduce erosion, and restore ecosystem functions using native species. Improved monitoring of wildfire emissions and air pollutants will strengthen environmental management and reporting. Conservatively, avoided forest loss and improved regeneration are expected to preserve hundreds of thousands of tons of carbon stock, with an indicative ecosystem and climate-regulation value of USD 2-4 million.

Benefits for Vulnerable Groups and Gender Considerations

141. The project has been designed with a strong focus on the most vulnerable communities and groups, in compliance with the Adaptation Fund Gender Policy.

- Remote mountain households with high dependence on forest resources will benefit from reduced fire risk, safer living conditions, and diversified livelihoods. These communities often have limited adaptive capacity, making them priority beneficiaries.
- Women, who are often responsible for household energy, food security, and care roles, will benefit from access to sustainable energy alternatives, safer forest use, and opportunities to lead enterprises in biofuel production, restoration, and eco-tourism. They will be targeted for inclusion in community brigades and decision-making structures, with explicit quotas for female participation.
- Young people, who face high unemployment and limited opportunities in rural areas, will gain skills and employment through innovation challenges, eco-tourism development, nursery management, and volunteer brigades. This will reduce rural outmigration and foster local leadership in climate adaptation.
- Households at higher socio-economic risk, including the elderly and low-income families, will be prioritized in community initiatives, awareness programs, and benefit-sharing mechanisms.

142. By embedding gender and inclusion across all components – and dedicating Component 4 specifically to gender-responsive wildfire resilience – the project ensures that women, youth, and marginalized groups are empowered as active agents of adaptation, not passive beneficiaries. More information can be found in the Gender Assessment and Action Plan, presented in Annex 5.

143. Direct targeted support will reach 300-400 women and youth across 20-25 vulnerable communities, with a minimum 40-50% female participation in community-level activities. Indirect beneficiaries include tens of thousands of people in wildfire-prone areas who will benefit from improved early warning, reduced smoke exposure, and safer forest landscapes. Employment and training opportunities will prioritize rural, forest-dependent, and low-income households.

Avoidance and Mitigation of Negative Impacts

144. The project has been carefully designed to avoid or minimize potential negative environmental and social impacts, in line with the Environmental and Social Policy of the Adaptation Fund and UNDP's Social and Environmental Standards (SES).

- Activities will be carried out on state or community-managed lands, with community participation, ensuring that no physical or economic displacement occurs. Land-use rights and customary access will be respected.

- Forest rehabilitation will prioritize native, climate-resilient species and promote natural regeneration. Monocultures will be avoided, and ecological integrity will be safeguarded through biodiversity-sensitive restoration practices.
- Firefighting brigades will be trained and equipped with PPE and communications gear to reduce occupational risks. Early warning systems and awareness campaigns will reduce community exposure to fire and smoke hazards.
- Biofuel production facilities and other enterprises will comply with national environmental regulations, including waste management and emission controls. Resource use will be monitored to prevent overexploitation.
- All project-supported work will comply with national labour laws, with strict attention to occupational health and safety standards, especially for volunteers and community members.
- Hiking trails and eco-tourism initiatives will be designed in consultation with local communities to avoid impacts on cultural or sacred sites.
- A transparent grievance mechanism will be established at community and project levels, linked to UNDP's Stakeholder Response Mechanism and the Adaptation Fund's grievance procedures, ensuring accessible channels for addressing concerns.

Compliance and Monitoring

145. All activities will be screened under the Environmental and Social Management Framework (ESMF), with Environmental and Social Impact Assessments conducted where necessary (e.g., for infrastructure such as biofuel facilities or hiking trail networks). The project will integrate gender-disaggregated indicators and age-sensitive monitoring frameworks to track inclusive participation.

146. Annual monitoring reports will document compliance with the ESP, delivery of economic, social, and environmental benefits, and the effectiveness of mitigation measures. Adaptive management will ensure that lessons learned from implementation, including post-fire investigations, feed back into project activities.

D. Describe or provide an analysis of the cost-effectiveness of the proposed project and explain how the regional approach would support cost-effectiveness.

Rationale for Cost-Effectiveness

147. The proposed project addresses the rapidly increasing wildfire risks in the mountain forest ecosystems of Armenia and Georgia through an integrated package of institutional, technological, and community-based interventions. Its cost-effectiveness rests on three main pillars.

148. First, prevention is consistently cheaper than suppression. International experience shows that every dollar spent on wildfire prevention can save between 10 and 35 dollars in avoided suppression and recovery costs. In comparable mountain ecosystems, benefit-cost ratios for prevention education alone reach 35:1.[32] By prioritizing forecasting, early warning, fuel management, pest and disease monitoring, and behaviour-change interventions, the project reduces the need for costly aerial suppression and post-fire rehabilitation.

[32] David T. Butry and Jeffrey P. Prestemon, Economics of WUI/Wildfire Prevention and Education, 2019

149. Second, the project leverages existing institutions rather than creating parallel structures. By working directly through forest agencies, emergency services, hydrometeorological centers, and municipal governments, the project reduces overhead costs and ensures sustainability.

150. Finally, the project promotes market-based and community-driven solutions. Biofuel production, eco-tourism, briquetting, and small-scale enterprises generate revenue streams and create incentives for local stewardship. These measures reduce dependence on public budgets, shorten payback periods, and increase the likelihood of sustaining benefits beyond the project's lifetime.

Cost-Effectiveness of Prevention and Preparedness

151. Prevention and preparedness investments are consistently more cost-effective than reliance on suppression. Current expenditure patterns in Armenia and Georgia remain heavily weighted toward emergency response, occasionally involving costly international mobilization of aircraft and personnel. This project shifts that balance by operationalizing fire danger forecasting systems, strengthening pest and disease monitoring, and introducing low-cost fuel management practices.

152. Residue-to-biofuel conversion provides a concrete example. GIZ analysis in Georgia shows benefit–cost ratios of 3.7:1 (financial) and up to 5.2:1 (socio-economic, including carbon benefits) for reducing residue burning.[33] Hiking trails designed as firebreaks provide another dual benefit: they serve as preventive infrastructure while also generating eco-tourism revenues. In both cases, relatively modest investments produce long-term cost savings and create new economic opportunities.

Evidence from Pilots and Local Experience

153. The proposed interventions are not theoretical. They build directly on pilots tested in Armenia and Georgia that have demonstrated both technical feasibility and strong economic returns. Briquetting facilities, for example, achieve payback periods of less than three years and deliver fuel at roughly half the cost per unit of energy compared to firewood. Residue management pilots show that farmers gain higher returns by selling straw or incorporating residues into soils rather than burning them, with additional carbon benefits improving overall value.

154. Community brigades supported by OSCE have also proven effective in early suppression and prevention, while the World Bank's study on Armenia's Rescue Service confirms that modest targeted investments in local equipment and restructuring yield significant efficiency gains. These experiences underscore that low-cost, community-based, and market-oriented interventions are both viable and sustainable.

Regional Cost-Effectiveness

155. The regional design of the project is itself a major driver of efficiency. Armenia and Georgia share ecosystems, fire regimes, and risk drivers, and both face similar institutional and resource constraints. Joint action reduces duplication and achieves economies of scale. Shared forecasting and smoke monitoring systems avoid the need for parallel national investments. Regional training centers and standardized curricula lower per-trainee costs and ensure interoperability.

156. Harmonized legislation and renewed bilateral agreements reduce administrative barriers and costly delays. Cross-border innovation platforms allow universities, start-ups,

[33] GIZ. (2019). Cost–benefit analysis of agricultural burning practices in the Dedoplistskaro Municipality, Georgia.

and private firms to pool resources, while regional eco-tourism products linked to firebreak trails attract more visitors and revenues than isolated national initiatives. In short, regional cooperation reduces unit costs, enhances impact, and ensures that transboundary ecosystems are managed coherently.

Cost-Benefit Analysis and Selection Criteria

157. To ensure efficient use of resources, the project will apply cost-benefit analysis at multiple levels. Ex-ante assessments will help select community-level measures with the strongest socio-economic and environmental returns, while ex-post evaluations will measure actual impacts and feed lessons into national planning. Interventions will be screened for their targeting of vulnerable groups, alignment with national priorities, feasibility within budget and timeframe, and likelihood of being sustained or scaled up. Only those measures that demonstrate a positive benefit-cost ratio and a reasonable payback period will be funded, ensuring that investments represent good value for money.

Comparative Advantage Over Business-as-Usual

158. The business-as-usual scenario in both Armenia and Georgia is characterized by increasing reliance on costly suppression, frequent requests for international assistance, and steadily rising damages to forests, communities, and infrastructure. As climate change intensifies, this reactive model becomes increasingly unsustainable. In contrast, the proposed project offers a proactive and preventive approach that strengthens institutions, reduces ignition risks, and empowers communities. By protecting biodiversity and ecosystem services, diversifying livelihoods, and reducing reliance on international emergency aid, the project ensures that limited resources deliver far greater long-term returns.

159. The project is cost-effective because it shifts the focus from suppression to prevention, leverages existing institutions, scales up proven pilots with high benefit–cost ratios, and stimulates private sector and community innovation. The regional approach magnifies these benefits by pooling resources, harmonizing standards, and jointly managing transboundary ecosystems. The result is a coherent, efficient, and scalable package of measures in which the economic, social, and environmental benefits significantly outweigh the costs.

Table 4. Demonstration of the project cost-effectiveness by component

Components	No-Action / Business-as-Usual Scenario	Programme Intervention	Cost Implication	Estimated Benefits / Losses Avoided (USD, indicative)
Risk assessment & early warning	Delayed detection leading to larger fires and costly suppression	Integrated forecasting, sensors, satellite and UAV-based monitoring	Faster containment and reduced burned area	$3–5 million avoided suppression and damage costs
Fuel management & ecosystem restoration	Repeated post-fire rehabilitation and expensive engineering works	Preventive thinning, firebreaks, pest and disease control	Prevention cheaper than restoration	Up to 10–35:1 savings ratio; $5–8 million avoided losses
Community brigades & equipment	Dependence on centralized or international aerial support	Trained and equipped local first responders	Reduced aircraft and logistics costs	$1.5–3 million savings

Biofuel, briquetting & eco-tourism	Pressure on forests due to fuelwood consumption, lost income opportunities	Market-based alternatives generating revenue and reducing risk	Short payback periods and partially self-financing measures	Financial BCR 3.7–5.2:1 plus additional income gain
Regional cooperation & shared systems	Duplicated national investments and training	Shared platforms, joint procurement and SOPs	Economies of scale	$0.8–1.2 million administrative savings
Overall impact	Rising wildfire losses and increasing suppression expenditures	Proactive, preventive and coordinated management	Lower lifetime costs and sustained ecosystem services	$10–16+ million indicative avoided losses

E. Describe how the project is consistent with national or sub-national sustainable development strategies, including, where appropriate, national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist. If applicable, please refer to relevant regional plans and strategies where they exist.

160. The proposed regional project is strongly aligned with the sustainable development and climate adaptation priorities of Armenia and Georgia, as well as relevant regional frameworks for the South Caucasus. By addressing wildfire risk and enhancing the resilience of mountain forest ecosystems, the project contributes directly to national development goals, climate change commitments, national biodiversity strategies and plans, and poverty reduction strategies. The design ensures that activities reinforce ongoing reforms in forestry, disaster risk reduction, biodiversity protection, and community development, while also delivering benefits at the regional level through harmonization and cooperation.

Armenia

161. Armenia's Nationally Determined Contribution (NDC, 2021) commits the country to reduce economy-wide greenhouse gas emissions and achieve 20.1% forest cover by 2050. By investing in fire prevention, restoration, and sustainable fuel alternatives, the project directly supports this target while also contributing to climate adaptation and mitigation synergies.

162. National Adaptation Plan (NAP, 2021) identifies wildfires as a major climate risk to ecosystems, livelihoods, and infrastructure. The NAP highlights the importance of early warning systems, integrated forest management, and community-based adaptation – exactly the pillars around which this project is built.

163. National Forest Policy and Strategy (2004) and the Forest Sector Improvement Strategy and Action Plan (2017) both emphasize the need for sustainable forest management, improved inventories, and community engagement. The project's support to Armenia's first National Forest Inventory (with FAO/ADA support) and the development of a Forest Management Information System will advance these priorities.

164. Disaster Risk Management Law (entering into force in 2027) requires over 40 secondary legal acts to address climate- and wildfire-related provisions. The project will provide technical support for drafting and operationalizing these acts, ensuring climate change and wildfire risk are fully integrated.

165. The National Biodiversity Strategy and Action Plan (2016–2020) and the forthcoming update under the CBD framework identify disaster management as a key action for conservation. Activities, such as pest and disease monitoring, fire-safe recreational zoning in protected areas (e.g., Khosrov, Dilijan), and restoration with native species reinforce Armenia's biodiversity commitments.

166. The project aligns with the National Action Programme to Combat Desertification in Armenia (2015), which prioritizes the restoration of degraded forest ecosystems to mitigate land degradation and soil erosion. Furthermore, the proposed interventions support Armenia's Land Degradation Neutrality (LDN) National Targets (2019), specifically the objective to increase forest cover to 20.1% by 2050 through the rehabilitation of 2,500 hectares of degraded forest land.

167. The project also builds on Armenia's Technology Needs Assessment for Adaptation, which identifies improved early-warning systems, enhanced hydrometeorological monitoring, and ecosystem-based forest management as priority technology interventions. By operationalizing fire-risk modelling, integrating satellite and UAV data into forest management information systems, and strengthening institutional capacity at national and municipal levels, the project advances Armenia's identified need to embed technology into adaptation planning and forest sector resilience.

168. At the sub-national level, community development and poverty reduction priorities are embedded in municipal plans that emphasize employment, rural energy access, and sustainable use of local resources. The project's livelihood interventions – biofuel production, briquetting, eco-tourism, and restoration enterprises – are fully consistent with these local priorities and reduce the dependence of poor households on unsustainable fuelwood extraction.

Georgia

169. Georgia updated its Nationally Determined Contribution (NDC 3.0) in 2025 The goal of the nationally determined contribution of Georgia is to support the country's sustainable, balanced, low-emission, and climate-resilient development, taking into consideration climate change, environmental challenges, and socio-economic priorities. In alignment with global efforts to limit temperature rise to 1.5°C under the Paris Agreement, Georgia recognizes the critical need for immediate and ambitious climate action. At the same time, Georgia is working on its first adaptation plan and fully committed to continue studying the adaptation gaps and adaptation limits, assessing climate risks and the adaptive capacity of its population, particularly vulnerable groups, economic sectors and ecosystems, to the adverse effects of climate change by mobilizing national and international resources.

170. The updated Nationally Determined Contribution (NDC) of Georgia, approved in 2021, became the basis for the country's Climate Change Strategy 2030 and its corresponding Action Plan. It is noteworthy that the current updated plan covers the years 2024-2025 and includes activities aimed at forest fire protection (7.2.4. Improvement of forest fire prevention and management). Based on the new NDC, the update of the Climate Action Plan will start soon. However, given the relevance of the issue, the forestry sector, LULUCF, and its sustainable management, including mitigating the negative impacts of climate change on forests in the form of fires, pests, and diseases, remains a priority direction

171. Forest Code of Georgia (2020) provides the basis for sustainable forest management but requires operational guidance to address wildfire risks. The project will embed fire management into forest planning, link with the National Forest Inventory completed in 2021, and ensure coherence with the emerging forest sector Monitoring, Reporting and Verification (MRV) system.

172. National Biodiversity Strategy and Action Plan (2014-2020, update under preparation) emphasize the need to protect biodiversity-rich areas such as Borjomi National Park from increasing wildfire threats. Project interventions in pest monitoring, fire-safe tourism zoning, and post-fire rehabilitation directly contribute to these goals.

173. In 2022, the Government of Georgia adopted the Decree *"On the Approval of the Fourth National Environmental Action Programme of Georgia for 2022–2026."* The National Environmental Action Programme (hereinafter NEAP-4) defines Georgia's environmental priorities for the years 2022–2026 and aims to improve the state of the environment and strengthen environmental governance in the country. The Fourth National Environmental Action Programme of Georgia for 2022-2026" includes the protection of water resources, management of atmospheric air, land, waste, forest resources, protection of biodiversity and protected areas, achieving good environmental status in the Black Sea and marine environment, ensuring nuclear and radiation safety, environmental education and sustainable development. The existing legal and political framework, the actions stipulated by the Third National Program of Environmental Protection Actions, as well as other strategic documents, including already implemented reforms and recent accomplishments are reviewed with regard to each priority area.

174. National Disaster Risk Reduction Strategy (2017-2020, renewed under Sendai Framework) stresses the importance of early warning, preparedness, and inter-agency cooperation. The project's support to forecasting, early warning systems, and training of brigades directly advances these objectives.

175. The project is consistent with Georgia's National Action Programme to Combat Desertification (2014–2022), which identifies wildfires as a significant driver of land degradation and calls for enhanced prevention and restoration efforts. It also directly contributes to Georgia's Land Degradation Neutrality (LDN) targets (2015), which emphasize the "rehabilitation of degraded forests and reforestation" as a primary mechanism to achieve a neutral balance of land degradation by 2030.

176. The project fully supports Georgia's Technology Needs Assessment for Adaptation, which prioritizes technologies for forest ecosystem management, and early warning systems to address droughts, floods, and wildfires. By introducing interoperable wildfire forecasting models, UAV and sensor-based detection, and cross-sector data systems linking forestry, hydromet, and emergency services, the project implements Georgia's TNA recommendations for strengthening adaptive capacity through technology transfer, institutional coordination, and community-based risk reduction.

177. At the sub-national level, Georgia's municipal development strategies emphasize sustainable tourism and natural resource management. The project's activities – particularly hiking trails as firebreaks, eco-tourism development, and youth engagement – support these priorities, while creating safer, more resilient local economies.

Regional Alignment

178. Beyond national strategies, the project contributes to regional and international frameworks relevant to the South Caucasus.

179. Armenia-Georgia Bilateral Agreements (1993–2001) on cooperation in environment and disaster management provide the institutional basis for cross-border collaboration, though they remain outdated. The project will renew and operationalize these agreements, embedding wildfire prevention, preparedness, and recovery in formal bilateral mechanisms.

180. ENPI FLEG II Memorandum of Understanding (draft, 2016) on forest cooperation highlighted the need for shared databases, joint forest protection efforts, and exchange of

expertise. This project provides the opportunity to finalize and operationalize such cooperation.

181. OSCE Strategy Paper on Environment and Security (ENVSEC, 2017) recognized transboundary wildfire risk in the South Caucasus and recommended enhanced cross-border cooperation. The project directly implements these recommendations.

182. Adaptation Fund Environmental and Social Policy (2025 update) underscores the need for regional approaches to climate-induced risks. By addressing wildfires jointly across Armenia and Georgia, the project aligns with this principle.

183. UNFCCC and CBD reporting obligations require both countries to monitor wildfire impacts on emissions, biodiversity, and adaptation. The project's investments in FMIS, cross-border smoke monitoring, and standardized post-fire assessments strengthen national capacity to meet these obligations while ensuring methodological consistency across the region.

Poverty Reduction and SDGs

184. The project contributes directly to national poverty reduction strategies and to global commitments under the Sustainable Development Goals (SDGs). By diversifying rural livelihoods (SDG 1 – No Poverty, SDG 8 – Decent Work), improving energy security (SDG 7 – Affordable and Clean Energy), protecting forests and biodiversity (SDG 15 – Life on Land), and enhancing resilience to climate shocks (SDG 13 – Climate Action), the project reinforces both national and international development frameworks. Its gender-responsive approach ensures contributions to SDG 5 (Gender Equality), while the regional cooperation dimension supports SDG 17 (Partnerships for the Goals).

185. The proposed project is firmly embedded in the development strategies of Armenia and Georgia. It advances national forest, biodiversity, and DRM policies, supports the implementation of updated NDCs and NAPs, and strengthens sub-national poverty reduction and sustainable tourism initiatives. At the same time, it revitalizes bilateral cooperation and implements regional strategies for environmental security and adaptation. By aligning with both national and regional priorities, the project ensures policy coherence, maximizes cost-effectiveness, and enhances sustainability, thereby reinforcing the broader sustainable development agendas of both countries and the South Caucasus region as a whole.

F. Describe how the project meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

186. The project is designed to ensure that all activities comply with relevant national technical standards in Armenia and Georgia, as well as with the Environmental and Social Policy (ESP) of the Adaptation Fund and the UNDP SES. This alignment will ensure that the project not only delivers effective adaptation benefits but also adheres to the highest safeguards for environmental integrity, social equity, and transparency.

Compliance with National Technical Standards

187. The project will primarily focus on capacity building, regulatory reform, institutional strengthening, and targeted investment in equipment, community enterprises, and demonstration activities. Procurement of equipment such as wildfire fighting tools, protective clothing, and transport vehicles will be undertaken in consultation with the respective authorities in both Armenia and Georgia, and will comply with relevant government procurement rules, technical specifications, and safety standards.

188. Downstream pilot activities – such as mineralization of roads, construction of firebreaks and water reservoirs, establishment of biofuel production facilities, or installation of monitoring equipment – will be small-scale and community-based. These activities will be subject to national and sub-national permitting procedures and regulations, including:

- Environmental Impact Assessment (EIA) requirements under national environmental legislation,
- Land-use planning regulations and local zoning rules,
- Building codes and construction permits for small-scale infrastructure,
- Waste management standards for briquetting and biofuel production facilities, and
- Forestry regulations governing thinning, coppice restoration, and reforestation with native species.

189. Tender documents and contracts will explicitly include clauses requiring compliance with national technical standards and environmental and social safeguards. Contractors and community groups will receive training on safety, environmental protection, and responsible resource use. Regular supervision, reporting, and monitoring will be conducted to verify compliance, and corrective measures will be applied if any non-compliance is identified. A grievance redress mechanism operating at community and national levels will ensure transparency, accountability, and timely resolution of concerns. The project also aligns with applicable national technical standards and regulatory frameworks in each participating country.

190. **In Armenia**, project activities will comply with the Law on Environmental Impact Assessment and Expertise (2014, amended 2023). Forest-related interventions will follow the Forest Code (2005). Waste management will comply with the Law on Waste (2004). Site selection and construction will comply with municipal land-use and planning regulations. All field activities will follow national labour legislation and occupational safety standards, including provision of personal protective equipment and safety training.

191. **In Georgia**, activities will comply with the Environmental Assessment Code (2017, in force 2018). Forest fire prevention and restoration will follow the Forest Code (2020, in force 2021), Governmental Decree N383 27.07.2021 Rules for Forest Protection, Maintenance, and Restoration. Waste handling will comply with the Waste Management Code (2014, in force 2015). Construction of facilities will follow the Spatial Planning, Architectural and Construction Code (2018, in force 2019). Occupational health and safety will comply with the Labour Safety Law (2019).

192. Across both countries, early warning systems, meteorological monitoring equipment, and risk communication activities will be implemented in coordination with national hydrometeorological services and will follow established standards for data quality, calibration, and dissemination. All ecosystem restoration and nature-based solutions will prioritize native species, avoid sensitive habitats, and promote long-term ecological integrity. No activities involving physical displacement or significant alteration of critical ecosystems are envisaged.

193. Through this integrated compliance framework, the project ensures that all interventions are environmentally sustainable, socially equitable, technically appropriate, and fully consistent with national laws and the Environmental and Social Policy of the Adaptation Fund.

Table 5. The list of the national standards to be consulted during the project implementation

Country	National Standard / Legal Framework	Date	Applies to Project Outputs / Activities	Compliance Measures
Armenia	Law on Environmental Impact Assessment and Expertise	2014 (amended 2023)	Infrastructure works, facilities, biofuel plants, trails, training centers	Screening, EIA where required, environmental permits prior to works
Armenia	Forest Code	2005	Fuel management, thinning, restoration, firebreaks, pest control	Forest management plans, approvals from Hayantar and protected areas authorities
Armenia	Law on Waste	2004	Biofuel production, briquetting, construction waste, operations	Waste management plans, safe storage, licensed disposal
Armenia	Land Code / Spatial planning regulations	Various	Site selection for facilities and equipment installation	Municipal land-use approval and zoning compliance
Armenia	Labour Code & Occupational Safety Rules	Various	Brigades, training, field operations	PPE provision, safety training, compliance monitoring
Georgia	Environmental Assessment Code (EIA/SEA)	2017 (in force 2018)	Infrastructure, processing units, facilities	Screening and EIA procedures, permits from MEPA
Georgia	Forest Code	2020 (in force 2021)	Forest fire prevention, restoration, forest works	Forest management plans, NFA approvals
Georgia	Rules for Forest Protection, Maintenance, and Restoration	2021	Forest fire prevention, restoration, forest works	Forest fire management plans, NFA approvals
Georgia	Waste Management Code	2014 (in force 2015)	Residue-to-biofuel, solid waste, operations	Waste handling procedures, licensed disposal
Georgia	Spatial Planning, Architectural & Construction Code	2018 (in force 2019)	Buildings, trails, equipment hubs, coordination centers	Building permits and compliance with construction standards
Georgia	Labour Safety Law	2019	Firefighting brigades, field workers, volunteers	Safety protocols, PPE, supervision and reporting

G. Describe if there is duplication of project with other funding sources, if any.

194. There are several initiatives of relevance to the proposed AF project that are ongoing or recently completed and upon which the project builds. Efforts have been made to ensure that there is no duplication with other initiatives and that potential synergies are explored. UNDP has been implementing a series of relevant projects and initiatives in both Armenia and Georgia that have generated lessons, pilots, baseline analysis in the areas of sustainable forest management, forest fire management, risk and vulnerability assessment, climate and disaster information systems, Early Warning Systems (EWS) to be used by the proposed project. Extensive stakeholder consultation has been undertaken with the major donors in the forestry sector in both Armenia and Georgia, including the World Bank, European Union, selected bi-lateral donors (GIZ, KfW, FAO, etc.). The primary previous, current and planned activities of relevance are identified as follows:

Table 6. Summary of Previous, current and planned projects related to wildfire risk management in the South Caucasus

N	Title of the project	Description	Implementing agency	Donor	Duration	Main activities	Potential alignment with the project
1	Forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation (Armenia)	Large scale forestry programme	FAO MoE	GCF	2020-29	Reforestation activities Energy efficiency activities to promote sustainable forest management Community forest governance and monitoring strategy	Under implementation. By focusing on the forest-energy nexus, the project targets adaptation and mitigation measures in two of the Armenia's administrative areas most vulnerable to climate change in Lori and Syunik. This GCF project is the country's first forestry-oriented funding proposal. It will increase the role of communities governing and managing natural resources through forest concessions and improved fuelwood management, timber production and non-timber forest products. This is a relatively new approach in Armenia, and has the potential to act as a model for the entire country. The project will include an increase in the use of energy-efficient appliances in the private sector and rural households to decrease pressure on natural ecosystems.
2	Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia (Georgia)	Building integrated EWS programme across a range of hazards and sectors	UNDP MEPA	GCF	2019-27	Expanded hydro-meteorological observation network and modelling capacities Multi-hazard early warning system and new climate information products supported with effective national regulations, coordination mechanism and institutional capacities Participatory community risk assessment and adaptation planning Municipal disaster preparedness plans; enhanced capacities of first respondents	Program is under implementation. Current programme excludes wildfire as a risk category. The Adaptation Fund programme will work to integrate wildfire risk into this wider DRR and EWS framework and will be able to benefit from enabling work undertaken by relevant stakeholders areas of alignment -Component 1: Observations and modelling. Project will support hydrometeorological observation and modelling network. AF project will work to integrate fire risk modelling into same institutional multi-risk hazard system Component 2: Early warning systems: Project will develop EWS for non-fire hazards. AF project will look to use EWS platforms for delivery and dissemination to forest and agricultural communities. -Component 3 – local awareness raising and community investment programme does not have any alignment (mostly targeted at flood prevention and risk reduction)
3	Strengthening Climate Adaptation Capacities of Georgia (Phase 2)	Addresses the remaining development challenges and barriers existing for risk informed decision making and development planning, with a dedicated focus on equality and	UNDP MEPA	SDC	2024-2028	Strengthening Climate Change Adaptation Capacities Phase 2 aims to address remaining barriers to risk-informed decision-making and development planning, with a strong focus on inclusion and gender equality. It will sustain and institutionalize Phase I results and contribute to reducing communities', livelihoo	Areas of alignment: ● Multi-hazard EWS platforms integrating wildfire risk. Existing national multi-hazard early warning platforms can be expanded to include wildfire danger and smoke alerts, using the same dissemination channels and institutional coordination mechanisms. This avoids creating parallel systems and ensures wildfire information reaches communities through already trusted, operational EWS pathways. ● FMIS systems linked with climate, forest inventory, and hazard databases. Interoperable Forest Management Information Systems can consolidate forest inventory data with hydrometeorological/climate inputs and wildfire detection data (satellite/UAV/sensors) to generate usable risk layers for planning and operations. This strengthens evidence-based decision-making by

		inclusivity. The				ds' and infrastructure exposure to climate-induced hazards through strengthened national and local capacities, a gender-responsive enabling environment for risk-informed local action, and alignment with the programme's Gen der Action Plan.	enabling forestry, environment and emergency institutions to access a single, consistent data source. ● Shared regional databases for cross-border monitoring and early warning. A joint Armenia–Georgia database and agreed data-sharing protocols can support coordinated monitoring of wildfire risk, fire spread and smoke impacts in border areas. This enables timely cross-border alerts, harmonized reporting, and more effective joint preparedness and response. ● Standardized impact assessment data systems for recovery and planning. Common methodologies and data templates for ecological and economic damage assessment can feed into national systems to systematically capture post-fire impacts and lessons learned. This supports evidence-based recovery planning, helps prioritize investments in prevention, and strengthens national and international reporting.
4	National Adaptation Plan (NAP) to advance medium and long-term adaptation planning (Armenia)	Developing national action plan for CCA	UNDP	GCF	2019-22	Identified information and capacity gaps to improve synergies and coordination between and across sectorial initiatives. Strengthened institutio nal, functional and technical capacities to plan for gender sensitive CCA Established climate change adaptation monitoring capacity to efficiently and effectively integrate CCA into national and sectorial planning and management. Developed a CCA financing strategy.	The Project targeted improvement of the existing climate-related knowledge and evidence base to support more comprehensive and consistent assessments of climate risks, vulnerabilities and impacts to efficiently and effectively integrate CCA into national and sectorial planning and management. The project also supported the engagement of the private sector through a comprehensive assessment of the enabling environment and barriers, in line with Armenia's priorities for the development of the private sector. AF has the potential to feed into a number of Components of the NAP. These include: Output 1: AF to provide inputs into institutional and regulatory knowledge gaps for wildfire management Output 2: Provision of more detailed risk analysis and scientific basis
5	Addressing climate change impact through enhanced capacity for wildfires management in Armenia (Armenia)	Targeted programme in 2-3 areas of Armenia exploring models for better	UNDP Ministry of Nature Protection Ministry of Emergency Situations	Govt of Russia	2017-2020	Revising legislative standards and acts in Armenia on forest and wildfire management Building community capacity for rescue and response Supporting entrepreneurship to prevent and mitigate wildfire risks Innovation in adaptation in the forestry sector	A relatively small project, it has undertaken valuable preparatory work which has fed into the design of this Adaptation Fund proposal. It will close in early 2020 before the Adaptation Fund regional project begins. The AF project will be able to support the scaling and deepening of reforms and activities identified. Lessons and best practices from all four project components are being used to inform and support the implementation of the AF project. These include: -Component 1: Revision and updating of policy and legislation documents, normative acts and/or standards related to forest and wildfire management. The AF project will build on the initial scoping work undertaken through Component 1.1. -Component 2: Developing 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. The AF project will take initial work undertaken and

							develop the full legislation and pilot community approaches through Components 1.1 and 1.4 -Component 3: Developing and supporting alternative entrepreneurship-based activities for the prevention and mitigation of wildfire risks. The project has successfully piloted investments in briquetting facilities in selected regions and will scale this model through Component 3.3 Component 4: Establishing 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. The AF project will support the scaling of innovation through investments in the CCTA (Component 2.4)
6	Adaptation to climate change impacts in mountain forest ecosystems of Armenia (Armenia)	Climate risk management in forest ecosystems piloted in Syunik Province, national policy development on forest fire management	UNDP Ministry of Nature Protection	GEF/SPA	2009-2013	The project aimed to bolster fire management capacities by training and equipping early response forest firefighting teams in Syunik Province (in 4 pilot sites), helping to shape national policies to control fires, and improving public awareness through a grass-roots campaign. A second prong involved increasing abilities to monitor and control pests, and a third entailed establishing three pilot projects to restore forests.	The project helped improve forest health and forest fire management on more than 100,000ha and spearheaded the development of national forest management legislation that takes climate risks into account. The early response teams have successfully prevented the spread of multiple grassland fires to neighbouring forests, spurring replication of the model. The National Assembly amended the Law on Atmospheric Air Protection to reduce the causes of forest fires, and the first National Action Programme for Forest Fire Prevention and Response was developed. The new Adaptation Project will learn from the local community-based work of the GEF/SAP initiative and will build upon the policy work by enhancing the enforcement. Component 1 undertook broad based policy and planning support to align forest management with climate change risks. Component 2 sought to pilot these aspects in Syunik region, including wildfire risk management (Output 2.3) (AF project region) Component 3 provided training to foresters for better forest resource management and climate change.
7	Upscaling of Global Forest Watch in Caucasus Region	Empower decision-makers in government and civil society with technology and information to help reduce deforestation, facilitate commitments to restoration and conserve forest biodiversity through information systems	UNEP/WRI/ GFW	GEF, WRI, REC MoNP (Armenia) MEPA (Georgia	2020-2023	The project aimed to build information capacity on monitoring forest cover in the South Caucasus using remote sensing and other inventory analysis to promote better land use planning, restoration and forest policy	Completed.

8	Global Forest Watch (Georgia)	Online platform that provides data and tools for monitoring forests. Real time information. Georgian Forest and Land Use Atlas.	World Resources Institute (WRI) Managed by MEPA	Multiple donors	2016-2019	Identification of direct drivers of tree cover loss/tree cover gain Geo-statistic database of wildfires using MODIS and VIIRS satellite data Assessment of burnt areas and development of a report on natural regeneration of forests and soil erosion	Completed. The project included activities related to forest fires, such as creation of statistics database on wildfires, and assessment of the areas burned during the fires which will be useful in Component 2.
9	Integrated Biodiversity Management in Caucasus (IBiS) (Regional)	Regional biodiversity programme in South Caucasus	GIZ	BMZ	Dec 2015 - Nov 2019	General support to biodiversity across southern Caucasus across a range of landscapes	In 2018, the IBiS project supported training in wildfire management for forestry authorities in Kakheti, involving authorities from Kvareli,Dedoplistskaro and Akhmeta municipalities. The project has a number of components of interest to AF: Component 1 has been promoting biodiversity management and afforestation in Akhmeta province in Georgia (AF project site) Component 4 has been supporting improved forest inventory and forest information system (NFIS) in Georgia - This may be used as an input into the forest fire risk warning system.
10	Enhancing National Capacities on Fire Management and Wildfire Disaster Risk Reduction in the South Caucasus (ENVSEC) (Regional)	Reducing fire risks in the South Caucasus Countries through enhancement of potential for effective response and deepening regional cooperation	Former Ministry of Environment and Natural Resources Protection of Georgia (currently MEPA), Forest Policy Service, LEPL National Forestry Agency, LEPL Agency of Protected Areas	ENVSEC Finnish Govt	2012-2014	Draft National Policy on Forest Fire management has been elaborated (not approved) Regional trainings on fire management has been conducted, which also supported regional experience exchange for the South Caucasus countries	The only project that has focused on natural disasters and forest fires at a regional scale; The project supported building the capacity of different institutions on preparedness and response; Within the project a draft National Policy on Forest Fire management has been elaborated. The ENVSEC can serve as the basis for further legislative reform and provides useful materials for training.
11	Training in forest fire management for APA staff (Georgia)	Introductory course on firefighting and restoring burned scars	USAID department of Interior	-	2009-2010	Trainings of APA staff	Historic project supporting the capacity of APA staff in firefighting and restoring burned areas. The AF project will review any training or educational materials that remain from the project as the basis for Output 1.4.

195. In particular, a number of key lessons have been identified from the wildfire management component of the project “Adaptation to climate change impacts in mountain forest ecosystems of Armenia” (5 in the above table):

196. Disturbances are becoming a significant threat to forest biodiversity, forest ecosystem functioning and forest resilience under Armenia’s aridifying climate – and the control of forest fires is of great urgency to reduce the vulnerability of forests to climate change

a. The forest rehabilitation pilot projects of the “Adaptation to climate change impacts in mountain forest ecosystems of Armenia” project have highlighted the increasing difficulty and the more intensive tending required to achieve successful forest regeneration under climate variability in disturbed forest areas located in arid parts of the country. Rehabilitation of disturbed areas under climate change will require increasing inputs and resources, which may not be available in forest management units. Natural regeneration on disturbed sites in arid areas will likely be insufficient to maintain forest ecosystem functioning at levels like those prior to the disturbance. The lack of replacement creates a significant threat to forest biodiversity, forest connectivity as well as forest ecosystem functioning and provision of ecosystem services,
b. Protection of forests from damage by taking efficient proactive measures is critical for maintaining forest functioning and forest resilience under climate change. Otherwise maintaining sufficient forest cover will become resource intensive, which on a wider scale and under the prevailing economic conditions will lead to lower rates of reforestation and prioritization of more productive sites/

197. Transfer of suitable technologies and the establishment of forest fire early response teams have yielded significant short-term improvements in managing the wildfire problem:

a. The establishment of forest fire early response teams by providing equipment and tools suitable for the suppression of surface fires in the mountainous terrain to three forest management units in the Syunik Province, despite being limited to suppressing smaller scale fires, had immediate positive impacts on the wildfire management capacities in the region. The project enjoyed wide support among partners and stakeholders, and spurred replication at the national level by national authorities. The comparative simplicity of the introduced technologies, which however are specifically well suited for the mountainous terrain, and the relatively low initial investment costs associated especially with some of the hand tools has supported the adoption of the approach by local stakeholders. With immediate impacts in the short term, the early response teams create an enabling environment for the development of more comprehensive national responses to wildfires and wildfire management in the longer term. Furthermore, the provision of horses to the forest management units built the critical capacities of forest rangers to monitor the forest areas for fires, pests as well as violations in the use of forest resources.

198. Formalization of the results is key to long-term improvements in wildfire management

a. Building on the initiated process of improving co-operation and coordination of all relevant stakeholders involved, a National Task Force on Wildfire Management was established by the decree of the Minister of Emergency Situations and with the endorsement of UNDP, OSCE and the Environment and Security Initiative. The Task Force convened technical experts from all relevant government organizations and was led by the national Rescue Service. Its main task is to develop a short-term Action Plan for the improvement of prevention, pre-suppression and suppression of wildfires in Armenia. The Task Force was a instrumental for ensuring long-term development of wildfire management in Armenia and up-scaling of project activities to the national level. Furthermore, the formalized Action Plan was important for securing adequate resources for carrying out the longer-term processes including revision of the legal framework and establishment of adequate institutional system to ensure law enforcement as well as acquisition of suitable equipment and machinery to

build responsive capacities to forest fires. The Action Plan additionally contributes to the long-term public awareness raising through inclusion of the topic into national curricula,

b. The inclusion of climate change considerations into the guiding document of forest management plan development had the same importance for mainstreaming climate change risk into forest management at the national level. The successful endorsement of the legal ban on burning of organic matter in forests and agricultural lands was key to beginning the process of changing behaviour related to the use of fire and controlling the main cause of wildfires in Armenia.

199. The need for improved capacity to respond to disasters such as forest fires under changing climate conditions as well as the need to adapt to climate change is recognized by the project stakeholders

a. The rapid increase in wildfire danger makes climate change induced impacts in forests felt immediately compared to other impacts with slower onset. Forest managers already report drying conditions in the forests that they manage causing more forest fires and fire fighters have had to deal with significantly worsening grassland fire situation over the recent years. Additionally, both actors must deal with the increasing wildfire problem with limited resources. The stakeholders identified not only the need for improved capacities to respond to the increasing disturbances under climate change, but also the need for enhanced co-operation between different authorities to organize wildfire fighting in an efficient manner. National ownership has paved the way for the activities carried out under the project which provided an opportunity to adopt new approach,

b. The initiative to establish the National Task Force on Wildfire management, which was supported by international organizations, created a formal platform to develop the organization of wildfire management in Armenia with the involvement of all relevant stakeholders and importantly with the leadership of local technical experts under the mandate created by the decree of the Minister of Emergency Situations.

200. Partnerships are essential

a. Strong national ownership of forest managers and fire fighters of the issue of improving wildfire management has been pivotal for the formation of good co-operation between key stakeholders and the project. The establishment of these partnerships, on the other hand, was instrumental for the effective and efficient implementation of project activities,

b. The project successfully formed good relations with the main local stakeholders but has also created synergistic relationships with other international organizations and initiatives sharing parallel targets in improving wildfire management in Armenia. Partnering with other organizations (e.g. GIZ) resulted in enhanced outcomes and effectiveness of the project.

201. Wide stakeholder consultation contributes to a good working environment, broad project support and identification of a comprehensive approach to address the wildfire issue

a. Inclusion of a wide range of stakeholders representing government agencies, ministries, national, regional and local authorities as well as the private sector and the civil society into the activities under the wildfire management component of the project contributed to enhanced communication between different parties, establishment of co-operation between national stakeholders as well as identification of measures to comprehensively address issues contributing to the wildfire problem. Importantly, this has strengthened the support for the project activities and has successfully brought the urgent issues of wildfire management to the national agenda. The key stakeholders, such as the regional forest enterprises and the protected area management authorities, have been involved in the project from the planning stages on, which has contributed significantly to individual and institutional capacity building and to the creation of a working environment supporting revision of current practices and adoption of new approaches as well as for example to the

utilization of local traditional knowledge to the fullest extent to identify adaptation options and for instance non-commercial tree species resilient to drought.

202. In summary, the project will be highly complementary to existing initiatives, whilst avoiding duplication in the few cases where this might exist. Where possible, the project will seek to build on the systems and infrastructure of past or ongoing initiatives (e.g. using existing sites for training and capacity building, engaging with existing program participants as potential resilient extension service providers for the private sector). Where potential activities overlap (e.g. capacity building and policy support) the Adaptation Fund project will target thematic areas relevant to its core mandate (e.g. wildfire risk reduction rather than wider forest sector reform). In all cases, the project team will liaise and coordinate with other projects to maximize synergies given that the reform process is a dynamic one. Ongoing discussions will be held with other stakeholders (such as the FAO, GIZ, KfW) to monitor and align programming activities with potential emerging initiatives.

H. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

203. The project includes dedicated learning and knowledge management activities designed to capture, synthesize, and disseminate practical lessons from implementation. These include systematic documentation of experiences from legal harmonization, bilateral coordination, early warning system deployment, community-based wildfire prevention, and post-fire rehabilitation, preparation of targeted knowledge products (policy briefs, technical notes, and case studies), and organization of bilateral and regional learning events and peer exchanges between Armenia and Georgia. Learning outputs will be produced at key implementation milestones and tailored to policymakers, practitioners, and local stakeholders to support replication and scaling.

204. Knowledge management is a core element of this project and is fully mainstreamed across the four components. While budgets and activities for knowledge capture and dissemination are embedded within each component, overall coordination will be ensured centrally by the project management unit, with a dedicated knowledge management and communications officer (estimated at 0.5 FTE) supported by international and national consultants. Oversight will rest with the Project Manager, who will ensure that learning activities are aligned with project objectives and integrated into reporting, monitoring, and evaluation processes.

205. The project team will work closely with national and regional partners – including the Ministries of Environment, Forestry Agencies, Hydrometeorological Services, Emergency Services, and Protected Area administrations – to co-develop knowledge products and establish effective dissemination pathways. Consultations held during preparation confirm that these agencies are strongly committed to building and sharing knowledge on wildfire prevention, preparedness, and response. The project will support these partners in embedding lessons into their institutional mandates and outreach efforts.

206. Most partner institutions already have capacity and channels to engage with knowledge activities, including training academies, ranger services, and community outreach programs. Where necessary, UNDP will provide targeted support to strengthen these functions – for example, by enhancing digital knowledge platforms, providing communications training, and supporting the integration of wildfire modules into existing curricula.

207. Lessons learned will be captured systematically across the four components:

208. Component 1 will generate lessons on institutional reform, legislative harmonization, and the establishment of cross-border cooperation frameworks,

209. Component 2 will provide insights into the effectiveness of preventive measures such as hiking trails as firebreaks, residue-to-biofuel conversion, pest monitoring, and the modernization of firefighting capacity,

210. Component 3 will capture learning from the development of interoperable FMIS, post-fire investigations, cross-border monitoring systems, and ecosystem-based recovery interventions,

211. Component 4 will document gender- and socially inclusive approaches to wildfire resilience, including women's and youth participation in brigades, awareness campaigns, and livelihood enterprises.

212. The project's annual performance and progress reports will include dedicated sections on lessons learned. These will highlight good practices, challenges, and opportunities for scaling up. Lessons will be consolidated into technical briefs and policy notes, which will be shared nationally and regionally. The Adaptation Learning Mechanism (ALM), UNDP's Climate Change Adaptation knowledge platform, and other relevant portals (including FAO's forestry and UNECE's forest monitoring platforms) will be used for global dissemination.

213. As a flagship regional Adaptation Fund program in the South Caucasus, the project will prioritize dissemination of findings to the Governments of Armenia and Georgia and to the wider donor and civil society communities. The Steering Committee will act as the main channel for sharing lessons with ministries, while also ensuring that Component 1's institutional reforms reflect feedback from Components 2-4.

214. The project team will convene regular meetings with development partners active in forestry, disaster risk reduction, and climate adaptation in the region, including UNDP, FAO, GIZ, KfW, the EU, and OSCE. By engaging with these partners, the project will ensure that its findings inform the design and implementation of other donor-funded initiatives, avoiding duplication and encouraging harmonization.

215. Knowledge products will be tailored to specific audiences. Policy briefs and legal guidance will target national decision-makers; technical manuals and training modules will support foresters, park rangers, and emergency responders; and awareness materials will reach farmers, tourists, and local communities. Workshops, simulation exercises, and community consultations will be documented, and their outcomes captured in practical guidance notes.

216. To increase outreach, the project will establish country-specific social media platforms (e.g., Facebook, Telegram) linked to existing UNDP and government portals. These channels will provide regular updates, accessible materials, and video content showcasing project activities. All major reports and training materials will be hosted on the project's online repository, accessible through the UNDP Armenia and Georgia websites.

217. For longer-term sustainability of knowledge transfer, the project envisages the following:

218. Learning materials on regulatory and legislative reforms will be institutionalized within the Ministries of Environment and Emergency Services and disseminated as part of their ongoing training mandates,

219. Tools and guidance on forecasting, monitoring, and decision-support will be embedded in hydrometeorological services and FMIS structures, ensuring continuous use and updating beyond the project period,

220. Lessons from community-level interventions, including firebreak trails, biofuel pilots, and volunteer brigades, will be transferred to Forest Agencies, Protected Area administrations, and relevant ministries, informing revisions of forest management plans and community engagement strategies,

221. Gender-responsive awareness materials and monitoring tools will remain part of national outreach strategies, ensuring that women, youth, and vulnerable groups continue to benefit from targeted information and opportunities.

222. These knowledge management efforts will create a continuous learning cycle where national institutions, communities, and regional stakeholders co-produce, share, and apply

lessons. By linking project learning with donor coordination forums, academic institutions, and global platforms, the project will ensure that its findings contribute to advancing regional and global understanding of climate-resilient wildfire management.

223. Learning and knowledge management will be led by the Regional Monitoring, Evaluation and Learning Specialist, supported by national MEL and knowledge management specialists in Armenia and Georgia, in close coordination with implementing entities. Lessons learned will be tracked through routine monitoring, structured after-action reviews following major activities (e.g. simulations, cross-border exercises, and system deployments), and periodic synthesis notes. Tracking will take place continuously, with formal consolidation at mid-term and project completion, aligned with Adaptation Fund reporting requirements. All learning and knowledge management functions are fully budgeted under dedicated project cost lines, including specialist inputs, documentation, learning events, and dissemination.

I. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy of the Adaptation Fund.

224. This proposal has been developed in full consultation with a broad range of stakeholders in Armenia and Georgia over several visits and consultation events.

225. During the project proposal development process, detailed stakeholder consultations were organized at national, provincial and local levels. The project development process included numerous local community meetings/visitsand extensive stocktaking and validation stakeholder consultations with relevant government counterparts and civil society.

226. Furthermore, during these consultations gender specific vulnerabilities and needs were identified. During these consultations the roles and responsibilities of key stakeholders and the specific mechanisms and strategies for their direct involvement in project activities were identified. Considerations of vulnerability, participation and gender empowerment in the formulation of activities will be a key focus area, while gender mainstreaming tools will be applied in the development of technical guidelines for integration of climate change adaptation into planning processes. The project will ensure that both men and women are able to participate meaningfully and equitably, have equitable access to project resources, and receive equal social and economic benefits. Consultations with gender merits stakeholders will be organized throughout the whole period of project implementation to ensure that respective priorities are taken into consideration. At the national level, the project will collaborate with gender machineries such as the Ministry of Labour and Social Affairs in Armenia and the Gender Equality Council of the Parliament of Georgia. At the local and community levels, engagement will focus on participatory planning processes that amplify women's voices in wildfire management committees, community forest user groups, and local adaptation planning bodies. Consultations will be structured to accommodate women's time and mobility constraints – through flexible meeting schedules, accessible venues, and targeted outreach to women-headed households, ethnic minorities, and persons with disabilities. Partnerships with women's civil-society organizations and grassroots associations will strengthen representation and accountability. By embedding gender-responsive stakeholder engagement mechanisms across all governance levels, the project will foster a culture of inclusion, ensure shared ownership of results, and enhance the social sustainability of wildfire resilience interventions in both Armenia and Georgia.

227. Key institutions and groups consulted in the development of this proposal are presented in the table below.

Table 7. Institutions and groups consulted during project preparation

Armenia	Georgia

• Ministry of Environment
  ○ Eco-Patrol Service
  ○ Hayantar (ArmForest) SNCO
  ○ Hydrometeorology and Monitoring Center SNCO
  ○ Department of Climate Policy, Department of Forest Policy, Department of Specially Protected Areas of Nature and Biodiversity Policy, Department of Atmospheric Policy, Department of Water Policy
• Ministry of Internal Affairs
  ○ Rescue Service, Department of Strategic Planning, Policy Development and Monitoring, Department of Disaster and other Emergency Situations Management, Seismic Protection Territorial Service SNCO
  ○ Educational Complex
• Forest Alliance
  ○ Armenia Tree Project NGO, Foundation for Preservation of Wildlife and Cultural Assets (FPWC) NGO, MyForest Armenia NGO, Shen NGO
• AI4DA – Armenian Institute for Digital Agriculture
• ISTC (Innovate.Study.Think.Create) Foundation
• World Bank
• FAO
	• Ministry of Internal Affairs
	  ○ Emergency Management Service of Georgia (EMS)
	• Ministry of Environment Protection and Agriculture (MEPA)
	  ○ Forest Policy Department
	  ○ Department of Environment and Climate Change
	  ○ Environmental Supervision Department (DES)
	• National Forestry Agency (NFA)
	• Agency of Protected Areas (APA)
	• Forestry Agency of Adjara (AFA)
	• National Environmental Agency (NEA)
	  ○ Department of Hydrometeorology
	• Caucasus Nature Fund (CNF)
	• Gulisashvili Forestry Institute
	• The Greens Movement of Georgia (NGO)
	• Centre for Biodiversity Research & Conservation – NACRES (NGO)
	• Sensors & Smart Technologies (SST)
	• Agricultural University of Georgia
	• GIZ Georgia representative office
	• UNDP programme teams
	• World Bank

228. In addition, two multi-stakeholder validation workshops were held in Tbilisi and Yerevan with policy makers, NGOs and academics with more than 30 attendees each, including representatives from the regions. Participants welcomed the proposed project scope and strategy, and stressed the importance of systemic approach applied in the project. A more detailed information and meeting notes on stakeholder and local communities consultations are presented in the Annex 5. Throughout the project implementation period stakeholder consultations will be continued both at national and local levels.

J. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

229. The program costs requested from the Adaptation Fund represent the additional investments required to address the emerging climate risks that exacerbate wildfire frequency and severity in the South Caucasus. Both Armenia and Georgia already allocate public resources to forestry, protected areas, and emergency response; however, these expenditures are insufficient to address the climate change “threat multiplier” effect. Without dedicated adaptation financing, both countries will remain locked into a reactive, suppression-driven approach that is costly, inefficient, and increasingly unsustainable under rising temperatures, droughts, and pest outbreaks. The Adaptation Fund grant is therefore sought to cover the full incremental costs of embedding climate resilience into wildfire prevention, preparedness, response, and recovery. The project will be able to achieve its planned adaptation objectives solely on the requested AF funds, irrespective of any additional co-financing from other donors.

230. National partners are expected to continue investing their own financial and in-kind resources into baseline wildfire and forest management functions. The requested funding does not substitute for those commitments but instead ensures that the adaptation dimensions – legislative reform, institutional strengthening, advanced data integration, community-based resilience, and regional cooperation – are implemented. These are not covered by baseline budgets. The Fund’s support will also ensure that community-level interventions, such as biofuel production, eco-tourism enterprises, and wildfire brigades, reach vulnerable

populations who would not otherwise have access to resources to manage climate-induced risks.

231. The project has been designed so that a large proportion of funds flow directly into capacity building, policy reform, and institutional improvements that deliver systemic and durable adaptation benefits. Weak governance, outdated legal frameworks, and insufficient preparedness represent the structural barriers that underpin wildfire vulnerability in Armenia and Georgia. By addressing these enabling conditions, the project ensures that adaptation investments generate long-term returns. The adaptation reasoning for each component is set out below.

Component 1. Strengthened regional and national regulatory and institutional frameworks for climate-resilient wildfire management

232. *Baseline (without AF funding)*. Without AF support, wildfire governance in both Armenia and Georgia would remain fragmented and reactive. Legal frameworks are outdated, enforcement is weak, and institutional mandates overlap. Municipalities and local authorities lack regulatory tools to prepare for wildfire threats. At the regional level, cooperation would remain based on outdated bilateral agreements from the 1990s, with no harmonized risk classifications, common operating procedures, or structured communication mechanisms. Training and joint drills would continue on an ad hoc basis, limiting preparedness for climate-driven fire events.

233. *AF Additionality (with AF funding)*. With AF financing, both countries will be able to revise DRM and forestry legislation to integrate climate risks, adopt secondary acts to operationalize wildfire management, and embed wildfire risk into biodiversity and protected area strategies. Municipalities will be supported to prepare local wildfire management plans. At the regional level, Armenia and Georgia will renew their Memorandum of Understanding on forestry and wildfire cooperation, establish a bilateral coordination platform, and operationalize harmonized standards for fire prevention and response. Structured drills, joint risk mapping, and exchange of lessons learned will become institutionalized. These are adaptation-specific measures that require dedicated funding, beyond baseline institutional spending.

Component 2: Improved wildfire prevention, preparedness, and response capacity

234. *Baseline (without AF funding)*. Currently, wildfire prevention and preparedness systems are underdeveloped. Forecasting models have been piloted but are not fully operationalized. Pest and disease monitoring is fragmented, while fuel management practices such as thinning and coppice restoration are sporadic. Communities continue to practice residue burning, a major ignition source, and recreational fires are poorly controlled. Emergency services struggle with outdated equipment, insufficient protective gear, and limited access to mountainous terrain. Without AF funding, these systemic gaps would persist, leaving communities highly vulnerable to climate-driven wildfire risks.

235. *AF Additionality (With AF funding)*. AF financing will allow both countries to operationalize climate-informed fire danger forecasting, integrate vegetation indices, and expand pest and disease monitoring. Preventive measures will include thinning, coppice restoration, fire-safe recreational zoning, and pilots for residue-to-biofuel conversion. Hiking trails will be constructed to serve as firebreaks and eco-tourism infrastructure, reducing ignition risks while diversifying livelihoods. National firefighting capacity will be strengthened with modern all-terrain fleets, protective equipment, mobile water systems, and the establishment of regional training centers. Bilateral cross-border drills will ensure interoperability. These represent incremental adaptation costs aimed at reducing ignition risks, increasing preparedness, and strengthening suppression capacity under changing climate conditions.

Component 3: Enhanced wildfire data, recovery, and decision-support systems

236. *Baseline (without AF funding)*. At present, wildfire data systems are fragmented and underdeveloped. Armenia and Georgia rely heavily on low-resolution global satellite data, with

limited national capacity for analysis. Fire databases, forest inventories, and emergency response data remain poorly coordinated, restricting integrated risk assessment. Post-fire recovery is largely ad hoc, without standardized methodologies for ecological and economic assessments. There are no systematic post-fire investigations, limiting institutional learning. Without AF financing, innovation in data systems would remain slow, and recovery efforts would continue to be reactive and inefficient.

237. *AF Additionality (with AF funding)*. The AF will finance the development of interoperable Forest Management Information Systems (FMIS) in both countries, integrating UAV, sensor, and satellite data with forest inventories and hydrometeorological services. Acceleration programs, hackathons, and innovation challenges will stimulate local IT and hi-tech solutions such as mobile fire-reporting apps, AI-driven early detection, and low-cost sensor networks. Cross-border smoke and air quality monitoring networks will be established, supporting national health systems and NDC reporting. Standardized methodologies for post-fire damage assessments will be developed, alongside systematic post-fire investigations into causes, spread, and response effectiveness. Recovery frameworks will emphasize soil stabilization, reforestation with climate-resilient species, pest and disease control, and sustainable livelihood recovery through eco-tourism and energy-efficient technologies. These measures represent the full cost of adaptation by embedding climate resilience into wildfire monitoring, learning, and recovery systems.

Component 4: Gender-responsive and socially inclusive wildfire resilience

238. *Baseline (without AF funding)*. Without AF support, wildfire management would continue to be largely gender-blind and exclusive of vulnerable groups. Women, youth, and marginalized households would remain underrepresented in brigades, decision-making platforms, and livelihood opportunities. Their differentiated vulnerabilities, such as reliance on fuelwood, household energy insecurity, and limited access to resources, would remain unaddressed. Awareness campaigns would not adequately target vulnerable groups, leaving them exposed to wildfire risks.

239. *AF Additionality (with AF funding)*. With AF support, the project will mainstream gender and social inclusion across all wildfire management activities. Systematic gender and social inclusion analyses will be conducted in both countries to inform policies and practices. Women and youth will be trained and equipped to participate in brigades, nurseries, restoration work, and awareness campaigns. Gender-sensitive outreach materials will be produced and disseminated, ensuring practical risk reduction advice reaches all groups. Monitoring frameworks will be updated with gender- and age-disaggregated indicators, ensuring equitable participation and benefit-sharing. These measures represent the incremental adaptation costs of making wildfire management socially just, participatory, and responsive to the needs of vulnerable groups under climate change.

240. The requested Adaptation Fund resources will finance the full incremental costs of adaptation for Armenia and Georgia. Baseline government investments cover basic forestry, fire suppression, and emergency response, but do not address the structural and climate-induced drivers of wildfire risk. With AF support, the project will:

241. Embed climate change into legal frameworks and institutional mandates,
242. Operationalize forecasting, prevention, and preparedness systems,
243. Modernize data management and post-fire recovery, and
244. Ensure gender-responsive and socially inclusive wildfire resilience.
245. The regional approach enhances cost-effectiveness by harmonizing methodologies, pooling resources, and institutionalizing cross-border cooperation. The result will be a step-change in resilience, enabling ecosystems and communities to withstand intensifying wildfire risks under climate change.

K. Describe how the sustainability of the project outcomes has been taken into account when designing the project.

246. The project has been designed to ensure that its outcomes are sustainable at institutional, technical, community, and regional levels. Each component includes measures that embed knowledge, build ownership, and create financial and organizational pathways for continuation beyond the project lifetime. Sustainability is pursued by anchoring interventions within national systems, aligning with ongoing reform processes, strengthening regional cooperation, and creating livelihood opportunities that are self-financing.

247. Economic sustainability will be ensured by prioritizing cost-effective prevention, early warning, and preparedness measures that reduce long-term wildfire suppression and damage costs. Investments in early warning systems, preventive landscape management, and coordinated response are designed to shift public expenditure from reactive emergency response to lower-cost preventive action, generating recurrent savings for national and local authorities. Skills development and temporary employment created through prevention, restoration, and training activities also strengthen local economies and provide a foundation for continued engagement in wildfire risk reduction beyond the project period.

248. Social sustainability will be supported through institutionalization of capacities rather than reliance on ad hoc project structures. Training and operational procedures target existing national and sub-national institutions (emergency services, forestry agencies, hydrometeorological services, and local authorities), ensuring that knowledge, roles, and coordination mechanisms remain in place after project completion. Gender-responsive participation and engagement of women and youth strengthen community ownership and local leadership in wildfire prevention and recovery, increasing the likelihood that practices introduced by the project are sustained and socially accepted.

249. Environmental sustainability is embedded through a focus on prevention, ecosystem-based approaches, and climate-resilient restoration. Preventive forest and landscape management reduces recurrent degradation and supports long-term ecosystem integrity, while post-fire rehabilitation prioritizes native, climate-resilient species and natural regeneration processes. Improved monitoring of wildfire impacts and emissions supports adaptive management and continuous improvement of environmental practices. These approaches ensure that environmental benefits extend well beyond the project lifetime and reduce the risk of maladaptation.

250. Financial sustainability is ensured by integrating the operation and maintenance (O&M) of systems and infrastructure into existing institutional mandates and budgets. Early warning systems, monitoring equipment, and information platforms are designed to be operated by national hydrometeorological and emergency agencies using existing staff, facilities, and budget lines, minimizing recurrent costs. Equipment selection will emphasize durability, compatibility with national standards, and availability of local servicing. Capacity building will include O&M procedures and responsibilities, ensuring that systems remain functional without continued external financing. No parallel or project-specific O&M structures are created.

251. The project is designed as a replicable regional model for wildfire risk reduction in mountainous and forested landscapes. Standardized tools, operating procedures, and documented lessons provide a clear basis for scaling within Armenia and Georgia and across the wider South Caucasus. The project's alignment with national strategies and regional cooperation frameworks positions it well for follow-up financing from other climate and development funds to expand geographic coverage, deepen prevention measures, or integrate wildfire resilience into broader landscape and climate adaptation programs. Learning products and regional exchanges further support uptake and replication beyond the initial project area.

Component 1: Strengthened regulatory and institutional frameworks for climate-resilient wildfire management

252. Component 1 focuses on long-lasting institutional reforms and regulatory improvements. By working directly with the Ministries of Environment, Emergency Services, Forestry and Protected Area Agencies in both countries, knowledge and know-how will be mainstreamed into the mandates of state institutions. This ensures that wildfire risk management and adaptation measures become part of routine government functions, financed through state budgets.

253. At the regional level, renewed Armenia-Georgia agreements and the establishment of a permanent bilateral coordination group under the Intergovernmental Economic Council provide a predictable framework for cooperation that will outlast project funding. At the local level, a legal basis for community volunteer brigades will enable municipalities to integrate citizen participation into formal response systems. These measures will create durable institutional capacity, replicable across the South Caucasus.

Component 2: Improved wildfire prevention, preparedness, and response capacity

254. Sustainability of Component 2 rests on embedding improvements within existing national systems. Forecasting upgrades and pest/disease monitoring will be integrated into hydrometeorological and forest management services, ensuring they remain operational as part of core government functions. Early warning systems will be developed in collaboration with agencies such as EMS “112” hotlines, guaranteeing that they continue as national services financed through regular budgets. Preventive measures, including thinning, coppice restoration, recreational zoning, hiking trails as firebreaks, and pilots for biofuel production, will be linked with ongoing forest inventory and management processes to ensure institutional ownership. Firefighting capacity will be modernized through provision of equipment and establishment of training centers, but curricula and maintenance will remain under the control of national academies and service agencies. Regular bilateral drills will be mainstreamed into national training calendars, ensuring sustainability of interoperability.

Component 3: Enhanced wildfire data, recovery, and decision-support systems

255. Component 3 sustainability is ensured by anchoring data and recovery functions within nominated national agencies and linking them to ongoing reforms. Interoperable Forest Management Information Systems (FMIS) will be developed with full involvement of national forest inventories and hydrometeorological services, ensuring institutionalization. Cross-border smoke and air quality monitoring networks will be aligned with UNECE and UNFCCC frameworks, guaranteeing continued reporting relevance.

256. Standardized methodologies for post-fire damage assessments will be adopted formally by governments, while post-fire investigations will be institutionalized within emergency and forest agencies as part of after-action reviews. Ecosystem and community recovery measures, such as reforestation, soil stabilization, and livelihood restoration, will be designed with ministries and local governments to ensure budget allocations or integration into national climate programs. Innovation elements, such as accelerators, hackathons, and IT tools, will be implemented with universities and the private sector, encouraging long-term uptake beyond project funds.

Component 4: Gender-responsive and socially inclusive wildfire resilience

257. Sustainability of Component 4 lies in embedding gender and social inclusion into wildfire governance systems. Gender and inclusion analyses will be used to update national and local policies, creating institutional recognition of differentiated vulnerabilities. Training women and youth for brigades, nurseries, and enterprises ensures human capacity that remains beyond the project period. Awareness campaigns will be designed as part of ministries’ ongoing outreach programs, ensuring their continuation with government resources. Monitoring frameworks will be updated with gender- and age-disaggregated indicators, which will remain embedded in national reporting systems, thereby institutionalizing inclusive

monitoring practices. By ensuring women, youth, and vulnerable groups have structured roles in prevention and recovery, the project builds long-term social sustainability and equity.

L. Provide an overview of the environmental and social impacts and risks identified as being relevant to the project.

258. The proposed project activities were screened using the UNDP SES and AF ESPs to identify potential social and environmental risks. Annex 2 provides the detailed Social and Environmental Screening Procedure. Table 5 summarizes the screening results with the help of a checklist that reflects both AF ESPs and UNDP SES, and indicates for each principle the potential risks, and any corresponding risk management strategies devised to avoid, minimize, or offset these risks in accordance with the AF and UNDP social and environmental risk management requirements.

259. The screening considered the following:

260. Information received during consultations with government agencies and stakeholders,

261. National regulations, and

262. Professional experience with projects of a similar nature.

263. Based on the screening and assessment results from an environmental and socioeconomic risks perspective, the project (across its four components) has been rated as Moderate Risk based on the UNDP SES and Category B based on the Adaptation Fund ESPs. Risks identified at this stage have potential adverse impacts that are relatively few, small in scale, localized, and reversible or readily mitigated.

264. Additional information is given in the Environmental and Social Management Framework (ESMF) provided in Annex 3, and in the Gender Action Plan (GAP) provided as Annex 4.

Table 8. Checklist of Adaptation Fund Environmental and Social Principles

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law *UNDP SES* *Accountability Principle*		**Low risks** The supported activities might fail to demonstrate full compliance with the applicable national law. All supported actions in the given outputs will be screened for compliance with the applicable national law. Compliance monitoring and periodic legal reviews will be conducted to ensure that all project-supported activities fully comply with applicable national laws
Access and Equity UNDP SES Accountability Principle		**Low risks** Marginalized groups, including persons with disabilities, ethnic minorities, and low-income communities, may face exclusion from project decision-making and benefits due to limited outreach and insufficient capacity to engage effectively. Additionally, some groups might not receive information about the project or its activities, further restricting their ability to participate. Equal access for all beneficiaries, especially in regional communities, will be ensured through public consultations and transparent information sharing. All project activities will be screened to ensure inclusive, fair, and equitable access to benefits for all, including marginalized groups and persons with disabilities, without worsening existing inequities, especially for those in extreme poverty or facing social disadvantages. GAP will be implemented and GAP implementation will be monitored.

Marginalized and Vulnerable Groups UNDP SES Human Rights Principle		**Moderate risks** Mountain communities may include vulnerable groups (especially the elderly and low-income households). The project will address the needs of marginalized and vulnerable groups through inclusive adaptation measures and accessible communication. By embedding gender and inclusion across all components the project ensures that women, youth, and marginalized groups are empowered as active agents of adaptation, not passive beneficiaries. In addition, the project shall establish and operate an easy-to-access project-level Grievance Redress Mechanism (GRM) to collect, consider and respond to concerns or grievances from the potentially affected communities incl. marginalized groups. The GRM will be presented during the inception phase, mentioned during the stakeholder consultations and included on locally appropriate notifications at the project sites (including the site of the works). GAP will be implemented and GAP implementation will be monitored.
Human Rights UNDP SES Human Rights Principle		**Low risks** The project is based on human rights principles and will not involve any coercive or discriminatory actions. All implementing partners will comply with social protection standards. As per the AF ESP guidance, the project will ensure ongoing screening, assessment, and monitoring of this principle throughout project implementation phase.
Gender equity and women's empowerment UNDP SES Gender Equality and Women's Empowerment Principle		**Low risks** Women's participation in the forestry and wildfire management may be limited. Supported activities may fail to be gender-responsive and could potentially discriminate against women and girls or exacerbate existing gender-based inequalities and discrimination. Systematic gender and social inclusion analyses will be conducted. Women and youth will be trained and equipped to participate in project supported activities. Gender-sensitive outreach materials will be produced and disseminated, ensuring practical risk reduction advice reaches all groups. The planned engagement of women will also include codes of conduct or other appropriate measures to prevent and protocols that respond to gender-based violence and sexual exploitation, abuse, or harassment. Additionally, the GRM that will pay careful attention to any indications of sexual exploitation, abuse, harassment (SEAH) risks. GAP will be implemented and GAP implementation will be monitored.
Core labour rights *UNDP SES Standard 7 Labour and Working Conditions*		**Moderate risks** Grant recipients and project contractors may lack proper mechanisms to ensure compliance with workers' rights and might fail to provide contracted workers with labour and working conditions in line with applicable national labour legislation. All project-supported work will be required to comply with national labour laws, with strict attention to occupational health and safety standards, especially for volunteers and community members. The project shall: • provide involved personnel with adequate personal protection equipment (PPE) and with introductory job-focused safety trainings, including on the proper use and maintenance of the PPE • Make the first aid kits available and easily accessible in relevant sites. • Record any health & safety and immediately report them to UNDP and the Project Board, • Conduct regular contract and compliance reviews of these arrangements.
Indigenous populations UNDP SES Standard 6 Indigenous Peoples	**X**	**No risks** No communities meeting the criteria used to identify indigenous peoples as per UNDP's SES Standard 6 are expected to be affected by

		the project. Nevertheless, the project will respect the cultural characteristics of local communities.
Involuntary Resettlement UNDP SES Standard 5 Displacement and Resettlement	**X**	**No risks** The project will not involve land acquisition or forced relocation. All infrastructure and/or project activities will be implemented on identified sites based on legally binding or voluntary agreements
Protection of natural habitats UNDP SES Standard 1 Biodiversity Conservation and Sustainable Natural Resource Management		**Moderate risks** The supported activities e.g., fire prevention activities or water storage solutions may involve ecosystem interventions The supported actions shall be screened to ensure that they: • Do not cause measurable adverse impacts on biodiversity values/criteria that underpin designation of the relevant critical habitats, and ecological processes supporting these biodiversity values (determined on an ecologically relevant scale), and • Respect the needs of environmental flow regimes and not significantly alter them in ways that prevent water resources from fulfilling their functions for upstream and downstream ecosystems and their services to local communities.
Conservation of biological diversity UNDP SES Standard 1 Biodiversity Conservation and Sustainable Natural Resource Management		**Moderate risks** Forest management and restoration activities could affect biodiversity. The project will focus on maintaining native species and promoting ecologically sustainable restoration.
Climate change UNDP SES Standard 2 Climate Change and Disaster Risks	**X**	**No risks** The project aims to reduce the impacts of climate change through wildfire prevention and the strengthening of sustainable forest management systems
Prevention of pollution and efficiency of resources *UNDP SES Standard 8 Pollution Prevention and Resource Efficiency*		**Moderate risks** Some supported activities may involve the improper use of chemical substances (such as contamination of soil and water from fuel or herbicides), inadequate waste management, fuel or oil leaks from equipment, inefficient use of water resources during firefighting operations, and air pollution resulting from the burning of charred materials. The supported activities will be monitored to ensure that chemical substances are used only when necessary and with safe alternatives, waste is collected, sorted, and disposed of in appropriate locations, equipment is regularly inspected to prevent leaks, water use is planned and controlled efficiently, and burned materials are safely managed or recycled without open burning. The project will also promote the use of environmentally safe materials, resource-efficient practices, energy efficiency, and sound waste management.
Public health UNDP SES Standard 3 Community Health, Safety and Security		**Low risks** Fire management operations may generate smoke and dust. Safety protocols, personal protective equipment, and public awareness campaigns will be implemented. Through improved prevention, early detection, and rapid response capacities, the project will substantially lower smoke emissions and the duration of fire events, resulting in cleaner air for surrounding communities.
Physical and cultural heritage UNDP SES Standard 4 Cultural Heritage		**Low risks** The project supported activities may, in certain cases, have an impact on cultural or historical monuments, landmarks, traditional structures, and sites. Preliminary assessments will be carried out, and all national regulations as well as international requirements on heritage protection will be followed
Soil and soil conservation UNDP SES Standard 1 Biodiversity Conservation and		**Moderate risks** The project supported activities E.g., Post-fire recovery and forest road, hiking trails construction/maintenance may affect soil stability. **Further assessment and management required for compliance** Erosion control techniques and vegetation restoration will be applied.

Sustainable Natural Resource Management		

PART III: IMPLEMENTATION ARRANGEMENTS

A. Describe the arrangements for project management at the regional and national level, including coordination arrangements within countries and among them. Describe how the potential to partner with national institutions, and when possible, national implementing entities (NIEs), has been considered, and included in the management arrangements.

265. At the request of the Governments of Armenia and Georgia, UNDP is the Multilateral Implementing Entity (MIE). UNDP's overall role as an Implementing Entity is to provide three-tier oversight and quality assurance through its Headquarter, Regional Bureaus and Country Office units.

266. UNDP is accountable to the AF for the implementation of this project. This includes overseeing project execution undertaken by the Executing Entities to ensure that the project is being carried out in accordance with UNDP and AF policies and procedures and the standards and provisions outlined in the Delegation of Authority (DOA) letter for this project. UNDP is responsible for the Project Assurance function in the project governance structure and presents to the Project Board and attends Project Board meetings as a non-voting member.

267. This regional project will be implemented in two countries and therefore will use the multi-country project type modality as per UNDP Policies and Procedures. This modality will maximize the national ownership and leadership by the beneficiary governments and secure efficiency, effectiveness and accountability to joint results on equal terms. This multi-country project is considered a single project for the purposes of project management and has a unified project document that includes a joint results and resources framework describing interventions in each participating country. The suggested multi-pillar model for the Project is presented in the figure below and suggests the following project set-up:

268. A Regional Coordination Project executed through UNDP Direct Implementation Modality (DIM) by the UNDP Country Office in Armenia (Lead Office) according to the policies and procedures outlined in the UNDP Programme and Operations Policies and Procedures (POPP). UNDP Armenia as the Executing Entity will assume responsibility and accountability for the overall AF project coordination and management, including monitoring and evaluation of project interventions and reporting to Adaptation Fund. The regional coordination project accounts for approximately 8% of the total programme budget.

269. A strict firewall will be maintained between the delivery of project oversight and quality assurance performed by UNDP and project execution undertaken by UNDP. The segregation of functions and firewall provisions within UNDP in this case is described in the next section.

270. Two country projects (child projects) executed through national implementation (NIM) by the Ministry of Environment of Armenia and the Ministry of Environmental Protection and Agriculture of Georgia with UNDP support. Each country project accounts for approximately 46% of the total programme budget.

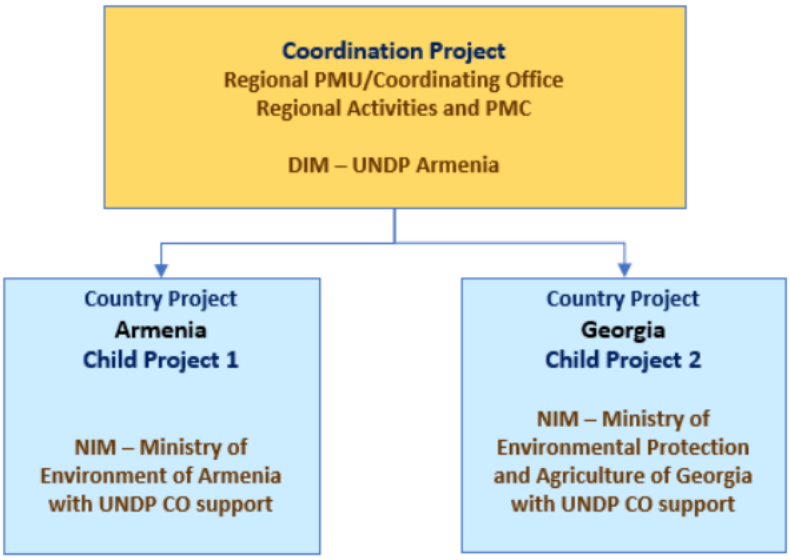

Figure 17. Regional ł multi-country execution model

271. The Ministry of Environment of Armenia and the Ministry of Environmental Protection and Agriculture of Georgia, acting as the National Project Executing Entities (UNDP National Implementing Partners) for their respective country projects, will provide overall strategic leadership, coordination, and accountability for the country projects. They will ensure alignment with national climate and adaptation policy priorities, institutional mandates, and relevant regulatory frameworks. The Executing Entities will oversee the planning and implementation of project activities, provide technical guidance, and ensure the quality and relevance of all deliverables. They will also lead stakeholder engagement, facilitate inter-agency coordination, and support the integration of project results and lessons learned into national policy and planning processes. At the request of the National Executing Entities, UNDP Country Offices in Armenia and Georgia will provide execution support to the National Executing Entities, including budget management support, procurement, recruitment/contract management, travel and event organization, financial payment/transaction services, grants management, engagement of responsible parties. Under the execution support modality, the National Executing Entities retain overall responsibility for achieving project objectives and ensuring national ownership for their country projects. The Ministry of Environment of Armenia and the Ministry of Environmental Protection and Agriculture of Georgia will each delegate their respective UNFCCC National Focal Points as the National Project Directors. In this role, the National Project Directors will review and approve annual work plans and monitor/oversee implementation progress under the country projects.

272. BPPS Climate Team and the VF Programme Support and Compliance Team will provide 2nd-layer technical oversight and ensure compliance to the Adaptation Fund polices and requirements. UNDP Istanbul Regional Hub will provide additional 2nd layer oversight to ensure compliance with UNDP POPP requirements.

273. The Project implementation may include different execution modalities in line with UNDP accreditation including, for example, on-granting and engaging Responsible Parties, in order to capitalize on in-country specialization, utilize different institutional capacities that will be required to implement the project. At the request of the National Executing Entities, UNDP could engage national Responsible Parties for the delivery of specific project activities. The national Responsible Parties could be identified during the project implementation in line with UNDP POPPs and with the approval by the Regional Project Board.

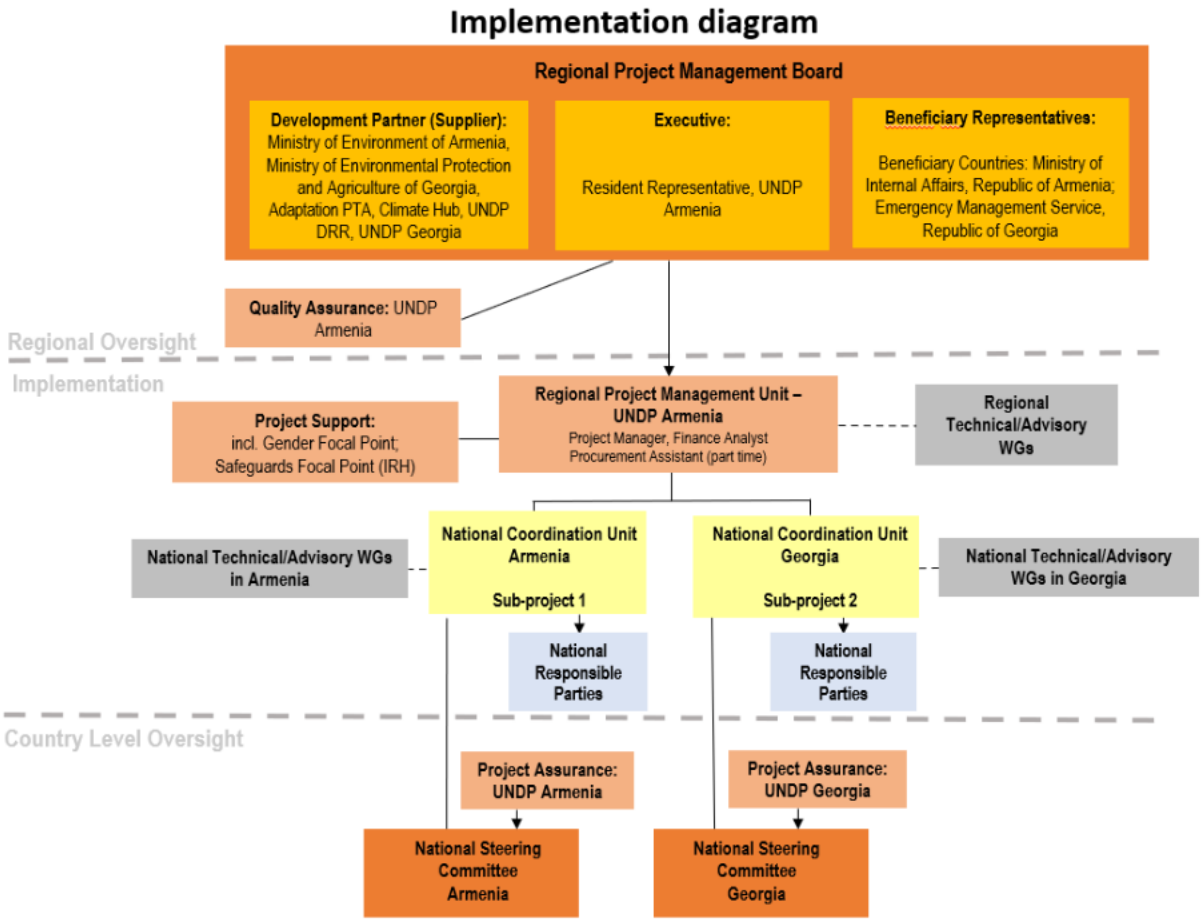

Figure 18. Project implementation diagram

274. A Regional Project Board (RPB) will be established as the most senior, dedicated oversight body for the project to provide high-level oversight of the execution of the project and approval of strategic project execution decisions with a view to assess and manage risks, monitor and ensure the overall achievement of projected results and impacts and ensure long term sustainability of project execution. RPB will meet according to necessity, but not less than once in 12 months, to review progress, approve work plans and approve major deliverables. The Project Board is responsible for making, by consensus, management decisions when guidance is required by the Project Manager. Project Board decisions will be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition. The composition of the project board, roles and responsibilities in detail, including on quorum requirements will be outlined in the terms of references developed and shared will all members prior the first board meeting. The Project Board will meet virtually or in-person as necessary and agreed, and at least once a year. The composition of the Project Board must include individuals assigned to the following three roles:

Project Executive: This is an individual who represents ownership of the project and chairs (or co-chairs) the Project Board. The Project Executive is: UNDP Resident Representative in Armenia.

Development Partners: Individuals or groups representing the interests of the parties concerned that provide funding, strategic guidance and/or technical expertise to the project. The Development Partners are: Ministry of Environment of Armenia; Ministry of Environmental Protection and Agriculture of Georgia; representatives of UNDP Istanbul Regional Hub, UNDP BPPS and UNDP Georgia CO.

Beneficiary Representative(s): Individuals or groups representing the interests of those groups of stakeholders who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. The Beneficiary representatives are: Ministry of Internal Affairs of Armenia, Emergency Management Service of Georgia.

275. The National Steering Committees (NSC) in the two beneficiary countries will be established to oversee and guide project implementation at the country level, including implementation of forest fire management and community engagement activities at the national and local levels. National coordination mechanisms will be established to align implementation with country-specific climate adaptation priorities and ensure ownership. These mechanisms will facilitate structured engagement with civil society organizations (CSOs), government institutions and local private sector promoting inclusive participation in the development and scaling of locally-driven adaptation solutions. The National Steering Committees will be composed of the national project stakeholders and will be co-chaired by the Ministries of Environment and by UNDP Country Offices (CO) in the two beneficiary countries. Nominees from the Ministry of Environment with its subordinated agencies, such as the Eco-Patrol Service, Hydrometeorology and Monitoring Center SNCO and Hayantar SNCO, the Rescue Service of the Ministry of Internal Affairs, National Statistical Committee, as well as the Ministry of Economy will represent national project board in Armenia. In Georgia, the NSC membership will include (but not limited to) the representatives from MEPA, EMS, APA and NSC. Representatives from regional administration, selected local communities, enforcement agencies, such as Police, Ministry of Health, academia and other relevant entities may be invited to the PB meetings. Final composition of the National Steering Committees will be decided at the PAC meeting.

276. **Project assurance.** Project assurance is the responsibility of each project board member; however, UNDP has a distinct assurance role for all UNDP projects in carrying out objective and independent project oversight and monitoring functions. UNDP performs quality assurance and supports the Project Board (and Project Management Unit) by carrying out objective and independent project oversight and monitoring functions, including compliance with the risk management and UNDP SES. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. Project assurance is totally independent of project execution.

277. The UNDP Resident Representatives in Armenia and Georgia assume full responsibility and accountability for oversight and quality assurance of this Project and ensures its timely execution in compliance with the AF-specific requirements and UNDP's Programme and Operations Policies and Procedures (POPP), its Financial Regulations and Rules and Internal Control Framework. Representatives of the UNDP CO will assume the assurance role and will present assurance findings to the Project Board, and therefore attends Project Board meetings as a non-voting member.

278. Mechanisms for local participation. The project will use the existing locally established mechanisms for local consultation and participation.

279. Gender responsiveness will be embedded in implementation through gender-balanced participation requirements, sex-disaggregated monitoring, and accountability built into implementing entities' workplans and TORs. MEL arrangements will track gender indicators throughout delivery to inform adaptive management. Community activities will be designed to enable meaningful participation of women and youth in technical and leadership roles, not only awareness actions.

280. The Regional Project Management Unit established in UNDP-Armenia will be responsible for the overall project coordination (across regional and country levels), reporting to the Adaptation Fund for the overall regional project, and delivery of project activities of regional scope/nature. The Regional Project Management Unit will report to the Regional Project Board. The day-to-day administration will be carried out by a Regional Project Manager (PM) and Project Assistant (PA), who will be located

within the UNDP Armenia and by the National Coordinator (NC) for Georgia based at UNDP Tbilisi. The RPM will, with the support of the PA and NC, run the project on a day-to-day basis on behalf of the Regional Project Board within the constraints laid down by the Project Board. The Project Manager function will end when the final project terminal evaluation report and other documentation required by the Adaptation Fund and UNDP have been completed and submitted to UNDP. The RPM is responsible for day-to-day management and decision-making for the project. The Project Manager's prime responsibility is 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. The project Logic Framework (indicators, means of verification, assumptions) will be reviewed and the quarterly and annual plans will be refined based on the progress made in each country as well as at the regional and global level. The PM will produce Annual Work and Budget Plans (AWP&ABP). The PM will further produce quarterly operational reports and Project Performance Reports (PPR).

281. The PM will be supported by an International Chief Technical Advisor (CTA, part time) recruited by UNDP for this project. CTA will provide (i) state of the art technical advice and (ii) associated policy advice to the program and its activities. S/he will provide guidance and advice to the Project Manager and National Coordinator on identifying the best methods to ensure that the project achieves maximum impact, in accordance with international best practice, towards its adaptation objectives.

282. The National Coordination Units will be established to deliver country activities under the national country projects in Armenia and Georgia; their mandates will be limited to the scope of the country projects. The National Coordination Units will be accountable to their respective National Executing Entities and will report to the National Coordination Committees and the Regional Project Management Unit.

283. The Executing Entities and AF DA have requested UNDP to provide operational support services (including procurement, recruitment/contract management, travel and event organization, financial payment/transaction services, grants management, engagement of responsible parties) in the amount of USD$ 525,000 for the full duration of the project, and the AF has agreed for UNDP to provide such execution support services. These support services are reflected transparently in the project's execution budget submitted to and approved by the AF as part of the overall project proposal.

284. To ensure the strict independence required by the AF and in accordance with the UNDP Internal Control Framework, these execution services will be delivered independent from the AF-specific oversight and quality assurance services.

B. Describe the measures for financial and project/program risk management.

Table 9. Financial and Project Risk Management Measures

Risk	Risk Rate	Action	Risk Category	Expected Risk Rate (after Action)
Reluctance of decision makers to adopt recommendations on new legislation or regulation	Medium	Active engagement of Ministry partners at senior level. Project design phase has included close consultations with Ministries and includes elements that are considered realistic within given timescales. The project has engaged closely with government stakeholders during development, and builds upon extensive relationships between UNDP and the respective governments	Institutional	Medium to Low
Institutional conflict (e.g. between EMS and forest agencies) or between national governments prevents the development of a	Medium	Strong focus on stakeholder consultation and alignment, bringing together EMS and Forest and protected area agencies with other stakeholders. Work to strengthen existing bi-lateral coordination mechanism at the regional level	Institutional	Medium to Low

strategy for improved wildfire management				
Due to staff turnover at the target Ministries and agencies, trained staff may leave for other job opportunities undermining installed technical capacity	Medium	Special training conditions and / or training for trainers will be arranged to leave the trained staff at the target Ministries.	Institutional	Medium to Low
Ongoing institutional reform and reorganization create challenges for more integrated and aligned wildfire management processes	Medium	Ensure that significant structural reform processes are completed before identifying institutions to host EWS product development or database management	Institutional	Medium to Low
Lack of willingness among public and community level partners to engage in local activities.	Medium	Provide strong facilitation support for vulnerability and prioritization processes at the local level	Social	Low
Local stakeholders may be unwilling to change existing livelihoods and cultural practices in relation to fire	Medium	Review uptake of awareness raising and capacity building activities and undertake course correction where necessary. The project will be introducing incentives for sustainable livelihoods and forest management practices in the targeted communities.	Social	Low
No finances are available for proper operation and maintenance of the equipment and structural/non-structural fire prevention measures	Medium	Both countries are upscaling budgetary support for forest and wildfire management. Activities will only be implemented in the context of ongoing sustainable finance from government, and this will be agreed in advance with key stakeholders	Financial	Low
Weather extremes/natural climate-induced disasters (heat waves, etc.)	Medium	Climate sensitive activities will be screened for potential exposure to changing climate and extremes (e.g. reforestation, water storage).	Environmental	Medium to Low

C. Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy of the Adaptation Fund.

285. The project presents generally low to moderate environmental and social risks, with several risks requiring further assessment and ongoing management to ensure full compliance with UNDP's SES and the AF's ESP. While the project does not involve risks related to involuntary resettlement, indigenous peoples' impacts, or major climate-related risks, a number of potential risks have been identified across social inclusion, labour conditions, biodiversity, pollution prevention, and community health and safety. Detailed information on the measures for environmental and social risk management, including the screening procedure for USPs, are presented in the annexed ESMF. The below is a summary of risks identified and related risk mitigation.

286. A key risk relates to compliance with national legislation, as project-supported activities may not consistently demonstrate adherence to applicable laws. To mitigate this, all outputs will undergo screening for legal compliance, supplemented by periodic monitoring and legal reviews.

287. Several risks concern equitable access and the inclusion of marginalized or vulnerable groups, particularly mountain communities, persons with disabilities, ethnic minorities, elderly people, and low-income households. These groups may face exclusion from consultations, decision-making, or project benefits. To address this, the project will ensure transparent

information sharing, inclusive participation processes, and targeted measures through the Gender Action Plan (GAP). Systematic gender and social inclusion analyses will be conducted, and a project-level Grievance Redress Mechanism (GRM) will be established to ensure accessible channels for feedback and grievance resolution.

288. Gender Equality-related risks may include to limited participation of women in forestry and wildfire management and the possibility of exacerbating existing gender inequalities. The project will promote gender-responsive activities, provide training for women and youth, develop gender-sensitive outreach materials, and integrate safeguards against sexual exploitation, abuse, and harassment (SEAH), including through the GRM.

289. Moderate risks are also present related to Labour and Working Conditions, as contractors and grantees may lack appropriate systems for ensuring workers' rights and occupational health and safety. To mitigate this, all project-supported entities must comply with national labour laws, provide personal protective equipment (PPE), deliver job-specific safety training, maintain accessible first aid kits, record and report any incidents, and undergo regular compliance reviews.

290. Environmental risks are primarily linked to biodiversity, natural resource management, and pollution prevention. Fire prevention operations, water storage solutions, forest restoration, and post-fire recovery measures could affect ecosystems, biodiversity values, and soil stability. The project will screen activities to avoid adverse impacts on critical habitats, maintain ecological flow regimes, focus restoration on native species, and implement erosion control and vegetation rehabilitation. Pollution-related risks—including improper chemical use, inadequate waste management, equipment fuel leaks, and air pollution from burned materials—will be managed through monitoring, resource-efficient practices, safe waste disposal, and the promotion of environmentally sound materials and methods.

291. Finally, the project poses low risks to community health, safety, and cultural heritage. Fire-related activities may generate smoke and dust, and some interventions may affect cultural or historical sites. The project will apply safety protocols, provide PPE, conduct awareness campaigns, and carry out preliminary assessments to ensure compliance with national and international cultural heritage protection standards.

292. Overall, the identified risks are manageable through the proposed mitigation measures, which collectively reinforce inclusive participation, gender equality, labour protections, ecosystem conservation, pollution prevention, and community safety. The integration of continuous screening, monitoring, and adaptive management—combined with the implementation of the GAP and the establishment of an accessible GRM—will support the project in meeting all SES requirements throughout implementation.

293. The PMU will include a Safeguards Officer and a Gender Specialist to implement and monitor the ESMF, GAP, and stakeholder engagement including GRM. Please refer to Annex 3, Environmental and Social Management Framework for further details, including on the GRM.

294. The project is committed to incorporation of project-specific environmental and social requirements into the procurement process and selection of contractors,

295. For site-specific activities UNDP will apply a Permit Compliance Management System that includes provisions for: i) listing permitting requirements; ii) connecting legal requirements to permits; iii) create and track compliance actions related to permits; and iv) provide record-keeping of checklists, notes, documents, etc. related to permits,

D. Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan.

296. Monitoring, Evaluation and Learning (MEL) will be implemented in line with UNDP and Adaptation Fund (AF) requirements to ensure accountability, adaptive management,

transparency, and continuous learning between Armenia and Georgia. The MEL system will combine digital data collection, participatory evaluation, and gender-responsive learning tools to support decision-making at regional, national, and local levels.

MEL Framework and Roles

297. UNDP Armenia – Leads regional MEL coordination and quality assurance.
   a. Develops and maintains a web-based MEL dashboard integrating all project indicators, gender data, and safeguard metrics.
   b. Reviews and clears all project-level and national-level reports before submission to the AF.
   c. Consolidates regional results, facilitates independent evaluations, and ensures data integrity and comparability between countries.

298. UNDP Istanbul Regional Hub (IRH) and Global Team – Provide technical backstopping on evaluation methodologies, gender and safeguard monitoring, and lessons-learned synthesis across the global climate-adaptation portfolio.

299. UNDP COs – Coordinate national MEL processes; validate data from field partners; support stakeholder consultations; and oversee compliance with AF requirements and UNDP SES.

300. Project Management Unit (PMU) – Manages day-to-day monitoring, maintains the risk log, compiles quarterly and annual progress reports, and ensures alignment of monitoring data with the project's Results Framework.

301. Performance and Data Analyst (Specialist) – Dedicated expert responsible for designing the digital data system, defining impact indicators, building the regional MEL database and dashboards, and supporting Mid-Term Review (MTR) and Terminal Evaluation (TE).

302. Independent Evaluators – Conduct the MTR and TE; validate results; identify lessons learned and recommendations for scaling up.

303. Gender and Safeguards Specialists – Monitor implementation of the Gender Action Plan (GAP) and Environmental and Social Management Framework (ESMF), ensuring that gender equality and social inclusion remain central throughout implementation.

Key MEL Activities

304. Within 90 days of project start, an Inception Workshop will be convened jointly by the PMU, IRH and COs to Review the project strategy, results framework, and MEL plan; Clarify institutional roles, reporting lines, and safeguard responsibilities; Validate the Year 1 Annual Work Plan and launch the regional implementation process. An Inception Report will summarize workshop outcomes and agreements on MEL protocols.

305. A Baseline Report will be completed within the first year – no later than submission of the first Project Performance Report (PPR) – to Establish baseline values for all indicators; Integrate geospatial and socio-economic datasets; Validate findings with national stakeholders; and Define methods and data sources for annual tracking.

306. Quarterly Monitoring: Grantees and national partners will submit technical and financial reports through the digital platform.

307. Annual Monitoring: Comprehensive AF PPRs will report on results framework updates, gender mainstreaming, financial status, procurement, environmental and social safeguards, and risk management.

308. The Performance and Data Analyst will update the online dashboard and coordinate data verification with COs.

309. A Risk Log will be maintained and reviewed quarterly. The PMU and IRH will document mitigation actions, flag emerging issues, and propose course corrections to the Steering Committees.

310. An independent Mid-Term Review will be conducted at the end of Year 3 to evaluate progress, effectiveness, efficiency, and sustainability, and to identify lessons for adaptive management. A formal management response will be prepared and publicly disclosed.

311. A final evaluation will be carried out within 9 months after the final closing date of the project to assess impact, scalability, and knowledge uptake. Findings will be shared through regional learning events and the Adaptation Fund's knowledge platform.

312. A Project Completion Summary will be submitted within 6 (six) month after the project closure.

313. Knowledge and Learning activities will include:

a. Annual peer learning workshops and "show and tell" events bringing together Armenia and Georgia stakeholders.
b. Online publication of lessons learned and technical briefs in English and local languages.
c. Integration with the Adaptation Innovation Marketplace (AIM) and IRH knowledge platforms for broader replication.

Budget Narrative and Alignment with AF Requirements

314. Monitoring and Evaluation activities are fully embedded within the project implementation structure and budgeted according to Adaptation Fund guidance (AFB/EFC.4/7/Rev.1).

a. Day-to-day MEL operations (data collection, risk management, reporting) are budgeted under EE costs.
b. Evaluation activities (MTR and TE), as part of oversight and completion functions, are budgeted under the Implementing Entity (IE) fee.
c. UNDP IRH and Global Team costs for quality assurance and evaluation coordination are covered through the IE fee.
d. PMU and national Project Coordinators costs for day-to-day monitoring are under EE costs.

Table 10. Project Monitoring and Evaluation activities and indicative costs

Monitoring Activity	Frequency / Timeframe	Expected Action / Purpose	Responsible Parties	Indicative Cost (USD)
Inception Workshop & Report	Within 2 months of first disbursement	Review results framework, clarify roles, launch project	EE – PMU, IRH, COs	10,000 (See Detailed Budget, BN (Budget Notes) 9)
Project Baseline Report	Within first year (before first PPR)	Establish baseline values and verification methods	EE – PMU, IRH, Performance & Data Analyst	5,000 (IE Fee)
Quarterly Progress Reports (QPRs)	Quarterly	Track progress against targets and financials via digital dashboard	PMU, COs	10,000 PMU, CO staff (See Detailed Budget, BN 74)
Annual AF PPRs	Annually	Consolidate technical, gender, and safeguard data for AF submission	PMU, IRH	15,000 PMU, CO staff (See Detailed Budget, BN 74)

Mid-Term Review (MTR)	End of Year 3	Independent evaluation of progress and recommendations for course correction	IRH, COs, Independent Evaluators	40,000 (IE Fee)
Terminal Evaluation (TE)	Final year (within 9 months after the final closing date of the project)	Independent assessment of impact and sustainability of results	IRH, COs, Independent Evaluators	60,000 (IE Fee)
Project Completion Summary	Within 6 months after project completion	Conveying to stakeholders a summary of project results and impacts	COs	IE Fee
Monitoring of GAP and ESMF	Annual / Ongoing	Track gender and safeguard performance indicators	Gender & Safeguards Specialists	40,000 (See Detailed Budget, BN 56)
Supervision and Field Missions	Annual	Verify implementation progress and risk mitigation on site	IRH, COs, PMU	50,000 (See Detailed Budget, BN 33,56)
Knowledge and Learning Activities	Annual / as needed	Peer learning workshops, regional exchange, knowledge products	PMU, IRH, KM Specialist	120,000 (See Detailed Budget, BN 2,17,18, 33,56,57)
Project Review (Project Board/National Steering Committees)	At least annually	Any quality concerns or slower than expected progress should be discussed by the project board and management actions agreed to address the issues identified.	Implementing Entity (IE), Executing Entities (EEs) Steering Committee	$10,000 (See Detailed Budget, BN 9)
TOTAL				$360,000

E. Include a results framework for the project/program proposal, including milestones, targets and indicators.

Regional Project Objective:

To prevent and reduce the frequency, scale, and impact of climate-related wildfires and enhance ecosystem integrity and community resilience across the mountain forest regions of Armenia and Georgia

Project Objective	Outcome Indicators	Baseline	Target at Project Completion	Means of Verification	Risks and Assumptions
To prevent and reduce the frequency, scale, and impact of climate-related wildfires and enhance ecosystem integrity and community resilience across the mountain forest regions of Armenia and Georgia	01. Area of forest ecosystems under improved wildfire prevention, preparedness, response, and recovery systems.	**0**	At least 3,100,000 ha of forests in Armenia and Georgia benefit from climate-resilient wildfire management (including prevention, firefighting operations, recovery, and sustainable management).	National forest agency reports; Forest Management Information Systems (FMIS); remote sensing imagery; project progress and evaluation reports	**Risks:** Wildfire risk is a growing threat due to increased temperatures and lower precipitation, which amplify human-induced causes. **Assumptions:** High-level engagement from the governments of Armenia and Georgia, including forest agencies and emergency services. Active participation of local agencies, authorities, and communities in targeted project sites.
	02. Number of people benefiting from reduced wildfire risk and enhanced resilience of forest-dependent livelihoods (a) Direct beneficiaries (male and female) (b) Indirect beneficiaries (male and female)	**0**	(a) 136,800 people, with at least 50% women. (b) At least 2,400,000 people across Armenia and Georgia (about 30% of population), with at least 50% women, benefit from reduced wildfire risk, improved early warning, recovery measures, and alternative livelihood opportunities. *(Targets will be reviewed after selection of grantees.)*	National statistics; household/community surveys; project monitoring and evaluation reports; independent evaluations	
Outcome & corresponding Outputs	**Output Indicators**	**Baseline**	**Target at Project Completion**	**Means of Verification**	**Risks and Assumptions**
Outcome 1: Governance frameworks in Armenia and Georgia integrate climate change considerations into wildfire prevention, preparedness, response, and recovery.	1.1. Degree of institutional and regional cooperation on climate-resilient wildfire management (measured through adoption of revised laws, coordination mechanisms, and operational bilateral agreements)	Outdated and fragmented frameworks; ad hoc bilateral cooperation.	a) National wildfire-related DRM and forestry laws in both countries revised; (b) institutional roles clarified; (c) an Armenia-Georgia bilateral wildfire cooperation framework renewed and operationalized.	Official gazettes; signed bilateral agreements/action plans; records of coordination meetings; project policy briefs and reports	**Risks:** Legal and regulatory reforms may face delays due to political or institutional changes. **Assumptions:** Strong commitment from the Governments of Armenia and Georgia to advance climate-informed wildfire governance. Effective cooperation between emergency services, forest agencies, and municipalities in clarifying mandates and adopting SOPs. Political will from both countries to renew the Armenia–Georgia MoU and operationalize regional coordination platforms. Integration of wildfire governance training into national systems and
Output 1.1: National DRM and forestry laws revised, with secondary acts and enforcement mechanisms to operationalize wildfire prevention and response, including ex-ante cost/benefit analyses to prioritize prevention over	1.1.1. Number of wildfire-related DRM and forestry laws and secondary regulations (e.g., residue burning, volunteer brigades, municipal wildfire planning) revised/adopted to	Frameworks fragmented and reactive Armenia's DRM law requires 40+ sub-acts; Georgia's Forest Code and related sub-acts need revision;	1.1.1. By Year 5, at least two national laws are revised to systematically integrate climate-induced wildfire risk management, including Armenia's Disaster Risk Management and Population Protection Law/Forest Code and Georgia's Forest Code. Revisions will explicitly address prevention, suppression, and recovery, provide a legal basis for community and volunteer	Official gazettes, enacted laws/acts, government decrees, project reports, gender audit documentation. Joint action plans, meeting minutes, drill reports	

suppression. National coordination platforms established and linked under the Intergovernmental Economic Council to provide structured bilateral cooperation.	include climate risk, gender-responsive and socially inclusive provisions 1.1.2. Percentage of policies and frameworks incorporating gender-responsive and socially inclusive provisions 1.1.3. Coordination platforms/working groups functional. 1.1.4. Number of Joint Armenia–Georgia wildfire drills	Outdated bilateral agreements, ad hoc cooperation	brigades, and align with national climate strategies and NDC commitments. A minimum of 10 secondary regulations are enacted (at least five per country), covering key areas such as agricultural residue burning bans, establishment and functioning of volunteer brigades, municipal wildfire management plans, fuel management practices, and enforcement mechanisms. Regulations will include clear compliance requirements, penalties for violations, and guidance for municipal authorities. 1.1.2. By Year 5, at least four national or sectoral frameworks (two per country, e.g., DRR strategies, biodiversity strategies, forestry policies, municipal development plans) explicitly integrate gender-responsive and socially inclusive provisions in wildfire risk management. These frameworks will include gender- and age-disaggregated targets, roles for women and youth in brigades and recovery planning, and equity measures to reduce differentiated vulnerabilities of marginalized groups. 1.1.3. By Year 5, at least one bilateral wildfire coordination group is established under the Armenian-Georgian Intergovernmental Economic Council and is fully functional. The group will convene at least two formal meetings annually and organize a minimum of one cross-border drill per year, producing joint lessons-learned reports. It will serve as a standing mechanism for planning, resource allocation, and coordination of emergency assistance in large-scale or transboundary wildfire events 1.1.4. By Year 5, at least three bilateral wildfire drills or simulation exercises are conducted (approximately one every 18 months), engaging national agencies, municipalities, forest rangers, emergency responders, and community brigades. Each drill will test the harmonized SOPs, include cross-border resource mobilization, and result in documented after-action reviews to inform continuous improvement of cooperation mechanisms.		inclusion of gender and social provisions in revised frameworks.

Output 1.2: Institutional mandates clarified, with coordination mechanisms established across emergency services, forest agencies, and local authorities.	1.2.1. Number of joint plans, protocols, or standard operating procedures (SOPs) revised, developed, and adopted	Overlapping mandates, ad hoc cooperation.	By Year 3, both Armenia and Georgia adopt national SOPs that clearly define the roles and responsibilities of emergency services, forest agencies, protected area administrations, municipalities, and volunteer brigades. SOPs will include protocols for information-sharing, rapid resource mobilization, coordination during wildfire events, and post-fire recovery, ensuring interoperability of communication and equipment standards.	SOPs, interagency agreements	
Output 1.3: Armenia-Georgia MoU on forestry and wildfire management renewed and operationalized, including harmonized operating procedures and joint action plans, including cross-border SOPs for fires, pests and diseases.	1.3.1. Status of the Armenia–Georgia MoU on forestry and wildfire management. 1.3.2. Number of harmonized bilateral SOPs. 1.3.3. Number of regional/cross-border training/simulation exercises.	No harmonized SOPs; last bilateral joint fire response 2017; no knowledge products.	1.3.1. By Year 2, a renewed Armenia–Georgia Memorandum of Understanding (MoU) on forestry and wildfire management is signed, formally operationalized, and supported by annual joint action plans. The MoU will cover prevention, suppression, recovery, and pest/disease management in border regions, and include provisions for joint data sharing, harmonized fire danger rating systems, and cross-border training exercises. 1.3.2. By Year 4, at least three harmonized bilateral SOPs are jointly developed and adopted by Armenia and Georgia, covering wildfire prevention, suppression, and post-fire recovery. These SOPs will align fire danger rating systems, equipment standards, and communication protocols, thus ensuring interoperability and providing a common reference for joint operations in transboundary forest areas. 1.3.3. By Year 5, at least four regional cross-border simulation exercises are conducted, testing joint SOPs, interoperability of equipment and communication systems, and coordination protocols. Exercises will involve national and municipal authorities, forest rangers, emergency responders, and community brigades, with structured after-action reviews to capture lessons learned for policy and operational improvements	Signed MoU, SOPs,	
Outcome 2: Armenia and Georgia reduce ignition risks and strengthen national and local services to contain climate-induced wildfires.	2.1. Value of new resources planned and leveraged by the governments of Armenia and Georgia as a result of the project for scaled up action to reduce	Limited implementation of preventive measures and insufficient finance for climate	By the end of the project, Armenia and Georgia allocate and leverage increased investment from domestic and international sources for scaled up action to reduce wildfire risks and increase resilience to wildfire (target TBD during the Inception phase).	National and local wildfire management reports, EWS and FMIS operational data, Annual progress reports of responsible institutions	**Risks:** The reduction of wildfire ignition risks and the strengthening of national and local wildfire management services may be hindered by extreme weather and climate variability, limited

	wildfire risks and increase resilience to wildfires (USD)	adaptation and risk reduction			institutional capacity, low community engagement, delays in legislation and regulations, and insufficient funding for preparedness and response. **Assumptions:** National and local institutions remain committed to wildfire risk reduction and are willing to adopt new systems and practices. Communities and local stakeholders actively participate in preventive measures and awareness campaigns. Weather patterns do not deviate drastically beyond historical climate extremes, allowing planning and preventive measures to be effective. Adequate funding and political support are maintained throughout the project period. Coordination between forestry, emergency management, and other relevant agencies continues effectively.
Output 2.1: Fire danger forecasting systems updated/developed, operationalized and integrated with hydrometeorological and vegetation data	2.1.1. Number of fire danger forecasting models operationalized and integrated with hydrometeorological and vegetation data. 2.1.2. Percentage of forecasts disseminated through user-tailored early warning systems	Models piloted in both countries but not operationalized; warnings generic (radio/TV, faxes) and not user focused.	2.1.1. By Year 3, at least two fully operationalized fire danger forecasting models (one per country) are integrated with national hydrometeorological systems, vegetation dryness indices, and Forest Management Information Systems (FMIS). Models generate daily fire danger maps accessible to national agencies, local authorities, and community brigades, with regional interoperability to enable joint analysis and forecasting across Armenia and Georgia. 2.1.2. By Year 5, at least 70% of wildfire forecasts are disseminated through user-tailored early warning systems, including SMS alerts, mobile apps, online dashboards, and social media, reaching farmers, municipalities, schools, and tourist groups. Messages are context-specific (e.g., residue burning bans, tourism fire restrictions) and incorporate gender-sensitive communication channels to ensure accessibility for women, youth, and marginalized groups.	Hydrometeorological and forest agencies reports; technical documentation of forecasting models; FMIS integration records; early warning dissemination logs (SMS/apps/media); user feedback surveys; annual progress reports.	
Output 2.2: Preventive measures introduced, including pest and disease monitoring, coppice management, and recreational zoning in fire-prone areas, including hiking trails serving as firebreaks and pilots for residue-to-biofuel production.	2.2.1. Area of high-risk forest ecosystems under preventive management (fuel breaks, thinning, coppice restoration, pest/disease monitoring). 2.2.2. Number of recreational zones established or rehabilitated with fire-safe infrastructure and zoning.	Preventive forest management and pest monitoring sporadic; recreational zoning absent; residue burning alternatives piloted only in a few sites.	2.2.1. By Year 5, at least 50,000 ha of high-risk forest ecosystems (25,000 ha per country) are under active preventive management, including the establishment of fuel breaks, forest thinning, coppice restoration, and systematic pest/disease monitoring. Activities are integrated into national forest management plans, with monitoring data fed into FMIS and linked to regional pest/disease control protocols to prevent cross-border outbreaks. 2.2.2. By Year 5, at least 10 recreational zones (5 per country) are established or rehabilitated with fire-safe infrastructure.	Forest agency records on thinning, coppice restoration, and pest monitoring; GIS and satellite imagery; recreational zone management plans; reports from biofuel pilots; annual project monitoring reports.	
Output 2.3: National firefighting capacity strengthened through modernization of fleets, provision of protective gear and water storage solutions and supply systems, and establishment of regional	2.3.1. Number of firefighting brigades equipped with modern vehicles, protective gear, and interoperable communications.	Equipment outdated; no dedicated training centers; drills ad hoc; no standardized curricula.	2.3.1. By Year 5, at least 60 firefighting brigades (30 per country) are fully equipped with modern all-terrain vehicles for mountain operations, personal protective equipment, portable pumps, mobile water carriers, and interoperable radios, ensuring readiness to respond rapidly to climate-induced wildfires across diverse terrains.	Procurement and deployment records; training center accreditation; training attendance lists and certificates; SOPs and exercise evaluations; after-action reviews.	

training centers with cross-border drills.	2.3.2. Number of national or regional wildfire training centers established and operational. 2.3.3. Number of personnel trained and certified under standardized curricula		2.3.2. By Year 4, two national wildfire training centers (one in Armenia and one in Georgia) are established and fully operational, equipped with simulation facilities and staffed with certified trainers. Centers deliver standardized curricula, conduct annual training cycles, and are integrated into national emergency service and forestry agency structures to ensure sustainability. 2.3.3. By Year 5, at least 400 personnel (200 per country), including rangers, foresters, emergency responders, municipal staff, and community brigade members, are trained and certified under gender-responsive standardized curricula. At least 40% of trainees are women and 25% are youth, ensuring inclusivity and long-term human resource development for wildfire prevention and response.		
Outcome 3: Decision-makers and communities in Armenia and Georgia benefit from integrated wildfire information and post-fire recovery frameworks.	3.1. Extent of adoption and application of innovative wildfire data, monitoring, and recovery solutions (measured through FMIS interoperability, EWS coverage, post-fire recovery frameworks, and innovation pilots).	Fragmented, outdated systems; pilots not institutionalized	Interoperable FMIS developed in both countries; at least two user-oriented EWS operationalized; standardized post-fire recovery methodologies adopted; and at least 10 innovation pilots (IT, UAVs, sensors, biofuels, eco-tourism/firebreak trails) institutionalized.	FMIS/EWS documentation; post-fire recovery guidelines and reports; innovation program records; technical audits	**Risks:** Limited FMIS/EWS access, low community engagement, technical and financial constraints, and extreme climate events hinder timely information, decision-making, and effective wildfire management and post-fire recovery. **Assumptions:** National and local institutions are willing to invest in innovative data systems (e.g., FMIS, EWS). Local communities and decision-makers are using available technologies for wildfire monitoring and decision-making. Technologies, data, and monitoring systems are accessible with adequate technical infrastructure, ensuring interoperability and effective data flow. Necessary financial and technical resources are available to operate and maintain the systems.
Output 3.1: Interoperable Forest Management Information Systems developed in both countries, integrating UAV, sensor technologies, and satellite imaginary data with innovation accelerators/hackathons for apps, AI detection	3.1.1. Number of operational Forest Management Information Systems (FMIS) integrating wildfire, forest inventory, and hydrometeorological data. 3.1.2. Number of national and regional institutions systematically using FMIS outputs in	Armenia's FMIS is still under development and Georgia's is only partly operational;	3.1.1. By Year 3, 2 fully operational FMIS platforms established in both Armenia and Georgia, integrating wildfire data with forest inventories and hydrometeorological services, and accessible to key agencies. 3.1.2. By Year 5, at least 30 national and municipal authorities (15 per country) systematically apply FMIS outputs and risk maps in preparedness planning and resource allocation.	FMIS integration reports; hydrometeorological and forestry agencies records;	

	planning and resource allocation				
Output 3.2: Cross-border smoke and air quality monitoring networks established, linked to UNFCCC and NDC reporting.	3.2.1. Number of operational joint smoke and air quality monitoring stations established. 3.2.2. Frequency of joint Armenia-Georgia reporting to UNFCCC/NDCs using harmonized wildfire data.	No joint smoke or air quality monitoring stations exist; wildfire data is inconsistently used in NDC reporting; regional knowledge products are rare and produced only through short-term projects	3.4.1. By Year 4, at least 6 joint smoke and air quality monitoring stations established along the Armenia–Georgia border, linked to national health and environmental monitoring systems. 3.4.2. By Year 5, both countries systematically include harmonized wildfire data in their UNFCCC/NDC submissions, with at least two joint reports prepared and submitted to international platforms.	Documentation of installed monitoring stations; cross-border data sharing records; UNFCCC/NDC submissions; published joint reports and knowledge products; workshop and dissemination event records.	
Output 3.3: Standardized methodologies developed for assessing ecological and economic wildfire damages and systematic post-fire investigations for lessons-learned, guiding evidence-based recovery.	3.3.1. Number of standardized methodologies adopted for ecological and economic damage assessments.	No standardized ecological or economic damage methodologies exist; post-fire assessments are ad hoc, infrequent, and rarely shared; lessons learned are not systematically documented.	By Year 3, standardized methodologies for ecological and economic wildfire damage assessment are adopted and institutionalized in both countries.	Government adoption documents of assessment methodologies;	
Output 3.4: Post-fire rehabilitation implemented, including soil stabilization, reforestation with climate-resilient species	3.4.1. Area of burned/degraded forest land rehabilitated through soil stabilization, reforestation, and pest/disease control 3.4.2. percentage of rehabilitation projects incorporating climate-resilient native species.	Rehabilitation of burned areas is limited to small-scale efforts;	3.4.1. By Year 5, at least 30,000 ha of burned/degraded forest ecosystems are rehabilitated through soil stabilization, pest/disease control, and reforestation with climate-resilient native species. 3.4.2. By Year 5, 100% of project-supported reforestation initiatives systematically incorporate climate-resilient native species to ensure long-term adaptation benefits.	GIS/remote sensing data on rehabilitated ha; forestry and community reports on soil stabilization and reforestation;	

Outcome 4. Women, youth and marginalized groups are empowered to participate in equitable and inclusive wildfire management in Armenia and Georgia.	4.1. Level of integration of gender and social inclusion into wildfire governance frameworks. 4.2 Number of local communities/groups participating in inclusive gender-responsive wildfire prevention and management activities in Armenia and Georgia	Wildfire-related laws and policies in both Armenia and Georgia are largely gender-blind Community participation in inclusive gender responsive wildfire prevention and management is weak	4.1. By Year 5, gender and social inclusion considerations are fully integrated into at least 80% of national and local wildfire governance frameworks in Armenia and Georgia. 4.2. By Year 5, 40 local communities/groups in Armenia and Georgia (20 in each country) are directly engaged in project-initiated inclusive gender-responsive wildfire prevention and management activities	Copies of revised or newly adopted laws, policies, and guidelines;	**Risks:** Gender norms and social barriers may limit participation in wildfire management. **Assumptions:** The governments of Armenia and Georgia support integration of gender and inclusion into policies, and that local authorities, schools, and communities engage actively in awareness programs, brigades, and evaluations.
Output 4.1: Women and youth trained and equipped to participate in community brigades, nurseries, and prevention campaigns.	4.1.1. Number of women and youth trained and engaged in community brigades, nurseries, and awareness campaigns 4.1.2. percentage of wildfire-related trainings with at least 40% female and 25% youth participation.	Women, youth, and vulnerable groups are underrepresented in brigades, nurseries, and awareness campaigns; participation in training is low and not tracked systematically	4.1.1. By Year 5, at least 1,000 women and youth (500 per country) are trained and actively engaged in community brigades, nurseries, and awareness campaigns. 4.1.2. By Year 5, at least 70% of wildfire-related trainings achieve a minimum of 40% female and 25% youth participation, with attendance tracked in all sessions.	Training registers with gender- and age-disaggregated data; brigade and nursery membership lists; reports from awareness campaigns noting women's and youth engagement	
Output 4.2: Behaviour-change campaigns implemented to reduce anthropogenic fire risks among farmers, tourists, and forest users, including unified campaign identity and geo-targeted hazard notifications.	4.2.1. Number of awareness campaigns on wildfire-safe practices with gender-sensitive and inclusive messaging designed and implemented. 4.2.2. Number of schools, youth networks, and community groups engaged in gender responsive fire safety and prevention programs.	Existing awareness campaigns are generic and lack gender-sensitive content; engagement of schools, youth networks, and community groups in wildfire prevention is limited and not coordinated; no monitoring of inclusive	4.2.1. By Year 5, at least 8 large-scale awareness campaigns with gender-sensitive and inclusive messaging (4 per country) are designed and implemented, using radio, TV, social media, community meetings, and protected area signage. Campaigns deliver tailored messages to farmers, tourists, hunters, and households, and include gender-responsive outreach to ensure accessibility for women, youth, and marginalized groups 4.2.4. By Year 5, at least 250 schools, youth networks, and community groups (125 per country) are actively engaged in	Campaign strategies, communication materials, and media coverage archives showing gender-sensitive content; records from schools, youth networks, and community groups engaged in prevention programs; pre- and post-campaign surveys demonstrating improved awareness, disaggregated by gender and age. Campaign reports; outreach materials;	

		messaging or impact. Awareness campaigns limited and generic; weak community engagement; schools and youth networks not systematically involved.	gender-responsive fire safety and prevention programs. Activities include integrating wildfire education into curricula, organizing youth-led campaigns, and involving community groups in awareness events and prevention drills.	media archives; school and youth network records; KAP surveys; project M&E reports.	
Output 4.3: National wildfire management monitoring and evaluation frameworks updated to include gender- and age-disaggregated indicators and to facilitate equitable participation and benefit sharing based on gender and social inclusion analysis of wildfire risks.	4.3.1. Number of project and government M&E systems updated with gender- and age-disaggregated indicators. 4.3.2. Number of wildfire-related laws, policies, and guidelines revised to include gender and social inclusion provisions	National and project-level M&E systems do not include gender- or age-disaggregated indicators; Current wildfire-related laws and policies in Armenia and Georgia generally do not address gender considerations	4.3.1. By Year 3, project and government M&E systems in both countries include gender- and age-disaggregated indicators for wildfire management. 4.3.2. By Year 5, at least four wildfire-related laws, policies, or guidelines (two per country) are revised or adopted to include explicit gender and social inclusion provisions.	Updated national and project-level M&E frameworks including gender/age indicators; annual reports with gender- and social inclusion data; participatory evaluation reports with attendance records; minutes from evaluation workshops confirming involvement of women, youth, and marginalized groups. Revised and newly adopted laws, policies, and guidelines;	
Output 4.4: Communities in Armenia and Georgia, including women, youth, and marginalized groups, implement integrated wildfire prevention, preparedness, and recovery actions that strengthen resilience, enhance livelihoods, and reduce household losses	4.4.1. Number of supported community-based initiatives piloting alternatives to residue burning and other risk-reducing practices 4.4.2. Number of supported livelihood recovery initiatives (eco-tourism, sustainable wood alternatives, energy-efficient households) implemented in affected communities	The limited capacity and financial resources of local communities prevent them from fully participating in wildfire prevention, preparedness, and post-fire recovery processes, and from taking actions to improve their	4.4.1. By Year 5, at least 10 community-based initiatives (5 per country) piloting alternatives to residue burning and other risk-reducing practices are operational. These include biofuel production from agricultural residues, composting, and the introduction of efficient agricultural practices that reduce reliance on open burning. Initiatives are supported by municipal wildfire management plans and demonstrate clear economic benefits, ensuring uptake and sustainability beyond the project lifetime. 4.4.2. By Year 4, at least 10 livelihood recovery initiatives (5 per country) are established in fire-affected communities, promoting eco-tourism, biofuel	Project records, grantees proposal, progress reports, documentation of community-based initiatives with evidence of leadership or participation by women, youth, or vulnerable groups.	

	4.4.3. Number of supported community-based initiatives led by or involving women, youth, or vulnerable groups in prevention or recovery.	livelihoods. community-based initiatives led by women, youth, or vulnerable groups are minimal.	production, and energy-efficient technologies. 4.4.3. By Year 5, at least 20 community-based initiatives (10 per country) are led by or actively involve women, youth, or vulnerable groups in prevention or recovery activities.		

Table 11. Core Impact Indicator Summary Table

Number of Beneficiaries

Adaptation Fund Core Impact Indicator "Number of Beneficiaries"		
	Baseline *(absolute number)*	**Target at project approval *(absolute number)***
Direct beneficiaries supported by the project	0	136,800
Female direct beneficiaries	0	68,400
Youth direct beneficiaries Youth defined as ages 15–24; country shares use 2020 est. as latest consolidated public figures; will be updated in Year 1 using actual grantee data	0	135,000
Indirect beneficiaries supported by the project	0	2,400,000
Female indirect beneficiaries	0	1,200,000
Youth indirect beneficiaries Youth defined as ages 15–24; country shares use 2020 est. as latest consolidated public figures; will be updated in Year 1 using actual grantee data	0	855,400

Early Warning Systems

Adaptation Fund Core Impact Indicator "Early Warning Systems"		
	Baseline	Target at project approval
Extent of adoption and application of innovative wildfire data, monitoring, and recovery solutions (measured through FMIS interoperability, EWS coverage, post-fire recovery frameworks, and innovation pilots).	0	Interoperable FMIS developed in both countries; at least two user-oriented EWS operationalized; standardized post-fire recovery methodologies adopted; at least 10 innovation pilots (IT, UAVs, sensors, biofuels, eco-tourism/firebreak trails) institutionalized.
	Not improved	Mostly improved

Increased income, or avoided decrease in income

Adaptation Fund Core Impact Indicator "Increased income, or avoided decrease in income"		
	Baseline	Target at project approval

Population benefiting from reduced wildfire risk and enhanced resilience of forest-dependent livelihoods (disaggregated by sex, age, and vulnerable groups).	0	At least 2,400,000 people across Armenia and Georgia (about 30% of population), with at least 50% women, benefit from reduced wildfire risk, improved early warning, recovery measures, and alternative livelihood opportunities.
	Not improved	Mostly improved

Natural habitats protected or rehabilitated

Adaptation Fund Core Impact Indicator "Natural habitats protected or rehabilitated"		
	Baseline	Target at project approval
Land asset: measure changes in hectares or km (e.g. hectares improved through soil and water conservation methods such as reduced deforestation, improved integrity of ecosystems, reduced erosion and degradation, improved water retention, etc.).	0	At least 3,100,000 ha of forests in Armenia and Georgia benefit from climate-resilient wildfire management (including prevention, firefighting operations, recovery, and sustainable management).
	Not improved	Mostly improved

Assets Produced, Developed, Improved, or Strengthened

Adaptation Fund Core Impact Indicator "Assets Produced, Developed, Improved, or Strengthened"		
	Baseline	Target at project approval
Sector: Multi-sector (agriculture, disaster risk reduction, management, food security, health)		
Targeted Asset 2) Physical asset (produced/improved/strengthened)	0	40 piloted
Changes in Asset (Quantitative or qualitative depending on the asset)	Not improved	Mostly improved

F. Demonstrate how the project aligns with the Results Framework of the Adaptation Fund

Project Objective(s)	**Project Objective Indicator(s)**	**Fund Outcome**	**Fund Outcome Indicator**	**Estimated Budget**
To prevent and reduce the frequency, scale, and impact of climate-related wildfires and enhance ecosystem integrity and community resilience across the mountain forest regions of Armenia and Georgia	Area of forest ecosystems under improved wildfire prevention, preparedness, response, and recovery systems. Number of people benefiting from reduced wildfire risk and enhanced resilience of forest-dependent livelihoods	**Outcome 1:** Reduced exposure to climate-related hazards and threats **Outcome 2:** Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses **Outcome 3**. Strengthened awareness and ownership of adaptation and climate risk reduction processes	1. People using improved climate-related threat and hazard information 2. Institutions with strengthened capacity to understand and better address climate risks and resilience 3.1. People with strengthened awareness of climate change risks and how to better address them 3.2. People implementing new or improved adaptation actions	

		Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress **Outcome 6:** Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas **Outcome 7:** Improved policies and regulations that promote and enforce resilience measures **Outcome 8:** Innovation for effective, long-term adaptation to climate change accelerated, encouraged, and enabled to scale up	5. Ecosystems and natural resources brought under protection, restoration, or improved management in response to climate variability and change 6.1. People adopting improved and/or new climate-resilient livelihood practices 6.2. Households with increased income, or avoided decrease in income 7. Policies, strategies, and/or plans adopted, implemented, and/or enforced that integrate climate risk and resilience considerations 8.1. Innovations successfully reaching scale up that demonstrate local innovation participation and/or local innovation benefit 8.2. Institutions created and/or enabled that lead on innovation for adaptation to climate change	
Project Outcome(s)	**Project Outcome Indicator(s)**	**Fund Output**	**Fund Output Indicator**	**Estimated Budget**
AF MTS ER3, ER4 **Outcome 1.** Governance frameworks in Armenia and Georgia integrate climate change considerations into wildfire prevention, preparedness, response, and recovery.	Degree of institutional and regional cooperation on climate-resilient wildfire management (measured through adoption of revised laws, coordination mechanisms, and operational bilateral agreements)	**Output 2.1:** Strengthened capacity of institutions to understand and better address climate risks	2.1.1 Institutions supported to strengthen capacity to understand and address climate risks and resilience	USD 323,000
		Output 7.1: Improved integration of climate resilience strategies into country development plans	7.1.1 Policies, strategies, and/or plans developed or adjusted to integrate climate risk considerations	USD 1,803,000
AF MTS ER3, ER4 **Outcome 2.** Armenia and Georgia reduce ignition risks and strengthen national and local services to contain climate-induced wildfires.	Value of new resources planned and leveraged by the governments of Armenia and Georgia as a result of the project for scaled up action to reduce wildfire risks and increase resilience to wildfires (USD)	**Output 1.1:** Risk and vulnerability assessments conducted and updated	1.1.1: Risk and vulnerability assessments conducted or updated	USD 1,955,000
		Output 2.1: Strengthened capacity of institutions to understand and better address climate risks	2.1.1: Institutions supported to strengthen capacity to understand and address climate risks and resilience	USD 5,674,000
		Output 5.1: Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability	5.1.1: Ecosystems and natural resources targeted by activities to improve protection, restoration, and/or management	USD 1,451,000
AF MTS ER1, ER3, ER2 **Outcome 3.**	Extent of adoption and application of innovative wildfire data, monitoring, and recovery solutions (measured through FMIS	**Output 2.1:** Strengthened capacity of institutions to understand and better address climate risks	2.1.1. Institutions supported to strengthen capacity to understand and address climate risks and resilience	USD 1,999,000

Decision-makers and communities in Armenia and Georgia benefit from integrated wildfire information and post-fire recovery frameworks.	interoperability, EWS coverage, post-fire recovery frameworks, and innovation pilots).	**Output 8.2:** Innovations identified and piloted which build the adaptation innovation evidence-base and institutional capacity	8.2.1: Innovation-focused knowledge products disseminated and/or learning events facilitated that support and enable innovation capacity at a local, national, and/or regional level	USD 185,000
		Output 5.1: Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability	5.1.1: Ecosystems and natural resources targeted by activities to improve protection, restoration, and/or management	USD 1,168,000
AF MTS ER1, ER4 **Outcome 4.** Women, youth and marginalized groups are empowered to participate in equitable and inclusive wildfire management in Armenia and Georgia.	Level of integration of gender and social inclusion into wildfire governance frameworks. Number of local communities/groups participating in inclusive gender-responsive wildfire prevention and management activities in Armenia and Georgia	**Output 3.1:** Targeted population groups participating in adaptation and risk reduction awareness activities	3.1.1: People participating in activities to improve awareness of climate risks and how to address them	USD 1,045,000
		Output 3.2: Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning	3.2.1: Climate resilience knowledge products and/or tools developed and shared with stakeholders	USD 215,000
		Output 3.3: Increased ownership of adaptation and climate risk reduction processes	3.3.1: Number of local institutions and/or communities responsible for decision-making over how adaptation solutions are defined, prioritized, designed, and/or implemented	USD 50,000
		Output 6.1: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	6.1.1: People receiving targeted support for new and/or improved livelihoods to manage climate risk	USD 1,302,000

G. Include a detailed budget with budget notes, broken down by country as applicable, a budget on the Implementing Entity management fee use, and an explanation and a breakdown of the execution costs

G.1. Detailed budget with budget notes: Please see the Annex 6 for further details.

Table 12. Project budget table

PIMS 6247 - Increased climate resilience of South Caucasus Mountain communities and ecosystems through wildfire risk reduction						
AF Component and Outcomes	**Project Activities**	**Regional Coordination Project Total Budget in USD**	**Armenia Country Project Total Budget in USD**	**Georgia Country Project Total Budget in USD**	**Total Project Budget in USD**	**Budget Notes**

Component 1. Strengthened regional and national regulatory and institutional frameworks for climate-resilient wildfire management *Outcome 1: Governance frameworks in Armenia and Georgia integrate climate change considerations into wildfire prevention, preparedness, response, and recovery.*	***Activity 1.1 (****Output 1.1) National DRM and forestry laws revised, with secondary acts and enforcement mechanisms to operationalize wildfire prevention and response, including ex-ante cost/benefit analyses to prioritize prevention over suppression. National coordination platforms established and linked under the Intergovernmental Economic Council to provide structured bilateral cooperation.*	358,000	722,500	722,500	1,803,000	Contracting of CTA (Senior DRM, forestry), and 2 legal experts: Drafting and harmonizing legal frameworks, bilateral agreements, and SOPs; supporting the establishment of a bilateral Wildfire Coordination Group under the Intergovernmental Economic Council, with regular meetings, scenario planning, and drills.
						Contracting of Regional Monitoring, Evaluation and Learning Specialist – ARM; Knowledge Management and Monitoring & Evaluation Specialists – ARM & GEO; Communication Specialists – ARM & GEO; National legal and policy specialists – ARM & GEO; Contracting of 3 experts to support municipal wildfire plans and sub-legal acts, gender mainstreaming, and the establishment of a bilateral Wildfire Coordination Group under the Intergovernmental Economic Council, with regular meetings, scenario planning, and drills.
						Regional Project Manager – ARM: Management of the day-to-day implementation of national activities; National Coordinator – GEO: Management of the day-to-day implementation of national activities; Regional Advisor on Nature-based Solutions for Climate Adaptation; Financial/Administrative Assistants – ARM & GEO: Provision of administrative, logistical, and operational support for the implementation of national activities.
						Domestic, regional, and international missions and meetings
						Office furniture, coordination center equipment, and meeting room upgrades for the establishment of wildfire coordination platforms in both countries, linking emergency services, forestry, hydrometeorological services, and municipalities.
						Servers, laptops, and conferencing systems for the establishment of wildfire coordination platforms in both countries, linking emergency services, forestry, hydrometeorological services, and municipalities.
						Software licenses for the establishment of wildfire coordination platforms in both countries, linking emergency services, forestry, hydrometeorological services, and municipalities.
						Rental and maintenance costs of project office premises
						Printing, publication, and outreach materials
						Inception workshop; 34 national workshops; 4 regional coordination events; 4 national conferences

	Activity 1.2 *(Output 1.2) Institutional mandates clarified, with coordination mechanisms established across emergency services, forest agencies, and local authorities.*	0	87,500	87,500	175,000	Contracting of 2 experts to conduct mapping and clarification of the roles of emergency services, forestry agencies, hydrometeorological and other relevant services, and municipalities; development of protocols for resource mobilization, reporting, and joint planning; and establishment of coordination platforms at the national level. Domestic, regional, and international missions and meetings 20 national workshops
	Activity 1.3 *(Output 1.3) Armenia-Georgia MoU on forestry and wildfire management renewed and operationalized, including harmonized operating procedures and joint action plans, including cross-border SOPs for fires, pests and diseases.*	94,000	27,000	27,000	148,000	Contracting of an expert to conduct updating and adopting the ENPI FLEG II draft MoU, expanding its scope to include climate-informed fire prevention, suppression, and recovery; developing bilateral SOPs for wildfire management, as well as pest and disease control, particularly in border regions, and preparing annual action plans. Contracting of 2 experts to conduct updating and adopting the ENPI FLEG II draft MoU, expanding its scope to include climate-informed fire prevention, suppression, and recovery; developing bilateral SOPs for wildfire management, as well as pest and disease control, particularly in border regions, and preparing annual action plans. 4 national workshops and 2 regional coordination events
Total Activity 1		**452,000**	**837,000**	**837,000**	**2,126,000**	
Component 2. Improved wildfire prevention, preparedness, and response capacity across forested regions *Outcome 2:*	***Activity 2.1 (****Output 2.1) Fire danger forecasting systems updated/developed, operationalized and integrated with hydrometeorological and vegetation data*	143,100	905,950	905,950	1,955,000	Contracting of a fire suppression, training curricula, and evaluation expert: training specialists to interpret and apply forecasts for fire prevention and suppression planning. Contracting of Regional Monitoring, Evaluation and Learning Specialist – ARM; Knowledge Management and Monitoring & Evaluation Specialists – ARM & GEO; Communication Specialists – ARM & GEO; National specialists (years 2–4): Contracting of 2 experts for integration of data collection outputs into national hydrometeorological systems and Forest Management Information Systems; designing prevention zoning, biofuel pilot schemes, and recreational fire-safe infrastructure.

Armenia and Georgia reduce ignition risks and strengthen national and local services to contain climate-induced wildfires.						Regional Project Manager – ARM: Management of the day-to-day implementation of national activities; National Coordinator – GEO: Management of the day-to-day implementation of national activities; IRH Knowledge Management Specialist; Financial/Administrative Assistants – ARM & GEO: Provision of administrative, logistical, and operational support for the implementation of national activities; Task Leaders – ARM & GEO: Technical leadership and coordination of assigned thematic tasks and activities under Outcomes 2 and 3; and Project Drivers – ARM & GEO.
						Procurement of mobile weather stations, UAV surveillance, and satellite fire danger indices (Copernicus, VIIRS, etc.), including 20 UAV units and forecasting IT servers.
						Communication systems and forecasting IT software
						Training on the interpretation and application of forecasts for fire prevention and suppression planning (50 trainees)
	Activity 2.2 *(Output 2.2) Preventive measures introduced, including pest and disease monitoring, coppice management, and recreational zoning in fire-prone areas, including hiking trails serving as firebreaks and pilots for residue-to-biofuel production.*	30,000	710,500	710,500	1,451,000	Contracting of an expert for designing and enhancing the pest/disease monitoring system
						Contracting of 2 experts for designing and enhancing the pest/disease monitoring system
						Domestic, regional, and international missions and meetings
						Contracting of 4 companies for development of pilot schemes to produce biofuels from agricultural residues as an alternative to open burning, construction and maintenance of hiking trails in fire-prone forest areas, designed both as firebreaks and to channel tourist flows into safe zones (trails will include fire-safety signage, designated fire-safe rest areas, and eco-tourism infrastructure (viewpoints, guided tours) that promote responsible recreation while discouraging risky behaviors such as unmanaged campfires, and Implementation of thinning and coppice restoration in degraded forests, and the establishment of fire-safe recreational zones with designated cooking areas and fire bans in forests and protected areas.
	Activity 2.3 (*Output 2.3) National firefighting*	106,000	2,784,000	2,784,000	5,674,000	Contracting of an expert for designing regional training centers with standardized curricula

	capacity strengthened through modernization of fleets, provision of protective gear and water storage solutions and supply systems, and establishment of regional training centers with cross-border drills.					Contracting of 2 experts for designing regional training centers with standardized curricula
						Domestic, regional, and international missions and meetings
						Upgrade all-terrain firefighting fleets and equip brigades with PPE, radios, and mobile water reservoirs, including 25 fire engines, 60 4×4 vehicles/quads, 1,000 PPE sets, and 20 water tanks.
						Rental and maintenance costs of project office premises
						Printing, publication, and outreach materials
						Conducting bilateral cross-border drills: 10 drills with 1,500 firefighters trained
Total Activity 2		**279,100**	**4,400,450**	**4,400,450**	**9,080,000**	
Component 3. Enhanced wildfire data, recovery, and decision-support systems covering both countries *Outcome 3: Decision-makers and communities in Armenia and Georgia benefit from integrated*	***Activity 3.1*** *(Output 3.1) Interoperable Forest Management Information Systems developed in both countries, integrating UAV, sensor technologies, and satellite imaginary data with innovation accelerators/hackathons for apps, AI detection*	133,100	770,450	770,450	1,674,000	Contracting of an expert for linking forest inventories, hydrometeorological data, and wildfire detection (UAVs, satellites) into FMIS, with IT/data experts supporting FMIS integration and damage assessment.
						Contracting of Regional Monitoring, Evaluation and Learning Specialist – ARM; Knowledge Management and Monitoring & Evaluation Specialists – ARM & GEO; Communication Specialists – ARM & GEO; Data Analysis and Decision-Making Specialists (Trainers) – ARM & GEO; Contracting of 2 Ecological Monitoring and Restoration Specialists – ARM & GEO.
						Regional Project Manager – ARM: Management of the day-to-day implementation of national activities; National Coordinator – GEO: Management of the day-to-day implementation of national activities; IRH Communications Specialist; Financial/Administrative Assistants – ARM & GEO: Provision of administrative, logistical, and operational support for the implementation of national activities; Task Leaders – ARM & GEO: Technical leadership and coordination of assigned thematic tasks and activities under Outcomes 2 and 3; and Project Drivers – ARM & GEO.
						Domestic, regional, and international missions and meetings

wildfire information and post-fire recovery frameworks.						Contracting of 4 companies to organize acceleration programs, innovation challenges, and hackathons to stimulate the development of IT and high-tech wildfire management solutions. These initiatives would engage universities, research institutes, start-ups, and private companies in both countries to co-develop mobile apps for real-time community fire reporting linked to FMIS; AI-driven early fire detection using satellite and UAV data; decision-support dashboards for emergency services and forest agencies; and low-cost sensor networks for smoke and fire monitoring in remote areas.
						UAVs, satellite-linked stations, and servers
						10 FMIS training events
	Activity 3.2 *(Output 3.2) Cross-border smoke and air quality monitoring networks established, linked to UNFCCC and NDC reporting.*	5,000	160,000	160,000	325,000	Domestic, regional, and international missions and meetings
						Procurement of office furniture to establish joint monitoring stations and connect them to UNECE LRTAP and national health systems, providing data from smoke and air-quality monitoring sensors to inform cross-border health advisories.
						Contracting a company to establish joint monitoring stations and connect them to UNECE LRTAP and national health systems, and to provide data from smoke and air-quality monitoring sensors to inform cross-border health advisories
	Activity 3.3 *(Output 3.3) Standardized methodologies developed for assessing ecological and economic wildfire damages and systematic post-fire investigations for lessons-learned, guiding evidence-based recovery.*	40,000	72,500	72,500	185,000	Contracting of an expert to develop and institutionalize joint methodologies for burned-area mapping, ecological damage assessment, and economic-loss valuation.
						Contracting of 2 expert to enhance capacities to conduct systematic post-fire investigations following major wildfire events. These investigations would go beyond ecological and economic damage assessment to examine ignition sources (anthropogenic or natural), the sequence of events and fire spread, the effectiveness and timeliness of response measures, the adequacy of equipment and coordination during suppression, and lessons learned for prevention, preparedness, and response.
						Domestic, regional, and international missions and meetings
						6 national workshops and 2 regional workshops
	Activity 3.4 *(Output 3.4) Post-fire rehabilitation implemented, including soil stabilization,*	34,000	567,000	567,000	1,168,000	Contracting of an expert to design of post-fire rehabilitation activities
						Contracting of 2 experts to design of post-fire rehabilitation activities
						Domestic, regional, and international missions and meetings

	reforestation with climate-resilient species.					Contracting of 4 companies to stabilize soils in burned areas; reforest with native, climate-resilient species; implement post-fire pest and disease control; support livelihood diversification (eco-tourism, efficient stoves); develop simulation software for forest maintenance and restoration measures to foster climate-resilient forest ecosystems; and support or promote alternative methods for sourcing wood, such as agroforestry and fast-growing plantations, to reduce pressure on natural forests.
						Soil stabilization tools, nursery equipment, and restoration machinery
						Rental and maintenance costs of project office premises
						Printing, publication, and outreach materials
						6 post-fire recovery workshops and trainings
Total Activity 3		**212,100**	**1,569,950**	**1,569,950**	**3,352,000**	
Component 4. Gender-responsive and socially inclusive wildfire resilience embedded into local practices *Outcome 4: Women, youth and marginalized groups are empowered to participate in equitable and inclusive wildfire management in Armenia and Georgia*	***Activity 4.1*** *(Output 4.1) Women and youth trained and equipped to participate in community brigades, nurseries, and prevention campaigns.*	0	25,000	25,000	50,000	Contracting of 6 trainers and facilitators
						Domestic, regional, and international missions and meetings
						Provision of tailored training for women and youth in firefighting brigades, reforestation, and awareness-raising, as well as engagement with scouts and youth networks.
	Activity 4.2 *(Output 4.2) Behaviour-change campaigns implemented to reduce anthropogenic fire risks among farmers, tourists, and forest users, including unified campaign identity and geo-targeted hazard notifications. Gender-responsive awareness materials produced and disseminated, ensuring practical risk reduction*	202,925	421,038	421,038	1,045,000	Contracting of Regional Monitoring, Evaluation and Learning Specialist – ARM; Knowledge Management and Monitoring & Evaluation Specialists – ARM & GEO; Communication Specialists – ARM & GEO; Gender and Safeguards Specialist – ARM & GEO: Design of awareness campaigns targeting farmers (residue burning), tourists (campfires), and hunters, using signage, schools, TV/radio, and social media; engaging women and youth in campaign design for inclusivity; developing a unified, recognizable campaign mascot; and designing outreach materials addressing the differentiated roles of men (agriculture), women (household energy), and youth (tourism).
						Contracting of Regional Project Manager – ARM: Management of the day-to-day implementation of national activities; National Coordinator – GEO: Management of the day-to-day implementation of national activities; IRH Gender Mainstreaming Advisor; CCA Communications; Financial/Administrative Assistants – ARM & GEO: Provision of administrative, logistical, and operational support for the implementation of national activities.

	advice reaches vulnerable					Contracting of 2 companies to establish/enhance a hazard messaging system, with the capability to send targeted notifications to the population in specific areas, conduct awareness campaigns targeting farmers (residue burning), tourists (campfires), and hunters, using signage, schools, TV/radio, and social media; engage women and youth in campaign design to ensure inclusivity.
						Domestic, regional, and international missions and meetings
						Outreach events for schools, media, and communities
						Hardware for establishing/enhancing a hazard messaging system, with the capability to send targeted notifications to populations in specific areas.
						Software for establishing/enhancing a hazard messaging system, with the capability to send targeted notifications to populations in specific areas.
	Activity 4.3 *(Output 4.3) National wildfire management monitoring and evaluation frameworks updated to include gender- and age-disaggregated indicators and to facilitate equitable participation and benefit sharing based on gender and social inclusion analysis of wildfire risks.*	35,000	90,000	90,000	215,000	Contracting of an expert to conduct participatory assessments of the differentiated vulnerabilities and roles of women, youth, and other vulnerable groups, with integration of findings into all components; supported by Gender and Social Inclusion Advisors for policy and monitoring.
						Contracting of 2 experts to conduct integration of gender- and age-disaggregated indicators into M&E frameworks, with the involvement of women and vulnerable groups in participatory evaluations and participatory assessments of the differentiated vulnerabilities and roles of women, youth, and other vulnerable groups, with integration of findings into all components; supported by national gender and youth experts (~500 months).
						Domestic, regional, and international missions and meetings
						Gender-disaggregated data modules integrated into the FMIS
	Activity 4.4 *(Output 4.4) Communities in Armenia and Georgia, including women, youth, and marginalized groups, implement integrated wildfire prevention,*	25,000	638,500	638,500	1,302,000	Contracting an expert to support community-led wildfire risk assessments, preparedness planning, and recovery initiatives that incorporate ecosystem-based and livelihood-oriented approaches.
						Contracting of 2 experts to build the capacity of women, youth, and other vulnerable groups to design and implement wildfire prevention and post-fire livelihood recovery measures.
						Domestic, regional, and international missions and meetings

	preparedness, and recovery actions that strengthen resilience, enhance livelihoods, and reduce household losses.					Provision of small grants for community-based demonstration projects on fire-resilient land management, reforestation, and sustainable income generation, in accordance with UNDP policy on LVG. Rental and maintenance costs of project office premises Printing, publication, and outreach materials Gender-inclusive brigade training and women/youth outreach programs, including facilitation of knowledge exchange between Armenian and Georgian communities on wildfire risk reduction and recovery best practices. Training in fire-resilient land management, reforestation, and sustainable income generation. Provision of firefighting tools: safety kits for community brigades and nursery tools
Total Activity 4		**262,925**	**1,174,538**	**1,174,538**	**2,612,000**	
Project Execution Costs	***Activity: Project Management Cost***	175,000	292,227	272,773	740,000	Audit costs Regional Project Manager – PMU (20%): Responsible for overall management, monitoring, and supervision of project implementation across the two countries, overseeing the timely delivery of activities and results, and supporting report development. Financial/Administrative Assistant – FAA (20%): Provision of administrative, logistical, and operational support for the implementation of regional activities. Project Management support – 20% NOB staff cost (US$ 958.62*66.00029 (months) = US$ 133,372.80) Project Management Support – 20% staff cost for Programme Associate (US$ 958.62*66 (months)=US$ 63,268.20). --- UNDP operational support services, including; human resources (recruitment/contract management), finance, procurement and admin support.
Total Project Execution Cost		**175,000**	**292,227**	**272,773**	**740,000**	
Total Project Funds		**1,381,125**	**8,274,165**	**8,254,711**	**17,910,000**	
Implementing Entity Fee (10%)		**138,113**	**827,416**	**825,471**	**1,791,000**	
Total Project Grant		**1,519,238**	**9,101,581**	**9,080,182**	**19,701,000**	

Table 13. Budget distribution by countries (direct costs):

Regional and country projects	Amount, US$
Regional activities, regional coordination and regional PMU	$1,381,125
Country project – Armenia	$8,274,165
Country project – Georgia	$8,254,711
TOTAL	**$17,910,000**

Table 14. Execution cost breakdown by country:

DESCRIPTION OF UNDP EXECUTION COST BREAKDOWN FOR ARMENIA:			
1) Professional Services	**US$ 20,000**	Audit cost	
2) Contractual Services – Individuals	**0**		
3) Support services	**US$ 272,227**	Please see details below.	
Breakdown of the Support services	**Schedule for the provision of the support services**	**Cost to UNDP of providing such support services (where appropriate)**	**Amount and method of reimbursement of UNDP (where appropriate)**
I. UNDP Operational Support Services			
1. Human Resources (recruitment/contract management)			
Identification and/or recruitment of project personnel (PSA) -Project Manager (PM), Task Leader (TL), Fin/Admin Assistant (FAA) and Driver (D)	In the first quarter of the project implementation	US$ 298.05*4 (PM,TL,FAA,D)	US$ 1,192 UNDP will directly charge the project in accordance with the UNDP CO SS
Total HR:			**US$ 1,192**
2. Finance			
Payment Process	Ongoing throughout implementation as applicable	US$ 46.26*850	US$ 39,321 UNDP will directly charge the project in accordance with the UNDP CO SS
Total Finance:			**US$ 39,321**
3. Procurement			
Procurement not involving CAP - below US$ 50,000	As per the work plan	US$ 266.93*30	US$ 8,008

			UNDP will directly charge the project in accordance with the UNDP CO SS
Procurement process involving CAP (and/or ITB, RFP, requirements) - above US$ 50,000)	As per the work plan	US$ 684.96*15	US$ 10,274 UNDP will directly charge the project in accordance with the UNDP CO SS
Consultant recruitment: Advertising (20%) Shortlisting &selection (40%) Contract issuance (40%)	Per IC process	US$ 266.93*50	US$ 13,347 UNDP will directly charge the project in accordance with the UNDP CO SS
Total Procurement:			**US$ 31,629**
4. Admin Support			
International Travel Management: Travel cost estimates (including airline quotes DSA estimates) (25%) Travel request authorization (40%) Travel claim (35%)	Ongoing throughout implementation as applicable	US$ 80.57*20	US$ 1,611 UNDP will directly charge the project in accordance with the UNDP CO SS
Local Travel management (with overnight)	Ongoing throughout implementation as applicable	US$ 28.20*50	US$ 1,410 UNDP will directly charge the project in accordance with the UNDP CO SS
Local Travel management (without overnight)	Ongoing throughout implementation as applicable	US$ 14.10*30	US$ 423 UNDP will directly charge the project in accordance with the UNDP CO SS
Total Admin Support:			**US$ 3,444**
Total Services to Project (GOE)			**USD 75,586**
I. Project management support			
Project Management support – 20% NOB staff cost		US$ 958.62*66.00029 (months)	US$ 133,372.80
Project Management Support – 20% staff cost for Programme Associate		US$ 958.62*66 (months)	US$ 63,268.20
Total Services provided by CO Staff			**US$ 196,641**
Total Execution Cost - Armenia			**US$ 292,227**

DESCRIPTION OF UNDP EXECUTION COST BREAKDOWN FOR GEORGIA:		
1) Professional Services	**US$ 20,000**	Audit cost
2) Contractual Services – Individuals	**0**	

3) Support services	**US$ 252,773**	Please see details below.	
Breakdown of the Support services	**Schedule for the provision of the support services**	**Cost to UNDP of providing such support services (where appropriate)**	**Amount and method of reimbursement of UNDP (where appropriate)**
I. UNDP Operational Support Services			
1. Human Resources (recruitment/contract management)			
Identification and/or recruitment of project personnel -National Coordinator (NC), Fin/Admin Assistant (FAA) and Driver (D)	In the first quarter of the project implementation	US$ 768.91*3 (NC,FAA, D)	US$ 2,306.73 UNDP will directly charge the project in accordance with the UPL
Local Personnel HR & Benefits Administration & Management	One- time fee, per staff at: the issuance of a contract, and- again at separation	US$298.04*3*4 (contract issuance and separation for NC & FAA &D)	US$ 2,384.32 UNDP will directly charge the project in accordance with the UPL
Recurrent personnel management services: Local Payroll & Banking (35%) Performance evaluation (30%) Extension, promotion, entitlements (30%) Leave monitoring (5%)	Annual fee per employee, per calendar year	US$448.67*3*4 (NC&FAA&D)	US$ 5,384.04 UNDP will directly charge the project in accordance with the UPL
Total HR:			**US$ 10,075.09**
2. Finance			
Payment Process	Ongoing throughout implementation as applicable	US$ 46.26*593.4256	**US$ 27,451.87** UNDP will directly charge the project in accordance with the UPL
Total Finance:			**US$ 27,451.87**
3. Procurement			
Procurement not involving CAP - below US$ 50,000	As per the work plan	US$ 266.94*15	US$ 4,004.1 UNDP will directly charge the project in accordance with the UPL

Procurement process involving CAP (and/or ITB, RFP, requirements) - above US$ 50,000)	As per the work plan	US$ 684.97*4	US$ 2,739.9 UNDP will directly charge the project in accordance with the UPL
Consultant recruitment Advertising (20%) Shortlisting &selection (40%) Contract issuance (40%)	Per IC process	US$ 298.04*30	US$ 8,941 UNDP will directly charge the project in accordance with the UPL
Total Procurement:			**US$ 15,685.18**
4. Admin Support			
Travel request or authorization (40%) F10 settlement) (35%)	Ongoing throughout implementation as applicable	US$ 38.47*40 US$ 33.66*40	US$ 3,528 UNDP will directly charge the project in accordance with the UPL
Total Admin Support:			**US$ 3,528**
Total Services to Project (GOE)			**USD$ 56,131**
II. Project management support			
Project Management support – 20% NOB staff cost	US$ 2,020.80*66.01385 (months)	US$ 133,400.79	
Project Management Support – 20% staff cost for Programme Associate	US$ 958.62*65.9711 (months)	US$ 63,241.22	
Total Services provided by CO Staff		**US$ 196,642**	
Total Execution Cost - Georgia		**US$ 272,773**	

DESCRIPTION OF UNDP EXECUTION COST BREAKDOWN FOR REGIONAL PROJECT COMPONENT:

1) Professional Services	**US$ 10,000**	Audit cost
2) Contractual Services – Individuals	**US$ 165,000**	Regional Project Manager – PMU (20%): Responsible for overall management, monitoring, and supervision of project implementation across the two countries, overseeing the timely delivery of activities and results, and supporting report development. Financial/Administrative Assistant – FAA (20%): Provision of administrative, logistical, and operational support for the implementation of regional activities.
TOTAL EXECUTION COST		**US$ 740,000**

G.2. UNDP Implementing Entity Fees for Support to the Adaptation Fund Project are described in Annex 6.

Table 15. UNDP Implementing Entity Fee Breakdown:

Category	Services Provided by UNDP	IE Fee (USD)
Identification, Sourcing and Screening of Ideas	Provide information on substantive issues in adaptation and innovation associated with the purpose of the Adaptation Fund (AF). Engage in upstream policy dialogue related to a potential application to the AF. Verify soundness & potential eligibility of identified ideas for AF.	89,550
Feasibility Assessment / Due Diligence Review	Provide up-front guidance on converting general idea into a feasible project/programme. Source technical expertise in line with the scope of the project/programme. Verify technical reports and project conceptualization. Provide detailed screening against technical, financial, social and risk criteria and provide statement of likely eligibility against AF requirements. Determination of execution modality and local capacity assessment of the executing entity. Assist in identifying technical partners. Validate partner technical abilities. Obtain clearances from AF.	268,650
Development & Preparation	Provide technical support, backstopping and troubleshooting to convert the idea into a technically feasible and operationally viable project/programme. Source technical expertise in line with the scope of the project/programme needs. Verify technical reports and project conceptualization. Verify technical soundness, quality of preparation, and match with AF expectations. Negotiate and obtain clearances by AF. Respond to information requests, arrange revisions etc.	358,200
Implementation	Technical support in preparing TORs and verifying expertise for technical positions. Provide technical and operational guidance project teams. - Verification of technical validity / match with AF expectations of inception report. Provide technical information as needed to facilitate implementation of the project activities. Provide advisory services as required. Provide technical support, participation as necessary during project activities. Provide troubleshooting support if needed. Provide support and oversight missions as necessary. Provide technical monitoring, progress monitoring, validation and quality assurance throughout.	805,950

	Allocate and monitor Annual Spending Limits based on agreed work plans. Receipt, allocation and reporting to the AFB of financial resources. Oversight and monitoring of AF funds. Return unspent funds to AF.	
Evaluation and Reporting	Provide technical support in preparing TOR and verify expertise for technical positions involving evaluation and reporting (including for the Mid-Term- and Terminal Evaluations). Participate in briefing / debriefing (including for the Mid-Term and Terminal Evaluations). Verify technical validity / match with AF expectations of all evaluation and other reports (including for the Mid-Term and Terminal Evaluations). Undertake technical analysis, validate results, and compile lessons Disseminate technical findings	268,650
	Total	**$ 1,791,000.00**

H. Include a disbursement schedule with time-bound milestones.

Table 16. Disbursement Schedule

	Upon Agreement signature	One Year after Project Start (inception workshop)	Year 2	Year 3	Year 4	Year 5	Total
Scheduled Date	7/1/2026	1/1/2028	1/1/2029	1/1/2030	1/1//2031	1/1/2032	
Project Funds	775,757	4,439,257	4,270,257	4,128,767	3,493,767	802,195	17,910,000
Implementing Entity Fees	762,960	265,170	258,030	248,340	208,440	48,060	1,791,000
Total	**1,538,960**	**4,684,670**	**4,558,530**	**4,387,340**	**3,682,440**	**849,060**	**19,701,000**

PART IV: ENDORSEMENT BY GOVERNMENTS AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government[34] *Provide the name and position of the government official and indicate date of endorsement for each country participating in the proposed project. Add more lines as necessary. The endorsement letters should be attached as an annex to the project proposal. Please attach the endorsement letters with this template; add as many participating governments if a regional project:*

Hambardzum Matevosyan, Minister of Environment	Date*: 26 December 2025*

6. Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

Ministry of Environment, Republic of Armenia	
Nino Tandilashvili, First Deputy Minister Ministry of Environment Protection and Agriculture of Georgia	Date*: 22 December 2025*

B. Implementing Entity Certification *Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project contact person's name, telephone number and email address*

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (including National Communications to the UNFCCC, national adaptation strategies and plans, disaster risk reduction strategies and action plans etc.) and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.	
DocuSigned by: Nancy Bennet 4FFADA5A5FF9433 Nancy Bennet Executive Coordinator, Vertical Fund Programme Support, Oversight and Compliance Unit Bureau for Policy and Programme Support United Nations Development Programme Implementing Entity Coordinator	
Date: *(Month, Day, Year)*	Tel. and email: Nancy.Bennet@undp.org
Project Contact Person: Natalia Olofinskaya, Regional Technical Advisor, UNDP IRH	
Tel. And Email: nataly.olofinskaya@undp.org; +90 (543) 532-3046	

PART V: ANNEXES

Annex 1: Letters of endorsement from the governments

MINISTRY OF ENVIRONMENTAL PROTECTION
AND AGRICULTURE OF GEORGIA

34, Marshal Gelovani ave
Tbilisi, 0156, Georgia
+995 32 237 80 13
+995 32 237 80 44
info@mepa.gov.ge

22 December 2025

N 8703/01

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject Endorsement for the Regional Project Proposal for Armenia and Georgia "Increased climate resilience of South Caucasus Mountain communities and ecosystems through wildfire risk reduction"

In the capacity of a nationally designated authority (NDA) for the Adaptation Fund in Georgia, the Ministry of Environmental Protection and Agriculture of Georgia confirms that the above-mentioned regional project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Georgia.

Accordingly, the NDA is pleased to endorse the above regional project proposal with support from the Adaptation Fund. If approved, the project will be implemented by UNDP and executed by the Ministry of Environment of Armenia, the Ministry of Environmental Protection and Agriculture of Georgia and UNDP.

Sincerely,

Nino Tandilashvili
First Deputy Minister

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ՇՐՋԱԿԱ ՄԻՋԱՎԱՅՐԻ ՆԱԽԱՐԱՐ
REPUBLIC OF ARMENIA
MINISTER OF ENVIRONMENT
РЕСПУБЛИКА АРМЕНИЯ
МИНИСТР ОКРУЖАЮЩЕЙ СРЕДЫ

№ 1/08.6/14110

«26» «12» 2025

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org

Subject: Endorsement for the Fully-Developed Regional Project Proposal for Armenia and Georgia "Increased climate resilience of South Caucasus mountain communities and ecosystems through wildfire risk reduction".

In my capacity as designated authority for the Adaptation Fund in Armenia, I confirm that the above regional project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts and risks posed by climate change in Armenia.

Accordingly, I am pleased to endorse the above fully-developed regional project proposal with support from the Adaptation Fund. If approved, the project will be implemented by UNDP and executed by the Ministry of Environment of Armenia, the Ministry of Environmental Protection and Agriculture of Georgia and UNDP.

Sincerely,

H.E. Mr. Hambardzum Matevosyan

ՀԱՅԱՍՏԱՆԻ ՀԱՆՐԱՊԵՏՈՒԹՅՈՒՆ
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Annex 2: Social and Environmental Screening Procedure (SESP)

UNDP Social and Environmental Screening Summary

Project Information

Information	
Title	Increased climate resilience of South Caucasus Mountain communities and ecosystems through wildfire risk reduction
Number	PIMS+ 6247
Location	Armenia + Georgia – nationwide, including high-risk areas, such as Lori, Kotayk, Aragatsotn, Vayots Dzor, and Syunik in Armenia, and Samtskhe-Javakheti, Kakheti, and Shida Kartli in Georgia
Project stage	Concept/Design/Implementation
te	6 February 2026

Overall Social and Environmental Risk Rating of the Project

6: Overall Social and Environmental risk categorization (based on highest Risk Significance level from above)		
S&E Risk rating	Check if applicable	Comments
Low Risk	☐	
Moderate Risk	X	
Substantial Risk	☐	
High Risk	☐	

Social and Environmental Risk Management Instruments

7: Assessment or management measures required to address the identified S&E risks and impacts (applies only for complex Moderate, Substantial and High-Risk projects)		
Further assessment or management measures	Check if applicable	Comments: indicate scope of measures (e.g. outputs/activities to be addressed) as well as timing (e.g. completed, planned, prior to initiation of certain activities)
ESMF (Environmental and Social Management Framework)	☐	

Targeted assessment(s)	X	Targeted screenings
ESIA (Environmental and Social Impact Assessment)	☐	
SESA (Strategic Environmental and Social Assessment)	☐	
ESMP (Environmental and Social Management Plan)	☐	
Targeted management plans	☐	
Other instruments (please specify)	☐	

Additional Measures to Integrate the Programming Principles to Strengthen Social and Environmental Sustainability

8: Measures to further mainstream the UNDP Programing Principles into the project
Mainstreaming the human rights-based approach
The project "Increased climate resilience of South Caucasus mountain communities and ecosystems through wildfire risk reduction" fully integrates a human rights-based approach in line with the Adaptation Fund's 2025 Environmental and Social Policy (ESP) and the UNDP Social and Environmental Screening Procedure (SESP) format. It does so by ensuring that all interventions uphold the principles of equality, participation, transparency, and accountability, and by explicitly addressing the differentiated vulnerabilities and capacities of forest-dependent and rural populations in Armenia and Georgia. The project recognizes that climate-induced wildfires directly affect the fundamental rights of individuals and communities to life, health, safety, and a healthy environment. Accordingly, it emphasizes the empowerment of rights-holders – particularly women, youth, and marginalized rural groups – to participate meaningfully in all phases of planning, implementation, and monitoring. Through Component 4, which embeds gender-responsive and socially inclusive wildfire resilience, the project establishes participatory structures that give communities a central role in wildfire prevention, preparedness, and recovery. Local actors, including women's groups, youth organizations, and community volunteers, are involved in co-designing fire management measures and are supported to assume leadership roles in forest restoration and risk reduction initiatives. In accordance with paragraphs 13-15 and 26 of the updated ESP, the project ensures non-discrimination, access, and equity by providing equal opportunities for participation and benefits regardless of gender, age, disability, or social status. It pays particular attention to marginalized and vulnerable groups who may otherwise be excluded from decision-making or deprived of the benefits of climate adaptation actions. The design of training, employment, and livelihood diversification activities explicitly targets women, youth, and low-income forest users to ensure their inclusion in community fire brigades, sustainable fuel management schemes, and nature-based tourism initiatives. Project information, including data on fire risk and early warning, will be made publicly accessible in formats and languages understandable to all, thereby strengthening informed participation and local agency. The project also reinforces the accountability of duty-bearers by enhancing the institutional capacity of forestry, emergency management, and environmental agencies to fulfil their human rights obligations. National and local authorities are trained and supported to apply transparent, participatory, and equitable procedures in wildfire management. A grievance redress mechanism will be established in each country to allow affected persons and communities to raise concerns and seek remedies without fear of reprisal. These mechanisms will be accessible, gender-sensitive, and integrated into the overall stakeholder engagement and monitoring framework. By ensuring that the voices of vulnerable groups shape decisions, and by guaranteeing equitable access to project benefits and grievance channels, the project strengthens the social contract between institutions and communities. It thereby transforms wildfire risk management into a platform for advancing human rights, social inclusion, and local empowerment. This approach aligns with the Adaptation Fund's updated ESP, which requires implementing entities to identify and address human rights risks and to promote fair and inclusive development outcomes, and mirrors the structure and intent of the UNDP SESP Question 1 on mainstreaming the human rights-based approach.

Improving gender equality and women's empowerment

The project "Increased climate resilience of South Caucasus Mountain communities and ecosystems through wildfire risk reduction" integrates gender equality and women's empowerment as both a core principle and an operational priority, consistent with the Adaptation Fund's updated Environmental and Social Policy (paragraph 17) and the UNDP Social and Environmental Screening Procedure. Gender considerations are not treated as cross-cutting add-ons but as fundamental to the effectiveness, inclusiveness, and sustainability of climate adaptation outcomes.

Women in Armenia and Georgia play central roles in forest and land management, rural livelihoods, and household energy use, yet remain underrepresented in decision-making structures and have limited access to resources, training, and technology. The project directly addresses these inequalities by embedding gender-responsive design and implementation measures across all components. It ensures that women participate meaningfully and equitably in the development and execution of wildfire risk reduction strategies, from national policy reforms to community-based prevention and recovery actions. Through targeted training, leadership development, and employment opportunities within community fire brigades, forest monitoring teams, and nature-based livelihood initiatives, the project increases women's agency and visibility in traditionally male-dominated fields such as firefighting, forestry, and environmental protection.

To promote equal access and control over benefits, the project applies gender-responsive budgeting and monitoring frameworks. All data related to participation, employment, and capacity building will be disaggregated by gender, and gender-specific indicators will be used to assess outcomes. At the institutional level, the project builds the capacity of government and partner agencies to apply gender mainstreaming in climate and disaster management planning, ensuring that women's perspectives and priorities are reflected in national wildfire policies and local action plans.

At the community level, the project provides tailored support for women's economic empowerment through activities that diversify income sources and enhance adaptive capacities. Women-led cooperatives and small enterprises will be encouraged to engage in sustainable fuel management, eco-tourism, non-timber forest product processing, and other climate-resilient livelihoods. These initiatives contribute to reducing women's economic vulnerability while positioning them as drivers of local adaptation. The project also ensures that all training and communication materials are inclusive and culturally appropriate, removing barriers to participation such as limited mobility or unequal access to information.

By promoting equal participation, leadership, and benefit-sharing, the project contributes to shifting social norms around gender roles in environmental governance. It recognizes women not merely as beneficiaries but as key agents of change in achieving community resilience and ecological stability. The project's gender-responsive approach therefore advances both the Adaptation Fund's Gender Policy and the broader human rights obligations of Armenia and Georgia, ensuring that wildfire risk management becomes a catalyst for greater gender equality and women's empowerment across the South Caucasus.

Mainstreaming sustainability and resilience

The project "Increased climate resilience of South Caucasus Mountain communities and ecosystems through wildfire risk reduction" mainstreams sustainability and resilience as guiding principles across all its components, ensuring that actions to address climate-induced wildfires also generate long-term ecological, social, and institutional benefits. Its design is fully aligned with the Adaptation Fund's Environmental and Social Policy, which requires projects to strengthen environmental integrity, promote sustainable resource management, and enhance adaptive capacity at multiple levels.

Environmental sustainability is embedded in the project's focus on ecosystem-based adaptation and integrated wildfire management. By reducing the frequency and severity of wildfires, restoring degraded forest areas, and promoting sustainable fuel management, the project safeguards vital ecosystem services such as carbon sequestration, soil stability, and water regulation. These interventions contribute directly to the conservation of biodiversity and the sustainable management of natural resources, in accordance with paragraph

21 of the ESP. The project also prioritizes low-emission, climate-smart technologies and promotes energy-efficient practices in wildfire response and recovery, minimizing greenhouse gas emissions and supporting broader climate mitigation co-benefits.

Institutional sustainability is ensured through the strengthening of regional and national governance frameworks. The project enhances the capacity of government agencies, forestry and emergency services, and local authorities to plan, finance, and implement climate-resilient wildfire management. Regional cooperation mechanisms between Armenia and Georgia institutionalize joint monitoring, early warning, and post-fire recovery protocols, ensuring that collaboration continues beyond the life of the project. Capacity development, knowledge exchange, and the creation of interoperable information systems enable both countries to sustain and scale up wildfire risk management in the long term.

Social sustainability is achieved through community empowerment and livelihood diversification. The project integrates resilience thinking into local development by promoting sustainable income opportunities that reduce dependence on unsustainable forest use. Community members, particularly women and youth, are supported to develop eco-tourism, non-timber forest product enterprises, and biofuel initiatives that both reduce fire risk and enhance adaptive livelihoods. Training and awareness-raising campaigns foster behavioral change toward safer land-use and fire-prevention practices, building a culture of resilience and stewardship.

Overall, the project mainstreams sustainability and resilience by combining ecosystem restoration, institutional strengthening, and community empowerment into an integrated adaptation framework. It enhances the capacity of both natural and human systems to absorb shocks, recover from disturbances, and adapt to future climate risks. By institutionalizing risk reduction, embedding sustainability criteria in investments, and fostering regional collaboration, the project ensures that its environmental, social, and economic benefits endure well beyond its implementation period, fully reflecting the objectives and principles of the Adaptation Fund's updated ESP.

Strengthening accountability to stakeholders

The project "Increased climate resilience of South Caucasus Mountain communities and ecosystems through wildfire risk reduction" strengthens accountability to stakeholders by embedding transparency, inclusiveness, and responsiveness throughout its governance and implementation structures. In alignment with paragraph 26 of the Adaptation Fund's Environmental and Social Policy and the UNDP Social and Environmental Screening Procedure, the project ensures that all affected and interested parties are meaningfully engaged, informed, and empowered to influence decisions that affect their lives, livelihoods, and environments.

Accountability is operationalized through a structured system of stakeholder participation at regional, national, and local levels. During project formulation and throughout implementation, communities, civil society organizations, and local governments are actively involved in consultations, planning, and monitoring. These consultations are conducted in accessible formats and local languages to ensure full inclusion of women, youth, and marginalized groups. Feedback gathered through these processes directly informs project design adjustments and the prioritization of interventions, demonstrating a continuous loop of engagement and responsiveness.

To institutionalize accountability, the project establishes transparent reporting, monitoring, and grievance mechanisms in both Armenia and Georgia. A project-level grievance redress mechanism will be operational from inception, providing accessible channels for individuals and communities to raise concerns or complaints without fear of reprisal. These mechanisms will be widely publicized through community meetings, online platforms, and local media, and will ensure timely, fair, and confidential handling of all submissions. The project's implementation partners will maintain records of stakeholder feedback, including actions taken in response, thereby strengthening institutional transparency and credibility.

Regular reporting and participatory monitoring further reinforce accountability. Progress updates, including environmental and social performance, will be shared publicly with stakeholders and communities to enhance trust and ownership. Local monitoring committees—composed of representatives from municipalities, civil society, and community groups—will oversee implementation progress, provide feedback on outcomes, and help ensure compliance with environmental and social safeguards. At the regional level, information-sharing platforms will enable cross-border transparency between Armenia and Georgia, fostering mutual oversight and learning.

By institutionalizing stakeholder participation, ensuring access to information, and providing effective grievance and feedback mechanisms, the project promotes a culture of openness, fairness, and shared responsibility. This approach ensures that duty-bearers are responsive to rights-holders, that decisions remain transparent and inclusive, and that

project benefits are equitably distributed. Through these measures, the project not only complies with the Adaptation Fund's principles on stakeholder engagement and accountability but also establishes lasting mechanisms for participatory governance in wildfire risk management across the South Caucasus.

UNDP SES Principles & Standards	S&E Risk Events (from # 2)	Causes (outputs/activities from # 1)	Impacts (summarize potential impacts of risks, see #3 Comments for contextual information)	Risk Significance (Impact/ Likelihood)	Treatment Measures (summary informed by # 5)
Human Rights Principle	Potential risks of inequitable or discriminatory impacts on vulnerable populations (P1.5) Risks of exclusion	These risks arise especially in: Output 2.2: Preventive measures introduced, including pest and disease monitoring, coppice management, and recreational zoning in fire-prone areas, including hiking trails serving as firebreaks and pilots for residue-to-biofuel production.	Marginalized groups (within or outside mountain communities), including persons with disabilities, ethnic minorities, and low-income communities, may face exclusion from project decision-making and benefits due to limited outreach and insufficient capacity to engage effectively. Additionally, some groups might not receive information about the project or its activities, further restricting their ability to participate.	I: 3 L: 3	The project is based on human rights principles and will not involve any coercive or discriminatory actions. All implementing partners will comply with social protection standards. As per the AF ESP guidance, the project will ensure ongoing screening, assessment, and monitoring of this principle throughout project implementation phase. All project activities will be screened to ensure inclusive, fair, and equitable access to benefits for all, including marginalized groups and persons with disabilities, without worsening existing inequities, especially for those in extreme poverty or facing social disadvantages. Equal access for all beneficiaries, especially in regional communities, will be ensured through public consultations and transparent information sharing. All project activities will be screened to ensure inclusive, fair, and equitable access to benefits for all, including marginalized groups and persons with disabilities, without worsening existing inequities, especially for those in extreme poverty or facing social disadvantages. GAP will be implemented and GAP implementation will be monitored.
Gender Equality & Women's Empowerment Principle	Risks of gender-based violence, including sexual exploitation and abuse (P2.12) during participation of women in community brigades and nurseries Risks of exclusion	Output 4.1: Women and youth trained and equipped to participate in community brigades, nurseries, and prevention campaigns.	The planned intervention might involve activities that exacerbate the risks of gender-based violence Women's participation in the forestry and wildfire management may be limited. Supported activities	I: 3 L: 3	The planned engagement of women will also include codes of conduct or other appropriate measures to prevent and protocols that respond to gender-based violence and sexual exploitation, abuse, or harassment. Additionally, the GRM that will pay careful attention to any indications of sexual exploitation, abuse, harassment (SEAH) risks. Systematic gender and social inclusion analyses will be conducted. Women and youth will be trained and

			may fail to be gender-responsive and could potentially discriminate against women and girls or exacerbate existing gender-based inequalities and discrimination.		equipped to participate in project supported activities. Gender-sensitive outreach materials will be produced and disseminated, ensuring practical risk reduction advice reaches all groups. GAP will be implemented and GAP implementation will be monitored.
Accountability Principle	Risks of stakeholder grievances (P3.14) Risks of non-compliance with national law	These risks arise throughout the project.	The planned intervention might not allow stakeholders to communicate their concerns and have them reviewed through rights-compatible complaints redress processes and mechanisms. The supported activities might fail to demonstrate full compliance with the applicable national law.	I: 3 L:3 I: 3 L:2	Project shall establish and operate an easy-to-access project-level Grievance Redress Mechanism (GRM) to collect, consider and respond to concerns or grievances from the potentially affected communities incl. marginalized groups. The GRM will be presented during the inception phase, mentioned during the stakeholder consultations and included on locally appropriate notifications at the project sites (including the site of the works). All supported actions in the given outputs will be screened for compliance with the applicable national law. Compliance monitoring and periodic legal reviews will be conducted to ensure that all project-supported activities fully comply with applicable national laws
Sustainability and Resilience Principle				I: L:	
1. Biodiversity Cons. & Sust. Nat. Resource Mgmt.	Coppice management in Output 2.2 may lead to risks to habitats and/or ecosystems and their services (S1.1) Water storage solutions in Output 2.3 involve risks to critical habitats (S1.2) and surface or ground water use	These risks arise especially in: Output 2.2: Preventive measures introduced, including pest and disease monitoring, coppice management, and recreational zoning in fire-prone areas, including hiking trails serving as firebreaks and pilots for	The project supported activities E.g., Post-fire recovery and forest road, hiking trails construction/maintenance may affect soil stability. The supported activities e.g., fire prevention activities or water storage	I: 3 L: 3	The project will focus on maintaining native species and promoting ecologically sustainable restoration. Erosion control techniques and vegetation restoration will be applied. In addition, the supported actions shall be screened to ensure that they do not cause measurable adverse impacts on biodiversity values/criteria that underpin designation of the relevant critical habitats, and ecological processes supporting these biodiversity values (determined on an

	risks (S1.11) Reforestation, agroforestry and fast-growing plantations in Output 3.4 involve standard forestry/plantation-related risks to biodiversity (S1.8) Eco-tourism actions may lead to risks to critical habitats (S1.2)	residue-to-biofuel production. Output 3.4. Post-fire rehabilitation implemented, including soil stabilization, reforestation with climate-resilient species, and livelihood recovery through sustainable forestry and eco-tourism, including sustainable wood alternatives to reduce pressure on natural forests.	solutions may involve ecosystem interventions Forest management and restoration activities could affect biodiversity.		ecologically relevant scale) Actions promoting eco-tourism shall be screened to ensure that they: • Follow all applicable country law • Do not cause measurable adverse impacts on i) biodiversity values/criteria that underpin designation of the relevant critical habitats • Avoid, minimize, and mitigate environmental and related public health risks associated with the potential release of wastewaters in routine and non-routine circumstances in accordance with the national law • Separate waste at the source (where possible) and transport it to an appropriate waste recovery-or-treatment facility
2. Climate Change and Disaster Risks				I: L:	
3. Community Health, Safety and Security			Fire management operations may generate smoke and dust.	I: 2 L: 2	Safety protocols, personal protective equipment, and public awareness campaigns will be implemented. Through improved prevention, early detection, and rapid response capacities, the project will substantially lower smoke emissions and the duration of fire events, resulting in cleaner air for surrounding communities.
4. Cultural Heritage			The project supported activities may, in certain cases, have an impact on cultural or historical monuments, landmarks, traditional structures, and sites.	I: 2 L:2	Preliminary assessments will be carried out, and all national regulations as well as international requirements on heritage protection will be followed
5. Displacement and Resettlement				I: L:	
6. Indigenous Peoples				I: L:	
7. Labour and Working Conditions	Risks of substandard labour & working conditions (S7.1	These risks arise especially in: Output 2.2: Preventive measures introduced, including pest and disease monitoring, coppice	Participating firefighting agencies and project contractors may lack proper mechanisms to ensure compliance with workers' rights and might fail to	I: L:	All project-supported work will be required to comply with national labour laws, with strict attention to occupational health and safety standards, especially for volunteers and community members. The project shall: • Provide involved personnel with adequate personal protection equipment (PPE) and with introductory job-

		management, and recreational zoning in fire-prone areas, including hiking trails serving as firebreaks and pilots for residue-to-biofuel production. Output 3.4. Post-fire rehabilitation implemented, including soil stabilization, reforestation with climate-resilient species, and livelihood recovery through sustainable forestry and eco-tourism, including sustainable wood alternatives to reduce pressure on natural forests. Output 4.1: Women and youth trained and equipped to participate in community brigades, nurseries, and prevention campaigns.	provide contracted workers with labour and working conditions in line with applicable national labour legislation.		focused safety trainings, including on the proper use and maintenance of the PPE • Make the first aid kits available and easily accessible in relevant sites. • Record any health & safety and immediately report them to UNDP and the Project Board, • Conduct regular contract and compliance reviews of these arrangements.
8. Pollution Prevention and Resource Efficiency	Pest and disease control measures in Output 3.4 involve risks associated with pesticide use (S8.5) Eco-tourism actions in Output 3.4 may lead to pollutant release (S8.1) and inadequate waste management (S8.2)	Output 3.4. Post-fire rehabilitation implemented, including soil stabilization, reforestation with climate-resilient species, and livelihood recovery through sustainable forestry and eco-tourism, including sustainable wood alternatives to reduce pressure on natural forests.	Some supported activities may involve the improper use of chemical substances (such as contamination of soil and water from fuel or herbicides), inadequate waste management, fuel or oil leaks from equipment, inefficient use of water resources during firefighting operations, and air pollution resulting from the burning of charred materials.	I: 3 L:3	The supported activities will be monitored to ensure that chemical substances are used only when necessary and with safe alternatives, waste is collected, sorted, and disposed of in appropriate locations, equipment is regularly inspected to prevent leaks, water use is planned and controlled efficiently, and burned materials are safely managed or recycled without open burning. The project will also promote the use of environmentally safe materials, resource-efficient practices, energy efficiency, and sound waste management.

Increased Climate Resilience of South Caucasus Mountain Communities and Ecosystems Through Wildfire Risk Reduction

Environmental and Social Management Framework

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Executive Summary

The Environmental and Social Management Framework (ESMF) has been prepared for the regional project "Increased Climate Resilience of South Caucasus Mountain Communities and Ecosystems through Wildfire Risk Reduction," implemented by the United Nations Development Programme (UNDP) with financing from the Adaptation Fund (AF). The project aims to strengthen the resilience of ecosystems and mountain communities in Armenia and Georgia to climate-induced wildfires through an integrated approach to prevention, preparedness, response, and post-fire recovery.

The project is implemented under the Direct Implementation Modality (DIM) through UNDP's Country Offices in Armenia and Georgia, with overall technical and quality assurance provided by the UNDP Istanbul Regional Hub. The project contributes to national and regional priorities for climate adaptation, forest management, and disaster risk reduction, while fostering transboundary cooperation and ecosystem-based resilience across the South Caucasus.

The ESMF establishes the guiding framework for identifying, assessing, and managing potential environmental and social risks that may arise during project implementation. It ensures that all project activities are consistent with UNDP's Social and Environmental Standards (SES) and the Adaptation Fund's Environmental and Social Policy (ESP), as well as with applicable national legislation in Armenia and Georgia. The project has been classified as a Moderate Risk (Category B) project under UNDP's SES, reflecting that potential impacts are site-specific, small in scale, and reversible, and can be mitigated through established safeguard procedures.
The ESMF provides:

- A summary of the project's objectives, components, and expected results;
- An overview of the environmental and social context of Armenia and Georgia, including key risks and sensitivities;
- A description of relevant legal, policy, and institutional frameworks;
- Procedures for screening and assessment of environmental and social impacts at the sub-project level;
- Roles and responsibilities of implementing partners in safeguards management;
- Guidance for preparation and monitoring of site-specific Environmental and Social Management Plans (ESMPs);
- Measures to ensure meaningful stakeholder engagement, gender equality, social inclusion, and grievance redress.

The proposed project activities were screened using the UNDP SES and AF ESPs to identify potential social and environmental risks. The project presents generally low to moderate environmental and social risks, with several risks requiring further assessment and ongoing management to ensure full compliance with UNDP's SES and the AF's ESP. While the project does not involve risks related to involuntary resettlement, indigenous peoples' impacts, or major climate-related risks, a number of potential risks have been identified across social inclusion, labour conditions, biodiversity, pollution prevention, and community health and safety.

Implementation of this ESMF will help ensure that all project-supported activities – such as wildfire prevention, early warning system upgrades, firebreak construction, ecosystem rehabilitation, and community-based risk reduction – are carried out in a manner that safeguards people, biodiversity, and ecosystem services, while promoting inclusive and sustainable climate resilience.
The ESMF will be a living document, updated as necessary during project implementation to reflect lessons learned, evolving environmental and social conditions, and stakeholder feedback.

Introduction

This Environmental and Social Management Framework (ESMF) has been developed in support of the regional project "Increased Climate Resilience of South Caucasus Mountain Communities and Ecosystems through Wildfire Risk Reduction," implemented by the United Nations Development Programme (UNDP) with financing from the Adaptation Fund (AF). The project will be implemented under the Direct Implementation Modality (DIM) through UNDP's Country Offices in Armenia and Georgia, with overall technical oversight from the UNDP Istanbul Regional Hub.

In accordance with UNDP's role as an accredited entity of the Adaptation Fund, the project has been screened against UNDP's Social and Environmental Standards (SES) using the UNDP Social and Environmental Screening Procedure (SESP) and has been classified as a Moderate Risk (Category B) project. This reflects the presence of potential site-specific, small-scale, and reversible environmental and social impacts that can be effectively mitigated through appropriate management measures.

As the project includes a range of interventions and sub-projects whose exact locations, designs, and environmental or social risks cannot be fully determined during appraisal, this ESMF establishes the principles, procedures, and responsibilities for identifying, assessing, and managing such risks throughout implementation. It ensures that all project-supported activities comply with UNDP's SES, the Adaptation Fund's Environmental and Social Policy (ESP), and relevant national legislation in Armenia and Georgia.

Specifically, this ESMF provides:

- The project's contextual and policy framework, including potential social and environmental risks associated with planned activities;
- The applicable UNDP and AF environmental and social safeguard requirements;
- A summary of national environmental and social laws and institutional frameworks relevant to project implementation;
- Screening and assessment procedures for sub-projects and investments;
- Guidance for preparation of Environmental and Social Management Plans (ESMPs) and other safeguards instruments; and
- Provisions for stakeholder engagement, gender and inclusion mainstreaming, and grievance redress.

This framework serves as a practical guide to ensure that the project's wildfire prevention, preparedness, and ecosystem restoration activities contribute to sustainable and equitable climate resilience in the South Caucasus, while upholding environmental integrity, human rights, gender equality, and the participation of all affected and interested stakeholders.

Project Description

The regional project **"Increased Climate Resilience of South Caucasus Mountain Communities and Ecosystems through Wildfire Risk Reduction"** enhances Armenia's and Georgia's capacity to prevent, prepare for, and respond to climate-induced wildfires. Implemented by **UNDP**, it strengthens policies, institutions, and data systems for wildfire management while promoting community-based, gender-responsive, and ecosystem-based adaptation. By reducing ignition risks, improving early warning and response coordination, and fostering regional cooperation, the project safeguards biodiversity-rich mountain forests, protects rural livelihoods, and contributes to long-term climate resilience across the South Caucasus.

The **"Increased Climate Resilience of South Caucasus Mountain Communities and Ecosystems through Wildfire Risk Reduction"** project aims to transform the way Armenia and Georgia manage climate-driven wildfire risks by linking ecosystem restoration, community preparedness, and institutional reform into one adaptive framework.

The initiative focuses on strengthening governance systems, upgrading firefighting and early-warning infrastructure, and improving access to real-time climate and wildfire data. Through regional collaboration, it establishes harmonized methodologies, joint monitoring systems, and knowledge exchange between the two countries to ensure consistent and effective responses across borders.

Emphasizing inclusivity and equity, the project empowers women, youth, and vulnerable rural populations to participate in wildfire prevention and recovery efforts. In doing so, it not only reduces fire frequency and

damage but also promotes sustainable forest management and long-term climate resilience across the biodiversity-rich mountain landscapes of the South Caucasus.

The proposed project will involve both cross-cutting and output-specific social and environmental risks presented in Table 1 below:

Table 3. Project outputs and their social and environmental risks

Outputs proposed in the project	Specific social and environmental risks caused by these outputs	Signifi-cance
Outcome 1. Strengthened regional and national regulatory and institutional frameworks for climate-resilient wildfire management		
Output 1.1: National DRM and forestry laws revised, with secondary acts and enforcement mechanisms to operationalize wildfire prevention and response, including ex-ante cost/benefit analyses to prioritize prevention over suppression	-	
Output 1.2: Institutional mandates clarified, with coordination mechanisms established across emergency services, forest agencies, and local authorities.	-	
Output 1.3: Armenia-Georgia MoU on forestry and wildfire management renewed and operationalized, including harmonized operating procedures and joint action plans, including cross-border SOPs for fires, pests and diseases.	Pest and disease control measures involve risks associated with pesticide use (S8.5)	Moderate
Output 1.4: National coordination platforms established and linked under the Intergovernmental Economic Council to provide structured bilateral cooperation.	-	
Outcome 2. Improved wildfire prevention, preparedness, and response capacity		
Output 2.1: Fire danger forecasting systems updated/developed, operationalized and integrated with hydrometeorological and vegetation data.	-	
Output 2.2: Preventive measures introduced, including pest and disease monitoring, coppice management, and recreational zoning in fire-prone areas, including hiking trails serving as firebreaks and pilots for residue-to-biofuel production.	Pest and disease control measures involve risks associated with pesticide use (S8.5) Coppice management may lead to risks to habitats and/or ecosystems and their services (S1.1) All measures involve risks of substandard labour & working conditions (S7.1) and need to also consider potential risks of inequitable or discriminatory impacts on vulnerable populations (P1.5)	Moderate
Output 2.3: National firefighting capacity strengthened through modernization of fleets, provision of protective gear and water storage solutions and supply systems, and establishment of regional training centers with cross-border drills and community led preparedness programs	Water storage solutions involve risks to critical habitats (S1.2) and surface or ground water use risks (S1.11) Occupational health and safety risks (S7.6)	Moderate
Outcome 3. Enhanced wildfire data, recovery, and decision-support systems		
Output 3.1: Interoperable Forest Management Information Systems developed in both countries, integrating UAV, sensor technologies, and satellite	-	

imagery data with innovation accelerators/hackathons for apps, AI detection.		
Output 3.2: Cross-border smoke and air quality monitoring networks established, linked to UNFCCC and NDC reporting.	-	
Output 3.3: Standardized methodologies developed for assessing ecological and economic wildfire damages and systematic post-fire investigations for lessons-learned, guiding evidence-based recovery.	-	
Output 3.4. Post-fire rehabilitation implemented, including soil stabilization, reforestation with climate-resilient species, and livelihood recovery through sustainable forestry and eco-tourism, including sustainable wood alternatives to reduce pressure on natural forests.	Pest and disease control measures involve risks associated with pesticide use (S8.5) Reforestation, agroforestry and fast-growing plantations involves standard forestry/plantation-related risks to biodiversity (S1.8) Eco-tourism actions may lead to risks to critical habitats (S1.2), pollutant release (S8.1) and inadequate waste management (S8.2)	Moderate
Outcome 4. : Women, youth and marginalized groups are empowered to participate in equitable and inclusive wildfire		
Output 4.1: Women and youth trained and equipped to participate in community brigades, nurseries, and prevention campaigns.	Risks of gender-based violence, including sexual exploitation and abuse (P2.12) during participation of women in community brigades and nurseries Occupational health and safety risks (S7.6)	Moderate
Output 4.2: Gender-responsive awareness materials produced and disseminated, ensuring practical risk reduction advice reaches vulnerable groups.	-	
Output 4.3: National wildfire management monitoring and evaluation frameworks updated to include gender- and age-disaggregated indicators and to facilitate equitable participation and benefit sharing based on gender and social inclusion analysis of wildfire risks.	-	
Output 4.4: Communities in Armenia and Georgia, including women, youth, and marginalized groups, implement integrated wildfire prevention, preparedness, and recovery actions that strengthen resilience, enhance livelihoods, and reduce household losses	-	
Cross-cutting risks and treatment measures for multiple project activities	Risks of stakeholder grievances (P3.14)	Moderate

Applicable Policy and Legal Framework

This section provides a preliminary review of the applicable policy, legal and institutional framework related to the potential risks and benefits of the implementation of the proposed activities. It includes a brief review of applicable national legislation, policies and regulations; and the UNDP SES.

4.1 UNDP Social and Environmental Standards

The project will comply with UNDP's Social and Environmental Standards (SES), which came into effect in January 2015. The SES underpin UNDP's commitment to mainstream social and environmental sustainability in its Programmes and Projects to support sustainable development. The objectives of the standards are to:

- Strengthen the social and environmental outcomes of Programmes and Projects
- Avoid adverse impacts to people and the environment
- Minimize, mitigate, and manage adverse impacts where avoidance is not possible
- Strengthen UNDP and partner capacities for managing social and environmental risks
- Ensure full and effective stakeholder engagement, including through a mechanism to respond to complaints from project-affected people

The SES are an integral component of UNDP's quality assurance and risk management approach to programming.

Table 4. Key Elements of UNDP's Social and Environmental Standards (SES)

Overarching Policy	Project-Level Standards	Policy Delivery Process & Accountability
Human Rights Gender Equality and Women's Empowerment Sustainability and Resilience Accountability	Biodiversity and Sustainable Natural Resource Management Climate Change and Disaster Risks Community Health, Safety, and Security Cultural Heritage Displacement and Resettlement Indigenous Peoples Labour and Working Conditions Pollution Prevention and Resource Efficiency	Quality Assurance Screening and Categorization Assessment and Management Stakeholder Engagement and Response Mechanism Access to Information Monitoring, Reporting, and Compliance review

The Standards are underpinned by an Accountability Mechanism with two key functions:

- A Stakeholder Response Mechanism (SRM) that ensures individuals, peoples, and communities affected by UNDP projects have access to appropriate procedures for hearing and addressing project-related grievances; and
- A Compliance Review process that can investigate claims that UNDP is not in compliance with UNDP's social and environmental policies.

Through the AF Accreditation Process, the SES are acknowledged to be consistent with the Adaptation Fund's Environment and Social Policy (see section 4.2 below). The UNDP SES also require UNDP not to support activities that do not comply with national law and obligations under international law, whichever is

the higher standard (hereinafter "Applicable Law"). UNDP programmes and projects, therefore, must always comply with the beneficiary countries' national law (see section 0 below). The supported actions will therefore have to meet not only UNDP SES and Adaptation Funds Environment and Social Policy but also any additional requirements stipulated in the national law.

4.2 Adaptation Fund Environmental and Social Policy

The Adaptation Fund had established in March 2016 its own Environmental and Social Policy to ensure that the Fund does not support projects/programmes that unnecessarily harm the environment, public health or vulnerable communities. The Policy is built on 15 principles and also provides adequate opportunities for the informed participation of all stakeholders in the formulation and implementation of projects/programmes supported by the Fund.

As part of the implementing entities' responsibilities for the project/programme, the Fund requires the implementing entities to (i) have an environmental and social management system that ensures environmental and social risks are identified and assessed at the earliest possible stage of project/programme design, (ii) adopt measures to avoid or where avoidance is impossible to minimize or mitigate those risks during implementation, and (iii) monitor and report on the status of those measures during and at the end of implementation. These requirements are fully consistent with the UNDP Social and Environmental Standards. The table below outlines the consistency of the Adaptation Fund Environmental and Social Principles with the specific requirements stipulated by the UNDP's Social and Environmental Standards.

Table 5. Analysis of the consistency of the Adaptation Fund Environmental and Social Principles with the UNDP Social and Environmental Standards

Adaptation Fund Environmental and Social Principles	UNDP Social and Environmental Standards (relevant provisions only)
Compliance with the Law: Projects/programmes supported by the Fund shall be in compliance with all applicable domestic and international law.	See the UNDP SES Accountability Principle 4, item 30 stating that 'UNDP does not support activities that do not comply with national law and obligations under international law, whichever is the higher standard (hereinafter "Applicable Law").
Access and Equity: Projects/programmes supported by the Fund shall provide fair and equitable access to benefits in a manner that is inclusive and does not impede access to basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions, and land rights. Projects/programmes should not exacerbate existing inequities, particularly with respect to marginalized or vulnerable groups.	See the UNDP SES Human Rights Principle, paragraph 14 and the Social and Environmental Screening questions related to: P1.6 Risk of restricting access to resources or basic services.
Marginalized and Vulnerable Groups: Projects/programmes supported by the Fund shall avoid imposing any disproportionate adverse impacts on marginalized and vulnerable groups, including children, women and girls, the elderly, indigenous people, tribal groups, displaced people, refugees, people living with disabilities, and people living with HIV/AIDS. In screening any proposed project/programme, the implementing entities shall assess and consider particular impacts on marginalized and vulnerable groups.	See the UNDP SES Human Rights Principle, paragraph 16 and the Social and Environmental Screening questions related to: P1.5 Risk of inequitable or discriminatory impacts on affected populations.
Human Rights: Projects/programmes supported by the Fund shall respect and, where applicable, promote international human rights.	See the UNDP SES Human Rights Principle, paragraph 13 and the Social and Environmental Screening questions related to: P1.4 Risk of adverse impacts on civil, political, economic, social or cultural rights.
Gender Equality and Women's Empowerment: Projects/programmes supported by the Fund shall be designed and implemented in such a way that both women and men (a) have equal opportunities to	See the UNDP SES Gender Equality and Women's Empowerment Principle, paragraphs 18-20 and the Social and Environmental Screening questions related to: P2.9 Risk of adverse impacts on gender equality,

participate as per the Fund gender policy (refer to Annex 4 for details); (b) receive comparable social and economic benefits; and (c) do not suffer disproportionate adverse effects during the development process.	P2.10 Risk of discrimination against women, and P2.11 risks of limiting the women's access to natural resources.
Core Labour Rights: Projects/programmes supported by the Fund shall meet the core labour standards as identified by the International Labor Organization.	SES Standard 7, paragraphs 5-12, 20-24 and the Social and Environmental Screening questions related to: S7.1 Risks of substandard labour & working conditions, S7.2 Risks to freedom of workers association and collective bargaining, S7.3 Child labour risks, S7.4 Forced labour risks (incl. in supply chains), S7.5 Risks of discriminatory working conditions, S7.6 Occupational health and safety risks.
Indigenous Peoples: The Fund shall not support projects/programmes that are inconsistent with the rights and responsibilities set forth in the UN Declaration on the Rights of Indigenous Peoples and other applicable international instruments relating to indigenous peoples.	Entire See the UNDP SES Standard 6 and the Social and Environmental Screening questions related to: S6.1 Risks associated with activities taking place where indigenous peoples are present S6.2 Risks associated with activities taking place on lands, territories claimed by indigenous peoples S6.3 Risks to rights, lands, territories natural resources and traditional livelihoods of indigenous peoples S6.4 Risk that activities will take place without meaningful, effective informed participation of indigenous peoples S.6.5 Risk of utilizing/developing indigenous peoples resources without agreement and/or agreed benefit sharing S6.6 Risk of forced eviction or physical/economic displacement of indigenous peoples S6.7 Impacts on development priorities of indigenous peoples S6.8 Risks to physical and cultural survival of indigenous peoples S6.9 Risks of impacts on cultural heritage of indigenous peoples
Involuntary Resettlement: Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids or minimizes the need for involuntary resettlement. When limited involuntary resettlement is unavoidable, due process should be observed so that displaced persons shall be informed of their rights, consulted on their options, and offered technically, economically, and socially feasible resettlement alternatives or fair and adequate compensation.	See the UNDP SES Standard 5 objective and its paragraphs 1,3,4 and the Social and Environmental Screening questions related to: S5.1 Physical displacement risks S5.2 Economic displacement risks S5.3 Risk of forced evictions S5.4 Risks of impacts on community-based rights to land, territories or resources
Protection of Natural Habitats: The Fund shall not support projects/programmes that would involve unjustified conversion or degradation of critical natural habitats, including those that are (a) legally protected; (b) officially proposed for protection; (c) recognized by authoritative sources for their high conservation value, including as critical habitat; or (d) recognized as protected by traditional or indigenous local communities.	See the UNDP SES Standard 1, paragraph 13 and the Social and Environmental Screening questions related to: S1.2 Risks to critical habitats
Conservation of Biological Diversity: Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids any significant or unjustified reduction or loss of biological diversity or the introduction of known invasive species.	SES Standard 1, paragraph 13 and the Social and Environmental Screening questions related to: S1.4 Risks to endangered species
Climate Change: Projects/programmes supported by the Fund shall not result in any significant or unjustified increase in greenhouse gas emissions or other drivers of climate change.	SES Standard 2, paragraph 9 and the Social and Environmental Screening questions related to: S2.4 risks of increased GHG emissions

Pollution Prevention and Resource Efficiency: Projects/programmes supported by the Fund shall be designed and implemented in a way that meets applicable international standards for maximizing energy efficiency and minimizing material resource use, the production of wastes, and the release of pollutants.	SES Standard 8, paragraph 4 and paragraphs 7-9 and the Social and Environmental Screening questions related to: S8.1 risks of pollutants release S8.2 risks of inadequate waste management
Public Health: Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids potentially significant negative impacts on public health.	See the UNDP SES Standard 3, paragraphs 2,3,6, and 7 and the Social and Environmental Screening questions related to: S3.1 construction-related risks S3.2 Emissions, noise, traffic, hazards and effluent risks S3.3 safety risks due to failure of project structural elements S3.4 risks of water/vector-borne diseases
Physical and Cultural Heritage: Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids the alteration, damage, or removal of any physical cultural resources, cultural sites, and sites with unique natural values recognized as such at the community, national or international level. Projects/programmes should also not permanently interfere with existing access and use of such physical and cultural resources.	See the UNDP SES Standard 4, paragraphs 1, 2, and 14 and the Social and Environmental Screening questions related to: S4.1 risks to cultural heritage sites S4.2. risks of unknown archaeological heritage damage S4.3 risks to tangible and intangible forms of cultural heritage
Lands and Soil Conservation: Projects/programmes supported by the Fund shall be designed and implemented in a way that promotes soil conservation and avoids degradation or conversion of productive lands or land that provides valuable ecosystem services.	See the UNDP SES Standard 1, paragraph 21 and the Social and Environmental Screening questions related to: S1.7 risks of soil degradation

As required by the Adaptation Fund Environmental and Social Policy, the above requirements will be fully respected within the project and will guide project design, implementation, and monitoring of any identified environmental and social risks.

4.3. Applicable country Law

Both Armenia and Georgia, the countries supported by this regional project, are aligning their environmental and climate legislation with international commitments under the Paris Agreement, the UN Convention to Combat Desertification (UNCCD), and the Convention on Biological Diversity (CBD), while progressively harmonizing with elements of the EU environmental acquis under their respective EU agreements – Comprehensive and Enhanced Partnership Agreement (Armenia) and Association Agreements (Georgia).

In both countries, the foundations for environmental governance are set by overarching laws on environmental protection and forest management, which define core principles such as the precautionary and polluter-pays principles, and require environmental and strategic environmental assessments (EIA/SEA) for development projects and spatial plans. These are complemented by legal frameworks on disaster risk management, biodiversity and protected areas, water and land use, and climate change adaptation, which together regulate activities relevant to wildfire prevention, suppression, and recovery.

The following section outlines the key legal instruments that must be considered and complied with during the implementation of the project's interventions in Armenia and Georgia.

Table 6. Key Legal Instruments – Armenia

Law	Description
Law on Environmental Protection (1991, amended)	Serves as the overarching legal framework for environmental governance in Armenia. It establishes core principles such as sustainable use of natural resources, the "polluter pays" and "precautionary" principles, and the right of citizens to live in a healthy environment. The Law underpins the requirement for environmental impact assessments (EIA) and guides all activities

	affecting land, water, air, and biodiversity. The project must comply with these provisions in any activity potentially affecting forest ecosystems, soil, or habitats.
Forest Code of the Republic of Armenia (2005, amended)	Governs forest use, protection, and restoration, defining state, community, and private forest ownership and management principles. It establishes requirements for forest management planning, reforestation, pest and disease control, and fire prevention measures. The Code provides the legal basis for fuel management, forest rehabilitation after wildfires, and the creation of firebreaks, directly linking to several project outputs.
Law on Environmental Impact Assessment and Expertise (2014)	Regulates the procedures for conducting Environmental and Social Impact Assessments (ESIAs) for projects and activities that may have environmental or social effects. It ensures that potential adverse impacts of interventions—such as construction of fire-watch towers, water storage points, or training facilities—are identified and mitigated before implementation. Compliance with this law guarantees that project interventions meet national and Adaptation Fund environmental safeguard standards.
Law on Disaster Risk Reduction and Population Protection (2012, amended)	Provides the legal foundation for national and local disaster risk management, including wildfire prevention, preparedness, and response. It defines the responsibilities of the Ministry of Internal Affairs, municipalities, and emergency services, and establishes coordination mechanisms for disaster management. The project's support for volunteer brigades, early warning systems, and community preparedness aligns directly with this law.
Law on Specially Protected Nature Areas (2006, amended)	Regulates the establishment and management of national parks, state reserves, and sanctuaries. It defines protection regimes, restrictions on activities within and around protected areas, and biodiversity conservation requirements. As some project sites may overlap with or be adjacent to protected areas, compliance with this law ensures that prevention and restoration activities (e.g., fuel management or firebreaks) do not compromise conservation objectives.

Table 7. Key Legal Instrument – Georgia

Law	Description
Law on Environmental Protection (1996, amended)	Provides the overall legal basis for environmental policy and management in Georgia. It sets out key environmental principles, including sustainable use of natural resources, the "polluter pays" and "precautionary" principles, and integrates public participation and access to environmental information. The project must align with this law in implementing wildfire prevention and restoration measures to ensure minimal ecological disturbance and community consultation.
Forest Code of Georgia (2020)	Establishes the legal framework for the sustainable management, use, and protection of forest resources. It introduces a multifunctional approach to forest management, including fire prevention, pest control, and reforestation. The Code directly supports project activities related to fuel management, post-fire rehabilitation, and monitoring of forest health. It also emphasizes climate resilience and ecosystem services, making it a cornerstone for implementing project outputs under Outcome 2.
Environmental Assessment Code (2017)	Regulates Environmental Impact Assessments (EIA), Strategic Environmental Assessments (SEA), and environmental permitting processes in Georgia. It ensures that activities with potential environmental or social impacts undergo prior review and public consultation. Project interventions such as construction of fire management infrastructure or training facilities must comply with this law to ensure environmental integrity and transparency.
Law on Civil Safety (2018)	Defines the institutional framework for disaster prevention, preparedness, and response in Georgia, including the coordination role of the Emergency Management Service under the Ministry of Internal Affairs. The law covers wildfire risk management, volunteer engagement, and inter-agency coordination—central to the project's capacity-building and community-based disaster risk reduction activities.
Law on the System of Protected Areas (1996, amended)	Establishes categories, governance regimes, and permitted activities within Georgia's protected areas. It provides for biodiversity conservation and sustainable use of resources in and around protected territories. As the project will operate near or within forest ecosystems that may include protected zones, compliance with this law ensures that prevention and restoration works are consistent with conservation objectives and management plans.

Potential Environmental and Social Risks

During the development of this proposal, the project was screened using using the UNDP SES and AF ESPs to identify potential social and environmental risk. The project presents generally low to moderate environmental and social risks, with several risks requiring further assessment and ongoing management to ensure full compliance with UNDP's SES and the AF's ESP. While the project does not involve risks related to involuntary resettlement, indigenous peoples' impacts, or major climate-related risks, a number of potential risks have been identified across social inclusion, labour conditions, biodiversity, pollution prevention, and community health and safety. For USP activities, while a degree of information is known and was considered in the project screening, detailed environmental and social risks and mitigation measures will be further identified through the screening procedure outlined in this ESMF.

A key risk relates to **compliance with national legislation**, as project-supported activities may not consistently demonstrate adherence to applicable laws. To mitigate this, all outputs will undergo screening for legal compliance, supplemented by periodic monitoring and legal reviews.

Several risks concern **equitable access and the inclusion of marginalized or vulnerable groups**, particularly mountain communities, persons with disabilities, ethnic minorities, elderly people, and low-income households. These groups may face exclusion from consultations, decision-making, or project benefits. To address this, the project will ensure transparent information sharing, inclusive participation processes, and targeted measures through the Gender Action Plan (GAP). Systematic gender and social inclusion analyses will be conducted, and a project-level Grievance Redress Mechanism (GRM) will be established to ensure accessible channels for feedback and grievance resolution.

Gender Equality-related risks may include limited participation of women in forestry and wildfire management and the possibility of exacerbating existing gender inequalities. The project will promote gender-responsive activities, provide training for women and youth, develop gender-sensitive outreach materials, and integrate safeguards against sexual exploitation, abuse, and harassment (SEAH), including through the GRM.

Moderate risks are also present related to **Labour and Working Conditions**, as contractors and grantees may lack appropriate systems for ensuring workers' rights and occupational health and safety. To mitigate this, all project-supported entities must comply with national labour laws, provide personal protective equipment (PPE), deliver job-specific safety training, maintain accessible first aid kits, record and report any incidents, and undergo regular compliance reviews.

Environmental risks are primarily linked to **biodiversity, natural resource management, and pollution prevention**. Fire prevention operations, water storage solutions, forest restoration, and post-fire recovery measures could affect ecosystems, biodiversity values, and soil stability. The project will screen activities to avoid adverse impacts on critical habitats, maintain ecological flow regimes, focus restoration on native species, and implement erosion control and vegetation rehabilitation. Pollution-related risks—including improper chemical use, inadequate waste management, equipment fuel leaks, and air pollution from burned materials—will be managed

through monitoring, resource-efficient practices, safe waste disposal, and the promotion of environmentally sound materials and methods.

Finally, the project poses low risks to **community health, safety, and cultural heritage**. Fire-related activities may generate smoke and dust, and some interventions may affect cultural or historical sites.

Table 6: Overview of risks (to be considered in complimentarity with proposal annex 2 – UNDP SES Screening Summary)

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law *UNDP SES Accountability Principle*		**Low risks** The supported activities might fail to demonstrate full compliance with the applicable national law. All supported actions in the given outputs will be screened for compliance with the applicable national law. Compliance monitoring and periodic legal reviews will be conducted to ensure that all project-supported activities fully comply with applicable national laws
Access and Equity UNDP SES Accountability Principle		**Low risks** Marginalized groups, including persons with disabilities, ethnic minorities, and low-income communities, may face exclusion from project decision-making and benefits due to limited outreach and insufficient capacity to engage effectively. Additionally, some groups might not receive information about the project or its activities, further restricting their ability to participate. Equal access for all beneficiaries, especially in regional communities, will be ensured through public consultations and transparent information sharing. All project activities will be screened to ensure inclusive, fair, and equitable access to benefits for all, including marginalized groups and persons with disabilities, without worsening existing inequities, especially for those in extreme poverty or facing social disadvantages. GAP will be implemented and GAP implementation will be monitored.
Marginalized and Vulnerable Groups UNDP SES Human Rights Principle		**Moderate risks** Mountain communities may include vulnerable groups (especially the elderly and low-income households). The project will address the needs of marginalized and vulnerable groups through inclusive adaptation measures and accessible communication. By embedding gender and inclusion across all components the project ensures that women, youth, and marginalized groups are empowered as active agents of adaptation, not passive beneficiaries. In addition, the project shall establish and operate an easy-to-access project-level Grievance Redress Mechanism (GRM) to collect, consider and respond to concerns or grievances from the potentially affected communities incl. marginalized groups. The GRM will be presented during the inception phase, mentioned during the stakeholder consultations and included on locally appropriate notifications at the project sites (including the site of the works). GAP will be implemented and GAP implementation will be monitored.
Human Rights UNDP SES Human Rights Principle		**Low risks** The project is based on human rights principles and will not involve any coercive or discriminatory actions. All implementing partners will

		comply with social protection standards. As per the AF ESP guidance, the project will ensure ongoing screening, assessment, and monitoring of this principle throughout project implementation phase.
Gender equity and women's empowerment UNDP SES Gender Equality and Women's Empowerment Principle		**Low risks** Women's participation in the forestry and wildfire management may be limited. Supported activities may fail to be gender-responsive and could potentially discriminate against women and girls or exacerbate existing gender-based inequalities and discrimination. Systematic gender and social inclusion analyses will be conducted. Women and youth will be trained and equipped to participate in project supported activities. Gender-sensitive outreach materials will be produced and disseminated, ensuring practical risk reduction advice reaches all groups. The planned engagement of women will also include codes of conduct or other appropriate measures to prevent and protocols that respond to gender-based violence and sexual exploitation, abuse, or harassment. Additionally, the GRM that will pay careful attention to any indications of sexual exploitation, abuse, harassment (SEAH) risks. GAP will be implemented and GAP implementation will be monitored.
Core labour rights *UNDP SES Standard 7 Labour and Working Conditions*		**Moderate risks** Grant recipients and project contractors may lack proper mechanisms to ensure compliance with workers' rights and might fail to provide contracted workers with labour and working conditions in line with applicable national labour legislation. All project-supported work will be required to comply with national labour laws, with strict attention to occupational health and safety standards, especially for volunteers and community members. The project shall: • provide involved personnel with adequate personal protection equipment (PPE) and with introductory job-focused safety trainings, including on the proper use and maintenance of the PPE • Make the first aid kits available and easily accessible in relevant sites. • Record any health & safety and immediately report them to UNDP and the Project Board, • Conduct regular contract and compliance reviews of these arrangements.
Indigenous populations UNDP SES Standard 6 Indigenous Peoples	**X**	**No risks** No communities meeting the criteria used to identify indigenous peoples as per UNDP's SES Standard 6 are expected to be affected by the project. Nevertheless, the project will respect the cultural characteristics of local communities.
Involuntary Resettlement UNDP SES Standard 5 Displacement and Resettlement	**X**	**No risks** The project will not involve land acquisition or forced relocation. All infrastructure and/or project activities will be implemented on identified sites based on legally binding or voluntary agreements
Protection of natural habitats UNDP SES Standard 1 Biodiversity Conservation and Sustainable Natural Resource Management		**Moderate risks** The supported activities e.g., fire prevention activities or water storage solutions may involve ecosystem interventions The supported actions shall be screened to ensure that they: • Do not cause measurable adverse impacts on biodiversity values/criteria that underpin designation of the relevant critical habitats, and ecological processes supporting these biodiversity values (determined on an ecologically relevant scale), and • Respect the needs of environmental flow regimes and not significantly alter them in ways that prevent water resources from

		fulfilling their functions for upstream and downstream ecosystems and their services to local communities.
Conservation of biological diversity UNDP SES Standard 1 Biodiversity Conservation and Sustainable Natural Resource Management		**Moderate risks** Forest management and restoration activities could affect biodiversity. The project will focus on maintaining native species and promoting ecologically sustainable restoration.
Climate change UNDP SES Standard 2 Climate Change and Disaster Risks	**X**	**No risks** The project aims to reduce the impacts of climate change through wildfire prevention and the strengthening of sustainable forest management systems
Prevention of pollution and efficiency of resources *UNDP SES Standard 8 Pollution Prevention and Resource Efficiency*		**Moderate risks** Some supported activities may involve the improper use of chemical substances (such as contamination of soil and water from fuel or herbicides), inadequate waste management, fuel or oil leaks from equipment, inefficient use of water resources during firefighting operations, and air pollution resulting from the burning of charred materials. The supported activities will be monitored to ensure that chemical substances are used only when necessary and with safe alternatives, waste is collected, sorted, and disposed of in appropriate locations, equipment is regularly inspected to prevent leaks, water use is planned and controlled efficiently, and burned materials are safely managed or recycled without open burning. The project will also promote the use of environmentally safe materials, resource-efficient practices, energy efficiency, and sound waste management.
Public health UNDP SES Standard 3 Community Health, Safety and Security		**Low risks** Fire management operations may generate smoke and dust. Safety protocols, personal protective equipment, and public awareness campaigns will be implemented. Through improved prevention, early detection, and rapid response capacities, the project will substantially lower smoke emissions and the duration of fire events, resulting in cleaner air for surrounding communities.
Physical and cultural heritage UNDP SES Standard 4 Cultural Heritage		**Low risks** The project supported activities may, in certain cases, have an impact on cultural or historical monuments, landmarks, traditional structures, and sites. Preliminary assessments will be carried out, and all national regulations as well as international requirements on heritage protection will be followed
Soil and soil conservation UNDP SES Standard 1 Biodiversity Conservation and Sustainable Natural Resource Management		**Moderate risks** The project supported activities E.g., Post-fire recovery and forest road, hiking trails construction/maintenance may affect soil stability. **Further assessment and management required for compliance** Erosion control techniques and vegetation restoration will be applied.

Procedures for Addressing the Expected Social and Environmental Risks

6.1 Project's social and environmental risk rating

As stated in the previous section, the project has been screened against UNDP's Social and Environmental Standards utilizing the UNDP Social and Environmental Screening Procedure and it was deemed to be a Moderate Risk project. The next section ensures that project activities once fully defined will be further screened and appropriate management measures are adopted for any potentially significant social and environmental risks.

6.2 Further screening and assessment requirements during the project implementation

The project includes outputs with unidentified sub-projects (USPs) whose location and detailed characteristics have not been defined yet at the proposal stage.

Table 7: Project outputs involving unidentified sub-projects (USPs)

Expected Outputs	Whether this Output includes USPs
Output 1.1: National Disaster Risk Management (DRM) and forestry laws revised, with secondary acts and enforcement mechanisms to operationalize wildfire prevention and response, including ex-ante cost/benefit analyses to prioritize prevention over suppression. National coordination platforms established and linked under the Intergovernmental Economic Council to provide structured bilateral cooperation.	No
Output 1.2: Institutional mandates clarified, with coordination mechanisms established across emergency services, forest agencies, and local authorities.	No
Output 1.3: Armenia-Georgia MoU on forestry and wildfire management renewed and operationalized, including harmonized operating procedures and joint action plans, including cross-border SOPs for fires, pests and diseases.	No
Output 2.1: Fire danger forecasting systems updated/developed, operationalized and integrated with hydrometeorological and vegetation data.	No
Output 2.2: Preventive measures introduced, including pest and disease monitoring, coppice management, and recreational zoning in fire-prone areas, including hiking trails serving as firebreaks and pilots for residue-to-biofuel production.	Yes USP – location unknown
Output 2.3: National firefighting capacity strengthened through modernization of fleets, provision of protective gear and water storage solutions and supply systems, and establishment of regional training centers with cross-border drills and community led preparedness programs	Yes, USP - location unknown
Output 3.1: Interoperable Forest Management Information Systems developed in both countries, integrating UAV, sensor technologies, and satellite imaginary data with innovation accelerators/hackathons for apps, AI detection.	No
Output 3.2: Cross-border smoke and air quality monitoring networks established, linked to UNFCCC and NDC reporting.	No
Output 3.3: Standardized methodologies developed for assessing ecological and economic wildfire damages and systematic post-fire investigations for lessons-learned, guiding evidence-based recovery.	No
Output 3.4. Post-fire rehabilitation implemented, including soil stabilization, reforestation with climate-resilient species, and livelihood recovery through sustainable forestry and eco-tourism, including sustainable wood alternatives to reduce pressure on natural forests.	Yes USP - location unknown
Output 4.1: Women and youth trained and equipped to participate in community brigades, nurseries, and prevention campaigns.	No

Output 4.2: Gender-responsive behaviour-change campaigns implemented to reduce anthropogenic fire risks and promote community-based wildfire preparedness among farmers, tourists, and forest users, including unified campaign identity and geo-targeted hazard notifications.	No
Output 4.3: National wildfire management monitoring and evaluation frameworks updated to include gender- and age-disaggregated indicators and to facilitate equitable participation and benefit sharing based on gender and social inclusion analysis of wildfire risks.	No
Output 4.4: Communities in Armenia and Georgia, including women, youth, and marginalized groups, implement integrated wildfire prevention, preparedness, and recovery actions that strengthen resilience, enhance livelihoods, and reduce household losses	USP - grants

The design process of the supported activities through the project will involve targeted screenings which will combine the relevant UNDP Social and Environmental Screening criteria and the Adaptation Fund Environmental and Social Principles. Such screening will be used in the following project outputs and in any other activity that involves unidentified sub-projects whose location has not been identified yet and with potentially significant risks:

- Output 1.3: Armenia-Georgia MoU on forestry and wildfire management renewed and operationalized, including harmonized operating procedures and joint action plans, with cross-border SOPs for fires, pests and diseases.
- Output 2.2: Preventive measures introduced, including pest and disease monitoring, coppice management, and recreational zoning in fire-prone areas, including hiking trails serving as firebreaks and pilots for residue-to-biofuel production.
- Output 2.3: National firefighting capacity strengthened through modernization of fleets, provision of protective gear and water storage solutions and supply systems, and establishment of regional training centers with cross-border drills and community led preparedness programs
- Output 3.4. Post-fire rehabilitation implemented, including soil stabilization, reforestation with climate-resilient species, and livelihood recovery through sustainable forestry and eco-tourism, including sustainable wood alternatives to reduce pressure on natural forests.
- Output 4.1: Women and youth trained and equipped to participate in community brigades, nurseries, and prevention campaigns.
-

Output 4.4: Communities in Armenia and Georgia, including women, youth, and marginalized groups, implement integrated wildfire prevention, preparedness, and recovery actions that strengthen resilience, enhance livelihoods, and reduce household losses

The screening will use the following Social and Environmental Risks Screening framework, which may be further customised based on the nature of the proposed activities - i.e. the risks that may not be reasonably expected in the given activity do not have to considered.

Table 8. Social and Environmental Risks Screening Template for the Design of the Ssupported Activities

Social and Environmental Risks Screening	Y/N	Measures to be taken to avoid, minimize or offset these risks
Compliance with the Law:		

Is there a risk that the planned activity would not comply with all applicable domestic and international law?		
Access and Equity:		
Is there a risk that the planned activity would not provide fair and equitable access to benefits in a manner that is inclusive and does not impede access to basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions, and land rights?		
Is there a risk that the planned activity would exacerbate existing inequities, particularly concerning marginalized or vulnerable groups?		
Marginalized and Vulnerable Groups:		
Is there a risk that the planned activity would impose any disproportionate adverse impacts on marginalized and vulnerable groups, including children, women and girls, the elderly, indigenous people, tribal groups, displaced people, refugees, people living with disabilities, and people living with HIV/AIDS.		
Gender Equality and Women's Empowerment:		
Is there a risk that the planned activity would not be designed and implemented in such a way that both women and men have equal opportunities to participate and receive comparable social and economic benefits.		
Is there is risks that risks that the activity could include gender-based violence, including sexual exploitation and abuse of women and children? NB: relevant primariy for activities engaging women and youth volunteers.		
Core Labour Rights:		
Is there is risk that the planned activity would not meet the core labour standards as identified by the International Labor Organization?		
Protection of Natural Habitats:		
Is there a risk that the planned activity would involve unjustified conversion or degradation of critical natural habitats, including those that are (a) legally protected; (b) officially proposed for protection; (c) recognized by authoritative sources for their high conservation value, including as critical habitat; or (d) recognized as protected by traditional or indigenous local communities?		
Conservation of Biological Diversity:		
Is there a risk that the planned activity would cause any significant or unjustified reduction or loss of biological diversity or the introduction of known invasive species?		
Pollution Prevention and Resource Efficiency:		
Is there a risk that the planned activity would not be designed and implemented in a way that meets applicable international standards for maximizing energy efficiency and minimizing material resource use, the production of wastes, and the release of pollutants?		
Public Health:		
Is there a risk that the planned activity would not be designed and implemented in a way that avoids potentially significant negative impacts on public health?		
Physical and Cultural Heritage:		
Is there a risk that the planned activity would not be designed and implemented in a way that avoids the alteration, damage, or removal of any physical cultural resources, cultural sites,		

and sites with unique natural values recognized as such at the community, national, or international level?		
Lands and Soil Conservation:		
Is there a risk that the planned activity would not promote soil conservation and avoid degradation or conversion of productive lands or land that provides valuable ecosystem services?		

Where the screening of the fully defined project activities identifies potential social and environmental risks that could be categorized as Substantial or High Risk, these activities will be either redesigned to eliminate and/or minimize such risks or excluded from further consideration.

6.3 Environmental and social management guidelines for the supported projects

The above screening shall be supplemented with guidelines that will recap the core obligations for sound management of the social and environmental risks enshrined in the UNDP's Social and Environmental Standards for the project applicants and reviewers of the applications. The guidelines will be provided to the project staff and applicants for the project support and will stipulate the following basic obligations:

Compliance with the Law: All project-supported activities shall be required to fully comply with all applicable national law.

Access and Equity: The project shall be required to be designed to provide fair and equitable access to benefits in a manner that is inclusive for potentially affected populations, including marginalized individuals and persons with disabilities, and not exacerbate existing inequities, particularly with respect to marginalised or vulnerable people who live in extreme poverty or face disadvantage(s) that limit their choices and opportunities relative to others in society.

Marginalized and Vulnerable Groups: The project activities shall be required not to exacerbate existing inequities, particularly with respect to marginalized or vulnerable groups.

Gender Equality and Women's Empowerment: The project activities shall be required to be gender-responsive and not reinforce gender-based discrimination and/or inequalities. The supported actions will be expected to promote a meaningful and equitable participation of both women and men in decision-making about the supported activities, allow both genders obtain comparable social and economic benefits from the proposed actions, and support women to easily access them. The project will (where relevant) promote women-led initiatives. The planned engagement of women will include codes of conduct or other appropriate measures to prevent and protocols that respond to gender-based violence and sexual exploitation, abuse, or harassment. Additionally, the GRM that will pay careful attention to any (even indirect) indications of sexual exploitation, abuse, harassment (SEAH) risks.

Core Labour Rights: The supported organisations will be required to provide their workers with labour and working conditions that meet the national labour laws, including the following core labor-related requirements stipulated in the relevant key ILO conventions:

Provide project workers with clear and understandable information on terms and conditions of their employment (e.g. payment in a timely manner, written notice of termination, and payment of all wages and benefits on termination, etc.).

Prevent and address violence, harassment, intimidation, or exploitation, including any form of gender-based violence.

Ensure that workers engaged have appropriate health and social insurance.

In addition, training and pilot activities for fire management will adequately address occupational health and safety risks and:

- Follow appropriate safety protocols that prevent, so far as is reasonably practicable, risk of accidents or of adverse effects to workers' and public health

- Provide involved personnel with adequate personal protection equipment (PPE) and with introductory job-focused safety trainings, including on the proper use and maintenance of the PPE
- Make the first aid kits available and easily accessible in relevant sites.
- Record any health & safety and immediately report them to UNDP and the Project Board,
- Conduct regular contract and compliance reviews of these arrangements.

Protection of Natural Habitats: The supported actions shall be required to:

as far as possible, conduct the proposed activities in areas where natural habitats have already been converted to other land uses or that have low value for biodiversity and ecosystem services, and low sensitivity to the anticipated impacts,

keep interventions in natural and semi-natural habitats to minimum in order not to disturb the existing flora and fauna, degrade the habitat and resident species populations

not to cause measurable adverse impacts on biodiversity values/criteria that underpin designation of the relevant critical habitats (protected areas or areas planned for such designation),

where possible avoid interventions that would reduce ecological connectivity in the ecosystem (e.g. restricting the free movement of species between important habitats) or changes in the important ecosystem processes (e.g. hydrological regimes and nutrient flows) that support ecosystems and their services.

use cost-effective opportunities to enhance the existing habitats and ecosystem services as part of the proposed interventions.

Conservation of Biological Diversity: The supported actions shall be required to consider the presence of any endangered species and any potentially significant adverse impacts on their habitats, breeding grounds, free movement, and migration needs and will be optimised to ensure that they:

do not cause any reduction of any recognized Vulnerable, Endangered, or Critically Endangered species,

avoid adverse impacts on endemic species, restricted-range species, and migratory species, and minimize unwarranted impacts on resident species populations,

focus on maintaining native species and promoting ecologically sustainable restoration.

The supported reforestation, agroforestry, and fast-growing plantations shall be required to ensure that they:

- Avoid conversion of natural forests and critical habitats,
- Prioritize such interventions in already-modified or low-biodiversity areas;
- Maintain or enhance biodiversity and ecosystem functionality in areas where forest restoration is undertaken;
- Promote mixed-species or structurally diverse plantations rather than monocultures.
- Use native climate-resilient species with low vulnerability to climate change or more climate resilient species under the SSP3-7.0 or SSP5-8.5 scenario that are not invasive into new environments
- Give preference to small-scale community-level management approaches where they best reduce poverty in a sustainable manner

In addition, the coppice management activities shall be required to:

- Keep interventions in natural and semi-natural habitats to a minimum and avoid cutting in bio corridors, riparian buffer zones around watercourses, and steep or highly erodible slopes.
- Conduct, as far as possible, the cutting in areas where natural habitats have already been converted to other land uses or that have low value for biodiversity and ecosystem services, and low sensitivity to the anticipated impacts, in order not to disturb the existing flora and fauna, degrade the habitat and resident species populations.

- Prefer cutting rotation schedules that avoid breeding seasons of key species (based on local ecological calendars) and allow recovery of understory and associated fauna.
- Pro-actively eliminate any potential invasive alien species whenever possible, as part of the cutting operations.
- Promote coppice regeneration with mixed-species coppice systems (i.e. avoid conversion to single-species stands) and locally adapted species.
- Where possible, use light machinery or manual methods and contour-based harvesting, followed by erosion-control measures after cutting
- Train forestry workers on low-impact harvesting techniques.

The supported actions related to water storage shall be screened to ensure that they:

- Respect the needs of environmental flow regimes and
- Do not significantly alter them in ways that prevent water resources from fulfilling their functions for upstream and downstream ecosystems and their services to local communities.

Pollution Prevention and Resource Efficiency: The supported actions shall be required to avoid, minimize, and mitigate environmental and related public health risks associated with the potential release of pollutants in routine and non-routine circumstances in accordance with the national law and international best practices used in the region.

Where the risks of pollution release would arise, the project will:

require operators to conduct orientation training addressing relevant environmental and occupational health and safety issues prior commencement of the relevant operations,

conduct regular surveillance to avoid leaks, spills, incidents or accidents occurring during the use of equipment and during storage,

monitor, manage and remediate any chemical oil leaks or spills, and incidents/accidents occurring during the use of equipment and their effects, and undertake all necessary immediate actions to ensure they do not adversely affect water bodies/sources.

Where the risks of inadequate waste management would arise, the supported actions shall be required to:

reduce the generation of any generated waste

separate waste at the source (where possible)

reuse waste in a manner that is safe for human health and the environment.

transport all waste that cannot be reused to an appropriate waste recovery-or-treatment facility that appropriately controls its emissions and residues in accordance with the national law and international best practices used in the region.

Public Health: All project-supported constructions will be designed, implemented, and operated in accordance with the national law and will also respect the following UNDP requirements for construction process management:

have design and management plans which were: i) prepared by suitably qualified and experienced professionals who are certified for such design process, and ii) cleared by the competent authorities for construction process management. Low-risk designs will require at least a peer-review by qualified professionals.

be constructed and operated by the experienced contractor(s) having relevant certifications and permits for the relevant works,

implement preventive/protective measures to avoid/minimize the relevant health and safety risks for the construction workers and the surrounding communities based on the national law and international good practice, and

be before the beginning of their actual use/operation approved (and where needed certified) by either competent authorities or independent professionals not involved in their design and construction.

Where potential impacts on public health arise, the supported actions shall be required to:

adopt preventive measures and plans to address any identified risks in a manner commensurate with their potential impacts based on good practices and standards used by the international organizations working in the region,

prepare, implement, and monitor emergency preparedness plans in collaboration with stakeholders and relevant authorities, where relevant, and

require periodic safety inspections and monitoring, and report to UNDP should any issues be found.

Physical and Cultural Heritage: The supported actions shall be required to:

comply with the local requirements for their protection and preservation, and fully respect the requirements of the World Heritage Convention (if they might affect the World Heritage sites).

Lands and Soil Conservation: The supported actions shall be required to adopt appropriate measures to ensure that the supported activities promote soil conservation.

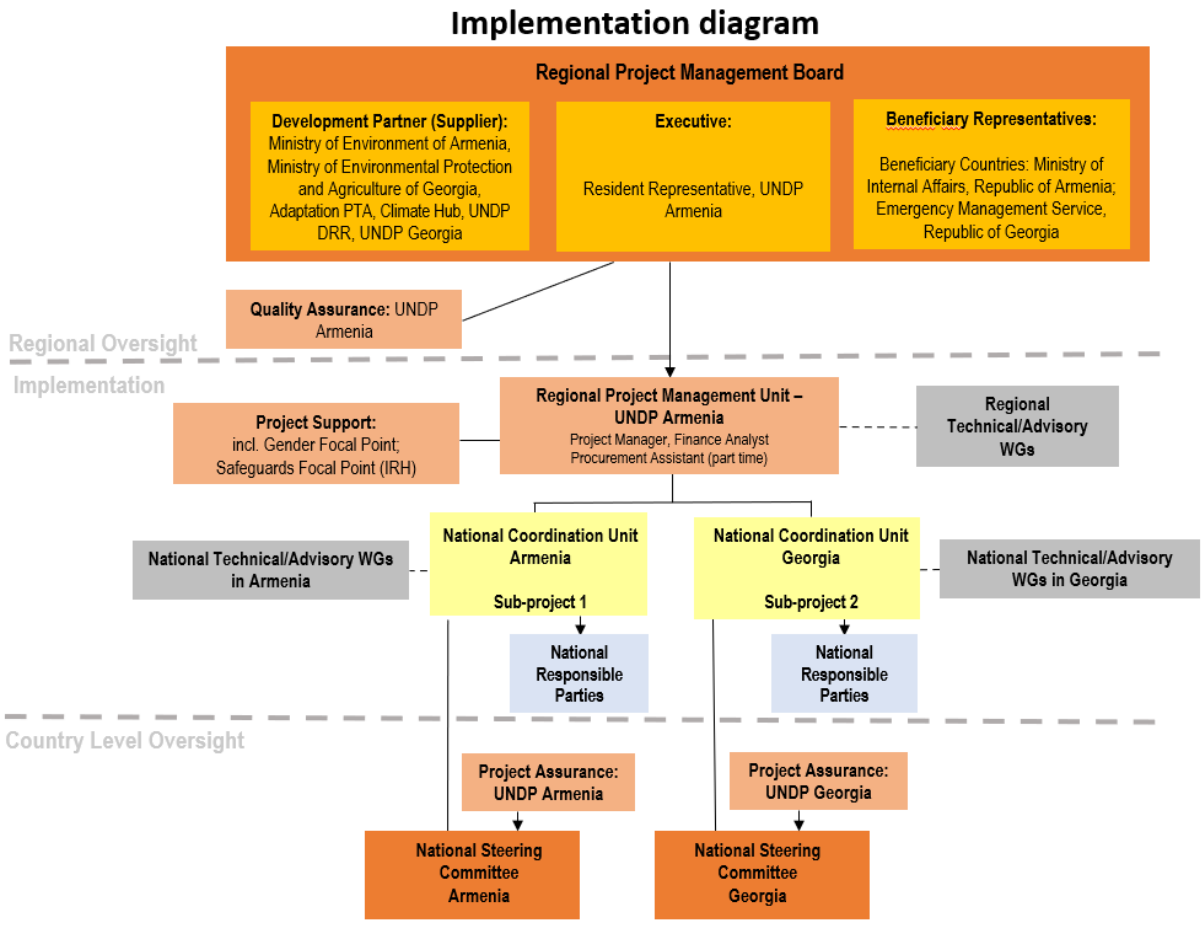
The above guidelines will be used as a reference during the review process of the specific project actions before their implementation.

Implementation and operation

This section gives a clear definition of roles and responsibilities of project staff and associated agencies in implementation of project activities and application of social and environmental procedures (e.g. screening, assessment, preparation of management plans, monitoring). Assess the particular institutional needs within the implementation framework for application of the ESMF, including a review of the authority and capability of institutions at different administrative levels (e.g. local, district, provincial/regional, and national), and their capacity to manage and monitor ESMF implementation. Where necessary, capacity building and technical assistance activities should be included to enable implementing agencies and involved institutions and stakeholders to implement the ESMF, including preparation, implementation and monitoring of specific social and environmental management plans/measures.

Below is an example of specified roles and responsibilities.

General Management Structure and Responsibilities



A high-level PMU structure is shown in the Figure above, with the key roles are discussed below.

Project Board

This regional project will be implemented in two countries through the multi-country project type modality as per UNDP Policies and Procedures. This modality will maximize the national ownership and leadership by the beneficiary governments and secure efficiency, effectiveness and accountability to joint results on equal terms. This multi-country project is considered a single project for the purposes of project management and has a unified project document that includes a joint results and resources framework describing interventions in each participating country. The suggested multi-pillar model for the Climate and Health Project is presented in the figure below and suggests the following project set-up:

(a) A Regional Coordination Project implemented through UNDP Direct Implementation Modality (DIM) by the UNDP Country Office in Armenia (Lead Office) according to the policies and procedures outlined in the UNDP Programme and Operations Policies and Procedures (POPP). UNDP Armenia will assume responsibility and accountability for the overall project coordination and management, including monitoring and evaluation of project interventions and reporting to Adaptation Fund.

(b) Two country sub-projects (child projects) implemented through national implementation modality (NIM) by the Ministry of Environment of Armenia and the Ministry of Environmental Protection and Agriculture of Georgia.

A Regional Project Board (RPB) will be established as the most senior, dedicated oversight body for the project to provide high-level oversight of the execution of the project and approval of strategic project execution decisions with a view to assess and manage risks, monitor and ensure the overall achievement of projected results and impacts and ensure long term sustainability of project execution. The Project Board is responsible for making, by consensus, management decisions when guidance is required by the Project Manager. The composition of the Project Board must include individuals assigned to the following three roles:

Project Executive: This is an individual who represents ownership of the project and chairs (or co-chairs) the Project Board. The Project Executive is: UNDP Resident Representative in Armenia.

Development Partners: Individuals or groups representing the interests of the parties concerned that provide funding, strategic guidance and/or technical expertise to the project. The Development Partners are: Ministry of Environment of Armenia; Ministry of Environmental Protection and Agriculture of Georgia; representatives of UNDP Istanbul Regional Hub, UNDP BPPS and UNDP Georgia CO.

Beneficiary Representative(s): Individuals or groups representing the interests of those groups of stakeholders who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. The Beneficiary representatives are: Ministry of Internal Affairs of Armenia, Emergency Management Service of Georgia.

The National Steering Committees (NSC) in the two beneficiary countries will be established to oversee and guide project implementation at the country level, including implementation of forest fire management and community engagement activities at the national and local levels.

In line with UNDP's standard Terms of Reference for Project Boards, the Project Board will also review and endorse key project instruments, including the Environmental and Social Management Framework (ESMF), and guide the Project Management Unit on adaptive management actions to address implementation challenges and safeguard compliance across both countries.

6.1.2 Project Management Unit and Project Manager

The Regional Project will be implemented under the UNDP Regional Programme Document for Europe and the CIS (2026–2029) through the Direct Implementation Modality (DIM), managed by UNDP via its Country Offices in Armenia and Georgia, with overall technical guidance from the UNDP Istanbul Regional Hub. This structure ensures coherent technical oversight, transparent financial administration, and efficient coordination of regional and national activities.

A Regional Project Management Unit (PMU) will be established and hosted within UNDP Armenia Country Offices to facilitate day-to-day management, coordination, and liaison with both governments and implementing partners. The day-to-day administration will be carried out by a Regional Project Manager (PM) and Project Assistant (PA), who will be located within the UNDP Armenia and by the National Coordinator (NC) for Georgia based at UNDP Tbilisi. The RPM will, with the support of the PA and NC, will run the project on a day-to-day basis on behalf of the Regional Project Board within the constraints laid down by the Project Board. The Project Manager function will end when the final project terminal evaluation report and other documentation required by the Adaptation Fund and UNDP have been completed and submitted to UNDP. The Project Manager's prime responsibility is 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. The Project Manager's responsibilities include ensuring timely implementation of activities, maintaining high-quality technical outputs, managing risks, and ensuring compliance with UNDP's Social and Environmental Standards (SES) and the project's Environmental and Social Management Framework (ESMF). The Project Manager will also oversee the implementation of environmental and social risk mitigation measures, monitor safeguard performance, and ensure that gender and inclusion considerations are systematically applied throughout project execution.

Project assurance. The 'project assurance' function of UNDP is to support the Regional Project Board by carrying out objective and independent project oversight and monitoring functions. Project assurance has to be independent of the Project Manager; therefore, the Project Board cannot delegate any of its assurance responsibilities to the Project Manager. UNDP Armenia will monitor the overall project implementation and achievement of the project outcomes/outputs and ensure the efficient use of donor funds. UNDP IRH will support Project Assurance.

Capacity Building and Training

Delivery organisations (e.g. contractors, NGOs) have the responsibility for ensuring systems are in place so that relevant employees, contractors and other workers are aware of the environmental and social requirements for project implementation that have been agreed during the review of the project applications,

Grievance Redress Mechanism

During the design, construction and implementation of any project, a person or group of people may perceive or experience potential harm, directly or indirectly due to the project activities. The grievances that may arise can be related to social issues such as eligibility criteria and entitlements, disruption of services, temporary or permanent loss of livelihoods and other social and cultural issues. Grievances may also be related to environmental issues such as excessive dust generation, damages to infrastructure due to construction related vibrations or transportation of raw material, noise, traffic congestions, decrease in quality or quantity of private/ public surface/ ground water resources during irrigation rehabilitation, damage to home gardens and agricultural lands, etc.

Should such a situation arise, there must be a mechanism through which affected parties can resolve such issues in a cordial manner with the project personnel in an efficient, unbiased, transparent, timely and cost-effective manner. To achieve this objective, a Grievance Redress Mechanism has been included in the ESMF for this project.

The Grievance Redress Mechanism has been designed to:

be a legitimate process that allows for trust to be built between stakeholder groups and assures stakeholders that their concerns will be assessed in a fair and transparent manner;

allow simple and streamlined access to the Grievance Redress Mechanism for all stakeholders and provide adequate assistance for those that may have faced barriers in the past to be able to raise their concerns;

provide clear and known procedures for each stage of the Grievance Redress Mechanism process, and provides clarity on the types of outcomes available to individuals and groups;

ensure equitable treatment to all concerned and aggrieved individuals and groups through a consistent, formal approach that, is fair, informed and respectful to a concern, complaints and/or grievances;

to provide a transparent approach, by keeping any aggrieved individual/group informed of the progress of their complaint, the information that was used when assessing their complaint and information about the mechanisms that will be used to address it; and

enable continuous learning and improvements to the Grievance Redress Mechanism. Through continued assessment, the learnings may reduce potential complaints and grievances.

The GRM will be gender- and age-inclusive and responsive and address potential access barriers to women, the elderly, the disabled, youth and other potentially marginalized groups as appropriate to the Project. The GRM will not impede access to judicial or administrative remedies as may be relevant or applicable and will be readily accessible to all stakeholders at no cost and without retribution.

Information about the Grievance Redress Mechanism and how to make a complaint and/or grievance must be communicated during the stakeholder engagement process and placed at prominent places for the information of the key stakeholders.

UNDP SRM and SECU

In addition to the project-level and national grievance redress mechanisms, complainants have the option to access UNDP's Accountability Mechanism, with both compliance and grievance functions. The Social and Environmental Compliance Unit investigates allegations that UNDP's Standards, screening procedure or other UNDP social and environmental commitments are not being implemented adequately, and that harm may result to people or the environment. The Social and Environmental Compliance Unit is housed in the Office of Audit and Investigations, and managed by a Lead Compliance Officer. A compliance review is available to any community or individual with concerns about the impacts of a UNDP programme or project. The Social and Environmental Compliance Unit is mandated to independently and impartially investigate valid requests from locally impacted people, and to report its findings and recommendations publicly.

The Stakeholder Response Mechanism offers locally affected people an opportunity to work with other stakeholders to resolve concerns, complaints and/or grievances about the social and environmental impacts of a UNDP project. Stakeholder Response Mechanism is intended to supplement the proactive stakeholder engagement that is required of UNDP and its Implementing Partners throughout the project cycle. Communities and individuals may request a Stakeholder Response Mechanism process when they have used standard channels for project management and quality assurance, and are not satisfied with the response (in this case the project level grievance redress mechanism). When a valid Stakeholder Response Mechanism request is submitted, UNDP focal points at country, regional and headquarters levels will work with concerned stakeholders and Implementing Partners to address and resolve the concerns. Visit www.undp.org/secu-srm for more details. The relevant form is attached at the end of the ESMF.

Budget for ESMF Implementation

A budget has been prepared for the implementation of the ESMF as follows:

Table 9. ESMF Implementation Budget

Budget Account Description	Description	Indicative Cost in USD (For Y1-Y5)
Regional Project Manager, National Coordinator – Georgia	Responsible for overseeing implementation of the ESMF and required environmental and social risk management actions	$260,000
Regional Gender specialist	Support/guide the integration of gender considerations into all project activities, ensuring alignment with the ESMF and promoting gender-responsive and inclusive outcomes.	$65,000
National Gender and Safeguards specialists	Provide guidance and backstop support to the MEL Analyst/Specialist and Regional Project Manager on gender mainstreaming and environmental and social safeguards to ensure project compliance with the GAAP, ESMF, mitigating risks and enhancing positive impacts.	$165,000
M&E Specialist	Develop and implement monitoring, evaluation, and learning systems that capture environmental and social performance in line with the ESMF, including safeguards and gender indicators.	
Audit costs	Cover the costs of financial and compliance audits, including verification of expenditures related to ESMF activities and safeguards.	$50,000
Total		**$540,000**

Annex 4. Gender Assessment and Action Plan

Increased climate resilience of South Caucasus mountain communities and ecosystems through wildfire risk reduction

I. Introduction

This document supports the regional project “Increased climate resilience of South Caucasus mountain communities and ecosystems through wildfire risk reduction”, implemented by UNDP in Armenia and Georgia with Adaptation Fund financing. It aims to ensure that gender equality and women’s empowerment are integrated across all stages of project design and implementation, in line with the Adaptation Fund’s Gender Policy (2021).

The assessment analyzes how women and men are differently affected by climate-induced wildfire risks and how social, economic, and institutional factors shape their adaptive capacity. It highlights that women – particularly in rural and mountain areas – face structural barriers to participation in decision-making, access to resources, and climate-resilient livelihoods, yet play critical roles in forest stewardship, community safety, and household adaptation.

Developed through a desk review of national gender policies, adaptation frameworks, and consultations with stakeholders in both countries, the assessment adopts a human-rights and intersectional lens. It identifies entry points for promoting women’s leadership, equitable benefit-sharing, and gender-responsive planning in wildfire prevention, preparedness, response, and recovery.

The accompanying Action Plan translates these findings into targeted measures and indicators to ensure that project interventions contribute to more inclusive, participatory, and resilient communities – advancing both gender equality and climate adaptation goals across the South Caucasus.

Scope of the Gender Assessment

The Gender Assessment examines gender-based vulnerabilities, capacities, and opportunities related to climate-induced wildfire risks in Armenia and Georgia. It focuses on understanding how women, men, and diverse social groups – including youth, persons with disabilities, ethnic minorities, and those living in remote rural areas – experience and respond to climate impacts in different and intersecting ways.

The assessment reviews gender inequalities in access to information, resources, technologies, and decision-making within forest, emergency, and natural resource management sectors. It analyzes the enabling and constraining factors for women’s participation in wildfire prevention, preparedness, and response, as well as in alternative livelihood initiatives supported by the project.

It also considers the alignment of national gender equality frameworks and climate policies with the Adaptation Fund’s Gender Policy, identifying institutional gaps and opportunities for mainstreaming gender across governance, capacity building, and community-level interventions. The findings inform the project’s Gender Action Plan, ensuring that all components and outcomes actively promote gender equality, enhance women’s leadership, and strengthen the resilience of vulnerable groups to the growing risks of wildfires in the South Caucasus.

II. Gender equality and social inclusion in the South Caucasus: Armenia and Georgia

Armenia and Georgia share strong legal and institutional commitments to gender equality, yet persistent socio-economic and cultural disparities continue to shape women's and men's roles in society and their access to opportunities. Both countries have made notable progress in aligning with international conventions such as CEDAW and the Beijing Platform for Action, and have integrated gender considerations into national development and climate policies. However, implementation gaps, weak institutional capacity, and entrenched social norms still limit the translation of these commitments into practice, particularly in rural and climate-sensitive sectors.

This section provides an overview of gender equality and social inclusion trends across key dimensions that influence adaptive capacity and participation in climate action. It examines the status of women and men through the Gender Inequality Index, highlighting regional disparities and development patterns; explores gender gaps in labour force participation and employment, and structural barriers in entrepreneurship and access to resources; and reviews progress in education, skills, and STEM fields relevant to innovation and resilience.

Further, it analyzes disparities in access to information, technology, and climate finance, representation in decision-making, and the influence of gender roles, unpaid care work, and social norms on adaptive behaviour. Together, these subsections present a comprehensive picture of gendered vulnerabilities and capacities in Armenia and Georgia, forming the basis for targeted actions to strengthen equality and inclusion within the project's wildfire resilience framework.

Gender Inequality Index

Both Armenia and Georgia are classified as upper-middle-income countries with relatively high human development, yet persistent gender disparities continue to affect economic participation, representation, and empowerment. According to the UNDP Human Development Report (2024), Armenia ranks 66th globally on the Gender Inequality Index (GII) with a value of 0.239, while Georgia ranks 57th with a value of 0.198. These scores reflect progress in education and health but underline continued challenges in women's political representation, labour market participation, and access to economic resources.

In both countries, women achieve near parity with men in secondary and tertiary education and exhibit high literacy rates. However, these achievements are not yet reflected in leadership roles or labour market outcomes. Women remain underrepresented in national and local decision-making structures, with only about one-third of parliamentary seats held by women in both countries, and fewer than 20 percent of senior civil service positions.

The Gender Development Index (GDI) shows similar patterns: Armenia's value of 0.973 and Georgia's 0.978 indicate overall parity in basic human development but mask sectoral inequalities, particularly in access to income and employment.

These indices highlight that while legal and policy frameworks on gender equality are well established, socio-economic structures and cultural norms continue to limit the full realization of women's rights and potential. Understanding these patterns is essential for integrating gender-responsive measures into the project's design, ensuring that wildfire resilience initiatives benefit women and men equitably and address underlying systemic inequalities.

Labour force participation and Employment

Gender gaps in labour force participation and employment remain significant in both Armenia and Georgia, reflecting enduring structural and cultural barriers that restrict

women's economic engagement – particularly in rural and mountainous regions where climate vulnerability is highest.

In Armenia, women's labour force participation is around 52%, compared to 72% for men (2024, World Bank). Female employment is concentrated in lower-paid sectors such as education, health care, and social services, while men dominate construction, transport, and energy – sectors that often benefit more directly from public investments. Rural women are heavily engaged in unpaid agricultural work and family farming, often without formal contracts or social protection. This limits their eligibility for state support, credit, or training programmes linked to climate adaptation and sustainable forestry.

In Georgia, the gender gap is similarly pronounced, with women's participation at about 55% versus 69% for men (Geostat, 2024). Women are overrepresented in informal employment and face higher unemployment rates in rural and highland areas. Despite equal access to education, their transition to the formal labour market remains constrained by limited childcare services, mobility challenges, and persistent gender norms regarding household responsibilities.

Across both countries, the lack of gender-sensitive employment policies and limited access to professional training in climate-smart, forest-based, and emergency response sectors reduce women's participation in the green and resilience economy. Addressing these disparities – through targeted skills development, inclusive recruitment, and support for women's participation in forestry, firefighting, and environmental management – will be key for ensuring equitable benefits from wildfire resilience investments in the South Caucasus.

Entrepreneurship and Access to Resources

Women's entrepreneurship in Armenia and Georgia has expanded gradually over the past decade, yet women-owned enterprises remain a small share of the overall business landscape and face persistent structural barriers. Across both countries, women tend to operate smaller, lower-capital businesses concentrated in services, education, trade, or hospitality, while men dominate higher-value sectors such as construction, energy, and information technology.

In Armenia, only about one in four registered enterprises has at least one woman among its owners, and women account for less than 20% of senior business managers (Statistical Committee of Armenia, 2024). Limited property ownership and collateral restrict access to bank credit and investment. Rural women often engage in informal or subsistence entrepreneurship – such as food processing, handicrafts, or ecotourism – but lack the financial literacy, business networks, and institutional support to expand these activities.

In Georgia, women lead approximately 30% of micro- and small enterprises, but their participation declines sharply among medium and large firms. Access to finance remains a major obstacle: only 64% of women have a bank account compared to 78% of men, and fewer than 10% of business loans are issued to women entrepreneurs (National Bank of Georgia, 2023). Women are also underrepresented in agricultural cooperatives and producer groups, limiting their ability to benefit from state or donor-supported grant schemes.

Both countries have introduced targeted initiatives – such as women's entrepreneurship funds, innovation grants, and rural credit lines – but uptake remains modest due to limited outreach and gender-blind eligibility criteria. Strengthening women's access to land, finance, training, and digital tools is therefore essential to enable their meaningful participation in the emerging climate-resilient and green

economy, and to ensure equitable benefits from adaptation and wildfire-risk reduction investments.

Education, skills and STEM

Armenia and Georgia have achieved near gender parity in education, with women attaining higher enrollment and completion rates than men at secondary and tertiary levels. However, horizontal segregation by field of study persists, limiting women's entry into science, technology, engineering, and mathematics (STEM) – disciplines critical for climate innovation, environmental management, and wildfire resilience.

In Armenia, women represent more than 58% of university graduates, yet only about 30% of students in engineering and ICT fields are female (Armstat, 2024). Women remain concentrated in education, health, and social sciences, which offer lower wages and fewer opportunities in green or digital sectors. Skills mismatches and limited exposure to applied science and technology constrain women's participation in technical roles such as forest management, environmental monitoring, and disaster response.

In Georgia, women account for roughly 55% of tertiary graduates, but under 35% of graduates in STEM disciplines. Although the national education system promotes equal access, gender stereotypes influence career choices from early schooling onward. Women are well represented in academic and research institutions but remain underrepresented in technical professions and leadership positions within forestry, hydrometeorology, and emergency management agencies.

Across both countries, vocational training and workforce development programs rarely address gender barriers in emerging green sectors. Expanding gender-responsive technical education – particularly in environmental engineering, GIS, remote sensing, and renewable energy – will help unlock women's potential as agents of climate adaptation and innovation, ensuring their stronger participation in the wildfire-resilient economy of the South Caucasus.

Access to Information, Technology, and Climate Finance

Access to timely information, technology, and finance is essential for effective climate adaptation and wildfire resilience, yet significant gender gaps persist in both Armenia and Georgia. Women – especially in rural and mountainous areas – often have limited access to digital tools, early warning systems, and financial services, constraining their ability to anticipate, respond to, and recover from climate-related shocks.

In Armenia, digital inclusion remains uneven: while over 80% of urban women use the internet regularly, this rate drops to less than 50% in rural areas (Armstat, 2024). Women farmers and community members often lack access to meteorological data, mobile applications, or online platforms that provide information on fire risks or adaptation opportunities.

Similarly, financial inclusion gaps remain wide – only about 37% of women report having access to formal credit, compared with 55% of men, limiting women's capacity to invest in climate-smart livelihoods or small-scale enterprises.

In Georgia, similar patterns prevail. Although national broadband coverage has improved, digital literacy among rural women remains low, and participation in innovation or technology-oriented initiatives is limited. Access to climate finance – through green credit lines, agricultural subsidies, or donor grants – tends to favour male landowners and formal entrepreneurs. Women's limited property ownership and collateral eligibility further restrict their ability to obtain loans for renewable energy, agroforestry, or resilience-oriented investments.

Bridging these gaps requires gender-responsive outreach, tailored digital literacy programs, and equitable access criteria for public and private financing schemes.

Integrating women into community-based early warning systems, participatory monitoring, and digital wildfire management platforms will ensure that both women and men benefit from the project's technological and financial innovations, strengthening inclusive climate resilience across the South Caucasus.

Representation in Decision-Making

Despite steady policy progress toward gender equality, women remain underrepresented in decision-making positions across all governance levels in Armenia and Georgia – particularly within environmental, forestry, and emergency management institutions that are central to climate adaptation and wildfire resilience.

In Armenia, women hold about one-third of parliamentary seats (35%), and roughly 28% of senior civil service positions, yet their presence in local governance and natural resource management remains limited. Only a small share of mayors, community heads, and forestry officials are women, reflecting persistent gender stereotypes that portray environmental management and disaster response as male-dominated domains.

Within forest enterprises and firefighting structures, women's participation rarely exceeds 10–15%, and is mostly in administrative or support roles rather than operational or leadership positions.

In Georgia, women occupy around 23% of parliamentary seats and fewer than 20% of leadership roles in ministries and local governments. Participation in municipal councils and community-based organizations is higher but often informal or advisory. In forestry, hydrometeorological, and emergency agencies, technical and managerial positions remain overwhelmingly male. Although the Law on Gender Equality (2010) and municipal gender councils provide formal mechanisms for women's participation, their influence on environmental and climate decision-making is still limited.

Enhancing women's leadership in climate governance is crucial for equitable and effective adaptation. The project will therefore promote women's participation in wildfire management committees, community forest user groups, and regional coordination bodies. Strengthening institutional gender focal points and supporting mentorship and leadership programs will help ensure that women's perspectives shape climate and disaster risk policies, advancing inclusive governance across the South Caucasus.

Gender Roles, Care Work, and Social Norms

Deeply rooted social norms in Armenia and Georgia continue to shape gender roles, influencing household responsibilities, labour division, and participation in public life. While both societies have made progress toward gender equality in education and legislation, traditional expectations of women as primary caregivers and men as household providers remain pervasive, particularly in rural and mountainous communities where climate impacts are most acute.

Women typically bear a disproportionate share of unpaid domestic and care work – ranging from child and elder care to food preparation, fuelwood collection, and management of household resources. In Armenia, women spend on average four times more hours per day on unpaid care work than men (Armstat, 2023), and similar patterns are observed in Georgia. This unequal distribution of time and responsibilities constrains women's ability to engage in paid employment, training, community initiatives, and decision-making processes related to climate adaptation and wildfire management.

Social norms also influence perceptions of risk, leadership, and mobility. Men are more likely to be involved in outdoor and technical activities, such as firefighting, forest work, or emergency response, while women's roles in environmental management are often

informal and undervalued – focused on household resilience, caregiving during disasters, and the stewardship of community resources. These gendered expectations can perpetuate vulnerability by excluding women from formal climate response systems and limiting their access to information and resources.
Addressing these inequalities requires not only policy reforms but also cultural and behavioural change. Integrating gender awareness and social norm transformation into community outreach, training, and media campaigns will be key to recognizing and valuing women's contributions, redistributing care responsibilities, and promoting shared leadership in climate and wildfire resilience efforts across the South Caucasus.

III. Mechanisms to address gender inequality in Armenia and Georgia - legal and administrative framework

Both Armenia and Georgia have established comprehensive legal and institutional mechanisms to promote gender equality and ensure compliance with international commitments, including the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and the Beijing Platform for Action. While these frameworks provide a solid foundation, their practical implementation – especially within environmental and climate governance – remains uneven.
In Armenia, gender equality is guaranteed under the Constitution (2015) and the Law on Equal Rights and Equal Opportunities for Women and Men (2013). The Council on Women's Affairs, chaired by the Deputy Prime Minister, coordinates national gender policy, while the Ministry of Labour and Social Affairs serves as the lead institution for gender equality.
Armenia has adopted several strategic frameworks, including the Gender Equality Strategy 2019–2023 and the National Human Rights Strategy, which integrate gender considerations into social and economic development. Gender focal points are designated in all ministries, but their influence on climate and environmental decision-making is still limited, with few dedicated budgets or coordination mechanisms.
In Georgia, the Law on Gender Equality (2010), the Law on Elimination of Domestic Violence (2006), and the Gender Equality Strategy 2022–2024 provide the legal basis for mainstreaming gender across governance systems. The Gender Equality Council of the Parliament of Georgia oversees implementation, while line ministries have gender focal points responsible for integrating equality principles into sectoral programs. The country has also adopted Gender-Responsive Budgeting (GRB) at the national level, a practice that offers valuable lessons for linking gender outcomes with resource allocation.
Both countries have institutional frameworks to advance women's empowerment, yet their application to climate change adaptation, forestry, and disaster risk reduction remains nascent. Strengthening coordination between gender institutions and environmental authorities, building capacity for gender analysis in technical sectors, and embedding gender targets within national adaptation plans and budgeting processes are essential to ensure that climate resilience policies benefit women and men equally.

IV. Gender and social inclusion in the context of Climate Change and Innovation

Climate change affects women, men, and socially diverse groups in different ways, reinforcing pre-existing inequalities while also opening new opportunities for transformation. In the South Caucasus, where ecosystems and livelihoods are highly climate-sensitive, gender and social inclusion are critical dimensions of resilience. The interplay between environmental stress, economic transition, and social norms shapes

how individuals experience risks, access resources, and participate in adaptation and innovation processes.

This section explores how gender and social factors influence vulnerability and adaptive capacity in Armenia and Georgia, highlighting three interrelated dimensions. The first subsection, “Differentiated Impact on Women and Men,” examines how gender roles and livelihood patterns lead to unequal exposure to climate hazards, including wildfires, droughts, and resource scarcity.

The second, “Vulnerabilities of Target Groups,” focuses on the compounded disadvantages faced by rural women, youth, ethnic minorities, and persons with disabilities, whose exclusion from decision-making and financial systems heightens climate risks. The final subsection, “Women as Agents of Change,” emphasizes women’s leadership, traditional knowledge, and innovation potential in advancing sustainable forest management, ecosystem restoration, and climate-smart livelihoods.

Together, these analyses underscore that gender equality and social inclusion are not only moral imperatives but also practical enablers of effective climate adaptation. By integrating inclusive approaches and supporting women’s agency, Armenia and Georgia can accelerate innovation and build more equitable, resilient, and sustainable societies in the face of growing climate challenges.

Differentiated impact on Women and Men

Climate change and its associated hazards – particularly wildfires, droughts, and land degradation – affect women and men in Armenia and Georgia in distinct ways, shaped by social roles, economic responsibilities, and access to resources. While both face increased livelihood insecurity and environmental stress, women often experience greater vulnerability due to structural inequalities in land ownership, employment, and participation in decision-making.

In rural and mountain areas, men are more likely to migrate seasonally for work, leaving women to manage households, agriculture, and livestock under increasingly unpredictable climatic conditions. This “feminization of rural labour” increases women’s workload and exposure to resource scarcity, while limiting time for income generation or participation in training and community initiatives. Women’s dependence on natural resources – such as forest products, water, and fuelwood – makes them more directly affected by forest degradation, wildfire damage, and loss of biodiversity.

Conversely, men are disproportionately represented in high-risk occupations such as firefighting, forest operations, and emergency response, where exposure to physical danger and heat stress is increasing with climate change. However, men’s greater access to information, mobility, and institutional networks often enables faster recovery from shocks, highlighting a gendered asymmetry in adaptive capacity.

These differentiated impacts underline the importance of designing wildfire-resilience and adaptation measures that address gender-specific needs and strengths. Ensuring women’s equal access to early warning systems, sustainable energy alternatives, and recovery finance, while promoting men’s engagement in household resilience and care

roles, will help build a more inclusive and balanced response to climate risks across the South Caucasus.

Vulnerabilities of target groups

Climate change and ecosystem degradation in the South Caucasus disproportionately affect specific social groups whose exposure and adaptive capacity are shaped by gender, geography, and socio-economic status. In both Armenia and Georgia, rural women, youth, elderly people, persons with disabilities, and ethnic minorities face overlapping vulnerabilities that constrain their ability to anticipate, cope with, and recover from climate-induced shocks, including wildfires and droughts.

In Armenia, vulnerability is closely linked to the country's mountainous geography, rural isolation, and high dependency on natural resources. Rural women bear much of the burden of agricultural and household labour – particularly in marzes such as Syunik, Tavush, and Lori – where poverty rates are higher and access to public services is limited. Women are heavily engaged in small-scale farming and forest use (collection of fuelwood, mushrooms, and non-timber products) but often lack land ownership and legal documentation, restricting their eligibility for agricultural or forestry subsidies. Climate-related droughts and fires directly threaten these livelihoods, exacerbating economic insecurity.

Elderly and widowed women, especially those in remote settlements, are among the most vulnerable to fuel shortages and heat stress, as they depend on biomass for heating and cooking. Youth face limited employment and training opportunities in green sectors, leading to rural outmigration and the erosion of community resilience. Persons with disabilities are largely excluded from emergency preparedness systems and lack access to tailored early-warning information. Ethnic minorities, including Yezidi and Assyrian communities in the Ararat and Aragatsotn regions, experience language and mobility barriers that reduce participation in adaptation initiatives.

In Georgia, the pattern of vulnerability reflects pronounced urban–rural and east–west divides. Rural women in mountainous areas such as Kakheti, Samtskhe-Javakheti, and Racha-Lechkhumi are particularly exposed to wildfires, drought, and declining soil fertility. They perform multiple roles as household managers, agricultural workers, and caregivers, yet have limited voice in local decision-making bodies. Women's participation in forest user associations and community councils remains low, and property registration gaps reduce their access to loans and agricultural extension services.

Youth in rural and highland regions face high unemployment and limited vocational training opportunities related to climate-smart agriculture or forestry, prompting outmigration and demographic decline. Ethnic minorities, including Armenian, Azerbaijani, and other groups concentrated in border regions, often lack proficiency in the state language, which restricts their access to public information, education, and environmental programs. Persons with disabilities and the elderly, especially in sparsely populated villages, are frequently overlooked in disaster preparedness and evacuation planning, despite being among the most affected by extreme heat and isolation during wildfire events.

Across both countries, social exclusion, gender norms, and limited institutional outreach reinforce these vulnerabilities. Addressing them requires context-specific inclusion strategies – such as integrating gender and disability considerations into local risk assessments, strengthening rural service delivery, and ensuring representation of marginalized groups in project planning and monitoring. By prioritizing these populations, the project can promote equitable participation and deliver more sustainable and socially just climate resilience outcomes across the South Caucasus.

Women as agents of change

Women across Armenia and Georgia play pivotal yet often underrecognized roles in advancing climate resilience, sustainable livelihoods, and community-based innovation. Beyond their traditional caregiving responsibilities, women are central to managing household resources, sustaining agricultural production, and maintaining social cohesion – functions that are indispensable to adaptation in rural and forest-dependent communities. Strengthening women's agency and leadership is therefore essential not only for gender equality but also for achieving effective, locally owned climate action.

In Armenia, women are increasingly visible as community organizers, educators, and entrepreneurs in sustainable agriculture, ecotourism, and forest restoration. Civil society networks and women-led cooperatives – particularly in regions such as Tavush, Lori, and Vayots Dzor – have demonstrated strong potential to link traditional ecological knowledge with modern practices like climate-smart irrigation, agroforestry, and fuelwood alternatives.

Women also play key roles in managing protected areas and environmental NGOs, including biodiversity monitoring, public awareness, and environmental education initiatives. However, their participation in formal decision-making structures, such as forestry enterprises, emergency services, and municipal councils, remains limited, highlighting the need for more targeted leadership support and institutional recognition.

In Georgia, women's leadership in rural development and environmental protection is gaining momentum, particularly through grassroots organizations and cooperatives engaged in sustainable farming, beekeeping, and eco-tourism in regions such as Kakheti and Samtskhe-Javakheti. Women have proven to be effective communicators in wildfire prevention campaigns and champions of household-level adaptation measures, including the adoption of energy-efficient technologies and water-saving practices. At the policy level, women's engagement in academia and civil society has influenced national debates on biodiversity conservation, forest reform, and gender mainstreaming in environmental governance.

Harnessing this potential requires removing institutional and cultural barriers that limit women's participation in innovation and leadership. The project will therefore promote gender-responsive capacity building, support women's access to climate finance and technology, and establish platforms for women's participation in wildfire management, community planning, and green entrepreneurship. By positioning women as agents of change, Armenia and Georgia can accelerate a more inclusive and transformative adaptation agenda – one that combines equity, innovation, and resilience for the benefit of all.

V. Gender analysis and recommendations

Building on the preceding assessment, this section translates the identified gender

gaps and opportunities into actionable guidance for ensuring that the project *"Increased climate resilience of South Caucasus mountain communities and ecosystems through wildfire risk reduction"* effectively advances gender equality and social inclusion across its design, implementation, and monitoring processes. The analysis aligns with the Adaptation Fund Gender Policy (2021) and UNDP's Gender Equality Strategy (2022–2025), emphasizing a results-based, participatory, and rights-based approach to climate adaptation.

The recommendations are structured around four key dimensions that determine the gender responsiveness of the project. The first subsection, "Project Design and Implementation," identifies entry points to mainstream gender considerations into policies, activities, budgets, and institutional arrangements – ensuring that both women and men benefit equitably from investments in wildfire prevention, preparedness, and recovery. The second, "Stakeholder Engagement," outlines mechanisms for inclusive participation, emphasizing the role of women's organizations, community leaders, and underrepresented groups in decision-making and capacity-building processes.

The third subsection, "Monitoring and Evaluation," proposes gender-sensitive indicators, outcome targets, and accountability mechanisms to track progress and measure gender impacts across project outcomes. Finally, "Data Collection and Monitoring" provides guidance on establishing sex-disaggregated baselines, integrating gender analysis into reporting systems, and strengthening institutional capacity for evidence-based decision-making.

Together, these recommendations aim to ensure that gender equality is embedded as a cross-cutting principle throughout the project cycle – transforming the way climate resilience, innovation, and social inclusion are operationalized in Armenia and Georgia.

Project design and implementation

Integrating gender equality into project design and implementation is central to ensuring that climate adaptation efforts in Armenia and Georgia are effective, equitable, and sustainable. The project "Increased climate resilience of South Caucasus mountain communities and ecosystems through wildfire risk reduction" has been designed to address the differentiated needs, priorities, and capacities of women and men while promoting inclusive participation in all stages of wildfire management – from prevention and preparedness to response and recovery.

In both countries, the project will ensure that gender considerations are embedded across all four components. During implementation, women's participation will be prioritized in community fire prevention groups, training programs, and employment opportunities related to forest restoration, fuel management, and alternative livelihood development. Project-supported infrastructure and technology investments – such as early warning systems and fire response equipment – will be designed and deployed in ways that enhance accessibility, safety, and benefits for women and marginalized groups.

Institutionally, gender focal points within implementing and executing entities will support the systematic integration of gender-responsive planning and budgeting, ensuring that all activities contribute to measurable equality outcomes. Partnerships with women's organizations, local NGOs, and community-based groups will help identify practical barriers and co-develop solutions that reflect local realities, including the constraints faced by rural women, youth, and vulnerable households.

Furthermore, project implementation modalities will emphasize equal access to decision-making, information, and financial resources. Gender-responsive

procurement, equitable benefit-sharing mechanisms, and inclusive communication strategies will be applied to prevent the reinforcement of existing inequalities. By operationalizing these principles throughout the implementation process, the project will not only build wildfire resilience but also contribute to the long-term empowerment of women and the institutionalization of gender equality in environmental governance across the South Caucasus.

Stakeholder engagement

Inclusive and participatory stakeholder engagement is essential to ensure that project outcomes on wildfire risk reduction and climate resilience are gender-responsive and socially equitable. The project's engagement strategy in Armenia and Georgia is designed to empower women, youth, and vulnerable groups as active contributors – rather than passive beneficiaries – of adaptation planning and implementation.

At the national level, ministries responsible for environment, emergency management, forestry, and social protection will collaborate with gender machineries such as the Ministry of Labour and Social Affairs in Armenia and the Gender Equality Council of the Parliament of Georgia. These institutions will ensure that national policy reforms, coordination platforms, and training frameworks integrate gender perspectives and uphold commitments under CEDAW and the Adaptation Fund Gender Policy.

At the local and community levels, engagement will focus on participatory planning processes that amplify women's voices in wildfire management committees, community forest user groups, and local adaptation planning bodies. Consultations will be structured to accommodate women's time and mobility constraints – through flexible meeting schedules, accessible venues, and targeted outreach to women-headed households, ethnic minorities, and persons with disabilities. Partnerships with women's civil-society organizations and grassroots associations will strengthen representation and accountability.

Throughout implementation, the project will maintain continuous dialogue with beneficiaries to identify evolving needs, monitor gender impacts, and adapt activities accordingly. Communication and awareness campaigns will promote equitable roles in wildfire prevention and environmental stewardship, while mentorship and leadership programs will support women and youth in decision-making positions.

By embedding gender-responsive stakeholder engagement mechanisms across all governance levels, the project will foster a culture of inclusion, ensure shared ownership of results, and enhance the social sustainability of wildfire resilience interventions in both Armenia and Georgia.

Monitoring and evaluation

A robust gender-responsive Monitoring and Evaluation (M&E) framework is essential to track the project's progress toward advancing gender equality and women's empowerment alongside its climate-resilience objectives. The *"Increased climate resilience of South Caucasus mountain communities and ecosystems through wildfire risk reduction"* project will integrate gender-sensitive indicators, baselines, and targets across all outcomes, ensuring that changes in women's and men's participation, benefits, and decision-making power are systematically measured throughout the project cycle.

The M&E system will collect sex-disaggregated data on key performance indicators, including participation in training and employment, access to early-warning information, representation in community and institutional decision-making bodies, and access to financial or livelihood opportunities. Each component will include

gender-specific output indicators, such as the proportion of women trained in fire management, percentage of women-led initiatives supported, and number of women beneficiaries of post-fire recovery assistance.

The project's Gender Action Plan (GAP) will serve as a reference for monitoring progress and accountability. Gender results will be reported in biannual and annual progress reports, ensuring alignment with the Adaptation Fund Gender Policy (2021) and UNDP's Gender Equality Seal requirements. Evaluation missions and mid-term and terminal evaluations will include dedicated gender experts to assess qualitative and quantitative outcomes, documenting lessons learned on effective gender mainstreaming in wildfire resilience.

Continuous feedback loops will ensure that M&E findings inform adaptive management – allowing project teams to refine activities, budgets, and partnerships in response to evidence on gender performance. By embedding gender equality into its results-based framework, the project will demonstrate that inclusive approaches enhance not only social equity but also the overall sustainability and effectiveness of climate adaptation interventions in Armenia and Georgia.

Data collection and monitoring

Systematic, gender-responsive data collection and monitoring are essential for understanding how the project's activities affect women and men differently and for ensuring that interventions are equitable, evidence-based, and aligned with the Adaptation Fund Gender Policy (2021). The project will therefore establish a data management system that captures sex-, age-, and vulnerability-disaggregated information across all components, enabling ongoing assessment of gender outcomes in both Armenia and Georgia.

Baseline data will be collected at the inception stage through community surveys, institutional assessments, and stakeholder consultations, focusing on participation levels, access to resources, and decision-making roles. These baselines will inform the setting of gender targets and indicators under the Gender Action Plan (GAP) and serve as benchmarks for mid-term and final evaluations. Data collection tools – such as beneficiary registries, training attendance sheets, and field monitoring templates – will be standardized across both countries to ensure comparability and consistency.

The project's monitoring framework will emphasize quality, frequency, and inclusivity of data. Local implementing partners, including women's organizations and community-based groups, will be trained to gather and validate field-level data, strengthening local ownership and accountability. Digital monitoring tools and participatory approaches – such as focus group discussions and perception surveys – will be employed to capture qualitative dimensions of empowerment, leadership, and behavioural change. Gender focal points within implementing entities will oversee the integration of gender indicators into the results-based management system and ensure that all progress reports include analysis of gender and social inclusion outcomes. By institutionalizing gender-sensitive data collection and monitoring, the project will enhance transparency, improve decision-making, and provide a credible evidence base for scaling gender-responsive climate and wildfire resilience policies across the South Caucasus.

VI. Proposed Gender Action Plan

This Gender Action Plan (GAP) operationalizes the Adaptation Fund Gender Policy (2021) and UNDP's Gender Equality Strategy (2022–2025) within the framework of the regional project *"Increased climate resilience of South Caucasus mountain communities and ecosystems through wildfire risk reduction."* It provides concrete actions to ensure that gender equality and social inclusion are mainstreamed across all project outcomes, consistent with the Theory of Change, which envisions that climate-resilient ecosystems and communities can only be achieved through inclusive institutions, empowered local actors, and equitable access to resources and knowledge.

Outcome 1: Governance frameworks in Armenia and Georgia integrate climate change considerations into wildfire prevention, preparedness, response, and recovery.. Gender and social inclusion will be embedded in wildfire and forest governance frameworks. National coordination platforms and interagency mechanisms will include at least 40% women's participation. The project will support the revision or development of at least four wildfire-related laws, policies, or guidelines (two per country) to include explicit gender and inclusion provisions. Training for ministries, forestry enterprises, and emergency services will build institutional capacity to conduct gender-sensitive risk assessments and budgeting, while national Gender Equality Machineries will be engaged to ensure coherence between environmental and gender policies.

Outcome 2: Armenia and Georgia reduce ignition risks and strengthen national and local services to contain climate-induced wildfires.. Women and youth will be actively involved in local preparedness planning, early-warning dissemination, and volunteer brigades. The project will ensure that women have equal access to training, equipment, and decision-making opportunities in community-based fire management. At least 1,000 women and youth (500 per country) will be trained and engaged in fire brigades, nurseries, and prevention campaigns. Training modules and awareness activities will ensure a minimum of 40% female and 25% youth participation, with sessions designed to accommodate women's schedules and responsibilities.

Outcome 3: Wildfire management in Armenia and Georgia becomes equitable, participatory, and responsive to the differentiated roles and vulnerabilities of women, youth, and marginalized groups. Gender-responsive livelihood restoration initiatives will promote equitable access to ecosystem-based income opportunities such as reforestation, nursery operations, eco-tourism, and sustainable biofuel production. Women's cooperatives and rural enterprises will be supported through training, market linkages, and small-scale value-chain development. Equal access to tools, seedlings, and sustainable energy technologies will reduce women's workload and dependency on forest biomass, while post-fire recovery planning will incorporate women's and youth's perspectives on local resource use and ecosystem management.

Outcome 4: Gender-responsive and socially inclusive wildfire resilience. This outcome directly targets gender and social inclusion gaps identified in the gender assessment. The project will implement the first joint gender and social inclusion analysis of wildfire risks in Armenia and Georgia, informing the design of all subsequent interventions. Gender- and age-disaggregated indicators will be integrated into monitoring and reporting systems to ensure equitable tracking of results. Tailored awareness campaigns will produce gender-responsive educational materials for communities, schools, and youth networks.

By Year 5, gender and social inclusion will be integrated into 80% of national and local wildfire governance frameworks, and both countries will adopt inclusive monitoring systems that track women's participation, youth engagement, and community leadership roles in wildfire prevention and recovery.

Cross-cutting Actions. A Gender Specialist will be embedded within the Project Management Unit (PMU) to coordinate GAP implementation, provide advisory support to national teams, and ensure that gender targets are systematically monitored. Data collection will include sex-, age-, and vulnerability-disaggregated metrics to measure both participation and empowerment outcomes – such as increased women's leadership, access to income, and influence in environmental governance.

Gender equality will also be reflected in the project's budget allocations, ensuring that sufficient resources are dedicated to targeted inclusion activities, gender-sensitive communication, and institutional capacity building. Progress against the GAP will be reviewed annually through the project's monitoring and evaluation system, ensuring that gender mainstreaming results in tangible, transformative outcomes for women, men, and marginalized groups in Armenia and Georgia.

By embedding gender equality within the entire Theory of Change – from governance to ecosystem restoration and inclusion – the project ensures that wildfire resilience in the South Caucasus is not only environmentally sustainable but also socially just and transformative.

Outcome 1: Governance frameworks in Armenia and Georgia integrate climate change considerations into wildfire prevention, preparedness, response, and recovery.				
Objective	**Actions**	**Indicator and Targets**	**Responsible Institutions**	**Allocated Budget ($US)**
1.1 National DRM and forestry laws revised with secondary acts and enforcement mechanisms	Integrate gender-responsive and socially inclusive provisions into revised DRM, forestry, and sub-acts; conduct gender audit of policies.	At least 2 national laws and 10 secondary regulations revised to include gender and social inclusion measures; at least 4 frameworks (2 per country) integrate gender-responsive provisions.	MoEnv (Armenia, Georgia), MoIA, Ministry of Labor and Social Affairs (Armenia), Human Rights Defender's Office (Armenia, Georgia), UNDP	150,000

1.2 Institutional mandates clarified; coordination mechanisms established	Ensure SOPs define equitable participation and roles of women and youth in wildfire brigades and recovery teams; include gender clauses in operational manuals.	SOPs in both countries include gender roles; 100% coordination plans reflect gender-sensitive communication and participation measures.	MoEnv, emergency services, forest agencies, municipalities	75,000
1.3 Armenia–Georgia MoU renewed and operationalized	Integrate gender provisions into bilateral MoU and joint SOPs; ensure women/youth participation in cross-border drills.	At least 4 regional simulations and 3 joint SOPs include gender and social inclusion components.	MoEnv (AM/GE), MoFA, emergency services, UNDP Regional Hub	80,000
1.4 National coordination platforms established under Intergovernmental Council	Ensure representation of women and civil society in coordination groups; gender focal points participate in bilateral meetings.	Bilateral platform established with at least 40% women's representation; annual reports include gender-disaggregated participation data.	Intergovernmental Economic Council, MoEnv, national gender institutions	60,000
Outcome 2: Armenia and Georgia reduce ignition risks and strengthen national and local services to contain climate-induced wildfires				
Objective	**Action**	**Indicator and Targets**	**Responsible Institution**	**Allocated Budget ($US)**
2.1 Fire danger forecasting systems updated and operationalized	Ensure forecasting and early warning messages are gender-sensitive and accessible through channels reaching women, youth, and marginalized groups.	At least 70% of forecasts disseminated through inclusive communication tools (SMS, mobile apps, local media).	Hydromet Services, MoEnv, IT agencies, local authorities	100,000
2.2 Preventive measures introduced (pest/disease monitoring, coppice restoration, recreational zoning)	Engage women and youth in fuel management, pest monitoring, and eco-trail maintenance; provide training on safety and leadership roles.	50,000 ha of forest under preventive management includes gender-balanced community participation; 5 recreational zones per country managed with women's participation.	Forest agencies, MoEnv, SPNA administrations, NGOs	250,000
2.3 Behavior-change campaigns implemented	Design gender-responsive awareness materials; ensure equal outreach to women farmers, tourists, and youth; monitor gendered impact.	8 campaigns (4/country) with gender-sensitive messaging; 200 schools/youth groups engaged, at least 50% female participation.	MoEnv, Ministries of Education & Tourism, NGOs	250,000
2.4 Firefighting capacity strengthened	Ensure women's inclusion in brigades and training programs; provide tailored PPE and facilities; track sex- and age-disaggregated data. Capacity building (for both women and men) on sexual harassment abuse prevention / awareness. Training on the benefits of gender equality for wildfire management.	400 personnel trained, at least 40% women and 25% youth; 2 national training centers operational with gender-responsive curricula.	Emergency Services, MoEnv, training centers	400,000
Outcome 3: Decision-makers and communities in Armenia and Georgia benefit from integrated wildfire information and post-fire recovery frameworks.				
Objective	**Action**	**Indicator and Targets**	**Responsible Institution**	**Allocated Budget ($US)**

3.1 Interoperable FMIS developed and operational	Train women professionals and local users on FMIS tools; ensure user interface supports gender- and age-disaggregated data inputs.	30 agencies use FMIS, with gender-disaggregated access and usage reports by Year 5.	MoEnv, Hydromet Services, national statistics offices	120,000
3.2 Cross-border smoke and air quality monitoring networks established	Include gender-disaggregated health monitoring; train women in environmental data collection and reporting.	6 joint monitoring stations operational with gender-balanced staffing; 2 joint UNFCCC/NDC reports include gender dimensions.	MoEnv (AM/GE), Health Ministries, Environmental Monitoring Centers	100,000
3.3 Standardized methodologies for ecological/economic damage assessment	Integrate gender-disaggregated social impact assessment tools; involve women's groups in post-fire recovery evaluations.	Standard methodologies institutionalized in both countries including gender-disaggregated data collection.	MoEnv, MoEcon, universities, NGOs	80,000
3.4 Post-fire rehabilitation implemented	Involve women and youth in nursery management, soil stabilization, and restoration work; ensure equitable access to benefits.	30,000 ha rehabilitated; all reforestation projects record gender participation and equitable benefit-sharing.	MoEnv, forest agencies, SPNA units, community groups	300,000
Outcome 4: Women, youth and marginalized groups are empowered to participate in equitable and inclusive wildfire management in Armenia and Georgia.				
Objective	**Action**	**Indicator and Targets**	**Responsible Institution**	**Allocated Budget ($US)**
4.1 Gender and social inclusion analysis completed	Conduct participatory gender and inclusion analyses; feed findings into all policies and training modules.	4 policies (2 per country) revised to include gender and inclusion provisions.	MoEnv, Gender Equality Commissions, UNDP	120,000
4.2 Women and youth trained and equipped	Deliver leadership, safety, and entrepreneurship training; support women/youth-led brigades and nurseries.	1,000 women/youth trained; 70% of trainings meet minimum 40% women / 25% youth quota.	MoEnv, emergency services, municipalities, NGOs	350,000
4.3 Gender-responsive awareness materials produced	Produce inclusive educational materials; engage schools, youth networks, and community groups in wildfire safety.	8 campaigns (4 per country) developed with inclusive messaging; 250 schools/youth groups engaged.	MoEnv, Ministries of Education, NGOs	200,000
4.4 M&E frameworks updated to include gender-disaggregated indicators	Update all M&E frameworks to capture gender, age, and vulnerability data; train staff on inclusive data reporting.	Project and national M&E systems in both countries updated by Year 3 with gender- and age-disaggregated indicators.	PMU, MoEnv, national statistics services, UNDP	180,000
4.5 Community-based initiatives for inclusive resilience and livelihoods	Support small grants for women/youth-led projects (biofuel, eco-tourism, energy-efficient livelihoods); promote leadership roles.	20 initiatives led by or involving women/youth/vulnerable groups; 10 community pilots for residue-to-biofuel alternatives.	PMU, municipalities, NGOs, MoEnv	500,000

Annex 5: Stakeholder Consultations and Engagement

1. Stakeholder Consultation and Engagement, Armenia

1.1. National Stakeholder Consultation Workshop, Armenia, October 9, 2025

The National Stakeholder Consultation Workshop on the project *"Increased Climate Resilience of South Caucasus Mountain Communities and Ecosystems Through Wildfire Risk Reduction"* was convened to present and discuss the draft regional project proposal under preparation for submission to the Adaptation Fund (AF).

AGENDA

Time	Agenda Item / Presenter
14:00 – 14:30	Registration
14:30 – 14:45	Operning Remarks: • Atom Grigoryan, Deputy Director of the Hydrometeorology and Monitoring Center of the Ministry of Environment of the Republic of Armenia • Tigran Petrosyan, Deputy Director of the Rescue Service of the Ministry of Internal Affairs of the Republic of Armenia • Konstantin Sokulskiy, Deputy Resident Representative of UNDP in Armenia
14:45 – 14:55	Background and Adaptation Context Hovhannes Ghazaryan, Portfolio Lead, Climate, Environment and Resilience, UNDP in Armenia
14:55 – 15:20	Project Proposal Overview: Objectives, Activities, Expected Results, and Timeline Vardan Melikyan, National Consultant
15:20 – 16:00	Q&A and Discussion All Participants
16:00 – 16:15	Next Steps and Wrap-up Vardan Melikyan, National Consultant Hovhannes Ghazaryan, Portfolio Lead, Climate, Environment and Resilience, UNDP in Armenia

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29	Marika Harutyunyan	FAO	marika.harutyunyan@fao.org
30	Artashes Sergoyan	Foundation for the Preservation of Wildlife and Cultural Assets (FPWC)	artashes.sergoyan@fpwc.org
31	Narine Karapetyan	FPWC	narine.karapetyan@fpwc.org
32	Nvard Shahmuradyan	SHEN	nvard@shen.am
33	Seryozha Karapetyan	Armenian Institute for Digital Agriculture	seryozhakarapetyan01@gmail.com
34	Anna Tovmasyan	ISTC Foundation	info@istc.am
UNDP			
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38	Svetlana Harutyunyan	UNDP-GEF Small Grants Programme Coordinator	svetlana.harutyunyan@undp.org
39	Artak Voskanyan	DRR Project Coordinator	artak.voskanyan@undp.org
40	Vardan Melikyan	National Consultant	vardan.melikyan@greenvance.org
41	Lusine Sargsyan	Project Assistant	lusine.sargsyan@undp.org

MEETING NOTES

The event opened with remarks from Mr. Hovhannes Ghazaryan, UNDP CER Team Leader, followed by representatives of key partner institutions. Mr. Atom Grigoryan (Ministry of Environment) and Mr. Tigran Petrosyan (Rescue Service, MIA) welcomed participants and emphasized the importance of strengthened inter-agency cooperation on wildfire risks.

Mr. Konstantin Sokulskiy, UNDP Deputy Resident Representative, highlighted the growing climate-driven wildfire threat in the South Caucasus, underscoring rising temperatures, droughts, and longer fire seasons that endanger forests, biodiversity, and rural livelihoods. Citing global wildfire projections from UNEP and UNU-INWEH, he stressed that regional cooperation between Armenia and Georgia is essential and noted that the proposed Adaptation Fund project could become a flagship initiative ahead of CBD COP-17. He referenced recent effective collaboration with the MIA after the 2024 Tavush floods and encouraged active discussion.

Presentations

Mr. Ghazaryan introduced the project background, wildfire trends, and UNDP's experience, after which National Consultant Mr. Vardan Melikyan presented the draft proposal's objectives, components, and timeline.

Discussion and Key Interventions

Key points raised by participants are summarized below:

- Mr. Yeghiazar Davtyan (MTAI) suggested exploring U.S.-style real-time fire dashboards and asked about beneficiaries. Mr. Melikyan noted nationwide coverage, inclusion of air quality monitoring, and expanded scope beyond forests.
- Ms. Marine Saribekyan (MoEnv) asked about funding for technical capacity building. Mr. Melikyan confirmed it is the largest budget component, focused on tangible field investments.
- Mr. Meruzhan Khachatryan (MIA) stressed community capacities, volunteer brigades, early warning, and data interoperability. Mr. Melikyan emphasized coordination with NGOs and local actors.
- Mr. Gegham Margaryan (Vayots Dzor) recommended localized water reservoirs; Mr. Ghazaryan confirmed these are under consideration.
- Mr. Eduard Karapetyan (Eco-Patrol) highlighted specialized vehicles and drones; Mr. Melikyan noted drones' growing use and relevance.
- Mr. Tigran Karapetyan (ANAU) suggested drones are most useful for detection and data collection; Mr. Melikyan mentioned linkages between pest outbreaks and wildfires, and the potential for a shared helicopter platform.
- Ms. Armine Hayrapetyan (MIA EC) proposed including cultural monument protection and using Sendai methodologies; Mr. Melikyan referenced fire-safe hiking trails where this could be integrated.
- Ms. Nvard Shahmuradyan (Shen NGO) introduced the Forest Alliance and raised issues faced by community forests. Mr. Melikyan described possible solutions, including delegated management models, and requested further information on agroforestry approaches.

- Mr. Ara Aslanyan (MIA) and Ms. Shahmuradyan discussed availability of cooperative equipment and compensation mechanisms. Mr. Aslanyan also emphasized space-based technologies, which Mr. Melikyan confirmed are included in the project design.
- Mr. Karapetyan asked about parallel consultations in Georgia; Mr. Melikyan confirmed these are planned.
- Ms. Milena Kiramijyan (EPIU) suggested engaging the European Space Agency and asked about budget distribution. UNDP clarified that national implementation budgets are equivalent, with Armenia serving as the lead entity.

Concluding Remarks

Mr. Ghazaryan thanked participants for their contributions and outlined next steps: all recommendations from Armenia and the upcoming Georgian consultation will be integrated by the Lead Consultant into the final draft, which will undergo Regional Hub review before submission to the Adaptation Fund.

1.2. List of Meetings held in 2025 during proposal preparation, Armenia

#	Organisation	Date
1	Educational Complex of the Ministry of Internal Affairs	August 4, 2025
2	Eco-Patrol Service of the Ministry of Environment	August 6, 2025
3	FAO	August 7, 2025
4	AI4DA - Armenian Institute for Digital Agriculture	August 8, 2025
5	Forest Alliance of Armenia (NGOs)	August 8, 2025
6	Ministry of Environment	August 12, 2025
7	Ministry of Internal Affairs	August 14, 2025
8	Hydrometeorology & Monitoring Center (HMC) SNCO of the Ministry of Environment	August 28, 2025
9	Hayantar (ArmForest) SNCO of the Ministry of Environment	August 28, 2025

2. Stakeholder Consultation and Engagement, Georgia

2.1. National Stakeholder Consultation Meeting, Georgia, September 18, 2025

AGENDA

Time	Topic
10:00-10:10	Opening remarks: • Lika Giorgadze, Deputy Head of Forest Policy Department, Ministry of Environmental Protection and Agriculture • Nino Antadze, UNDP Georgia
10:10-10:30	▪ Brief Overview of the Project ▪ Results of stakeholder consultations and identified priorities ▪ Project Components, Expected Outcomes, Expected Outputs Natia Iordanishvili, Local Expert, Forestry and Wildfire Resilience
10:30-11:30	Discussion – All Participants
11:30-12:00	Summary and Next Steps

	Natia Iordanishvili, Local Expert, Forestry and Wildfire Resilience Nino Antadze, UNDP Georgia

PARTICIPANTS

N	Full Name	Business or Occupation
1	Rati Gelashvili	Biodiversity and Forestry Department, MEPA
2	Shota Tsiklauri	Biodiversity and Forestry Department, MEPA
3	Papuna Kapanadze	Biodiversity and Forestry Department, MEPA
4	Zaza Nonashvili	Biodiversity and Forestry Department, MEPA
5	Nata Sultanishvili	Agency of Protected Areas
6	Khatuna kokosadze	National Environment Agency (NEA), Department of Meteorology
7	Dodo Gvazava	National Environment Agency (NEA), Division of Weather Forecasting and Early Warning
8	Giorgi Tkhelidze	National Forestry Agency
9	Alexander Rukhadze	MEPA
10	Irine Imerlishvili	EMS of Georgia
11	Shalva Nozadze	MEPA
12	Nino Chkhobadze	The Greens Movement of Georgia
13	Kakha Artsivadze	Nacres – Center for Biodiversity Conservation and Research
14	Giorgi Kolbin	GIZ
15	Tamar Pataridze	CNF
16	Darejan Kapanadze	WB
17	Irina Mikadze	UNDP
18	Liana Turkia	UNDP
19	Davit Kakhiani	Sensors & Smart Technologies (SST)
20	Giorgi Tskrialashvili	Sensors & Smart Technologies (SST)
21	Lali Tevzadze	UNDP
22	Irakli Eradze	Sensors & Smart Technologies (SST)
23	Giorgi Grigolashvili	Smart Solutions Ltd
24	Vano Grigolashvili	Smart Solutions Ltd

KEY FINDINGS

Participants unanimously reaffirmed the project's national relevance and expressed strong support for deeper regional cooperation with Armenia, noting that collaboration between emergency services, forestry agencies, and environmental institutions is already well-established. Stakeholders highlighted the need for better data-sharing and stronger local-level capacities, while also acknowledging resource constraints and opportunities for improved cooperation across institutions.

Key Findings by Component

Legislation and Regulation

- Georgia has made notable progress since 2019 in forestry and emergency management legislation. The new Forest Code adequately addresses forest fire and climate issues, requiring only minor clarifications.
- Stakeholders noted that terms such as "forest fire protection" should shift to the more comprehensive "forest fire risk reduction/management," covering prevention, preparedness, and

response. Internal documents (e.g., Decree №383) should reflect this and categorize actions by phase.

- A national forest fire risk reduction strategy is needed to guide prioritization and enable forestry managers to develop site-specific plans.

Strategic Documents

- The 2017–2020 DRR Strategy addressed forest fires but has not been updated or released publicly.
- Georgia currently lacks a national forest fire management policy, risk reduction strategy, and standardized procedures for fire management plans; existing guidance is limited to National Forestry Agency internal orders.
- Establishing national-level policies, strategies, and planning standards is essential for coordinated action across public and private actors.

Information and Technology

- Progress has been made on forest inventories (NFI/FMI), but data analysis and integration remain weak.
- Stakeholders emphasized the need for modern technologies for data collection, modeling, forecasting, and response, and recommended linking fire data with GHG inventory systems.
- Predictive, climate-based warning systems are viewed as more effective than detection-only tools. Upcoming climate vulnerability assessments will support risk modeling.
- Protected Areas have piloted integrated monitoring and AI cameras, though cost-effectiveness at scale is unclear.
- Use of open-source tools (e.g., Copernicus) and development of specialized technical expertise were identified as priorities.

Volunteers and Public Awareness

- Volunteer programs exist through EMS and various projects, and the National Forestry Agency's "Forest Friend" platform facilitates registration, though management systems are lacking.
- Volunteers currently focus mainly on response; international experience shows that prevention-focused engagement – awareness, monitoring, risk assessment – significantly reduces fires. Continuous training is essential.
- Agencies run separate awareness campaigns; stakeholders recommended a unified national communication strategy with a recognizable mascot.

Coordination at National and Regional Levels

- Coordination between emergency and forestry authorities has improved but lacks a permanent institutional mechanism; meetings remain ad hoc.
- Structural gaps limit joint planning, standard harmonization, and resource sharing. The Civil Safety National Plan designates the Ministry of Environment and Agriculture as the lead for coordination, which should involve all relevant institutions and sectors.
- International models (e.g., NWCG) demonstrate the value of multi-agency coordination.
- Regional cooperation with Armenia is strategically important, enabling knowledge exchange, joint training, and shared technical solutions.

Technical Means and Resources

- Human and technical resource limitations remain significant.
- Effective fire management requires not only response capacity but also assessment of ecosystem damage and planning of restoration.
- Modern technologies can improve efficiency and resource optimization.

Conclusions

The consultations identified key challenges and opportunities that will shape the next phase of project design. Ongoing stakeholder engagement will be essential to ensuring sustainable

outcomes. A joint meeting scheduled for mid-September will present the draft proposal and refine activities and indicators.

2.2. List of Meetings held during proposal preparation, Georgia

N	Full Name	Business or Occupation	Contact
State Organizations			
1	Carl Amirgulashvili	Biodiversity and Forestry Department, MEPA	Karlo.Amirgulashvili@mepa.gov.ge
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4	Toma Dekanoidze	Agency of Protected Areas	Toma.Dekanoidze@apa.gov.ge
5	Nata Sultanishvili	Agency of Protected Areas	Nato.Sultanishvili@apa.gov.ge
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7	Maia Chkhobadze	Environmental Supervision Department	Maia.Chkhobadze@des.gov.ge
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9	Giorgi Mamadashvili	National Forestry Agency	Giorgi.Mamadashvili@forestry.gov.ge
10	Nino Barkaia	First Deputy Emergency Management Service	nbarkaia@es.gov.ge
11	Teimuraz Melkadze	Emergency Management Service Head of the Department of Civil Security	tmelikidze@es.gov.ge
12	Tamar Chanturaia	Emergency Management Service	tchanturaia@es.gov.ge
NGO			
13	Nino Chkhobadze	The Greens Movement of Georgia	nino.chkhobadze@gmail.com
14	Kakha Artsivadze	Nacres – Center for Biodiversity Conservation and Research	kakha.artsivadze@nacres.org
International Organizations			
15	Giorgi Kolbin	GIZ/GCF	giorgi.kolbin@giz.de
16	Tamar Pataridze	CNF	tpataridze@caucasus-naturefund.org
17	Darejan Kapanadze	WB	dkapanadze@worldbank.org
18	Tornike Phulariani	UNDP	tornike.phulariani@undp.org
Experts and Scientific organizations			

19	Koba Chiburdanidze	Expert	k_chiburdanidze@yahoo.com
20	Giorgi Kavtaradze	Gulisashvili Forestry Institute	g.kavtaradze@agruni.edu.ge
21	Nato Kobakhidze	Agricultural University of Georgia, Prof. Manager of the Forestry programs, Coordinator of the PhD school	n.kobakhidze@agruni.edu.ge
Private Sector			
22	Irakli Eradze	Sensors & Smart Technologies (SST)	info@sst.ge
23	Giorgi Grigolashvili	Sensors & Smart Technologies (SST)	g.grigolashvili@sst.ge

3. Record of stakeholder and community consultations carried out during preparation for earlier submissions of the proposal, Armenia and Georgia

Intensive consultations with variety of stakeholders and local communities were conducted in 2019 to get their insights for project activities and outputs. Field visits were conducted to two regions in each country to meet with local stakeholders in four separate areas. Stakeholders included Forest Enterprises, Protected Area Agencies, local EMS services, local government officials and community representatives. In order to validate the technical aspects of the project design, local and regional experts undertook consultations with national and local level stakeholders in both Armenia and Georgia to:

- Carry out field investigations to generate data in support of the project;
- Identify and meet with project stakeholders to acquire site specific data;
- Acquire existing current and historical data from institutions;
- Identify gaps from local stakeholders in the information required to deliver the project.

Institutions and groups consulted during project preparation	
Armenia	**Georgia**
• Aparan community • Aparan Forest Enterprise • Aragatsotn rescue service • Armenia Hydromet • Armenian Rescue Service • Armenia Climate Change Center • Dilijan National Park Administration • FAO Armenia Representative Office • GIZ Armenia Representative Office • Gugark Forest Enterprise • Kotayk Emergency Services • Lori rescue service • Ministry of Emergency Situation s	• Agency of Protected Areas (APA) • Akhmeta municipality and local forestry service • Caucasus Nature Fund (CNF) • CENN (NGO) • Centre for Biodiversity Research & Conservation – NACRES (NGO) • Emergency Management Service of Georgia • Environmental Information and Education Center (EIEC) • Geo Outlook (NGO) • GIZ Georgia representative office

• Ministry of Nature Protection • Razdan Forest Enterprise • State Forest Committee • State Forest Monitoring Center • Tavush rescue Service • UNDP programme teams • Municipality of Vayq (Vayots Dzor Region) • Vayots Dzor Forest Enterprise • WWF Armenia • Vanadzor Municipality • Agrarian State University (Vanadzor branch)	• Global Forest Watch • Green Alternative (NGO) • Ministry of Internal Affairs, 112 emergency service • Ministry of Environment Protection and Agriculture (MEPA) • National Forestry Agency • PPRD East project team • Regional Environmental Center (REC) • Tianeti municipality and local forestry service • International Union for Conservation of Nature • UNDP programme teams • World Bank • WWF

In addition, two multi-stakeholder workshops were held in Tbilisi and Yerevan for policy makers, NGOs and academics with more than 30 attendees in total.

List of community consultations conducted during the project development and validation		
Date	**Community**	**Number of people attended**
15th April 2019	Aparan (Armenia) – EMS, local administration, forest agency, community members	20 (3)
17th April 2019	Vanadzor (Armenia) - Farmers, foresters, community heads, EMS, local administration	40 (5)

Two large scale community level consultation events were also held at potential project sites:

Stakeholders in Local Community Meetings in Armenia		
#	**Name / Family Name**	**Organization/Position**
List of stakeholders in Kotayk region (Meeting in Razdan City)		
1.	Stepan Margaryan	Director, "Razdan Forest Enterprise" SNCO[35]
2.	Khachik Melkonyan	Forest Engineer, "Razdan Forest Enterprise" SNCO
3.	Khachatur Khachatryan	Forester, "Razdan Forest Enterprise" SNCO
4.	Aram Muradyan	Forester, "Razdan Forest Enterprise" SNCO
3.	Rafael Grioryan	Head, Qaxsi Community Administration
4.	Armen Amirjanyan	Head of Kotayk Regional Rescue Department, Ministry of Emergency Situation
5.	Narek Harutyunyan	Deputy Head, Meghradzor Community Administration
6.	Ruben Petrosyan	Adviser to the State Forest Committee, Ministry of Environment
7.	Vardan Melikyan	Task Leader, UNDP Wildfire Management Project

[35] SNCO – State Non-commercial Organization

8.	Ashot Sargsyan	DRM National Expert
List of stakeholders in Aragatsotn region (Meeting in Aparan City)		
1.	Vram Abrahamyan	Director, "Aragatsotn Forest Enterprise" SNCO
2.	Hrachik Araqelyan	Forester, "Aragatsotn Forest Enterprise" SNCO
3.	Vardges Sargsyan	Forester, "Aragatsotn Forest Enterprise" SNCO
4.	Hrayr Ghukasyan	Forester, "Aragatsotn Forest Enterprise" SNCO
5.	Gnel Adamyan	Ranger, Aragats Branch of "Aragatsotn Forest Enterprise" SNCO
6.	Andranik Ghazaryan	Chief Forester, "Aragatsotn Forest Enterprise" SNCO
7.	Hrayr Darbinyan	Head of Aragatsotn Regional Rescue Department, Ministry of Emergency Situation
8.	Gagik Simonyan	Chief Specialist, Aparan Municipality
9.	Hayk Arshakyan	Commander, Aparan Fire-fighting Rescue Group
10.	Robert Galstyan	Aparan Municipality
11.	Karen Harutyunyan	Head, Kayq Administrative District
12.	Vigen Harutyunyan	Chief Inspector, Emergency Management Center, Aragatsotn Regional Rescue Department
13.	Vardan Melikyan	Task Leader, UNDP Wildfire Management Project
14.	Ashot Sargsyan	DRM National Expert
List of Stakeholders in Lori region (Meeting in Vanadzor City)		
1.	Samvel Mkhitaryan	Forester, Eghegnut Branch of "Gugark Forest Enterprise" SNCO
2.	Levon Mkhitaryan	Forester, "Gugark Forest Enterprise" SNCO
3.	Rafik Aghababyan	Gugark Forest Enterprise" SNCO
4.	Tigran Antonyan	Gugark Forest Enterprise" SNCO
5.	Kare Sargsyan	Leading Specialist, Shahumyan Community Administration
6.	Arayik Gevorgyan	Head, Antaramut Community Administration
7.	Taron Serobyan	Lernapat Community Representative
8.	Serj Ghambaryan	Ranger, Eghegnut Branch of "Gugark Forest Enterprise" SNCO
9.	Gagik Ghazakhecyan	Ranger, Eghegnut Branch of "Gugark Forest Enterprise" SNCO
10.	Gagik Andreasyan	Forester, Vanadzor Branch of "Gugark Forest Enterprise" SNCO
11.	Gagik Mkhitaryan	Forester, Spitak Branch of "Gugark Forest Enterprise" SNCO
12.	Vahe Dokhoyan	Ranger, Eghegnut Branch of "Gugark Forest Enterprise" SNCO
13.	Apres Voskanyan	Lernarot Community Administration
14.	Suren Kostanyan	Vahagni Community Administration
15.	Ashot Ghazaryan	Debed Community Administration
16.	Sayad Mnatsakanyan	Arjut Community Administration
17.	Artak Simonyan	Gugark Fire -fighting Group
18.	Suren Gharabekyan	Ranger, "Gugark Forest Enterprise" SNCO
19.	Artashes Mkhitaryan	Ranger, "Gugark Forest Enterprise" SNCO
20	Armen Danamashyan	Deputy Head, Lori Regional Rescue Department, Ministry of Emergency Situation
21.	Ruben Petrosyan	Adviser to the State Forest Committee, Ministry of Environment
22.	Ruben Vardanyan	Independent Consultant on Environmental and Social Safeguards

Annex 6: Detailed Budget and Breakdown of the IE Management Fee

Included as a separate file in this proposal.