CTR 488701

ANNEX I: DESCRIPTION OF THE ACTION

COVER PAGE

Joint Programme title: Clean Air for Health and Green Growth in Armenia *(EU 4 Clean Air in Armenia)*	
Outcome(s):	United Nations Sustainable Development Cooperation Framework (UNSDCF 3.1 Natural resources & Climate Action)
Project duration:	36 months
Anticipated start and end dates:	**Start date:** 1 March, 2026 **End date:** 28 February, 2029
Program Team Administrative Agent Lead PUNO/Convening agent PUNOs: NUNOs**:**	 The United Nations Development Organization (UNDP) Multi-Partner Trust Fund Office (MPTFO) - Administrative agent UNDP Country Office (CO) - PUNO and Convening Agency United Nations Economic Commission for Europe (UNECE) - PUNO World Health Organization (WHO) - PUNO Environment Agency Austria (UBA) - NUNO
Fund management modality: (Parallel; Consolidated; Pass-through)	Pass-through
UNDP Social and Environment Screening Category: Low	**UNDP Gender Marker**: 2
Administering Agent (pass-through only) **Convening Agent** (pass-through only)	MPTFO — Alain Noudehou, alain.noudehou@undp.org UNDP CO – Natia Natsvlishvili, natia.natsvilishvili@undp.org
Financing Plan:	**Total budget: 2,470,240 USD**, including **2,393,600 USD (2,000,000[1]EUR) from EU and co-funding from:** UNDP - 40,000 USD; UNECE - 31,640 USD; WHO - 5,000 USD

[1] February InforEuro rate 1 EUR = 1.1968 USD

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LIST OF ABBREVIATIONS AND ACRONYMS

AQ	Air Quality
AQI	Air Quality Index
AQM	Air Quality Monitoring
BATs	Best Available Technologies
BTR	Biennial Transparency Report
CAFE	Clean Air For Europe
CC	Climate Change
CEPA	Comprehensive **a**nd Enhanced Partnership Agreement
CLRTAP	Convention on Long-range Transboundary Air Pollution (air Convention)
CO	Country Office
CSO	Civil Society Organisation
DIM	Direct Implementation Modality
DoA	Description of Action
EC	European Commission
EN	European Norm (Standard)
ELV	Emissions Limit Value
EMEP	Co-operative programme for monitoring and evaluation of the long-range transmission of air pollutants in Europe
EU	European Union
EUR	Euro
GDP	Gross Domestic Product
GHG	Greenhouse gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GMS	General Management Services
HMC	"Hydrometeorology and Monitoring Center" State Non-Commercial Organization
JP	Joint Programme
IED	Industrial Emissions Directive
IPPC	Integrated Pollution Prevention and Control
IIR	Informative Inventory Report
IT	Information Technologies
MoE	Ministry of Environment
MoH	Ministry of Health
NCDs	Noncommunicable Diseases
NCDC	National Center for Disease Control
NGO	Nongovernmental Organization
NFR	Nomenclature for Reporting
NMVOC	Non-Methane Volatile Organic Compounds
NUNO	Non-UN organisation
ODS	Ozone-Depleting Substances
PM	Particulate Matter
PSC	Project Steering Committee
SDG	Sustainable Development Goals
SNCO	State Non-Commercial Organization
PUNO	Participating UN organisation
QA/QC	Quality Assurance and Quality Control
TVET	Technical and Vocational Education and Training
TUMO	Center for Creative Technologies (Armenia)
VOCs	Volatile Organic Compounds
WHO	World Health Organization
UBA	Environment Agency Austria (Umweltbundesamt)
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNFCCC	United Nations Framework Convention on Climate Change

UNICEF	United Nations Children's Fund
USD	United States Dollar

Chemical Compounds, Unites of Measures

NO2	Nitrogen Oxide
NOx	Nitrogen Oxides
SO2	Sulphur Dioxide
SOx	Sulphur Oxides
O3	Ozone
km	Kilometre
µg	Microgram
m^3	Cubic meter
sq	Square meter

EXECUTIVE SUMMARY

Contract Number: 2025 / 488701

Title: "Clean Air for Health and Green Growth in Armenia *(EU4 Clean Air in Armenia)".*

Global objective (impact): To improve air quality in Armenia to better protect the health of citizens.

Specific objective (outcome): To increase the capacity of the Government of Armenia to monitor, analyse and regulate air quality.

Target/Key Stakeholders (direct beneficiaries): Ministry of Environment, "Hydrometeorology and Monitoring Center (HMC)" SNCO (State Non-Commercial Organization), Ministry of Health, Yerevan Municipality.

Problem Statement: Armenia faces persistent challenges in managing air quality due to inadequate composition and technical conditions of air quality (AQ) monitoring network, which does not provide for realistic picture, due to insufficient monitoring of operational data of background air quality data, particularly related to impact of industry, transport and construction and mining related impact. Estimates of emissions of air pollutants from industry are solely based on calculations relying on self-reporting provided by the key industries and there are no laboratories accredited for industrial emissions measurement. The quality of health statistics and data on air quality do not allow Armenia to report on SDGs related to the health impact of air pollution. All that hinders harmonisation of legal and regulatory framework of air protection with commitments of Armenia under the EU-Armenia Comprehensive and Enhanced Partnership Agreement (CEPA).

According to the CEPA roadmap for implementation commitments, the air quality management needs proper regulation of industrial emissions. This can be achieved through supporting the legislative framework to adopt the EU Directive on industrial emissions (integrated pollution prevention and control), as well as through awareness and knowledge on benefits of applying Best Available Technologies (BAT) requirements, regulation and control of industrial emissions.

An inclusive implementation must be prioritized through strong cooperation with national authorized organisations in the field of air protection and health. Strengthening the engagement of CSOs/NGOs, women and youth—through capacity-building and improved access to information.

Thematic Scope/content: The project aims to improve air quality in Armenia by strengthening national systems for monitoring, forecasting, planning, and regulatory governance. It will support targeted assessments, technical studies, and policy-aligned actions in close cooperation with national authorities responsible for air-quality management. A core element is the modernisation of the national monitoring network: based on EU-compliant technical specifications, at least two new monitoring stations will be procured and installed to expand coverage and improve real-time data. In parallel, the project will support the establishment of a National Reference Laboratory in line with Directive 2008/50/EC and Directive (EU) 2015/1480, including procurement of essential equipment. Capacity-building and awareness-raising activities will further engage institutions, youth, and civil society, strengthening technical competencies and promoting science-based decision-making for sustainable air-quality improvements.

Implementation Modality: The project will be implemented as a Joint Programme (JP) through a partnership between the United Nations Development Programme (UNDP), the United Nations Economic Commission for Europe (UNECE), the World Health Organization (WHO) as the Participating UN Agencies (PUNOs); the Environment Agency Austria (UBA), as a Non-UN Agency (NUNO). The UNDP Multi-Partner Trust Fund Office (MPTFO) will serve as the administrative agent, while UNDP also acts as the convening agent.

Partners: UNDP (PUNO), UNECE (PUNO), WHO (PUNO) and UBA (NUNO)

Summary of Outputs and Activities:

The project will deliver three interrelated outputs, supported by a structured set of activities and sub-activities:

- Output 1. Legal framework and capacity building strengthened.
- Output 2. Air quality monitoring and management system modernized.
- Output 3. Air quality data used more intensively by the relevant institutions and population.

I. Situation Analysis

1.1 Background

Globally, household and ambient air pollution are responsible for approximately 7 million premature deaths each year, with more than 5 million deaths attributable to air pollution-related Noncommunicable Diseases (NCDs). Vulnerable populations, including children, elderly, and individuals with pre-existing health conditions, are particularly susceptible to the harmful health effects of air pollution. Air pollution is also at the intersection of the triple planetary crisis as it affects climate change and biodiversity. The impacts of air pollution therefore also have a significant effect on the economy.

In 2024, the average PM2.5 concentration in Armenia was about 24.4 µg/m³, which is 4.9 times higher than the World Health Organization's annual guideline (5 µg/m³). The country's average Air Quality Index (AQI⁺) is reported as ~ 80 (US scale) (indicating "moderate to unhealthy for sensitive groups") for recent assessments. Armenia is often ranked among the lower-performing countries in Europe regarding air quality. However, emissions of some major pollutants have seen reductions over past decades: for example, nitrogen oxides down ~ 58%, sulphur dioxide down ~ 83% (compared to 1990 baseline) in the region. According to the WHO Environmental Health Armenia 2023 Country Profile, annual mean concentration of fine particulate matter (PM2.5) in Armenia was 34 µg/m³, which is nearly seven times higher than the WHO's air quality guideline level of 5 µg/m³.

Data of 2019 shows that air pollution led to about 3,100 lives lost in Armenia. Health damage costs from air pollution (reduced life expectancy, hospital admittance, sick leave, medicine costs) for 2020 have been estimated at about 10 % of GDP for Armenia[2].

In Armenia, the air pollution levels are assessed as high in densely populated capital city Yerevan as well as in a number of industrial zones, with solid particle matters of special concern. In Yerevan, the air quality is often in the "Moderate" category, meaning that while air is "acceptable" it can pose health risks to particularly sensitive groups (children, elderly, those with respiratory conditions). Daily fluctuations are common: sometimes levels worsen (especially during certain weather and heating seasons) and sometimes improve. A local source notes that the yearly average PM2.5 in Yerevan is ~ 24.6 µg/m³ (again ~ 4.9× the WHO guideline). Some districts or industrial-adjacent areas tend to show higher pollution spikes, depending on traffic, industrial emissions, and geography (valleys/trapping of air). For instance, near Hrazdan and in nearby villages like Kakavadzor, industrial emissions (e.g. cement factories) are reported to contribute to local air quality issues. "Dust" (PM) concentrations are difficult to evaluate in relation to international standards and guidelines due to the measurement methods applied. This is because "dust" is assumed to be Total Suspended Particles (TSP) minus PM1, due to the local monitoring technique of measuring particles with a diameter larger than 0.95 µm. The local 24 hours limit value of 150 µg/m^3 for PM has been exceeded from 1, -5 times in 2024 for average of 30% of all measured cases conducted in Yerevan, Gyumri, Vanadzor, Alaverdi and Ararat.

The main sources and reasons why Armenia, and especially urban areas, have poorer air quality include:

- **Residential heating & solid fuel use**: use of wood, and low-quality fuels for heating in winter is a significant source of PM2.5, inefficient heating stoves and poor insulation magnify emissions per unit of energy.
- **Vehicular emissions**: many vehicles are old, have weak or no emission controls (e.g. lack of catalytic converters), or run on lower-quality fuel, congestion and traffic in city centers amplify

[2] Economic cost of the health impact of air pollution in Europe: Clean air, health and wealth, 2015

pollutant concentrations.

- **Industrial emissions:** factories, plants (e.g. cement, manufacturing) in and around towns release PM, NO_x, SO_2, volatile organic compounds (VOCs), etc., some industrial facilities are located near residential zones, worsening local exposure.

- **Geography** and **meteorology**: Yerevan and other cities in valleys or basins may trap pollutants (inversion layers) especially during cold seasons or calm weather conditions, seasonal variations: winter months tend to see worse air quality due to heating emissions and stagnant air; summer may see more ozone formation in some cases.

- **Transboundary pollution & regional background levels**: **s**ome pollution may come from upwind sources, but local sources dominate in many cases.

1.2 Legal framework

Armenia is a party to the UNECE Convention on Long-range Transboundary Air Pollution (May, 1997) (Air Convention), and its protocol on Long-term Financing of the Co-operative Program for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP), UN Framework Convention to Climate Change (May, 1993) and Paris Agreement (February, 2017). However, it has not ratified the Protocol on Heavy Metals, Protocol on Persistent Organic Pollutants (POPs) and Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozon. to the Air Convention. Many provisions under the Air Convention's protocols are mirrored in EU legislation.

In the framework of CEPA, Armenia is committed to gradually approximate its legislation to the key European Union environmental legislation according to the adopted timetable to the provisions of Directive 2008/50/EC on ambient air quality (AQ) and cleaner air for Europe and with several other EU Directives. The legislative reforms are necessary specifically on the ambient air quality directive and the industrial emissions directive (2010/75/EU), such as those regulating classification of air quality zones and agglomerations, alignment with European Union air quality standards. The establishment of a system for assessing ambient air quality in relation to air pollutants and a system to provide information to the public, are planned by 2026. In addition, capacity building to implement new legislation is needed for competent authorities.

NCDs contribute significantly to Armenia's high rates of premature mortality and represent major public health and development challenges. In 2022, NCDs accounted for 83.4% of all deaths in the country. The health system bears the escalating costs of treatment, while the economy loses productivity through reduced workforce participation, absenteeism, and early retirement due to illness. A 2018 World Health Organization report estimated that the economic losses from NCDs, including both direct and indirect costs, amounted to AMD 363 billion in 2017, equivalent to 6.5% of the Gross Domestic Product (GDP) (WHO Armenia NCD report, 2018).

Air pollution is a critical risk factor, driving cardiovascular, respiratory, and cancer-related mortality, while also reducing workforce productivity and increasing health care costs. Addressing air pollution alongside other NCD risks is not only a health priority but also a strategic economic investment.

Prevention and control of noncommunicable diseases, alongside the reduction of morbidity and premature mortality and the promotion of healthier lifestyles, are identified as priority areas in Armenia's Healthy Lifestyle Strategy 2021-2025 (https://www.moh.am/uploads/827.1.pdf), the National Health System Development Strategy 2023–2026 (National Health System Development

Strategy for 2023-2026), and are fully aligned with the Programme of the Government of the Republic of Armenia 2021–2026 (Programme of the Government of the Republic of Armenia for 2021-2026).

Armenia has been consistently advancing legislative reforms in the field of air protection. The Law on Atmospheric Air Protection, first adopted in 1994, has undergone several rounds of amendments to strengthen regulatory, institutional, and technical provisions. In 2022, the Government approved Amendment Law No. HO-522-N, introducing significant updates to the Law on Atmospheric Air Protection, along with complementary amendments to the Code on Administrative Offences and the Tax Code. These legal changes aim to integrate modern requirements for measuring, control, reporting, and verification (MRV) under the UNFCCC, enhance the control of pollution and promotion of best available techniques (BATs), and tighten emission limitations from both stationary and mobile sources. The reform also establishes clearer procedures for technical standards development, empowers competent authorities to apply prohibition and enforcement measures, and improves the national system for emissions accounting. Together, these steps mark an important shift toward EU-compatible, performance-based air-quality governance and provide a strong legal foundation for implementation of the EU for Clean Air for in Armenia project.

In 2025, three government decisions on air protection regulations were approved: No 611-L "On approval of the program of comprehensive measures in the field of air protection for 2025-2030", No. 1142-N "On the approval of common criteria for ambient air quality assessment, pollution measurement methods and standardized measurement methods, as well as the locations and quantities of pollution measurement stations" and No 1145-N "On the classification of zones and agglomerations", which impose significant requirements for improvement of the air monitoring system, with clear timelines for implementation, need to monitor $PM_{2.5}$ and PM_{10} which was note previously measured due to absence of corresponding equipment.

According to the Decision No 611-L measures for upgrading and establishing 14 air quality monitoring automatic stations are planned by 2029.

1.3 Institutional Framework

The key state authority for air protection is the Ministry of Environment (MoE). The Atmospheric Air Policy Department is in charge of policy development, drafting legal and regulatory acts; the Waste and Atmospheric Emissions Management Department of MoE is the permitting unit. The environmental inspection function is separated from the MoE and is under the independent entity Environmental Protection and Mining Inspection Body.

Air quality monitoring in the Republic of Armenia is done by the Hydrometeorology and Monitoring Center (HMC), which is a non-commercial organization under the MoE. The HMC produces reports on air quality, archives the data and publishes monthly and annual air monitoring reports on its web-site. HMC also develops emission inventories and reports these regularly to the Air Convention.

The AQ monitoring network consists of 15 active sampling stations, one regional background station within the EMEP programme (Co-operative programme for monitoring and evaluation of the long-range transmission of air pollutants in Europe) to monitor transboundary air pollution and 214 passive sampling points. Within the 15 active sampling stations air quality monitoring is carried out daily throughout the year, however the system was not upgraded and worked on equipment purchased decades ago

In the area of air protection special, competences are given to Ministry of Emergency (currently merged with Ministry of Internal Affairs) and the Ministry of Health (MoH) on approving prediction, warning and response to hydrometeorological hazards. MoH also is responsible for assessing, communicating and managing the health impacts of environmental hazards including air pollution and works closely with the Ministry of Environment to ensure that early warning translates into effective public health protection

and preparedness actions.

1.4 Development challenges

Insufficient AQ monitoring system: The 2014-2025 Development Strategy of Armenia matches SDG 11 (Make cities and human settlements inclusive, safe resilient and sustainable) and target 11.6 (By 2030, reduce the adverse per capita environmental impact of cities, including by paying attention to air quality and municipal waste and waste management). The absence of measurement of particulate matters is not allowing Armenia to monitor and report on the progress under the SDG 3 goal, as well under target 3.9. (By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollutions and contamination) which are based on Particulate Matter (PM) data.

Monitoring coverage is still not uniform; many areas lack real-time, quality-assured monitoring data. Some pollutant standards may be outdated or not fully aligned with best practice / WHO guidelines. The composition and technical conditions of AQ monitoring network does not provide for realistic picture since monitoring is focused on industrial centres and operational data of background air quality data, particularly related to impact of transport, construction and mining is not sufficiently monitored. As of 2025, no automatic air quality monitoring stations are operational. Two stations have been purchased by state funding but are yet to be installed. Particulate matter ($PM_{2.5}$ and PM_{10}), and VOCs are not measured, and data evaluation, quality control, including on air pollution effects (e.g., on health), is still limited.

Within the EU-UNDP Programme "EU4Climate"[3], the Environment Agency Austria (UBA) has conducted study aimed at drawing recommendations based on requirements arising from CEPA for improving air quality monitoring in Armenia. The results of the study were presented to government counterparts and donor community on the meeting of GREEN platform (July 12, 2023).[4]

Non-existence of a national reference laboratory: The HMC laboratory is not accredited by standard ISO/IEC 17025 for testing laboratories. Modernizing the existing air quality monitoring system in accordance with international requirements will allow more reliable, internationally comparable data that can be reported in real-time. This will provide citizens with timely and accurate information to protect their health and well-being.

Limited knowledge and capacities on the health impact assessment of air pollution and available tools, as well as limited public health/epidemiological data: SDG indicator 3.9.1 is very important for measuring the success of national measures to improve air quality and human health. The Ministry of Health is cooperating with WHO on this matter and experts are trained to use the WHO software tool for health risk assessment of air pollution but lack of data on concentrations of particulate matter prevents the use of this tool in terms of calculating mortality rate attributable to air pollution.

The Second Environment Performance Review of Armenia (2022, published in 2024) states*: "Armenia relies on a traditional, somewhat outdated, air quality monitoring system, which is not providing a complete and reliable picture of the country's air pollution. Estimates of emissions of air pollutants from industry are solely based on calculations relying on self-reporting provided by the key industries and there are no laboratories accredited for industrial emissions measurement. The quality of health statistics and data on air quality do not allow Armenia to report on SDGs related to the health impact of air pollution."*

Ensuring public access to data and transparency is still a challenge in practice, despite legal guarantees.

[3] https://www.undp.org/eurasia/projects/eu4climate

[4] https://nature-ic.am/en/publications/a-general-concept-for-improving-air-quality-monitoring-in-armenia https://www.gov.am/en/news/item/10320/

Incomplete emission inventories and poor/absent AQ modelling and forecasting capacities and tools: The connection between data on air quality and on-air emissions is not established. Emission inventories reporting, which is a key obligation under the UNECE Air Convention, are also still incomplete, as emissions from some sectors or sub-sectors are not assessed or are partially estimated. Improvements in the completeness, accuracy, and precision of the total emission inventories are necessary to be able to improve gridded emissions and develop emission projections. Given these data gaps, pollution problems cannot be properly understood and addressed through relevant measures. Since there is also no real-time reporting on air quality, there is no provision of relevant health advice related to air pollution, except during extreme pollution episodes, which can have serious detrimental effects. The HMC does not have well-established QA/QC system, including tools for initial and final data validation and verification for determining compliance status with national or international AQ standards and guidelines. Most importantly for quantifying trends to identifying future problems or progress in achieving targets.

Need for approximation of the legal framework: CEPA commitments in relation to air quality management according to the roadmap for implementation, specifically indicated the need for proper regulation of industrial emissions. This can be achieved through supporting the legislative framework for adopting 2010/75/EC Directive on industrial emissions (integrated pollution prevention and control). As many of the provisions of the UNECE Air Convention's protocols are mirrored in EU legislation, approximation would also achieve progress towards ratification and implementation of the Convention's protocols, thereby strengthening regional cooperation on clean air in the framework of the Convention.

Lack/absent industry knowledge, resources and incentives to implement BATs: To implement BATs and an environmental permitting system, legislative changes will lead to new processes and will require capacity-building for government authorities and industry. Trainings and a study tour for both government and industry representatives to new EU Member States with industry profiles similar to Armenia may be highly beneficial for acquiring practical knowledge for regulation and control of industrial emissions, on the one hand, and for compliance with BAT requirements on the other hand.

The above-mentioned critical challenges need external donor assistance due to their complexity and lack of in-house knowledge and resources within key stakeholders, in particular MoE, HMC, municipalities and industries. Especially, the assistance from the EU and its Member States and/or agencies – with expertise and experience in EU acquis approximation – would be an added value for Armenia to ensure a healthy environment for its citizens, and to fully meet obligations under CEPA and SDGs.

II. Project Strategy

2.2 Proposed Joint Programme - scope, overall goal and approach

The overall objective of the Joint Programme is **to improve air quality, to better protect the health of citizens of Armenia.** This will be done through enhancing air quality monitoring, assessment, and management capacities of the government of Armenia.

To address the persisting air quality challenges in Armenia, three UN agencies – UNDP, WHO and UNECE in a partnership with Umweltbundesamt - Environment Agency Austria (UBA) will carry out the present Joint Programme.

The project implementation methodology will follow the logic of the relevant comprehensive knowledge of EU AQ, industrial emissions acquis as well as air monitoring, modelling, forecast and planning requirements and related policy issues.

To achieve the project's overall objective, it is critical to address the aforementioned prevailing challenges in Armenia's air quality policy and management through three interrelated outputs: (i) Strengthened legal framework and capacity building; (ii) Modernized air quality monitoring and management system; (iii) More intensive usage of air quality data by the relevant institutions and population, supported by a structured set of activities and sub-activities aligned with key environmental and health strategies and plans of Armenia as well as with Armenia's commitments under international agreements and CEPA requirements.

Having as key focus of the project the capacity-building and support of relevant national institutions, the project will support cooperation, learning, knowledge exchange and policy dialogue for the enhancement of the legal framework for AQ management and a technical upgrade of the AQ monitoring system. It will be delivered through a tailored training, strengthening institutional expertise of relevant authorized entities on national and municipal level and promoting inclusive participation, especially involving educational institutions, CSOs, women and youth.

The project will ensure efficiency and sustainability of results, in particular:

- The project will support beneficiary institutions with appropriate justification, international examples and lessons learned for drafting required regulatory documents or amendments to existing laws.
- The manuals and guidelines for the AQ monitoring system improvement, communication ways and channels of tailored information to public developed with the help of project experts, will be done in close consultation with relevant institutions and will allow updates by the beneficiaries without external support, after the end of the project.

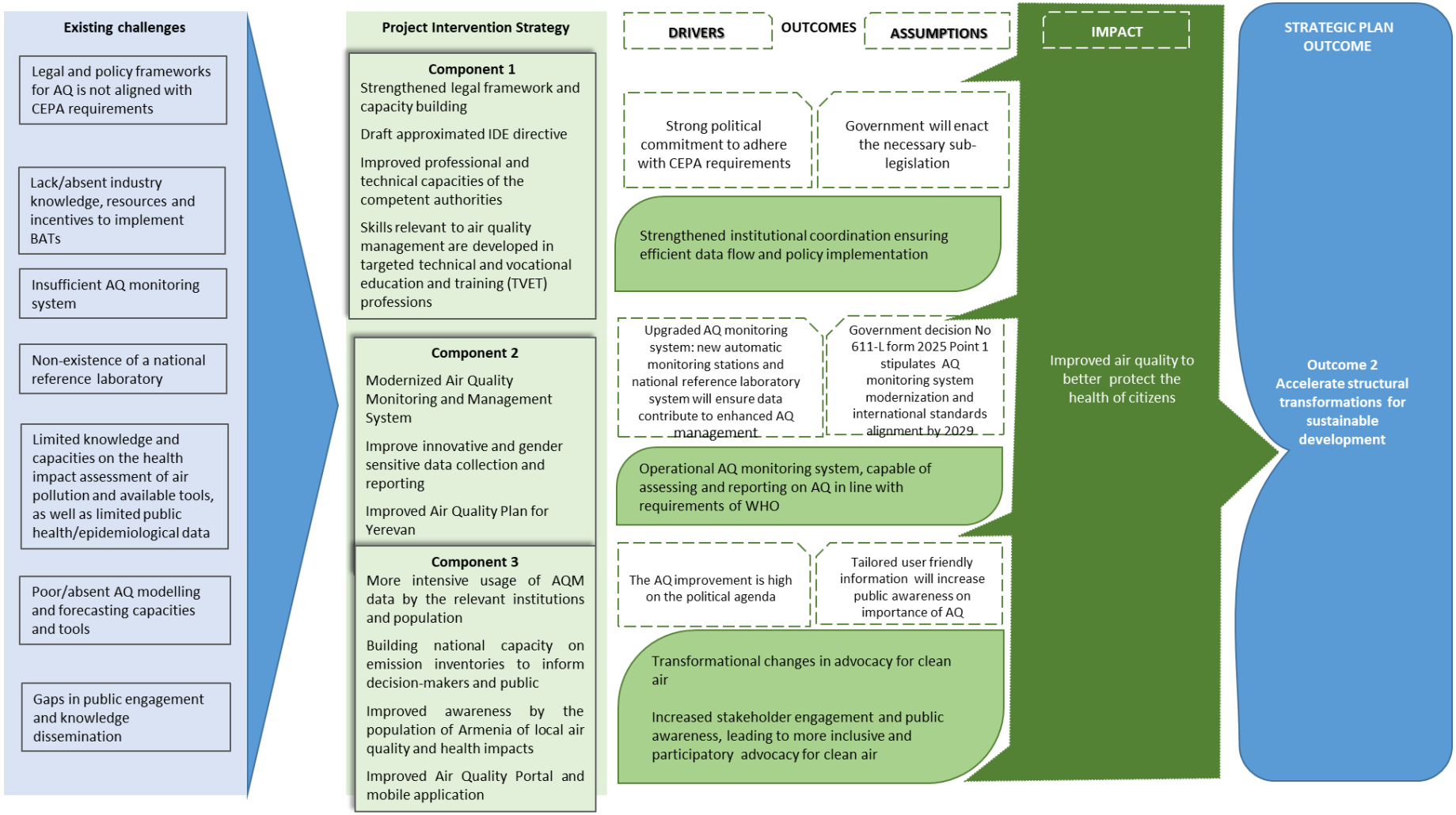
The project will make positive contributions to mainstreaming improvement of air quality monitoring with special focus on accessibility of AQ information for vulnerable groups, including women and people with health problems.

The project has coordinated its planned activities with the EU4Green Recovery East project and other initiatives to avoid duplication and ensure synergies. In addition, the project will coordinate with the ongoing EU "Support to CEPA Monitoring, Implementation and Communication" project.

The Theory of Change diagram provided below presents the analytical flow from the development of impact level to overall outcome, to project results and interventions. The project will follow activities aimed at moving from fragmented to operational AQM system capable of tracking, assessing and

reporting on AQ status, providing a basis for alignment of air quality in Armenia with the WHO requirements for clean air.

2.3 Theory of Change



III. Results and Partnerships

The overall long-term objective (impact) of the Project will be achieved through the outcome of improved institutional and technical capacity of the Government of Armenia to monitor, analyse, and regulate air quality, contributing to long-term improvements in air quality and public health protection.

The mentioned outcome will be delivered through the following three Components:

- Output 1. Legal framework and capacity building strengthened.
- Output 2. Air quality monitoring and management system modernized.
- Output 3. Air quality data used more intensively by the relevant institutions and population.

To effectively address Armenia's policy implementation, through enhanced technical and professional capacity, and public awareness and control the UN organizations (PUNOs) – UNDP, UNECE, WHO - together with non-UN organisation (NUNO) - the Environment Agency Austria (UBA) - are joining efforts and expertise to implement a 3-year the project as UN Joint Programme.

3.1 Description of Activities by Division of Labour[5]

Activity/Sub-activity	UNDP	UNECE	WHO	UBA
Activity 1.1 Draft approximated legal framework for AQM and IED to support CEPA approximation by MoE				
Sub-activity 1.1.1. Based on the outcomes of the BAT feasibility study conducted by UNECE, draft a law on industrial emissions (aligned with the Industrial Emissions Directive - IED) and related legal acts, incorporating BAT Reference Documents (BREFs) and BAT Conclusions (BATCs).	**L**			
Activity 1.2 Improved professional and technical capacities of the competent authorities				
Sub-activity 1.2.1. Capacity building of the staff of Hydrometeorology and Monitoring Centre	**P**			**L**
Sub-activity 1.2.2 Capacity building on establishing an environmental permitting system and implementing Best Available Techniques (BAT)		**L**		
Sub-activity 1.2.3 Experience sharing and demonstration of BAT implementation by an EU country		**L**		
Activity 1.3 Skills relevant to AQM are developed in targeted TVET professions				
Sub-activity 1.3.1. Needs assessment of targeted technical and vocational education and training (TVET) professions	**L**			
Sub-activity 1.3.2. Development of a comprehensive programme and curricula for TVET	**L**			
Activity 2.1 Improved AQ monitoring network				
Sub-activity 2.1.1 Needs assessment of ambient AQ monitoring system and development of a system upgrade action plan				**L**
Sub-activity 2.1.2. Development of the specifications and procurement of monitoring stations	**L**			**P**
Sub-activity 2.1.3. On-job training for the maintenance and operation of air quality stations				**L**

[5] L- Lead; responsible for delivery of activity; P – Participating

Sub-activity 2.1.4. The feasibility study/cost analysis for establishing a national reference laboratory (NRL) for air quality	**P**			**L**
Sub-activity 2.1.5. Further modernization of the chemical laboratory and establishing a National Reference Laboratory	**L**			**P**
Activity 2.2 Improved Air Quality Plan (possibility depending on resources and needs)				
Sub-activity 2.2.1 Study on sources of pollutants in Yerevan	**L**			**P**
Activity 3.1 Building National Capacity on emission inventories to inform decision-makers and public				
Sub-activity 3.1.1 Establishment of harmonized air pollutant and GHG emission inventory system	**P**	**L**		
Sub-activity 3.1.2 Develop spatially allocated national air emissions in the EMEP grid (gridded emission)	**P**	**L**		
Activity 3.2 Improved awareness by the population of Armenia of local air quality				
Sub-activity 3.2.1. Identification of critical information related to AQ and appropriate channels for delivery of AQ related information to the population	**P**		**L**	
Sub-activity 3.2.2. Awareness campaign	**P**		**L**	
Activity 3.3 Improved Air Quality Portal				
Sub-activity 3.3.1. Defining technical specifications of the AQ dashboard and mobile application for real-time air quality data, historical trends, forecasts, or health advisories	**L**		**P**	
Sub-activity 3.3.2. Develop a portal and mobile application for dissemination of AQ information	**L**		**P**	

A detailed description of project components, outputs and activities under each output is given below

Output 1. Legal framework and capacity building strengthened

Activity 1.1 Draft approximated legal framework for air quality management and the industrial emissions directive to support CEPA approximation by Ministry of Environment

The activities under output 1.1 focus on providing technical guidance and legislative support to policymakers to create a conducive policy and regulatory environment for CEPA approximation.

Sub-activity 1.1.1 Support in approximation of legal framework for adopting EU Directive 2010/75/EU (UNDP)

Support in implementation of the CEPA commitments in relation to air quality management according to the Roadmap for implementation, specifically through supporting the legislative framework for adopting EU Directive 2010/75/EU (IED) of 24 November 2010 on industrial emissions (integrated pollution prevention and control), with, among others:

- Adoption of national legislation and designation of competent authority(ies).
- Determination of structures for which a permit is required (Appendix I)
- Creation of a combined permit system (Articles 4 to 6, 12, 21 and 24 and Annex IV)
- Establishing a compliance monitoring mechanism (Articles 8, 14(1)(d) and 23(1))
- Application of Best Available Technologies (BATs), taking into account the reference documents for the BATs (Articles 14(3) to (6) and 15(2) to (4))
- Setting emission limit values for combustion plants (Article 30 and Annex V)
- Development of programs to reduce the total volume of annual emissions from existing plants (alternative to setting emission limit values for existing plants) (Article 32)

UNECE is currently working on a feasibility study to estimate the cost of implementing BATs for one existing plant to elaborate recommendations for retrofitting/upgrading. UNDP will use the feasibility study to support the process of drafting the essential legal frameworks. This process will include close coordination with the Ministry of Environment and consultations with all relevant stakeholders, including with industry associations.

Activity 1.2 Improved professional and technical capacities of the competent authorities

The activities under output 1.2 aim to build capacities of the staff in the Atmospheric Policy Department and Hydrometeorology and Monitoring Centre. In the context of the approximation to the IED, capacity-building will also encompass training for industry representatives, regulators, and law enforcement officers on BAT implementation.

Sub-activity 1.2.1 Capacity building of the staff of Hydrometeorology and Monitoring Centre (UBA and UNDP)

UBA will carry out capacity building, organizing a mission to Armenia to train staff regarding technical questions related to AQ monitoring. Furthermore, there will be up to three online workshops for further capacity building of the staff. The topics of the mission and the workshops will depend on the specific needs, including hand-on training on setting up, calibrating and maintaining air quality monitoring equipment; practical exercises on data transmission protocols used in automatic air quality monitoring systems; troubleshooting techniques specific to automatic air quality monitoring systems, data acquisition, storage, quality control, and basic analysis using specific software (e.g., Excel, open-source statistical tools).

Sub-activity 1.2.2 Capacity building on establishing an environmental permitting system and implementing BATs (UNECE)

UNECE will organize a workshop to facilitate an exchange on establishing an environmental permitting system and implementing BATs in line with the IED for industry representatives, regulators, and law enforcement officers. The workshop will also share lessons learned from the feasibility study UNECE is currently carrying out (ref. 1.1.1)

Sub-activity 1.2.3 Experience sharing and demonstration of BAT implementation by an EU country (UNECE)

UNECE will organize a study tour to an EU country for relevant decision-makers and industry representatives, as well as environment permitting and law enforcement authorities, for them to learn about an EU country's experience on integrated pollution prevention and control (IPPC), BAT and its practical operation, compliant installations, and results of BAT in one sector (e.g., large combustion plants or another appropriate sector).

Activity 1.3 Skills relevant to air quality management are developed in targeted technical and vocational education and training (TVET) professions

The sustainable operation of air quality monitoring stations and laboratory equipment management and maintenance needs qualified technical personnel. There is a gap in the formal educational system which can be addressed by introducing new courses in technical and vocational education institutions. These programs should include curriculum development and hands-on practical courses in identified technical and/or vocational education institutions. Significant expertise in this area has been developed at TUMO Labs, where young professionals are trained to design, assemble, and program climate and air quality monitoring equipment, as well as collect and analyze online data. By integrating these enhancements, technical and vocational establishments can better equip future air quality monitoring technicians with essential knowledge and skills in remote control and IT-based technologies. This will make them more

relevant and effective in addressing contemporary air quality monitoring challenges.

Sub-activity 1.3.1 Needs assessment of targeted TVET professions (UNDP)

Based on analysis of corresponding institutional landscape and qualification requirements for technicians for AQ monitoring, a target technical and vocational institutions will be selected. The courses in corresponding specializations will be enhanced considering new requirements for knowledge on new technologies, including AQ monitoring stations and laboratory equipment, and IT-based technologies.

Sub-activity 1.3.2 Development of a comprehensive programme and curricula for TVET (UNDP)

The programme and curricula for AQ monitoring stations and laboratory equipment management and maintenance will be developed in partnership with specialized educational institutions and the TUMO Lab, including facilitation of internships or practical placements for students to gain hands-on experience with real-world monitoring systems, understanding on needs of calibrating, troubleshooting techniques specific to remote deployments and maintaining the monitoring equipment as laboratory technicians.

Output 2. Air Quality Monitoring System modernized

Activity 2.1 Improved air quality monitoring network

The air quality monitoring network and much of the supporting infrastructure need fundamental rebuilding and restructuring. The CEPA agreement aims at harmonizing the Armenian legislation towards the European air quality directives, with agreed timelines for implementation of provisions including: classification of zones and agglomerations; upper and lower assessment thresholds and limit values; system for assessing ambient air quality concentrations in relation to standards; system to provide information to the public.

Sub-activity 2.1.1 Development of air quality monitoring system upgrade action plan (UBA)

In 2022, UBA conducted a needs assessment for Armenia's ambient air monitoring system in the scope of the UNDP EU4Climate project. In consultations with the Ministry of Environment, Ambient Air Policy Department and Hydrometeorology and Monitoring Center, the information will be reviewed and the sites for installation of new monitoring stations will be agreed upon. No mission foreseen under this sub-activity.

Sub-activity 2.1.2 Development of the specifications and procurement of monitoring stations (UBA and UNDP)

Tailored and detailed technical specifications for procurement of the monitoring stations will be developed and agreed upon with the Hydrometeorology and Monitoring Center. According to the upgrade action plan, at least 2 new monitoring stations will be procured and installed. No mission foreseen under this sub-activity.

Sub-activity 2.1.3 On-job training for the maintenance and operation of air quality monitoring stations (UBA)

It is expected that general service and maintenance of the new AQ stations for two years after deployment will be part of the contract with the supplier. Two missions by one UBA expert to Armenia and further online support are foreseen to further equip the personnel of the Hydrometeorology and Monitoring Center with the necessary skills and knowledge to effectively maintain and operate air quality monitoring stations, as well as regarding validating and reporting of the air quality data. The key components of the training hence include: technical training (equipment familiarization, routine

maintenance, troubleshooting), operational training (data collection, data analysis, reporting), etc. The trainings will be based on the train-the-trainer principle. The sub-activity is based on the assumption that air quality monitoring stations have been installed and are fully operational at the end of 2027 at the latest.

Sub-activity 2.1.4 Feasibility study/cost analysis for establishing a national reference laboratory for air quality (UBA)

The feasibility study/cost analysis for establishing the national reference laboratory will be done focusing on internal capacities and needs of the Hydrometeorology and Monitoring Centre, followed by development of detailed specifications for analytical and calibration equipment of the reference laboratory. No mission foreseen under this sub-activity.

Sub-activity 2.1.5 Technical upgrade of the chemical laboratory and establishing a National Reference Laboratory (UNDP)

The establishment of the National Reference Laboratory is important to meet the requirements of Directive 2008/50/EC (CAFE) as amended by Commission Directive (EU) 2015/1480 pursuant to Article 3 and Annex I of the given directive. Basic equipment will be procured and installed following technical specifications and guidance by UBA consultants.

Activity 2.2 Improved Air Quality Plan

A study on sources of pollutants in Yerevan will support better air quality planning in the city.

Sub-activity 2.2.1 Study on sources of pollutants in Yerevan (UNDP)

Based on air quality monitoring data and database of the Ministry of Environment on stationary sources operating in the boundaries of Yerevan, a roadmap will be developed for improvement of air quality in close consultation with Yerevan Municipality.

Output 3. AQM data used intensively by the relevant institutions and population

Activity 3.1 Building national capacity on emission inventories to inform decision-makers and public

Emission inventories help pinpoint significant sources of air pollutants, enabling targeted regulatory actions. Inventories provide essential data for mathematical models that estimate air quality and predict the impact of potential regulatory measures. By periodically updating emission inventories, decision-makers can establish trends over time, which is vital for assessing the effectiveness of pollution control strategies. Emission inventories can be used to inform the public about sources of pollution, fostering greater community engagement and support for environmental initiatives. Accurate emission data is also fundamental for developing and implementing targeted policies aimed at reducing air pollution and protecting public health. In the context of the UNECE Air Convention, annual reporting of emission inventories is one of the basic obligations, ensuring the proper functioning of the agreement.

Sub-activity 3.1.1 Establishment of harmonized air pollutant and GHG emission inventory system (UNECE)

Air pollutant and GHG emission inventories and projections are often developed separately, when in fact, there are benefits to developing them conjointly. Given that activity data is largely the same for both types of inventories, it is more efficient and cost-effective to build a single coordinated system for estimating both GHG and air pollutant emissions. In addition, compiling air pollutants and GHG inventories in tandem might improve quality across inventories. It may also help decision-makers understand the co-benefits and potential conflicts and improve tracking the impact of air pollution and

climate measures. To advance efforts on establishing a harmonized air pollutant and GHG emission inventory system, UNECE will organize a workshop for national emission inventory experts involved in the inventory-related work under UNFCCC and the UNECE Air Convention. The workshop will address reporting requirements, reporting formats (e.g., reporting tables (NFR, BTR), methodological report (IIR)), methodologies, and various aspects of data collection.

Sub-activity 3.1.2 Develop spatially allocated national air emissions in the EMEP grid (gridded emission) (UNECE)

Gridding or spatially allocating emissions aims to produce maps of air pollutant emission sources of a given country, which can help experts and decision-makers understand which policies are most viable. Spatial allocations of emissions are also important to understand where emissions are coming from on a regional level. Gridding emissions is technically complex. It requires applying the gridding matrix to the inventory emissions to transform source-based inventory emissions to gridded emissions. Under the UNECE Air Convention, Parties now report gridded emissions in a 0.1° x 0.1° longitude-latitude spatial resolution. The fine resolution can help attribute emissions more precisely on the map. To assist Armenia in developing gridded emissions, UNECE will organize a workshop on spatially allocated national air emissions. Since UNECE has assisted Armenia in developing its first gridded emissions and data on large point sources, a follow-up workshop will focus on improvement of quality and completeness of the reports.

Activity 3.2 Improved awareness by the population of Armenia of local air quality and health impacts

Communication and outreach, awareness raising, and public participation will contribute to transformational changes in advocacy for clean air, promoting adaptive actions and pro-environmental behaviours. Quality health messaging can help users to react specifically to elevated levels of ambient air pollution.

Sub-activity 3.2.1 Identification of critical information related to AQ and appropriate channels for delivery of air quality related information to the population (WHO)

A nation-wide survey will be conducted to: (1) assess population awareness about air pollution and interpretation of air quality indicators; (2) identify gaps in knowledge and preferred communication channels for different population groups; (3) utilize survey findings to inform the development of targeted, health-focused messaging and campaigns.

In addition, an inclusive policy dialogue will be organized, involving government stakeholders, healthcare professionals, civil society organizations (CSOs), and academia to sensitize and discuss the use of survey results to develop evidence-based air quality strategies and communication plan of action by leveraging WHO tools such as AirQ+ and CLIMAQ-H.

The activities will lead to improved understanding of population's perceptions of air quality risks, strengthened institutional environment and health sector capacity to communicate health impacts of air pollution, and enhanced stakeholder engagement and alignment around national air quality strategies in line with WHO guidelines.

Sub-activity 3.2.2 Awareness raising campaign (WHO)

WHO will develop and implement an evidence-based national awareness campaign aimed at increasing public understanding of air quality, its determinants, and its health implications through the whole project duration. The campaign will promote protective behaviours and evidence-supported healthier decision-making through tailored messaging on air quality information and information on air pollution and key health-relevant air pollutants, associated risks, and preventive measures. It will deploy a multi-

channel communication strategy, leveraging digital platforms, traditional media, and community outreach, to ensure inclusive and wide-reaching dissemination. The campaign will include development of targeted information and education materials for healthcare providers, empowering them to counsel patients, particularly vulnerable groups, on air pollution and protective behaviours. This will lead to increased public awareness and understanding of air pollution and its health effects. Improved risk perception and adoption of protective behaviours by the population. Active engagement of healthcare professionals in educating the population on the health impact of air pollution and advocating for clean air.

Activity 3.3 Improved Air Quality Portal and mobile application

The issue of air pollution is high on the political agenda as an element of a holistic approach to sustainable development. It is also a serious concern related to health-related risks, especially in the capital city of Yerevan. Providing users with tailored information is crucial for increasing public awareness of air quality issues and encouraging behaviours that mitigate pollution-related risks.

3.3.1 Defining technical specifications of the AQ dashboard and mobile application for real-time air quality data, historical trends, forecasts, or health advisories (UNDP)

The air quality information portal content and technical specifications will be developed following leading international best practices for public dissemination of air quality data. Its design will prioritize user-friendliness and broad accessibility, empowering citizens, researchers, and policymakers with actionable insights.

3.3.2 Develop a dedicated portal and upgrade mobile application for dissemination of AQ information (UNDP)

A HMC website will be upgraded with a dedicated portal and mobile application to be developed, offering streamlined real-time air quality data and specific information for health-related behavioural recommendations. The portal will provide real-time and historical air quality data at city, and potentially street-level where data allows. This will allow users to easily identify the pollution hotspots and trends over time. A detailed user guide will support navigation, help to interpret air quality indices, and to understand the health implications of various pollution levels. The detailed statistics on average pollution levels (e.g., $PM_{2.5}$, PM_{10}, NOx, SO_2, O_3) in designated urban zones will enable comparative assessments and support long-term trend monitoring.

The HMC is currently operating a mobile application providing real-time weather information for all main urban areas of Armenia and air quality data from stationary stations. The mobile application will be updated to integrate air quality real-time monitoring data. The upgraded mobile application will be synchronized with the portal's data, providing on-the-go access to real-time data, alerts, and localized air quality forecasts, leveraging mobile-optimized data visualizations for user-friendly information and clarity.

3.2 Project Results Framework

Results	Results chain	Indicators	Baselines (values and years)	Targets (values and years)	Sources of data	Assumptions
Impact	Improve air quality in Armenia through better capacity of the Government of Armenia to monitor, analyse and regulate air quality	Daily/annual concentrations of SO_2 and NO_2[6]	In 2024: NO_2:83µg/m³ SO2:76 µg/m³	Y3: all values to show reductions	Statistical Committee, HMC	Sufficient reliable data available
		Emissions of NOx, NMVOC, SOx, NH_3, CO, $PM_{2.5}$ and PM_{10}	In 2023: NOx: 24,8 kt NMVOC: 53,99 kt SOx: 1,49 kt NH_3: 15,87 kt CO: 169,65 kt $PM_{2.5}$: 4,37 kt PM_{10}: 8,72 kt	In 2026 (Y3-2): all values to show reductions	Officially reported emission data under the UNECE Air Convention, available at ceip.at	
Output 1	Legal framework and capacity building strengthened	**1.** Legal basis for approximation to Ambient Air Quality Directive and industrial emissions and related capacity of competent authorities and TVET professions enhanced (yes/no)	2025: No Law on Industrial Emissions; Capacity of HMC regarding AQ monitoring and Ministry of Environment regarding Best Available Techniques weak; No national reference laboratory; No curricula for TVET professions	In Y3: Yes The draft IED law submitted to MoE (to be measured through the level of achievement of output targets)	Project reports, legal texts, final evaluation,	Government of Armenia receptive and cooperative

[6] Impact indicators are provided for the purpose of monitoring the overall situation in the country. The project does not have control over the achievement of these indicators.

Results	Results chain	Indicators	Baselines (values and years)	Targets (values and years)	Sources of data	Assumptions
Outcome 2	AQ Monitoring and Management System modernized	**2.** New air quality monitoring stations procured, operation and maintenance ensured; National Reference Laboratory established; study on sources in Yerevan (yes/no)	2025: Insufficient air quality monitoring stations and no AQ reference laboratory; weak operation and maintenance; No study on sources in Yerevan	In Y3: Yes (to be measured through the level of achievement of output targets)	Project reports, final evaluation, website of Hydrometeorology and Monitoring Center and European Environment Agency	Government of Armenia receptive and cooperative
Outcome 3	AQM data used intensively by the relevant institutions and population	**3.** Improved emission data reported to the Air Convention Improved awareness by the population of local air quality Availability of data on AQ portal and mobile application (yes/no)	2025: Gaps in emission data; Weak awareness by the population of local air quality; No AQ portal and mobile application with real-time air quality data and health effects	In Y3: Yes (to be measured through the level of achievement of output targets)	Project reports, final evaluation, websites of relevant institutions, media coverage	The project implements targeted awareness campaigns with tailored messages and capacity building activities in way to have positive impact on target groups and general public.
Activity 1.1	Draft approximated legal framework for air quality management and the industrial emissions directive to support CEPA approximation by Ministry of Environment	**1.1.1** (UNDP) # of draft laws/ regulations developed	2025:0	In Y3: 1 draft law developed	Project reports, final evaluation, draft law	Government of Armenia receptive and cooperative
Activity 1.2	Improved professional and	**1.2.1** (UBA)	2025:0	In Y3: at least 5 specialists	Training reports, final evaluation	Depending on commitment/engagement of

Results	Results chain	Indicators	Baselines (values and years)	Targets (values and years)	Sources of data	Assumptions
	technical capacities of the competent authorities	# of HMC staff trained on air quality monitoring system operation and maintenance, by sex and age		trained (train the trainer principle)		Armenian experts, personnel continuity
		Indicator 1.2.2 (UNECE) # of workshops organized **Indicator 1.2.3** (UNECE) # of national experts/industry representatives trained on the environmental permitting system and implementation of BAT	2025:0	In Y3: 1 workshop on BATs organized In 2028: at least 25 experts trained, at least 40% females	Project reports, final evaluation	Industries and key decision-makers are interested in getting up-to-date knowledge and skills in regulation and control of industrial emissions; Ministry of Environment is instrumental in mobilising trainees and study tour participants.
		Indicator 1.2.4 (UNECE) # of national experts who gained knowledge about the EU experience in implementing the environmental permitting system and BAT	2025:0	In Y3: at least 12 experts trained, at least 40% female.	Project reports, final evaluation	
Activity 1.3	Skills relevant to air quality management are developed in targeted TVET	**Indicator 1.3.1.** (UNDP) Programme and curricula developed for	2025:0	Y3: Target TVET institutions identified and teaching	Developed programme, project reports	The need for technically qualified staff for monitoring equipment management and

Results	Results chain	Indicators	Baselines (values and years)	Targets (values and years)	Sources of data	Assumptions
	professions	TVET institutions on air quality monitoring systems **Indicator 1.3.2.** (UNDP) # of TVET institutions implementing the programme.		programme and curricula developed		maintenance is stated by stakeholders
Activity 2.1	Improved air quality monitoring network	**Indicator 2.1.1** (UNDP) # of automatic air quality stations procured	2025: 2	Y3: 4	AQ data reported by the Hydrometeorology and Monitoring Center	UBA consultants support will ensure transfer of knowledge to the personnel at Hydrometeorology and Monitoring Center. Continuity of service and maintenance of AQ stations through provided instructions
		Indicator 2.1.2 (UBA) National reference laboratory working (yes/no)	2025: 0	Y3: 1	Project reports	
Activity 2.2	Improved Air Quality Plan	**Indicator 2.2.1.** (UNDP) Study on sources in Yerevan and roadmap for improvement developed (yes/no)	2025:0	Y3: 1	Project reports	Local government receptive and cooperative
Activity 3.1	Building national capacity on emission inventories to inform decision-makers and public	**Indicator 3.1.1** (UNECE) # of workshops organized **Indicator 12**(UNECE) # of trained national experts	2025:0	In Y3: 2 One on air pollutant and GHG emissions; One on gridded emission data In Y3: at least 8 experts trained,	Project reports, final evaluation	National experts will actively engage in the workshops

Results	Results chain	Indicators	Baselines (values and years)	Targets (values and years)	Sources of data	Assumptions
				at least 40% female.		
Activity 3.2	Improved awareness by the population of Armenia of local air quality and health impacts	**Indicator 3.2.1.** (WHO) # of policy dialogues organized **Indicator 3.2.2** # of participants at the policy dialogues, by sex and age **Indicator 3.2.3** (WHO) # people reached by awareness campaign **Indicator 3.2.4.** (WHO) # of awareness materials developed	2025:0 2025: 0 2025: to be measured by survey 2025: 0	Y3: 1 policy dialogue Y3: 50 participants, 50% men and 50% women, age 30-55 Y3: awareness raised 1.5 mln Y3: 3	Project reports, Knowledge, Attitude, Practice (KAP) survey, campaign implementation and results report, evaluation	Increased knowledge on air quality and its impact on health
Activity 3.3	Improved Air Quality Portal and mobile application	**Indicator 3.3.1.** (UNDP) Air quality portal and mobile application is functional	2025: 0	Y3: 1	Link to the web portal; project reports	Access to AQ data ensured

3.3 Project Partners

The relevant experience, expertise, available resources, and already established strong strategic partnerships and stakeholder/community of practice network in Armenia - put UNDP, UNECE, WHO and UBA as well positioned to successfully implement the Project. All partners will use in-house expertise and recruit additional temporary project staff, including local and international consultants. Below is a brief elaboration of the experience, capacity, and technical competence of project partners:

UNDP: has been active in Armenia since 1993, aiming at, *inter alia*, facilitating Armenia's green transition, by assisting the country in developing and promoting Low-Emission Development policy approaches. UNDP has supported Armenia in identifying and drafting necessary actions for a transitional system for air pollution permitting system for smooth convergence of the existing legal framework with the main principles of Directive 2010/75/EU. UNDP supported in drafting amendment of Air Protection Law (adopted in 2023), Government decree No 54-N, 2024 on GHG emissions inventory data collection and reporting system including harmonization of data reporting under the UNECE Convention on Long-range Transboundary Air Pollution.

The professional capacity of UNDP Armenia is based on rules, procedures, and fiduciary standards fully in line with the best international standards demonstrated at large-scale initiatives. All UNDP projects are subject to independent evaluation, and recommendations, as well as lessons learned, are considered, especially for future actions. The UNDP CO Climate, Environment and Resilience portfolio manages a number of projects' staff and consultants hired on service or individual contracts. The current (2021-2025) portfolio budget is around US $ 99 million for a range of initiatives covering climate policies and country strategy development, climate change mitigation and adaptation, biodiversity conservation, disaster risk management amongst others. UNDP has solid cooperation with the national government and municipalities, private sector, CSOs and academia. UNDP enjoys access to UNDP in-house knowledge, expertise, and resources in environment protection, climate change, and green transition. It also can rapidly mobilize international expertise, as well as to utilize regional and global experience where needed, through its well-established roster of consultants/community of practice.

UNECE: UNECE provides the secretariat to the Convention on Long-range Transboundary Air Pollution, the only multilateral environmental agreement regulating air pollutants on a broad regional basis. The Air Convention provides a framework to facilitate emission reduction measures, policy responses to the air pollution challenge and the implementation of air quality management systems. Armenia acceded to the Convention in 1997 and is taking measures to reduce air pollution but has not yet acceded to the amended Gothenburg Protocol[7]. Provisions in the Gothenburg Protocol, such as emission limit values (ELVs) based on Best Available Techniques (BATs), are mirrored in Industrial Emissions Directive (IED) 2010/75/EU. To promote the understanding and implementation of the Convention and its protocols across the UNECE region, UNECE has organised subregional workshops on BATs. It is also currently carrying out a BAT feasibility study in Armenia. In addition, UNECE has provided support to Armenia in the past in developing emission inventories, including gridded emissions and in developing a national action plan as a roadmap for accession to the latest protocols to the Convention. In 2025, UNECE organized a national clean air dialogue in Armenia to discuss progress towards implementation of actions outlined in the national action plan, and

[7] Protocol on Heavy Metals, Protocol on Persistent Organic Pollutants, Protocol to Abate Acidification, Eutrophication and Ground-level Ozone (Gothenburg Protocol)

to promote discussions on next steps among governmental and non-governmental organisations.

WHO: WHO is the UN agency specialised in promoting multilateral cooperation in the area of health and is supporting the countries' efforts to improve health outcomes linked to environmental risks, through sharing good practices, research, policies and action on environmental and occupational hazards to health and strengthening environmental surveillance and information systems. WHO has strong expertise in environment and health, including reducing the health burden of air pollution. It is providing transformative policy approaches, knowledge, decision-support and advocacy tools, and technical assistance to countries in assessing the health impacts of improving AQ, attaining health-based AQ targets, reducing polluting fuel technologies, strengthening health systems and communities, resilient to climate change, and promoting cleaner energy. Moreover, it has a normative role, through developing the AQ guidelines, methods and tools, and maintains and strengthens global and regional thematic networks of experts to provide support to countries in need. WHO has developed AQ related tools, including on the links to CC mitigation, household fuel combustion, and non-motorised transportation (AirQ+, HEAT, CLIMAQ-H, etc).

WHO has developed and implemented a strategy for raising awareness on the risk of air pollution, as well as available solutions that can be implemented to mitigate the risks of exposure to air pollution. As a part of the strategy, the global BreatheLife campaign, led by WHO, CCAC, UNEP and World Bank, has raised the political commitment of policy-makers to lead urban, national and regional campaigns to build awareness of emerging evidence of the health impacts of air pollution, scale-up local policy interventions like Urban Health Initiative to meet WHO's air quality guidance, and anchor health as a lever for action on climate change. The BreatheLife reached over 486 million people, raising local best practices to a global profile, while localizing messages which link health, climate and economic benefits to clean air.
In Armenia, WHO will gather in-depth insights into public knowledge, existing gaps, and behaviours related to air quality and its impact on health. Building on these findings, WHO will design a campaign that translates complex scientific evidence into clear, accessible information and practical actions for communities and decision-makers. To support this effort, WHO will share its extensive expertise and evidence-based data, ensuring the campaign is both informative and impactful.

WHO will provide technical expertise in environmental health related activities under Activity 3.2 of the project.

Umweltbundesamt - Environment Agency Austria (UBA): The Umweltbundesamt - Environment Agency Austria (UBA) is a top provider of environmental services in various areas, including AQ monitoring, emission inventories, pollutants release and transfer register, AQ information systems and data reporting, etc. The agency makes use of its experience from environmental research projects, carried out in collaboration with research institutes and universities, and provides consultancy services in large areas of expertise including assessment of EU policy implementation across EU Member States, provision of recommendations to policy makers, capacity building of South-eastern Europe countries in their adaptation to EU legislation and implementation of environmental policies, environmental data management and reporting. It is noteworthy to mention that UBA's calibration laboratory under the Department for Air Quality & Buildings has been acting as National EU Reference Laboratory for Ambient AQ since the coming into force of the Austrian Ambient Air Quality Protection Act in 2000. It is accredited as a calibration laboratory according to EN ISO/IEC 17025 hence, the Agency has a vast experience in operating an EU-compliant reference laboratory. Under the EU4Climate project, UBA conducted an assessment on the needs of an air monitoring system for Armenia and developed a concept for system improvement.

The following resources will be provided for the project:

- UNDP will manage the project daily, including financial and administrative management,

monitoring, reporting, stakeholder engagement, advocacy and communications, etc. UNDP Country Office (CO) in Armenia will provide programmatic and operational backstopping to the project, including M&E, quality assurance, recruitment, procurement, financing. This will be ensured by UNDP Armenia country office team, including Programme team: Environmental and Energy Team Leader, Programme Associate, and Monitoring and Evaluation Officer;

- WHO will provide technical expertise in environmental health related activities under output 3.2;
- UNECE will provide technical expertise in industrial emission control to enhance knowledge and capacities of decision-makers and industry representatives in regulation and control of industrial emissions and practical application of BAT (activities 1.2.2 and 1.2.3). UNECE will also provide technical expertise to support the country in developing and improving emission inventories further, as accurate emission data is fundamental for developing and implementing targeted clean air policies. In the context of the UNECE Air Convention, annual reporting of emission inventories is one of the basic obligations, ensuring the proper functioning of the agreement (activities 3.1.1 and 3.1.2).
- UBA will bring expertise in AQ monitoring, data calibration and inter-comparison – to provide technical advice to HMC in assessing the existing AQ monitoring network and strategies, and identifying gaps/validating findings, providing a feasibility study / cost analysis for NRL in consultation with HMC, designing specifications for: AQ measurement equipment, analytical and calibration equipment and validation software, proper O/M of AQ monitoring and laboratory equipment through trainings, coaching and mentoring.

3.4 Project Stakeholders

Stakeholder	**Role in the project**
National and Local Governmental Institutions	
Ministry of Environment (MoE)	The MoE is the main authority responsible for air quality protection policy, including legal and regulatory framework development, issuance of permits and licenses for entities which exceed the set threshold level of emissions; monitoring of air quality, monitoring the air quality in 10 cities. The key departments of the MoE consulted in the course of concept preparation, as key beneficiaries of the project activities: - **Atmospheric Policy Department** looks after the registration of management of mobile and stationary sources, receiving information from eight ministries and agencies, besides its policy work. The Department cooperates with the Ministry of Health on norms and standards and submits data to the Statistical Committee; - **Atmospheric Emissions Management Department** deals with pollution permits on air pollution and approval of maximum permissible levels of air emissions, permits on use of ozone depleting substances; - **"Hydrometeorology and Monitoring Center" SNCO** under the Ministry of Environment is responsible for hydrometeorological observation systems and monitoring of the environmental situation and reporting, including AQ monitoring and reporting under the UNECE Convention on Long-range Transboundary Air Pollution and GHG Inventory under UNFCCC. The main pollutants monitored include: SO2, NO2, dust, O3, heavy metals. The AQ

	monitoring system includes 15 fixed non-automated stations. In 2025 2 automatic stations were procured, however the installation and commissioning are still pending.
Environmental Protection and Mining Inspectorate under Government	Environmental Protection and Mining Inspectorate has the broad scope which comprises inspection and environmental enforcement activities on ambient air, water, soil, waste and chemicals, fauna and flora, subsoil.
Ministry of Health (MoH)	MoH is a state body of executive power, which processes and implements the policy in the field of healthcare. The MoH maintains an administrative statistical register with data and information collected on the health system and health status of the population. The National Center for Disease Control and Prevention (NCDC) is a state non-commercial organization (SNCO) under the authority of MoH. NCDC serves as the country's principal public health agency, mandated to prevent, detect, and respond to threats to population health through integrated surveillance, laboratory, and response capacities. NCDC has a broad mandate that covers both communicable and non-communicable diseases and plays a central role in Armenia's compliance with the International Health Regulations (IHR 2005). As part of its mandate, NCDC is engaged in policy formulation in the area of environmental health.
Yerevan Municipality	With a population of 1,075,100 spread across 233 sq km, Armenia's capital, Yerevan, faces a critical air quality challenge due to substantial emissions from stationary and mobile sources. This makes air quality management a major concern for the country's most densely populated city. Yerevan's continental climate, marked by hot, dry summers and relatively cold winters, combined with its geographical setting, the absence of a centralized district heating system, intensive construction, and significant road traffic, severely degrades air quality during both winter and summer. Despite the municipal administration's awareness and initial steps towards improvement, tangible progress remains elusive. The **Nature Protection Department** of Yerevan Municipality will be the key contact for the project.
Ministry of Economy	The ministry oversees economic policy in general and sectoral policies, such as industrial and agrarian policies regarding and promotion of private sector, expansion of exportable sectors of economy by contributing to the development of sectors with export potential as processing industry.
Statistics Committee (Armstat)	The Committee is one of the main providers for the national environmental data and publication of the SDG related indicators.
Ministry of Internal Affairs	The Ministry is the National focal point to the Sendai Framework and leads the National Platform on Disaster Risk Reduction.
Academia and Educational Institutions	

National Polytechnical University American University of Armenia Centre for Ecological-Noosphere Studies of the National Academy of Sciences	Engineering educational and scientific institutes involved in data sciences as well as in environment and sustainability sciences can serve as valuable partners in the course of project implementation and benefit in enhancing educational curricula for air quality monitoring and data processing specialties. Noosphere Center, for instance, conducts fundamental and applied research in biology, environmental protection, and health risk assessments.
Private sector	
Chamber of Commerce and Industry of the Republic of Armenia	The Chamber was founded in 2002 as a non-profit and non-commercial organization, representing the interests of small, medium and large enterprises. The private sector enterprises contribute to national emissions of pollutants and GHGs in certain sectors and are primary stakeholders to be consulted on AQ policies, and. Individual enterprise-level reporting for key emitting industries, such as cement factories, big combustion plants, copper and molybdenum re-processing, and glass production, etc.
NGOs	
Armenian Red Cross Society, Armenian Women for Health and Healthy Environment (AWHHE), EcoLur	NGOs active in advocacy of environment health nexus issues and advocate for civil rights will play an important role in advocacy, awareness-raising and in communicating information for engaging civil society, communities and the broader public in importance of air quality for health. The NGOs and active citizens will be involved in events and capacity building activities. The civil society organisations and media will be consulted in the course of AQ portal design to maximize public access to air quality-related data and information.
TUMO Labs	TUMO Labs, an educational institution launched in 2020 as part of the TUMO ecosystem, focuses on advanced, project-based learning in technology and science. It connects students with real-world challenges through hands-on programs, industry collaborations, and R&D projects. Climate Net is one of the flagship initiatives developed and implemented by TUMO Labs, combining technical education with environmental impact. To date, Climate Net has successfully deployed 30 environmental monitoring devices across Armenia, continuously collecting data on air pollution, temperature, humidity, rainfall, and other key environmental indicators. Building on this infrastructure, TUMO Labs is now planning to develop a dedicated course for TUMO students focused on data analysis and interpretation.
International organizations	
International organizations	Multilateral and bilateral agencies, such as the World Bank, the European Commission, GIZ, WHO, UNICEF country offices and others directly or indirectly involved in AQ management issues. The project will maintain ongoing, two-way communication with these agencies.

3.5 Sustainability of results

Ensuring sustainable outcomes lies at the heart of the JP. Its approach focuses on delivering long-lasting results across policy, stakeholder, and grassroots levels while embedding environmental considerations. This is firmly rooted in the principles of the inclusive, and fair green transition aimed at efficient protection of healthy environment.

Institutional Sustainability

The JP emphasizes the development of robust capacities for stakeholders involved in AQ management. This includes tailored capacity-building interventions and the development of operational guidelines and training materials to ensure long-term retention and transfer of knowledge on AQ monitoring and transparent sharing of information. By fostering collaborative frameworks and building ownership among key stakeholders, the project ensures that results are maintained and expanded beyond its completion. Close collaboration with specialized organizations from EU member states, enhances the project's alignment with EU AQ management standards and best practices, fostering institutional alignment with EU policies and approaches.

Financial Sustainability

The JP incorporates strategies to support establishment of sustainable financing mechanisms for continuous operation of AQ monitoring system management. By consultation with MoE, the JP will provide corresponding justification to address required operational and maintenance cost for AQ monitoring stations and reference laboratory.

Knowledge Building, Partnerships, and EU Cooperation

Knowledge-building is the cornerstone of the JP's sustainability strategy. Through training materials, operational guidelines, best-practice sharing from EU member states, the project enhances technical capacity and understanding among all stakeholders. The JP fosters partnerships with MoE, MoH, municipal administrations and academia - ensuring a cohesive and collaborative approach to AQ management and transparency management solutions. The strong cooperation with partner EU Pillar-Assessed Agencies contributes to Armenia's CEPA commitments alignment.

Educational Institutions and Youth Engagement

Youth knowledge-building is a critical pillar of the JP's sustainability strategy. Engaging youth through education programmes in TVET system, will ensure creation of capacity for qualified staff for smooth operation of the AQ monitoring system equipment in Yerevan as well as in other urban areas. The youth involvement in development of data sharing networks, training workshops, and public campaigns will promote shift in active use of AQ data and advocacy. Youth-driven initiatives as described under activity 1.3 will be ensured through involving TUMO lab involvement to development and use of low cost AQ monitoring systems, educational curricula development for youth, including also involvement in social campaigns, which will foster a cultural and behavioural transformation toward building active citizens influencing current and future decision-making advocacy for the clean air.

Gender Engagement and Social Inclusion (GESI)

A fairer and more inclusive AQ management system project will contribute to including gender-responsive AQ health assessment. The systematic integration of Gender Equality and Social Inclusion (GESI) considerations into AQ management plans, operational manuals, all capacity building activities conducted in

the frames of the project. Considering strong link between air pollution and gender aspects of environmental health, as well as existing challenges related to gender mainstreaming in environmental protection in general and AQ management in particular environmental and health NGOs will be involved in the project activities for appropriate advocacy of AQ importance in urban planning and data transparency. This will serve as effective means for gender and social mainstreaming in AQ and environmental health management processes after the project completion

Civil Society

The JP enhances the capacity and resilience of relevant NGOs by equipping them with the knowledge and data on situation with AQ initiatives. The capacity building workshops with involvement of environmental NGOs will help them to advocate for AQ improvement in densely populated urban areas or areas specifically affected by industrial, construction or mining related pollution. The JP will ensure equitable access to knowledge and opportunities, building a foundation for long-term sustainability.

IV. Governance and Management Arrangements

The Joint Programme (JP) will be jointly managed, coordinated and implemented by UNDP, UNECE, WHO and UBA as a NUNO. The Multi-Partner Trust Fund Office (MPTFO) of UNDP will serve as the Administrative Agent of the JP. The functions of the Administrative Agent are outlined in the Fund Management Arrangement section. UNDP Armenia will act as the Convening Agency.

The JP will be implemented through a strategic One UN approach, integrating initiatives undertaken by UNDP, UNECE and WHO. At the same time, UNDP, which will implement the project under the Direct Implementation Modality (DIM)[8], will retain distinct accountability for deliverables aligned with its respective mandate, institutional priorities, and specialised expertise. This accountability framework ensures focused leadership on mandate-specific initiatives, while fostering inter-agency collaboration on strategic interventions to achieve the JP's overarching objectives.

Under this JP:

UNDP Armenia will take the lead in the following priority areas:

- Close coordination with MoE on legal and regulatory framework improvement
- Provision of local trainers/consultants for the legal approximation activities;
- Mobilisation and engagement of relevant government organizations, educational institutions and CSOs/NGOs in stakeholder consultations and trainings.
- Ensuring procurement of equipment for monitoring stations and reference laboratory
- Public awareness/outreach activities;
- Youth awareness, capacity building, and engagement
- Ensuring gender-responsive approaches
- Networking with international networks and platforms

UNECE will take the lead on the following domains and contribute:

- Organization of capacity building workshop and study tour on BAT implementation (activities 1.2.2 and 1.2.3).

[8] Direct Implementation (DIM) | United Nations Development Programme

- Organization of workshops to support the country in establishing harmonized air pollutant and GHG emission inventory system and in developing spatially allocated (gridded) emission data (activities 3.1.1 and 3.1.2).

WHO will take lead in:

- Conducting survey for identification of AQ related critical information for the population.
- Organisation of awareness raising campaign including communication materials for particular vulnerable groups.
- WHO will contribute environmental health expertise with a focus on air quality management and health and have coordination role vs-a-vis key government counterparts MoH and NCDC based on the already established partnerships and communication channels.

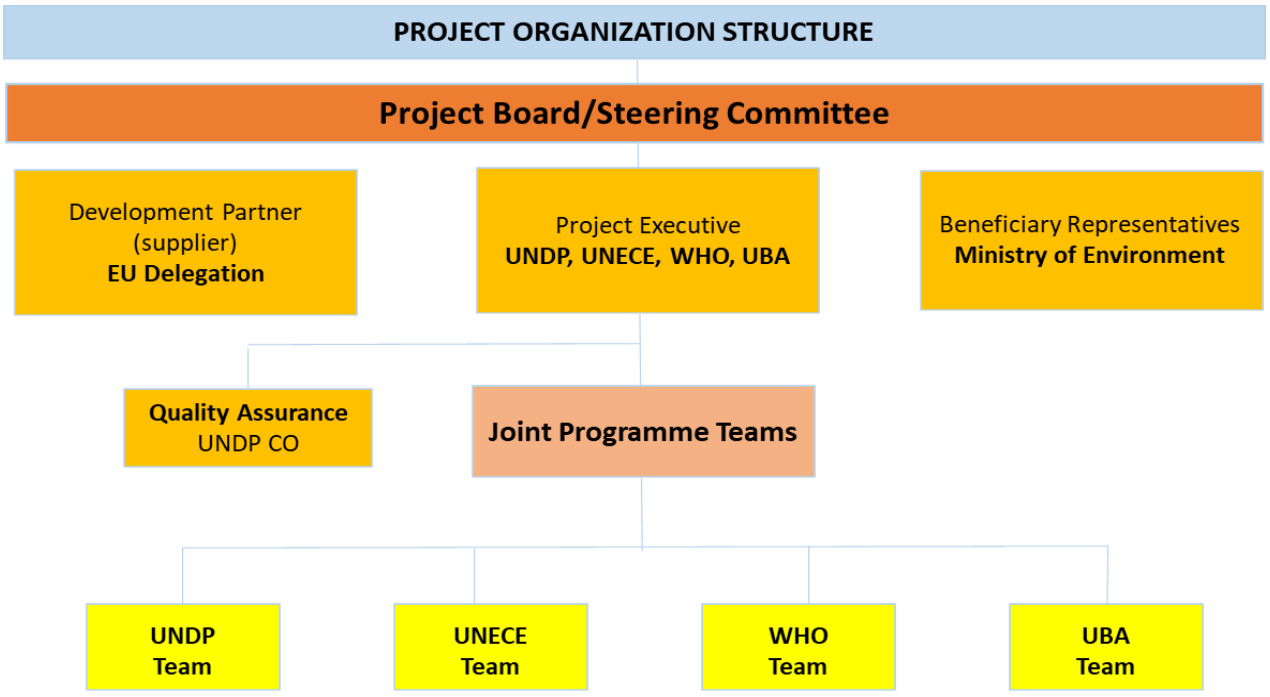
UBA will take the lead on the following domains:

- Capacity building of HMC staff regarding air quality monitoring and quality assurance, and development of recommendations for AQ monitoring system upgrade
- Development of technical specifications for procurement of equipment for the monitoring stations and reference laboratory feasibility study.

While each agency will maintain leadership in the mandated areas, they will optimise resource utilisation and impact through coordinated implementation mechanisms. This approach ensures both specialised expertise and unified delivery, maximising the JP's effectiveness while maintaining the One UN principle.

The JP Steering Committee (PSC) of the project is accountable for effectively managing the JP and achieving JP results while the JP Team is responsible for the management of results throughout programme cycle in accordance with the JP results framework, work plan (WoP), and budget. The PSC meetings will be organised semi-annually and more often, if it is necessary.

The JP team will be coordinated by the lead PUNO-UNDP designated manager. Detailed duties and responsibilities of the PSC and the JP Team are provided in Appendix II.



V. Fund management Arrangements

This Joint Programme will be using a pass-through fund management modality where **UNDP Multi-Partner Trust Fund Office** (will act as the Administrative Agent (AA) under which the funds will be channelled for the programme through the AA. Prior to the launch of the JP, each participating UN organization (PUNOs) and non-UN- organization (NUNO) receiving funds through the pass-through would have to sign a standardized Memorandum of Understanding with the AA. A common annual Workplan will be elaborated.

The JP Account will be administered by the Administrative Agent in accordance with the regulations, rules, directives and procedures applicable to it, including those relating to interest.

The Administrative Agent will charge direct costs, which are included under- the personnel/staff budget line for MPTFO staff based in New York to carry out the following activities:

a) Sign the MOU with Participating UN Organisations as well as non-Participation Organisations to establish the Joint Programme;

b) Sign Contribution Agreement the EU and receive contributions to the Fund/Programme through the AA.

c) Administer such funds received in accordance with its regulations, policies, and procedures, as well as the relevant MOU and Joint Programme document and Contribution Agreement, including the provisions relating to winding up the Fund account and related matters;

d) Subject to availability of funds, disburse such funds to each of the PUNOs in accordance with decisions from the SC, taking into account the budget set out in the approved JP documents.

e) Ensure consolidation of financial statements and reports, based on submissions provided by each PUNO and NUNO, as set forth in the JP document, and submit the consolidated financial statements and reports and the consolidated narrative progress reports provided by the Convening Agent to the EU that has contributed to the Joint Programme account and the PSC;

f) Provide final reporting, including notification that the Joint Programme has been operationally completed;

g) Disburse funds to any PUNO and NUNO for any additional costs of the task that the PSC may decide in accordance with the JP document.

The Administrative Agent will establish a separate ledger account under its financial regulations and rules for the receipt and administration of the funds received from the donor(s) pursuant to the Administrative Arrangement.

The PUNOs/NUNO will:

- Assume full programmatic and financial responsibility and accountability for the funds disbursed by the AA.
- Establish a separate ledger account for the receipt and administration of the funds disbursed to it by the Administrative Agent.

- Each PUNO and NUNO is entitled to deduct its indirect costs on contributions received according to its regulation and rules, considering the size and complexity of the programme. Each PUNO and NUNO will deduct 7% as overhead costs of the total allocation received for the agency.[9]
- Provide the update on progress of utilization of budget upon submission of the official narrative and financial reports. This update will not be part of or annexed to the official Narrative or Financial Reports and will be provided for information purposes only.

Each UN organization participating in the joint programme will recover indirect costs in accordance with its financial regulations and rules and as documented in the Memorandum of Understanding signed with the AA.

The Convening Agent will:

- coordinate the programmatic aspects among the PUNOs and NUNO;
- be responsible for consolidating the annual and final narrative progress reports based on submissions provided by each PUNO and NUNO and provide these to the Administrative Agent by 31 March for further submission to each donor that has contributed to the Programme. Annual narrative progress report will be provided by 31 May to the donors by the Administrative Agent per the MoU, and the final narrative report, to be provided to the AA four months after the completion of activities to enable submission to the donor within six months, per the MoU Addendum for contributions from the EU.
- prepare an aggregated/consolidated budget, showing the budget components of each participating UN organization.

Transfer of cash to local Implementing Partners: Cash transfer modalities, the size and frequency of disbursements, and the scope and frequency of monitoring, reporting, assurance, and audit will be agreed with partners prior to programme implementation, taking into consideration the capacity of implementing partners, and can be adjusted in its course in accordance with applicable policies, processes and procedures of the PUNOs and NUNO.

The MPTF Office will:

- Prepare consolidated narrative and financial progress reports, based on the narrative consolidated report prepared by the Convening Agency and the financial statements/ reports submitted by each of the Participating UN Organizations in accordance with the timetable established in the MoU;
- Provide those consolidated reports to each donor that has contributed to the Joint Programme Account, as well as the Steering Committee, in accordance with the timetable established in the Administrative Arrangement.
- Provide the donors, Steering Committee and Participating Organizations with:
    - Certified annual financial statement ("Source and Use of Funds" as defined by UNDG guidelines) to be provided no later than five months (31 May) after the end of the calendar year;

[9] EU contribution is subject to 7% (as per the FAFA). The rate of remuneration of the Organization/partner(s) for the implementation of the activities under the Agreement will not exceed 7%. Other sources of funds used in this operation will be subject to the rates applicable pursuant to Decisions promulgated by UNCDF/UNDP Executive Board.

- Certified final financial statement ("Source and Use of Funds") to be provided no later than seven months (31 July) of the year following the financial closing of the Joint Programme.
- Budget Preparation - The Convening Agency will prepare an aggregated/consolidated budget, showing the budget components of each participating UN organization.
- Accounting - Each UN organization will account for the income received to fund its programme components in accordance with its financial regulations and rules.
- Joint Programme Structure / Project Office Costs - Under the JP, there are several categories of the project office costs that are envisaged for the functioning of the JP, including costs of the AA and PUNOs staff and personnel along with other costs necessary for the implementation of the JP such as travel and subsistence costs for staff and other persons directly assigned to the operations of the project office; office rent costs, depreciation costs, rental costs or lease of equipment and assets composing the project office; costs of maintenance and repair contracts specifically awarded for the operations of the project office; costs of consumables and supplies specifically purchased for the operations of the project office; costs of IT and telecommunication services specifically purchased for the operations of the project office; costs of energy and water specifically supplied for the operations of the project office; costs of facility management contracts including security fees and insurance costs specifically awarded for the operations of the project office.

VI. Monitoring and Evaluation

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

Monitoring Plan

Monitoring Activity	Purpose	Frequency	Expected Action
Track results progress	The JP implementation will be assessed continuously at the results level, against clearly defined indicators to monitor the progress of the project in achieving the agreed outputs and SO. The JP may be subject to Result-Oriented Monitoring (ROM) missions by the EU, providing an additional layer of rigorous monitoring	Throughout the project implementation	Project management will promptly address any delays to ensure timely progress. Additionally, JP partners will present these monitoring results to the Steering Committee for informed decision-making.
Monitor and Manage Risk	JP partners will continuously identify specific risks that may threaten the achievement of intended results. JP partners will also continuously monitor risk management actions using a risk log (Appendix I) to mitigate their impact on project implementation. This includes monitoring measures and plans that may have been required as per UN and EU standards.	Throughout the project implementation	Project management proactively identifies and addresses risks, diligently maintaining a risk log to monitor all identified risks and taking corresponding mitigating actions.
Learn	Project management proactively identifies and addresses risks, diligently maintaining a risk log to monitor all identified risks and taking corresponding mitigating actions.	At least annually	Relevant lessons are captured by the project team and used to inform management decisions.
Project Quality Assurance	The quality of the project will be assessed against UNDP's quality standards to identify project strengths and weaknesses and to inform management decision making to improve the project.	Bi-Annually	The Steering Committee reviews the programme's implementation progress to assess strengths and weaknesses and improve project performance
Review and Make Course Corrections	The project components, including the results framework, may be revised for further streamlining and maximizing results based on the lessons learned, monitoring data, and contextual changes.	At least annually	Review and monitoring data are used to make course corrections through adaptive management.

Project Report	Reporting will be conducted in a timely manner, adhering to deadlines established by the agreement. Partners will report on results (impact, outcome, and output) linked to verification sources in the Results Framework. Reporting will be conducted through Interim, and Final Reports as outlined in the Description of Action and the EU-UN agreement's Annex II. The Administrative Agent will conduct financial reporting in accordance with Annex III of the EU-UN agreement - Budget of the Action, aligning with EU reporting requirements.	Interim reports annually. Final report at the end of the project.	JP partners provide results and impact-oriented reports through regular narrative progress reports and financial reporting. Once UN agencies can access the EU projects monitoring platform OPSYS, the partners report through this platform as well.
Project Review (Steering Committee)	The project governing body- Project Steering Committee - will convene annually to assess project progress, review and adapt the Workplan and budget to reflect the contextual and programme necessities. The technical Partners will convene semi-annual on-line technical meetings to monitor technical progress, exchange data and lessons learned, and ensure coherence of activities across project components.	At least annually and at the end of the project	Steering committee to address any quality issues or delays and provide corrective interventions.

Evaluation

A final external evaluation of the Joint Programme will be conducted to collect feedback from stakeholders (partners and beneficiaries), analyze effectiveness, efficiency and sustainability of the results achieved and challenges encountered, and provide evidence-based recommendations that will inform future programming in the area of waste management. The JP evaluation will be facilitated by the UNDP, as the Convening Agency and will be coordinated with the PUNOs according to the agreed TOR of the evaluation exercise.

Cost and source of funding: 15,000 EUR/Project budget.

VII. Basis for Relationship

Partners	Agreement
Participating UN organization	
UNDP	This JP Document shall be the instrument referred to as the Project Document in Article I of the Standard Basic Assistance Agreement between the Government of Armenia and the UNDP, signed by the parties on 01 July 1994.
UNECE	The Government of Armenia agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed and entered into force on 1 July 1994.
WHO	The Basic Agreement between the World Health Organization and the Government of the Republic of Armenia on the establishment of technical advisory cooperation relations concluded on 17 September 1997.
Non-UN participating organization: UBA	N/A

The Partners agree to undertake all reasonable efforts to ensure that none of the funds received pursuant to this Joint Programme are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by Participating UN organizations do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via. This provision must be included in all sub-contracts or sub-agreements entered into under this project document.

VIII. Work Plan

Activity/sub-activity	Months																																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Output 1. Legal framework and capacity building strengthened																																				
Activity 1.1 Draft approximated legal framework for AQM and IED to support CEPA approximation by MoE																																				
Sub-activity 1.1.1. Based on the outcomes of the BAT feasibility study conducted by UNECE, draft a law on industrial emissions (aligned with the Industrial Emissions Directive - IED) and related legal acts, incorporating BAT Reference Documents (BREFs) and BAT Conclusions (BATCs).			X	X	X	X	X	X							X	X	X	X								X	X	X	X	X	X	X				
Activity 1.2 Improved professional and technical capacities of the competent authorities																																				
Sub-activity 1.2.1. Capacity building of the staff of Hydrometeorology and Monitoring Centre									X	X	X	X									X	X	X	X					X	X	X	X				
Sub-activity 1.2.2 Capacity building on establishing an environmental permitting system and implementing Best Available Techniques (BAT)																									X	X	X	X	X	X						

Sub-activity 1.2.3 Experience sharing and demonstration of BAT implementation by an EU country															X	X	X	X	X	X	X	X	X	X	X	X									
Activity 1.3 Skills relevant to AQM are developed in targeted TVET professions																																			
Sub-activity 1.3.1. Needs assessment of targeted technical and vocational education and training (TVET) professions								X	X	X	X	X																							
Sub-activity 1.3.2. Development of a comprehensive programme and curricula for TVET																			X	X	X	X	X	X											
Output 2. Air Quality Monitoring System modernized																																			
Activity 2.1 Improved AQ monitoring network																																			
Sub-activity 2.1.1 Needs assessment of ambient AQ monitoring system and development of a system upgrade action plan		X	X	X	X	X	X	X																											
Sub-activity 2.1.2. Development of the specifications and procurement of monitoring stations		X	X	X	X				X	X	X	X	X	X	X	X	X																		
Sub-activity 2.1.3. On-job training for the maintenance and operation of air quality stations																X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sub-activity 2.1.4. The feasibility study/cost analysis for establishing a national reference											X	X	X	X	X	X	X	X																	

laboratory (NRL) for air quality																																			
Sub-activity 2.1.5. Further modernization of the chemical laboratory and establishing a National Reference Laboratory																			X	X	X	X	X	X	X	X	X								
Activity 2.2 Improved Air Quality Plan (possibility depending on resources and needs)																																			
Sub-activity 2.2.1 Study on sources of pollutants in Yerevan										X	X	X	X	X						X	X	X	X	X	X	X	X								
Output 3. Air quality data used more intensively by the relevant institutions and population																																			
Activity 3.1 Building National Capacity on emission inventories to inform decision-makers and public																																			
Sub-activity 3.1.1 Establishment of harmonized air pollutant and GHG emission inventory system										X	X	X	X	X																					
Sub-activity 3.1.2 Develop spatially allocated national air emissions in the EMEP grid (gridded emission)																								X	X	X	X	X	X						
Activity 3.2 Improved awareness by the population of Armenia of local air quality																																			
Sub-activity 3.2.1. Identification of critical information related to AQ and appropriate channels for delivery of AQ related information to the population		X	X	X	X	X	X	X	X																									

Sub-activity 3.2.2. Awareness campaign				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Activity 3.3 Improved Air Quality Portal																																			
Sub-activity 3.3.1. Defining technical specifications of the AQ dashboard and mobile application for real-time air quality data, historical trends, forecasts, or health advisories																							X	X	X	X	X								
Sub-activity 3.3.2. Develop a portal and mobile application for dissemination of AQ information																								X	X	X	X	X	X	X	X	X	X		

Appendix 1. RISK LOG

#	Description	Date Identified	Type	Probability and Impact	Countermeasures / management response	Owner
1.	Delays in adopting or aligning national legal framework with EU air-quality acquis (2008/50/EC, 2004/107/EC, IED).		Regulatory / Institutional	P=3 I=5	Provide targeted legal drafting support; align milestones with CEPA; conduct peer review with EU experts; include translation and legal-expert TA.	UNDP
2.	Weak inter-ministerial coordination between MoE, MoH, and Yerevan Municipality.		Coordination / Governance	P=3 I=4	Establish formal Inter-Agency Working Group; define mandates under Government Decision 611-L; hold quarterly coordination meetings; adopt data-sharing MoUs.	PUNOs
3.	Procurement and installation delays for air-quality monitoring stations or calibration equipment.		Operational / Procurement	P=3 I=5	Conduct early procurement planning; pre-approve technical specs; include Hydromet engineers in bid evaluation; set contractual penalties for late delivery.	UNDP
4.	Data quality or interoperability issues in AQM system due to outdated QA/QC procedures or lack of lab accreditation.		Technical / Quality	P=3 I=4	Develop EU-aligned QA/QC manuals; upgrade labs; introduce automated data validation; organize inter-laboratory calibration.	UBA
5.	Health authorities not integrating AQM data into disease surveillance and early warning.		Institutional / Health	P=3 I=3	Develop MoE–MoH data-sharing protocol; define thresholds for health advisories; integrate AQ indicators into MoH early-warning systems.	WHO
6.	Political or leadership changes delaying reform adoption or implementation.	July 2026	Political	P=3 I=5	Anchor commitments under CEPA, NDC 3.0, and Government Program 2025–2030; maintain EU–Government dialogue; highlight health and economic co-benefits.	PUNOs
7.	Overlaps or fragmentation with other donor projects (EU4Environment, EU4Climate, GCF Readiness).		Coordination / Programmatic	P=3 I=3	Maintain donor coordination platform chaired by MoE; share progress reports; align annual workplans and visibility materials.	PUNO
8.	Inflation or exchange-rate volatility affecting procurement costs.		Financial	P=3 I=3	Adjust cost estimates quarterly; maintain 10% contingency; reallocate budget with EU DEL approval.	UNDP

P = probability; I = Impact; Scores are based on a scale from I (low) to 5 (high).

Appendix II. Detailed functions of the PSC and JP partners

Project Steering Committee (PSC)

The Project Steering Committee will serve as the governing body of the JP and will provide overall strategic direction and oversight. The PSC will meet semi-annually, and more frequently if required, to review implementation progress, assess performance against the Results Framework, examine narrative and financial reports, and approve any necessary adjustments to the annual workplan and budget.

The PSC will be chaired by the Ministry of Environment and include representatives from UNDP, UNECE, WHO, the Environment Agency Austria (UBA), and the EU Delegation to Armenia (EUD). The PSC will oversee programme quality, address implementation challenges, review risk mitigation measures, and ensure alignment with national priorities and EU environmental and air-quality standards.

The PSC shall:

- Review and approve annual workplans and budgets;
- Review implementation progress, monitoring data, and risk logs, taking corrective action where necessary;
- Assess strengths and weaknesses in execution and endorse adaptive management measures;
- Provide strategic guidance to participating PUNOs and technical partners;
- Ensure coordination among national and international partners;
- Validate recommendations for fund disbursement through the Administrative Agent (MPTFO).

PSC meetings will be informed by consolidated narrative and financial reports submitted in accordance with the EU–UN agreement.

Technical Coordination Mechanism

In addition to the PSC, Technical Partners (UNDP, UNECE, WHO, UBA, HMC, and other relevant institutions) will convene semi-annual online technical coordination meetings. These meetings will review operational progress, share data and lessons learned, align ongoing activities across components, and address emerging technical issues.

Structured Engagement with the EU Delegation

To ensure continuous donor engagement and oversight, the project will maintain a regular coordination mechanism with the EUD to Armenia. In addition to its participation in the PSC, the EUD will be engaged through a technical coordination meeting every two months. These bi-monthly sessions will:

- Provide up-to-date information on project implementation and milestones;
- Allow early identification of delays, risks, or operational challenges;
- Ensure alignment with EU technical standards, visibility requirements, and policy priorities;
- Facilitate timely decision-making and coordinated problem-solving.

This three-tier governance structure (annual PSC meetings, semi-annual technical partner meetings, and bi-monthly technical briefings with the EUD) provides a robust and coherent mechanism for oversight, coordination, and adaptive management throughout the implementation of the Joint Programme.

JP partners

a) UNDP: The project staff will consist of a full-time Project Manager (100%) and a full-time Administrative and Finance Assistant (40%), both contracted under the UNDP Service Contract modality, with the applicable rules and entitlements. UNDP CER Team Leader (15%) will ensure overall quality assurance, project oversight, and coordination with UNDP, other UN agencies, and stakeholders; Programme Associate (15%) will support project staff with HR, finance, procurement, and financial reporting, ensuring compliance with UNDP and donor requirements; Monitoring and Evaluation (M&E) Specialist (5%) will set up and supports evidence-based monitoring of project results. Note: The salary rates include Salary and UNDP-regulated entitlements for this position for Fixed-Term National Staff.

MPTFO: Administrative Agent tasks will be carried out by staff of the MPTFO based in NY.

UNECE: The project will be supported by UNECE through part-time contributions from a Project Manager, a Project Assistant for administrative support, and a Chief of Unit for overall supervision and strategic guidance of the project, and provision of senior expert knowledge and high-level representation in meetings. The project will also receive support from Executive Office staff for financial reporting. Technical experts in relevant technical areas will also be engaged as needed to support specific components of the project.

b) WHO core team will include Public Health Officer, technical lead, based in WHO Armenia Country staff: Communication Specialist/Consultant, based in WHO Armenia Country office, assistant (part-time). Additionally, experts from WHO European Centre for Environment and Health (Bonn, Germany) will be engaged as needed.

c) UBA: The core team includes a Project Manager/Coordinator responsible for overall project management, with extensive experience in international environmental projects and data systems in the air protection systems. Experts will provide technical input on AQ management, and data analysis, with experience in EU-level projects related to AQ monitoring and reporting. Additional experts will be engaged as needed, primarily from Umweltbundesamt's in-house team.

UNDP will use the Climate Programme office situated in the premises of the Ministry of Environment as in-kind contribution from the government for the project, it will include essential utility services such as electricity, water, and heating. There will be one single office for this JP and all partners will use it during missions to Armenia. In addition to the Yerevan based staff, MPTFO staff based in NY will be carrying out administrative services as a direct cost to the JP.

Office Supplies: This includes essential expendable items for required for daily operations of office equipment such cartridge, tonner, paper, notebooks, folders, etc. It also includes small IT equipment and necessary spare parts to ensure smooth operations.

Qualified electronic signature by: VASSILIS MARAGOS

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