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AIR QUALITY MANAGEMENT IN TAJIKISTAN

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Acknowledgments

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Executive Summary

The Air Quality Management (AQM) system in Tajikistan needs strengthening in its key policy and institutional as well as technical aspects to reduce health impacts of air pollution in the most polluted airsheds (Dushanbe and other urban centers). The World Bank's first engagement to strengthen Tajikistan's AQM aims to develop a better understanding of the priorities and needs in addressing air pollution and to support the government of Tajikistan in identifying key air pollution reduction measures. This summary report and the attached presentation detail the outcomes of Tajikistan's first AQM study, which is envisioned to continue.

The study provides recommendations for all components of the AQM framework based on an analysis of the current status and gaps. It provides: 1) air quality (AQ) monitoring and population exposure assessment, 2) source attribution, 3) emissions-reduction interventions, and 4) recommendations to strengthen AQM Policies. The study prioritizes fine dust particles ($PM_{2.5}$) due to their significant health impacts.

Air pollution causes significant health and economic losses in Tajikistan. In a recent assessment, the annual average population-weighted $PM_{2.5}$ concentration in Tajikistan was estimated to be 35.93 μg/m^3 [1]— the highest among Central Asia countries — and above the European Union (EU) limit of 25 μg/m^3, and much higher than the WHO target of 5 μg/m^3. The attributed mortality rate due to $PM_{2.5}$ pollution is estimated at 78 deaths per 100,000 inhabitants, which is the second highest in Central Asia after Uzbekistan.[2]

In the city of Dushanbe in 2021, data collected from $PM_{2.5}$ monitoring represented annual $PM_{2.5}$ concentration between 13.8 and 58.1 μg/m^3, with peak concentrations occurring in autumn and winter months. There is a lack of reliable data to verify the range. Preliminary $PM_{2.5}$ source apportionment showed that the highest contributions come from windblown dust (33 percent) and residential heating (31 percent, individual households), followed by contributions from electric power generation (9 percent, including central heating plants), waste (7 percent), industry (4 percent), and transport (3 percent).

Based on a preliminary assessment, investment needs for the implementation of priority emission reduction interventions in Dushanbe are estimated at $111 million. The AQM interventions could result in a 13-percent reduction of $PM_{2.5}$ levels (average cost estimates are based on recent studies performed in Kazakhstan). The interventions implemented within key polluting sectors could reduce attributed $PM_{2.5}$ levels by 20 to 30 percent and are prioritized by an average intervention cost to reduce the annual average concentration of $PM_{2.5}$ by 1 μg/m^3. The largest pollution reduction — 2 μg/m^3 of $PM_{2.5}$ concentration — could be achieved in the residential sector (through improved heating in households). This intervention has the unit cost of about $20 million per 1 μg/m^3 of $PM_{2.5}$ concentration. It could reduce pollution by 13 percent and would cost $111 million, reducing annual mortality by 70 to 100 cases. Similar assessments could be used to formulate a set of interventions for an AQ improvement roadmap in the most polluted airsheds of Tajikistan, including Dushanbe.

The roadmap to establish a baseline for developing a strong, effective, and efficient AQM system will be developed as the next phase of technical assistance. It will comprise a set of steps to create a solid regulatory and governance base, a planning system on the national and local level, horizontal and vertical coordination procedures, and strong technical capacity for monitoring and evaluation. Additionally, procedures will be defined for development of local-level AQ action plans to strengthen AQM. The action plans should prioritize emission reduction interventions for the sources with the highest contribution to pollution, should define implementation modalities for the interventions and ensure monitoring and evaluation, and should include appropriate finance mechanisms.

[1] μg/m^3 — microgram per cubic meter.
[2] Global Burden of Disease Collaborative Network 2021. Global Burden of Disease Study (GBD 2019) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME).

Summary Report

Tajikistan's Air Quality Management (AQM) system needs strengthening in its key policy and institutional as well as technical aspects to reduce health impacts of air pollution in the most polluted airsheds (Dushanbe and other urban centers). Recognizing the importance of a robust AQM, the government of Tajikistan aims to improve and consolidate relevant national strategies. This report provides a preliminary analysis of air quality and identifies data gaps, options, and priorities to improve it. The objective of the AQM work is to develop a better understanding of the priorities and needs in addressing air pollution and to support the government in identifying key air pollution reduction measures. This summary report and the attached presentation detail the outcomes of the first AQM engagement of the World Bank in Tajikistan, which is envisioned to continue.

As part of its technical assistance, the World Bank has provided recommendations for all components of the AQM framework based on an analysis of the current status and gaps. The components are: 1) AQ monitoring and population exposure, 2) source attribution, 3) emissions-reduction interventions, and 4) recommendations to strengthen AQM Policies. Priority pollutants are fine dust particles ($PM_{2.5}$), coarse dust particles (PM_{10}),[3] carbon monoxide (CO), nitrogen oxides (NO_x), and sulfur dioxide (SO_2). This study prioritizes $PM_{2.5}$ due to their significant human health impacts. $PM_{2.5}$ concentration is comprised of directly emitted particles and secondary particles formed through atmospheric chemistry processes. NO_x and SO_2 are important precursors for these reactions and an analysis of the trends of these pollutants can indicate priority emission sources.

To analyze the current state of air quality, data from monitoring stations in Dushanbe were used and complemented by global models. All publicly available data from monitoring stations and emission sources were provided by the State Committee of Environmental Protection (CEP). Due to limited availability of local data, global datasets with a focus on Dushanbe compiled through satellite measurements were analyzed through modeling assessments to determine $PM_{2.5}$ concentrations, source attributions, and seasonal trends. While global data have their limitations,[4] they can reveal trends and help to identify gaps for further research on the ground. This study represented the first comprehensive application of these global models for Dushanbe. The results were discussed in stakeholder consultations, including CEP and the line ministries.

Air Quality Context in Tajikistan

Tajikistan's recent economic growth, while impressive, is not decoupled from growing pressure on natural resources and pollution. Tajikistan's GDP has been growing at a rate of 7.6 percent annually since 2000, with rents coming from extraction of metals such as aluminum, precious metals, lead, and zinc ores dominating its export and fueling high growth rates together with remittances from abroad. The livelihoods of the population are dependent on agriculture, which is vulnerable to environmental and climate risks. Since 2000, natural capital per capita (cropland and pastureland) has been declining partially due to soil erosion, while carbon intensity of energy production has increased since 2013 due to high energy intensity of manufacturing, growth of construction (cement production), and commissioning of new coal-fired central heating and power plants (CHP). These processes increase pressure on air quality in major cities. Decoupling of economic development from increased pressure on natural resources and intensified pollution requires transition to a more productive and greener growth pathway, including improved AQM.

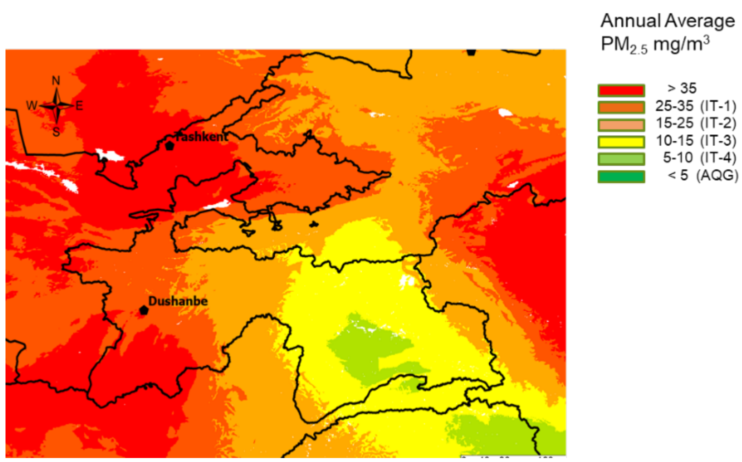
Population-weighted $PM_{2.5}$ concentration in Tajikistan is the highest among Central Asia countries and well above the WHO guidelines, as assessed in the global models. In a recent assessment, the

[3] Particulate matter with a diameter below 2.5 µm ($PM_{2.5}$) and 10 µm (PM_{10}), respectively.
[4] Limitations include the coarse resolution of the global model, uncertainty in input parameters (emission sources, meteorology) due to a lack of data, and representation of atmospheric processes involved.

annual average population-weighted $PM_{2.5}$ concentration in Tajikistan was estimated at 35.93 μg/m³ — the highest among Central Asia countries — and above the EU limit of 25 μg/m³,[5] and much higher than the WHO target of 5 μg/m³.[6] Surface $PM_{2.5}$ concentrations are similarly elevated in the more densely populated west of the country while in the mountainous eastern part of Tajikistan they are lower (see Figure 1).

Air pollution causes significant health and economic losses in Tajikistan. The attributed mortality rate due to $PM_{2.5}$ pollution is estimated at 78 deaths per 100,000 inhabitants — the second highest rate in Central Asia after Uzbekistan. Overall, **4,800 deaths[7]** are attributable to ambient air pollution in Tajikistan, mostly due to ischemic heart disease (51 percent) and stroke (27 percent).[8] Another air pollutant with considerable health impacts is ozone, to which 60 to 230 deaths can be attributed. The corresponding health costs are estimated to be 4 percent of GDP. Other impacts of air pollution are loss of crop yields (due to ozone) and accelerated melting of glaciers (due to black carbon).

Figure 1: Annual Average Surface $PM_{2.5}$ Concentration in Tajikistan for 2021



Source: Map created by Jay Turner, data from Aaron van Donkelaar, et al. 2021 (surface $PM_{2.5}$ global model V5.GL.03) color coded using WHO annual average $PM_{2.5}$ Air Quality Guideline (AQG) and Interim Targets (IT)[9]

Air Quality Monitoring and Population Exposure in the Airshed of Dushanbe

While Tajikistan's all major cities show high pollution levels, Dushanbe was chosen for further analysis as an air pollution hotspot and the city with the largest population in the country (12 percent of total national population). The city's built area has not increased significantly in the past 30 years, yet its population density has doubled, increasing the number of people exposed to air pollution. The modeled airshed domain has an area of 1,740 km², of which 200 km² represents the metropolitan area with high population density.[10]

Some geographical and meteorological characteristics of Dushanbe provide conditions for trapping air pollution in the city. Dushanbe is located in the West of Tajikistan, surrounded by mountains ranges

[5] https://environment.ec.europa.eu/topics/air/air-quality/eu-air-quality-standards_en.
[6] https://www.who.int/publications/i/item/9789240034228.
[7] https://openknowledge.worldbank.org/handle/10986/36501.
[8] https://www.healthdata.org/data-visualization/gbd-results.
[9] https://sites.wustl.edu/acag/datasets/surface-pm2-5/.
[10] In this study, the World Bank defined and analyzed AQ in the Dushanbe airshed.

in the Gissar valley. The rivers Varzob and Kofarnihon confluence in the city. The climate zone is Mediterranean with humid continental influences. Annual average precipitation is 654 mm, mostly during winter, spring and autumn months with almost no precipitation in summer. Over the year, the most prevalent wind direction is from North-East and South-East, but wind can come from all directions and is generally characterized by low wind speeds.

There is no comprehensive air quality (AQ) monitoring system in Tajikistan and data availability is a challenge. Data are available only for the years 2019-2021 from one automatic station located at the premises of and operated by Tajikistan's Agency for Hydrometeorology (Tajikistan Hydromet) under the Committee of Environmental Protection (CEP). Dushanbe's five additional stations are operated manually. The only other automatic monitoring station in Tajikistan is located at the U.S. Embassy in Dushanbe. Stations are not distributed comprehensively across the city to capture different sources (background, traffic, industry). This study's analysis is the first attempt to produce an assessment of air quality levels, emissions, and sources in the airshed of Dushanbe using different available global models. The study's results are preliminary and need to be confirmed with local data on pollution levels, emission sources, and meteorological data, which did not fall within the scope for this study.

The analysis of concentrations from global models shows a steady increase of $PM_{2.5}$ concentrations from 17.8 μg/m^3 in 1998 to an annual average of 32.7 μg/m^3 in 2021. Annual average $PM_{2.5}$ concentrations are high throughout the airshed of Dushanbe with the highest concentrations estimated in the urban center. The modeled concentration levels cannot be verified with the currently available monitoring data – the U.S. Embassy station shows almost double (58.1 μg/m^3) the concentration than the global models, the Hydromet stations show a lower annual average concentration (13.8 μg/m^3). The differences between the global model and local measurements will be further investigated.

Nevertheless, the U.S. Embassy and Hydromet stations show similar patterns with regard to seasonal differences in the $PM_{2.5}$ concentrations with the highest concentrations occurring in the autumn and winter months. Starting from July, concentrations increase and peak in November (91.0 μg/m^3/28.4 μg/m^3). Other pollutants have peaks from July to October (PM_{10}, NO_2, NO) and during winter months (SO_2) or show no seasonal trend (CO). While there are no measurements available for ozone, modeled concentrations of ozone peak in summer with concentrations 130-140 μg/m^3 from May to August.

With no comprehensive emission inventory available, emissions of air pollutants were estimated from global models as a part of a preliminary assessment. Emissions of the air pollutants: SO_2, NO_X, and CO (precursors of $PM_{2.5}$) are estimated to be higher during winter months corresponding to higher $PM_{2.5}$ levels. This is likely due to emissions from coal combustion, especially for heating in the winter.

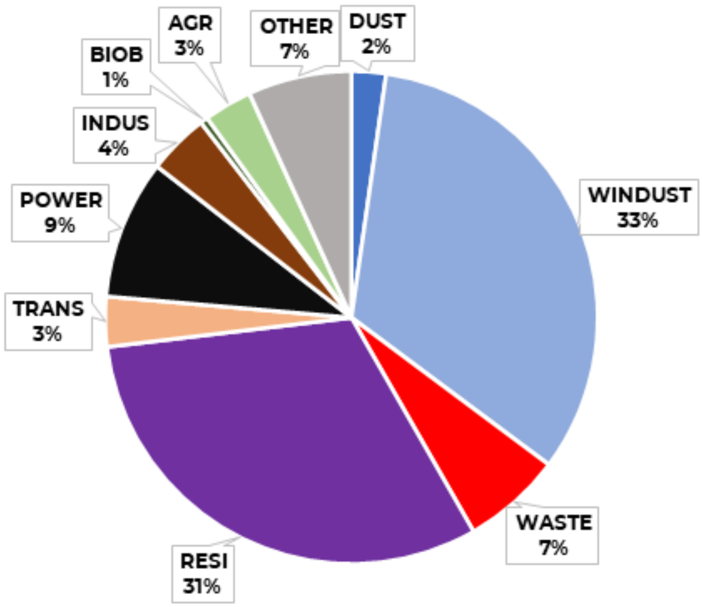
Emission Sources and Source Attribution

Preliminary source apportionment of $PM_{2.5}$ has identified that the highest contributions come from windblown dust (33 percent) and residential heating (31 percent, individual households), followed by contributions from electric power generation (9 percent, including central heating plants), waste (7 percent), industry (4 percent) and transport (3 percent).[11] According to the assessment, 40 percent of the $PM_{2.5}$ concentrations can be directly attributed to the combustion of fossil fuels. Since source apportionment data are from a model that uses satellite-based measurements of the global data set with a coarse grid resolution, they need to be validated by further ground-level measurements and local analysis. Yet they are in line with other source apportionment analyses in Central Asia, for example in Almaty and

[11] McDuffie, E.E., Martin, R.V., Spadaro, J.V., Burnett, R., Smith, S.J., O'Rourke, P., Hammer, M.S., van Donkelaar, A., Bindle, L., Shah, V. and Jaeglé, L. 2021. 'Source sector and fuel contributions to ambient PM2. 5 and attributable mortality across multiple spatial scales.' *Nature communications*, 12(1), p.3594. Data analyzed in the grid overlapping with the Dushanbe airshed.

Astana, where a small number of single-family homes generates a significant share of exposure to $PM_{2.5}$ pollution.[12]

Figure 2: Source Apportionment of $PM_{2.5}$ Concentration in Dushanbe



Source: GBD-MAPS-Global (McDuffie, et al., 2021) [Global Model]. https://zenodo.org/record/4739100#.YbhkLb1Bw2w.

Residential heating in individual households was found as the largest source of $PM_{2.5}$ pollution. The high share contributed by residential heating was confirmed through emission and concentration assessments showing higher levels during winter months. This finding is surprising, because the majority of individual households use electricity for heating (91 percent), and only five percent use coal-based stoves or individual boilers.[13] While additional research is needed, this disproportionally high share contributed by individual households can be explained by the use of inefficient stoves and potentially sub-optimal fuel generating high primary and secondary aerosol emissions, which transform quickly into $PM_{2.5}$ due to non-linear atmospheric chemistry processes. Similarly, in most urban centers in Central and Eastern Europe, Eastern and Western Balkans, and Central Asia, seasonal peaks in air pollution are caused by residential heating in the winter months.[14]

The largest stationary source of air pollution is likely the combined heating and power plant (CHP) combusting coal, producing electricity and heating for the central heating network. The CHP uses coal as a main fuel (80 percent). Increased demand from industry, as well as for central heating from the residential sector has led to a drastic increase in coal consumption in recent years. Connection to the central heating is mandatory for new buildings, and plans for another CHP exist.

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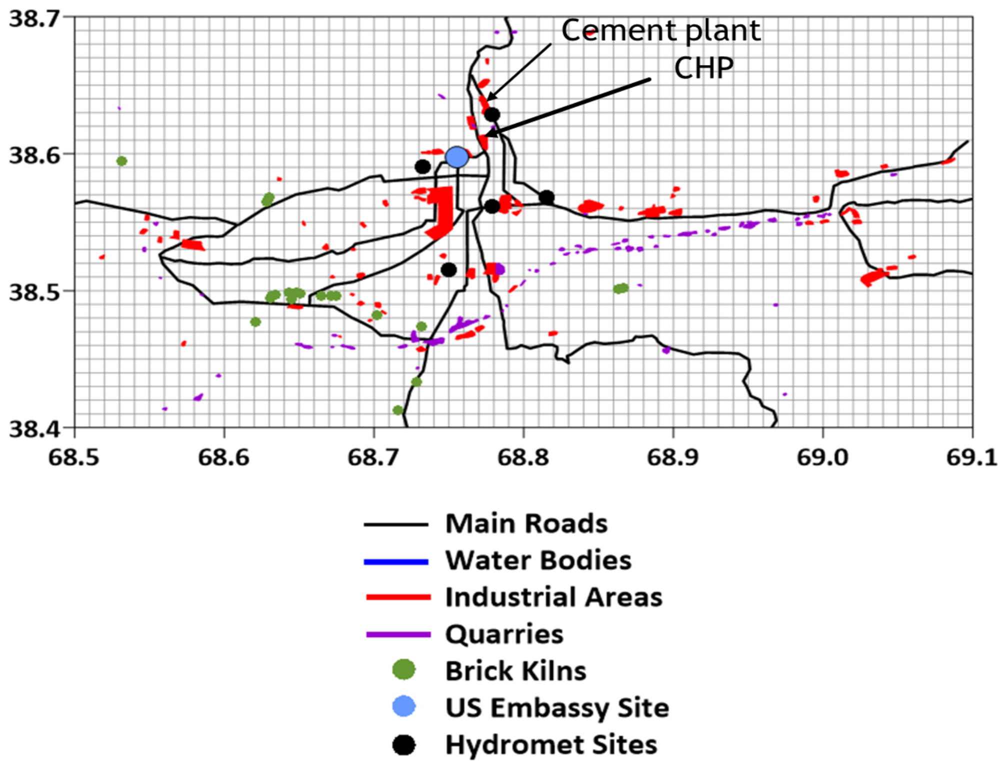
[12] For example: World Bank 2022. *Clean Air and Cool Planet, Volume II: Integrated Air Quality Management and Greenhouse Gas Reduction for Almaty and Nur-Sultan*. © Washington, DC. http://hdl.handle.net/10986/37938
[13] World Bank 2015. *Keeping Warm: Urban Heating Options in Tajikistan. Summary Report*. © Washington, DC. https://documents1.worldbank.org/curated/en/353391467986295623/pdf/97495-WP-P133058-PUBLIC-Box391480B-Heating-Assessment-for-Tajikistan-P133058-Final.pdf.
[14] Peszko. G. 2023. Presentation at the Central Asia Climate Change Conference: 'Climate Change and Development in Central Asia,' May 16-17, 2023; Dushanbe, Tajikistan.

The waste management sector is a considerable contributor of the $PM_{2.5}$ concentration in Dushanbe (7 percent). This is due to a lack of solid waste management at the only landfill in Dushanbe. Waste is deposited by trucks at various points along the perimeter road, forming heaps that are burned at various points across the landfill, with the resulting smoke polluting the air. Other waste-sector related contribution to air pollution could be linked to inefficiencies in the existing waste collection practices in the city, which require further analysis.[15]

Although transport was assessed as a minor contributor the $PM_{2.5}$ concentration in the global study (3 percent), in a recent local study, it was estimated to contribute about 13 percent.[16] While at the time of study no data were available for Dushanbe, the transport sector in Tajikistan has grown rapidly with consumption of oil products more than doubling since 2010, which is mostly driven by growing. Thus, transport emissions are expected to increase and – in contrast to heating – are considered a year-round environmental challenge.

$PM_{2.5}$ concentrations are emitted by large stationary sources throughout the airshed of Dushanbe, including industry and coal-fired CHP, quarries and brick kilns (see Figure 3). The coal-powered cement plant and the CHP are located in the north. There are three other CHPs mostly operated by natural gas and hence contributing less to $PM_{2.5}$. Quarries are located along the mostly dry riverbed. Brick kilns are in the south and west and are considered as area sources of air pollution.

Figure 3: Main Stationary Pollution Sources and Monitoring Stations in Dushanbe



Source: Original elaboration for this publication.

[15] World Bank. 2023. CN. Dushanbe Sustainable Urban Development Project (P179630).
[16] Almeida, S. M., et al. 2020. 'Ambient particulate matter source apportionment using receptor modelling in European and Central Asia urban areas.' *Environmental Pollution* 266 (2020): 115199.

Natural windblown dust plays an important role in $PM_{2.5}$ concentration in Dushanbe and needs to be considered in policy actions. Several strong and extreme dust events occur each year. The share of windblown dust in total $PM_{2.5}$ concentrations is higher during the summer months, as opposed to anthropogenic emissions that peak in winter. Dust particles found in Tajikistan come from long-range transport sources outside the region, as far as the Sahara and the Middle East, and regional sources, like the dry Aral Seabed and other locations in Central Asia. While there is no direct measure to control windblown dust, it is important to assess its contribution to $PM_{2.5}$ concentration as the first step. Additionally, when setting air quality standards, exceptional events, like dust storms, should be considered.

Although the uncertainty of analysis in this first preliminary assessment is significant, it is within the acceptable range of uncertainties identified for the global source apportionment study. The sensitivity analysis allows to quantify fractional source contributions to the total $PM_{2.5}$ concentration under complete elimination of emissions from individual sources. This approach is consistent with Global Burden of Disease 2019[17] estimation of health burden from $PM_{2.5}$ pollution globally and in Tajikistan. Further analysis of each individual pollution source with clarification of major driving factors, including air dispersion modeling for the airshed, will reduce uncertainty and better inform interventions to reduce air pollution levels.

Prioritizing and Financing Emission Reduction Interventions

Investment needs for the implementation of emission-reduction measures that provide about a 13-percent reduction of $PM_{2.5}$ levels in Dushanbe are estimated at about $111 million, using average cost estimates from recent studies in Kazakhstan.[18] The interventions in key sectors with the greatest attributed $PM_{2.5}$ are prioritized by an average intervention cost to reduce the annual average $PM_{2.5}$ concentration by 1 μg/m^3 or by 20–30 percent. The largest pollution reduction – by 2 μg/m^3 of $PM_{2.5}$ concentration could be achieved in the residential sector (improved heating in households). This intervention has the unit cost of about $20 million per 1 μg/m^3 of $PM_{2.5}$ concentration. It could reduce pollution by 13 percent and would cost $111 million, reducing annual mortality by 70 to 100 cases. Similar assessments could be used to formulate a set of interventions for a roadmap for air quality improvement in the most polluted airsheds of Tajikistan, including Dushanbe.

The existing pollution fee structure could be used to incentivize emission reduction measures. Currently, stationary and mobile sources are subject to fees, but at very low rates as compared to other countries and abatement costs. Hence, incentives to invest in abatement technologies and generated revenues are low, even after the charges are adjusted to reflect environmental factors and exceeded permissible pollution levels. In 2020, air pollution fees generated 3,452,186 TJ Somoni (about $315,000) or 0.02 percent of overall tax revenue. Integrating a pollution fee reform into the overall air quality management reform is recommended. Such a reform would ensure that pollution fees reflect the cost of pollution, consider an updated and more relevant list of pollutants and sources, and establish the fees based on best available technologies and more advanced standards for transport and residential heating. Implementing a "Polluter Pays Principle" could be part of an overall environmental fiscal reform and of the new Environmental Code.

[17] IHME 2023. Global Burden of Disease.
[18] World Bank. 2021. *Clean Air and Cool Planet: Cost-Effective Air Quality Management in Kazakhstan and Its Impact on Greenhouse Gas Emissions.* © Washington, DC.; https://openknowledge.worldbank.org/entities/publication/36317e51-1b08-5191-9b89-b537d7c93d76; and World Bank 2022. *Clean Air and Cool Planet, Volume II: Integrated Air Quality Management and Greenhouse Gas Reduction for Almaty and Nur-Sultan*. © Washington, DC. http://hdl.handle.net/10986/37938

Comprehensive AQM Policies: Gaps and Recommendations

AQM requires an integrated approach across stakeholders that includes: 1) reform of the overall AQM framework on the national level; 2) adoption of urgent institutional, policy and regulatory measures; and 3) technical improvements in the planning, monitoring and evaluation system and sectoral emission reduction measures. The goal is to develop a roadmap with objectives and needed actions and to establish an air pollution management platform with key stakeholders.

In the current AQM framework, the study identified several gaps (see Annex, page 32). Next to addressing gaps in the legal framework and technical aspects (monitoring, emissions inventory, and modeling), there are strong needs for improved coordination among stakeholders – both within the government and with non-governmental actors – and for increased capacity, including knowledge building, awareness raising, and resources.

A roadmap to formulate a national vision and strategy for AQM and to establish the baseline for developing a strong, effective, and efficient AQM system will be developed as part of the continued technical assistance. It will comprise a set of steps to create a solid legislative and governance base, a planning system on the national and local level, horizontal and vertical coordination procedures, and strong technical capacity for monitoring and evaluation. Additionally, procedures will be defined for development of local-level air quality action plans that: prioritize emission reduction interventions for the sources with the highest contribution to pollution, define implementation modalities for the interventions, and ensure the monitoring and evaluating of the results for strengthened AQM. The action plans should also include appropriate finance mechanisms.

On AQM legislation, the main recommendation is to amend the Law on Protection of the Atmospheric Air (2012) to include revised AQ standards based on the latest best practices and scientific consensus, develop necessary environmental regulations, and to cover emissions from all sources. Currently, only stationary and mobile sources are covered in the legislation and no standards for $PM_{2.5}$ and PM_{10} are established. The government is open to amending the Law on Atmospheric Air, including revising air quality standards to include $PM_{2.5}$ and PM_{10}, taking into account national and local climatic conditions, and a transparent AQ index. New national-level AQ standards will be complemented by a review of regulations in other sectors relating to the main emission sources, such as industry, transport, residential heating, and waste, and by suggested fiscal policy reforms. The creation of a regulatory framework for a national air quality strategy and development of local action plans for the most polluted areas is envisaged. The amended Law on Atmospheric Air and accompanying regulations will be included in the new Environmental Code currently under development.

AQ improvement measures should consider a significant contribution of windblown dust and synergies between AQM and climate mitigation and resilience building. Appropriate interventions for lowering the contribution of natural dust and protecting vulnerable population, especially during dust storms and other high dust events could be explored. This should consider international best practices and coordination with neighboring countries. Since most anthropogenic air pollution sources emit greenhouse gases (GHGs) simultaneously, policies to enable emission reduction interventions should be coordinated across sectors and stakeholders. This will allow to manage trade-offs and enable synergies between GHGs and reduction of air pollutants, especially for urban mobility/transport, sustainable residential heating, industry, and resilient landscape restoration with urban greening.

To plan, monitor and evaluate the success of emission reduction measures, the AQ monitoring system could be upgraded with automated AQ monitoring stations and improved activity data collection for key air pollution and GHG emission sources. This requires enhancement of the technical capacities for AQM at the national and local level, including capacity for planning based on air dispersion and source apportionment modeling tools in selected airsheds. Monitoring results should be analyzed to estimate population exposure and applied to calibrate air dispersion models. The design of the monitoring system will be according to international standards and will include stations for both urban and suburban monitoring (background, traffic, industry).

Establishment of a national coordination platform among different national and local stakeholders, as well as regional and international exchanges ape recommended to support strengthening of AQM and deepening of multi-sectoral engagements. The objective of the national platform is to discuss policy and institutional reforms and develop strategic documents for AQ improvement interventions, such as a national AQ strategy and/or local air quality actions plans. Tajikistan will benefit from knowledge exchange on best practices and experiences from peer countries in Central Asia and beyond, and from a coordinated support of development partners. One of the key areas for coordination includes development of effective measures to address (natural) windblown dust from transboundary sources as part of AQM and reduce anthropogenic sources of windblown duct.

The roadmap for AQM in Tajikistan will determine the most pressing policy actions and the next steps to be taken as part of the government's overall reform agenda. The consultations with major stakeholders to identify the next steps were launched with a roundtable on April 20, 2023 with the participation of the Committee for Environmental Protection (CEP), Tajikistan Hydromet, the Ministry of Energy and Water Resources, the Ministry of Transport, the Ministry of Health and Sanitation, Tajik Aluminum Company (TALCO), and Technical University of Tajikistan, development partners from World Health Organization and United Nations Environmental Programme, and experts from the Washington University of St. Louis. The consultations focused on identifying the most urgent policies and measures that could be adopted in the next one to two years to initiate reforms, reduce pollution, and improve quality of life in urban centers. In the medium term, integration with climate agenda could be considered. Complementing reform of AQM policies with the emerging GHG regulation introduced by the government of Tajikistan in the forthcoming Environmental Code will help contribute to decarbonization and resilience-building actions and will support deployment of new efficient and clean technologies and conservation of natural capital.