6. Summary and Recommendations for Future Activities

6.1 Summary

6.1.1 Overview of state of atmospheric environment in East Asia

East Asia is a global hotspot not only for air pollution but also for atmospheric deposition, particularly reactive nitrogen. These pollutants and atmospheric deposition have significant impacts on human health and ecosystems. Against this backdrop, effective management of the atmospheric environment in East Asia through science-based, data-driven policymaking has become an increasingly important societal and policy priority.

EANET has conducted long-term monitoring of air concentrations, atmospheric deposition, and ecosystem responses across East Asia since 2000. Over more than two decades, these activities have generated consistent and comparable datasets through established Quality Assurance and Quality Control (QA/QC) procedures. The QA/QC system has basically remained unchanged since 2000 and includes standardized procedures for siting, sampling and sample handling, chemical analysis, and data evaluation. Inter-Laboratory Comparison projects and multi-level data verification have further supported the reliability and comparability of EANET data.

The long-term EANET observations provide an important basis for assessing the status and trends of the atmospheric environment in East Asia. As of 2024, EANET operated 54 air concentration monitoring sites across participating countries. The assessment indicates that air pollution has improved in some parts of East Asia, while important regional and local challenges remain. $PM_{2.5}$ concentrations have decreased at many long-term sites in Japan, the Republic of Korea, Mongolia, Thailand, and Vietnam, partly reflecting reductions in emissions in China and associated decreases in long-range transport. SO_2 and NO_x concentrations have also decreased substantially at Chinese sites. These results indicate the effectiveness of emission reduction measures in reducing particulate and acidic air pollution in Northeast Asia and their regional benefits.

In contrast, surface O_3 shows an emerging regional air quality concern. While springtime O_3 has decreased at some remote sites in Japan, likely reflecting reduced long-range transport from China, significant increases have been observed at urban sites in Thailand. This suggests increasing photochemical ozone production associated with NO_x and VOC emissions. Biomass burning in Southeast Asia and coal combustion in Mongolia also remain important sources of particulate matter. These findings indicate that the major characteristics of air pollution are changing across East Asia, from predominantly sulfur-related pollution toward more complex pollution involving $PM_{2.5}$, O_3, and their precursors.

The assessment of atmospheric deposition also indicates a changing regional environmental situation. Wet deposition of sulfur has generally decreased, particularly in Northeast Asia, consistent with reductions in SO_2 emissions. In contrast, nitrogen deposition shows more complex spatial patterns, and reduced nitrogen is now the dominant form of nitrogen deposition at most sites. High nitrogen deposition and exceedance of critical loads at many assessed sites indicate potential risks of nitrogen accumulation and eutrophication, particularly in parts of Southeast Asia. These findings highlight the growing importance of NH_3 and reactive nitrogen management.

EANET ecological monitoring has provided further evidence on the environmental consequences of atmospheric deposition. Although relationships between changes in atmospheric deposition and soil, forest, and inland-water responses have been observed at some sites, ecosystem responses are not uniform and are strongly influenced by meteorological, hydrological, geological, and biogeochemical processes. Continuing changes in climate may further modify these responses. Continued integrated monitoring is therefore essential for assessing both delayed ecosystem responses and emerging environmental risks.

Overall, the EANET assessment demonstrates that the atmospheric environment in East Asia has improved in some respects, particularly with regard to sulfur pollution and $PM_{2.5}$ in several areas, but new and persistent challenges remain, including surface O_3, reactive nitrogen, NH_3 emissions, biomass burning, and ecosystem impacts. The long-term EANET monitoring network provides a unique scientific basis for identifying these regional changes, evaluating the effectiveness of emission control measures, and supporting evidence-based environmental policy. Future priorities should include maintaining and strengthening long-term monitoring; expanding $PM_{2.5}$, O_3, precursor, and reactive nitrogen observations; improving assessment of total deposition; promoting source apportionment and integrated modeling; and strengthening QA/QC, data harmonization, and regional collaboration.

6.1.2 Monitoring data quality (Chapter 2)

Reliable and comparable EANET monitoring data are essential for understanding the regional atmospheric environment, supporting decision-making, and ensuring compatibility with other international monitoring networks and scientific analyses. Therefore, continuous and appropriate Quality Assurance (QA) and Quality Control (QC) are required. EANET established four QA/QC programs in 2000, covering wet deposition, air concentration, soil and vegetation, and inland aquatic environments. Related Technical Manuals provide detailed QA/QC procedures, including site selection, sampling and sample handling, chemical analysis, and quality control of monitoring data (EANET, 2016).

National Monitoring Plans (NMPs) provide essential information for EANET QA/QC activities, including monitoring sites, measurement programs and frequency, participating laboratories, and geographical information. Each Participating Country prepares and annually reviews its NMP in accordance with EANET data reporting procedures, with revisions made as necessary. EANET monitoring sites are broadly classified into air concentration/acid deposition monitoring sites and ecological survey sites. The former are further categorized as remote, rural, and urban sites, while the latter are classified as survey sites and ecosystem analysis sites, depending on their monitoring objectives.

The Inter-Laboratory Comparison (ILC) project is an important component of EANET's QA/QC activities, designed to assess and improve the analytical performance of laboratories involved in EANET monitoring. Common samples prepared or distributed by the Network Center are analyzed by participating laboratories under standardized procedures, enabling the comparability and reliability of analytical results across the network to be evaluated. The ILC project covers the major monitoring fields of EANET, including wet deposition, air concentration monitoring using the filter pack method, soil monitoring, and inland aquatic environment monitoring. Depending on the monitoring field, artificial samples or common actual samples are distributed, and participating laboratories conduct the required analytical procedures, including sample treatment, instrumental analysis or titration, and data reporting. The results are evaluated against EANET Data Quality Objectives or by statistical procedures to identify deviations, outliers, and inter-laboratory variations. Through these evaluations, potential problems related to analytical methods, instruments, standard solutions, sample preparation, calculations, and laboratory procedures can be identified. The ILC project therefore provides participating laboratories with opportunities to review and improve their analytical performance and contributes to maintaining the quality, consistency, and comparability of EANET monitoring data across Participating Countries.

EANET regularly evaluates monitoring data to ensure their accuracy, precision, representativeness, completeness, and comparability across Participating Countries and with other monitoring networks. Monitoring data are compiled and verified annually by each National Center under its QA/QC Manager and submitted to the Network Center for further checking and verification. Identified issues are referred back to the relevant countries for confirmation and correction. The data are subsequently reviewed by external researchers and experts through the Verification Group before being compiled

into the EANET Data Report. Data completeness is an important indicator for evaluating the reliability of monthly and annual statistics. EANET applies specific Data Quality Objectives (DQOs) for wet deposition and air concentration monitoring. Regular evaluation of these objectives helps identify data gaps and operational problems and supports improvements in equipment maintenance and monitoring practices. The representativeness of monitoring data is also evaluated by considering site characteristics. Information on potential pollution sources, surrounding land use, site classification, and changes in monitoring conditions is collected through National Monitoring Plans and considered when interpreting the data. These systematic evaluation and verification procedures contribute to maintaining and continuously improving the reliability and comparability of EANET monitoring data.

6.1.3 Gas and Aerosol Concentration in East Asia (Chapter 3)

Gas and aerosol concentration monitoring under EANET provides essential information for understanding regional air quality and atmospheric deposition processes in East Asia. As of 2024, EANET operates 65 air concentration monitoring sites across 13 participating countries, including urban, rural, and remote sites. Observations are conducted using harmonized monitoring methodologies and QA/QC procedures, ensuring comparability of data across the region.

Spatial and temporal trend analysis of particulate matter (PM) showed substantial spatial variability across East Asia. PM_{10} and $PM_{2.5}$ concentrations were generally highest in Mongolia and some site in Southeast Asia, particularly at urban sites affected by coal combustion, biomass burning, traffic emissions, and secondary aerosol formation. In contrast, remote and rural sites in Japan and some island and high-elevation locations showed relatively low particulate matter concentrations. Long-term observations indicated decreasing $PM_{2.5}$ trends at many sites in Japan, Mongolia, the Republic of Korea, Thailand, and Vietnam, reflecting emission reduction efforts and improved air quality management. However, biomass burning in Southeast Asia and wintertime coal combustion in Mongolia continue to contribute substantially to PM pollution.

The chemical composition of particulate matter varied among regions. Sulfate (SO_4^{2-}) remained an important component of PM at many Southeast Asian countries sites, while nitrate (NO_3^-) and ammonium (NH_4^+) became increasingly important in Northeast Asia. Calcium (Ca^{2+}), representing crustal and dust-related origins, was particularly elevated at Mongolia and continental inland region sites. These results indicate regional differences in emission sources and atmospheric transformation processes.

Surface ozone (O_3) exhibited contrasting regional trends. Relatively high ozone concentrations were observed at several rural and remote sites in Japan, China, and the Republic of Korea, reflecting regional photochemical production and long-range transport. Long-term analyses showed decreasing springtime ozone concentrations at several Japanese sites, likely associated with reduced precursor transport from continental source regions. In contrast, increasing ozone trends were detected at urban sites in Thailand, indicating growing photochemical oxidant formation associated with urbanization and increasing precursor emissions. These findings highlight ozone as an emerging regional air quality concern in Southeast Asia.

SO_2 concentrations were generally low across the EANET region, with most monitoring sites recording levels below 0.5 ppb, indicating substantial reductions in sulfur emissions. Long-term observations showed remarkable declines in SO_2 concentrations in China, Japan, and the Republic of Korea as a result of emission control measures implemented since the mid-2000s. However, elevated concentrations were still observed at some urban sites in Mongolia and some Southeast Asian countries. Similarly, NO_x and NO_2 concentrations decreased at many sites in Northeast Asia, while some urban areas in Southeast Asia continued to be relatively high concentrations related to transportation and industrial activities.

Annual trends of HNO_3 and NH_3 concentrations showed predominantly decreasing patterns at many EANET sites, although several locations, particularly agricultural regions in Southeast Asia, exhibited increasing NH_3 concentrations. These observations suggest that reactive nitrogen is becoming an increasingly important component of regional air pollution and secondary aerosol formation. Spatial distributions of HCl, HNO_3, and NH_3 also reflected strong influences from coastal environments, biomass burning, agriculture, and industrial activities.

EANET air concentration observations demonstrated significant improvements in air quality over the past two decades, particularly for sulfur-related pollutants and particulate matter in Northeast Asia. At the same time, increasing ozone concentrations in parts of Southeast Asia and the growing importance of reactive nitrogen compounds indicate that continued monitoring and assessment of gas and aerosol concentrations remain essential for supporting regional air quality management and ecosystem protection.

6.1.4 Wet and Dry Deposition in East Asia (Chapter 4)

Under the EANET framework, there are currently 57 wet deposition monitoring sites and 51 dry deposition monitoring sites located in 13 EANET member countries. In accordance with EANET criteria, the monitoring sites are categorized into three types: urban, rural, and remote. Sampling techniques, sample storage and analysis, data processing, and QA/QC procedures of all monitoring sites and laboratories participating in EANET are conducted according to EANET's guidelines and manuals (EANET, 2010a, 2010b, 2013, and 2022). Dry deposition was estimated using the inferential method described in the Technical Manual for Dry Deposition Flux Estimation in East Asia (EANET, 2010b).

Long-term variations in wet deposition of non-sea-salt sulfate (nss-SO_4^{2-}) across East Asia showed substantial regional changes during 2000–2024. Northeast Asia exhibited significant decreasing trends, particularly in China and Japan, consistent with substantial reductions in SO_2 emissions. Declines at remote sites in Japan also suggest reduced transboundary sulfur deposition from the Asian continent. In contrast, trends in Southeast Asia were more heterogeneous. In the early 2000s, relatively high sulfur deposition was widely observed in China and at several sites in Southeast Asia. Deposition subsequently decreased substantially, particularly in China, where values at all monitored sites were below 10 kg S ha^{-1} yr^{-1} by 2020–2024. Meanwhile, relatively high deposition became more prominent in Vietnam and Indonesia, indicating a geographical shift in sulfur deposition hotspots toward Southeast Asia. In contrast, high-latitude sites in Mongolia and Russia consistently maintained low sulfur deposition throughout the study period.

Wet deposition of nitrate (NO_3^-) and ammonium (NH_4^+) showed substantial spatial and temporal variability across East Asia during 2000–2024. NO_3^- deposition generally showed less pronounced trends than nss-SO_4^{2-}, with stable to slightly decreasing trends in Northeast Asia and greater variability in Southeast Asia. NH_4^+ deposition was also generally stable or slightly decreasing in Northeast Asia, while localized increases and pronounced variability occurred in Southeast Asia. NH_4^+ deposition generally exceeded NO_3^- deposition at most sites. In the early 2000s, relatively high nitrogen deposition was observed in China, Malaysia, and Indonesia. By 2020–2024, high deposition remained in parts of Southeast Asia, with new hotspots emerging in Vietnam, including at rural and remote sites, indicating a geographical shift in nitrogen deposition hotspots. In contrast, high-latitude sites in Mongolia and Russia consistently showed low nitrogen deposition. Total nitrogen deposition during 2015–2024 was relatively high in Southeast Asia, particularly in Indonesia and Vietnam, with levels exceeding 30 kg N ha^{-1} yr^{-1} at several sites. Reduced nitrogen accounted for more than 50% of total nitrogen deposition at most sites, indicating its substantial contribution across East Asia.

Long-term observations across EANET sites show substantial regional differences in precipitation chemistry and acidity. Precipitation pH is largely controlled by the balance between acidic components (nss-SO_4^{2-} and NO_3^-) and neutralizing components (NH_4^+ and nss-Ca^{2+}). Over the past 25 years, precipitation acidity has generally decreased in Northeast Asia, particularly in China and

Japan, reflecting reductions in acidic components and substantial neutralization. In contrast, Southeast Asia shows greater interannual variability and less consistent long-term trends, influenced by variations in emissions, agricultural activities, and meteorological conditions. Overall, clearer improvements in precipitation acidity have occurred in Northeast Asia, while conditions remain more variable in Southeast Asia.

Long-term trends in wet deposition generally reflected regional emission changes. Declining SO_2 and NO_x emissions in Northeast Asia were consistent with decreases in nss-SO_4^{2-} and NO_3^- deposition, while increasing emissions in parts of Southeast Asia corresponded to increasing deposition. NH_3 emissions remained stable or increased slightly, highlighting the growing importance of reduced nitrogen. Assessment of ecological risks showed that critical loads for eutrophication were exceeded at 20 of 27 evaluated sites, with large exceedances around major urban areas in Southeast Asia. Although other nitrogen sources also affect surface waters, elevated atmospheric nitrogen deposition may increase nitrogen leaching risks in forest ecosystems, supporting the need for continued monitoring.

6.1.5 Impacts on Ecosystems in East Asia (Chapter 5)

EANET ecological monitoring over more than two decades has accumulated substantial datasets on soil, forest vegetation, and inland water to assess the impacts of atmospheric deposition on ecosystems. In addition, catchment-scale analyses have helped clarify the interrelationships among atmospheric deposition, soil, forest vegetation, and stream water.

Diverse soil chemical properties across EANET sites are primarily controlled by soil formation processes, forest composition, and climatic conditions, although soil pH increased as nss-SO_4^{2-} wet deposition decreased at several sites in China and Japan. Most observed changes in forest growth can be attributed to human disturbance, meteorological fluctuations, or increased competition among individuals as forest stands age. Inland water chemistry showed no clear regional evidence of widespread acidification across the EANET monitoring sites; however, decreases in SO_4^{2-} concentrations were observed more frequently than increases, suggesting a partial response to reductions in sulfur deposition. The correspondence between atmospheric deposition and inland water chemistry was clearer for sulfur-related parameters than for nitrogen-related parameters. Decreases in stream water SO_4^{2-} and NO_3^- were observed where atmospheric deposition had declined, suggesting ongoing recovery from acidification and N saturation. However, such relationships were not consistent across all catchments. The surveyed forest catchments generally still function as N sinks, although incomplete N retention may occur under conditions of relatively high DIN export.

Overall, ecosystem responses were not always consistent with changes in atmospheric deposition, indicating strong influences of meteorological, hydrological, geological, and internal biogeochemical processes at individual monitoring sites. At the same time, relationships between atmospheric deposition and ecosystem responses were observed at several sites, and atmospheric deposition is still increasing at some sites. It has become clear that it is difficult to assess these impacts uniformly based solely on the deposition levels of N and S compounds. In particular, CO_2 concentrations and temperatures continue to rise year on year, whilst precipitation levels and patterns are also changing. It will be necessary to situate ecosystem monitoring within the context of such environmental changes.

6.2. Recommendations for future activities

6.2.1. General remarks

Based on the findings of this Assessment Report, it is important that EANET's activities over the next five years continue to follow the direction set out in the current Medium-Term Plan (MTP), with a focus on supporting atmospheric environment management in the region. In particular, EANET

should strengthen monitoring and data analysis for ozone and $PM_{2.5}$, improve understanding of their current status based on scientific evidence, and generate policy-relevant outputs that can support data-driven, decision-making in participating countries.

Furthermore, the emphasis should be placed on the three strategic perspectives identified in the current MTP: sustainable monitoring, nitrogen cycle and management, and impacts of meteorological conditions on air pollution.

For sustainable monitoring, (1) priority should be given to the integrated use of low-cost sensors, satellite observations, and existing monitoring networks; (2) improving understanding of the spatiotemporal characteristics of air pollution through the integration of observational data, chemical transport models, and emission inventories; (3) promoting the application of AI technologies to support these activities; (4) strengthening technical capacity across all participating countries; (5) enhancing the sustainability of the EANET monitoring system; and (6) strengthening collaboration with other international initiatives.

For nitrogen cycle and management, priority should be given to (1) establishing quantitative, long-term, continuous, and region-wide monitoring of atmospheric deposition of reactive nitrogen; utilizing satellite observations of nitrogen dioxide (NO_2) and ammonia (NH_3) to regional monitoring; and (2) integrating diverse observational datasets with atmospheric models to produce region-wide maps of reactive nitrogen deposition across East Asia.

For understanding the impacts of meteorological conditions on air pollution, priority should be given to (1) conducting long-term and continuous monitoring of meteorological conditions, air pollutant concentrations, and atmospheric deposition in order to detect the impacts of meteorological variability; (2) applying atmospheric models and AI-based analytical approaches to distinguish the effects of meteorological changes on the processes governing atmospheric pollutants, including anthropogenic and natural emissions, atmospheric transport, chemical transformation, and deposition; and (3) predicting future changes in air pollutant concentrations and atmospheric deposition under changing meteorological conditions.

During the current MTP period, the following efforts should be prioritized.

Sustainable Monitoring:
During the current MTP period, efforts under sustainable monitoring should focus on Examine practical approaches for utilizing LCS, satellite observations, existing monitoring networks, and AI technologies; Develop methodologies for integrating monitoring data with models and emission inventories to better characterize the spatiotemporal distribution of air pollutants; Strengthen capacity-building activities to enhance technical expertise across participating countries; Further strengthen collaboration with relevant international initiatives; Prepare a strategic paper to guide the next MTP; and Address the progressive degradation of monitoring capacity due to aging equipment at some stations, and prioritize systematic instrument replacement and upgrading to ensure long-term data quality and network reliability.

Nitrogen Cycle and Management:
During the current MTP period, efforts under nitrogen cycle and management should focus on Improve understanding of the current status of reactive nitrogen deposition using existing monitoring data; Explore analytical approaches and build capacity for the use of satellite observations, atmospheric models, and AI technologies; and prepare a strategic paper to guide the next MTP.

Impacts of Meteorological Conditions on Air Pollution:
During the current MTP period, efforts under impacts of meteorological conditions on air pollution should focus on Analyze the impacts of meteorological conditions on air pollutant concentrations and atmospheric deposition using existing monitoring data; Develop analytical methodologies and

strengthen capacity for detecting meteorological impacts on air pollution and deposition; and prepare a strategic paper to guide the next MTP.

EANET should continue to strengthen collaboration with relevant international organizations and initiatives, promote data sharing with national monitoring programmes, provide continuous capacity-building for participating countries, and identify the needs of policymakers in participating countries and implementing activities based on those needs.

6.2.2. Specific topics

6.2.2.1. Monitoring and QA/QC

EANET has conducted long-term atmospheric monitoring across the East Asian region for more than 25 years. Continuous monitoring is a key function of EANET. EANET is currently implementing its Medium-Term Plan (MTP), which places particular emphasis on addressing regional air pollution issues, especially ozone and $PM_{2.5}$. At the same time, EANET is promoting three strategic themes: sustainable monitoring, nitrogen cycle and management, and understanding the impacts of meteorological conditions on air pollution.

Atmospheric monitoring is essential for the effective management of the atmospheric environment in East Asia. Therefore, it is important to maintain and strengthen long-term monitoring to assess temporal trends and evaluate the effectiveness of air pollution control policies. To this end, strengthening QA/QC, data harmonization, and regional collaboration remains essential to ensure the consistency, comparability, and policy relevance of EANET data.

Strategic monitoring of ozone, $PM_{2.5}$, and their precursors, consistent with the current MTP, should be further strengthened. In particular, regional-scale monitoring of surface ozone and $PM_{2.5}$ across East Asia is essential for providing a scientific basis for the development of national air pollution control policies.

With regard to the three strategic themes of the MTP, sustainable monitoring should be addressed as described in Section 6.2.1. For nitrogen cycle and management, quantitative, long-term, continuous, and region-wide monitoring of atmospheric deposition of reactive nitrogen is indispensable. Monitoring of reactive nitrogen species, including NH_3, HNO_3, and aerosol ammonium and nitrate, should therefore be strengthened. In particular, the utilization of satellite observation data, which can spatially complement the limited number of ground-based observations, is an important approach for advancing regional-scale monitoring of nitrogen dioxide (NO_2) and ammonia (NH_3). At the same time, several technical challenges remain, including observational uncertainties, the conversion of column concentrations to ground-level concentrations, and the fusion of satellite and ground-based observation data using atmospheric models. With regard to the impacts of meteorological conditions on air pollution, detecting the effects of meteorological variability on the atmospheric environment requires continuous, long-term observations and coordinated monitoring of meteorological parameters together with air quality and atmospheric deposition.

6.2.2.2 Assessing regional atmospheric environment

Assessment of ozone, $PM_{2.5}$, and their precursors, consistent with the current MTP, should be further strengthened. In particular, source apportionment and integrated modelling should be promoted to identify the contributions of local emissions, long-range transport, biomass burning, and natural sources, which is important for developing effective emission reduction strategies. To advance these assessments, emission inventories, receptor models, chemical transport models, inverse modelling, and AI-assisted analytical techniques should be promoted as key assessment tools. The application of these methodologies, together with capacity building to ensure their effective use across participating countries, is essential.

In addition, estimating total deposition is essential for assessing ecosystem impacts, including acidification and eutrophication. However, estimates of dry deposition are currently constrained by the limited availability of monitoring data. To address these data limitations, a combined approach (data fusion) integrating observational data with chemical transport models provides a useful means of estimating total deposition. Therefore, its application within EANET should be considered.

Greater emphasis should also be placed on strengthening activities at the science–policy interface. In particular, EANET should generate scientific information to support the evaluation of air quality policies, the development of atmospheric management strategies, and the prediction of future air quality under different emission and environmental scenarios.

6.2.2.3 Assessing impacts on ecosystems

CO_2 concentrations and temperatures have been increasing year by year, while precipitation amounts and patterns have also undergone substantial changes. In light of the potential for these environmental factors to exert significant direct and indirect effects on ecosystem responses, ecosystem monitoring should be conducted within the context of such environmental changes. Therefore, continued monitoring of atmospheric deposition and ecosystem responses is of critical importance for detecting delays in ecosystem recovery, acidification, and changes in nitrogen (N) retention capacity.

Consistent with the current MTP, greater efforts should also be devoted to assessing the impacts of ozone and $PM_{2.5}$ on ecosystems. In addition, from the perspective of nitrogen cycle and management, priority should be given to understanding and assessing ecosystem impacts resulting from atmospheric deposition of reactive nitrogen. Furthermore, with regard to the impacts of meteorological conditions on air pollution, greater attention should be paid to assessing the impacts of meteorological variability on ecosystems.

6.2.2.4 Other activities

EANET should strengthen science-based policy support through the development of practical tools and recommendations for addressing specific environmental issues, while implementing strategic and well-planned capacity-building programmes to enhance scientific and technical capabilities across participating countries.

6.3 References

EANET. 2010a. Technical Manual for Wet Deposition Monitoring in East Asia -2010. https://www.eanet.asia/wp-content/uploads/2019/04/techwet.pdf

EANET. 2010b. Technical Manual for Dry Deposition Flux Estimation in East Asia. https://www.eanet.asia/wp-content/uploads/2019/04/techdry.pdf

EANET. 2013 Technical Manual for Air Concentration Monitoring in East Asia.

EANET. 2016 Quality Assurance / Quality Control (QA/QC) Guidebook for Acid Deposition Monitoring Network in East Asia - 2016.

EANET. 2022. Technical Manual for Air Concentration Monitoring in East Asia (Second Edition). https://www.eanet.asia/wp-content/uploads/2026/02/Technical-Manual-for-Air-Concentration-Monitoring-2022.pdf