

DENR ADMINISTRATIVE ORDER

No. 2025-_____

**SUBJECT: ADOPTION OF THE UPDATED INTEGRATED AIR QUALITY
IMPROVEMENT FRAMEWORK—AIR QUALITY CONTROL ACTION
PLAN**

Pursuant to Section 8 of Republic Act (RA) 8749 otherwise known as the Philippine Clean Air Act of 1999 and Rule 4 of DENR Administrative Order No. 2000-81 or the Implementing Rules and Regulations of RA 8749, and to specify the methods and means to achieve the intent of the Clean Air Act, the attached 10-Year Integrated Air Quality Improvement Framework – Air Quality Control Action Plan (IAQIF-AQCAP) is hereby adopted and promulgated for the guidance of all concerned.

Section 1. Basic Policy. It is the policy of the state to (1) protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature, (2) attain and maintain a balance between development and environmental protection, and (3) maintain a quality of air that protects human health and welfare.

Section 2. Objective. This Order aims to provide a coherent direction towards the improvement of air quality in the country through the implementation of specific actions and commitments by various government agencies and stakeholders.

Section 3. Scope and Coverage. The IAQIF-AQCAP applies to airsheds and all sources of air pollution as defined in RA 8749.

Section 4. Lead Office. The Environmental Management Bureau (EMB) shall take the lead in the implementation of the IAQIF-AQCAP in coordination with concerned government agencies and stakeholders. It shall ensure that the IAQIF-AQCAP be disseminated to all concerned for its proper implementation.

Section 5. Monitoring, Evaluation, and Reporting. To ensure the continuous effectiveness of the IAQIF-AQCAP, EMB shall conduct performance assessment at the end of every year then set new targets for the following year. Progress towards the objectives of this action plan shall be made publicly available to provide transparency and accountability in the implementation of air quality management measures.

Section 6. Review and Updating. The IAQIF-AQCAP shall be reviewed every three years or as the need arise, to evaluate its effectiveness in achieving air quality objectives and to incorporate new scientific findings, technological advancements, and policy developments among others. Amendments may be proposed as deemed necessary to address emerging air quality challenges or to improve the effectiveness of existing measures. Amendments will be subject to thorough evaluation and public consultation before being incorporated.

Section 7. Separability Clause. If any part or provision of these Rules and Regulations or that of the IAQIF-AQCAP is held or declared unconstitutional or invalid by a competent court, the other parts of provisions hereof shall continue to be in force as if the parts or provisions so annulled or voided had never been incorporated herein.

Section 8. Repealing Clause. Pertinent laws or parts of that are deemed inconsistent with these Rules and Regulations are hereby revised, amended, modified, and/or suspended as the case may be made by this Order.

Section 9. Effectivity. This Order shall take effect fifteen (15) days after is publication in a newspaper of general circulation and its registration with the Office of the National Administrative Registry (ONAR).

MARIA ANTONIA YULO-LOYZAGA

Secretary

<DENR Logo>

INTEGRATED AIR QUALITY IMPROVEMENT FRAMEWORK – AIR QUALITY CONTROL ACTION PLAN

(2025 to 2035)

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PREFACE

ACKNOWLEDGEMENT

The Integrated Air Quality Improvement Framework – Air Quality Control Action Plan (IAQIF-NAQCAP) 2025–2035 has been formulated based on the results of focus group discussions (September 26 to 28, 2023), an interagency workshop (November 13, 2023), sectoral consultations (January 24 to 26, 2024), and a public consultation (March 13, 2024). The valuable contribution and participation of the following government agencies and other stakeholders are greatly appreciated:

- Department of Environment and Natural Resources
 - Environmental Management Bureau
 - Climate Change Services
- Department of Energy
 - Oil Industry Management Bureau
 - Renewable Energy Management Bureau
 - Energy Utilization Management Bureau
 - Oil Industry Standards Monitoring Division
 - Energy Policy and Planning Bureau
 - Energy Resource Development Bureau
- Department of Trade and Industry – Bureau of Product Standards
- Department of Transportation
 - Road Sector
 - Land Transportation Office
 - Civil Aviation Authority of the Philippines
 - Maritime Industry Authority
- Metro Manila Development Authority
- Department of Human Settlements and Urban Development
- Department of Health
 - Disease Control and Prevention Bureau
 - Health Promotion Bureau
- Department of Science and Technology
 - Philippine Council for Industry, Energy, and Emerging Technology Research and Development
 - Industrial Technology Development Institute
- Department of Finance – Bureau of Customs
- Department of the Interior and Local Government
- Department of Public Works and Highways
- Department of Budget and Management
- National Economic and Development Authority – Agriculture, Natural Resources, and Environment
- Philippine Information Agency
- Technical Education and Skills Development Authority
- Climate Change Commission
- University of the Philippines
 - Institute of Environmental Science & Meteorology
 - College of Public Health
 - National Center for Transportation Studies

Integrated Air Quality Improvement Framework-Air Quality Control Action Plan

- Ateneo De Manila University – School of Medicine and Public Health
- Manila Observatory
- Partnership for Clean Air, Inc.
- Clean Air Asia
- Lasallian Institute for the Environment
- World Bank
- United Nations Development Programme
- World Health Organization
- Coalition of Clean Air Advocates Philippines
- Motorcycle Development Program Participants Association
- Truck Manufacturers Association
- Chamber of Automotive Manufacturers of the Philippines, Inc.
- Electric Vehicle Association of the Philippines, Inc.
- Philippine Liner Shipping Association
- Light Rail Manila Corporation
- Cement Manufacturers Association of the Philippines
- Philippine Steel Rolling Mills Association
- Philippine Rural Electric Cooperatives Association, Inc.
- Petron Corporation
- Philippine Independent Power Producers Association, Inc.
- Samahan sa Pilipinas ng mga Industriyang Kimika
- Philippine Sugar Millers Association
- Philippine Sinter Corporation
- Philippine Chamber of Commerce and Industry
- Association of Petrochemical Manufacturers of the Philippines, Inc.
- Association of Abaca Pulp Manufacturers, Inc.
- Philippine Resins Industries, Inc.
- Innogy Solutions, Inc.

ACRONYMS

AO	: Administrative Order
AQCAP	: Air Quality Control Action Plan
AQI	: Air Quality Index
AQMS	: Air Quality Management Section
ASGB	: Airshed Governing Board
BPS	: Bureau of Philippine Standards
CAA	: Clean Air Asia
CAAP	: Civil Aviation Authority of the Philippines
CCS	: Climate Change Service
CEMS	: Continuous Emission Monitoring System
CFPP	: Coal-Fired Power Plant
CII	: Carbon Intensity Indicator
CLUP	: Comprehensive Land Use Plan
CREVI	: Comprehensive Roadmap for the Electric Vehicle Industry
DA	: Department of Agriculture
DAHS	: Data Acquisition and Handling System
DALYs	: Disability-Adjusted Life Years
DBM	: Department of Budget and Management
DENR	: Department of Environment and Natural Resources
DepEd	: Department of Education
DHSUD	: Department of Human Settlements and Urban Development
DILG	: Department of the Interior and Local Government
DOE	: Department of Energy
DOF	: Department of Finance
DOH	: Department of Health
DOLE	: Department of Labor and Employment
DOST	: Department of Science and Technology
DOTr	: Department of Transportation
DPWH	: Department of Public Works and Highway
DTI	: Department of Trade and Industry
ECC	: Environmental Compliance Certificate
EDSA	: Epifanio de los Santos Avenue
EEDI	: Energy Efficiency Design Index
EEXI	: Energy Efficiency of Existing Ship Index
EMB	: Environmental Management Bureau
ENRO	: Environment and Natural Resources Office
ETV	: Environmental Technology Verification
EV	: Electronic Vehicle
FGD	: Focus Group Discussion
GHG	: Greenhouse Gases
GWh	: Gigawatt-Hour
HAZAP	: Hazardous Air Pollutants
IAQIF	: Integrated Air Quality Improvement Framework
IEC	: Information, Education and Communication
IMO	: International Maritime Organization
IRR	: Implementing Rules and Regulations
ITDI	: Industrial Technology Development Institute
JAO	: Joint Administrative Order
kW	: Kilowatt
LGU	: Local Government Units
LTFRB	: Land Transportation Franchising and Regulatory Board

Integrated Air Quality Improvement Framework-Air Quality Control Action Plan

LTO	: Land Transportation Office
MARINA	: Maritime Industry Authority
MEPDS	: Marine Environment Protection and Development Service
MMDA	: Metropolitan Manila Development Authority
MPUV	: Modern Public Utility Vehicle
NAQCAP	: National Air Quality Control Action Plan
NDC	: Nationally Determined Contribution
NEDA	: National Economic and Development Authority
NESSAP	: National Emission Standards for Source Specific Air Pollutants
NGO	: Non-Government Organizations
NO _x	: Nitrogen Oxide
ODS	: Ozone-Depleting Substances
ONAR	: Office of the National Administrative Registry
OPMS	: Online Permitting and Monitoring System
PCG	: Philippine Coast Guard
PCIEERD	: Philippine Council for Industry, Energy and Emerging Technology Research and Development
PDPFP	: Provincial Development and Physical Framework Plan
PHIVOLCS	: Philippine Institute of Volcanology and Seismology
PIA	: Philippine Information Agency
PNP	: Philippine National Police
PNS	: Philippine National Standards
PPA	: Philippine Port Authority
PTO	: Permit to Operate
PUV	: Public Utility Vehicle
PUVMP	: Public Utility Vehicle Modernization Program
RA	: Republic Act
RATA	: Relative Accuracy Test Audit
RO	: Regional Office
SEEMP	: Ship Energy Efficiency Management Plan
SLCP	: Short-lived Climate Pollutants
STCWO	: Standards of Training, Certification, and Watchkeeping
SUC	: State Universities and Colleges
TCPA	: Technical Committee on. Petroleum Products and Additives
TWG	: Technical Working Group
TESDA	: Technical Education and Skills Development Authority
VULP	: Vehicle Useful Life Program

1

LEGAL FRAMEWORK

The Air Quality Improvement Framework, which is mandated by Republic Act (RA) 8749 or the Philippine Clean Air Act of 1999, serves as the official guideline for government agencies towards achieving and sustaining compliance with air quality standards. In addition, RA 8749 mandates the development of the Air Quality Control Plan, which will facilitate the implementation and attainment of its objectives.

In response to the aforementioned provisions of RA 8749, the Integrated Air Quality Improvement Framework (IAQIF)-Air Quality Control Action Plan (AQCAP) was released under DAO 2000-82. Established with the participation of local government units (LGUs), non-government organizations (NGOs), and private organizations, the academe, and other concerned entities from the private sector, the Framework outlines emission reduction goals, associated timeframes, an institutional framework to support implementation, and other supportive elements like economic incentives, collective action, and environmental education. In addition, the Framework promotes cost-effective use of economic incentives, management strategies, collective action, and environmental education and information.

DAO 2000-82 also specifies key elements of the Air Quality Control Action Plan, which include enforceable air emission limitations, control measures tailored to specific industries and emission types, compliance schedules, definition of airsheds, prevention of air quality deterioration, enforcement programs for pollution control regulations, and other necessary measures for effective air pollution control and abatement. This comprehensive approach aims to establish a clear pathway toward achieving healthier air quality across the Philippines.

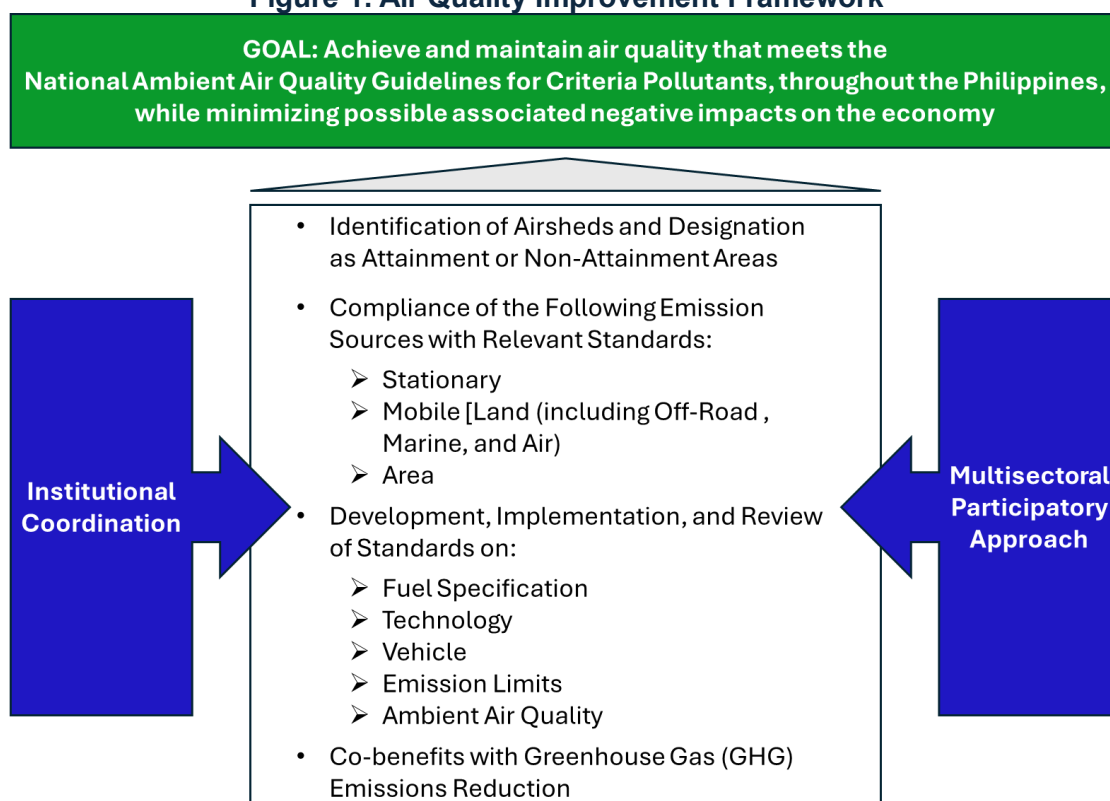
Given the evolving landscape of air quality challenges and advancements in pollution control technologies, it is imperative that the 20-year framework and action plan be reviewed and updated to align with current needs and emerging best practices as well as to ensure their continued relevance and effectiveness in addressing current and future air quality challenges. Over the past two decades, significant developments have occurred in air quality management, necessitating a comprehensive reassessment of goals, strategies, and implementation approaches. This is also aligned with DAO 2000-82, which stipulates the periodic review and updating of the IAQIF-AQCAP.

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AIR QUALITY IMPROVEMENT FRAMEWORK

Pursuant to the primary goal of the Clean Air Act to achieve and maintain healthful air for all areas of the Philippines while minimizing possible negative impacts to the economy, the Figure 1 illustrates the updated Air Quality Improvement Framework, which serves as a roadmap to pursue a national program on air quality management.

Figure 1. Air Quality Improvement Framework



The Framework is aligned with the principles and provisions in DAO 2000-82 and maintains its emphasis on strong institutional coordination and a people-drive approach as key components for an effective air quality management program. However, the updated Framework encompasses a more comprehensive range of emissions, now including other mobile emission sources such as off-road equipment or vehicles, marine vessels, and aircraft. These emit pollutants that contribute to air pollution and impact air quality and public health. Recognizing the significance of emissions from these sources is essential for developing effective air quality management strategies.

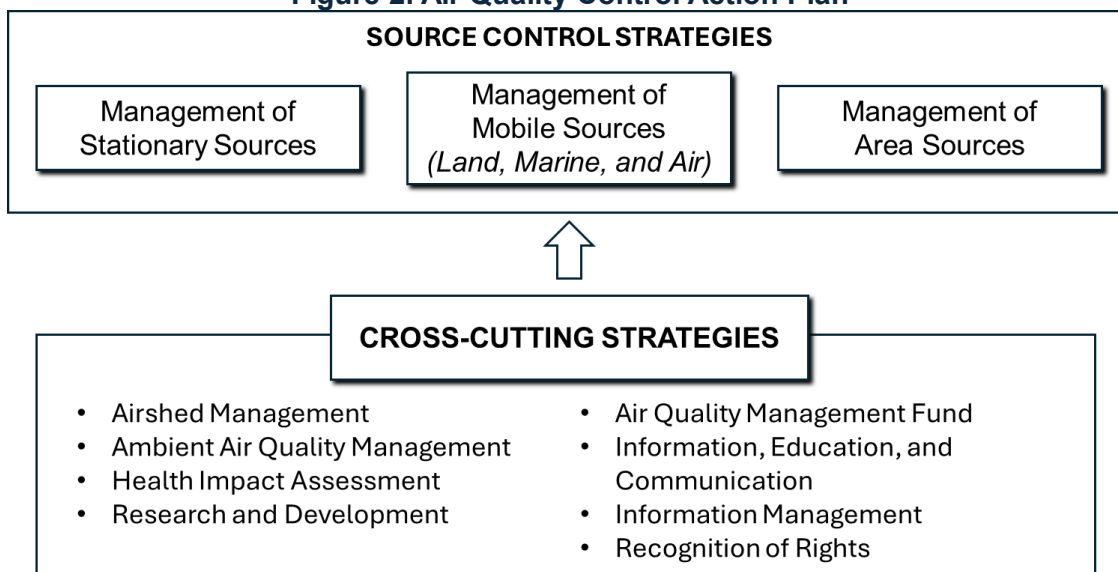
Moreover, the updated Framework adopts a synergistic approach that recognizes the interconnections and shared sources between air pollutants and GHGs. By addressing both concurrently, the Framework seeks to maximize co-benefits between air quality management and climate change mitigation.

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AIR QUALITY CONTROL ACTION PLAN

The Air Quality Control Action Plan consists primarily of controlling the different types of air emissions sources as presented in Figure 2. This is then supported by cross-cutting strategies that are common across the different emission sources.

Figure 2. Air Quality Control Action Plan



The strategy-specific actions, indicators, and stakeholders are presented in the Air Quality Action Plan (Table 1). This considers challenges and opportunities stemming from prior frameworks, legislations, and ongoing or planned programs.

Integrated Air Quality Improvement Framework-Air Quality Control Action Plan

Table 1. Air Quality Control Action Plan

Actions to Reduce Air Pollution Levels	Indicator	Responsible Stakeholders	Reporting Stakeholders
Management of Stationary Sources			
Strengthen monitoring and enforcement of NESSAP	Percentage of establishments inspected for compliance with RA 8749 requirements	DENR-EMB	DENR-EMB
	Percent increase of establishments with valid PTO	DENR-EMB	DENR-EMB
	Percentage of establishments complying with NESSAP	DENR-EMB	DENR-EMB
Develop/review emission standards	Percent completion of the study on new emission standards for existing air quality parameters with corresponding regulatory impact assessment	DENR-EMB	DENR-EMB
	Number of hazardous air pollutants with emission standards	DENR-EMB	DENR-EMB
Develop/review other policies: <ul style="list-style-type: none"> • Emission charge system • Emissions averaging • Emissions trading • Accreditation of relative accuracy test audit (RATA) providers • Requirements for stack testing for those with operational continuous emission monitoring system (CEMS) • Online stack sampling and automated technologies for stack sampling 	Completion of policy development/review	DENR-EMB	DENR-EMB
Establish automatic alert system for CEMS data acquisition and handling system (DAHS)	Percentage of EMB Regional Offices with functional alert system for CEMS DAHS	DENR-EMB	DENR-EMB

Integrated Air Quality Improvement Framework-Air Quality Control Action Plan

Actions to Reduce Air Pollution Levels	Indicator	Responsible Stakeholders	Reporting Stakeholders
Review and revise (if necessary) the EMB Citizen's Charter on the issuance of Permit to Operate	Percent completion of the needed updates/revisions	DENR-EMB	DENR-EMB
Update the OPMS	Percent completion of OPMS updates	DENR-EMB	DENR-EMB
Develop capability to monitor dioxins, furans, and other hazardous air pollutants	Percentage of EMB Regional Offices capable of monitoring dioxins, furans, and other hazardous air pollutants	DENR-EMB	DENR-EMB
	Number of accredited third-party testing firms	DENR-EMB	DENR-EMB
Conduct capacity building for emission and air quality monitoring	Number of trainings/workshops conducted	DENR-EMB	DENR-EMB
	Number of EMB AQMS personnel trained based on training needs	DENR-EMB	DENR-EMB
Develop guidelines on industrial biofuel blend implementation	Percent completion of the guidelines with corresponding regulatory impact assessment	DOE	DOE
Enhance energy efficiency and conservation	Combined Gigawatt-Hour (GWh) of energy savings of designated establishments	DOE	DOE
Accelerate renewable energy development	Percentage of renewable energy in installed generating capacity	DOE	DOE
Management of Mobile Sources			
<i>Mobile (Land)</i>			
Enhance sustainable mobility	Kilometer-length of protected active transport lanes	DOTr, DPWH, DILG	DOTr
	Percent increase in public transport use	DOTr	DOTr
Ensure that new vehicles being registered comply with the emission standards as required by EMB	Percentage of vehicles with certificate of conformity passing the emission standards, including NO _x standard for diesel	LTO	DOTr
Conduct roadside emission testing	Number of operational mobile smoke emission testers/opacimeter	LTO	LTO
	Number of procured mobile smoke emission testers/opacimeter	MMDA	MMDA

Integrated Air Quality Improvement Framework-Air Quality Control Action Plan

Actions to Reduce Air Pollution Levels	Indicator	Responsible Stakeholders	Reporting Stakeholders
Conduct training of inspectors, apprehending officers, and deputized agents regarding air quality management	Number of inspectors, apprehending officers, and deputized agents trained	LTO	LTO
		MMDA	MMDA
Standardize apprehension procedures	Relevant policy issued and enforced	LTO, MMDA	LTO, MMDA
Perform baseline and clean air scenario in implementing Euro 5/V or 6/VI	Published study	DENR-EMB	DENR-EMB
Develop and implement policies for higher Euro level fuels	Percentage of regulated establishments complying with higher Euro level fuels	DOE, DTI-BPS	DOE, DTI-BPS
Develop and implement PNS for E-Gasoline Fuel (E20)	Percentage of regulated establishments complying with the PNS for E-Gasoline Fuel (E20)	DOE	DOE
Develop and implement Department Circular for the guidelines on automotive biofuel blend implementation	Percentage of regulated establishments complying with the guidelines on automotive biofuel blend	DOE	DOE
Issue policy for Euro 5/V and Euro 6/VI covering PUVs	Percentage of PUVs complying with Euro5/V and Euro 6/VI standards	LTO	LTO
Establish accreditation of Euro 5/V or higher modern public utility vehicle (MPUV) manufacturers	Number of accredited manufacturers distributing Euro 5/V or 6/VI units	DOTr	DOTr
Institutionalize the Public Utility Vehicle Modernization Program (PUVMP)	Percentage of modernized PUV	DOTr, LTRFB	DOTr
Finalize the Comprehensive Roadmap for the Electric Vehicle Industry (CREVI) Action Plan	Percent implementation of the CREVI Action Plan	DOE	DOE
	Number of electric vehicles (EVs) with Certificate of Recognition	DOE	DOE
Provide support for transition of PUVs to electric vehicles (EV)	Percentage PUVs that transitioned to EV	DOE	DOE

Integrated Air Quality Improvement Framework-Air Quality Control Action Plan

Actions to Reduce Air Pollution Levels	Indicator	Responsible Stakeholders	Reporting Stakeholders
Accredit vehicle end-of-useful life facilities	Number of accredited VULP facilities	DOTr	DOTr
Establish vehicle type approval system testing centers	Number of vehicle type approval system testing center established	DOTr	DOTr
Develop policies to manage off-road motor vehicles	Relevant policy issued	DENR-EMB, DOTr, DA	DENR-EMB
Develop policies on alternative work arrangements (e.g. Work-from-Home, 4-Day Work Week) for government offices	Percentage of government offices with alternative work arrangements	DILG/DOLE	DILG/DOLE
<i>Mobile (Marine)</i>			
Assess the implementation of existing regulations related to air quality management	Percent completion of air quality guidelines covering marine transport	MARINA	MARINA
Review/update Residual Marine Fuel (PNS/DOE QS 014:2018)	Updated Report on Residual Marine Fuel (PNS/DOE QS 014:2018)	TCPA - PNS development/DC consultation	DOE
	PNS for marine fuels	DTI-BPS	DTI-BPS
Adopt emission testing guidelines for domestic ships	Percentage completion of impact assessment/study on the emission testing of domestic ships (400 gT above)	MARINA	MARINA
	Percentage of domestic ships complying with emission testing	MARINA	MARINA
Conduct emissions inventory of domestic maritime transportation	Published inventory report	DENR-EMB	DENR-EMB
Adopt the Guidelines of the International Regulations for the Philippine International Ships (IMO 2023 Strategy on GHG Reduction from Ships)	Completed impact assessment study	MARINA	MARINA
	Number / percent of domestic ships achieving their respective GHG reduction targets	MARINA	MARINA

Integrated Air Quality Improvement Framework-Air Quality Control Action Plan

Actions to Reduce Air Pollution Levels	Indicator	Responsible Stakeholders	Reporting Stakeholders
Develop and implement National Strategic Action Plan for Decarbonization of the Philippine Maritime Transport	Finalized strategic action plan endorsed by the Inter-Agency Coordinating Committee to Facilitate the Ratification and Accession and Implementation of Maritime Conventions	MARINA	MARINA, PCG, PPA. Shipping and Shipyard Associations
	Percent reduction of carbon from domestic maritime transport	MARINA	MARINA
Conduct capacity building of government regulators and maritime workforce on new technologies related to air quality management	Number of trainings conducted	MARINA	MARINA
	Number of trained personnel	MARINA	MARINA
Develop seafarers' training framework on the safe operation of ships using zero or near zero GHG emission fuels and technologies	Finalized training framework	MARINA	MARINA- STCWO
	Training standard per IMO model course		
Adopt ship energy efficiency measures anchored on the IMO 2023 GHG Strategy	Policy on energy efficiency design index (EEDI)	MARINA	MARINA-MEPDS and Regional Offices
	Policy on energy efficiency of existing ship index (EEXI)		
	Policy on carbon intensity indicator (CII)		
	Policy on ship energy efficiency management plan (SEEMP)		
	Policy on economic measure(s)		
Adopt Regulation 13 of MARPOL Annex VI, which applies to each marine diesel engine with power output of more than 130 kW installed on a ship	Percentage of marine vessels complying Regulation 13 of MARPOL Annex VI	MARINA	MARINA-MEPDS and Regional Offices
Conduct studies to support the enactment of proposed Bill entitled "Prevention and Control of Pollution from Ships and to Provide Penalties and for other Purposes"	Study on Annex VI of the IMO's MARPOL Convention	MARINA	MARINA MEPDS and partner academic institutions

Integrated Air Quality Improvement Framework-Air Quality Control Action Plan

Actions to Reduce Air Pollution Levels	Indicator	Responsible Stakeholders	Reporting Stakeholders
<i>Mobile (Air)</i>			
Develop fuel standard for aircraft to reduce carbon emission or similar pollutants	Percent completion of the guidelines including regulatory impact assessment	DOE	CAAP
Improve air traffic management system to address airport air traffic congestion	Percent reduction of air traffic congestion	CAAP	CAAP
Conduct emissions inventory of domestic air transportation	Completed inventory and updates	DENR-EMB	DENR-EMB
Management of Area Sources			
Review and update DHSUD Comprehensive Land Use Plan (CLUP) Guidebooks	Number of updated CLUP Guidebooks	DHSUD/ ASGB Members	
	Number of CLUP that are harmonized with NAQCAP	DHSUD, DENR, DILG	
Review and approve CLUPs for highly urbanized cities and independent cities and Provincial Development and Physical Framework Plans (PDPFP) streamlined with NAQCAP	Number of CLUPs and PDPFPs reviewed and approved	DHSUD/ ASGB Members	DHSUD
Assign manpower complement for air quality management in ENROs	Percentage of ENROs with designated personnel for air quality management	LGUs	LGUs
Develop, implement, and review policies on household/domestic open burning	Relevant policy issued	EMB, ASGB	EMB, ASGB
Develop policies on agricultural open burning	Relevant policy issued	DA	DA
Develop policies on pyrotechnic events	Relevant policy issued	DILG-PNP	DILG-PNP

Integrated Air Quality Improvement Framework-Air Quality Control Action Plan

Actions to Reduce Air Pollution Levels	Indicator	Responsible Stakeholders	Reporting Stakeholders
Cross-cutting Strategies			
<i>Airshed Management</i>			
Designate airsheds as attainment or non-attainment areas	Number of regions with airsheds designated as attainment or non-attainment area	DENR-EMB	DENR-EMB
Review guidelines for the creation of Airshed Governing Boards (ASGBs)	Percentage of ASGBs with DHSUD representatives	EMB, DHSUD	DENR-EMB
Develop an incentive scheme for the best ASGB	Percentage of ASGBs participating in the incentive scheme	DENR-EMB	DENR-EMB
Develop and implement climate-proofed air quality management plans	Percentage of airsheds with proof of implementation of climate-proofed air quality management plans	ASGBs	ASGBs
Capacitate ASGB members	Number of trainings conducted	DENR-EMB	DENR-EMB
	Number / percent of personnel trained	DENR-EMB	DENR-EMB
<i>Ambient Air Quality Management</i>			
Conduct ambient air quality monitoring	Number of operational ambient air quality monitoring stations	DENR-EMB	DENR-EMB
	Published reports of air quality monitoring at ports, airports, and rail stations	DENR-EMB	DENR-EMB
Establish air quality monitoring systems along the stretch of EDSA and other major thoroughfares of Metro Manila	Number of operational air quality monitoring stations along the stretch of EDSA and other major thoroughfares of Metro Manila	MMDA	MMDA
Review/update siting criteria for air quality monitoring	Percentage of air quality monitoring stations compliant with the siting criteria	DENR-EMB	DENR-EMB
Adopt sensor-based equipment for air quality monitoring	Issued guidelines for sensor-based equipment for use in air quality monitoring	DENR-EMB	DENR-EMB
Review ambient air quality guideline values	Percent completion of the guidelines with regulatory impact assessment	DENR-EMB	DENR-EMB

Integrated Air Quality Improvement Framework-Air Quality Control Action Plan

Actions to Reduce Air Pollution Levels	Indicator	Responsible Stakeholders	Reporting Stakeholders
Establish air pollution and health data repository for ease in updating the air quality guideline values	Percent completion of data repository system	DENR-EMB	
Develop policies on the protection of the ozone layer by reducing ozone depleting Substances (ODS)	Percentage reduction of ODS	EO 174 and NDC TWG Agencies (DOE, DOTr, DENR, DA, CCC)	EMB-AQMS/ DENR CMS
Implement Nationally Determined Contributions Policies and Measures	Percent reduction of CO ₂ , CH ₄ , N ₂ O	EO 174 and NDC TWG Agencies (DOE, DOTr, DENR, DA, CCC)	EMB-AQMS/ DENR CCS
	Percent reduction of GHG aside from CO ₂ , CH ₄ , and N ₂ O	EO 174 and NDC TWG Agencies (DOE, DOTr, DENR, DA, CCC)	EMB-AQMS/ DENR CCS
Develop institutional mechanism for meteorological data for air dispersion modeling, interpretation of air quality data in the country, and public advisory	Relevant policy issued	DENR-EMB PAG-ASA PHIVOLCS	DENR-EMB
Create separate unit handling climate change and GHG in DENR Regional Offices (ROs)	Number of ROs with dedicated unit for climate change	DENR-EMB	DENR-EMB
Health Impact Assessment			
Support epidemiological studies linking ambient and/or indoor air pollution (criteria and other emerging pollutants) to specific health outcomes (e.g., respiratory diseases, cardiovascular diseases, and adverse pregnancy outcomes) including estimates of	Number of published studies (to date) coordinated with and/or supported by DOH	DOH	DOH

Integrated Air Quality Improvement Framework-Air Quality Control Action Plan

Actions to Reduce Air Pollution Levels	Indicator	Responsible Stakeholders	Reporting Stakeholders
premature mortality, hospital admissions, and disability-adjusted life years (DALYs) attributable to air pollution.			
Support operational studies (e.g., cost-benefit analysis, health technology assessment, feasibility studies) of potential health interventions for mitigating health impacts of air pollution (e.g., shift to e-vehicles, alternative fuels, clean cooking technology, indoor air quality monitors, etc.)	Number of completed studies (to date) coordinated with and/or supported by DOH	DOH	DOH
Include human health risk assessment on the ECC conditions for steel industries	Percentage of establishments in the steel industry with human health risk assessment as an ECC condition	DENR-EMB	DENR-EMB
Include human health risk assessment on the ECC conditions for cement industries	Percentage of establishments in the cement industry with human health risk assessment as an ECC condition	DENR-EMB	DENR-EMB
Include human health risk assessment on the ECC conditions for coal-fired power plant (CFPP) industries	Percentage of establishments in the CFPP industry with human health risk assessment as an ECC condition	DENR-EMB	DENR-EMB
Strengthen public advisory and early warning systems/ mechanisms for circumstances involving unhealthy/ severe cases of air pollution (e.g., haze events, pollution during New Year, etc.)	Percentage of air pollution events / emergencies where DOH released a health advisory	DOH, DENR-EMB	DOH, DENR
Develop guidelines or standards on indoor air quality for households	Relevant policy issued	DOH, DILG	DOH, DILG

Integrated Air Quality Improvement Framework-Air Quality Control Action Plan

Actions to Reduce Air Pollution Levels	Indicator	Responsible Stakeholders	Reporting Stakeholders
<i>Research and Development</i>			
Establish the specific roles and responsibilities of each agency in the implementation of the National Research and Development Program	Relevant policy issued	DENR-EMB	DENR-EMB
Allocate research funding for air quality research and development	Number of research proposals related to air quality approved	DOST- PCIEERD	DOST- PCIEERD
Establish air quality related laboratories and facilities	Number of R&D laboratories and facilities with the capacity to test and certify air quality technologies	DOST-ITDI, DENR-EMB	DOST-ITDI, DENR-EMB
Study the contribution of long-range transported pollution from neighboring Asian region	Published study results	Academe, DENR-EMB	Academe, Philippine Space Agency
Conduct chemical speciation and source apportionment studies	Number of published studies	Academe, DENR-EMB, DOST-ITDI	Academe, DENR-EMB, DOST-ITDI
Establish supersite for monitoring episodic events and specific air parameters	Percent availability of the supersite	DENR-EMB	Academe (local SUC or local private universities)
Strengthen the monitoring network to include the rest of criteria pollutants (gases), HAZAP and short-lived climate pollutants	Percentage of regional offices with at least 3-years' worth of data on criteria gases, HAZAP, and SLCPs	DENR-EMB	Academe (local SUC or local private universities)
Establish and implement Philippine guidelines in approving air monitoring technologies	Number of approved air monitoring technologies	DENR-EMB, DOST	DENR-EMB, DOST
Develop JAO between DENR-EMB and DOST regarding environmental technology verification (ETV) of local air monitoring equipment	Number of verified local air monitoring equipment	DENR-EMB, DOST	DENR-EMB, DOST

Integrated Air Quality Improvement Framework-Air Quality Control Action Plan

Actions to Reduce Air Pollution Levels	Indicator	Responsible Stakeholders	Reporting Stakeholders
<i>Air Quality Management Fund (AQMF)</i>			
Implement guidelines on AQMF	Amount collected	DBM	DBM
	Amount utilized	DENR-EMB	DENR-EMB
<i>Information, Education, and Communication</i>			
Develop comprehensive National Air Quality Communication Plan	Updated plan	DENR-EMB	DENR-EMB
Establish air quality indices (AQI)	Availability of real-time AQI	DENR-EMB	DENR-EMB
Publish annual air quality status report	Number of air quality reports disseminated	DENR-EMB	DENR-EMB
Participate in the tobacco control campaign	Number of participants given orientation on dangers of smoking (drivers, secondary students, MMDA employees, persons with disabilities)	MMDA	MMDA
	Number of public terminals and schools posted with air pollution health risks	MMDA	MMDA
	Number of IEC materials distributed on the effects of smoking to health	MMDA	MMDA
<i>Information Management</i>			
Operationalize and maintain air quality monitoring network/databases	Percent availability of air quality monitoring network/databases	DENR-EMB	DENR-EMB
<i>Recognition of Rights</i>			
Establish platforms for collaborative and evidence-based planning, formulation, and implementation of environmental policies and programs	Number of NGOs and civil society organizations with ongoing partnerships with Philippine government agencies on air quality management	DENR-EMB	DENR-EMB
	Percentage of policy consultation meetings and events on air quality management with participants from NGOs and civil society	DENR-EMB	DENR-EMB