



**KGID
2025**

**Green Growth:
The Path to
Sustainable Jobs**

Korea's Practice of Addressing Air Pollution and GHG Emissions from Small- and Medium-scale Industries

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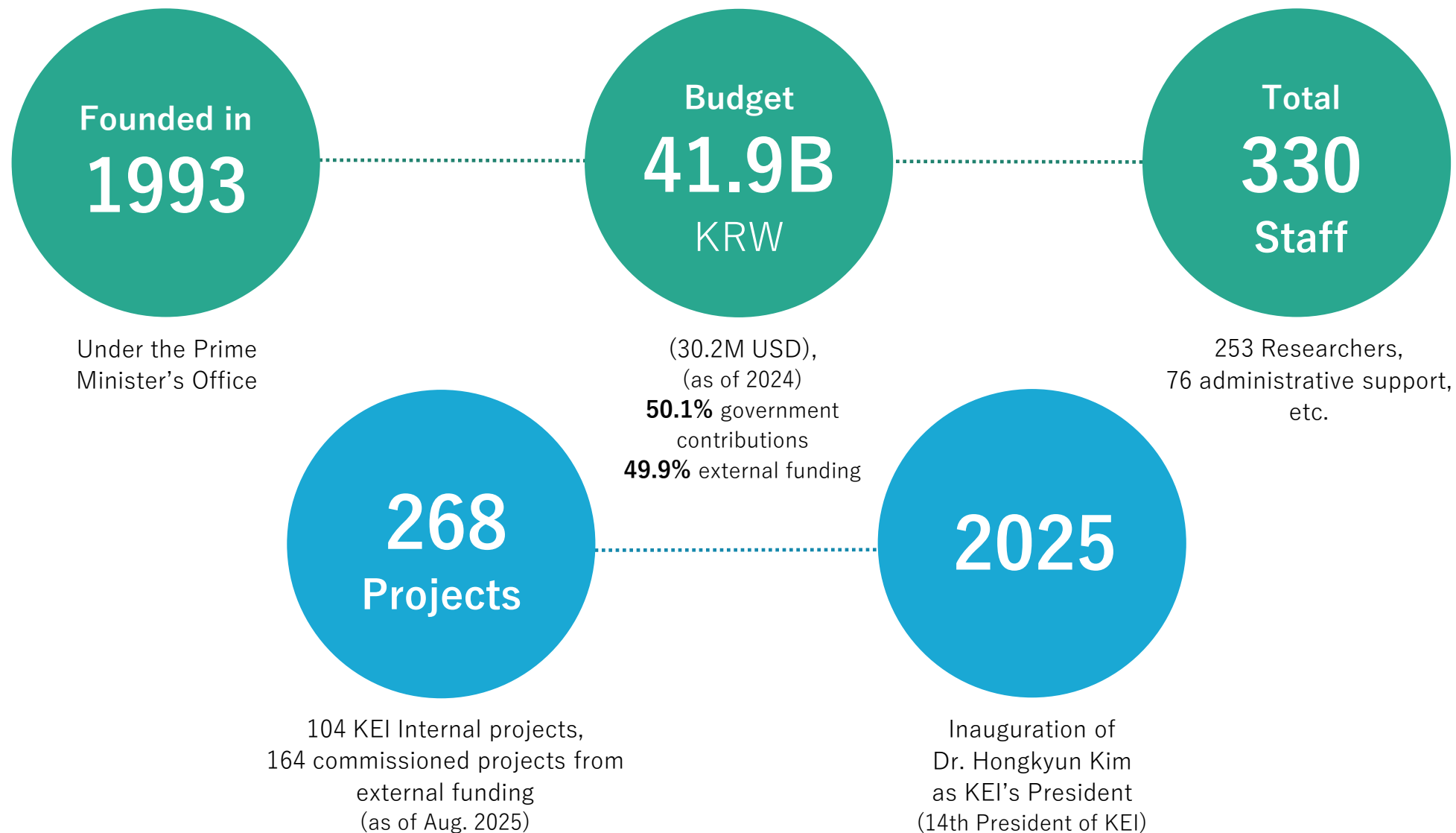
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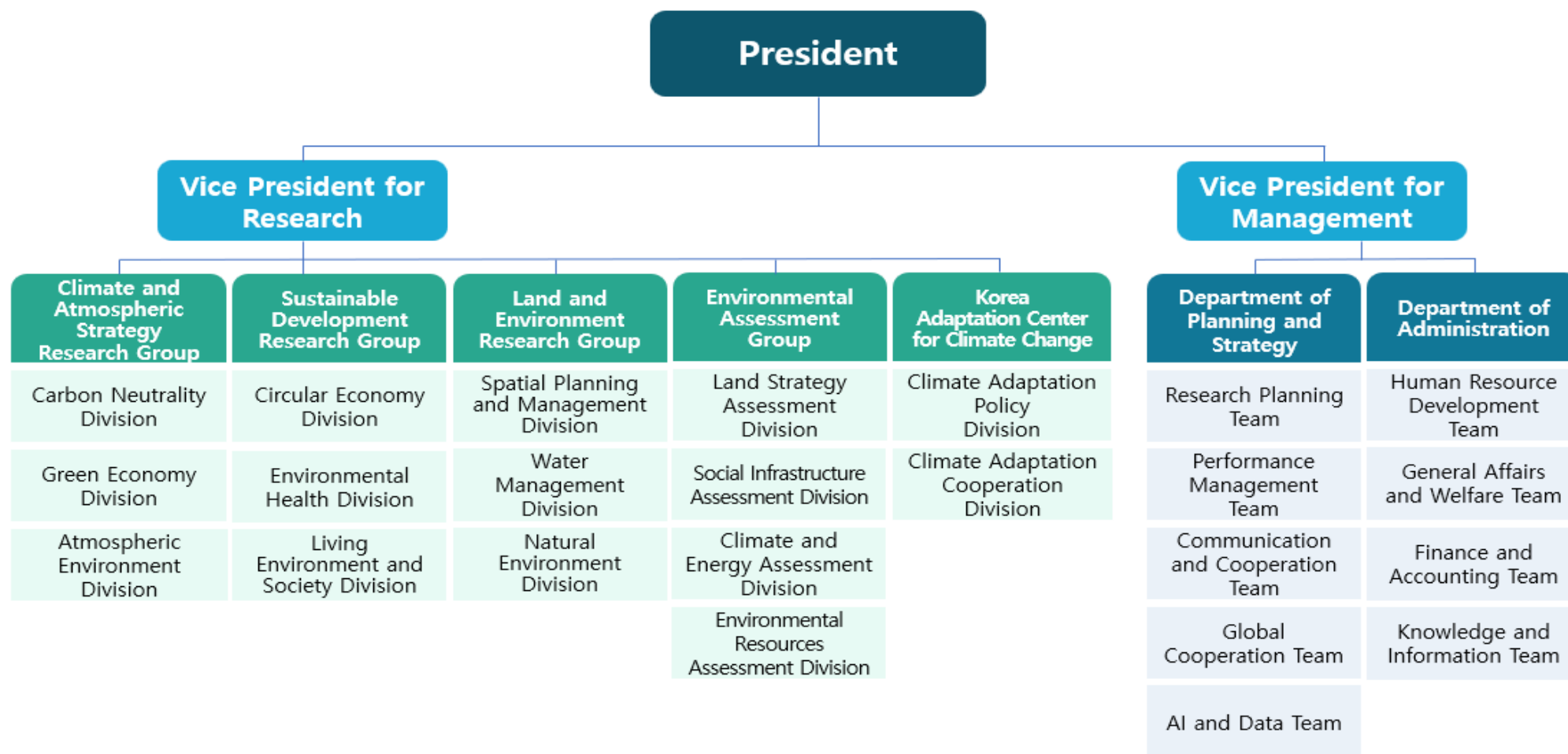
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About KEI



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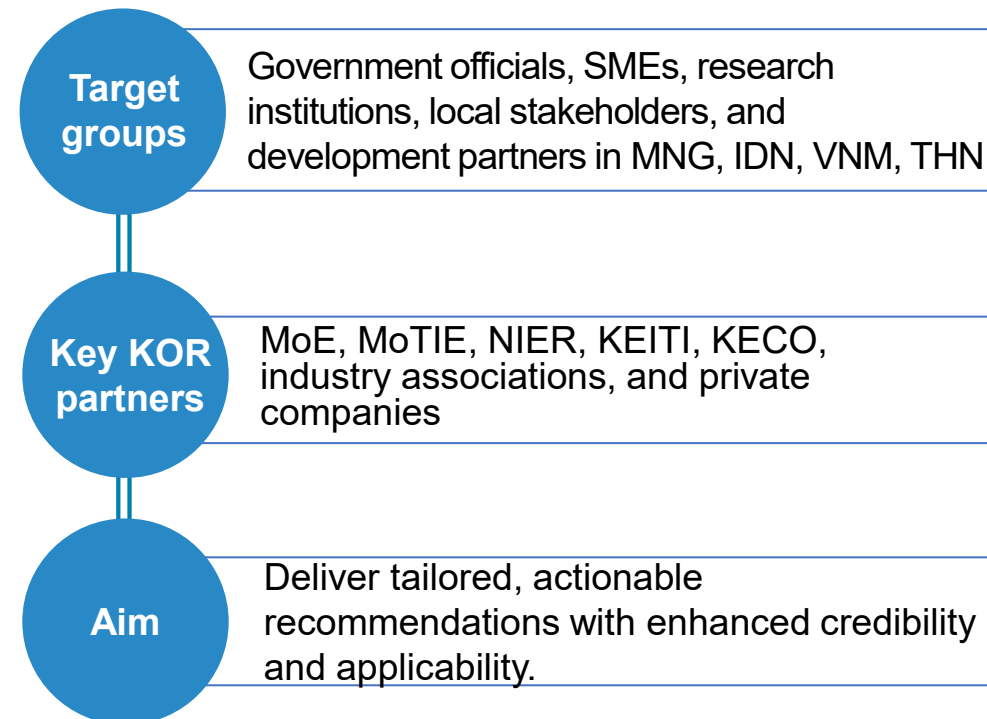


I. Introduction

1. Background & Objectives

- **Climate change** poses major challenges for **SMEs**, while **Korea's industrialization** and **progressive air and climate policies**—extended to SMEs under the **2050 Carbon Neutrality Vision** and **NDCs**—offer **key lessons for EAP countries**.
- This study analyzes **Korea's** industrialization, air and climate policies, legal frameworks, and **SME inclusion** to provide actionable models for **air quality improvement** and **industrial decarbonization** in **EAP countries**.

2. Audience and Partnerships



II. Methodological Framework

1. Data Collection and Analysis for each Activity

- Key activities and outputs reflect Korea's dual framework on air pollution and GHG management.
- In parallel, the analysis covers both air pollution management and GHG emissions management, reflecting Korea's dual policy framework.

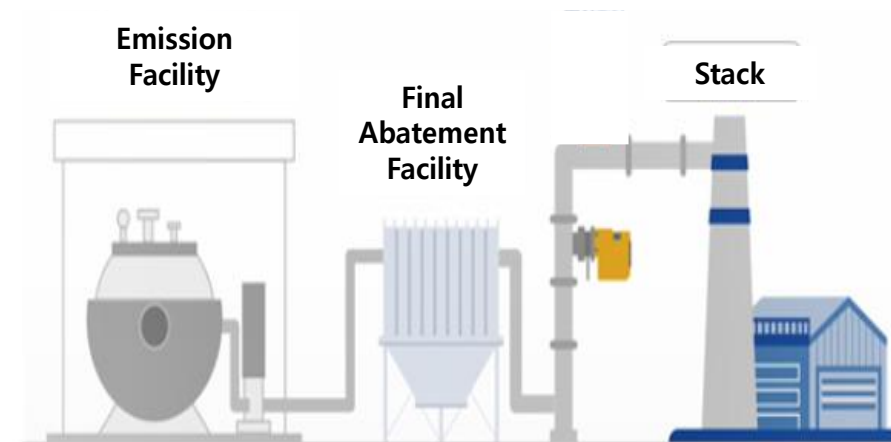
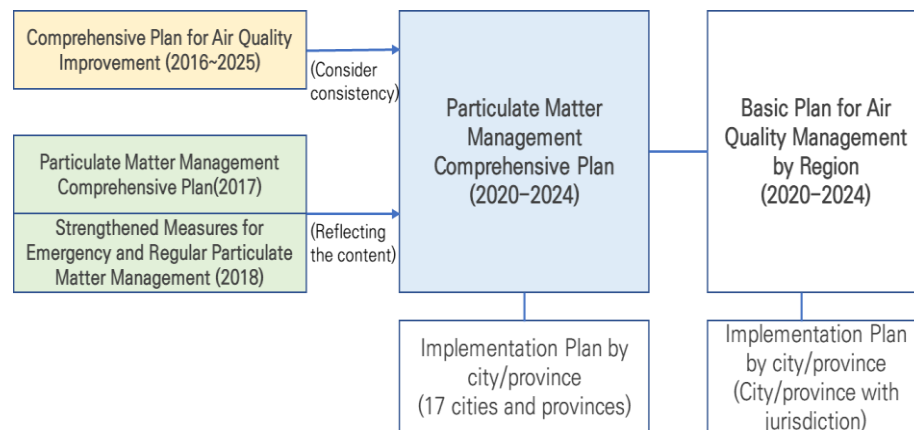
Activity Area	Focus	Key Stakeholders	Expected Output
Policies & Regulations	Legal frameworks, sectoral policies, SME support	MoE, MoTIE, KEI, KECO	Policy brief, lessons
Institutional Mechanisms	Multi-level governance, inter-ministerial coordination	MoE, KECO, KEITI, local gov.	Stakeholder map, governance model
Technological Innovation	Mitigation technologies, monitoring (CEMS/FEMS), diffusion	KEITI, SMEs, industry associations, NIER	Technology inventory
Financing & Market Mechanisms	ETS, green finance tools, SME access, financing conditions	MoE, MoTIE, KEITI, KECO, banks, agencies	Policy note, financing models
Collaboration & Communication	PPPs, SME engagement, gov–industry dialogue	MoE, MoTIE, KEITI, KECO, industry groups	Policy brief, collaboration models
Knowledge Exchange	Capacity-building, peer learning, training modules	KEI, MoE, KEITI, World Bank, experts	Training module, expert roster, briefs
Country Case Studies	TA cooperation (Mongolia, Indonesia), coordination lessons	MoTIE, KEITI, World Bank TTLs, KEI team	Advisory inputs, synthesis memo

II. Methodological Framework

1. Data Collection and Analysis for each Activity

1.1. Air Quality Management

- Korea manages air quality through laws such as the Air Quality Conservation Act and the Special Act on Fine Dust, supported by multi-tiered plans and region/sector-specific policies. Core tools include **BAT-based standards, cap-and-trade for large facilities, and SME support**, alongside emission caps in control zones, coal plant reduction, and clean energy transition.

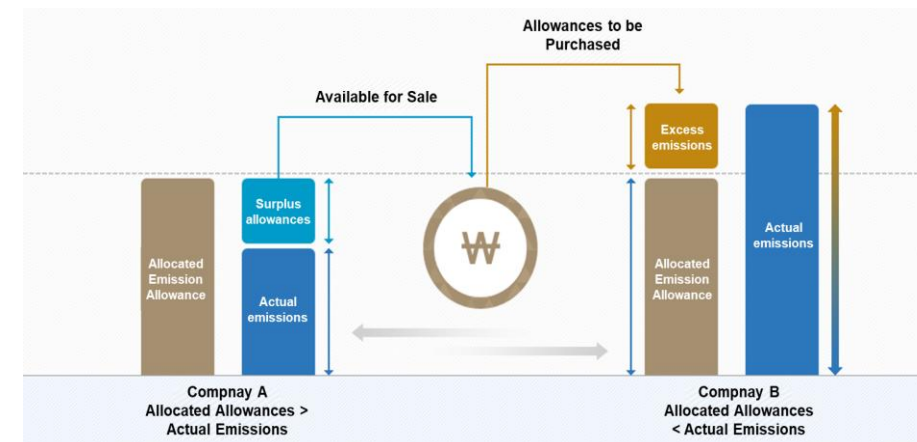


II. Methodological Framework

1. Data Collection and Analysis for each Activity

1.2. GHG Emissions Mitigation

- Korea has developed a comprehensive legal framework culminating in the Framework Act on Carbon Neutrality and Green Growth (2021). Key instruments are the **K-ETS (covering ~74% of emissions)** and the **Target Management System (TMS)**, applying market-based regulation for large emitters and tailored support for SMEs.
- Policy innovations such as **allocation methods, MRV, and reinvestment of auction revenues** strengthen implementation.



II. Methodological Framework

2. Co-benefits and trade-offs

- **Korea's policy design** balances **carbon neutrality** and **competitiveness** through **stakeholder co-design** and **strategic communication**, providing **actionable lessons** for partner countries.

3. Stakeholder Engagement and Knowledge Transfer

- This component grounds outputs in local contexts and fosters long-term transferability through stakeholder engagement, knowledge sharing, and capacity-building.

Co-benefits and Trade-offs

- Carbon neutrality + industrial competitiveness
- Integrate air quality & climate policies

Strategic Communication

- Public alert systems (e.g., air quality)
- Gov–industry protocols
- Risk communication
- Public engagement & trust

Transferability to Developing Countries

- Tailor to institutional & socioeconomic contexts
- Actionable, co-designed tools
- Ensure policy relevance & application

Sector Prioritization for SMEs

- Select SME sub-sectors (emissions profile)
- Compare SMEs vs. large industries
- Case studies: policy, tech, finance
- WB client–tailored recommendations

Stakeholder Engagement

- Knowledge co-production
- Stakeholder interviews (MoE, MoTIE, NIER, KEITI, KECO)
- Field/site validation

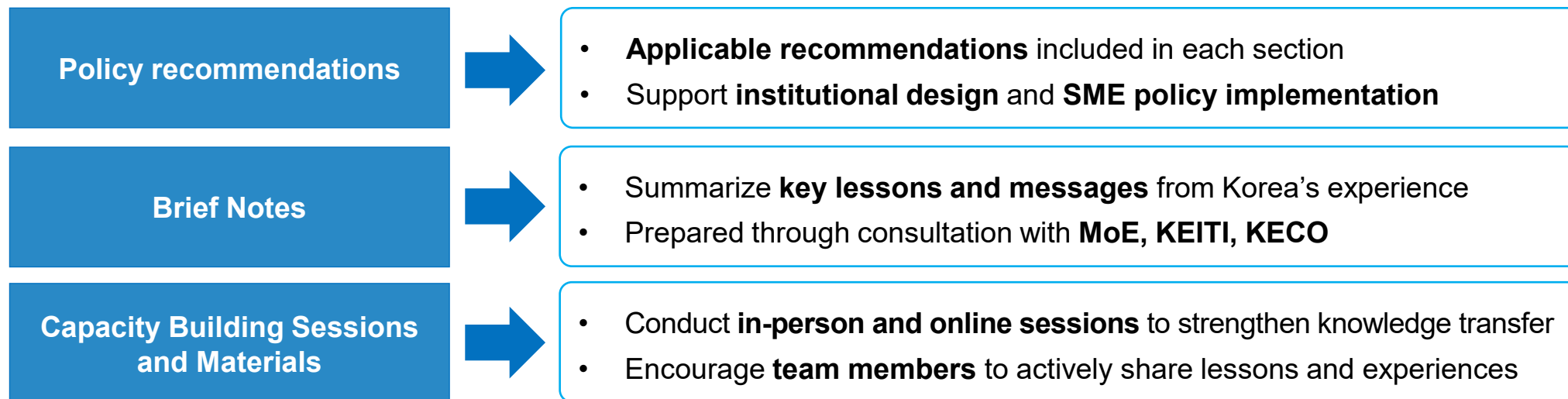
Knowledge Management

- Centralized bilingual repository
- Long-term accessibility (World Bank platforms)
- Feedback loop for improvement
- Technical advisory support

III. Work Plan and Timeline

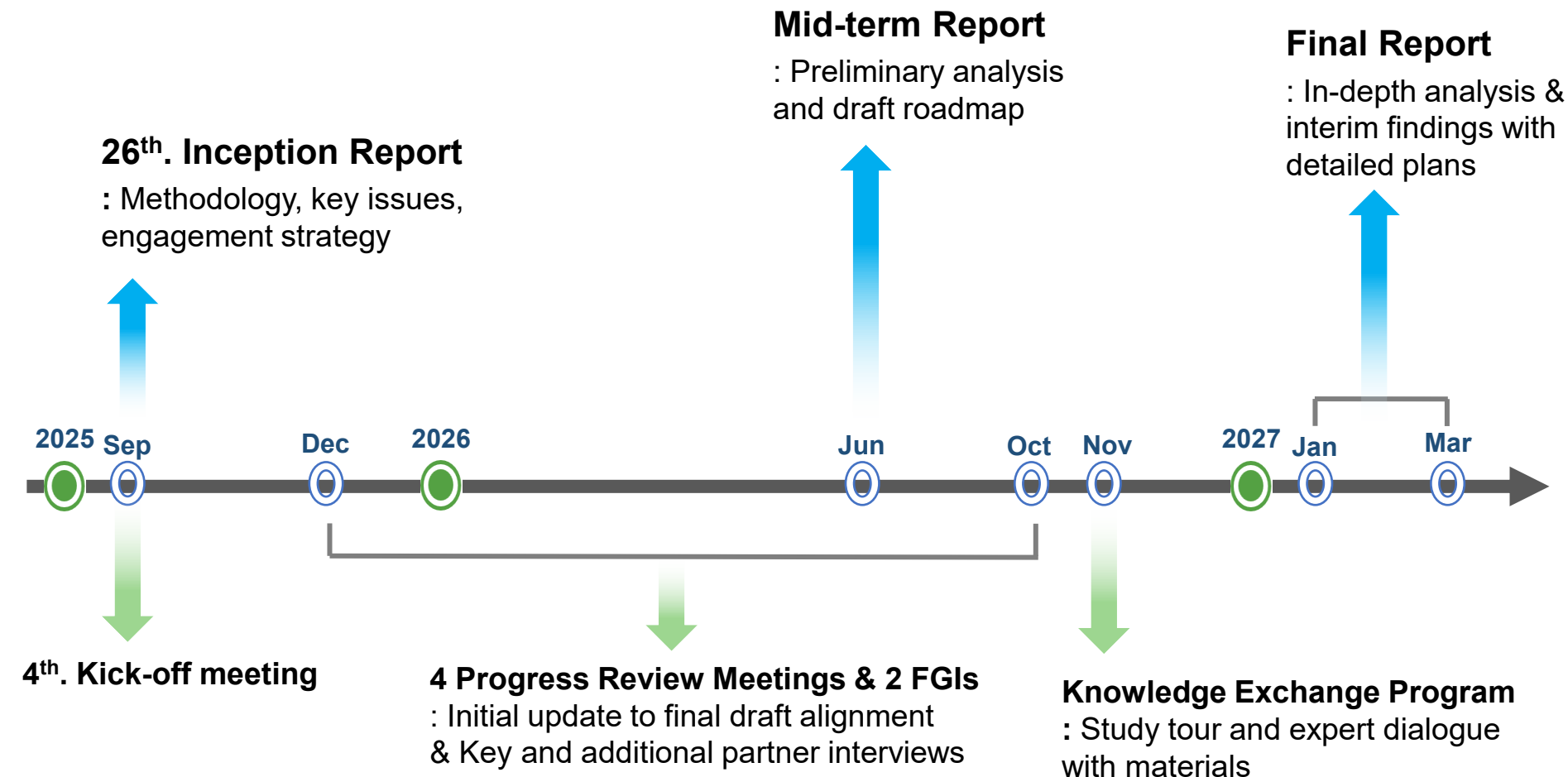
1. Key Milestones and Deliverables

- Main reporting milestones - inception report, mid-term report, and final report - are supplemented by **four progress review meetings** to ensure alignment and quality assurance.
- The deliverables include **reports, policy briefs, training materials, and presentations to support** decision-making, capacity building, and regional knowledge transfer.



III. Work Plan and Timeline

2. Schedule of Activities and Deliverables



IV. Team Composition and Expertise

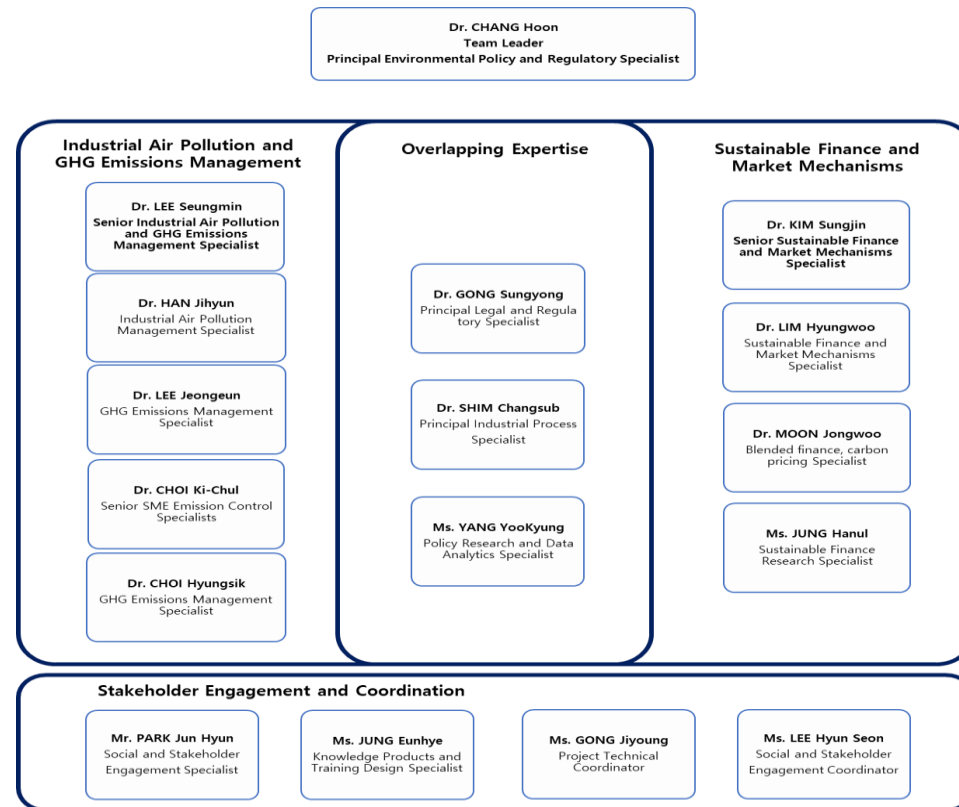
1. Key Experts and Additional Expertise

- Main reporting milestones - inception report, mid-term report, and final report - are supplemented by **four progress review meetings** to ensure alignment and quality assurance.
- The deliverables include **reports, policy briefs, training materials, and presentations to support** decision-making, capacity building, and regional knowledge transfer.

2. Team Organization

- The team is structured into **four functional clusters** -policy, technical, financial, and social -ensuring high-quality, context-sensitive outputs.
- KEI has strong expertise in **air quality, GHG mitigation, and climate policy**, spanning:
 - National air quality strategies and regulatory frameworks
 - Industrial innovation and local emissions monitoring
 - Market- and science-based climate policy approaches
 - Climate integration in public finance and governance
- This structure supports **integrated recommendations for developing countries**.

IV. Team Composition and Expertise



Thematic Areas	Project Title
National air quality strategies and regulatory frameworks	• Annual Evaluation of the Implementation of the 1st Comprehensive Particulate Matter Management Plan 2020-2024
	• Formulation of the 2 nd National Air Quality Management Master Plan 2025–2029
	• Final Evaluation of the 1st Comprehensive Particulate Matter Management Plan and Foundation Study for the Evaluation of the 2nd Plan
	• Research on Improvement Measures for Fugitive Dust Management System
Industrial innovation and local emissions monitoring	• Research on Improving the Self-Monitoring System for Air Pollutant Emissions
	• Transition Strategies for Air Quality Management Systems to Promote Carbon Neutrality and Simultaneous Reduction of Air Pollutants
	• Development of a Comprehensive Information and Utilization Platform for Carbon Neutrality Technologies – Energy Sector: Power, Industry, Transport, Buildings
	• Integrated Improvement Measures for Air Pollution Control and Carbon Neutrality Strategies in the Cement Industry
Market- and science-based climate policy approaches	• Evaluation and Improvement of Policies on Air Pollution Control Facility Installation and IoT-Based Management for Small-Scale Businesses
	• Carbon Neutrality Policy Research (Phases I–III)
	• Key Issues and Challenges in Korea's Emissions Trading System
	• Impact Assessment of Emissions Allowance Allocation Scenarios for the Power Sector under the 4th Planning Period (2026–2030) of the K-ETS
Climate integration in public finance and governance	• Development of an Integrated Assessment Model for Climate and Air Quality Policy Evaluation
	• Development of a National Long-Term Greenhouse Gas Reduction Pathway
	• Pilot Project on the Application of GHG-Reduction-Oriented Budget Tagging in Local Finance
	• Development of a Framework for Applying GHG-Reduction-Oriented Budget Tagging to Local Government Finance

Future Directions for WB-KEI Collaboration and Potential Thematic Linkages

1. How KEI envisions cooperation with the World Bank

- Joint Research & Knowledge Exchange: Pollution prevention and circular economy policy frameworks
- Capacity Building & Regional Outreach: Training programs, policy dialogues for developing countries
- Integrated Policy Innovation: Applying Korea's experience in resource efficiency, low-carbon transition, circular economy, etc.

2. Potential Thematic Linkages and Modalities

KEI Research Areas	KEI Cross-cutting Thematic Groups	WB Environment Priorities	Possible Collaboration Modality
Circular Economy	National Sustainability	Pollution Management	Knowledge Sharing & Mutual Consultation
GHG Reduction	Carbon-Neutral Cities	Circular Economy	Joint events / Policy Dialogues
Climate Adaptation	Climate-Resilient Development Pathways	Climate Change (Mitigation & Adaptation)	Joint Policy Studies / Analytical Work
Ecology	Environmental Valuation	Ecosystems / Biodiversity	Pilot Cases / Demonstration Projects
Environmental Assessment	Environmental Indicators	Institutional strengthening, governance & policy reforms	Capacity building / Training
Water Management	Integrated Environmental Management	Mainstreaming Environment across sectors	Co-development of Policy Tools & Methodologies
Atmospheric Environment	Ecological Security	⋮	Co-funded Projects / Joint Programs
⋮	⋮		Staff Exchange / Secondment Mechanisms

Thank you