

TERMS OF REFERENCE AND TECHNICAL SPECIFICATIONS

1 General information

Assignment name	Study and Guidelines on the Co-Benefits of Addressing Air Pollution and Climate Change in ASEAN
Beneficiary	ASEAN Member States (AMS)
Country	ASEAN countries: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam
Total estimated number of days	estimated 190 days

2 Context and justification of the need

Context and strategic challenges

Air pollution, one of the targets of Sustainable Development Goal 3 on health, is a major health, environmental, economic and social issue, with over 90% of the world's population exposed to the hazardous air pollution levels with the annual levels of fine particulate matter or PM_{2.5} (inhalable particles with the aerodynamic diameter equal or less than 2.5 micron) well above the WHO guideline of 5 µg/m³. It is both a local and global phenomenon, affecting urban and peri-urban areas as well as rural areas. In 2019, air pollution caused 6.7 mil premature deaths globally and about 2/3 of that occurred in Asia. In Southeast Asia, air pollution especially PM^{2.5} is reaching critical levels, sparing no area and impacting mainly the most vulnerable populations (children, the elderly, people working outdoors, etc.).

In ASEAN Member States (AMS), as of 2019, air pollution was responsible to almost 0.5 million of premature deaths, with 0.25 million due to ambient PM_{2.5}, 0.231 mil. due to household air pollution, and about 9000 deaths due to the exposure to surface ozone.¹ Air pollution across AMS tends to intensify as a result of rapid economic development accompanied by urbanization, motorization, and industrialization, together with population growth, which induce a rapid increase in the energy production to meet the demand. The region is also highly vulnerable to the effects of climate change, which in turn affect the atmospheric emissions especially those from biomass open burning, e.g., forest fires and peat bogs. Air pollution has major impacts on the regional economy, not only through the increase in mortality and

¹ HEI (2020) *State of Global Air 2020*. Health Effects Institute. <https://www.stateofglobalair.org/>

morbidity rates but also the damage to crops and properties, as well as the loss of tourism and welfares

To cope with the worsening air quality, many AMS have set and started implementing relevant policies. However, the air quality management capacities have not been developed at a required pace to handle the fast increasing amounts of emissions. As a result, air quality continued to deteriorate in many places with the alarming levels commonly observed during the dry season. Considerable efforts need to be made in the region to improve air quality through a multi-sectoral approach (including transport, agriculture, industry, energy, waste, etc.) and at different levels (amongst the population, policymakers and authorities, and other stakeholders) towards raising awareness, improving knowledge of pollution, drawing up public policies and action plans.

Objectives of the AQIP for ASEAN

The project, “Air Quality Improvement Program (AQIP) for ASEAN”, is envisaged to support ASEAN and the ASEAN Member States (AMS) in their efforts to develop comprehensive public policies for improving air quality within their jurisdictions.

This overall objective of the project is translated in several specific objectives that are intended:

- i) To reinforce awareness of air quality issues among the population and the main stakeholders (policymakers, authorities, industries);
- ii) To increase the knowledge and understanding of air quality management mechanism in respective AMS territories;
- iii) To strengthen local capacities in each AMS with trainings and technical support provided by international experts; and,
- iv) To draft guidelines and policy recommendations tailored to ASEAN’s circumstances and needs to manage air quality in each AMS.

To realise the objectives, three studies/guidelines will be prepared, namely:

- 1) Study and Guidelines on Particulate Matter (PM) composition analysis;
- 2) Study and Guidelines for the Elaboration of Emission Inventories in ASEAN; and,
- 3) Study and guidelines on the Benefits of Addressing Air Pollution and Climate Change in ASEAN

Complementing these are four training programs on the following topics:

- 1) Improvement of Air Quality Monitoring and Establishment of a Data Management System (DMS);
- 2) Emissions Inventories (methodology, data collection, relevant emissions factors, use for policy making);
- 3) Private Sector Engagement Towards Improving air quality; and
- 4) Long Term Strategic Planning for Improved Air Quality

In addition, two study tours will be conducted in Europe and Asia to foster experience sharing.

The target beneficiaries are local and national decision-makers in AMS, particularly the representatives from the environment agencies responsible for the development and implementation of air quality policies and regulations.

AQIP will run from July 2023 - December 2025 and is developed in relation to national level air quality improvement initiatives of the Agence Française de Développement (AFD) in Cambodia, Indonesia and Thailand as well as a completed technical assistance in Viet Nam.

AQIP is a collaboration between the ASEAN Working Group on Environmentally Sustainable Cities (**AWGES**C), the Environment Division of the ASEAN Secretariat, AFD and Expertise France (EF) as implementing partner.

This project is consistent with the areas of cooperation identified by the ASEAN-France Development Partnership Committee, which was established after ASEAN conferred ASEAN Development Partner status on France in September 2020. This formal partnership paves the way for stronger cooperation between ASEAN and France, particularly in the implementation of mutually beneficial projects, schemes and cooperative activities.

3 Objectives and desired results for the study & recommendations on air quality and health co-benefits of climate policies in ASEAN

3.1 Background

This specific project component addresses the need for policies that support addressing together air pollution and climate change.

Residents of South East Asia, have not just been breathing unhealthy air but also suffer heat waves, typhoons and sea level rises to name a few of climate change impacts.

It is often said that air pollution and climate action represent “two sides of the same coin” and as such, offer potential synergies on both and benefits by achieving multiple SDGs through intersecting policy action. Unfortunately, governments and policy makers often overlook this synergy and opportunity.

One of the main opportunities involves looking at co-benefits (i.e., the multiple benefits resulting from actions that address air pollution, climate change, and other sustainable development priorities) which has been gaining attention from policymakers, businesses, and the development community as a whole. This growing appeal is reflective of the realization that it is possible to save time, resources and boost sustainability with solutions that leverage synergies and avoid trade-offs across multiple issues.

In order to highlight these synergies, it is proposed to carry out a technical study looking at both the technical and non-technical measures which lower air pollution and mitigate climate change in the region and what would be the benefits of those reductions.

As climate change and air pollution share the same sources, addressing them yields multi-fold benefits. For example, methane and black carbon are among the substances that pollute the air as well as accelerate global warming. According to UNEP, reducing these so-called super pollutants could slow down the rate of global warming by up to 0.5°C by 2050.

Human activities lead to degradation of air quality and intensification of climate change. Thus, highlighting the health benefits of air pollution measures would incentivise policymakers and health advocates towards promoting access to clean energy policies, which in turn directly contribute to achieving climate targets.

Policies designed to mitigate climate change would result in long-term human health benefits, due to reduced global temperature changes and associated impacts, but they would also bring more immediate benefits, due to reduced ground-level air pollution in the short term. Several measures aimed at reducing greenhouse gas (GHG) emissions, including reduced use of fossil fuels such as coal, can also improve local air quality, particularly air pollution by particulate matter (PM) and heavy metals among others. Whereas the benefits of climate change mitigation would likely materialize in the distant future, these co-benefits would enable a much more immediate "return on investment" in longer life spans, reduction in hospitalisation costs and higher property incomes.

At the same time, AMS would need help in ensuring compliance and enforcement of regulations that are essential in curbing air pollution and mitigating climate change.

3.2 Specific objectives

The specific objectives of the project include:

- To analyse and understand the relation of climate policies and air quality and their impact on health and quality of life as well as other potential economic benefits in ASEAN
- To quantify, as much as possible, the impacts of jointly addressing air quality and climate change mitigation and
- To support ASEAN policymakers in integrating air quality improvement and its benefits in climate policies.

A technical study will be carried out among the AMS to identify the current situation and collect relevant data. The study is aimed to highlight the benefits of joint action on air and climate in ASEAN, arguing for greater ambition on both issues. Quantifying the positive impacts of air quality management and climate policies on public health can also help improve the social and economic acceptability of these policies. For the purposes of this study, key air quality management and climate change policies implemented at national level by AMS will be selected by the service provider in consultation with the AWGSEC.

Based on an analysis of implemented or planned climate policies and air quality management programs, impacts in terms of air pollutant emissions and ambient air concentrations can be estimated using modelling tools. These results can then be used as part of a quantitative health impact assessment (QHIA) to translate the reduction in pollution levels into health gains (e.g. number of premature deaths avoided, etc.). This will require robust input data, particularly in terms of relevant dose-response relationships for different air pollutants. It will highlight how the main air pollutants which have significant impacts on human health, and which are likely to be reduced by policies aimed at controlling GHG emissions.

Policy recommendations, integrating air quality, climate and health issues, adapted to the ASEAN context, will be provided and disseminated to AMS.

The specific activities of this assignment are:

1. To consult AMS to collect detailed information on the current situation, circumstances and needs with all available data;
2. To carry out a technical study on the air quality and health co-benefits of climate policies and air quality management in ASEAN, taking into account an analysis of implemented or planned climate policies and air pollution control measures, and their impacts in terms of air pollutant emissions and ambient air concentrations using modelling tools.
3. To perform a quantitative health impact assessment (QHIA) to translate the reduction in pollution levels into health gains and quantify the positive impacts of positive air pollution action and climate change strategies being implemented by AMS.
4. To elaborate policy recommendations integrating air quality, climate and health issues that could be followed by the AMS to develop their own air quality and climate policies.
5. To present the results and seek validation from the Project Steering Committee of the AQIP-ASEAN project.

3.3 Anticipated results

The main outcomes of this work will improve the ability of decision-makers to design and implement effective air quality and climate policies with joint impacts and co-benefits for the citizens and the environment across ASEAN.

4 Description of the assignment

4.1 Planned activities

The service provider must provide the necessary expertise and resources in line with appropriate research methodologies in order to perform the following activities:

Assignment preparation

- Examine the pertinent project documentation and relevant technical reports in relation to air pollution, air quality management and mitigation of climate change policies and practices in ASEAN.
- Participate in discussions with Expertise France (EF) personnel responsible for managing the AQIP, AFD, the ASEAN Environment Division (ED) and the AWGESC.
- Prepare the kick-off meeting (KOM) and a draft inception report to present the workplan and the mobilization of the experts, and any clarification needs.
- Consolidate the inception report and update the detailed workplan accordingly.

Phase I: Technical study the co-benefits of addressing air pollution and climate change in ASEAN.

- Carry out a consultation among AMS to collect relevant data, information on initiatives and programmes related to air quality and health co-benefits;
- Perform an analysis of implemented or planned climate policies in AMS and their impacts in terms of air pollutant emissions and ambient air concentrations using modelling tools;
- Draft a technical study on the air quality and health co-benefits of climate policies; and,
- Present the findings and seek validation from the AWGESC

Phase II: Quantitative health impact assessment (QHIA)

- Identify and list relevant flagship air quality and climate policies implemented by some AMS.
- Perform an analysis of implemented or planned climate policies and air pollution interventions in AMS and their impacts on air pollutant emissions and ambient air concentrations using modelling tools.
- Select representative policies from various AMS to implement a quantitative health impact assessment.
- Perform a quantitative health impact assessment to demonstrate the positive impact of the selected policies.
- Present the results of the study to the AWGESC during a workshop and seek validation.
- Communicate the results of the study towards the ASEAN networks and initiatives related to the air quality and mitigation of climate change.

Phase III: Policy recommendations integrating air quality, climate, and health issues.

- Elaborate policy recommendations integrating air quality, climate and health issues for the AMS.
- Explore recommendations that would address differential impacts across sectors including women and children.
- Adapt the policy recommendations for implementation at the level of cities, using the resources and guidelines developed by C40 Knowledge², and other relevant initiatives.
- Present the policy recommendations to the Steering Committee.

Post-assignment follow-up:

- Provide support to policymakers, up to 6 months after the end of the study.
- Cooperate with service providers in charge of the other activities of the project.

4.2 Expected deliverables

T0 corresponds to the date of notification of the assignment.

The expected deliverables are presented in the table below, with the deadline for their submission to the Project Manager.

Phase	Deliverables	Completion date
Assignment preparation	1. Inception report	T0 + 3 weeks
	2. Work plan and mobilization of experts	T0 + 3 weeks
Phase I	3. Draft technical study and guidelines on the co-benefits of addressing air pollution and climate change in ASEAN, based on	T0 + 4 months

² https://www.c40knowledgehub.org/s/article/Clean-air-healthy-planet-A-framework-for-integrating-air-quality-management-and-climate-action-planning?language=en_US

	a consultation and literature review 4. In person executive presentation of the study	
Phase II	5. Perform an analysis of implemented or planned climate policies and air pollution interventions in AMS and their impacts on air pollutant emissions and ambient air concentrations using modelling tools	T0 + 5 months
	6. Quantitative health impact assessment (QHIA)	T0 + 7 months
	7. Policy recommendations integrating air quality, climate, and health issues	T0 + 8 months
	8. In person executive presentations of the guidelines and reports	T0 + 8 months
Phase III	9. Final versions of the report with policy recommendations after feedback is collected during the in-person presentation	T0 + 9 months
	10. Project completion report providing feedback from the service provider	T0 + 9 months

4.3 Coordination and monitoring

The service provider shall designate a single contact person for project implementation purposes.

Ms Catherine CORPUZ is the project manager (PM) who will be the service provider's sole contact person for Expertise France.

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Regular progress meetings (every two months on the average, or as needed) will be organized by the service provider with the project manager to report on the activities accomplished, the assignment's progress and, if relevant, discuss the difficulties or deviations from the workplan that may be encountered.

4.4 Meetings and planning

The following meetings have to be included in the proposal:

- A kick-off meeting shall be held on-line within 2 weeks after the contract award has been notified.

- Progress meetings will be organized on-line on average every two months.
- Month 4: in-person meeting with the AWGESC for the presentation of the “Study and Guidelines on the Co-Benefits of Addressing Air Pollution and Climate Change in ASEAN”.
- Month 8: in-person meeting with the AWGESC for the presentation of the policy recommendations integrating air quality, climate, and health issues.

The final deliverables must be submitted at month 9 of the project, considering the feedback from the presentation month 8.

5 Place, duration and terms of performance

5.1 Place and terms of performance

The service provider will carry out the work from its own offices or locations.

The assignment requires consultations with the project manager from Expertise France based in Jakarta, Indonesia and with the AWGESC in a venue within the region.

5.2 Implementation period:

- 1) **Start date:** 03 March 2025
- 2) **End date:** 03 December 2025
- 3) **Effective duration:** 9 months from its award date
- 4) **Schedule/programme:**

The provisional programme for assignment implementation is as follows:

Activity	Place	Period	Estimated effort (man/days)
Assignment preparation	Service provider offices	T0 + 3 weeks	5
Phase I: Draft technical study and guidelines on the co-benefits of addressing air pollution and climate change in ASEAN + In person executive presentation of the study	Service provider offices	T0 + 4 month	70
Phase II: Analysis, Health Impact Assessment, and Policy	Service provider offices	T0 + 7 months	75

Development for Sustainable Air Quality			
Phase III: Policy recommendations integrating air quality, climate, and health issues + Finalisation of the study and recommendations	Service provider offices	T0 + 9 months	40
Total			190

In its technical brief, the bidder must propose the time required to complete each stage and deliverable, as well as the technical evaluation criteria to be taken into account in order to ensure that each deliverable is measurable and auditable according to precise indicators adapted to the context of the project.

6 Required expertise and profile

6.1 Number of experts per assignment: max. 3

The number of experts assigned by the service provider should be limited to 3. Any deviation should be justified in the proposal.

6.2 Profile of the designated expert(s) responsible for contract execution

A. Qualifications and skills:

- Holder of a postgraduate university degree in the field of environmental sciences, environmental engineering, chemical engineering, chemistry, biology, environmental planning or related fields.
- Excellent qualities/capacities in:
 - Research, analysis and reporting
 - Training design
 - Knowledge transfer
 - Communication
 - Teamwork and interpersonal skills
 - Problem identification and resolution
 - Decision-making and taking initiatives
- High proficiency in written and spoken English.

B. General professional experience

- Professional experience of at least 5 years in the field of air quality improvement initiatives notably in Southeast Asia.
- Professional experience of at least 10 years in relation to various aspects of air quality monitoring, emissions inventory, data management and analysis.
- Mastery of the research methodologies particularly in air quality monitoring and management.

C. Specific professional experience

- Solid understanding of the issues relating to air quality and its impacts on the environment, climate change, health and quality of life.

- Prior involvement in designing and providing policy advice to the government and private sector in relation to air quality management.
- Prior experience in modelling and quantitative health impact assessment.
- Involvement in air quality studies with corresponding publications.

7 Assignment reports

A project completion report following the completion of the assignment must be prepared by the service provider and delivered to Expertise France. This report will summarize the activities that has been accomplished, and provide a feedback and lessons learned from the implementation of the assignment (difficulties encountered, solutions implemented, feedback).

8 Monitoring-evaluation

The Project Manager in coordination with the AWGESC will monitor the following performance indicators.

Deliverables	Immediate effects	Intermediate effects	Verification sources
<ul style="list-style-type: none">• Technical study and guidelines on the co-benefits of addressing air pollution and climate change in ASEAN	<ul style="list-style-type: none">• Creation of an ASEAN pool of experts following the analysis and recommendations on co-benefits of air quality and climate policies	<ul style="list-style-type: none">• ASEAN Member States have access to modelling and assessment tools for health benefits to design evidence-based air quality improvement and climate policies	<ul style="list-style-type: none">• Activity reports (e.g. workshop reports, meeting reports)• Publications of the studies and policy recommendations• Reports on diffusion strategy of the studies and guidelines• Reports of policy actions on air quality monitoring and improvements initiated after the diffusion of the technical studies

9 Practical information

The work of the service provider has to be performed in the offices of the service provider as no office space will be provided.

The engagement assumes that the fees are inclusive of the use of office equipment and supplies. The various activities will be carried out in a consultative manner amongst the service provider experts and the contact persons from AFD, EF and the Environment Division of the ASEAN Secretariat and the AWGESC.

Meetings/discussions will be mainly done via e-mail exchanges and on-line meetings. These meetings maybe arranged by EF or the service provider.

Expenses relating to the logistics of in-person meetings will be covered by another budget and managed by AQIP Project Management Unit. They must not appear in the service provider's budget. The service provider will participate in the preparation of these meetings in order to ensure the best possible presentation of the elements at these meetings.

It is expected that the service provider will be invited to present several deliverables during the AQIP Programme Steering Committee meeting, either on-line and in-person (for the draft technical study to be delivered at month 4, and the guidelines and recommendations to be delivered at month 8).

The service provider may suggest a platform for document sharing and storage as well as for meeting arrangements. The use of this platform will be confirmed or not by the Project Manager from EF according to the internal policies and procedures.