

Consultancy services for scoping and needs assessment related to environmental technologies for the reduction of air pollution in three selected cities	Project number/ cost centre: 19.9000.1-009.00
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0 List of abbreviations

AVB	General Terms and Conditions of Contract (AVB) for supplying services and work 2018
ToRs	Terms of Reference
BMU	German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
BMZ	German Federal Ministry for Economic Cooperation and Development
ExI	Export Initiative Environmental Technologies
GV	Global Project
SDG	Sustainable Development Goals
MoEFCC	Ministry of Environment, Forest and Climate Change, Government of India
NCAP	National Clean Air Programme
NAMP	National Air Quality Monitoring Programme
NAAQS	National Ambient Air Quality Standards
CPCB	Central Pollution Control Board
SPCB	State Pollution Control Board
MoHUA	Ministry of Housing and Urban Affairs
C & D	Construction and demolition waste
CSCAF	Climate-Smart Cities Assessment Framework
EPA	Environment Protection Act
MoRTH	Ministry of Road, Transport and Highways
SWOT	Strength Weakness Opportunities Threats
ULBs	Urban Local Bodies
SPV	Special Purpose Vehicles
DC	Development Cooperation

1 Context

1.1 Background

GIZ is engaged in the field of international cooperation for sustainable development and international education work, dedicated to shaping a future worth living around the world. GIZ has over 50 years of experience in a wide variety of areas, including economic development and employment promotion, energy and the environment, and peace and security. As a federal enterprise, GIZ supports the German Government in achieving its objectives in the field of international cooperation for sustainable development in more than 120 countries worldwide.

To address the air pollution problem in India, the Government of India through its Ministry of Environment, Forest and Climate Change (MoEFCC) launched 'National Clean Air Programme' (NCAP) in January 2019 as a national-level strategy to achieve the national level target of 20-30% reduction of PM_{2.5} and PM₁₀ concentration by 2024. For priority action, 122 cities have been identified by MoEFCC as non-attainment cities due to air pollution levels in exceedance beyond permissible National Ambient Air Quality Standards (NAAQS) based on data generated under National Air Quality Monitoring Programme (NAMP) during 2011-2015.

The Central Pollution Control Board (CPCB), the sectoral ministries of Housing & Urban Development, Power, Transport, Petroleum and Natural Gas, New and Renewable Energy and Heavy Industry and Agriculture are actively engaged for implementation of NCAP. At the state and local level, agencies of environment, pollution control, industry and cities are involved. At present, the city action plans of the non-attainment cities are approved by the CPCB, and the main focus is on the implementation of these plans.

Under the ongoing Indo German Development Corporation, a project on "Reduction of Air Pollution in Three Indian Cities" is being implemented by GIZ, commissioned by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) as a part of the Global Project on "Export Initiative - Environmental Technologies" (ExI). The Global Project supports in improving favourable framework conditions and developing markets for the introduction and permanent application of innovative, integrated environmental and climate protection technologies and the development of innovative green infrastructure in selected partner countries and thus contributes to the achievement of the UN sustainability goals (SDGs). GIZ is implementing the project on "Reduction of Air Pollution in Three Indian Cities" with the Ministry of Environment, Forest and Climate Change, Government of India as the implementing partner and in close cooperation with the Ministry of Housing and Urban Development, Government of India.

1.2 Brief information about the project

The "**Reduction of Air Pollution in Three Indian Cities**" project has the objective to strengthen the capacities of authorities in selected cities to effective implementation of India's National Clean Air Programme (NCAP). The project has focus on developing solutions for implementing viable environmental technologies for achieving air pollution reduction targets in the selected cities. The budget for the project is 2.4 Mio EUR. The project started in June 2020 and is up to March 2023. The implementing partner to the project is the Ministry of Environment, Forest and Climate Change, Government of India (MoEF&CC) and the project will be implemented in close cooperation with the Ministry of Housing and Urban Affairs, Government of India (MoHUA).

Project Locations: 3 cities to be selected by GIZ in consultation with MoEFCC. Tentatively, the cities under consideration are Surat, Pune and Nagpur. The final selection of cities is expected

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to be made by the start of the present consultancy services. There is a possibility that the cities are other than Surat, Pune and Nagpur.

Project activities: The activities under the project are divided into the following eight work packages, which will be implemented in selected areas in the identified three cities:

- WP 1. Strengthening City Air Action Plans
- WP 2. Sensor-based monitoring of air quality
- WP 3. Vehicle fitness certification
- WP 4. Urban traffic and transportation
- WP 5. Decentralized waste management and segregation
- WP 6. Modernization of brick kilns
- WP 7. Awareness Raising and Exchange of Experiences
- WP 8. Strengthening international cooperation

The proposed activities under the above work packages will support the selected cities in contributing to pollution reduction targets as per MoEFCC's National Clean Air Programme (NCAP) and the Clean Air indicators of the MoHUA's Climate-Smart Cities Assessment Framework¹.

As a first step, it is proposed to undertake scoping and needs assessment to understand the state of affairs, scope of implementation of various relevant work packages of the project in the three cities and to assess needs for environmental technology solutions for reducing air pollution. Towards, this GIZ proposes to engage a national consultant as per the Terms of References given below.

2 Tasks to be performed by the contractor

2.1 Overall objective

The overall objective of the consultancy services is to facilitate GIZ and the project partners to take a decision on the scope of application of environmental technologies for reduction of air pollution.

Specific objectives of the consultancy services are:

- (a) To collect information on the state of affairs concerning various relevant Work Packages of the project in the three selected cities.
- (b) To undertake scoping of available environmental technologies in the country pertaining to these Work Packages.
- (c) To undertake needs assessment of environmental technology solutions that are required to reduce air pollution in the three selected cities.

2.2 Scope of services

1. The services are required for the three selected cities (example Surat, Pune, Nagpur). The cities are in the process of being finalised in consultation with the Ministry of Environment, Forest and Climate Change, Government of India.

¹ <https://smartnet.niua.org/csc/assessment-overview.html>

2. The tasks to be performed for the present consultancy services pertain to the following Work Packages of the project:
- (a) WP 2. Sensor-based monitoring of air quality
 - (b) WP 3. Vehicle fitness certification
 - (c) WP 4. Urban traffic and transportation
 - (d) WP 5. Decentralized waste management and segregation
 - (e) WP 6. Modernization of brick kilns

3. The tasks to be performed included mainly the following:
- a) To collect information on the state of affairs concerning various relevant Work Packages of the project in the three selected cities.
 - b) To undertake scoping of available environmental technologies in the country pertaining to these Work Packages.
 - c) To undertake needs assessment of environmental technology solutions that are required to reduce air pollution in the three selected cities.

4. The information collection for various Work Packages as above to include the following for the three selected cities in the form of reports, data, maps etc.:

(a) WP 2. Sensor-based monitoring of air quality:

Information collection purpose: To understand the current state of affairs in the city on sensor-based monitoring and to enable a decision on strengthening the existing systems or introducing viable available technologies as a solution so that air quality measurements are strengthened and most appropriate decisions can be taken for reducing air pollution in the city. Some guiding questions and relevant aspects for information collection are:

- What is the current ambient air quality monitoring system in the city?
- What is the current emission source (industrial, vehicular etc.) monitoring system in the city?
- Air quality data availability for the city for ambient air and emission sources.
- Is sensor-based monitoring in place in the city? If yes, details thereof (technology, number of sensors, costs – capital and operating, operating model/service delivery mechanisms (example, PPP) etc.
- At present how many monitoring stations are in the city and locations of the same.
- Existing air quality data management system and decision support system in the city.
- Are any measures/actions planned in the three selected cities for installation of sensor-based monitoring?
- Information on some of the existing sensor-based technology suppliers in India, costs, applications etc.
- What are the relevant national and international best practices and case examples (applicable for the selected cities) related to sensor-based air quality monitoring?

(b) WP 3. Vehicle fitness certification:

Information collection purpose: To understand the current state of affairs in the city on vehicle fitness certification and to enable a decision on strengthening the existing systems or introducing viable vehicle fitness certification solutions that would help in

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reducing vehicular emissions. Some guiding questions and relevant aspects for information collection are:

- What is the existing vehicle fitness inspection, certification and maintenance infrastructure in the city?
 - types of fitness certificates based on the type of vehicles in the city
 - validity of the certificates
 - existing inspection system for in-use vehicles in the city
 - existing vehicle maintenance infrastructure (for the purpose of certification)
- How many testing centres are existing and their adequacy in terms of numbers, infrastructure etc. to cater to the vehicles in the city? What are the operating models/service delivery mechanisms (example, government, PPP) related to vehicle fitness certification, inspection and maintenance?
- Are any measures/actions planned in the three selected cities on vehicle fitness certification for air pollution reduction?
- What are the relevant national and international best practices and case examples (applicable for the selected cities) related to vehicle fitness certification?

(c) WP 4. Urban traffic and transportation

Information collection purpose: To understand the current state of affairs in the city on the traffic and transportation related air pollution and to enable a decision on introducing viable technology solutions for reducing air pollution. Some guiding questions and relevant aspects for information collection are:

- What are the emission and levels of air pollution caused by the traffic and transportation systems in the city?
- What are the key concerns, hotspots etc. related to existing bottlenecks/ hotspots in the city?
- Which solutions are already in place for reducing air pollution - non-motorized modes of transport (e.g., cycling, e-rickshaw, e-transport in university campuses, e-bike sharing), e-mobility, efficient public transportation, parking etc.? Provide brief details.
- What are the operating model/service delivery mechanisms (example, PPP) for the technology solutions available in the city related to traffic and transportation?
- Are any measures/actions planned in the three selected cities for air pollution reduction with technology solutions for urban traffic and transportation management?
- What are the relevant national and international best practices and case examples (applicable for the selected cities) related to application of technologies/techniques for reduction of air pollution from traffic and transportation?

(d) WP 5. Decentralized waste management and segregation

Information collection purpose: To understand the current state of affairs in the city on the waste management systems and to enable a decision on introducing viable decentralised waste management and segregation technology solutions for reducing air pollution. Some guiding questions and relevant aspects for information collection are:

- Overview of the existing waste management system in the city (MSW, HW, plastics, bio-medical, C&D, e waste, etc.) - quantities, method of collection, treatment, disposal etc.
- What are the concerns/issues from the existing waste management systems and waste segregation?

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- What are the air pollution concerns in the city from improper waste management – hotspots, pollution being caused etc.?
- Which solutions are already in place for reducing air pollution – control over illegal dumping, waste to energy facilities, decentralised waste management systems etc.?
- What are the operating model/service delivery mechanisms (example, PPP) for the technology solutions available in the city related to waste management?
- Are any measures/actions planned in the three selected cities for air pollution reduction with decentralized waste management and segregation?
- What are the relevant national and international best practices and case examples (applicable for the selected cities) related to decentralized waste management and segregation?

(e) WP 6. Modernization of brick kilns

Information collection purpose: To understand the current state of affairs in the city on the brick kilns and to enable a decision on introducing viable technology solutions for reducing air pollution. Some guiding questions and relevant aspects for information collection are:

- Whether brick kilns exist in the city and its surrounding having an impact on air pollution in the city?
- What is the overview of pollution problems from those brick kilns, the status of the technologies being used, key concerns etc.?
- Are any measures/actions in place in the three selected cities for air pollution reduction from brick kilns?
- What are the relevant national and international best practices and case examples (applicable for the selected cities) on application of technologies for prevention and control of air pollution from the brick kilns?

5. For the scoping of available environmental technologies in the country pertaining to the above Work Packages:

- (a) Compile information on environmental technologies in use or available in the country pertaining to WP2, WP3, WP4, WP5 and WP6 as above, including manufactures/suppliers, approximate costs, cities where used etc.
- (b) Rapid assessment of the technical soundness and financial viability of the identified environmental technologies.
- (c) Rapid assessment on the applicability of the identified environmental technologies in the three selected cities.

6. To undertake a needs assessment of environmental technology solutions that are required to reduce air pollution in the three selected cities, including the following:

- (a) What are the estimated emissions from traffic and transportation, brick kilns and waste management and their share of air pollution in the city?
- (b) Which are the air pollution hotspot areas (up to 5 nos) in the city from traffic and transportation, brick kilns, and solid wastes, in particular reference to those that can be addressed by the environmental technologies?
- (c) What are the needs for application of environmental technologies in the three selected cities for Sensor-based monitoring of air quality, Vehicle fitness certification, Urban

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traffic and transportation, Decentralized waste management and segregation, and Modernization of brick kilns?

- (d) Recommendation for application of the environmental technologies in the three selected cities including viable business models (PPP, private model etc.) based on technical soundness and financial viability.

Services to cover interactions with MoEFCC, MoRTH, MoHUA, CPCB, SPCBs, Administrative in cities and another relevant national, state-level and city-level agencies, departments and stakeholders in the cities.

2.3 Tasks to be performed

The contractor is responsible for providing the following services as per the tasks mentioned in the table below:

<p>Main Task 1: To collect information on the state of affairs concerning various relevant Work Packages of the project in the three selected cities</p>	<p>Sub Task1: Collate required information on the state of affairs concerning the relevant Work Packages (WP2, WP3, WP4, WP5 and WP6) of the project in the three selected cities for fulfilling the objectives, scope of services and deliverables of the consultancy services including the following:</p> <ul style="list-style-type: none"> • Secondary information through sources e.g. websites, published documents, literature searches, and any information from any other reliable sources. • Primary information through visits, one-to-one meetings, focus group/group meetings, workshops etc. <p>Note: The purpose and guiding questions on information collection requirements are given in Section 2.2 above (Scope of Services). Relevant documents, maps, data etc. should be collected for each of the three cities.</p> <p>Sub-task 2: Stakeholder identification – Identify and map the relevant stakeholders relevant for the work packages (WP2, WP3, WP4, WP5 and WP6). Finalization of the stakeholders to be done in consultation with GIZ.</p> <ul style="list-style-type: none"> • SPCB, Municipal Corporation, Transport Department, State Environment Department, and other relevant stakeholders, etc. <p>Sub-task 3: Organise workshops in each of the three cities with identified stakeholders (up to 25 participants) to discuss on the tasks and expected outputs/deliverables from the consultancy services to seek feedback on the tasks, information availability and various stages of consultancy services. The following Work Packages must be covered:</p> <ol style="list-style-type: none"> WP 2. Sensor-based monitoring of air quality WP 3. Vehicle fitness certification WP 4. Urban traffic and transportation WP 5. Decentralized waste management and segregation WP 6. Modernization of brick kilns
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	<p>Note: Due to COVID pandemic, workshops could be conducted virtually online.</p> <p>Sub-task 4: Prepare and submit city-wise reports on the state of affairs concerning relevant Work Packages (WP2, WP3, WP4, WP5 and WP6) of the project in the three selected cities. Submit with the report all the available data, reports, maps etc. for each city which the project may use eventually for developing technical solutions for the selected cities.</p> <p>Note: Submit a separate report for each of the three shortlisted cities.</p>
<p>Main Task 2: To undertake scoping of available environmental technologies and their applicability in the three selected cities</p>	<p>Sub-task 1: Compile information on environmental technologies in use or available in the three selected cities and other cities country pertaining to WP2, WP3, WP4, WP5 and WP6, including manufactures/suppliers, approximate costs, cities where used etc. Collect information:</p> <ul style="list-style-type: none"> ➤ Three selected cities ➤ Other cities in the country <p>Sub-task 2: Rapid assessment of the technical soundness (including effectiveness) and financial viability of the identified environmental technologies for their application.</p> <ul style="list-style-type: none"> ➤ Technical soundness ➤ Type of business models by which it is being implemented ➤ Financial viability and cost-benefit analysis ➤ SWOT analysis to identify its internal strengths and weaknesses, opportunities and threats ➤ Potential for reducing the air pollution ➤ Sustainability ➤ Replicability ➤ Issues or concerns or inadequacies/gaps <p>Sub-task 3: Rapid assessment on the applicability of the identified viable environmental technologies in the three selected cities.</p> <ul style="list-style-type: none"> ➤ List of identified environmental technologies in use in India for the WP2, WP3, WP4, WP5 and WP6. ➤ Applicability of the identified environmental technologies in the three selected cities.
<p>Main Task 3: To undertake needs assessment of environmental technology solutions required in the three selected cities for reducing air pollution</p>	<p>Sub-task 1: Collate or make a rough estimation of emissions caused due to traffic and transportation, brick kilns and waste management and their share of air pollution in the city. Include the following information besides any other relevant information:</p> <ul style="list-style-type: none"> ➤ Emissions generated ➤ Estimated % contribution to air pollution in the city <p>Sub-task 2: Provide information on the air pollution hotspot areas (up to 5 nos) in the city from each of traffic and transportation, brick kilns, and solid wastes, in particular reference to addressing them with the environmental technologies. Include the following information besides any other relevant information:</p> <ul style="list-style-type: none"> ➤ Location of the hotspot on map

	<ul style="list-style-type: none"> ➤ Extent of the hotspot, present land use ➤ Causes of pollution ➤ If any clean air measures are planned or being implemented <p>Sub-task 3: Needs assessment for application of environmental technologies in the three selected cities for Sensor-based monitoring of air quality, Vehicle fitness certification, Urban traffic and transportation, Decentralized waste management and segregation, and Modernization of brick kilns.</p> <ul style="list-style-type: none"> ➤ Consult with various stakeholders on the needs. ➤ Technical assessment of needs for reduction of pollution. <p>Sub-task 4: Recommendations for application of the environmental technologies in the three selected cities including viable business models (PPP, private model etc.) based on technical soundness and financial viability for each of the following (ref. to Main task 2):</p> <ul style="list-style-type: none"> ➤ Sensor-based monitoring of air quality ➤ Vehicle fitness certification ➤ Urban traffic and transportation ➤ Decentralized waste management and segregation ➤ Modernization of brick kilns <p>Include the following information besides any other relevant information:</p> <ul style="list-style-type: none"> ➤ Technical soundness ➤ Type of business models by which it is being implemented ➤ Financial viability and cost-benefit analysis ➤ SWOT analysis to identify its internal strengths and weaknesses, opportunities and threats ➤ Potential for reducing the air pollution ➤ Sustainability ➤ Replicability ➤ Implementation agency(ies) in the three selected cities for the identified technologies <p>Sub-task 5: Organise workshops for each of the three cities with identified stakeholders (up to 25 participants) to discuss on the needs assessment and the recommendations on the work packages:</p> <ul style="list-style-type: none"> (a) WP 2. Sensor-based monitoring of air quality (a) WP 3. Vehicle fitness certification (b) WP 4. Urban traffic and transportation (c) WP 5. Decentralized waste management and segregation (d) WP 6. Modernization of brick kilns <p>Accordingly finalise the reports.</p> <p>Note: Due to COVID pandemic, workshops could be conducted virtually online.</p>
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Certain milestones, as laid out in the table below, are to be achieved by certain dates during the contract term, and at particular locations:

Milestone	Deadline
<u>Reports on Main Task 1:</u> <ul style="list-style-type: none"> • Inception report • Report on the kick-off workshop conducted in all three cities • Report on the state of affairs concerning relevant Work Packages (WP2, WP3, WP4, WP5 and WP6) of the project for each of the three selected cities (3 reports). 	January 15, 2021
<u>Reports on Main Task 2:</u> <ul style="list-style-type: none"> • Report on the Rapid Assessment of the technical soundness (including effectiveness) and financial viability of the identified environmental technologies in the three selected cities and other cities in the country for their application. • Report on Rapid Assessment on the applicability of the identified viable environmental technologies in the three selected cities. 	February 28, 2021
<u>Reports on Main Task 3:</u> <ul style="list-style-type: none"> • Draft Needs Assessment report on application of environmental technologies in the three selected cities for Sensor-based monitoring of air quality, Vehicle fitness certification, Urban traffic and transportation, Decentralized waste management and segregation, and Modernization of brick kilns. • Draft Recommendations Report for application of the environmental technologies in the three selected cities including viable business models (PPP, private model etc.) based on technical soundness and financial viability for Sensor-based monitoring of air quality, Vehicle fitness certification, Urban traffic and transportation, Decentralized waste management and segregation, and Modernization of brick kilns. • Workshop report on the feedback from the stakeholders on above draft reports. • Final Needs Assessment report on application of environmental technologies in the three selected cities for Sensor-based monitoring of air quality, Vehicle fitness certification, Urban traffic and transportation, Decentralized waste management and segregation, and Modernization of brick kilns. • Final Recommendations Report for application of the environmental technologies in the three selected cities including viable business models (PPP, private model etc.) based on technical soundness and financial viability for Sensor-based monitoring of air quality, Vehicle fitness certification, Urban traffic and transportation, Decentralized waste management and segregation, and Modernization of brick kilns. 	March 31, 2021
<u>Other Reports:</u> <ul style="list-style-type: none"> • Final Report on the assignment including all the main tasks of ToR. 	March 31, 2021

Note:

- The consultant is required to periodically make presentations before the GIZ team and the GIZ partners on the outputs and progress of work.
- All reports need to be submitted in hard (1 copy) as well as editable soft copies of the same along with all necessary reference data/information collected with the meta-data.

2.4 Period of assignment:

The period of assignment shall be from **November 16, 2020** until **30 April 2021**.

3 Concept

In the bid, the bidder is required to show how the objectives defined in Section 2 are to be achieved, if applicable under consideration of further specific method-related requirements (technical-methodological concept). In addition, the bidder must describe the project management system for service provision.

3.1 Technical-methodological concept

Strategy: The bidder is required to consider the tasks to be performed with reference to the objectives of the services put out to tender. Following this, the bidder presents and justifies the strategy with which it intends to provide the services for which it is responsible.

Cooperation: The bidder is required to specify the actors relevant for cooperation for fulfilling the tasks and describe the cooperation (existing/proposed) with them.

Steering: The bidder is required to present and explain their approach to steering the measures with the project stakeholders.

Processes: The bidder is required to describe the key processes for the services for which it is responsible and create a schedule that describes how the services are to be provided. In particular, the bidder is required to describe the necessary work steps and, if applicable, take account of the milestones and contributions of other actors in accordance with Section 2.

Learning and innovation: The bidder is required to describe its contribution to knowledge management for the stakeholders and GIZ and for promoting scaling-up effects.

3.2 Other specific requirements

-NA--

3.3 Project management of the contractor

The bidder is required to explain its approach for coordination with the GIZ project.

- The contractor is responsible for selecting, preparing, training and steering the experts assigned to perform the advisory tasks.
- The contractor makes available equipment and supplies (consumables) and assumes the associated operating and administrative costs.
- The contractor manages costs and expenditures, accounting processes and invoicing in line with the requirements of GIZ.

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- The contractor reports regularly to GIZ in accordance with the AVB of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH from 2018.

The bidder is required to draw up a **personnel assignment plan** with explanatory notes that lists all the experts proposed in the bid; the plan includes information on assignment dates (duration and expert days) and locations of the individual members of the team complete with the allocation of work steps as set out in the schedule.

4 Personnel concept

The estimated requirements for consideration by the bidders are given below.

4.1 Qualification requirements for the companies participating in the tender:

a) Commercial assessment criteria:

- Average annual turnover for the last three financial years: *At least 75,000 Euro*
- Number of employees as at 31.12 of the previous year: *At least 10 Persons*

b) Technical assessment criteria: The technical assessment is only based on reference projects with a minimum commission of 20,000 Euro.

i) Minimum Requirements:

The consultant company should have undertaken:

- At least three reference projects in any of the technical fields of clean air and air quality management; and
- At least one similar reference project in the last three years covering any of the fields of traffic and transportation, brick kilns, waste management.

ii) Weighted Criteria:

» Technical experience:

- Minimum 2 years experience in working on technical fields in the areas air pollution and air quality management in Indian cities.
- Minimum 2 years experience in dealing with air pollution problems in the relevant fields, viz. traffic and transportation, brick kilns, waste management.

» Regional experience:

- Working experience in India

» Experience of development projects (ODA financed)

Note: GIZ may invite each technically shortlisted applicant to make a presentation to demonstrate its understanding of the assignment, and its proposed approach, methodology, key features and work plan. The presentation should preferably be made by the proposed Key Personnel. The presentation should ideally not exceed 30 minutes.

The bidder is required to provide personnel who are suited to filling the positions described, based on their CVs (see Chapter 7), the range of tasks involved and the required qualifications.

The estimated man-days are given below:

- Team Leader – 30 mandays (including up to 18 travel days)

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- Senior Expert– 70 mandays (including up to 33 travel days)
- Junior Expert – 210 mandays (including up to 66 travel days)

The below-specified qualifications represent the requirements to reach the maximum number of points. The numbers given in brackets refer to the respective lines in the document “Grid for the technical assessment of bids”.

4.2 Team leader (1 no., up to 30 mandays)

Tasks of the team leader

- Overall responsibility for the advisory packages of the contractor (tasks, quality of work and deliverables and meeting with deadlines)
- Coordinating and ensuring communication with GIZ, partners and others involved in the project
- Technical tasks and contributions as may be needed
- Personnel management, in particular identifying the need for short-term assignments within the available budget, as well as planning and steering assignments and supporting local and international short-term experts
- Regular reporting as per deadlines

Qualifications of the team leader

- Education/training (2.1.1): Post graduate degree in fields of environment, engineering, planning or equivalent from a recognised University
- Language (2.1.2): Good language skills in English
- General professional experience (2.1.3): 20 years of professional experience in the field of pollution control and environmental management
- Specific professional experience (2.1.4): 5 years of experience in area of urban air pollution and air quality management
- Leadership/management experience (2.1.5): 6 years of management/leadership experience as a project team leader or manager in a company
- Regional experience (2.1.6): Working experience in India with cities
- Development Cooperation (DC) experience (2.1.7): Experience in DC projects is preferred
- Other (2.1.8): Knowledge about Air Quality Management in India; National Clean Air Programme and Smart Cities Mission. Working with government agencies (central and state)

4.3 Senior Expert 1 (1 no., upto 70 mandays)

Tasks of expert 1

- Carrying out various tasks as assigned by the team leader.
- Technical expert for carrying out various tasks including information collection information review and assessments, preparing reports etc.
- Coordination with different stakeholders in three cities.
- Resource person in workshops, meetings, stakeholder consultations.

Qualifications of expert 1

- Education/training (2.2.1): Post graduate degree in fields of environment, engineering, planning or equivalent form a recognised University
- Language (2.2.2): Good language skills in English
- General professional experience (2.2.3): 15 years of professional experience in the field of pollution control and environmental management

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- Specific professional experience (2.2.4): 5 years of experience in area of urban air pollution and air quality management
- Leadership/management experience (2.2.5): 3 years of management/leadership experience as a manager in a company
- Regional experience (2.2.6): Working experience in India with cities
- Development Cooperation (DC) experience (2.2.7): Experience in DC projects is preferred
- Other (2.2.8): Knowledge about Air Quality Management in India; National Clean Air Programme and Smart Cities Mission. Working with government agencies (central and state)

4.4 Junior Expert 1 (1 nos., up to 105 mandays)

Tasks of Junior Expert

- Carrying out various tasks as assigned by the team leader and senior expert.
- Support in information collection and its review
- Support in preparing reports
- Support in communication and coordination
- Provide support to senior expert in workshops, meetings, stakeholder consultations.

Qualifications of Junior Expert

- Education/training (2.3.1): Post graduate degree in fields of environment, engineering, planning or equivalent form a recognised University
- Language (2.3.2): Good language skills in English
- General professional experience (2.3.3): 5 years of professional experience in the field of pollution control and environmental management
- Specific professional experience (2.3.4): Experience in area of urban air pollution and air quality management
- Leadership/management experience (2.3.5): -NA
- Regional experience (2.3.6): -NA
- Development Cooperation (DC) experience (2.3.7): - NA
- Other (2.3.8): -NA-

4.5 Junior Expert 2 (1 nos., 105 mandays)

Tasks of Junior Expert

- Carrying out various tasks as assigned by the team leader and senior expert.
- Support in information collection and its review
- Support in preparing reports
- Support in communication and coordination
- Provide support to senior expert in workshops, meetings, stakeholder consultations.

Qualifications of Junior Expert

- Education/training (2.4.1): Post graduate degree in fields of environment, engineering, planning or equivalent form a recognised University
- Language (2.4.2): Good language skills in English
- General professional experience (2.4.3): 5 years of professional experience in the field of pollution control and environmental management
- Specific professional experience (2.4.4): Experience in area of urban air pollution and air quality management
- Leadership/management experience (2.4.5): -NA

0

- Regional experience (2.4.6): -NA
- Development Cooperation (DC) experience (2.4.7): -NA
- Other (2.4.8): -NA-

5 Costing requirements

5.1 Assignment of personnel

The estimated days of personnel (including travel days) are given below.

	Team Leader	Senior Expert	Junior Expert 1	Junior Expert 2
Main task 1	10	20	35	35
Main task 2	10	25	35	35
Main task 3	10	25	35	35
Total	30	70	105	105

Estimated travel days for field work:

Team Leader	Senior Expert	Junior Experts (2 nos)
18 days (2 trips of 2 days each per city; 3 trips to Delhi of 2 days each)	33 days (3 trips of 3 days each per city; 3 trips to Delhi of 2 days each)	66 days (per person: 3 trips of 3 days each per city; 3 trips to Delhi of 2 days each)

5.2 Travel

The bidder is required to calculate the travel by the specified experts and the experts it has proposed based on the places of performance of the assignment (example, Delhi, Surat, Nagpur, Pune) and list the expenses separately by the daily allowance, accommodation expenses, flight costs and other travel expenses. The estimated number of travels of the consultant is as below:

- Up to 45 air/train travels are foreseen to three Indian cities along with travel to Delhi for up to total 117 days. Outstation travels are according to GIZ rules. Costs may be quoted accordingly, subject to actuals.
- Local travel requirements may be quoted on a lumpsum basis, subject to actuals. Local travels reimbursements are as per GIZ rules.

5.3 Specification of inputs

Fee days	Number of days up to	Comments
• Preparation/debriefing	01 day	Preparation/debriefing on the tasks to be performed in three cities
• Implementation	192 days	Man-days for taking up the tasks as defined in the TORs. It doesn't include travel days.

• Travel days	117 days	Travel to Delhi and other project location within India as may be required. The experts will also get the fee for the travel days.
Travel expenses	Number of days/nights up to	Comments
• Per diem	117 days	Bidder to quote per diem costs. Note that costs will be reimbursable up to limits as per GIZ rules.
• Accommodation allowance	117 days	Bidder to quote per accommodation costs. Note that costs will be reimbursable up to limits as per GIZ rules.
Other travel expenses		Comments
• Number of local trips	50	Please specify the cost as per the indicated total number of local trips by taxi/car for local conveyance. Costs are reimbursable as per GIZ rules.
• Number of trips abroad	0	0
• Ancillary travel expenses (visa)	0	0
Flights	Number of flights up to	Comments
• International flights	0	0
• Domestic flights	45	45 Round flight trips to Delhi and project locations within India as may be required.
Other costs		Comments
Institutional overheads		Institutional overheads (lump sum) for this assignment to be specified by the bidder.

5.4 Workshops

The contractor implements the following workshops:

- Conduct a kick-off workshop (online or at field) in each of the three cities to discuss on the tasks and expected outputs/deliverables from the consultancy services to seek feedback on the tasks, information availability and various stages of consultancy services. Include relevant stakeholders MoEFCC, MoHUA, SPVs, CPCB, SPCB, Municipal Corporation, Transport Department, State Environment Department, and other stakeholders.
[ref. main task 1, subtask 3] [location: selected 3 cities; up to 25 participants per city]
- Conduct a workshop for each of the three cities to finalise the needs assessment and recommendation reports.

0

[ref. main task 3, subtask 5] [location: selected 3 cities; up to 25 participants per city]

5.5 Other costs

-NA-

5.6 Flexible remuneration item

-NA-

6 Inputs of GIZ or other actors

GIZ and/or other actors are expected to make the following available:

- Support in providing contact with the implementing partners of the project and key stakeholders.
- Review of progress and approvals on deliverables.

7 Requirements on the format of the bid

The structure of the bid must correspond to the structure of the ToRs. In particular, the detailed structure of the concept (Chapter 3) is to be organised in accordance with the positively weighted criteria in the assessment grid (not with zero). It must be legible (font size 11 or larger) and clearly formulated. The bid is drawn up in the English language.

The complete bid shall not exceed 30 pages (**excluding CVs & other supporting company documents; as mentioned in grid for assessing eligibility of firms**).

The CVs of the personnel proposed in accordance with Chapter 4 of the ToRs must be submitted using the format specified in the terms and conditions for application. The CVs shall not exceed 4 pages. The CVs must clearly show the position and job the proposed person held in the reference project and for how long. The CVs can also be submitted in English.

If one of the maximum page lengths is exceeded, the content appearing after the cut-off point will not be included in the assessment.

Please calculate your price bid based exactly on the aforementioned costing requirements. In the contract, the contractor has no claim to fully exhaust the days/travel/workshops/ budgets. The number of days/travel/workshops and the budget amount shall be agreed in the contract as 'up to' amounts. The specifications for pricing are defined in the price schedule.