TERMS OF REFERENCE (TORS)

Hiring of Consultancy Services for an Independent Verification Agency (IVA) for Punjab Clean Air Program (PCAP)

1. Background

The Punjab Clean Air Program (PCAP) is a World Bank funded hybrid of Program for Results (PforR) to link funding with measurable improvements and Investment Project Financing (IPF) operation to support technical assessments, policy development, and institutional capacity-building, with a total cost of USD 300 million over 5 years (2025-2030). The program integrates strategies such as expanding public transport with electric buses, enforcing stricter vehicle inspections, retiring high-emission vehicles, and promoting electric two- and three-wheelers. These interventions are designed to reduce traffic congestion, improve fuel efficiency, and lower carbon emissions, ultimately fostering a more sustainable urban transport system. The Program Development Objective is to strengthen air quality management and reduce population weighted PM 2.5 annual average exposure in Lahore Division.

Under the PforR window, funds will be disbursed to the Punjab Government based on achieving nine disbursement-linked indicators (DLIs) under the three results areas having forty-seven Disbursement Linked Results (DLRs). The amount to disbursed will be equivalent to US$280 million.

2. Objectives of the Assignment

The primary objective of the consultancy is to independently verify and validate the milestones/DLRs achieved by the implementing agencies under the PCAP. The firm will ensure that the deliverables align with the disbursement linked indicators (DLIs) and program targets. The performance of PCAP in achieving DLIs, as assessed in the **Results Framework** will determine the size of allocations to be disbursed and will be an important metric to determine progress towards the Program Development Objective (PDO). The IVA consultant firm will be hired by the Coordination and Monitoring Unit (CMU) for Five years (FY 2025-30) or completion of project whichever is earlier, subject to satisfactory performance. Verification of DLRs is to be done in accordance with the DLI verification protocols articulated in the Program Appraisal Document for PCAP, to be shared with the consultant, upon appointment.

3. Scope of Work

The IVA will verify results across all three Results Areas of PCAP:

- RA1: Air Quality Management governance and awareness raising;
- RA2: Transport sector abatement measures;
- RA3: Agriculture sector abatement measures.

- **Results Area 1: Air Quality Management (AQM) Governance and Awareness Raising:**
  Under RA-1, the DLI-1 states that “Additional regulatory grade monitors shall be added to air quality monitoring network”, DLI-2 cater for development of Integrated air pollutant /

SLCP / GHG emissions inventory system which would support the assessment of Smog Action Plan and informs annual, DLI-3 envisages that Fuel quality testing laboratories with mobile and fixed facility may be operationalized and lastly under DLI-4 of this result area, it deals behavioral change campaign & Interactive public information by EPD, Punjab.

  - Development and implementation of robust air quality policies and regulations.
  - Strengthening the institutional capacity of the Environmental Protection and Climate Change Department (EPCCD) and other relevant agencies.
  - Establishment and enhancement of air quality monitoring networks and data management systems.
  - Conducting comprehensive public awareness and behavior change campaigns on air pollution and its impacts.

- **Results Area 2: Transport Sector Abatement Mechanisms:**
  The RA-2 encompasses 4 DLIs, where DLI-5 pertains to Transport & Masstransit department targeting at the increase of cleaner public transport (Electric Buses) in Lahore Division. The DLI-6 aims at promoting the transition to electric two- and three-wheelers to reduce emissions, the DLI-7 envisages best international practices by bringing a scheduled and permanent mechanism for expanding vehicle inspections, lastly the DLI-8 targets at the Buyback of polluting vehicles.

  - Support for the expansion of electric public transport (e.g., electric buses).
  - Incentivizing the adoption of electric vehicles and associated charging infrastructure.
  - Developing and implementing programs for the retirement of old, high-polluting vehicles.
  - Strengthening enforcement of fuel quality standards and vehicle emission inspections.

- **Results Area 3: Agriculture Sector Abatement Measures:**
  The RA-3 falls under the ambit of Agriculture Department whereby; the department may support expansion of mechanized crop straw management; expanding mechanized crop straw management (DLI-9)

  - Promotion and dissemination of sustainable agricultural technologies and practices, such as "super-seeders" for direct seeding, to reduce crop residue burning.
  - Development and implementation of strategies to discourage and prevent open burning of agricultural waste.
  - Capacity building and awareness campaigns for farmers on cleaner agricultural practices.

The IVA/TPV firm will be required to undertake the following scope of work:

1. Review and validate data and evidence of DLR achievements submitted by CMU, PIU and IAs.
2. Develop verification methodologies and sampling plans in line with World Bank guidance.

3. Conduct physical verification of sites, facilities, and equipment (e.g., AQ monitoring stations, e-bus depots, super seeders).
4. Verify institutional systems and records maintained by implementing agencies.
5. Conduct stakeholder consultations and beneficiary surveys to validate reported outcomes.
6. Cross-check results with independent data sources where possible.
7. Prepare Verification Reports for submission to the CMU-PCAP for onward submission to the World Bank.

4. Financing and Implementation

The total financing of PCAP amounts to approximately US$300 million, equivalent to JPY 46,455 million. Of this, US$280 million is allocated for PforR activities and US$20 million for IPF support. The Planning and Development Board serves as the coordinating agency through a dedicated Coordination and Monitoring Unit (CMU). Program implementation is undertaken in partnership with key line departments, including the Transport & Mass Transit Department, Agriculture Department, and Environmental Protection & Climate Change (EPCCD) Department.

In summary, PCAP represents a transformative step by the Government of Punjab in tackling the region's air quality crisis. By addressing multiple sectors simultaneously and anchoring interventions in strong institutional frameworks, PCAP is expected to deliver lasting improvements in environmental health, enhance resilience against climate change, and set a model for other provinces in Pakistan.

5. Verification of DLIs

Disbursement linked indicators	Baseline	` Total Allocated Amount (JPY)	Disbursement linked results indicative timeline					
			Prior Results	Period-1	Period-2	Period-3	Period-4	Period-5
DLI 1: Additional regulatory grade monitors added to AQM network (Number)	30 Regulatory Grade AQM stations across Punjab (25 fixed; 5 mobile) operational and calibrated by external contractors with three-year contracts.	1,393,650,000 **Responsible Agency: EPCCD/EPA**	-	**(Scalable)** **DLR 1.01:** JPY 774,250,000 if 10 additional fixed and 30 existing AQM stations positioned throughout Punjab, operated by EMC and reporting data per SOP/QA protocols; and real-time data made available online hourly with public access; JPY 77,425,000 per station.	-			

DLI 2. Integrated air pollutant/ SLCP/GHG emissions inventory system is developed and routinely updated, used for assessment of smog action plan and informs annual development plans (Yes/No)	Inventory last updated for 2021, but not integrated.	929,100,000 **Responsible Agency: EPCCD/EPA**	-	**(Non-scalable)** **DLR 2.01:** JPY 309,700,000 if integrated and comprehensive air pollutant inventory system operational, with dedicated staff in EMC, covering five districts (Faisalabad, Multan, Lahore, Gujranwala & Sheikhupura) and all major sectors (agriculture, industry, transport, energy, residential and waste).	**(Non-scalable)** **DLR 2.02**: JPY 309,700,000 if integrated emission inventory covering the five districts for 2025 developed, as per 2006 IPCC guidelines including requisite quality assurance	2.03: External review of the inventory completed, and feedback incorporated into the inventory; 2.04: Updated emissions inventory submitted to the Provincial Minister in charge for Environment & Climate Change. Inventory system used for assessment of province-wide smog action plan and informs the decision making of relevant departments in their preparation of annual development plans		
DLI 3. Fuel quality testing laboratories with mobile and fixed facility operational (Number)	3 fuel quality testing laboratories with provincial government operational	464,600,000 **Responsible Agency: EPCCD/EPA**	-	**(Non-scalable)** **DLR 3.01**: JPY 309,733,334 if 2 additional fuel quality testing laboratories established.	-	3.02: At least 20 tests of private fuel sellers/users have been conducted at each fuel quality testing laboratory		

						as per ASTM standards		
DLI 4. Interactive public information and behavioural change campaign sessions held (Number)	65 awareness sessions held in last two years.	309,700,000 **Responsible Agency: EPCCD/EPA**	-	**(Non-scalable)** **DLR 4.01:** JPY 77,425,000 if comprehensive data- driven behavioral change plan developed using existing inventory (city and provincial level) and monitoring data **(non-scalable)** **DLR 4.02**: JPY 77,425,000 if the plan informs the use of at least 5 air quality roadshow vehicles operational for 250 working days; and the establishment of a feedback mechanism for citizens to provide comments and suggestions on an online platform and in person	-	4.03: 450 additional data-driven behavioral change campaign sessions held and feedback collected and summary reports compiled on quarterly basis. Real-time monitoring and forecasted data are used in Health Advisory System providing air quality alerts for hazardous air quality conditions and mitigatory advisory recommendations both to the general public and target sectors. Feedback mechanism for citizens to provide comments and suggestions on an online platform and in person is in use		

DLI 5. Expanding Cleaner Public Transport in Lahore Division (e- Buses) (Number) Amounts for all scalable DLRs in DLI 5 (DLRs 5.07 to 5.14) can be pro rated according to the following formula: Allocated Amount multiplied by (actual achievement divided by Target) minus amount disbursed previously under this DLR. Any overachievement will count towards the subsequent year's target	250 diesel buses in Lahore, and 27 e- buses under public sector concessions.	21,679,050,000 **Responsible Agency: T&MD via PMA/PTC**	**(Non-scalable)** **DLR 5.01:** JPY 154,850,000 if T&MD approves a Bus Service Transformation Plan for PMA	**(Non-scalable)** **DLR 5.02**: JPY 309,700,000 if PMA/PTC advertises tender(s) for e-buses using contractual documents based on business model chosen via a study. **(non-scalable)** **DLR 5.03:** JPY 774,250,000 if Implementing Entity implements distance-based fare policy for electric buses **(non-scalable)** **DLR 5.04** JPY 5,419,800,000 if commencement of operations of 200 additional electric buses in Lahore Division	**(Non-scalable)** **DLR 5.05:** JPY774,250,000 if Implementing Entity signs a Public Transport Service Contract with PMA. **(Non-scalable)** **DLR 5.06:** JPY 309,700,000 for ITMS system covering feeder bus operations in Lahore. **(Scalable)** **DLR 5.07:** JPY 1,584,500,000 if PMA/PTC signs contract(s) to procure 100 additional e- buses in Lahore Division (tranche 2). (Scalable) **DLR 5.08:** JPY 1,935,625,000 if	5:09: PMA/PTC signs contract(s) for 100 additional e-buses (tranche 3) (scalable); 5.10: Operation of 100 additional e-buses commence (tranche 3) with associated supporting infrastructure (scalable)	5.11: PMA/PTC signs contract(s) to procure 100 additional e-buses in Lahore Division (tranche 4) (scalable); 5.12: Operation of 100 additional e-buses commence (tranche 4) with associated supporting infrastructure (scalable)	5.13: PMA/PTC signs contract(s) to procure 100 additional e-buses in Lahore Division (tranche 5) (scalable); 5.14: Operation of 100 additional e-buses commence (tranche 5) with associated supporting infrastructure (scalable)

					operation of 100 additional e-buses commences (tranche 2) with associated supporting infrastructure.			
DLI 6. Transition to e-2/3Ws (new vehicles) (Number) Amounts for all scalable DLRs in DLI 6 (DLRs 6.05 to 6.09) can be pro rated according to the following formula: Allocated Amount multiplied by (actual achievement divided by Target) minus amount disbursed previously under this DLR. Any overachievement will count towards the subsequent year's target.	<10,000 and 0 e- 2Ws and e-3Ws in Lahore respectively, with sales penetration less than 1% in either segment	7,742,500,000 **Responsible Agency: T&MD; EPCCD**	**(Non-scalable)** **DLR 6.01:** JPY 464,550,000 if Implementing Entity notifies provincial electric vehicle policy and associated charging infrastructure roadmap	**(Non-scalable)** **DLR 6.02:** JPY 774,250,000 if Implementing Entity establishes financing facility established for e-2Ws and e-3Ws via a financial intermediary. **(non-scalable)** **DLR 6.03:** JPY 154,850,000 if Implementing Entity introduces dedicated EV entity with clear terms of reference. **(non-scalable)** **DLR 6.04**: JPY 309,700,000 if Implementing Entity introduces	**(Scalable)** **DLR 6.06:** JPY 619,400,000 if 11,000 e-2Ws (or equivalent number of e-3Ws) supported under the financing facility. Amount to be pro-rated based on the actual number of e-2Ws (or equivalent number of e-3Ws)	6.07: 21,000 e-2Ws (or equivalent number of e-3Ws) supported under the financing facility. Amount to be pro-rated based on the actual number of e-2Ws (or equivalent number of e-3Ws) (scalable)	6.08: 35,000 e-2Ws (or equivalent number of e-3Ws) supported under the financing facility. Amount to be pro-rated based on the actual number of e-2Ws (or equivalent number of e-3Ws) (scalable)	6.09: 50,000 e-2Ws (or equivalent number of e 3Ws) supported under the financing facility. Amount to be pro-rated based on the actual number of e 2Ws (or equivalent number of e-3Ws) (scalable)

				battery waste management rules **(Scalable)** **DLR 6.05:** JPY 309,700,000 if 3,000 e-2Ws (or equivalent number of e-3Ws) supported under the financing facility.				
DLI 7. Expanding vehicle inspections (Percentage)	Two wheelers currently excluded from vehicle inspections under the Motor Vehicles Ordinance	1,548,500,000 **Responsible Agency: T&MD**	**(Non-scalable)** **DLR 7.01:** JPY 464,550,000 if Implementing Entity amends Motor Vehicles Ordinance to subject motorcycles to vehicle emissions inspections	-	-	7.02: 3% of registered two wheelers inspected, calculated against a base of the average number of two-wheelers registered in Punjab over the preceding three years, based on data from the Excise and Taxation Department	7.03: 5% of registered two wheelers inspected, calculated against a base of the average number of two-wheelers registered in Punjab over the preceding three years, based on data from the Excise and Taxation Department	

DLI 8: Buyback of polluting vehicles (Number) Amounts for all scalable DLRs in DLI 8 (DLRs 8.03 to 8.06) can be pro rated according to the following formula: Allocated Amount multiplied by (actual achievement divided by Target) minus amount disbursed previously under this DLR. Any overachievement will count towards the subsequent year's target.	No	6,194,000,000 **Responsible Agency: T&MD**	-	(**Non-scalable)** **DLR 8.01:** JPY 619,400,000 if Implementing Entity amends the relevant legal framework to allow for vehicle retirement tied to emissions inspections. **(non-scalable)** **DLR 8.02:** JPY 619,400,000 if Implementing Entity notifies buyback and scrappage scheme for polluting vehicles identified via emission inspections, with appropriate financial incentives, scrapping mechanism and informed by stakeholder consultations.	**(Scalable)** **DLR 8.03:** JPY 1,238,800,000 if 225 polluting heavy vehicles (truck/bus) (or equivalent) scrapped under the buyback scheme.	8.04: 225 polluting heavy vehicles (truck/bus) (or equivalent) scrapped under buyback scheme (scalable)	8.05: 225 polluting heavy vehicles (truck/bus) (or equivalent) scrapped under buyback scheme (scalable)	8.06: 225 polluting heavy vehicles (truck/bus) (or equivalent) scrapped under buyback scheme (scalable)

DLI 9: Expanding mechanized crop straw management (Number)	1000 super seeders with 60 percent subsidy provided to farmers across Punjab	3,097,000,000 Responsible Agency: Agriculture Department	-	**(Scalable)** **DLR 9.01:** JPY 929,100,000 if Implementing Entity provides 2000 super seeders on 60 percent subsidy to farmers selected via balloting who contribute 40% share; scalable pro rata based on number of super seeders provided.	**(Scalable)** **DLR 9.02:** JPY 1,393,650,000 if Implementing Entity distributes 3000 super seeders on 60 percent subsidy to farmers selected via balloting who contribute 40% share; scalable pro rata based on number of super seeders provided.	9.03: Mechanized management of crop straw on 1.2 million acres of land. Scalable pro rata in FY27-28, with the balance released if DLR achieved in a subsequent FY on the full 1.2 million acres of land (scalable)	9.04: 70 percent reduction in crop residue burning areas as compared to 2023 crop acreage burning data	

Program Action Plan

Action Description	Source	DLI#	Responsibility	Timing		Completion Measurement
Adopt policy framework to integrate formal and informal public transport	Technical	NA	T&MD	Due Date	30-Jun-2027	Government Order or notice issued
Climate resilience for bus depots & charging infra incorporated	Technical	NA	T&MD	Recurrent	Continuous	Based on design documents
Fill key staff in PCAP-CMU and T&MD PIU	Technical	NA	PCAP-CMU & T&MD PIU	Recurrent	Continuous	Staffing based on Program Operation Manual
Implement: 1) Gender Inclusion & SEA/SH Action Plan, 2) P-SEP w/ GM, 3) Disability Inclusion Plan	Environmental and Social Systems	NA	PCAP-CMU & IAs	Other	1), 2), 3) 12 months after effectiveness	Plans acceptable to WB and approved (PSC Minutes).
Appoint Environmental and Social/Gender Specialists at PCAP- CMU & T&MD PIU, and Env/Social Focal Point within each IA	Environmental and Social Systems	NA	PCAP-CMU, T&MD & IAs	Other	Within 90 days of Program effectiveness	Specialists and focal points appointed and maintained throughout Program implementation
Prepare & operationalize E&S technical manual	Environmental and Social Systems	NA	PCAP-CMU & T&MD PIU	Other	Within 90 days of Program effectiveness	E&S acceptable to WB and approved (based on PSC minutes)
Develop and implement training for IAs on E&S management, including CHS, child labor, SEA/SH, e-waste, and lithium battery fire safety	Environmental and Social Systems	NA	PCAP-CMU & IAs	Other	Within 90 days of Program effectiveness and before civil works start	E&S training module developed and acceptable to World Bank, and E&S training completed

Conduct annual citizen feedback surveys and publish Results	Environmental and Social Systems	NA	PCAP-CMU	Other	Annual	Citizen feedback surveys implemented and results disseminated
Ensure timely and effective planning and budgeting	Fiduciary Systems	NA	FD	Other	Annual	Sufficient and timely funds available to IAs for Program implementation
Strengthen grievance/complaint redressal mechanism for all procurement	Fiduciary Systems	NA	All IAs	Other	Annual review	Clear provisions in procurement documents specifying bidder rights and independent committee established
Conduct independent procurement audit	Fiduciary Systems	NA	PCAP-CMU	Other	Annual	Annual procurement audit conducted by a reputable third- party firm
Implement anti-corruption and governance (ACG) controls	Fiduciary Systems	NA	PCAP-CMU	Recurrent	Semi-Annually	Compliance of IAs with ACG policies, incl. debarred and suspended entities/individuals
Comprehensive and timely reporting and full disclosure in financial statements	Fiduciary Systems	NA	PCAP-CMU, T&MD PIU & all IAs	Other	Annual	Compliance of IAs with financial reporting framework
Compliance to open competition and non-discriminatory provisions	Fiduciary Systems	NA	IAs	Other	Annual review	Realistic evaluation and qualification criteria proportionate to estimated value of contracts, as per PPF
Tailor and adopt PGDP land acquisition & resettlement standard operating procedures	Environmental and Social Systems	NA	T&MD & PCAP-CMU	Other	Within 90 days of Program effectiveness and before civil works start	Tailored standard operating procedures acceptable to WB and approved (based on PSC minutes)

Environmental and Social Impact Assessment (ESIA) prepared for bus infra and operations, incl. OHS and CHS plans	Environmental and Social Systems	NA	T&MD & PMA/PTC	Other	Prior to the start of the civil works	ESIA acceptable to WB and approved by EPA
Tailor and adopt standard operating procedures for e- waste management	Environmental and Social Systems	NA	PCAP-CMU & IAs	Other	Within 6 months of Program effectiveness	Standard operating procedures acceptable to WB and approved (based on PSC minutes)
Strategy for proper vehicle disposal	Environmental and Social Systems	NA	T&MD	Other	Prior to start of buy-back scheme	Strategy acceptable to WB and approved (based on PSC minutes)
E&S checklists for super-seeder deployment	Environmental and Social Systems	NA	Ag Dept & PCAP-CMU	Other	Prior to super-seeder deployment	E&S acceptable to WB and approved (based on PSC minutes)
Exclude from consideration as a Program area any areas subject to AED on or after December 9, 2024, or that may involve the displacement of 200 or more Individuals	Environmental and Social Systems	NA	PCAP-CMU & IAs	Recurrent	Continuous	Regular reporting by PCAP-CMU

ANNEX 1. RESULTS FRAMEWORK

Program Development Objective(s)

To strengthen air quality management and reduce population-weighted PM2.5 annual average exposure in Lahore Division

PDO Indicators by Outcomes

Baseline	Closing Period
Strengthen air quality management	
Population-weighted exposure to PM2.5 annual average concentrations due to emissions reductions by PCAP (Microgram/m3)	
Jun/2030	Jun/2030
99.79	97.47
Index on expanded systems for air quality management (Number)	
Feb/2025	Jun/2030
0	5
People in Lahore Division with real-time access to air quality and environmental information (Number)	
Feb/2025	Jun/2030
56,000	500,000
PM2.5 emission reduction to transboundary airshed (Microgram/m3)	
Jun/2030	Jun/2030
3.18	3.14
Reduce emissions from targeted sectors	
PM2.5 emission reductions from priority sectors supported by the Program (Metric ton)	
Feb/2025	Jun/2030
0	85,454
➢PM2.5 emission reduction from Transport (Metric ton)	
Feb/2025	Jun/2030
0	3,737

➢PM2.5 emission reduction from Agriculture (Metric ton)	
Feb/2025	Jun/2030
0	81,717
Direct users that benefit from improved access to sustainable transport infrastructure and services (Number of people) CRI	
Feb/2025	Jun/2030
0	520,000
➢Direct users that benefit from improved access to sustainable transport infrastructure and services - Female (Number of people) CRI	
Feb/2025	Jun/2030
0	130,000
➢Direct users that benefit from improved access to sustainable transport infrastructure and services - Youth (Number of people) CRI	
Feb/2025	Jun/2030
0	98,000

Intermediate Indicators by Results Areas

Baseline	Closing Period
Air Quality Management Governance and Awareness Raising	
Additional regulatory grade monitors added to AQM network (Number) DLI	
Feb/2025	Jun/2030
30 Regulatory Grade AQ monitoring stations across Punjab (25 fixed; 5 mobile) operational and calibrated by external contractors with three-year contracts.	25 additional regulatory grade monitors added to air quality monitoring network.
Area covered by air quality monitoring stations (Square kilometer(km2))	
Feb/2025	Jun/2030
1,000	1,900
Integrated air pollutant/SLCP/GHG emissions inventory system is developed and routinely updated, used for assessment of Smog Action Plan and informs annual development plans (Yes/No) DLI	
Feb/2025	Jun/2030
Inventory last updated for 2021, but not integrated.	Integrated 2025 inventory developed, used for assessment of Smog Action Plan and informs annual development plans.
Fuel quality testing laboratories with mobile and fixed facility operational (Number) DLI	
Feb/2025	Jun/2030
3 fuel quality testing laboratories with provincial government operational	2 additional fuel quality testing laboratories established and testing completed as per ASTM standards
Interactive public information and behavioral change campaign sessions held (Number) DLI	
Feb/2025	Jun/2030
65 awareness sessions held in last two years.	450 awareness sessions held
EPCCD Env Monitoring Centre's staff skilled to validate, quality assure and analyze monitoring data (Percentage)	
Feb/2025	Jun/2030
0	100% of staff responsible for monitoring data
Industrial units monitored and inspected annually (Percentage)	
Feb/2025	Jun/2030
The program baseline starts with new enforcement staff and a new Environmental Technology & Policy Center within EPCCD from the PGDP.	Final program report with cumulative activity reported annually
Transport Sector Abatement Measures	
Expand Cleaner Public Transport in Lahore Division (E-buses) (Number) DLI	
Feb/2025	Jun/2030
250 diesel buses in Lahore, and 27 e-buses under public sector concessions.	600 additional e-buses operating in Lahore Division, with supporting infrastructure, sustainable institutional and funding arrangements in place
Women employed in technical and managerial roles within the Lahore e-bus system (Percentage)	
Feb/2025	Jun/2030
0	5
Transport sector staff trained (Number)	
Feb/2025	Jun/2030
0	100
Transition to Electric Two- and Three-Wheelers (new vehicles) (Number) DLI	
Feb/2025	Jun/2030
<10,000 and 0 e-2Ws and e-3Ws in Lahore respectively, with sales penetration less than 1% in either segment	120,000 e-2Ws or e-3W equivalent supported under financing facility to be established under the Program
Private capital mobilized (Amount(USD))	
Feb/2025	Jun/2030
0	80,000,000
Share of loans by value made to women under the e-2/3W financing facility (Percentage)	
Feb/2025	Jun/2030
0	10
Expanding Vehicle Inspections (Percentage) DLI	
Feb/2025	Jun/2030
Two wheelers currently excluded from vehicle inspections under the Provincial Motor Vehicles Ordinance (1965)	Vehicle inspections extended to two-wheelers, with at least 5% of registered vehicles (based on the average number of registrations in preceding three years) tested annually
Buyback of polluting vehicles (Number) DLI	
Feb/2025	Jun/2030

No buyback or vehicle retirement scheme for polluting vehicles	900 heavy vehicles (or equivalent) scrapped
Standard operating procedures for road dust management adopted (Yes/No)	
Feb/2025	Jun/2030
No	Yes
GHG emissions reduced - Transport (Metric ton)	
Feb/2025	Jun/2030
0	2,000,000
Agriculture Sector Abatement Measures	
Expanding mechanized crop straw management (Number) DLI	
Feb/2025	Jun/2030
0	1.2 million acres
Private capital mobilized (Amount(USD))	
Feb/2025	Jun/2030
0	9,000,000
GHG emission reduced - Agriculture (Metric ton)	
Feb/2025	Jun/2030
0	6,800,000

Disbursement Linked Indicators (DLI)

Period	Period Definition
Prior Results	Pakistan FY 24-25
Period 1	Pakistan FY 25-26
Period 2	Pakistan FY 26-27
Period 3	Pakistan FY 27-28
Period 4	Pakistan FY 28-29
Period 5	Pakistan FY 29-30

Baseline	Prior Results	Period 1	Period 2	Period 3	Period 4	Period 5
1:Additional regulatory grade monitors added to AQM network (Number)						

6. Detailed Tasks

The IVA will undertake the following specific tasks:

TASKS	DESCRIPTION
Task – 1	Prepare an Inception Report with verification methodology, tools, and protocols.
Task – 2	Conduct desk review of all program data, including monitoring systems and institutional records.
Task – 3	Undertake field verification missions, including site inspections, GPS-tagged visits, and photographic evidence.
Task – 4	Organize consultations with stakeholders such as EP&CCD, PMA, EPA, T&MD, PTC, Industries Department, Agriculture Department, and private sector actors
Task – 5	Submit Draft Verification Reports for review by CMU and the World Bank
Task – 6	Submit Final Verification Reports confirming results achieved and certifying disbursements.

5. Deliverables

The IVA is expected to deliver the following outputs:

1. Inception Report within 4 weeks of contract signing;
2. Semi-Annual Verification Reports covering verification of DLRs/DLIs;
3. Annual Consolidated Verification Reports with analysis of results and trends;
4. Final Completion Report at the end of the program summarizing all verification activities and lessons learned.

7. Duration of Assignment

The assignment will be carried out over a period of five years (FY 2025-20230) or completion of the Program (PCAP) whichever is earlier. The contract period will be for 05 years, extendable upon satisfactory performance. Verification activities will be continuous and linked to disbursement cycles. Annual work plan will be approved by the CMU-PCAP in consultation with the World Bank. The firm is expected to deploy its resources for 04 months for each year.

8. Institutional Arrangements

The IVA will be contracted by the Planning and Development Board (PCAP-CMU). The firm will coordinate with the Transport & Mass Transit Department, the Agriculture Department, and the Environmental Protection and Climate Change Department, and the Environmental Protection Agency. The IVA will report directly to the CMU and provide copies of reports for onward submission to the World Bank.

10. Key Experts

Expert Role	Man Months	Minimum Educational Qualification	Relevant Experience	Key Responsibilities
Team Leader / Project Director	04	Master's in Environmental Science/engineering, Public Policy or related field	15 years in project management, environmental policy, and large-scale verification assignments	Overall coordination, quality assurance, stakeholder engagement, reporting to CMU
Project Coordinator	03	Master's in Environmental Science/engineering, management, Public Policy or related field	08 years in project management, environmental policy, and large-scale verification assignments	Focal person to coordinate with CMU and relevant IAs under PCAP
Environmental/Air Quality Specialist	03	Master's in Environmental Science/Engineering, Atmospheric Sciences	10 years in air quality monitoring, QA/QC, data interpretation	Verification of air monitoring network, emissions inventory, smog action plans
Transport & EV Specialist	03	Master's in Transport Engineering, Mechanical Engineering, or Energy Systems	8 years in electric vehicle policies, EV deployment, public transport systems	Verification of e-bus milestones, e-2W/e-3W implementation, charging infrastructure
Contract / Legal & Regulatory Expert	02	LLB or Master's in Environmental Law, Policy, or Public Administration	8 years in policy/regulatory reforms, especially in transport, environment, or energy sectors	Review of legal reforms (motor vehicle ordinance amendments, EV/buyback policies)
Agricultural Economist	02	Master's in Agricultural Economics or related field	8 years in sustainable agriculture, crop residue management, mechanization strategies	Verification of super seeder deployment and crop burning reduction
Field Supervisor / Surveyors (05)	03	Master's/Graduation in relevant field	3 years in relevant field	Verification/validation of Data pertaining to DLIs/PDOs/PAPs

9. Reporting and Communication

The IVA will produce all reports in English and aligned with World Bank formats. Reports must include evidence such as photographs, GPS-tagged site visit data, and survey results. Bi-annual review meetings will be held with CMU and the World Bank. All raw data and instruments must be submitted as annexes with verification reports. After completion of the verification report, the IVA will submit the final report, both in hard and soft form to the Program Director, CMU-PCAP. The Program Director, CMU-PCAP will submit the report to the World Bank.

10. Ethical Standards and Confidentiality

The IVA must adhere to the World Bank's Environmental and Social Framework (ESF), as well as relevant laws and regulations of the Government of Punjab. Confidentiality of beneficiary and program data must be maintained. The firm must also disclose any conflict of interest and ensure impartiality throughout the assignment.

11. Payment Schedule

The IVA will be compensated based on deliverables, with payments made against satisfactory acceptance of reports by the CMU and the World Bank. Suggested payment milestones are:

Deliverables	Payment %
• Upon approval of Inception Report (for each DLI)	20%
• Upon submission of Draft Report (for each DLI)	30%
• Upon submission and acceptance of Final Completion Report (for each DLI)	50%

12. Responsibilities of the Consultant

The consultants will also be responsible for the provision of ICT equipment required to carry out the assignment, such as computers, mobile phones etc.

13. Type of Contract

The contract will be on a Lump-Sum basis.