**TERMS OF REFERENCE - STATEMENT OF WORK**

**RG-T2761**

**Empirical Analysis of Air Pollution and Climate Change Mitigation Actions in LAC**

1. Background and Justification
   1. This technical cooperation (TC) focuses on climate vulnerability, climate and environmental risk, and actions to manage, adapt, and mitigate the impacts of climate change and air pollution.
   2. Air pollution is a serious concern in Latin America and the Caribbean. In LAC, more than 50% of the population of developing countries is exposed to air pollution above the levels recommended by the World Health Organization.[[1]](#footnote-1) High air pollution has been causally linked to infant mortality, lost income for poor households, and lower educational outcomes (Arceo, Hanna, and Oliva, 2016; Hanna and Oliva, 2014; Miller and Ruiz-Tagle, 2015; Miller and Vela, 2013).
   3. This consultancy, as part of this Technical Cooperation, seeks to improve the evidence available to decision makers when designing and improving air pollution and climate change policies and programs. This technical cooperation seeks to assist policy makers by providing information and evidence in two critical areas: (i) the effect of distributing salient and readily-assessable air pollution information, and (ii) the valuation of health co-benefits of climate change mitigation actions.
   4. In particular, this consultancy is part of a project that will attempt to determine the effect of information about the tradeoff between fuel costs for wood stoves and the creation of emissions on household’s emission behavior.
   5. This consultancy consists of two tranches: the pilot phase and the main survey phase. The pilot phase is a small experiment that will inform the design of the household survey instrument, survey method, and logistics procedure. Changes to the survey instrument, survey method and logistics procedure may be directed by the researchers during the pilot phase. The main survey phase will consist of a larger experiment.
2. Objectives
   1. The first tranche of this consultancy is the pilot phase. The main objective of the pilot phase is to produce quantitative and qualitative evidence and results that will inform the implementation of the full scale experiment and the design of the associated household survey.
   2. The second tranche of this consultancy is the main survey phase. The main objective of the main survey phase is to generate an accurate and informative household-level dataset using the survey instrument, survey methods and logistics procedures developed by the researchers.
3. Scope of Services
   1. The requirements to make this project successful include experience in recruiting and training surveyors, conducting data collection through face-to-face household interviews with a survey instrument, and ensuring data quality through a data validation and data quality checking process. In addition, frequent and detailed communication with the researchers is necessary for successful completion of the project.
   2. The duration of the contract is not to exceed 12 months.
   3. The second tranche of this consultancy will be completed only if both the Bank and the consulting firm consider the first tranche to be completed satisfactorily.
4. Key Activities
   1. Key activities are of the first tranche (pilot phase):

* Surveyor and surveyor supervisor recruitment and training in Valdivia, Chile
* Development of a work plan, including a logistics plan
* Development of the electronic survey instrument using the survey provided by the researchers
* Obtainment and maintenance of necessary equipment such as AirBeams to measure pollution and Andriod devices for electronic surveying
* Changes to the survey instrument, survey method, and logistics procedure as directed by researchers
* 50 household surveys in Valdivia, Chile in neighborhoods designated by the researchers
* Data validation and data quality checks
* Creation of a complete and clean dataset from household surveys in STATA (.dta) format
  1. Key activities are of the second tranche (main survey phase):
* Surveyor and surveyor supervisor recruitment and training in Valdivia, Chile
* Development of a work plan, including a logistics plan
* Development of the electronic survey instrument using the survey provided by the researchers
* Obtainment and maintenance of any additional necessary equipment such as AirBeams to measure pollution and Andriod devices for electronic surveying
* 250 household surveys in Valdivia, Chile in neighborhoods designated by the researchers
* Data validation and data quality checks
* Creation of a complete and clean dataset from household surveys in STATA (.dta) format

The scale of the activities may be increased during the period of the contract, as determined and directed by the researchers in writing, and payment will be in accordance with the scale of activities completed as stated in the contract.

1. Expected Outcome and Deliverables
   1. The deliverables in the first tranche include:

* A work plan for the pilot phase that includes a detailed logistics plan and the electronic survey instrument.
* A complete, clean STATA (.dta) format dataset containing all data collected using household surveys during the pilot phase.
* A final report summarizing the data from the household surveys during the pilot phase. This report should be submitted in pdf format.
  1. The deliverables in the second tranche include:
* A work plan for the main survey phase that includes a detailed logistics plan and the electronic survey instrument.
* A complete, clean STATA (.dta) format dataset containing all data collected using household surveys during the main survey phase.
* A final report summarizing the data from the household surveys during the main survey phase. This report should be submitted in pdf format.

1. Project Schedule and Milestones
   1. For each tranche, the dataset and final report summarizing the data from household surveys must be submitted within 4 weeks of the completion of the household surveys.
   2. Within 12 weeks of the delivery of the household survey dataset and final report summarizing the household survey data from the first tranche, both the Bank and the consulting firm will determine whether the first tranche was successfully completed.
2. Reporting Requirements
   1. The reporting requirements of this consultancy are the deliverables outlined in Section 5.
3. Acceptance Criteria
   1. The deliverables from this consultancy will be accepted by Bridget Hoffmann (RES/RES). The encrypted dataset will be transferred to Bridget Hoffmann.
4. Other Requirements
   1. In addition, this consultancy requires firms to work closely with the researchers to develop and implement a plan for data security and to maintain various data security measures, including but not limited to encrypting data before storage and transfers, maintaining updated virus scans and software systems, promptly removing data from field data collection equipment, and restricting access to data.
   2. No product or activity of this consultancy can be sold or generate any income. No product or activity of this consultancy can be given to any third party except as directed by Bridget Hoffmann.
5. Payment Schedule
   1. Final payment will be determined in accordance with the scale of the work performed. The payments for the first tranche will be made separately and prior to any payments for the second trance. No payments for the second tranche will be made unless the first tranche was considered successfully completed by both the Bank and the consulting firm.
   2. For each tranche, 20% of the total payment based on the scale of the activities for that tranche defined in Section 4 will be paid after signing. An additional 60% of the total payment based on the scale of the activities for that tranche defined in Section 4 will be paid after delivery of the work plan for that tranche and the electronic survey instrument for that tranche. The remaining 20% of the total payment based on the scale of the activities for that tranche defined in Section 4 net any adjustments in the total payment due to a change in the scale of the activities will be paid after acceptance by the Bank of all deliverables.
6. Supervision
   1. This consultancy will be supervised by Bridget Hoffmann (RES/RES). Bridget Hoffmann will give any instructions for change, supervise and monitor the progress of work, and receive and approve of deliverables.

1. http://data.worldbank.org/indicator/EN.ATM.PM25.MC.ZS/countries/MX-XJ-CL?display=graph [↑](#footnote-ref-1)