

## TERMS OF REFERENCE FOR INDIVIDUAL CONSULTANTS AND CONTRACTORS

### NATIONAL INDIVIDUAL CONSULTANCY

#### **Air quality monitoring and environmental policy coordinator**

**Background:** The United Nations Children's Fund (UNICEF) works for the rights of children to survival, development, participation and protection as guided by the Convention on the Rights of Children (CRC). UNICEF provides long-term humanitarian and developmental assistance to children and their families in developing countries. UNICEF is active in over 190 countries and territories through country programmes and National Committees. Seven regional offices provide technical assistance to country offices as needed. UNICEF 's headquarters in New York oversees overall management and administration of the organization.

Exposure to air pollution during early life can cause long lasting damage to brain function, diminish the ability to concentrate, and disrupt behavior thus reducing educational attainment, mental development and lifetime earnings. UNICEF, in collaboration with the Government of Mongolia and with the financial support of the Swiss Agency for Development and Cooperation (SDC) is implementing the 4-year programme "Impact of Air Pollution on Maternal and Child Health" to reduce the risks of air pollution to maternal and child health through enhanced evidence, policy, institutional capacity and action on the ground to reduce exposure of and strengthening health services for vulnerable children and pregnant women.

One of the interventions focuses on strengthening ambient air quality monitoring at provincial level, assess the effectiveness of actions by the government and improve indoor air quality (IAQ) in kindergartens and health facilities in Bayankhongor province and Bayanzurkh district of Ulaanbaatar. For this purpose, ambient air quality monitoring network, specifically designed and tested for the unique situation in Mongolia, has been installed and operationalized in Bayankhongor, while IAQ devices have been installed and operationalized in over 30 kindergartens in Bayanzurkh district of Ulaanbaatar and in Bayankhongor.

The AQ monitoring project requires a research approach to develop and operationalize these air quality monitoring networks and IAQ systems, therefore UNICEF Mongolia is partnering with the Washington University in St. Louis (WUSTL) and Mongolian University of Science and Technology (MUST). Starting 2021, National agency for meteorology and environmental monitoring (NAMEM) has been collaborating with UNICEF to use low cost AQ devices in provincial centers. NAMEM has started testing Purple Air devices in UB to determine the comparability between the Purple Air devices before sending them to the provinces using the guideline provided by WUSTL, retrieve the data from the SD cards and review the data, sending it to WUSTL for a parallel review and ensure that devices are successfully connected to Wi-Fi and registered, and real-time data can be viewed through the PurpleAir web site.

Furthermore, to further enable and sustain project outputs it is necessary to link and integrate air pollution, air quality management and rights of children to healthy and sustainable environment into policies. At current, UNICEF Mongolia is working with the Ministry of Construction and Urban Development (MCUD) on building design codes for kindergartens, schools and health facilities inclusive of IAQ as well as ventilation systems. However, more work needs to be done to advance

children's environmental rights because children are the most vulnerable to air pollution together with other types of pollution, environmental harm and climate change and they are often not in position to exercise their rights, including rights to information, participation and access to effective remedies<sup>1</sup>.

Relevant to this, UNICEF Mongolia is seeking a national individual consultant to work as the air quality monitoring and environmental policy coordinator.

### 1. Purpose of Assignment:

The objectives of this consultancy is to coordinate, provide guidance and facilitate project activities implemented by partners in relation to ambient air quality monitoring at provincial level and indoor air quality monitoring in selected kindergartens and health facilities, and provide expertise and support for policy planning, development and dialogue with the relevant government partners to integrate environmental rights of children into environmental, climate change and other sectoral policies.

### 2. Scope of Work:

#### 1. Ambient air quality monitoring at provincial center level

- Oversee and support to National agency for meteorology and environmental monitoring (NAMEM) for strengthening ambient AQ monitoring stations in provinces (workplan to collaborate with UNICEF Mongolia)
  - Network expansion (calibration of Bayankhongor (BKH)) data; support maintenance of BAM in BKH; software development to convert and sync AQ measures to display AQ data on website tsag-agaar.mn.
  - Use of low cost AQ devices for ambient air quality monitoring in provinces, database and experiment on correction of data;
  - Trainings to national/provincial staff; and
  - Develop and print SOP for AQ devices.
- Oversee the implementation of project activities on ambient air quality monitoring within the framework of the Project cooperation agreements (PCAs) with WUSTL and MUST.

#### 2. Indoor air quality monitoring in selected kindergartens and health facilities

- Oversee the implementation of project activities on indoor air quality monitoring within the framework of the Project cooperation agreements (PCAs) with WUSTL and MUST;
  - Ensure smooth operations of IAQ monitoring systems in kindergartens and health facilities in Bayanzurkh district of Ulaanbaatar and Bayankhongor province and operationalization of online platform; and
- Jointly with partners, organise trainings to staff of selected kindergartens and health facilities on IAQ and its impacts on children's health and wellbeing.

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<sup>1</sup> Children's rights and the environment. Report to the Human Rights Council on the rights of children and the environment (2018)

3. *Policy planning, development and advocacy*

- Oversee the implementation of the workplan with Ministry of Construction and Urban Development (MCUD)
  - Enforcement, use and application of new codes on building design (IAQ and ventilation) of kindergartens, schools and health facilities;
  - Capacity building on the usage and application of new buildings codes among companies in private and public organisations; and
  - TVOC concentration in building materials commonly used in repair and maintenance of schools and kindergartens, IAQ and health of children etc.
- Support NCREP in reviewing and prioritizing key actions in the 2<sup>nd</sup> phase of the National programme for reducing air and environmental pollution by organizing consultative meetings with ministries, agencies and local governments and seek approval by a relevant authority;
- Organise consultative meetings with the government including the Ministry of Environment and Tourism to link and integrate environmental rights of children into key environmental, climate change and other sectoral policies of Mongolia;
- Produce recommendations for integrating environmental rights of children into policies and if needed, draft necessary parts of the policy document; and
- Support for organisation of high-level policy dialogue at Parliament, Cabinet and Ministry level on environmental rights of children and integrating into policies.

3. **Programme Area and Specific Project Involved:** Air pollution and environment programme.

4. **Contract duration (start and end date):** The consultant will work for 11.5 months period. The contract shall commence upon signing the Contract by 15 May 2021 and shall expire upon satisfactory completion of the services described above, but not later than 30 April 2022.

5. **Type of engagement: (Full time/Part time):** The consultant will work full time at UNICEF office for the entire duration of the contract. Consultant will be eligible for 1.5 days paid time off (PTO) per month. During COVID-19 pandemic, specific internal procedures including COVID-19 care pathway will apply in addition to the Mongolian Government policies and measures.

6. **Deliverables, Timeframe and Payment Schedule:**

The key deliverables and details are elaborated in the Table:

#	Tasks	Deliverables	Timeline
I	<b>Ambient air quality monitoring at provincial center level</b>		
1	Oversee the implementation of project activities on ambient air quality monitoring within the framework of the Project cooperation agreements (PCAs) with WUSTL and MUST	-Data completion rate 75% -Real time online data platform -Capacity building trainings to staff of NAMEM and local meteorology department -Scientific article by WUSTL and MUST -A comprehensive report on project completion	15 August 2021

		-Dissemination workshop (online)	
2	Oversee and support to NAMEM for strengthening ambient AQ monitoring stations in provinces (workplan with UNICEF)	-Calibration of Bayankhongor (BKH) data; maintenance of BAM in BKH; software development to convert and sink AQ indicators to display AQ data on tsag-agaar.mn website; -Low cost AQ devices installed and operational in provincial centers, data completion rate 75% and experiment on correction of data; -SOP for AQ devices.	31 December 2021
3	Oversee the implementation of the workplan with Ministry of Construction and Urban Development (MCUD)	-National codes approved, published and disseminated -At least 6 trainings provided to public and private organisations in 2 steps - TVOC of building materials commonly used in repair and maintenance of schools and kindergartens, IAQ and health of children	30 June 2021 30 June 2021 31 Oct 2021 31 Dec 2021
<b>II</b>	<b>Indoor air quality monitoring in selected kindergartens and health facilities</b>		
4	Oversee the implementation of project activities on IAQ monitoring within the framework of PCAs with WUSTL and MUST	-Data completion rate 75% -Real time online data platform -Capacity building trainings to local staff	15 August 2021
5	Trainings to raise awareness about IAQ and its impacts to staff of selected kindergartens and health facilities	-5 pilot trainings on IAQ and health impacts to staff of selected kindergartens and feedback -Syllabus and handbook -3 trainings to staff of selected kindergartens -2 trainings to staff of health facilities	30 August 2021 31 Oct 2021 30 Nov 2021 31 Jan 2021
<b>III</b>	<b>Policy planning, development and advocacy</b>		
6	Support NCREP in reviewing and prioritizing key actions in the 2 <sup>nd</sup> phase of the National programme for reducing air and environmental pollution by organising consultative meetings with ministries, agencies and local governments and seek approval by a relevant authority	-Ministerial order on measures to be implemented in the 2 <sup>nd</sup> phase of NPRAEP and other relevant documents	30 August 2021

7	Organise consultative meetings with the government including the MET to link and integrate environmental rights of children into key environmental, climate change and other sectoral policies of Mongolia	-At least 3 consultative meetings organised -Reports and notes of consultative meetings inclusive of participants' list, presentations, items/reports for discussion.	Sep-Dec 2021
8	Support for organisation of high-level policy dialogue at Parliament, Cabinet and Ministry level on environmental rights of children and integrating into policies	-At least 1 high level event  -At least 2 follow up dialogues at technical levels of sectoral ministries	November 2021  Jan 2022
9	Produce recommendations for integrating environmental rights of children into policies and if needed, draft necessary parts of the policy document.	-Draft recommendations for integrating the environmental rights of children, draft policy document	March 2022
10	Take measures to disseminate results of the work for policy advocacy, policy integration and public awareness	-Evidence that key results of the work are used in policies and publicly accessible.	Throughout the contract
11	Final report	-Final report produced	April 30, 2022

The consultant will be paid on monthly basis upon submission of a satisfactory monthly report together with deliverables produced.

#### 7. Project Management:

Direct supervisor: Air Pollution and Environment Programme Manager.

Frequency of performance review: The consultant will be expected to provide UNICEF with project updates, documents, workplans or other documents requested and will report to UNICEF Mongolia. Performance progress report must be provided at every stage of contract payment. Any deviations from the initial planning and assignments shall be promptly considered and solved; any conditions beyond the responsibility of the Individual National Consultant shall be brought to the attention of UNICEF's Representative.

#### 8. Qualifications and requirements:

- An advanced university degree (Master, PhD) in the fields of environmental science;
- At least 10 years of relevant professional work experience at the national government level;
- Experience in designing and analysing policy documents, high quality reports and recommendations in environmental sector;
- Experience working for/with multi-lateral organizations and the United Nations;



- Excellent planning and coordination skills; and
- Excellent writing and speaking skills in English language.

**Nature of 'Penalty Clause' to be Stipulated in Contract:**

UNICEF reserves the right to withhold up to 30% of the total fee in the case that the deliverables are not submitted on schedule or do not meet the required standard. Copyright and ownership of all documents produced will remain with UNICEF.

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**Note:** Individuals engaged under a consultancy or individual contract will not be considered "staff members" under the Staff Regulations and Rules of the United Nations and UNICEF's policies and procedures, and will not be entitled to benefits provided therein (such as leave entitlements and medical insurance coverage). Their conditions of service will be governed by their contract and the General Conditions of Contracts for the Services of Consultants and Individual Contractors. Consultants and individual contractors are responsible for determining their tax liabilities and for the payment of any taxes and/or duties, in accordance with local or other applicable laws.