



Terms of Reference

Position Title: Research Scientist

Organization: Interinstitutional Research Center for Air Pollution Studies (IRCAPS)

Project: SATREPS/IRCAPS – Enhancing Air Quality Monitoring and Assessing Health and Economic Impacts of Air Pollution

Duty Station: IRCAPS, Osh State University, Osh, Kyrgyzstan

Duration: 5 year (with the possibility of extension based on performance and funding availability)

Background and Project Description

The Interinstitutional Research Center for Air Pollution Studies (IRCAPS) is an initiative under the SATREPS project to strengthen Kyrgyzstan's air quality monitoring system and assess the impact of air pollution on health and the economy. IRCAPS serves as a hub for interdisciplinary research, policy development, and community engagement in addressing air quality challenges in Kyrgyzstan.

The Technical Assistant will support the administrative and technical operations of IRCAPS, ensuring smooth day-to-day functioning of the Center's activities and providing critical assistance to the research and management teams.

Scope of Work: Research Scientist

Position Overview

The Research Scientist will contribute to the development and implementation of advanced air pollution assessment methods, including satellite data analysis, chemical transport modeling, and epidemiological research on air pollution's impact on health and the economy. The role involves conducting independent research, collaborating with international partners, and supporting policy recommendations.

Key Responsibilities

Research & Data Analysis

1. Conduct scientific research on air pollution sources, dispersion, and health effects.
2. Develop and apply **satellite-based air quality monitoring** and **chemical transport models**.
3. Analyze large datasets using **Python, R, GIS**, and machine learning techniques.

4. Validate and calibrate air quality measurement instruments.
5. Contribute to emission inventory development and air pollution impact assessments.

Scientific Communication & Publications

1. Prepare **research papers**, reports, and presentations for academic and policy audiences.
2. Present findings at national and international **conferences** and workshops.
3. Collaborate with **government agencies, NGOs, and academic institutions** to disseminate research outcomes.

Project Management & Collaboration

1. Participate in multi-disciplinary research teams, including **Japanese and Kyrgyz** institutions.
2. Contribute to grant applications and funding proposals.
3. Assist in the establishment and operational management of the **new Air Pollution Research Center**.
4. Provide technical expertise for public awareness campaigns on air pollution mitigation.

Training & Capacity Building

1. Train **junior researchers, students, and technical staff** in air quality monitoring methods.
2. Conduct **workshops** for governmental agencies on pollution control strategies.
3. Develop educational materials for the public on pollution and health risks.

Qualifications & Skills

Education & Experience

1. **PhD or MSc** in Environmental Science, Meteorology, Atmospheric Chemistry, Public Health, or related fields.
2. Experience with **air pollution modeling**, remote sensing, or epidemiological studies.
3. Proven track record of **peer-reviewed publications** in relevant scientific domains.

Technical Skills

1. Expertise in **statistical analysis, machine learning, and geospatial modeling**.
2. Proficiency in **Python, R, MATLAB, or GIS software**.
3. Experience with **air quality monitoring instruments** and data processing.

Soft Skills

1. Strong **analytical and problem-solving skills**.
2. Ability to work in **interdisciplinary and international teams**.
3. Excellent **scientific writing and communication skills** in English.

Deliverables

1. Research publications and technical reports.
2. Development of air quality assessment models.
3. Policy recommendations for environmental and health sectors.

4. Training materials and workshop sessions.

Work Location & Travel

Based at **Osh State University, Kyrgyzstan** with possible travel to Bishkek and Japan for research collaborations.

Application Process

Deadline for Submission: March 10,2025

Email for Submission: iperyipery@gmail.com

aseitova@oshsu.kg

amurzalieva@oshsu.kg

Subject Line: Application for Research Scientist – SATREPS/IRCAPS

Required Documents:

1. Detailed CV, including relevant experience and qualifications.
2. Cover letter explaining your interest and suitability for the position.
3. Contact information for two professional references.

Evaluation Criteria

Evaluation Area	Weight (%)
Education	20%
Relevant Experience	40%
Skills and Competencies	30%
Language Proficiency	10%

Only candidates scoring a minimum of 70% will be considered for the final selection.