

The Project for Development of a Satellite Data and a Regional Chemical Transport Modeling-based Air Pollution Assessment System and Formation of a Research Center for Air Pollution Studies (SATREPS)

Project Purpose: The capacity of Osh State University as a research center for ambient and household air pollution is strengthened.

Project Period: 2025 – 2030

Implementing (Counterpart) Organization(s): Osh State University

Estimated Project Cost*: JPY 350 million (USD 2.22 million)

Project Site: Osh region



Expected Outcomes:

1. Air pollution assessment systems using satellite data are developed.
2. Air pollution assessment and prediction systems based on a regional chemical transport model and inventories are developed
3. Evaluation systems for health and economic impacts of air pollution are developed.
4. Scientific knowledge contributing to the control of household air pollution is expanded and accumulated.

Key Activities:

1. Air pollution estimation model is developed by utilizing deep learning and Japanese data.
2. The monitoring network is strengthened by the installation of an air quality monitoring station in Osh
3. Deep learning model is developed by calculating historical air pollution data based on a regional chemical transport model.
4. Osh State University produces and publishes an air pollution map for the whole Kyrgyz Republic and updates it based on the air pollution estimation model.
5. An institutional arrangement for continuous improvement of the air pollution assessment and prediction system is established at Osh State University, with a clear picture of the air pollution situation in the Kyrgyz Republic through comparison and verification with the air pollution map and field observation data.