

E Tokyo Metropolitan Research Institute for **n**vironmental Protection



Tokyo Environmental Public Service Corporation
**Tokyo Metropolitan Research Institute
for Environmental Protection**

Research and Study

TMRIEP conducts research and study (R&S) for environmental policies of TMG, including R&S commissioned by TMG, joint research with Tokyo Metropolitan University and research by external funds from national government and private companies.



▲ Chassis dynamometer for heavy-duty-vehicles

(1) Automobile

- Measurement of exhaust gases from recent in-used vehicles to confirm the effect of emission reduction technologies.
- Measurement of emission trends of unregulated components from vehicles such as VOCs, N₂O etc.
- Evaluation of the amount of CO₂ and fuel consumptions for current hybrid vehicles.



▲ Adsorption / reaction processing experiment apparatus in gaseous mercury

(2) Resource recycling

- Research of recycling metals and incineration ash from municipal solid waste
- Investigation of management for hazardous substances in flue gas from incineration plant
- Analysis on the emissions status and factor of food loss



▲ Particulate matter (PM_{2.5}) collecting device and analysis

(3) PM_{2.5}-particulate matter less than 2.5μm-

- Concentration measurement and composition analysis of PM_{2.5}
- Source analysis and effect estimation of the countermeasures of PM_{2.5}
- Investigation on the status of nano particle

(4) Chemical substances

- Investigation on the status of contamination and source analysis of persistent organic pollutants (POPs)*
- *POPs can affect human health because they are toxic and hardly decomposed in the environment.



▲ Analysis of harmful chemical substances



▲ Seawaters sampling analysis

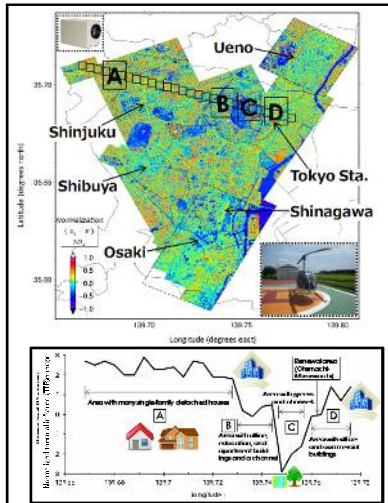
(5) Water

- Investigation on the mechanism of red tide and poor oxygen bottom water generation in summer : research on effective countermeasures of them, to improve water quality in Tokyo-bay
- Investigation on the status of groundwater

scientific findings for Tokyo Metropolitan Government (TMG) and citizens.

4 Technical reliability assessment for environmental countermeasures

5 Technical support for municipalities



▲ Results of airborne measurements of thermal environment at midday on hot summer days

(6) Urban heat island

- Investigation on urban heat island in Tokyo
- Observational and numerical studies on improvement of thermal environment in Tokyo for urban heat island mitigation and adaptation strategies focusing on urban greening

(7) Hydrogen*

- Survey on the utilization of CO₂-free hydrogen (produced by renewable energy) in Tokyo and the energy management by hydrogen battery to utilize hydrogen energy in urban development
- *Hydrogen is one of the promising next-generation energy.

Technical support

TRIEP has technical support programs the followings;

(1) Automobile emission testing (by chassis dynamometer)

- Testing diesel vehicles, ordinary-sized truck and large-sized bus etc., based on the Automobile NOx/PM Control Law
- Performance testing the emission gas reduction device of heavy and light duty vehicles



▲ Chassis dynamometer for a light-duty-vehicle



▲ Analysis of samples

(2) Analytical quality assurance

- Analysis of the quality of public water, groundwater and drainage samples as same as the samples analyzed by analytical laboratories contracted with TMG, to inspect whether the reported data by the contractor is reliable

(3) Training course

- Training course on knowledge and technique related to environmental issues, analysis of dioxin, offensive odors and waste composition etc., for TMG and municipalities



▲ Training workshop for technical support



▲ Introduction of research to overseas researchers

(4) International cooperation

- Sharing advanced technical knowledge on air quality and climate change with cities of overseas



Guide

- **Vehicle emission gas test and performance test for vehicle emission reduction device, etc.**

TMRIEP carry out the vehicle emission gas test and performance tests for vehicle emission reduction device, etc.
Tel 03-3699-1331

- **Reference room: provides materials for reading and loans them.**

[Hours] Weekday: 9:00 - 16:30

[Closed] Saturdays, Sundays, national holidays, the year-end and New Year Holidays, and the fourth Wednesday of every month (third Wednesday of March and December)

Tel 03-3699-1346 (Reference service) E-mail refer@tokyokankyo.jp

- **Facility tour: (Advance booking is needed.)**

10:00 - 16:00 (but except 12:00 - 13:00 Saturdays, Sundays, national holidays and the year-end and New Year Holidays)

Standard tour is about two hours, however, it can be determined on consultation.

Tel 03-3699-1333 Public Relations E-mail kanken@tokyokankyo.jp

- **Public open day**

The event of "Open Day" is provided where visitors may enjoy leaning the situation of Tokyo's environment and research accomplishments. Researchers will explain in detail. (See our website for schedule)

- **Public research conference**

Public research conference for research accomplishments is held during December or January every year. (See our website for the details)

History

1968 April	The Tokyo Metropolitan Research Institute for Environmental Pollution was established (Yurakucho, Chiyoda ward, Tokyo).
1985 April	The name was changed from the Tokyo Metropolitan Research Institute for Environmental Protection to the Tokyo Metropolitan Research Institute for Waste Management.
	The research institute in Yurakucho moved into the newly built buildings at the current address in Koto Ward.
2000 April	With a merger with the former Tokyo Metropolitan Research Institute for Waste Management, it was reformed as a new research organization of comprehensive environmental science, including the waste matters
2007 April	The business was transferred and placed under the authorities of the Tokyo Environment Public Service Corporation, an incorporated foundation.
2012 April	The Incorporated Foundation Tokyo Environment Public Service Corporation was reorganized into the Public Interest Incorporated Foundation Tokyo Environment Public Service Cooperation.

In September 2016, We were selected as a special Grants-in-Aid research institute regarding national Grants-in-Aid for Scientific Research by the Minister of Education, Culture, Sports, Science and Technology.



Tokyo Environmental Public Service Corporation

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Protection

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