



Kyoto University



## Research Center for Environmental Quality Management Kyoto University, Japan

京都大学大学院工学研究科附属流域圏総合環境質研究センター



### ACCESS 交通アクセス

10 minutes by car from JR Otsu Sta.  
JR琵琶湖線 大津駅下車タクシー10分

15 minutes on foot from Zeze Sta.  
(JR&Keihan Railways)  
膳所駅 (JR & 京阪) 下車徒歩15分

7 minutes on foot from Keihan Nishiki Sta.  
京阪石坂線 錦駅下車徒歩7分

10 minutes by car from Otsu I.C.  
(Meishin Highway)  
名神大津インターから10分

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# Research Center for Environmental Quality Management

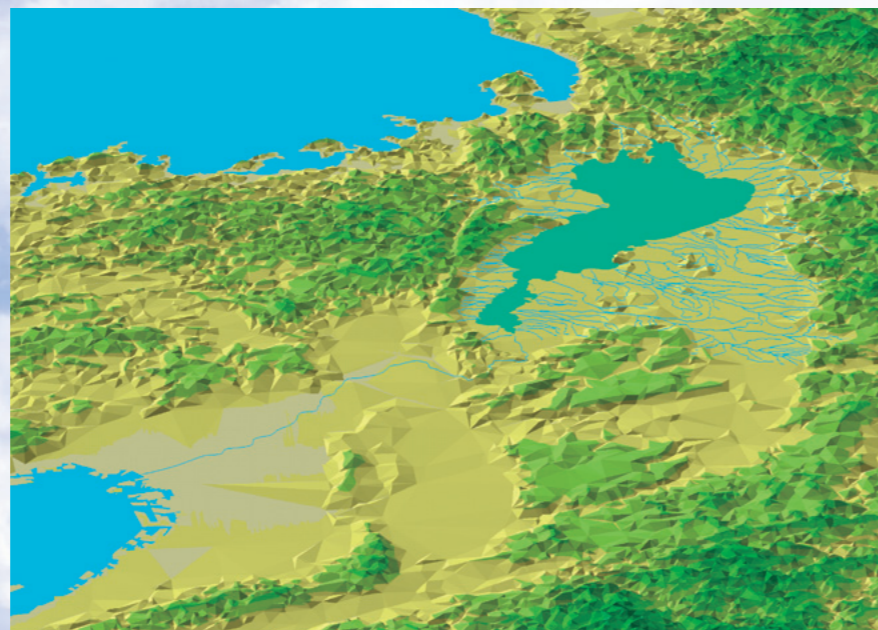
## Outline

- The Research Center for Environmental Quality Management (RCEQM) was inaugurated in 2005. It has three research and educational divisions: Environmental Quality Management, Environmental Quality Prediction, and Environmental Quality Monitoring.
- The main goal of the RCEQM is to become an advanced research and educational institution, by integrating various fields of expertise to target integrated watershed management and to investigate the adverse effects of existing and new environmental contaminants on human health and ecosystems.
- The RCEQM's research and education will contribute greatly toward solving current and future environmental problems.

## Research at RCEQM

To create and maintain a healthy, safe, resilient environment through:

- Risk-based, integrated watershed management that considers the effects of climate change on hydrology and water quality, the environmental risk assessment of toxic chemicals, and governance.
- Development of innovative technologies for managing and controlling contaminants in the environment. Sitting on the shore of Lake Biwa and near a municipal wastewater treatment plant, the RCEQM focuses on the management and pollution in the lake and its watershed and on municipal wastewater management.
- Revealing how human activity and nature generate contaminants, and the fate and effects of pollutants in the environment.
- Assays of environmental toxicity and biology, technologies for the management of contaminants, and establishment of an urban water recycling system.



## Activities

### Research

- Domestic and international research
- Academia–society collaboration for innovation

### Education

- Lectures, including international e-learning
- Opportunities for both domestic and foreign students

### Outreach

- Cooperative research with international, national, and local governments, the private sector, and private companies
- Technical, scientific and public seminars



## Research topics

### Environmental Quality Management

- ◆ Integrated watershed management of lotic and lentic water environments in Japan and Asia
- ◆ Taxonomy of natural organic matter to understand its role and function in the aquatic environment and in water and wastewater treatment
- ◆ Development of bio-mimic sensors for evaluating environmental toxicity
- ◆ Development of innovative genotoxicity tests
- ◆ Evaluation of the toxicity of chemicals by using “Omics” approaches: proteome, genome, transcriptome, metabolome, DNA adductome

### Environmental Quality Prediction

- ◆ Water quality management for a healthy aquatic ecosystem
- ◆ Risk management of emerging pollutants in water recycling systems
- ◆ Municipal wastewater management, including advanced water treatment and countermeasures against combined sewer overflows
- ◆ Water reclamation and reuse
- ◆ Pathogen control in wastewater, water reuse and the aquatic environment

### Environmental Quality Monitoring

- ◆ Cooperative research and education with visiting foreign scholars