The “Environmental Monitoring and Analysis in the East Asian Region: Technology Transfer and Environmental Governance” project has been implemented by the United Nations University since 1996. The project involves the monitoring of chemical pollutants in the coastal environments of 10 Asian countries, with the purpose of creating a sustainable global environment. To date, the project has conducted research focusing on volatile organic compounds (VOCs), endocrine disrupting chemicals, and persistent organic pollutants (POPs) in five phases, with each phase consisting of three years.

With the corporate philosophy of “Contributing to Society through Science and Technology,” Shimadzu has provided comprehensive support for this project from its commencement in 1996, utilizing the expertise that we have cultivated over our long history. In addition to providing liquid chromatograph mass spectrometers and other instruments manufactured in-house, Shimadzu has supported the convening of international symposia, and trained researchers in analytical technologies. In addition to improvements to capabilities of monitoring in detail the environments in various countries, definitive results have been amassed over these 15 years including improvements to detailed data analysis techniques, the construction of a social network across the major research institutions in Asia, the development of new analysis methods, and the accumulation of data.

Loans of New Models in the Plans for the Next Term

The fall of 2012 saw the implementation of “Monitoring and Governance of Persistent Organic Pollutants (POPs) in Asia -- Monitoring of PFOS (perfluorooctane sulfonate) and PFOA (perfluorooctanoic acid) pollutants in the aquatic environment. In this phase, Shimadzu is providing the latest ultra-fast liquid chromatograph mass spectrometers (LCMS) that are capable of monitoring compounds with larger molecular weights. In addition, Shimadzu will provide personnel training as per usual, capitalizing on our technical skills and expertise with respect to environmental analysis. The results of this project at the United Nations University are expected to promulgate through the Asian countries and beyond to emerging nations.

First Phase (1996-1999)
Environmental Monitoring and Analysis in the East Asian Region -- Technology Transfer and Environmental Governance --
Studies and monitoring of endocrine disruptors (pesticides, biphenyl A, dioxin, phthalic acid) in river and coastal waters were conducted to determine the degree of environmental pollution and allow the analysis of pollutants in the East Asian Coastal Hydrosphere.

Environmental Monitoring and Governance in the East Asian Coastal Hydrosphere -- Endocrine Disruptors in River and Coastal Waters --
Studies and monitoring of endocrine disruptors (pesticides, biphenyl A, dioxin, phthalic acid) in river and coastal waters were conducted to determine the degree of environmental pollution and allow the analysis of pollutants in the East Asian Coastal Hydrosphere.

Third Phase (2002-2005)
Environmental Monitoring and Governance in the East Asian Hydrosphere -- POPs in the East Asian Coastal Hydrosphere --
Studies and monitoring of the pollution status in rivers and soil were conducted, and the analytical expertise and human networking in the participating research organizations were reinforced in order to restrict and prevent persistent organic pollutants (POPs) in the East Asian Hydrosphere.

Fourth Phase (2005-2008)
Environmental Monitoring and Governance in the East Asian Hydrosphere -- POPs in the East Asian Coastal Hydrosphere --
Studies and monitoring of the pollution status in rivers and soil were conducted, and the analytical expertise and human networking in the participating research organizations were reinforced in order to restrict and prevent persistent organic pollutants (POPs) in the East Asian Hydrosphere.

Fifth Phase (January 2009 to December 2011)
Environmental Monitoring and Governance in the East Asian Hydrosphere -- Monitoring of Persistent Organic Pollutants (POPs) in the Asian Region --
Studies and monitoring of the pollution status in aquatic organisms such as crustaceans and fish were conducted, and the analytical expertise and human networking in the participating research organizations, including two additional countries, were reinforced in order to restrict and prevent persistent organic pollutants (POPs) in the East Asian Hydrosphere.

Continued Support for Environmental Projects with the United Nations University

To Cultivate Engineers and Environmental Protection in Asia

Aiming for Environmental Conservation in the Asian Region

The “Environmental Monitoring and Analysis in the East Asian Region: Technology Transfer and Environmental Governance” project has been implemented by the United Nations University since 1996. The project involves the monitoring of chemical pollutants in the coastal environments of 10 Asian countries, for the purpose of creating a sustainable global environment. To date, investigative research focusing on volatile organic compounds (VOCs), endocrine disrupting chemicals, and persistent organic pollutants (POPs) has been implemented in five phases, with each phase consisting of three years.

With the corporate philosophy of “Contributing to Society through Science and Technology,” Shimadzu has provided comprehensive support for this project from its commencement in 1996, utilizing the expertise that we have cultivated over our long history. In addition to providing liquid chromatograph mass spectrometers and other instruments manufactured in-house, Shimadzu has supported the convening of international symposia, and trained researchers in analytical technologies. In addition to improvements to capabilities of monitoring in detail the environments in various countries, definitive results have been amassed over these 15 years including improvements to detailed data analysis techniques, the construction of a social network across the major research institutions in Asia, the development of new analysis methods, and the accumulation of data.

Analytical technologies to a higher level, and he promised even stronger support than conventionally provided. The objective of the 6th phase is to study and monitor the status of POPs (perfluorooctane sulfonate) and PFOA (perfluorooctanoic acid) pollutants in the aquatic environment. In this phase, Shimadzu is providing the latest ultra-fast liquid chromatograph mass spectrometers (LCMS) that are capable of monitoring compounds with larger molecular weights. In addition, Shimadzu will provide personnel training as per usual, capitalizing on our technical skills and expertise with respect to environmental analysis. The results of this project at the United Nations University are expected to promulgate through the Asian countries and beyond to emerging nations.
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**Continued Support for Environmental Projects with the United Nations University**

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 Loans of New Models in the Plans for the Next Term

The fall of 2012 saw the implementation of "Monitoring and Governance of Persistent Organic Pollutants (POPs) in Asia -- Monitoring of PFCs --," a 3-year plan for the 6th phase of the project. As Shimadzu had decided to continue its support, a signing ceremony for a support-related agreement for the 6th phase of the project was held on November 12, 2012 at the United Nations University headquarters (Aoyama, Tokyo). The agreement was signed by the two highest officials of the respective organizations: Akira Nakamoto, President of Shimadzu Corporation, and Dr. Konrad Ostrwalder, Rector (at the time) of the United Nations University. At the signing ceremony, President Nakamoto noted that this agreement can be expected to further strengthen the established network of researchers, thereby elevating analytical technologies to a higher level, and he promised even stronger support than conventionally provided. The objective of the 6th phase is to study and monitor the status of POPs (perfluorooctane sulfonate) and PDA (perfluorooctanoic acid) pollutants in the aquatic environment. In this phase, Shimadzu is providing the latest ultra fast liquid chromatograph mass spectrometers (CLMS) that are capable of monitoring compounds with larger molecular weights. In addition, Shimadzu will provide personnel training as per usual, capitalizing on our technical skills and expertise with respect to environmental analysis.

The results of this project at the United Nations University are expected to promulgate through the Asian countries and beyond to emerging nations.

**First Phase (1996-1999)**

**Environmental Monitoring and Analysis in the East Asian Region -- Technology Transfer and Environmental Governance**

Studies and monitoring of endocrine disruptors (pesticides, bisphenol A, alkylphenol, phthalic acid) in river and coastal waters were conducted to determine the degree of environmental pollution and allow the analysis of pollutants in the East Asian Coastal Hydrosphere.

**Second Phase (1999-2002)**

**Environmental Monitoring and Governance in the East Asian Coastal Hydrosphere -- Endocrine Disruptors in River and Coastal Waters**

Studies and monitoring of endocrine disruptors (pesticides, bisphenol A, alkylphenol, phthalic acid) in river and coastal waters were conducted to determine the degree of environmental pollution and allow the analysis of pollutants in the East Asian Coastal Hydrosphere.

**Third Phase (2002-2005)**

**Environmental Monitoring and Governance in the East Asian Hydrosphere -- POPs in the East Asian Coastal Hydrosphere**

Studies and monitoring of the pollution status in rivers and soil were conducted, and the analytical expertise and human networking in the participating research organizations were reinforced in order to restrict and prevent persistent organic pollutants (POPs) in the East Asian Hydrosphere.

**Fourth Phase (2005-2008)**

**Environmental Monitoring and Governance in the East Asian Hydrosphere -- Monitoring of Persistent Organic Pollutants (POPs) in the East Asian Hydrosphere**

Studies and monitoring of the pollution status in aquatic environments such as crustaceans and fish were conducted, and the analytical expertise and human networking in the participating research organizations, including two additional countries, were reinforced in order to restrict and prevent persistent organic pollutants (POPs) in the East Asian Hydrosphere.

**Fifth Phase (January 2009 to December 2011)**

**Environmental Monitoring and Governance in the East Asian Hydrosphere -- Monitoring of PCBs and Other Persistent Organic Pollutants (POPs) in the Asian Region**

Studies and monitoring of the pollution status were conducted with respect to PCBs in the aquatic environment and brominated flame retardants in the sediment, in order to restrict and prevent persistent organic pollutants (POPs) in the Asian environment. At the same time, analytical expertise and human networking in the participating research organizations were reinforced.