



Preface

Global mercury contamination is an urgent matter for the international community. In 2003, the Global Mercury Assessment report noted significant adverse global impacts from mercury and its compounds and urged further international action. Due to its long-range atmospheric transport, its persistence in the environment and its significant negative impacts on human health, mercury accumulation and exposure have become global concerns, leading to adoption of the Minamata Convention on Mercury in 2015.

Having entered into force in August 2017, the Minamata Convention aims to protect human health and the environment from anthropogenic emissions and releases of mercury. It restricts anthropogenic releases of mercury throughout its lifecycle, from mining, trade, usage, emissions and releases to storage and disposal. The Convention also highlights social issues related to mercury, such as vulnerable populations facing risks from mercury—particularly children and women of child-bearing age and the informal sector working in the field of artisanal and small-scale gold mining (ASGM).

The international community has been working hard to comply with the measures established in the Convention. One of the remaining issues is how to certify long-term management of mercury waste as environmentally sound. There is estimated to be a large amount of surplus mercury in stocks around the world, and mercury waste generated unintentionally will continue to be emitted every year. Thus, proper management of mercury waste is the next big challenge for the Convention. Some countries, such as Japan and the EU have already legislated final disposal of mercury, but permanent mercury stabilization technologies are still new and need further development for certification of safe long-term storage in the environment. Enhancement of mercury waste management capacities in developing countries is also crucial.

In this Special Issue of *Global Environmental Research*, the latest research is reported by scientists and experts in the areas of mercury management, including the Secretariat of the Minamata Convention as well as government bodies and research institutes. What is unique about this Special Issue is that the ten manuscripts it presents cover a wide range of scientific and social aspects of mercury waste management, including analyses of mercury final disposal measures, long-term behavior of mercury in landfills, cognitive aversion to mercury, management of mercury-containing products, development of mercury thresholds, development of the Convention in the context of the Sustainable Development Goals (SDGs), implementation of the Convention and future challenges. I appreciate these experts for their efforts to provide valuable knowledge and expertise on this important matter, and hope that this information will facilitate global efforts to establish environmentally sound long-term management schemes for mercury waste.

July 2020
Guest Editor
Reiko SODENO
(Shibaura Institute of Technology, Japan)

