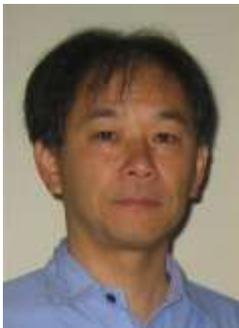


Importance of health for water sustainability

Chiho Watanabe
Professor, University of Tokyo

Urban water bodies are connected in multiple ways to human health. Obviously the quality of drinking water is directly linked to the health of the population who consumes it. For example, the contamination of water by various types of microorganisms may cause diarrhea (ranging from very mild to fatal), which is a major public health threat among children in developing countries. Chemical contamination can also have negative public health outcomes. For example, arsenic contamination of groundwater endangers the health of far more than 10 million people in several Asian countries including Bangladesh. Water bodies in urban areas can also serve as habitat for vector organisms such as mosquitoes, although such negative health outcomes will be more important in rural areas, where mosquitoes and some types of flies, snails, and microorganisms can infect humans. The public health outcomes of reduced water quality can be analyzed in reverse direction, i.e. by capturing the impact of health seeking action/behavior on water sustainability. A typical example is the setting of higher water quality standards for arsenic in some Asian countries. The rationale is probably simple. If these standards were tightened then the amount of water for drinking, would be much reduced. In other words, assessing and managing health risk is connected with water sustainability, especially where the tight regulation based on stringent health risk assessment means that large amounts of polluted water will be diverted away from human use. This talk will discuss the link between health risk and the environment including water in terms of “footprint”.



Chiho Watanabe, is Professor at the Graduate School of Medicine, University of Tokyo. He has also been a member of IR3S and of EDITORIA (the Earth Observation Data Integration & Fusion Research Initiative), both at the University of Tokyo. He received Doctor of Health Science from the University of Tokyo in 1991. His background is in the toxicology [of metals], and the nutrition of essential trace elements. He has been interested in the effects of environmental chemicals associated with particular environmental/biological context and has been engaged in both experimental and field studies. Some of his field studies include arsenic contamination in South Asia, chemical environment associated with changing subsistence farming in rural Asia, and the use of “earth observation data” to tackle health-related issues associated with climate change.