Lee Kuan Yew School of Public Policy
National University of Singapore

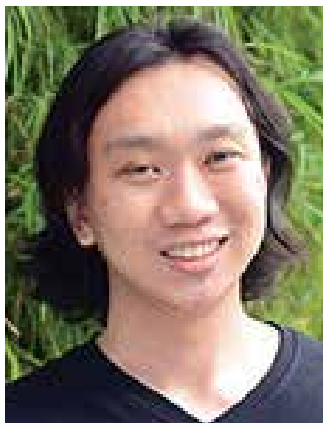
Institute of Water Policy

IWP RESEARCH SEMINAR

FLUORIDE: A NATURALLY-OCCURRING HEALTH HAZARD IN DRINKING-WATER RESOURCES OF NORTHERN THAILAND

Most cases of drinking-water resource degradation are in direct association with the contamination of water as a result of anthropogenic activities, e.g. pesticides and fertilisers from agriculture, tailings from mining operations, effluents from industrial processes, chemical spills, etc. While contaminants of anthropogenic origin will likely continue to be a major cause of the impairment of drinking-water resources, naturally-occurring drinking-water hazards, although less commonly reported, do exist — and they play a substantial part in the threat to public health and livelihoods of millions around the world. One such hazard is fluoride. In small amounts, fluoride is beneficial for oral health. However, prolonged exposure to high doses can lead to irreversible dental and crippling skeletal fluorosis. An estimated 200 million people from nearly every continent in the world are exposed to high concentrations of naturally-occurring fluoride in water that exceeds the World Health Organisation's guideline value. The case of high-fluoride drinking-water in the provinces of Chiang Mai and Lamphun shall be the focus of this talk. The key environmental processes which control the transport of fluoride from source to sink will first be presented. Then, the risks of vulnerable populations to fluorosis and the implications of the occurrence of these high-fluoride waters to the local water resource governance will be discussed.

ABOUT THE SPEAKER



Mr Joon Chuah
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Joon is currently a Research Associate at the Institute of Water Policy. For his PhD dissertation (with the Department of Geography, NUS), he investigated the chemical and microbiological quality of water resources in Northern Thailand as well as its impacts to the health of the local communities. He also completed his Master's degree at NUS with the Division of Environmental Science and Engineering where he cultured bacteria to biodegrade persistent, toxic chemicals in wastewater. He has also spent several years in the private sector as a civil and environmental engineer in Malaysia and Singapore.

CHAIR
Professor Robert Wasson
Senior Research Fellow, Institute of Water Policy, Lee Kuan Yew School of Public Policy

Monday, 25 April 2016, 12:15pm-1:30pm
Seminar Room 3-5, Level 3, Manasseh Meyer Building, Lee Kuan Yew School of Public Policy
469E Bukit Timah Road, Singapore 259774

Admission is free. Please register at lkyschoolevents@nus.edu.sg

Light lunch will be served for those who register by 20 April 2016.