

**Title:**

Development of a remote and efficient water quality monitoring system for tropical urban source water

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**Description:**

Flash flood or long drought phenomena are increasingly causing problems worldwide. Surface runoffs after heavy rainfall carries contaminants, microorganisms and solid suspensions that can end up reaching the source water and polluting it. Some of these may be hydrocarbons from road run-off, storage reservoirs and other sources that can cause serious problems for water treatment as well as long term water pollution problems. As for drought, the dropping volume level at the source water reservoir leads to increase in the concentration of the available contaminants and growth of microorganism communities. These cause severe problems in providing potable water to communities. The Institutional Link between the University of Manchester, UK and Swinburne University, Malaysia is intended to bring together dedicated multidisciplinary teams with the aim of constructing, testing and deploying sensing equipment that can help to maintain the integrity of potable water supplies. The focus is on the development of an innovative monitoring system that can detect contaminants that are associated during and after water crises in tropical climate regions. The measurement will be made using gas sensors to capture the volatile organic compounds (VOCs) caused or produced by the presence of the contaminants such as microorganisms and organic matter in the water. The topic investigated is a global problem and this Institutional Link is the first step in establishing a collaboration that can benefit both the UK and Malaysia economically, improve social welfare, and stimulate both academic and commercial partnerships.

**Graphical Abstract:**

