**Impact of flood on water quality: a case study in a flood-prone area of Thua Thien Hue province**

**Abstract**

 *People living in flood-prone areas are vulnerable to damages caused by annual floods, including changes in water quality. Seasonal flooding alters water quality in many aspects by introducing silt, nutrients, organic compounds, and sometimes bacteria. In this study, 50 household interviews in the flood-prone area in Thua Thien Hue province, were conducted to identify the flood characteristics. A total of 36 water samples, including surface- and pipe water, were collected and analyzed the basic parameters in December 2019 and June 2020 to demonstrate the main impacts of the flood on water quality. In general, in some aspects, flood helped reduce the organic contaminants (based on DO, BOD, and COD values assessment) and salinity, and somehow increase the total coliform at most of the sampling stations. Unpredictable weather and hydropower plant from upstream were believed to be the main causes of flood volume reduction in recent years, which also contributed to changes in water quality*

**Keywords:** impact of flood, water quality, surface water, pipe water, Thua Thien Hue.