

# **ASSESSMENT OF THE IMPACTS OF UNCONCENTRATED DOMESTIC WASTEWATER IN HANOI ON THE WATER QUALITY OF NHUE RIVER**

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## **Summary**

This study was conducted to assess the impacts of domestic wastewater that is not collected and treated, but drained directly into the Nhue River passing through Hanoi. In a 30-km-long field survey along the banks of the Nhue River, a total of 11 main sewers in the residential areas pouring directly into the Nhue River were identified. These sewers collected both surface run-off and domestic wastewater. The analysis results of wastewater samples showed that BOD<sub>5</sub>, COD, TSS, NH<sub>4</sub><sup>+</sup>, PO<sub>4</sub><sup>3-</sup> and *Coliform* at all sites exceed QCVN 14: 2008/BTNMT (column B) by many times, indicating that the wastewater was not treated or treated but did not meet treatment standards. Moreover, the same parameters of river water sampled from Nhue River around the sewers also exceed QCVN 08-MT: 2015/BTNMT (column B1). The slow river velocity that was field observed could limit the self - cleaning ability of the river. The results confirmed that the unconcentrated wastewater discharge in Hanoi have a negative impact on the Nhue River and could cause a large - scale waster pollution that affect downstream area.

**Keywords:** *Nhue river, unconcentrated domestic wastewater, impact assessment.*