



ASIA · GEOGRAPHY

**The 4<sup>th</sup>  
Asian Conference  
on Geography**

**第四届亚洲地理大会**

**PROGRAMME**

December 6-10, 2018

2018年12月6-10日

Sun Yat-sen University, Guangzhou, China

中国·广州·中山大学

# **An appraisal of water quality and human health risk in Kurunegala Municipality area- Sri Lanka**

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## **Abstract**

Water pollution has become a critical issue in Kurunegala Municipal Council (KMC) area, due to the industrial effluents and solid waste disposal, open excretion, seepage of chemicals and pollutants in to the existing water bodies, which has resulted life- threatening diseases to the human. Therefore, this study is designed with the prime objective of assessing the existing status of water quality and related health issues caused by the contaminate water.

The study revealed that the pH value of North East GND of KMC area shows as 6.362 and 6.409; West GND-5.947 and 6.161. Theliyagonna GND-6.481 and 5.754. The lowest pH value was observed in the Illupugedara and Udawalpola GNDs, which are 6.213, and 5.306 respectively. The concentration of two water samples taken from west of the KMC were reached to undesirable level ( $1167\mu\text{s}/\text{cm}$  and  $1552\mu\text{s}/\text{cm}$ ). Another two samples collected from Illupugedara were also reached to undesirable ( $1156\mu\text{s}/\text{cm}$ ,  $1521\mu\text{s}/\text{cm}$ ). Due to this situation, the dwellers of the area encounter with various health issues. All the stakeholders must be educated and aware on this crisis situation and should be called for participating in management activities to overcome this adverse impacts to the human health. Respective law implementing Authorities must be more instrumental in implementing laws against the all illegal activities. KMC must understand the necessity of integrate effort to control and manage water quality of the area in sustainable manner.

**Key words:** water quality, contaminated water, health issues, integrated and stakeholders