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| Title | Status of Heavy Metals in Water and Sediments of Canals and Rivers around the Dhaka City of Bangladesh and their Subsequent Transfer to Crops | | |
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| Abstract |  |
| The study was carried out to observe the present status of heavy metals in water, sediment, soil and plant in the Tejgaon-Rampura-Shitalakhya water channel and the adjacent areas of the Dhaka city as well as to evaluate the heavy metal transfer in the water-soil-plant systems. Water, sediment, soil and plant samples were analyzed to know about lead, cadmium, copper and zinc contents. The findings show that heavy metal concentrations in water, sediment, soil and plant in the study area had the trend: Tejgaon Khal>Rampura canal>Shitalakhya river. Different water quality parameters such as pH, DO, BOD, COD, TDS, and NH3 shows that most of the values are higher than the DoE (Bangladesh) recommended irrigation water standards. The heavy metal concentrations in water varies and are well below the recommended values except for Cd and the trend follow the order Pb>Cd>Zn>Cu. The concentrations of the investigated heavy metals in sediment samples are found higher than the USEPA recommended sediment standards and follow the trend Zn>Cu>Pb>Cd. Similar trends are observed for the heavy metals in soil. The accumulation of heavy metals in plants followed the trend Zn>Pb>Cu>Cd in the Tejgaon and Rampura area while the trend are Zn>Cu>Pb>Cd in plants from Shitalakhya. In most of the cases the results of the tested parameters shows significant variations (at 1% level) from Tejgaon river samples with others. | |

**Please specify which Sustainable Development Goal (SDG) (s) falls under your research:**

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| --- | --- | --- | --- |
| Goal 1 | No Poverty | Goal 2 | Zero Hunger |
| Goal 3 | Good Health and Well-Being | Goal 4 | Quality Education |
| Goal 5 | Gender Equality | **Goal 6** | **Clean Water and Sanitation** |
| Goal 7 | Affordable and Clean Energy | Goal 8 | Decent Work and Economic Growth |
| Goal 9 | Industry, Innovation and Infrastructure | Goal 10 | Reduced Inequalities |
| Goal 11 | Sustainable Cities and Communities | Goal 12 | Responsible Consumption and Production |
| Goal 13 | Climate Action | Goal 14 | Life below Water |
| Goal 15 | Life on Land | Goal 16 | Peace, Justice and Strong Institutions |
| Goal 17 | Partnerships for the Goals |  |  |