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| Title | Characteristics of municipal landfill leachate and its impact on surrounding agricultural land | | |
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| Abstract |  |
| An investigation was carried out to assess the characteristics of leachate and its impact on surrounding agricultural land of the Matuail landfill site, Dhaka, Bangladesh. Leachate samples were collected from active dumping areas; soil and plant samples from three different sites of surrounding agricultural areas. Water quality parameters like pH, DO, BOD, COD, TDS were measured for leachate samples and heavy metals like Cu, Zn, Pb, Cd, Ni were analyzed for leachate, soil and plant samples. The results showed that untreated leachate concentrations of DO, BOD, COD and TDS were 1.34, 96, 1343 and 7120 mg/l, respectively that exceeded inland surface water standard but the concentrations of DO (7.49 mg/l), BOD (10 mg/l) and TDS (790/l) in the treated leachate pond were found within the permissible limits. The leachate samples are not contaminated with heavy metals as these are present below the toxic limits. The heavy metal concentrations in agricultural soils are below the permissible limits except Pb; but in plants the concentrations of Cu, Zn and Pb exceeded the critical limits. | |

**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 |  |  |