

4.068 Green House Gas Emission from Solid Waste Disposal Sites in Sri Lanka.

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Abstract:

Waste collection and disposal has become a serious problem in Sri Lanka with the expansion of urban population and rapid changes of the consumption patterns. Local authorities are responsible for municipal solid waste management in Sri Lanka. However the capacity of Local Authorities is not sufficient to manage all waste generated within the local authority limit. Only limited local authorities are running sanitary land filling practice currently and others open dump. In Sri Lanka there is no separation at the collection as biodegradable and non biodegradable.

The garbage mound located at Meethotamulla collapsed on 14th April 2017 destroying houses and infrastructure situated at the toe region of the south western side of the garbage mound. According to the situation report of "Meethotamulla MSW Dump Disaster" by the Disaster Management Centre, 60 houses have been completely destroyed, 27 partially damaged while 32 bodies have been recovered from the damaged area. The Meethotamulla waste dump site is located about 4.0 km east of Colombo which is the capital city of Sri Lanka. The spatial data obtained from the drone survey shows that at the time of collapse, the dump has occupied an area of 78000 m² having a maximum length of approximately 413m in the NW to SE direction and a approximate width of 189 in NE and SW direction. The maximum crest height of the mountain was in the range of 40 to 50m.

Presently, about 250 open dump sites in active operation out of which 25 are same as Meethotamulla garbage dump site. MSW disposal sites are one of the biggest CH₄ sources of the country and it is an acute problem. According to the second national communication on GHG inventory preparation, a total of 84.06 Gg of methane has released from MSW disposal in the country in 2002.