Overview of the methane emissions from domestic wastewater in the Republic of Serbia

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ABSTRACT

In this paper, methane emissions from domestic wastewater were estimated using 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines. Wastewater can produce methane if it is handled anaerobically. According to the 2006 IPCC Wastewater model, methane emission is a function of the amount of generated organic waste and an emission factor that characterizes the extent to which this waste generates methane. The amount of degradable organic fraction in wastewater represents the main factor in determining the quantity of methane production. In this study, the population was divided into two areas, urban and rural. A survey was conducted in order to determine the number and type of wastewater treatment plants. At the current state, 38 wastewater treatment plants are in operation. Country-specific methane emissions from closed sewers, stagnant open sewers, septic tanks, and latrines combined are estimated to be about 22,000 tons per year.

Keywords: Domestic wastewater; Methane emissions; IPCC guidelines