

Greenhouse gases (GHG) emission from different land use

Zoran A. Galić¹

¹ *Institute of Lowland Forestry and Environment, Novi Sad, Serbia*

In past period climate change was highlighted as a fundamental ecological problem and so far, remains one. Greenhouse gases (GHG) emission was shown to have a predominant influence on global climate. In this context irreversible man-made changes, experienced by ecosystem, remain one of the predominant recent environmental problems. Land-use change (LUC), resulting in tremendous anthropogenic transformation GHG emissions is claimed by Intergovernmental Panel on Climate Change (IPCC) to be among the main driving factors influencing climate change. Land conversion to urban and different types of agricultural ones is entailed by tremendous changes in soil cover and vegetation, emissions of energy and matter. Soils are part of the largest terrestrial ecosystem with a carbon pool. As the most important drivers of GHG emissions from soils, the soil temperature, soil water content, nutrients (C/N-ratios), soil pH value, land use, land cover, type and age of vegetation, local and regional climate, and hydrology were determined. Another gap in understanding of GHG emissions' variability and drivers behind it is non-uniform distribution of monitoring nets. At the microsite level, soil temperature and soil water content are the most dominant factors that affect CO₂ emissions from soils, where one of these drivers can be more influential than another.

Keywords: Climate change, Greenhouse gases, Soil