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A CASE STUDY ON CARBON FOOTPRINT IN ERZURUM CITY OF 2012, TURKEY

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ABSTRACT

Today, climate change is considered one of the greatest environmental problems of the world. It has observable serious effect on ecological system by reducing the biodiversity, threatening flora and fauna, affecting water, energy, carbon and other essential element cycle and shifting in the distributions of plant species which currently provides important ecosystem services by controlling erosion, soil conservation, carbon sequestration, nutrient cycling, and maintenance of water quality. Due to its global effect, Turkey has to deal with the challenges of climate change as well. As a parting in Appendix I of United Nations Framework Convention on Climate Change (UNFCCC), Turkey has an obligation to inform the UNFCCC, to develop and implement new policies for fighting climate change and to report the existing data of greenhouse gas emissions. In this work, we monitored carbon dioxide emissions which is the main greenhouse gas in the Erzurum City, Turkey with the fact that most of the global emissions are generated by cities. The main point of this study is to calculate carbon footprint of Erzurum city by GPC-Global Protocol for Community-Scale Greenhouse Gas Emissions, Pilot Version 1.0, and to establish a basement for further studies in order to reduce the using of fossil fuels by encouraging to spread the cleaner energy sources and renewable energy investments in the long period. The results also provide to guide for adverse effect of climate change by analyzing the current situation for further researches on environmental and ecological studies of Erzurum City.

Keywords: Climate change, Carbon footprint, Erzurum city.