

Carbon money system-recycling of waste paper in response to climate change

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Abstract

Thirty-five percent of the world's forests (about 4 billion trees) are utilised as raw materials for paper, and paper raw material production has expanded 400 percent in the last 40 years. When generating 1 tonne of paper, it has been stated that recycling waste paper can save 30,000 litres of water, 17-31 trees, 4,000 kWh of electricity, and 60 pounds of air pollutants. According to research published in 2010, recycling one tonne of waste paper saves 1,070 kg of CO₂, 95 percent of air pollutants, and 28 to 70 percent of water and electricity, all of which contribute to climate change mitigation, pollution reduction, and energy use reduction. To deal with climate change, 17 European countries have joined the COST Action E48 project, which entails data collecting and analysis of waste. The appropriate policy foundation, waste recycling guide, and system required around 5 years to develop. Recycling 1 tonne of waste can save 937 kg of CO₂, 3,224 kWh of energy, 42,465 litres of water, and 340 kg of garbage, according to the United States Environmental Paper Network (US EPN). Pilot program of the ???Carbon Money System??? to be installed in the Olympic Park with aims to stimulate paper raw materials businesses through recycling and incorporating ???low-carbon city??? model as part of the Carbon Mineralization Flagship.

There are currently about 20.1 million confirmed cases worldwide, with 742 thousand deaths. The top ten countries depicted in Fig. 1 with reported cases include the USA (5,094,400 persons), Brazil (3,057,470 persons), India (2,268,675 persons), Russia (890,799 persons), South Africa (563,598 persons) etc. The COVID-19 pandemic has uncovered various flaws and limitations in the current socio-economic, health, and environmental sectors across countries, regardless of income group (poor, middle, and higher income) (Owusu and Asumadu 2020).

Though the COVID-19 epidemic is said to have reduced air pollution and noise pollution, as well as increased biodiversity and tourist attractions, the effects of stay-at-home and preventive measures on waste management is concerning. Due to the unprecedented output of garbage from both families and health facilities, there appears to be a trash emergency due to the hoarding of gloves, gowns, masks, and other protective clothes and equipment. Failure to adequately handle trash created by health facilities and families may result in secondary transmission of COVID-19. Due to the exposure to contaminants, rampant dumping, open burning, and incineration could have an impact on air quality and health outcomes. As a result, there is a problem in managing atypical trash in a sustainable manner while lowering air pollution, minimising secondary virus transmission, and mitigating potential health risks utilising existing garbage facilities. Furthermore, without proper waste management systems and waste emergency strategies to combat the epidemic, there could be major ramifications for underdeveloped countries.

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