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**Sustainability Measures Under Implementation of SDG 13 by Selected Regional Plantation Companies in Sri Lanka**

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**Abstract**

Climate change has been one of the greatest threats the world has ever faced. The primary factor driving climate change is the increased emission of greenhouse gases, with carbon dioxide (CO<sub>2</sub>) being the most prominent among them. This study aimed to assess the sustainability measures taken by three leading regional plantation companies in Sri Lanka in achieving the Sustainable Development Goal 13, focusing on mitigation of CO<sub>2</sub> emissions from energy consumption. CO<sub>2</sub> emissions from electricity consumption and fossil fuel use (diesel, petrol, and liquid petroleum) were calculated, and the eco-efficiency of each company was determined. The trends in waste generation were also studied. The study period spanned from April 2017 to October 2022, and data were collected with the assistance of sustainability officials of the respective companies. The results showed that all three companies were able to reduce CO<sub>2</sub> emissions from energy consumption per kg of the final product of tea and increase eco-efficiency over time. However, the findings also revealed that CO<sub>2</sub> emissions from fossil fuel usage had an increasing trend in all three companies, while CO<sub>2</sub> emissions from electricity had a decreasing trend. Waste generated per 1kg of the final product of tea had an increasing trend in two companies, but company C was able to reduce the trend. Solid waste can directly contribute to greenhouse gas emissions by generating methane through the anaerobic decay of waste in landfills. The findings of the current study help in understanding the sustainability trends in tea industry and highlight the importance of reducing fuel and electricity consumption to achieve SDG 13, as CO<sub>2</sub> emissions are a major cause of climate change. The selected companies have also implemented biodiversity conservation and reforestation programs to support the fight against climate change, and all three companies have the rainforest alliance certificate. Deforestation needs to end in the country in order to mitigate the climate crisis. Despite the positive steps taken, there is still room for improvement in achieving the SDGs by these companies by 2030. Therefore, the findings suggest that continuous evaluation and improvement of sustainability measures are necessary for regional plantation companies to contribute effectively to achieving the SDGs.

**Keywords:** SDG 13, Energy consumption, CO<sub>2</sub> emissions, Waste generation, Climate change