

Developing Carbon Footprint Based Environmental Performance Indices for Garment Manufacturing Industries in Sri Lanka: A Case Study at Body Line (Pvt) Ltd, Balangoda

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Among the most of environmental consequences, climate change is known as one of the major environmental consequence which cause to many adverse impacts .To overcome with this issue most of environmental bodies are encouraging business organizations and consumers to be carbon conscious. . The objective of this study was to develop Carbon Footprint Based Environmental Performance Indices (KPI) in a garment manufacturing industry. This study was conducted in Body Line (Pvt) Ltd which is located in Balangoda. In this study direct and indirect GHG emission sources were identified in all the operations in the organization. Activity data was collected covering 12 months period in 2015 – 2016 which are relevant to all emission sources and converted in to the GHG emission by referring published GHG emission conversion factors. According to the study, total carbon footprint is 1451tCO₂e for a one year period of operations. Highest amount of GHG emission was emitted from indirect GHG emission sources which were accounted as 113tCO₂e.and the least amount of GHG emission was emitted from direct GHG emission sources which were accounted as 38t CO₂e.Considering the key performance indices(KPI), Derived KPI for per meal was 0.086kgCO₂e. KPI related to purchased electricity usage, it was estimated as 0.63kgCO₂e per standard work hour and 0.108kgCO₂e per production unit.

Keywords: Carbon Footprint; GHG Emission; KPI; Garment Industry