Exploring Green House Gas Saving Potential of Transport Plan Optimization in Fabric Manufacturing Industry: A Case Study at Textured Jersey Lanka Plc, Avissawella

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The global warming caused by the Green House Gas (GHG) is a hot topic in recent year in the world. The transportation is considered as one of the major GHG emitting operations in a company and also these operations incur more cost to the company. However organizations are not much aware and consider about the GHG but the cost. Whoever with the growing trends in climate consciousness among people or the consumers, therefore apparel industries are moving towards in that direction which is become a climate conscious company. The main objective of this study is to assess the transport related GHG emission and saving potential in relation to transport optimization at Textured Jersey PLC .GHG protocol Part 3 and ISO 14064 Part 1 were used to conduct the assessment. There were five emission sources were identified as employee commuting, upstream transportation, downstream transportation, business travels, and waste item transportation. All the data related to those five emission sources were gathered by relevant data sources mainly from running sheets, air way bills, sea freight bills, foreign travel requesting sheets and check sheets. The collected activity data were converted to the CO2e using relevant emission factors. The results indicate that the total transport related carbon foot print as 1878.25 tons CO2e per year. The employee commuting contributes 357.77tons CO2e per year emissions and it is accounted as 19% from total transportation emission of the company. The upstream transportation represents 1081.38 CO2e tons emission and it is accounted as 58% from total transportation emission of the company. The downstream transportation represents 383.85tons CO2e.of carbon emission and it is accounted as 20% from total transportation emission of the company. The Business travel represents 54.62 tons of CO2e.emission and it is

accounted as 3% from total transportation emission of the company. The waste transportation represents 0.628 tons of CO2e Total saving of 518 tons of CO2e were estimated based on the options identified to make efficient vehicle capacity management and transport demand management in the organization. Also GHG emission related Key Performance Indices (KPIs) were developed and estimated reduction targets were set for further monitoring purposes.

Keywords; Transportation Carbon Foot Print; Key Performance Index