Abstract

The effects of climate change such as drought, storms and extreme weather are affecting the earth. Greenhouse gases are the main cause of climate change and carbon dioxide (CO2) takes the larger proportion of the total greenhouse gases emitted. CO2 is projected to continuously increase based on simulation and data mining tools relying on historical data. Globally, 80% of CO2 emission is from combustion of fossil fuel mainly in manufacturing industry or transportation industry. Governments in both developed and developing countries have formulated policies to manage CO2 emission by orienting them towards consumers or manufacturers. In Zambia, CO2 emission control has mostly focused on transportation industry where carbon emission tax is charged on motor vehicles depending on combustion capacity. Transportation is an industry that has had a high increase of total CO2 emission currently standing at 35% but with average of 31.7 % from 1971 to 2014 in Zambia. The manufacturing sector, though being the highest emitter of CO2 has seen no policies formulated to regulate emissions. Predicated emission values for both transportation and manufacturing sector show a continuous domination of these two sectors regarding carbon emission. The task is then left
with policy makers to introduce policies that will regulate emissions as the current carbon tax policy does not seem to be effective in reducing emissions. This paper brings out the trends in CO2 emission from fossil fuels in Zambia from 1964 to 2016. The paper also highlights the main industries contributing to CO2 emission, the policies implemented to control CO2 emission levels globally and in Zambia, provides a forecast for CO2 emission levels till 2021 and suggests future research directions based on the findings.

References

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Index Terms

Computer Science  Information Sciences

Keywords

Climate, Policy, Emission, Data Mining, WEKA, SMOreg, Carbon Tax