

Mitigate carbon dioxide emission and plastic through environment friendly practices

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Abstract— This paper investigates the environment friendly procedures, to tackle carbon emission and plastic waste. Urbanization, population size and other global issues has lead to increase in warming of earth and more plastic waste, the two major factor leading to climate change. What are the ecofriendly ways and how the world is progressing on it Many companies, organizations and governments are adopting practices that are environment friendly.

Keywords— Carbon emission, Plastic waste, Ecofriendly, Climate change.

I. INTRODUCTION

The industrial revolution has been the beginning of climate change; which major impact we see today. Understanding how climate change affects us and what can we do to tackle it is the key response to the global crisis. To stave off or offset the negative impact of climate change we need to be ecofriendly. Act of living with intent is being ecofriendly.

Plastic is not the only factor that affects environment but is one of the major source of climate change as it takes decades to decompose, in addition to this, toxic substances are released on exposure to sunlight and burning. Simons (2005) suggests that, owing to the unregulated accumulation of carcinogenic compounds, the use of plastic bags may allow inroads into cancerous diseases.¹ Plastic bags are dumped indiscriminately worldwide that occupy tons of hectares of land and results in emission of dangerous methane and carbon dioxide gases along with highly toxic leachates from these landfills during their decomposition stage.

The increase in volume of carbon dioxide due to burning of fossil fuels and deforestation has resulted in increase of Earth's temperature by 0.14° F (0.08° C) per decade since 1880, to more than twice that: 0.32° F (0.18° C) per decade since 1981 and the year 2020 tied with 2016 for the hottest year on record. i.e. largely responsible for greenhouse effect (as carbon dioxide absorbs a part of terrestrial radiation and reflects back some part of it towards Earth's surface, hence more carbon

dioxide in atmosphere more reflection of radiations more the rise in temperature of earth).³

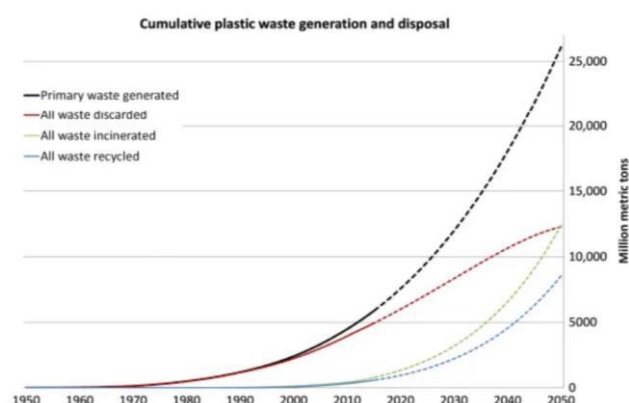


Figure 1.² – Cumulative plastic waste generation and disposal

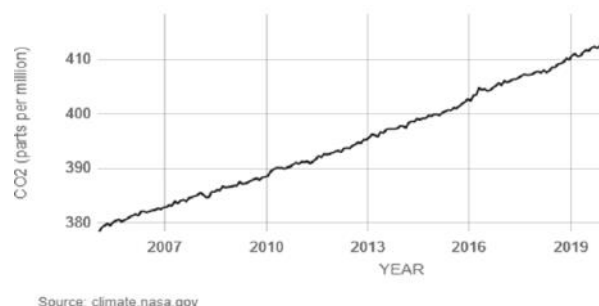


Fig.2.⁴ – Carbon dioxide emission (2005-present)

II. METHODOLOGY

The measurement of presence or absence of a particular particulate in air, informs us about the rise of carbon dioxide and small plastic particles present in air. Basically the carbon footprint is the total amount of greenhouse gas emissions that anything produced by an organization, a person or an event. The appropriate regression model is used to analyze plastic pollution in ocean (Pacific Ocean – ‘the Great Pacific garbage pack’), great lake (by micro plastics), rivers, contamination of soils, arctic ice cores.⁵

Reduce carbon emission from driving (alternatives to driving, using low carbon or electric vehicle, get a hitch mounted cargo rack, tire inflammation and other thing), air travel, home energy (solar energy and clean energy resources), food (cut beef and dairy, eat locally produced and organic food).

Efforts to reduce plastics include mechanical, chemical, thermochemical and biotechnological recycling processes.⁶ replace it by stainless steel, glass, platinum silicone, beeswax coated cloth, natural fiber cloth, wood, bamboo, pottery and other ceramics, cardboard. Bioplastics can also be used like biopolymer – liquid wood (made from pulp based lignin, a renewable resource), unfortunately some bioplastics don’t breakdown easily by organisms.⁷

III. DISCUSSION

Many companies are working on biodegradable packaging as in Poland pressed hay is being used for egg cartons, one of the super market of Thailand is using banana leaves and bamboo packaging, replacement of Styrofoam packaging from mushroom packaging and seaweed-based packaging.⁸ Grape waste is used as to form a synthetic leather and fabric for clothing in place of vinyl imitation leather by an Italian company.⁷ Raigopalan Vasudeva (plastic man of India) used plastic in making roads. School in Assam takes used plastic as fees and recycle the waste.⁹

UNEP is at the front in support of the Paris Agreement goal which sets the target of keeping global warming this century to well below 2°C, and aiming - to be safe - for 1.5°C, compared to pre-industrial levels. UNEP has developed a Six-Sector Solution to reach the goal.¹⁰ This includes finance, carbon markets, loss and damage, transparency and looking to wrap up important technical details of the “Paris Rulebook.” The COVID-19 pandemic has seen global decline of CO₂ by 5.4 per cent in 2020, but it was a temporary reduction. In 2020 as compared to 2019

levels are predicted to be only slightly lower, pushing the carbon dioxide concentration in the atmosphere to the higher level as it has been in the last two million years.¹⁰

IV. CONCLUSION

“Friday for future” – Greta Thunberg, a child environmental activists, known for challenging world leaders to take immediate action for climate change.

UNFCC and all the nations are working on making a healthy Earth through educational campaigns. Also Indian government and organizations are setting goals to offset plastic waste and carbon emission. It could be possible that slowing population growth can provide 16–29% of the emissions reductions estimated to be necessary by 2050 to avoid dangerous climate change.

Small steps should be initiated by every individual like, plant a tree, using wooden brushes and combs instead of plastic, replacing plastic containers from glass in kitchen, turn down the plastic bags, use disposable of leaf, wood or paper, travel in public vehicle or cycle, eating more vegetables reducing red meat in diet and more.

“Don’t despise the small beginnings because great things are just around the corner” –Creflo Dolar.

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