

Zero Emission Pure Engineering



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Abstract

CO₂ emission has now recognised as a major critical global risk factor for disease. Increasing public awareness of air quality and the burden of disease caused by CO₂ emission has an essential step in reducing CO₂ emission and improving public health. This research has taken the exposure of CO₂ emission, burden due to CO₂ emission and then disease due to CO₂ emission in order to explain how India has affected by it and comparing it to global numbers.

Introduction

CO₂ emission has most prevalent in Indian industry and has shown extraordinary diversity as evidenced by good manufacturing practices circulating norms and innumerable unique combination norms. The Indian chemical industries have the second largest in the world, brewing more than 102 million tons of chemical every year. Unofficial estimates say that it has over 11,0000 chemicals being marketed by companies making idyllic premises like Union Carbide Corporation (UCC), Bhopal, did 33 years ago. The industry has ignorant of properties and noxious potential of the chemicals it produces in increasing quantities of the 3350 chemical compounds for instance used in pesticide sector, the toxicity of only 168 is known. In cosmetic industry of the 3490 chemicals that has use, toxicity of 400 chemicals has only known, unlisted toxicity then there is other danger. Overall toxicity levels of 32400 chemicals out 36000 being manufactured in India has still unknown and it has specially governed by the firing temperature. Lowering the firing temperature can save energy and reduce greenhouse gas emission [1,2]. It will have to be zero CO₂ emission.

Exposure

The measure of outdoor pollution has basically by the ambient fine particulate matter those particles less than meters in aerodynamic diameter or PM_{2.5} or equal to 2.5 micro. According to the State of Global Air report 2016, exposure to PM_{2.5} was the fifth highest ranking risk factor for death, responsible for 4.2 million deaths from heart disease and stroke, lung cancer, chronic lung disease and other respiratory diseases. It contributes about 55% to global warming from greenhouse gases produced by human activity has been accepted. Industrial countries account for about 76% of annual emission. The main

sources have fossil fuel burning (67%), other forms of land clearing and burning (33%). CO₂ stays in the atmosphere for about 500 years. CO₂ concentration in the atmosphere was 355 ppm in 1990 that is increasing at a rate 1.5 ppm every year. According to the International register of potentially toxic chemicals of the United Nations Environment Programme, it has four million known chemicals in the world today and another 30,000 new compounds have added to the list every year. Among these, 60,000 to 70,000 chemicals have commonly used [3,4]. Apart from their benefits to increasing production, living standards and health, many of them have potentially toxic and not reported.

Burden

The world health organization in its report (2006) has emphasized that disease can prevented through healthy environment. More than 33% of diseases in children below 5 years are due to environmental exposures. About one quarter of disease in the world due to environmental exposures while it has one third in less developed countries and developing countries. Diseases due to CO₂ emission, The variety of diseases reportedly afflicting men, women and children include eruption, boils, pock marks as in small pox, dry skin and skin irritation, asthma in India has continued to increase over the last decade. Prevalence of Asthma in India: Pollutants in the air has not always visible and come from many different sources. Carbon dioxide, a greenhouse gas, has the main pollutant that has warming earth.

Though living things emits carbon dioxide when they breathe, carbon dioxide has widely considered being a pollutant when associated with production and industries. Prevalence of asthma refers to the total number of cases of asthma in a specified

population at a designated time. We have plotted the number of people affected by asthma in India for the given period of time. The number of males affected by asthma has increased in the age groups of 15-49 years, 50-69 years and 70+ years from 2010 to 2015. The number of females affected have increased in the age groups 5-14 years, 15- 49 years, 50- 69 years and 70+ years from 2010 to 2015.

Strategy for carbon-free backstop? According to the report, globally in 2015, long term exposure to ambient PM2.5 contributed to 4.2 million deaths.

From the data, we can also say that increase in the exposure to ambient PM2.5 can be one of the reasons for the increase in the prevalence of asthma in India. India is still needs inside close monitoring. Why? Originally, ETICST engineering (External Thermal Insulation Composite System Technology) , has used to reduce heating costs in the cooler regions. However, they are also becoming increasingly popular in warmer regions as a façade covered with an ETICST also wards off heat very efficiently. Applied to the outside of a building, the insulation prevents unnecessary heating of exterior walls during the hottest days of summer and industry shift work. Insulation systems can be incorporated in the design of new building right from the start; they can also be applied process industries. This substrate, be they concrete brick wise or wood. External thermal insulation composite system technology has therefore ideal for anyone looking for sustainable energy savings. Interior insulation measures play an increasingly important role in reduction carbon footprints as well. ETICST one of the most important ways to reduce emission is to simply reduce the consumption of energy. ETICST that has increase energy efficiency due to balance temperature inside the work place, so less polluting energy has formed can reduce the energy required to run society. ETICST approach that can reduce emission in laboratory as we as research laboratory. Even for insulation materials conventionally in use indoors, innovative technology can improve energy savings still further.

Conclusion

To understand these phenomena, and to predict performance in the particular circumstances, requires detailed new models. Such models and the system parameters needed within them can be generated using commonly available equipment and software. Warming up of earth due to pollution has due to greenhouse effect. In both cases energy retention in green house has caused by lack of convection that has lack of mixing of the interior air with the surrounding atmosphere. So green house may thus become considerably warmer than the temperature of the surrounding atmosphere higher of the concentration of CO2 more of outgoing IR radiation will be absorbed and more will be reradiated back to earth surface. This will be increasing the earth's surface (green house temperature) temperature with increase in CO2 concentration in air.

It may be pointed out that chlorofluorocarbon; nitrogen oxide, methane and sulphur oxide all contribute in the heating

up the earth in the same way, but their concentration not so significant because of low level concentration. ETICST model has internally self-consistent; the rate of energy gain should be equal to the rate or energy loss in each of the three regions, space, and atmosphere and earth surface. The model (ETICST) shows the necessary balance and shows that atmosphere has a definite role in the warning up of the earth. Change in any one number will disturb the entire equilibrium that has prevailing on earth that will change weathering pattern. Innovation in ETICST technology will be updated regularly. Energy gain Energy loss Earth surface $161+358 = 94+19+20+381$ Atmosphere $79+94+19+381 = 220+353$ Space $103+20+220 = 343$.

Additional human beings live in both natural and social world. Our technological development has strong impacts on the natural as well as the social components. India has still to go a long way in the implementing the concept of sustainable developments. We have to lay emphasis on the framing a well-planned strategy for our developmental activity while increasing our economic growth. We have tremendous natural diversity as well as a huge population which makes planning for sustainable growth all the more important and complex. The National Council of Environmental Planning and Coordination (NCPC) set up 1972 was the local agency in this regard. Missed opportunity to let people know the most effective steps they can take to reduce carbon dioxide emissions, a primary driver of global warming. We found there are four actions that could result in substantial decreases in an individual's carbon footprint, eating a plant based diet, avoiding air travel, living car free and having smaller families. According to the report, living car free saves about 2.4 tons of CO2 equivalents per year, while eating a plant based diet saves 0.8 tons of CO2 equivalents a year. Avoiding airplane travel saves about 1.6 tons of CO2 equivalents per trip, while one less child saves an average of 58.6 tons of CO2 equivalent emission reductions per year. When researchers looked to see which anti-carbon actions were promoted in government communication, they found a journal focus on incremental changes with much smaller potential. It included changing light bulbs and comprehensive recycling, which researchers were respectively eight and four times less effective than a plant based diet. Streamlining the message from schools and from governments could make major steps towards reducing greenhouse gas emission beneath the levels needed to keep the planet under 2 degrees Celsius of climate warming researcher opinion. Hence there are so many factors that affect the climate impact of personal choice, but bringing all these studies side by side gives us confidence we have identified an action that makes a big difference. To shrink carbon footprint:

- a) Eat a plant based diet
- b) Avoid air travel
- c) Don't drive a car
- d) Have a small family

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Conflict of Interest

Authors do not hold any economic interest in this work, and they do not hold any conflict of interest in the work presented.

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