

1-2-2018

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Recommended Citation

Premkumar, A. and Vinoth, V. (2018) "Impact Of Air Pollution In Tamil Nadu," *International Review of Business and Economics*: Vol. 1: Iss. 3, Article 21.

Available at: <https://digitalcommons.du.edu/irbe/vol1/iss3/21>

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23. IMPACT OF AIR POLLUTION IN TAMIL NADU

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ABSTRACT

This paper outlines the impact of air pollution in Tamil Nadu. Air pollution is the any form of solid, liquid and gaseous substance present in the atmosphere that may or tend to be injurious to human beings, other living creatures, plants, property or the environment in general. Air pollution is probably one of the most serious environmental problems confronting our civilization today. Most often, it is caused by human activities such as mining, construction, transportation, industrial work, agriculture, smelting, etc. However, natural processes such as volcanic eruptions and wildfires may also pollute the air, but their occurrence is rare and they usually have a local effect, unlike human activities that are ubiquitous causes of air pollution and contribute to the global pollution of the air every single day.

INTRODUCTION

Air pollution emanates from many sources, stationary sources such as factories, power plants, smelters and smaller sources such as dry cleaners and degreasing operations, mobile sources such as cars, buses, planes, trucks, and trains; anthropogenic activities and naturally occurring sources such as windblown dust and volcanic eruptions. In an even broader sense, air pollution means the presence of chemicals or compounds in the air which are usually not present and which lower the quality of the air or cause detrimental changes to the quality of life (such as the damaging of the ozone layer or causing global warming).

In Tamil Nadu air pollution is widespread in urban areas where vehicles are the major contributors and in a few other areas with a high concentration of industries and thermal power plants. Vehicular emissions are of particular concern since these are ground level sources and thus have the maximum impact on the general population.

RESEARCH METHODOLOGY

Being an explanatory research, researcher adopted secondary data for this study. The secondary data are from reviews journals, books and periodicals for the purpose of the study. Therefore whatever information is revealed by the present study is secondary data.

OBJECTIVES OF THE STUDY

1. To understand the concept of Air pollution.
2. To study about the impact of air pollution.
3. To know the problems facing by the people in Tamil Nadu.

HEALTH PROBLEMS

Air pollution can harm us when it accumulates in the air in high enough concentrations. Millions of Americans live in areas where urban smog, particle pollution, and toxic pollutants pose serious health concerns. People exposed to high enough levels of certain air pollutants may experience:

1. Irritation of the eyes, nose, and throat.
2. Wheezing, coughing, chest tightness and breathing difficulties.
3. Worsening of existing lung and heart problems, such as asthma.
4. Increased risk of heart attack.

ENVIRONMENTAL EFFECTS

Along with harming human health, air pollution can cause a variety of environmental effects: Acid rain is precipitation containing harmful amounts of nitric and sulfuric acids. These acids are formed primarily by nitrogen oxides and sulfur oxides released into the atmosphere when fossil fuels are burned. These acids fall to the Earth either as wet precipitation (rain, snow, or fog) or dry precipitation (gas and particulates). Some are carried by the wind, sometimes hundreds of miles. In the environment, acid rain damages trees and causes soils and water bodies to acidify, making the water unsuitable for some fish and other wildlife.

As of now in Chennai, the pollution control board operates eight manual ambient air quality monitoring stations, National Environmental Engineering Research Institute (NEERI) has three and Central Pollution Board has three CAMS in IIT, Alandur and Manali. In addition, there are 24 CAMS set-up by industries in Manali and Gummidipoodi areas whose data will be sent to TNPCB, said another TNPCB official.

The number of vehicles in Coimbatore has doubled from 4, 37,088 lakhs in 2000 (research data from Salim Ali Centre for Ornithology and Natural History) to over nine lakhs in early 2006. According to Central Pollution Control Board data there has been a steady increase in the levels of pollutants such as sulphur dioxide,

nitrogen dioxide as well as Suspended Particulate Matter that will affect the air quality. Though all vehicles are supposed to obtain the emission check certificate called Pollution under Control (which has to be renewed every six months), the methods adopted are not stringent enough to ensure total compliance.

IMPACT OF AIR POLLUTION IN INDUSTRIAL SECTOR

A national survey of the industrial sector states that the total estimated emissions of SPM from the 7 critical industries (Iron and steel, Cement, Sugar, Fertilizers, Paper and paper board, Copper and Aluminum) increased from 2 lakh tonnes in 1947 to 30 lakh tonnes in 1997. Of these seven critical industries, Tamil Nadu has a significant presence in cement, sugar and fertilizer industries. Many studies have revealed that pollution is concentrated in a few industrial sub-sectors and that a sector's contribution to pollution is often disproportionate to its contribution to the industrial output. For example, petroleum refineries, textiles, pulp and paper, and industrial chemicals produce 27 per cent of the industrial output but contribute 87 per cent of sulphur emissions and 70 per cent of nitrogen emissions. Likewise, iron and steel, and nonmetallic mineral products, produce about 16 per cent of the industrial output but account for 55 per cent of the particulate emissions.

VEHICULAR EMISSIONS

The density of motor vehicles per sq.km has increased from 22 in 1996 to 52 in 2004. This has led to traffic congestion and release of many toxic air pollutants into the atmosphere. Particularly, the growth of two wheelers is increasing in a steep manner, contributing to about 50.6 per cent of the pollution load. Poor maintenance of vehicles results in the spewing out of noxious fumes into the atmosphere. Roughly 400 tonnes of smoke units are being discharged into the atmosphere every day by the vehicles in Chennai. Adulterated fuel adds another dimension to the problem of pollution.

AIR POLLUTION CONTROL

The Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 aims to prevent and control air pollution and preserve the air quality. As per the provisions of the Act, the State of Tamil Nadu is declared as an 'Air Pollution Control Area'. The Board monitors industrial emissions through regular inspections of the air pollution control measures provided by the industries. Ambient air quality survey / stack emission survey are conducted to assess the quality of the emissions let out. In 2003-04, Ambient Air Quality surveys are conducted in 687 industries.

ALTERNATE FUEL

For controlling vehicular emission, cleaner fuel like unleaded petrol, petrol with 3 per cent benzene and low sulphur fuel (0.05 per cent) have been introduced in Chennai Metropolitan Area. Passenger cars complying with Bharat stage-II norms alone are registered in Chennai since July 2001. 2T oil auto dispensing system has been provided in retail outlets. The Board is also participating in a research project with a Non-Governmental Organization and the Civil Supplies Department to study the use of gas chromatograph to detect fuel adulteration.

CONCLUSION

Urban air pollution has long been a serious problem in the FSU, reflecting both the importance of highly polluting, resource-intensive industries for the national economy and political factors such as the low priority of environmental issues and lack of public participation. At the beginning of the transition from a centrally planned to a free market economy and a more open society, it was assumed that environmental performance in the FSU would improve. In particular, a shift away from heavy industries to less resource-intensive sectors and improvements in energy efficiency were expected to reduce air pollution levels. All countries of the FSU experienced a decline in industrial output following the change in economic regime and emissions of main pollutants have fallen as a result of a slump in production.

Many commentators saw this as a much needed break for the environment. However, while absolute levels of emissions have decreased, the ongoing economic crisis and persisting financial problems have ensured that decreases in emissions have been smaller than declines in output as a result of the associated deterioration of regulatory mechanisms, a lack of investment into pollution abatement equipment, weak enforcement of environmental legislation and public disengagement. In the areas benefiting from economic changes, and especially in large cities, environmental pressures have increased because of growing car ownership.

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