



ENVIRONMENTAL IMPACT ASSESSMENT OF AIR CONDITIONERS

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Abstract

With men driven techno savvy it is no out of the box thinking that comfort is sought in workplace and at home. Aided by machines from the onset of the 18th century the man of this world to keep him cool in times of varied seasons has been driven to the use of air conditioners. With the growing need for sustainable future this paper is an attempt to see if use of air conditioners has environmental impact. The study area is Madurai city located in the southern part of Tamil Nadu India.

Key Words: Air Conditioners, Environment Impact.

Introduction

The thought provoking and widely acclaimed 1987 U.N. report “Our common future” by the world commission on Environment and Development said “Sustainable Development” has challenged the society to change from its destructive, exploitative philosophy to one that fosters long term protection of environment and its inhabitants.

It is a corporate social responsibility of every organisation to move in line with this concept which will enable the practice of environmental ethics. This need is much in India in the 2000s where resources are utilised carelessly and an awakening has come in its way here.

Need for the Study

Availability of technologically driven equipments has resulted in office automation. Globalisation has brought in foreign organisations into India and to keep in pace with such organisations Indian organisations emerge with Indians at the helm of affairs and foreign in style and functions. One common attribute noted in various organisations is air conditioning. Excessive use of air conditioners has contributed to air pollution and global warming. No city is an exemption to this aspect in India.

Statement of the Problem

Madurai a district in the Southern part of the state of Tamil Nadu in India is known for its trade down the centuries. A tier 2 city as it is, houses various organisations both public and private a majority of whom use air conditioners during working hours. Night shifts are rare in Madurai except for certain not for profit organisations.

With increased income the expenditure pattern has shifted towards increased luxury living. One of the most common expenditure for houses is air conditioning- Madurai being in the tropical region.

It is therefore obvious that use of air conditioners has become a necessity in everyday life both at home and away from home as well as offices. Passenger utility vehicles are air conditioned on account of providing value added services as well as to yield to seeking of comforts.

In this context it is necessary to understand the implications of such use on environment.

Methodology

Therefore a sample of 25 public and private establishments and 25 households are taken at random from the different parts of the district. Interview schedule were administered among the respondents.

The data collected were analysed applying Chi Square Tests and t test. For this purpose null hypotheses were framed that there is no significant impact on the environmental variables before and after the use of air conditioners.

Analysis of data

The environmental factors considered were rise in temperature in the nearest proximate area, health issues namely high salt in blood for those in air conditioned rooms at workplace, increased consumption of electricity and thereby increased expenditure, increased maintenance charges and high replacement charges for the companies resulting in financial burden. It was found that the calculated t value (.772;.779;1.112;1.342,1.542) is higher than the table value at 5 per cent level of



Significance for the environmental variables, the attitude towards sustainable development was also analysed. For this purpose a null hypothesis that there is no significant relationship in the attitude of the respondents towards sustainable development and increased use of air conditioners. The calculated value of chi square (25.44) is higher than the table value at 5 per cent level of significance.

Findings and Conclusions

Use of air conditioners have resulted in increase of temperature within the premises that are not air conditioned. Remaining in the air conditioning rooms for a greater period of time contributes to increased salt content in blood because of lesser sweat. Increased revenue and capital expenditure has contributed to lesser delivery of social responsibility by companies. There is a significant relationship between the attitude towards sustainable development and increased use of air conditioners. Since Madurai is in tropical climate area it is agreed that cooling devices are inevitable.

Suggestions

However alternative equipments that are pollution free can be used. The attitude towards futuristic development need to be more reinforced by promoting awareness among residents for the future of the land rests on its present utility.

References

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