



IMPACTS OF TOURISM ON ENVIRONMENT: OZONE LAYER DEPLETION AND GREEN HOUSE EFFECT

Arjun Kumbhar

Department of Chemistry, P.D.V.P. Mahavidyalaya Tasgaon, (Sangli) Maharashtra, 416312, India

arjun2win@yahoo.co.in

Abstract:

Travel & Tourism is the world's largest business industry as it is creator of various type jobs across international, national and regional economies. It generated ~12 % of GDP directly and indirectly, and nearly 200 million jobs in the world-wide. It has tremendous potential to contribute to economically, environmentally and socially sustainable development. But also has many detrimental effects on environment and destroys local cultures as it is managed badly. One of them is as global increase in temperature as well as an direct/indirect effect on Ozone layer depletion. Both tourism and Ozone layer depletion has reversible phenomenon. As bad managed tourism directly affects ozone, similarly the tourism industries are facing challenges as a result of Ozone Layer depletion and global warming.

1. Introduction:

In present days Travel & Tourism is the world's largest business industry as it is creator of various type jobs across international, national and regional economies in retail, construction, manufacturing and telecommunications. It is one of the important parts of life associated directly with all leaving things. According to recent reports it has shown that in 2000, Travel & Tourism generated ~12 % of GDP directly and indirectly, and nearly 200 million jobs in the world-wide economy. These figures are forecasted to total 12 % and 300 million respectively in 2015.

2. Contributing to sustainable development:

United Nations Conference on Environment and Development (UNCED), the 'Rio Earth Summit' (1992) identified that Travel & Tourism is one of the key sectors of the economy which could make a positive contribution to achieving sustainable development. The Summit adopted 'Agenda 21', a comprehensive program of action by 182 governments to provide a global blueprint for achieving sustainable development that includes:

- Tourism has less impact on natural resources and the environment.
- Tourism should be based on enjoyment and appreciation of local culture, built heritage, and natural environment.
- Tourism can play a positive part in increasing consumer commitment to sustainable development.
- It provides an economic incentive to conserve natural environments and habitats helping to maintain bio-diversity

Though Travel & Tourism creates jobs and wealth and has tremendous potential to contribute to economic, and social sustainable development. It has many detrimental effects on environment and destroys local cultures as it is

managed badly. One of them is as global increase in temperature as well as an direct/indirect effect on Ozone layer depletion. Over the last 100 years, the average temperature of the air near the earth's surface has risen a ~1° C, which makes the earth warmer now i.e. global warming is concerned about C degradation and social justice. Now a days many government and organizations have started to pay attention to the impact of hospitality industry on local peoples as well as local and global environments. As a result there has emerged a new sector of the hospitality industry known as ecotourism or green travel.

3. About the Ozone layer: Ozone (O₃) is naturally occurring gas and 90 percent of all ozone is found in the upper atmosphere or stratosphere (12-50 km) above the earth's surface which known as the 'ozone layer'. It absorbs the harmful radiations ultraviolet (UV) coming from the sun and prevent it from reaching the earth's surface.

3.1 The impacts of ozone-layer depletion:

Though the stratospheric ozone shields the Earth from the Sun's harmful radiation, ground level ozone causes a pollution and harmful to human health. As generally observed as urban smog it can cause respiratory problems. Thus the combination of direct impact of incoming UV radiations on earth due to decrease in Ozone in stratosphere and increases ground level ozone causes the following problems;

- Human skin: there is increase in skin sunburn and skin cancers
- Human eye: more cases of cataract, snow blindness (actinic keratitis) and other chronic eye diseases.
- Immune systems: reduced human and animal resistance to infections and diseases including

cancers and allergies, and diseases such as malaria etc.

- Crops: smaller plants, lower yields, potential reductions in nutritional value, need to search for UV-B resistant crops

- Natural ecosystems: altered plant forms and changes in competitive balance between plants, the animals that eat them, and plant pathogens and pests

- Marine and aquatic life: reduced production of phytoplankton, zooplankton, juvenile fish, crabs and shrimps which will in turn threaten all marine life and reduce fisheries productivity

- Man-made materials: faster degradation of certain materials including many paints and plastics

- Increased global warming and climate change.

4. Effect of tourism on Ozone depletion:

Over the past 20-30 years, sufficient Ozone Depletion Substances (ODS) like CFC (ChloroFluoroCarbons: CCl_3F , CCl_2F_2 , CCl_4 , $CHCl_3$, $CHFBr_2$, CHF_2Br etc.) have been released into the atmosphere to cause serious damage to the ozone layer. Over the northern mid-latitudes, cumulative ozone loss of 12-13 percent are predicted in winter and spring, while 6-7 percent losses are expected in the summer and autumn. Over the southern mid-latitudes, cumulative ozone losses are predicted to be around 11 % all year round. The tourism and hotel industry uses ODS in variety of applications, and must therefore be a part of the process to halt the depletion of the ozone layer.

Tourism operations have a direct impact on the environment. This starts with the construction of new developments and continues during daily management and operations. Tourism facilities are resource intensive: they are large consumers of water and energy, and generate significant volumes of waste, emissions and effluent. What is not often realized is that they also consume and emit ODS. Refrigeration, air conditioning, fire-fighting equipment, foam insulation, solvents and aerosol propellants all contain ODS and are widely used in the hotel and tourism industry. The tourism industry has a greater vested interest than most in protecting the global environment. Tourism destinations rely on a clean and healthy environment for the long-term quality and viability of the product. Without such environmental quality, much tourism would disappear. Unless all tourism operators, large and small, take action to maintain and enhance environmental quality, the future of the industry is in threat. Tourists, especially those who set out to enjoy the pleasures of the open air, will be some of the

first to be concerned about the impacts of excessive UV radiation. By taking early action to phase out ODS, you demonstrate to your customers-guests or tour operators that you are a responsible operator.

4.1 Main source of ODS in the hotel and tourism industry:

As Travels and Tourism are mainly concerns about hospitality; it is most important consumers of ODCs mainly used in refrigeration, food and drinks, cold storage, display cabinets, freezers, ice machines and mini-bars etc.

- Air conditioning in buildings general amenity areas, conference and meeting facilities, individual room units

- in vehicles, mobile units in cars and buses

- Dry cleaning and degreasing solvents used in dry cleaning and special cleaning applications

- Aerosols spot cleaning, bathroom and other surface cleaners, small area paints, adhesives, insecticides and pesticides

- Foams food packaging, trays and containers, pipe insulation, seat and back cushions, head rests, bedding and other upholstery uses, carpet underlay, car and bus interiors, protective packaging for a wide variety of goods

- Fire extinguishers are used in fixed and portable fire extinguishers

4.2 Policy to maintain proper use ODS:

In 1996 the WTTC (World Tourism Organization and the Earth Council) joined together to launch an action plan entitled "Agenda 21 for the Travel & Tourism Industry: Towards Environmentally Sustainable Development. They has put forward some action plan for environment protection that includes:

- WTTC have also launched "ECoNETT", a website containing advice and data on good practice and sources of help and advice for environmental information, good practice, new techniques and technologies.

- Raised environmental awareness and developed programs through joint workshops to develop their own environmental awareness programs in the hotel industry

- Published advice including practical publications

- Guidelines for setting up environmental management systems

- Use of energy efficient and CFC free equipment's for good hospitality

- Insists Hotel and organizations to use renewable energy sources and

- Action plan regarding the waste water management

- Introduced the codes of conduct are also used to try and influence consumer behavior.

4.3 Management for reduce and avoid ODS:

- Good housekeeping measures to avoid leakage or loss of existing ODS during equipment operation and maintenance
- Recovery and re-use of original refrigerant after equipment dismantling for servicing
- Converting existing equipment to utilize low ODP or zero-ODP chemicals- this generally requires replacement of existing equipment parts and/or a change of lubricating oil; in some instances, it may be possible to use a 'drop-in' replacement instead of a complete retrofit (a drop-in replacement, as its name suggests, entails replacing ODS with low- or non-ODP substitutes without modifying the equipment)
- Purchasing new equipment that uses zero-ODP chemicals when the service life of the original equipment is over or the original chemicals are no longer available and retrofitting is not possible

4.4 The government perception: The government should define national legislation concerning the manufacture, restrictions and handling of ozone-destroying compounds. Thus it has been recommended that the introduction of aviation fuel tax throughout the world is preferable and also a shift from fossil fuel use to renewable energy sources.

4.5 Perceptions of tourists: As a visitor to the land of the ozone hole, we were particularly interested in the attitude of tourists. The opportunity to speak with people about this issue often came about while on various tours around the country. As a tourist one should not use environmentally hazardous things and take care of our environment.

5. Conclusion: Though the Travel & Tourism has a number of advantages over other industry sectors. It directly affects our environment and ecology. To solve such environmental problems the industry should make a concerted effort to build up programs for sustainable development. It was concluded that global warming has an effect on tourism development. Both tourism and Ozone layer depletion are reversible phenomena. As badly managed tourism directly affects ozone, similarly the tourism industries are facing challenges as a result of Ozone Layer depletion and global warming.

6. References:

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