

COMPENDIUM OF  
ENVIRONMENT STATISTICS  
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CENTRAL STATISTICAL ORGANISATION  
MINISTRY OF STATISTICS AND  
PROGRAMME IMPLEMENTATION  
GOVERNMENT OF INDIA  
NEW DELHI

## **PREFACE**

*The Central Statistical Organisation (CSO) took the initiative of bringing out a Compendium of Environment Statistics in 1997 to meet the needs of policy makers, planners and the public to have a sound data base on various aspects of environment. The publication has been useful in understanding various aspects of environment and its impact on sustainable development. The present issue is the sixth in the series.*

*The CSO has been endeavouring to improve the coverage, content and presentation of this publication and make it more user friendly. Graphics and extracts from environment related legislations have been included in this publication to help the readers.*

*I take this opportunity to express my appreciation to all the data source agencies for their active cooperation, contributions and willing support, without which it would not have been possible for the CSO to bring out this publication in its present form. We hope to get their continued support in future.*

*The Compendium has been prepared in the Environment Statistics Unit of the CSO under the overall guidance of Dr. G. Raveendran, Additional Director General. Dr. S. K. Nath, Deputy Director General, has taken a keen interest in enlarging the coverage of the publication and improving its presentation. The responsibility for data collection, preparation of tables and the final manuscript was shouldered by Shri S. K. Gupta, Director and his team comprising Sarvashri R. C. Aggarwal, Joint Director; M. C. Sharma, Assistant Director and Satyender Kumar, Computer.*

*Comments and suggestions from the users for further improvement of the publication would be most welcome.*

February 2004

(Adarsh Kishore)  
Secretary  
Ministry of Statistics and Programme Implementation  
New Delhi

## Overview

The Compendium has been prepared under the broad Framework for Development of Environment Statistics provided by the United Nations Statistics Division and adopted by the Steering Committee on Environment Statistics for the 1997 issue. The same pattern has been followed in the present issue. The five parameters of the framework, namely, biodiversity, atmosphere, land/soil, water, and human settlements have been used in this compendium. There are seven chapters, further divided into sections, the details of which are given below. An attempt has been made, wherever possible, to elaborate the data in the tables with the help of boxes under the table and suitable graphs and charts for easy comprehension.

The first chapter on Environment and Environment degradation gives a general introduction of the concept of environment; development versus environment degradation; impact of development activities on environment; emissions, discharges and their sources; some major pollutants, their sources and related health hazards.

The second chapter on Development of Environment Statistics in India summarises the activities undertaken by the Ministry of Statistics and Programme Implementation for the development of environment statistics.

The third chapter on Biodiversity is divided into three sections: Flora; Forests and Fauna. The section on Flora contains some statistics on plant species found in India, species which are rare, vulnerable, endangered and extinct. It also gives some statistics on preservation measure of flora like Biosphere reserves, Botanical gardens and gene banks in India, including information on agro biodiversity. The section on Forests contains statistics on

Indian forests. It gives information on percentage of forest area to total geographic area (state-wise), wastelands and external aids received for social forestry. The section on Fauna gives the major bio-geographic habitats in India, estimated number of species, national parks and wildlife sanctuaries, tiger reserves, livestock population in India, fish production and bovine population affected by drought.

The fourth chapter on Atmosphere is divided into five sections: Air and Transport; Energy; Industry, Greenhouse Gases and Noise. The section on Air and Transport gives the composition of the troposphere; ambient air quality standards and state of ambient air quality in some cities and towns. Ambient air quality in Delhi has also been given. The section on Energy gives information on installed capacity of utilities; electricity generation and actual power supply position, different fuels used for cooking; coal resources in India as well as its production; and renewable energy resources. The section on Greenhouse Gases gives information on the key greenhouse gases and the effect of global warming. The section on Industries gives information on the number of registered industrial establishments in India and the status of pollution control in 17 categories of industries. The section on Noise gives information on the ambient noise standards; average noise levels in various metropolitan cities and effects of noise pollution on human health.

The fifth chapter on Land/Soil is divided into four sections: Land Uses, Agriculture, Natural disasters and mining. The section on Land Uses contains land classification in India, and different land use patterns. The section on Agriculture contains information on area under principal crops; performance of crop production; use of agricultural inputs; consumption of pesticides statewise

and their effect on soil. The section on Natural Disasters contains information on frequently occurring natural disasters; recent natural disasters in India; major earthquakes; number of drought-prone districts and damages due to droughts and supercyclonic storm. The section on Mining gives data on number of mines, production of minerals, status of afforestation, mining machinery and consumption of explosives in mining.

The sixth chapter on Water is divided into two sections: Ground Water and Marine Water. The section on Ground Water contains information on rainfall performance during the last 20 years; water flow in streams and ground water resources; water quality criteria and distribution of water monitoring stations. The section on Marine Water contains information on coastline of India; main activities along the coastal zones; industrial and sewage discharges to coastal waters; pollutants and their impacts on marine environment and potential hot spots along the Indian coasts.

The seventh chapter on Human Settlements is divided into three sections: Population and Poverty; Housing, Slums and Basic Facilities; and Waste Management. Human development is adversely affected by the environmental degradation. Safe drinking

water and sanitation are closely linked with two of the very important human development indicators viz. infant mortality and life expectancy. Under the section on 'Population and Poverty' information on population totals, infant mortality rate, expectation of life at birth and population below the poverty line have been given. The section on Housing, Slums and Basic Facilities contains estimates of population in India, number of households, their size, number of rooms per housing unit, water supply system and toilet installation by rural/urban, homeless population, urbanization trends in India, slum population, housing shortage projected, percentage of population below poverty line, medical facilities under allopathy and Indian System of Medicine & Homeopathy. Due to rapid growth in urbanization, there is substantial increase in generation of various kinds of solid waste. When these waste are not collected and disposed off properly, they create health hazards. Information on hazardous waste regulatory quantities, total amount of solid waste collected in some towns/cities and its composition has been given under the section on Waste Management. In this regard, tables have been included on the type and quantities of different types of waste product generated in Delhi. Some tables on plastic wastes have also been included.