सत्यमेव जयते

EnviStats India 2018

GOVERNMENT OF INDIA
MINISTRY OF STATISTICS AND PROGRAMME IMPLEMENTATION
CENTRAL STATISTICS OFFICE
(SOCIAL STATISTICS DIVISION)

www. mospi.gov.in

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© भारत सरकार PSSD – I – 2018 (E)
नियंत्रक प्रकाशन 500-2018 (DSK-III)

This publication should be cited as CSO (2018), EnviStats-India 2018, Central Statistics Office, Ministry of Statistics & Programme Implementation, Government of India, New Delhi.

Printed copy of the publication are available at the Sales Counters of the Controller of Publications, Government of India or on request addressed to "Additional Director General, Social Statistics Division, Central Statistics Office, Ministry of Statistics and Programme Implementation", by email at ssd-mospi@gov.in.

Price for Print Version

In India	- ₹ 1400.00 (Normal)
	- ₹ 1500.00 (Inclusive of postage)
Abroad	- US $ 25.00 (Inclusive of air-mail courier charges)

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Feedback and suggestions for the publication are welcomed by the EnviStats team at ssd-mospi@gov.in.

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K V Eapen
Secretary

सत्यमेव जयते

एक कदम स्वच्छता की ओर

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Government of India
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FOREWORD

The Earth Summit of 1992 brought to fore the urgency of taking concrete measures to promote sustainable development for the benefit of current and future generations. The first step in this direction was the development of environment statistics as the main base line for developing sustainable environmental management.

With countries now on the path of the 2030 Agenda for Sustainable Development, the ambit of environment statistics needs to cover all components of environmental issues, from extent to quality, adaptation and mitigation measures to governance and regulation, so as to enable formulation of appropriate policies, strategies and programmes. The Central Statistics Office (CSO) of the Ministry of Statistics and Programme Implementation has addressed this requirement in EnviStats-India 2018, which highlights the data on various environmental factors as a means to raise awareness and help focus on the pivotality of environmental concerns.

I hope that researchers, planners and environmentalists would find this document useful for their specific pursuits. I take this opportunity to congratulate and convey my appreciation for team of officers of the Social Statistics Division of CSO whose efforts have lead to compilation of this extremely useful publication.

20/3/18

(K. V. Eapen)
Secretary

New Delhi
March 2018

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एक कदम स्वच्छता की ओर

भारत सरकार
सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय
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PREFACE

The Central Statistics Office (CSO) under the Ministry of Statistics and Programme Implementation has been bringing out two regular statistical publications on environment. The first one, the "Compendium of Environment Statistics", was based on the UNSD's Framework for Development of Environment Statistics (FDES), 1984, of which sixteen issues had been brought out till 2017. The second one, "Statistics related to Climate Change" was based on the Driving force – Pressure – State – Impact – Response (DPSIR) framework, of which two issues were brought out – one in 2013 and another in 2015.

UNSD has revised the FDES framework, referred to as FDES 2013, by including components important for the concept of "sustainable development" and also components of the DPSIR framework. This revision necessitated a change in the way environment statistics was being presented by CSO. This publication, "EnviStats-India" based on the FDES 2013 framework is a step in this direction and replaces the two publications – "Compendium of Environment Statistics" and the "Statistics related to Climate Change" brought out by the CSO.

The data given in this publication is based on the information sourced from the Ministries/ Departments/ Organizations of Central and State Governments. I express my deep gratitude to all data source agencies which contributed the valuable data /information and supported our efforts to bring out the publication.

Comments/suggestions for further improvement of the publication would be welcome and will be highly appreciated.

R Lochan

(Rajeev Lochan)
Director General

New Delhi
March 2018

Acknowledgements

Prepared by the Social Statistics Division of the Central Statistics Office, the Division gratefully acknowledges the contribution of all the source agencies listed below:

1. Botanical Survey of India, Central Pollution Control Board, Central Zoo Authority, Forest Survey of India, National Biodiversity Authority, National Tiger Conservation Authority, Wildlife Institute of India, Zoological Survey of India and the Divisions of the Ministry of Environment, Forest & Climate Change;

2. Central Water Commission, Central Ground Water Board and the Divisions of the Ministry of Water Resources, River Development and Ganga Rejuvenation;

3. Directorate of Economics & Statistics, Department of Agriculture & Cooperation, Department of Animal Husbandry, Dairying & Fisheries, National Centre for Organic Farming, National Board for Plant Genetic Resources, Soil and Land Use Survey of India, National Bureau for Soil Survey and Land Use Planning and other Divisions/ Organisations of the Ministry of Agriculture & Farmers Welfare;

4. Indian Meteorological Department and Integrated Coastal and Marine Area Management Project Directorate of the Ministry of Earth Sciences;

5. Indian Bureau of Mines, Ministry of Mines;

6. National Remote Sensing Centre, Ministry of Space; and

7. Office of the Registrar General of India, National Crime Records Bureau, National Disaster Management Authority and Divisions of the Ministry of Home Affairs

Data is beautiful but some of the key characteristics are unnoticeable when the data is presented in spreadsheets, charts and graphs. In order to add a visual context to the data contained in this publication, a few maps have been given for reference, thanks to the Survey of India and the Geological Survey of India.

Acknowledgments are also due to statistical focal points in the Department of Land Resources, Ministry of Rural Development; Ministry of Drinking Water and Sanitation; Coal Controller's Organization, Ministry of Coal; Central Electricity Authority, Ministry of Power; as also the nodal officers in the Ministries of Civil Aviation, Finance, Health & Family Welfare, Petroleum & Natural Gas, New and Renewable Energy, Road Transport & Highways, Railways, and Shipping. The acknowledgment would be incomplete without the mention of National Sample Survey Office, the official surveyors for collecting information from households and enterprises on a range of subjects which are crucial for developmental planning.

This multifarious collection of statistics could not have been possible without their endeavour to produce timely and accurate statistics.

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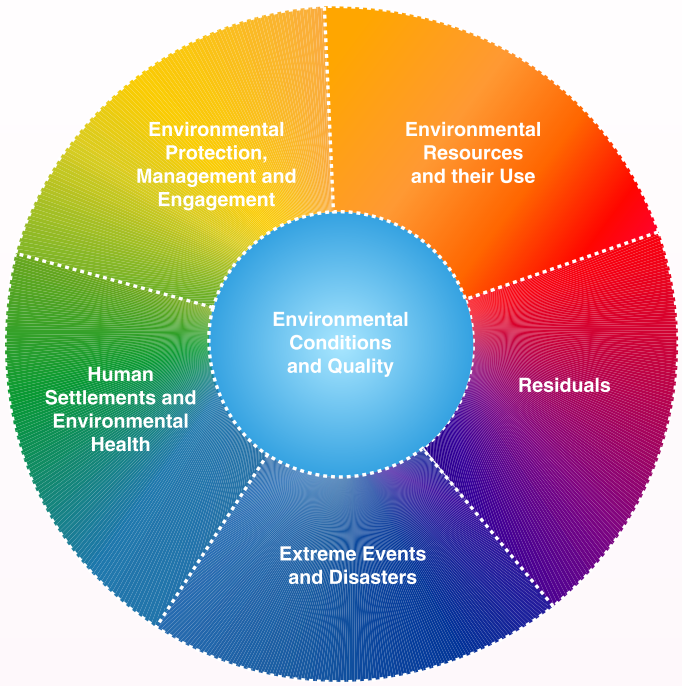


List of Tables in EnviStats - India

Acronyms used in this publication

µg	Microgram
µMHO	Micromho
AGB	Above-Ground Biomass
ASI	Annual Survey of Industries
BCM	Billion Cubic Metres
BG	Biomass Gasifier
BGB	Below Ground Biomass
BGCI	Botanic Gardens Conservation International
BOD	Biological Oxygen Demand
BP	Biomass Power
BSI	Botanical Survey of India
CBHI	Central Bureau of Health Intelligence
CEA	Central Electricity Authority
CFC	Chloro-Fluoro-Carbons
CH4	Methane
Cl	Chlorine
CO	Carbon Monoxide
CO2	Carbon Dioxide
COD	Chemical Oxygen Demand
CPCB	Central Pollution Control Board
CSO	Central Statistics Office
Cu.m	Cubic Metre
CWC	Central Water Commission
DAC	Department of Agriculture & Cooperation
DAC&FW	Department of Agriculture, Cooperation & Farmers' Welfare
DDT	Dichloro Diphenyl Trichloroethane
DDVP	Dimethyl Dichloro-Vinyl Phosphate
DES	Directorate of Economics & Statistics
DPSIR	Driving forces-Pressure-State-Impact-Response Framework
FDES	Framework for the Development of Environment Statistics
Fe	Iron
FSI	Forest Survey of India
GDP	Gross Domestic Product
GHG	Greenhouse Gases
GOI	Government of India
GRT	Gross Registered Tonnage
GSI	Geological Survey of India
GWP	Global Warming Potential
H2S	Hydrogen Sulphide
ha	Hectares
HC	Hydro Carbons
HFC	Hydro-fluoro-carbons
ICAR	Indian Council for Agriculture Research
ICFRE	Indian Council of Forest Research & Education
ICMAM	Integrated Coastal and Marine Area Management (Project Directorate)
IMD	India Meteorological Department
IPCC	Inter Governmental Panel on Climate Change
IQ	Institutional Qualified
IREDA	Indian Renewable Energy Development Agency (Limited)
ISRO	Indian Space Research Organisation
Kms	Kilometers
KVIC	Khadi and Village Industries Commission
LPG	Liquefied Petroleum Gas
LULC	Land Use and Land Cover (in Mapping)
LULCF	Land use, Land-Use Change, and forestry (Sector as per UNFCC)
m	Metre
M.C.M.	Million Cubic Metre
MEA	Multilateral Environmental Agreement
Mg	Magnesium
Mha	Million Hectares
MPN	Most Probable Number (for coliform count)
MLD	Million Litres per Day

MNER	Ministry of New and Renewable Energy
MOEF	Ministry of Environment and Forests (earlier name)
MOEF&CC	Ministry of Environment, Forest & Climate Change
MSMP	Monthly Statistics of Mineral Production
MW	Megawatts
N2O	Nitrous Oxide
NA	Not Available
NABARD	National Bank For Agriculture And Rural Development
NAPCC	National Action Plan on Climate Change
NATCOM	National Communication
NDMA	National Disaster Management Authority
Neg.	Negligible
NGO	Non-Governmental Organisation
NH3	Ammonia
NIC	National Informatics Centre
NIQ	Non-Institutional Qualified
NO2	Nitrogen Dioxide
NO3	Nitrate
NOX	Oxides of Nitrogen
NRIS	Natural Resource Information System
NRSA	National Remote Sensing Agency
NRSC	National Remote Sensing Centre
NSFP	National Social Forestry Project
ODP	Ozone Depletion Potential
ODS	Ozone Depleting Substances
Pb	Lead
PFC	Per-fluoro-carbons
PM	Particulate Matter
ppbv	Part per Billion by Volume
ppm	Parts per Million
ppmv	Part per Million by Volume
ppmv/year	Parts per Million by Volume per year
pptv	Part per Trillion by Volume
RES	Renewable Energy Sources
RFA	Recorded Forest Area
Rs.	Rupees
RSC	Residual Sodium Carbonate
RSPM	Residual Suspended Particulate Matter
SAC	Space Applications Centre
SAR	Sodium Absorption Ratio
SASE	Snow and Avalanche Studies Establishment
SF6	Sulphur-hexafluoride
SFP	Social Forestry Project
SHP	Small Hydro Project
SO2	Sulphur dioxide
SO4	Sulphate
SOC	Soil Organic Carbon
SP	Sodium Percentage
SPCB	State Pollution Control Board
SPM	Solid Particulate Matter
Sq. Kms.	Square Kilometres
SWS	Sub-Water Shed
TDS	Total Dissolved Solids
TERI	The Energy Resources Institute
TN	Total Nitrogen
TP	Total Phosphorus
TSP	Total Suspended Particulate
U&I	Urban & Industrial Water Power
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNSD	United Nations Statistics Division
UV	Ultra-Violet
WB	World Bank
WMO	World Meteorological Organization
ZSI	Zoological Survey of India

Overview

AN OVERVIEW OF ENVISTATS-INDIA

SECTION I: INTRODUCTION

Background

1. Environmental issues such as climate change, global warming, melting of snow in the glaciers, decreasing productivity in agriculture despite technology development, etc. are neither confined to any country or continent nor is it limited to the developing or the developed world. Therefore, the United Nations and other global institutions have been paying attention towards environment management since decades. It has been realized that sustainability of the development depends considerably upon the management of the environment and hence the expenditure on environmental management today is, in fact, a compulsory investment for a safe future.

2. The United Nations initiated actions towards the environment by establishing United Nations Environment Programme (UNEP) in 1972 to coordinate the development of environmental policy by keeping the global environment under review and bringing emerging issues to the attention of the governments and the international communities for action.

3. Environmental concerns, which have been for a long time part of Indian thought and social processes, are reflected in the Constitution of the Republic of India adopted in 1950. The Directive Principles of State Policy, an integral and significant element of constitution of India, contain provisions, which reflect the commitment of the State to protect the environment with regard to forests and wildlife and which enjoins upon the citizens of India the special responsibility to protect and improve the environment. The foundation of the present day institutional framework for environmental programmes in India goes back to 1976, when the Indian Parliament passed the 42nd Amendment to its constitution safeguarding the environment, becoming the first country in the world to do so. This was followed by the establishment of the National Committee of Environmental Planning and Coordination. The Committee was gradually upgraded into a Department of Environment in 1980 and five years later to a full-fledged Ministry of Environment and Forests (MOEF) of the Government of India (GOI). The State Governments also followed this example by establishing their own Departments of Environment to address the rapidly increasing policy initiatives and programmes in the environment and forests sectors. The Ministry of Environment and Forests was renamed as Ministry of Environment, Forests and Climate Change (MOEFCC) due to the increasing concern of climate change.

4. Ministry of Environment, Forests and Climate Change has the key role in managing the country's environment and this it achieves by focussing on the development of important administrative tools and techniques, impact assessment, research and collection and dissemination of environmental information. However, to address the varied problems emanating from the resource depletion and environmental degradation that are associated with the rapid pace of economic growth, a broad-based programme of environmental policies and regulations is needed. Such programmes require collection and compilation of authentic data on complex subjects like Bio-diversity, Atmosphere, Water, Land and Soil and Human Settlements. This being

multi-disciplinary in nature, the Central Statistics Office (CSO) under the Ministry of Statistics & Programme Implementation (MOSPI) has been releasing statistical publications on environment.

Defining environment through statistics

5. Principle 10 of the United Nations Declaration on Environment and Development (Rio de Janeiro, June 1992), stated "…….each individual shall have appropriate access to information concerning the environment that is held by public authorities ……. and the opportunity to participate in the decision-making process. States shall facilitate and encourage public awareness and participation by making information widely available."

6. Environment statistics describe human activities with a view to enumerate their interactions with the environment. The scope of environment statistics depends largely on the environmental problems on the political agenda. The geographic situation of a country, its state of development, and its political system taken together determine the bulk of this agenda. The scope generally includes the media of the natural environment (air/climate, water, land/soil), the biota found within these media, and human settlements. It, therefore, describes (i) the quality and availability of natural resources; (ii) human activities and natural events that affect the environment; (iii) the impacts of these activities and events; and (iv) social responses to these impacts.

7. Environment Statistics is relatively a young branch and multi-disciplinary area in the field of official statistics. The sources of environmental statistics are dispersed and varieties of methods are applied in their compilation. They generally provide a synthesis of data from various subject areas and sources to help in the formulation and evaluation of integrated socio-economic environmental policies.

Objective of Environment Statistics

8. The objective of environment statistics is to provide information about the environment, its changes over time and across locations, and the main factors that influence them. Ultimately, environment statistics aim at providing statistical information to improve knowledge of the environment, to support evidence-based policy and decision making, and to provide information for the general public, as well as for specific user groups.

Scope of Environment Statistics

9. The scope of environment statistics covers biophysical aspects of the environment and those aspects of the socio-economic system that directly influence and interact with the environment. The scope of environment, social and economic statistics overlap and it is not easy to draw a fine dividing line between these statistical areas. Social and economic statistics describing processes or activities that have a direct impact on, or interact directly with, the environment are widely used in environment statistics. Several social and economic statistics are also required to be put in environmental context to facilitate the integrated analysis of environmental, social and economic processes. The use of consistent definitions and classifications among these fields helps their integration. When properly integrated, data and other inputs from these domains enrich the analysis of environment statistics.

10. Environment statistics support evidence based policy making by enabling the identification of environmental issues and the objective quantification of measures and impacts of policy initiatives. They strengthen assessments through quantitative metrics, making analyses more robust through the use of timely and comparable data. The type, the level of thematic, spatial and temporal aggregation and the format of environment statistics depend on the type of the user and the intended purpose of use. The main products of environment statistics are – (a) detailed environment statistics series; (b) environmental accounts; and (c) environmental indicators.

Main uses and user groups of environment statistics

11. Different users need environment statistics at different levels of aggregation and depths of information. They may need cross-cutting environment statistics data sets, for instance regarding climate change and in other cases, they may only be interested in particular topics and themes pertaining to specific sectoral analysis and policy making. Policy and decision makers, and the general public would tend to use environmental indicators, whereas researchers, analysts, and experts may be more inclined to look at extensive and detailed environment statistics. Environment statistics serve a variety of users, including but not restricted to:

i. Policy and decision makers at all levels;

ii. The general public, including media and civil society;

iii. Analysts and researchers;

iv. Academia; and

v. International agencies

Framework for Development of Environment Statistics

12. In order to standardize the environment statistics being compiled by different countries, the United National Statistical Division (UNSD) developed and published in 1984 'A Framework for the Development of Environment Statistics (FDES)'. The FDES sets out the scope of environment statistics by relating the components of the environment to information categories that are based on the recognition that environmental problems are the result of human activities and natural events reflecting a sequence of action, impact, and reaction. The contents of the FDES are "statistical topics"; they are those aspects of environmental concerns that can be subjected to statistical description and analysis. It is a flexible framework for developing and organizing environmental and related socio-economic information.

13. Since the publication of FDES in 1984, there have been a number of scientific, political, technological, statistical and experience-based developments which necessitated the revision of FDES. The United Nations Statistical Commission, at its 41st session in February 2010, endorsed a work programme and the establishment of an Expert Group for the revision of the FDES. The members of the Expert Group represented producers and users of environment statistics of countries from all regions and international organizations. Specialized agencies and non-governmental organizations were also involved at different stages of development of this framework.

14. After conducting a due consultative process and pilot testing, the draft FDES was finalized by the Expert Group, and UN Statistical Commission at its 44th Session held in 2013 endorsed the revised framework as the framework for strengthening environment statistics programmes in countries and recognized it as a useful tool in the context of sustainable Development Goals and Post 2015 Development Agenda. Final official edited version of FDES 2013 has been released by UNSD in June 2016.

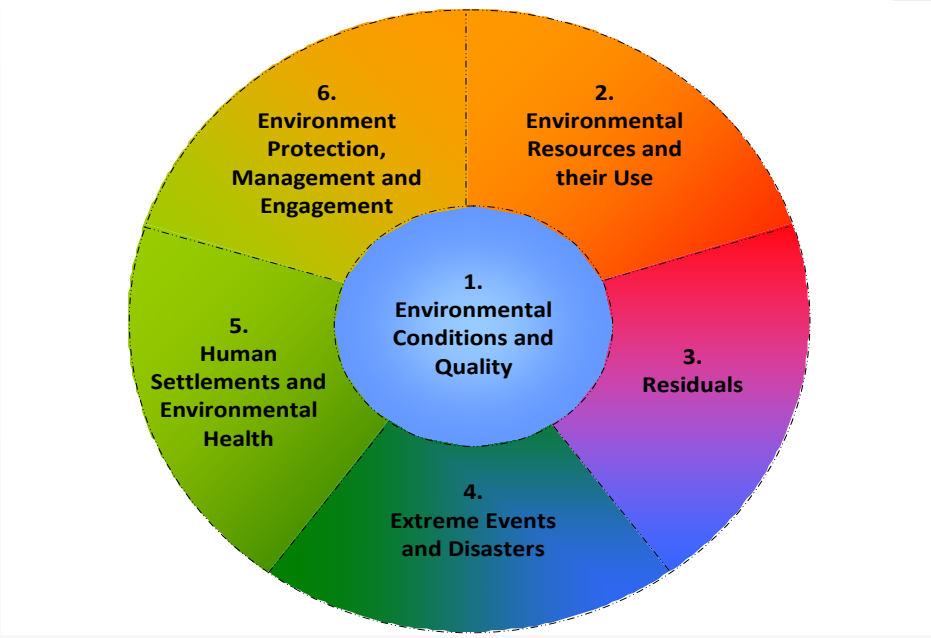
15. The FDES 2013 is a multipurpose conceptual and statistical framework that is comprehensive and integrative in nature. The FDES is structured in a way that allows links to economic and social domains. It seeks to be compatible with other frameworks and systems, both statistical and analytical, such as for instance the System of Environmental-Economic Accounting (SEEA), the Driving force – Pressure – State – Impact – Response (DPSIR) framework, and the Sustainable Development Goals (SDGs) indicator framework. The relationship between FDES 2013 and the DPSIR framework is given in Appendix-I. As such, the FDES facilitates data integration within environment statistics and with economic and social statistics.

16. The FDES organizes environment statistics into a structure consisting of components, subcomponents, statistical topics, and individual statistics using a multi-level approach. The first level of the structure consists of six fundamental components that follow the FDES conceptual framework.

17. The first component brings together statistics related to the conditions and quality of the environment and their change. The second component groups together statistics related to availability and use of environmental resources (ecosystem provisioning services, land and subsoil resources). The third component includes statistics related to the use of regulating services for the discharge of residuals from production and consumption processes into the environment. Statistics related to extreme events and disasters (both natural and technological) and their impacts are covered by the fourth component. The fifth component brings together statistics related to environmental conditions and impacts within human settlements. The sixth component groups statistics relevant to societal responses and economic measures aimed at protecting the environment and managing environmental resources.

18. Chart 1 shows the six components of the FDES. The dotted lines separating the components are an indication of the continuous interactions among them. These interactions are between and among all the components of the FDES. It should be noted that a two dimensional diagram can only provide a limited visualisation of the complex and interrelated nature of the relationships between humans and the environment. All the six components are intrinsically related with each other.

Chart 1: Component of FDES 2013



19. The revised FDES uses a multi-level approach. The first level of the structure defines the six fundamental components. Each individual component is further broken down into its respective sub-components (second level) and statistical topics (third level). Each level uses numbering conventions. The final level contains the actual individual environment statistics. The complete list is given in Appendix-II.

20. The FDES 2013 sets out a comprehensive (though not exhaustive) list of statistics (the Basic Set of Environment Statistics) that can be used to measure the statistical topics relating to environment and to develop national environment statistics programmes. This Basic Set of Environment Statistics is designed with enough flexibility to be adapted to individual countries' environmental concerns, priorities and resources and it follows a progression of three tiers:

(a) Tier 1 is the Core Set of Environment Statistics with 100 indicators, which are of high priority and relevance to most countries and have a sound methodological foundation.

(b) Tier 2 includes environment statistics that are of priority and relevance to most countries but need more investment in time, resources or methodological development.

(c) Tier 3 includes environment statistics which are either of less priority or require significant methodological development.

21. The Core Set of Environment Statistics (i.e., Tier 1) represents a broad consensus of opinion; as such, it is intended to foster collection, coordination and harmonization of environment statistics at the national, regional and global levels in the short-term. Consequently, depending on their priorities and resources, countries are encouraged to consider producing Tier 2 and Tier 3 statistics in the medium- and in the long-term respectively.

FDES and SDG

22. The UN General Assembly in its 70th Session considered and adopted the 2030 Agenda for Sustainable Development, which includes 17 goals (referred to as Sustainable Development Goals) and 169 targets. At the core of this agenda for sustainable development is the realisation that for any development intervention to be sustainable, it must take into account the social, economic, and environmental consequences it generates, and lead to conscious choices in terms of the trade-offs, synergies and spin offs it creates. The 2030 Agenda and its indicator framework have, therefore, highlighted a number of statistical areas, which would be required for monitoring the achievement of the SDGs. The environmental dimension of sustainable development is fully reinforced in the goals on oceans and marine resources, ecosystems and biodiversity, land degradation and desertification, and is also mainstreamed/embedded under all other goals. Almost half of the SDG targets require environment statistics in order to be able to compile its indicators and enable regular monitoring of progress. Presumably because of the concurrent development of the two frameworks, FDES 2013 has a strong linkage with the SDG indicator framework.

Environment Statistics in India

23. Central Statistics Office has been bringing out two regular statistical publications on environment. The first one is the "Compendium of Environment Statistics" which is based on the FDES framework. Since its inception in 1997, sixteen issues of the publication have been brought out on UNSD's FDES-1984 Framework, presenting available data relating to environment of the country. The last issue was released in March 2017.

24. Subsequent to the release of the "National Action Plan on Climate Change" by India, it was felt that a publication based on the Driving force – Pressure – State – Impact – Response (DPSIR) framework suggested for Climate Change should be brought out in addition to the "Compendium of Environment Statistics". After much deliberation at various fora, the second publication, "Statistics related to Climate Change" was conceptualised. This biennial publication was released first in 2013, followed by another issue in 2015.

25. With the release of FDES 2013, which is compatible with the DPSIR framework, a revision was mandated in the way environment statistics was being presented by CSO. This publication, "EnviStats-India" is a step in this direction. It replaces the two publications – "Compendium of Environment Statistics" and the "Statistics related to Climate Change". It is based on the FDES 2013 framework, covering 84 of the 100 indicators in the Core Set and 44 and 6 of the Tier 2 and Tier 3 indicators respectively. More indicators are likely to be added in the subsequent issues. In addition, for the purpose of avoiding any disruption to the users of the earlier two publications, all the tables have been updated and presented in this publication.

26. The tables presented in this publication have been sourced from various Departments/ Divisions/ Organisations of the Central/State Governments. The collation was facilitated by the Inter-Ministerial Group on Environment formed by CSO which includes most of the data sources on environment.

Coverage of the publication

27. The coverage of the publication can be defined by three components – subject coverage, availability of time series information and level of disaggregation. Following the FDES 2013, the tables of the publication 'EnviStats-India' has been categorised into six chapters, each corresponding to one of the components of FDES 2013. Section II gives the details of the different components and their coverage in this publication. The tables relating to the topics under the component have been put together, for the ease of comprehension and use. Time series/annual information has been provided since as early as 2000, wherever available, since specific values can be hard to interpret, but observing a significant change in those values over a period of years can signal important issues and/or areas which should be of particular concern for policy-makers. Similarly, state-wise information has also been provided so that the areas warranting focused interventions could be identified for guiding prognosis and evaluation.

SECTION II:
COMPONENTS OF FDES

Component-1: Environmental Conditions and Quality

28. Statistics on environmental conditions and qualities help measure the physical, biological and chemical characteristics of the environment. Just like the vital signs are used to measure the human body's basic functions, these measurements are taken to help assess the environmental health as well as to give clues to possible problems and show progress toward recovery after interventions. In respect of the policy makers, the government, these statistics help judge the need for and efficacy of policies. Component 1 of FDES covers statistics on different aspects of the environmental conditions like its meteorological, hydrographical, geological and geographical conditions, soil characteristics, land cover, extent of ecosystems, biodiversity and environmental quality.

29. Each of these statistics are intrinsically different – the geological (e.g., bedrock, fault lines and volcanoes), geographical (e.g., territorial borders, area of country, elevation and length of marine coastline) and geomorphological conditions of terrestrial areas and islands are normally static as these characteristics typically change slowly over time because of their nature. On the other hand, meteorological characteristics (like temperature and rainfall) are so much dynamic that the infinitesimal changes need to be analysed very carefully to observe whether or not these are significant. Between these two extremes are items like soil characteristics which change seasonally.

30. The measurement of these characteristics is also a colossal task – they require remote sensing techniques with simultaneous surveys, monitoring and analysis by the concerned environmental, meteorological, hydrological, geological and geographical authorities or institutions, so that these could be depicted as different category of maps and statistical tabulations. Again, certain characteristics could be studied by a single observation, while study of ecosystems and bio-diversity may involve repeated visits and observations to arrive at reliable estimates.

31. But despite all these challenges, it is important to have statistics on these characteristics since they depict environmental health and are crucial for any assessment of sustainability. For instance, in case of soil, which provides the physical base to support farm production, measurement of the nutrients is essential to appropriately augment the same for improved productivity. Another example is that of bio-diversity. Conservation of biodiversity, in any ecosystem acts as a bulwark against abrupt instabilities and makes it more resilient. Preventing a loss of biodiversity is crucial for mankind, given that humans depend on the natural richness of the planet for the food, energy, raw materials, clean air and clean water that make life possible and drive economies and societies. As such, a reduction or loss of biodiversity may not only undermine the natural environment but also economic and social goals. The matter is critical for India, which is one of the 12 mega biodiversity countries of the world. 28% of the total Indian flora and 33% of angiosperms occurring in India are endemic. Further, the country's high human population density, even in biodiversity hotspots, puts undue pressure on these sensitive eco-regions. It is, therefore, critical to keep a tab on the number of species and their population, so that appropriate measures could be taken in time.

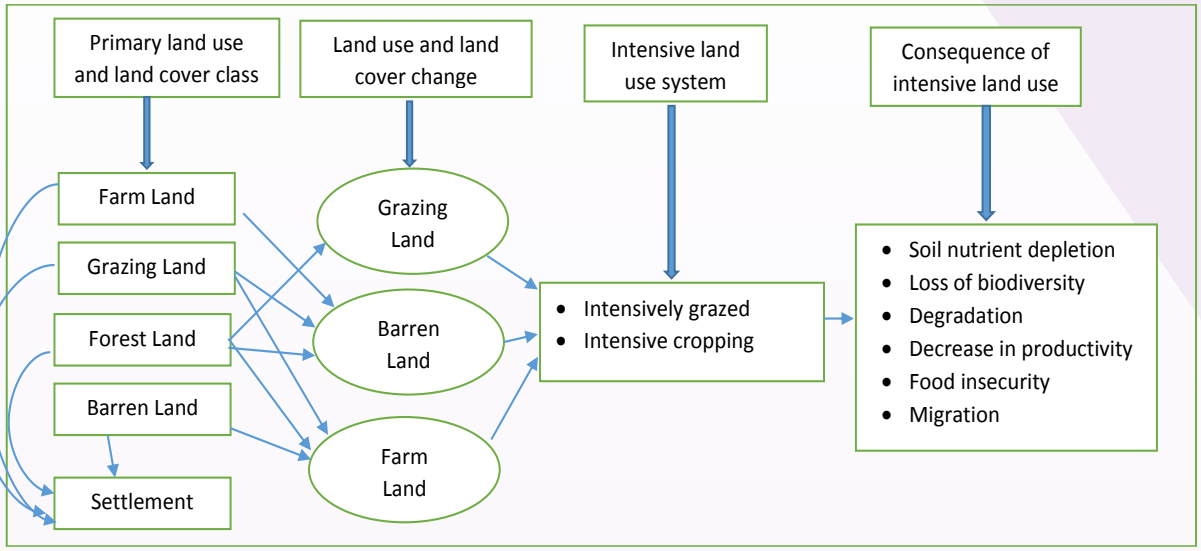
32. Considering that only the things that can be *measured* can actually be managed, the need to measure environmental health is larger than ever before. The set of statistics in Component 1 of FDES depict environmental health and therefore, are justifiably, shown at the centre of FDES in Chart 1. The remaining five components - Environmental Resources and their Use, Residuals, Extreme events and disasters, human settlements and environmental health, Environment Protection, Management and Engagement – have been established based on their relationship with this central component, primarily because the impact of all the other components can be assessed using these statistics.

Statements on Component 1: Environmental Conditions and Quality are numbered 1.01 to 1.57.

Component 2: Environmental Resources and their Uses

33. Earth is abundant with natural resources that develop on this planet using its surrounding environment. Few of them are used for our survival like land, water, air, rest of them like minerals, coal, gas, oil are used for satisfying our daily needs. From forests to wetlands, mountains to coastal shores and crops & livestock to minerals – each of these resources has its own importance.

34. The impact of changes in the land resources, for example, due to its use can be observed in the following diagram.



The above diagram shows that though changes in land use may be beneficial up to certain extent, relentless use of land may not only lead to loss in productivity and thereby, food insecurity, migration and but may also lead to social unrest.

35. Another important aspect of the environmental resources is the interaction between the resources. For instance, the linkage between forests and water. Forests play a vital role in water conservation as trees and other vegetation reduces the run-off and increase percolation of water into soil thereby improving the water regime in the area. Therefore, retaining and enhancing forest cover in watershed areas improves sustained river flows besides flood regulation.

36. India is characterized by its diversity – each of its regions exhibits striking contrasts in physical features, biodiversity, soil, climate etc. Different classifications are necessitated by this diversity for demarcating homogenous regions. For instance, in respect of forests, the country can be stratified into 14 physiographic zones based on the forest types.

37. Component 2 of FDES includes statistics on environmental resources and their use, with specific focus on their stocks and changes therein, as also their use for production and consumption so as to help policy formulation to ensure sustainable management of current and future use by the human sub-system.

Statements on Component 2: Environmental Resources and their Uses are numbered 2.01 to 2.62.

Component 3: Residuals

38. Of all living things, humans have the most impact on their environment. The economic growth and technological advancement which have expanded the horizon of possibilities for mankind bring with them an unsolicited visitor to the planet – pollution. This pollution, like the proverbial camel's nose in the tent, is throwing the natural environment off balance. Pollutants, whether they are released into the water, the air, or the ground, waste no time spreading throughout an ecosystem. They not only affect human health, but the health of all species, thereby threatening the existence of life on earth. Therefore, the planet's health and future depend solely on the ways and means to fight the causes of pollution and to work hand in hand to prevent it.

39. Statistics on pollution are covered under two Components of FDES. While Component 1 of FDES focusses on "environmental quality" and organizes statistics on the concentration of pollutants, Component 3 of FDES focusses on generation and management of pollution. It contains statistics on the amount and characteristics of residuals generated by human production and consumption processes, their management, and their final release to the environment. Residuals are defined as flows of solid, liquid and gaseous materials, and energy that are discarded, discharged or emitted by establishments and households through processes of production, consumption or accumulation. Data on the type of management of residuals- collection, treatment and recycling/ reuse are included in this chapter. Generally, emissions are analysed by the type of receiving environment (air, water or soil) and type of substance.

40. Emissions to air are distinctive in this set as these do not respect the frontiers between different countries. The impacts also being of the same nature, the emissions can only be managed or controlled through determined international co-operation. So, while greenhouse gases (GHG) are regulated by the Kyoto Protocol of UN Framework Convention on Climate Change (UNFCCC), the ozone-depleting substances regulated by the Montreal Protocol of the Vienna Convention.

41. Set up in 1974, in pursuance to the provisions made in the Water (Prevention and Control of Pollution) Act- 1974, CPCB works in association with the State Pollution Control Boards/Pollution Control Committees to collect, compile and publish technical and statistical data relating to water and air pollution and the measures devised for their effective prevention, control or abatement.

Statements on Component 3: Residuals are numbered 3.01 to 3.11.

Component 4: Extreme Events and Disasters

42. Climate Change, disaster and sustainable development – the connections between these three seemingly different issues have become the topic for many of the national and international discussions. With the scientists debating whether this era should be named as "Anthropocene"

considering the significant human impact not just on the Earth's geology and ecosystems, but also on the climate, the innumerable evidences of climate change are a testimony that it is man over nature as of now. But the experiments with nature have manifested in unpredictable outcomes. One such case is that of natural extreme events. The anthropogenic climate change has now been proven to be the cause of increased extremes of heat and rainfall and the frequency and severity of the extreme events- heat waves, cold waves, floods and droughts- is likely to get worse. So much so that these events which were traditionally referred to as "Act of God" could well be referred to as spoilt experiments of the humankind.

43. These disasters cannot be neglected for the disturbances they cause and the effect they have on people, their incomes, their livelihoods and local business. The effect is more severe especially in the case of vulnerable sections of the society who generally live from hand to mouth and do not have the comfort of a contingency plan to fall back on. With a majority population in India being dependent on agriculture, these events of unseasonal or lack of adequate rainfall and high temperatures can destroy crops – the only asset that this section of the population has. The income for the complete year vanishes and this leads to hunger and illness. It is now recognized that when the income inequalities within and among many countries cross a threshold level, they result in heightened tension and social conflict. That is why, the concept of sustainable development also includes the clause "leave no one behind".

44. This being the case, it is important for the policy makers to take mitigation and adaptation action for the extreme events. In this section, the details relating to some of the natural disasters are given. The datasets have been sourced from India Meteorological Department (IMD), National Crime Records Bureau (NCRB) and Department of Land Resources.

45. Set up in the year 1875, IMD is the principal agency for meteorological observations, weather forecasting and seismology. IMD is headquartered in Delhi and operates hundreds of observation stations across India and Antarctica. IMD has nurtured the growth of meteorology and atmospheric sciences not only in India but internationally as well. As part of the Agromet Advisory Services, effective weather and climate information and advisory services are provided to farmers, thereby contributing to weather-based crop/livestock management strategies and operations dedicated to enhancing crop production and food security. This assists farmers in taking the advantage of benevolent weather and in minimizing the adverse impact of malevolent weather. The services of IMD include forecasts and warnings for various natural disasters. This helps in saving human lives and minimizing damages due to natural disasters.

Statements on Component 4: Extreme Events and Disasters are numbered 4.01 to 4.11.

Component 5: Human Settlements and Environment Health

46. The link between good planning and good health is unequivocal. The quality of environment – both the natural and the man-made environment- has a significant impact on health and wellbeing. While the natural environment comprises the environmental components of air, water, land and the biota therein, the man-made environment is represented by human settlements which consist of physical elements, namely, shelter and infrastructure and the basic services like those of safe water, sanitation, health and transport. Therefore, Component 5 of

FDES 2013 encompasses the statistics related to two sub-components – human settlements and environmental health.

5.1 Human Settlements

47. The interaction of human settlements on the environment, at the most basic level, is that they extract non-renewable natural resources on the one hand and, on the other, produce waste products and pollution that has to be absorbed by the environment. The impact of human settlements on the natural environment increases as the population grows, urbanizes and consumes more. Urban and rural sprawl, housing demand, modes and character of transportation and basic service infrastructure, which have the most noticeable impact on the natural environment, are the focus for the creation of more sustainable human settlements with a reduced ecological footprint. These interactions and effects are described using information on human population, housing conditions, access to selected basic services (e.g., water, sanitation, waste removal, energy and transport) and environmental concerns, especially those specific to urban settlements.

48. Recognizing the fact that economic growth and development and urbanization always go hand-in-hand, India explicitly recognizes the importance of urbanization in the process of its socio-economic transformation. Its current approach to urbanization is focussed on several objectives: (i) urbanization must generate growth and enhance economic productivity and competitiveness; (ii) it should be inclusive and sustainable; (iii) it should aim at preservation and revitalization of history, culture and heritage; and (iv) it should contribute to the development of rural areas and strengthen rural urban interdependencies. Consistent with these goals and objectives, the Government of India has launched a number of missions, the key ones being the Smart Cities Mission, Atal Mission for Rejuvenation of Urban Transformation (AMRUT), Swachh Bharat (Clean India) Mission, Pradhan Mantri Awas Yojana- Housing For All (HFA), Heritage City Development and Augmentation Yojana (HRIDAY), and National Rurban Mission.

49. One of the most peculiar problems of urbanization is the proliferation of slums. As per UN Habitat, a slum is characterized by lack of durable housing, insufficient living area, lack of access to clean water, inadequate sanitation and insecure tenure. In India, so as to provide focused attention on this aspect, under Section-3 of the Slum Area Improvement and Clearance Act, 1956, slums have been defined as mainly those residential areas where dwellings are unfit for human habitation in any respect, by reasons of dilapidation, overcrowding, faulty arrangements and designs of buildings and streets, lack of ventilation, light, sanitation facilities or any combination of these factors which are detrimental to safety, health and morals.

50. In India, house listing and housing census is undertaken as a first phase of population census. One of the objectives of this exercise is to identify each building/census house and also to ascertain the quality of the census house, amenities accessible to it and assets available to the households living in those census houses. Since this can only be a decadal source and the latest data on housing conditions and access to basic services are not likely to be available through any of the administrative sources, collection of information on housing conditions and the access to basic services have been made a core portion in the two major official household surveys – the National Sample Survey and the National Family Health Survey.

51. Yet another issue related with human settlements is that of transportation. The issue of transportation and the environment is paradoxical in nature. From one side, transportation activities support increasing mobility demands for passengers and freight, and this ranging from urban areas to international trade. On the other side, transport activities have resulted in growing levels of motorization and congestion. The environmental impact of transport is substantial because it is a major user of energy, and burns most of the world's petroleum. This creates air pollution and is a significant contributor to global warming through emission of carbon dioxide. By subsector, road transport is the largest contributor to global warming.

52. The evaluation of the transport-environment link is hence critical to have sustainable human settlements with a reduced ecological footprint. Regular information on transport sector is collected by the nodal agencies – the Ministries of Civil Aviation, Road Transport & Highways, Railways and Shipping.

5.2 Environmental Health

53. Environmental health focuses on how environmental factors and processes impact and change human health. It can be defined as an interdisciplinary field that focuses on analysing the relationship between public health and the environment. Common measures of health problems within human populations include statistics on morbidity (incidence and prevalence) and mortality associated with specific types of diseases and conditions that are heavily influenced by environmental factors. Climate change and the associated increase in extreme events are also said to be linked with the expanding risk areas for air, water and vector-borne diseases, putting more people at risk.

54. As human health has been one of the prime focus areas in the Indian planning process since the beginning, Central Bureau of Health Intelligence (CBHI) was established in 1961, with the vision to have "a strong Health Management Information System in entire country". CBHI regularly brings out an annual publication, National Health Profile, based on the health data collected from all Health Directorates of states and union territories, covering 36 communicable and non-communicable diseases, including the air-borne, water-related and vector-borne diseases.

Statements on Component 5: Human Settlements and Environment Health are numbered 5.01 to 5.28.

Component 6: Environment Protection, Management and Regulation

55. Degradation of environment affects all nations. State boundaries are no guarantors to check the spread of pollution. Regulatory measures to protect and preserve environment do require laws at both national and international levels. Accordingly, national and international laws are supposed to work in tandem. To put into perspective the efforts made in India, an understanding of the chronology of international and national developments in respect of environmental regulations and management interaction of one with the other is a sine qua non.

56. In 1972, the UN Conference on Human Environment and Development was held at Stockholm. This was the first time that the world got together to deliberate on the important issue of environmental protection and sustainable development. The "Stockholm Declaration on Human Environment" and its accompanying Action Plan recommended national and international

level cooperation in identification and appraisal of environmental damages and problems of global significance.

57. This declaration influenced the establishment of MOEF as the apex administrative body in the country for regulating and ensuring environmental protection with due constitutional provisions. Subsequently, laws were enacted in this respect, the prime ones being Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981, Environment (Protection) Act, 1986 and Factories Amendment Act, 1987. Since then, an extensive network of environmental legislation has grown in the country. Presently, MOEFCC and the pollution control boards (CPCB i.e. Central Pollution Control Board and SPCBs i.e. State Pollution Control Boards) together form the regulatory and administrative core of the sector.

58. Convention on International Trade in Endangered Species of wild fauna and flora (CITES) in 1973 was the next major development, which envisaged to control or prevent international commercial trade in endangered species or products derived from them. Rather than seeking to directly protect endangered species or curtail development practices that destroy their habitats, CITES sought to reduce the associated economic incentive by closing off the international market. India became a party to the CITES in 1976. International trade in all wild flora and fauna in general and species covered under CITES is regulated in India jointly through the provisions of The Wildlife (Protection) Act 1972, the Import/Export policy of Government of India and the Customs Act 1962.

59. The ozone layer prevents most harmful UVB wavelengths of ultraviolet light (UV light) from passing through the Earth's atmosphere. In the late 1970s and early 1980s, a steady decline was observed in the total amount of ozone in Earth's stratosphere. This was referred to as ozone depletion. It was projected that the incidences of skin cancer, sunburn, and cataracts as also the harmful effects of these wavelengths of UV light on plants and animals would increase dramatically as a result of the thinning ozone. These concerns culminated in the adoption of the Montreal Protocol on Substances that deplete the Ozone Layer (to the Vienna Convention for the Protection of the Ozone Layer), 1987. The protocol set targets for reducing the consumption and production of a range of ozone depleting substances (ODS). The agreement acknowledges the differences across countries especially in respect of the technological and financial ability to reduce the emissions as also of the contribution to the ozone depletion. India acceded to the Montreal Protocol along with its London Amendment in September 1992.

60. In a move to prevent transfer of hazardous waste from developed to less developed countries and to ensure environmentally sound management of hazardous waste as closely as possible to the source of generation, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, usually known as the Basel Convention, an international treaty was opened for ratification in 1989. In force since 1992, it provides for timely notification, information, exchange and consultation between state parties in relation to hazardous waste. India ratified the Basel Convention in 1992, shortly after it came into force. The Indian Hazardous Wastes Management Rules Act 1989 encompasses some of the Basel provisions related to the notification of import and export, illegal traffic and liability in respect of hazardous waste.

61. In 1992, more than 100 heads of state met in Rio de Janeiro, Brazil for the United Nations Conference on Environment and Development (UNCED), properly referred to as the Earth Summit, which was convened to address urgent problems of environmental protection and socio-economic development. The Summit looked into may key issues, including, but not restricted to, patterns of production of waste and emissions, use of fossil fuels and water and problems of urbanization like transportation, congestion and their associated health problems. The Earth Summit 1992 launched the following:

i. The Rio Declaration of Environment and Development consisting of a series of principles defining the rights and liabilities of states regarding protection of environment;
ii. Agenda 21, a comprehensive blue print for global actions to affect the transition to sustainable development;
iii. A set of principles to support the sustainable management of forests worldwide;
iv. The legally binding conventions – Convention on Climate Change and Convention on Bio-diversity – aimed at preventing global climate change and conservation of biologically diverse species.

62. While 'Agenda 21' which brought to fore the necessity of rethinking the use and abuse of environment so that the ability of future generations to meet their needs is not affected, UN Framework Convention on Climate Change (UNFCCC), 1992, aimed to stabilize greenhouse gas emissions at levels that would prevent dangerous anthropogenic interference with the global climate. India signed the agreement in June 1992, which was ratified in November 1993. Under the UNFCCC, developing countries such as India do not have binding Green House Gas (GHG) mitigation commitments in recognition of their small contribution to the greenhouse problem as well as low financial and technical capacities. Subsequently, the Kyoto Protocol to the UNFCCC was adopted in 1997, which requires developed countries and economies in transition to reduce their GHG emissions by an average of 5.2% below 1990 levels. India acceded to the Kyoto Protocol on 26 August 2002. In 2015, 196 Parties came together under the Paris Agreement to transform their development trajectories so that they set the world on a course towards sustainable development. The Paris Agreement requests each country to outline and communicate their post-2020 climate actions, known as their Nationally Determined Contributions (NDCs), so as to aim at limiting warming to 1.5 to 2 degrees C above pre-industrial levels. India submitted its NDC in 2015.

63. Convention on Biological Diversity (CBD) is a legally binding framework treaty that has been ratified until now by 180 countries. The CBD has three main thrust areas: conservation of biodiversity, sustainable use of biological resources and equitable sharing of benefits arising from their sustainable use. The Convention on Biological Diversity came into force in 1993. Many biodiversity issues are addressed in the convention, including habitat preservation, intellectual property rights, biosafety, and indigenous peoples' rights. India's initiatives under the Convention include the promulgation of the Wildlife (Protection) Act of 1972, amended in 1991 and participation in several international conventions such as CITES.

64. Recognizing the need to establish an intergovernmental negotiating committee for the elaboration of an international convention to combat desertification in countries experiencing

serious drought and/or desertification, UN Convention to Combat Desertification (UNCCD) was formulated in 1994. The convention is distinctive as it endorses and employs a bottom-up approach to international environmental cooperation, linking the activities related to the control and alleviation of desertification and its effects to the needs and participation of local land-users and non-governmental organizations. Seven countries in the South Asian region are signatories to the Convention, which aims at tackling desertification through national, regional and sub-regional action programmes. The Regional Action Programme has six Thematic Programme Networks for the Asian region to strengthen the existing capacity of the member country parties and to network with each other for effective measures for monitoring, assessment, conservation, adaptation and mitigation to combat desertification. India hosts the network on agroforestry and soil conservation in arid, semi-arid and dry sub-humid areas.

65. This is only a sample of the measures taken in India in line with the international regulations for better management of environment. Several specific measures have also been taken by India on account of the conditions in the country, like setting up of soil-testing facilities and issue of soil health cards, so that over-use of fertilizers which may run-off to the waters can be avoided.

66. The connections between economic development, environmental management and human development need to be revisited in the context of sustainable development. It is important to look for new innovations to reconcile between environmental and economic concerns. This is only possible through better awareness, openness, and a new enlightenment on the part of individuals and an appropriate reorientation of all the institutions – government, corporates, households and civil societies – as also the norms in society. A new common wisdom has emerged that promises the ultimate reconciliation of environmental and economic concerns.

67. Component 6 of FDES recognizes the importance of synchronization of regulations and instruments. This component organizes information on the following key aspects of environmental governance:

i. Expenditure on environmental protection and resource management to improve the environment and maintain ecosystem health;

ii. Statistics on environmental governance, institutional strength, enforcement of regulations and extreme event preparedness; and

iii. Programmes and activities undertaken to increase awareness about environment, to diminish environmental impacts and to improve the quality of local environments.

Statements on Component 6: Environment Protection, Management and Regulation are numbered 6.01 to 6.17.

68. The publication “EnviStats-India” is not an end and itself. It envisages to be a means to achieve a “better environment, better tomorrow”.

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Environmental Conditions and Quality

Physical, biological and chemical characteristics of the environment

- ★ Atmosphere, climate & weather
- ★ Geological & geographical information
- ★ Soil characteristics,
- ★ Land cover, ecosystem & biodiversity
- ★ Environment quality of air, freshwater and marine water quality.

Statement 1.01 : Annual and Seasonal Mean Temperature - India

Unit - (°C)

Year	Annual	Jan-Feb	Mar-May	June-Sept	Oct-Dec
1901-10*	25.26	20.37	27.36	27.85	22.98
1911-20*	25.27	20.68	27.24	27.81	22.98
1921-30*	25.40	20.69	27.71	27.83	22.97
1931-40*	25.38	20.81	27.45	27.78	23.15
1941-50*	25.38	20.58	27.60	27.90	23.01
1951-60*	25.53	20.97	27.70	27.90	23.22
1961-70*	25.44	20.81	27.55	27.88	23.17
1981-90*	25.57	20.93	27.56	28.03	23.38
1991-2000*	25.73	21.09	27.76	28.12	23.60
2001	25.87	21.29	27.96	28.02	23.98
2002	26.03	21.29	28.28	28.30	23.94
2003	25.90	21.32	28.09	28.23	23.67
2004	25.94	21.36	28.35	28.13	23.67
2005	25.86	21.41	27.93	28.40	23.37
2006	26.15	22.59	27.92	28.17	24.06
2007	26.01	21.54	28.18	28.26	23.82
2008	25.85	20.78	27.97	27.96	24.30
2009	26.40	22.31	28.44	28.74	23.94
2010	26.41	21.76	29.34	28.39	23.94
2011	25.82	20.91	27.84	28.18	23.92
2012	25.89	20.73	28.02	28.48	23.76
2013	25.96	21.41	28.29	28.10	23.80
2014	26.01	21.05	27.85	28.68	23.93
2015	26.15	21.57	27.81	28.53	24.38
2016	26.46	22.25	28.86	28.45	24.20

Source: India Meteorological Department, Ministry of Earth Science (retrieved from data.gov.in)

** Denotes average for the period.*

Statement: 1.02 - Annual and Seasonal Minimum and Maximum Temperature - India

Unit - (°C)

Year	Annual		Jan-Feb		Mar-May		June-Sept		Oct-Dec	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
1901-10*	20.21	30.45	13.60	27.25	21.32	33.42	23.98	31.98	16.92	28.74
1911-20*	20.18	30.31	14.37	26.71	21.01	33.61	23.94	32.11	17.47	28.98
1921-30*	20.45	30.52	14.09	27.09	21.78	34.17	24.09	31.76	17.42	28.26
1931-40*	20.47	30.34	14.94	26.62	21.72	33.42	24.13	31.64	17.54	28.71
1941-50*	19.88	30.70	13.53	27.37	21.50	33.74	24.03	31.77	16.54	29.11
1951-60*	20.45	30.72	14.40	27.52	21.56	33.90	23.91	31.84	17.18	29.20
1961-70*	20.14	30.97	14.25	27.79	21.20	33.89	23.84	32.01	17.06	29.20
1971-80*	19.93	30.93	13.94	27.38	21.41	33.96	23.61	32.42	17.13	29.31
1981-90*	20.20	31.09	14.35	27.67	21.49	34.06	23.88	32.80	17.51	29.29
1991-2000*	20.43	30.91	14.73	27.22	21.64	33.72	24.15	32.23	17.75	29.76
2001	20.86	30.89	15.26	27.32	22.43	33.49	24.29	31.75	18.45	29.52
2002	21.00	31.07	15.43	27.15	22.75	33.80	24.42	32.17	18.40	29.47
2003	20.93	30.88	15.56	27.09	22.56	33.62	24.43	32.02	18.20	29.15
2004	20.93	30.96	15.49	27.23	22.71	33.99	24.29	31.97	18.28	29.07
2005	20.83	30.89	15.87	26.94	22.31	33.55	24.46	32.34	17.84	28.91
2006	21.11	31.20	16.17	29.00	22.33	33.51	24.37	31.98	18.82	29.31
2007	21.02	31.00	15.72	27.37	22.60	33.77	24.58	31.94	18.23	29.42
2008	20.85	30.85	14.91	26.64	22.31	33.63	24.22	31.70	18.87	29.74
2009	21.24	31.55	16.25	28.37	22.67	34.21	24.69	32.80	18.54	29.34
2010	21.45	31.37	15.82	27.70	23.56	35.11	24.58	32.19	18.91	28.98
2011	20.67	30.97	14.81	27.02	22.10	33.58	24.39	31.97	18.18	29.65
2012	20.70	31.08	14.69	26.78	22.07	33.97	24.58	32.37	18.18	29.34
2013	20.99	30.93	15.54	27.28	22.50	34.09	24.41	31.80	18.55	29.05
2014	20.99	31.04	15.44	26.66	22.09	33.62	24.74	32.61	18.58	29.28
2015	21.13	31.18	15.76	27.39	22.29	33.34	24.53	32.52	19.01	29.74
2016	21.28	31.63	16.17	28.33	23.15	34.57	24.61	32.28	18.37	30.04

Source: India Meteorological Department, Ministry of Earth Science (retrieved from data.gov.in)
** Denotes min. & max. for the period.*

Statement 1.03: Annual and Monthly Rainfall - India

Unit -Millimetre

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1901-10*	19.7	22.4	24.2	37.1	49.5	147.8	273.5	254.9	161.4	60.8	21.5	15.9	1088.7
1911-20*	20.2	25.4	32.6	36.2	64.8	186.7	268.4	247.1	165.6	78.6	36.5	12.5	1174.6
1921-30*	25.6	23.3	23.2	40.6	61.5	167.9	315.9	256.9	180.4	77.1	35.0	18.0	1225.3
1931-40*	17.8	31.8	28.3	40.6	66.4	190.5	308.1	263.4	176.9	79.3	33.1	14.4	1250.5
1941-50*	27.0	24.4	29.8	42.0	71.2	165.3	322.0	264.7	192.0	72.7	29.7	15.0	1255.7
1951-60*	23.6	16.0	28.9	33.6	66.9	162.9	307.9	271.7	183.9	98.9	24.0	11.4	1229.8
1961-70*	15.9	20.4	28.2	36.9	58.8	159.9	292.3	262.7	177.9	69.1	24.1	18.5	1164.4
1971-80*	15.3	21.9	24.1	36.6	59.2	172.3	279.6	263.2	156.5	76.9	36.4	14.2	1156.2
1981-90*	18.2	25.9	36.5	43.2	67.2	164.6	285.5	263.1	172.2	72.9	27.0	20.3	1196.5
1991-2000*	20.0	23.3	28.0	34.7	64.8	171.6	289.9	256.2	167.2	78.9	30.2	15.6	1180.1
2001	7.2	10.3	21.3	45.5	61.3	215.1	281.1	210.0	109.2	97.7	18.5	6.0	1083.3
2002	16.8	21.0	22.9	38.9	57.7	170.1	138.9	246.2	133.9	54.4	14.7	5.2	920.8
2003	7.2	42.1	33.7	35.5	38.6	164.5	305.6	247.8	179.9	92.7	10.2	16.6	1174.5
2004	26.2	10.7	11.9	50.6	74.5	167.8	241.7	252.5	123.6	88.8	16.9	6.1	1071.3
2005	40.3	46.0	42.6	38.5	50.3	146.9	340.3	192.0	200.7	96.2	27.2	11.5	1232.5
2006	17.4	11.5	34.4	30.4	80.7	151.4	298.5	302.6	175.4	52.3	32.1	12.7	1199.4
2007	2.7	35.7	34.4	33.6	50.4	201.4	295.8	259.2	215.1	55.3	15.2	16.7	1215.6
2008	22.4	19.2	37.7	32.6	45.2	208.8	250.0	264.3	165.7	50.5	25.1	10.8	1132.1
2009	11.8	13.2	15.2	26.0	56.6	86.5	283.7	191.9	140.3	70.1	53.2	10.8	959.3
2010	7.5	16.3	16.6	42.1	69.0	140.9	293.6	272.3	195.6	67.7	56.7	22.1	1200.5
2011	7.7	26.3	21.4	41.0	51.6	182.8	243.0	284.6	190.5	36.5	18.4	6.5	1110.1
2012	28.5	10.8	10.6	48.5	32.1	125.0	258.1	263.9	197.7	59.8	28.9	9.6	1073.5
2013	10.0	36.9	14.5	29.4	56.5	217.9	305.4	248.4	148.4	128.9	13.7	6.2	1216.2
2014	17.3	25.9	32.6	20.2	72.8	95.5	258.8	237.9	187.9	60.9	13.5	10.4	1033.7
2015	17.4	21.0	62.0	69.4	53.8	192.8	242.4	205.2	131.8	42.9	39.4	15.0	1093.2
2016	7.8	10.1	30.8	31.4	68.1	147.6	309.2	239.6	168.0	54.5	7.7	8.4	1083.1

Source: India Meteorological Department, Ministry of Earth Science (retrieved from data.gov.in)
** Denotes average for the period.*

Statement 1.04: Monsoon performance as departure from long-term mean

(June-September)

Sl. No.	Year	Number of Meteorological Sub-Divisions			Percentage of Long Period Average Rainfall for the Country as a Whole
		Normal	Large Excess/ Excess (LE/E)	Deficient/Large Deficient (D/LD)	
1	1998	22	11	2	105
2	1999	25	3	7	96
3	2000	23	5	7	92
4	2001	28	1	6	91
5	2002	14	1	21	81
6	2003	23	8	5	105
7	2004	23	0	13	87
8	2005	24	8	4	99
9	2006	21	6	9	100
10	2007	18	13	5	106
11	2008	31	2	3	98
12	2009	11	3	22	78
13	2010	17	14	5	102
14	2011	26	7	3	102
15	2012	22	1	13	93
16	2013	16	14	6	106
17	2014	24	1	11	88
18	2015	19	1	16	86
19	2016	22	4	10	97

Source : India Meteorological Department, Ministry of Earth Sciences.

Category: % Age from LPA(Long Period Average)

LE : Large Excess	+60% or more	D : Deficient	-20% to -59%
E : Excess	+20% to +59%	LD :Large Deficient	-60% to -90%
N : Normal	+19% to -19%	NR : No Rain	-100%

Statement 1.05 : Sub divisional Actual and Normal rainfall

Unit -Millimetre

Sl. No.	Meteorological Sub-divisions	2012		2013		2014		2015		2016	
		Actual	Normal	Actual	Normal	Actual	Normal	Actual	Normal	Actual	Normal
East & North India											
1	Arunachal Pradesh	2760.9	2933.7	2042.9	2933.7	2403.2	2933.7	2593.2	2933.7	2706.9	2933.7
2	Assam and Meghalaya	2321.3	2624.9	1811.5	2624.9	2171.9	2624.9	2509.4	2624.9	2266.9	2624.9
3	Bihar	924.2	1205.6	1069.9	1205.6	1061.0	1205.6	874.0	1205.6	1158	1205.6
4	Gangetic West Bengal	1258.3	1527.2	1804.7	1527.2	1241.7	1527.2	1507.7	1527.2	1427	1527.2
5	Jharkhand	1102.0	1296.3	1253.6	1296.3	1156.6	1296.3	1085.6	1296.3	1264	1296.3
6	Nagaland, Mizoram, Manipur & Tripura	1669.2	2278.0	1557.2	2278.0	1599.9	2278	1947.4	2278.0	1956.4	2278
7	Sub-Himalayan West Bengal & Sikkim	2630.2	2708.9	2406.1	2708.9	2322.6	2708.9	2501.7	2708.9	2624.8	2708.9
North West India											
1	Haryana, Chandigarh & Delhi	313.6	562.8	461.3	562.8	305.6	562.8	437.8	562.8	6	562.8
2	Himachal Pradesh	1035.1	1373.9	1216.9	1373.9	1019.9	1373.9	1223.2	1373.9	444	1373.9
3	Jammu & Kashmir	1116.5	1205.3	1193.8	1205.3	1278.4	1205.3	1572.6	1205.3	902.8	1205.3
4	Punjab	338.9	635.9	586.6	635.9	382.7	635.9	512.6	635.9	398.7	635.9
5	East Uttar Pradesh	853.6	1018.6	1042.1	1018.6	701.4	1018.6	603.6	1018.6	871.7	1018.6
6	West Uttar Pradesh	582.8	886.2	925.9	886.2	487.0	886.2	586.4	886.2	692.8	886.2
7	Uttarakhand	1309.7	1580.9	1735.4	1580.9	1287.4	1580.9	1247.6	1580.9	1308	1580.9
8	East Rajasthan	695.8	671.3	834.9	671.3	683.0	671.3	650.6	671.3	860.6	671.3
9	West Rajasthan	318.3	299.3	389.4	299.3	302.4	299.2	458.6	299.2	247	299.2
Central India											
1	Odisha	1430.2	1460.5	1632.4	1460.5	1536.9	1460.5	1210.1	1460.5	1253.5	1460.5
2	West Madhya Pradesh	1012.3	956.3	1396.3	956.3	864.9	956.3	1045.4	956.3	1098	956.3
3	East Madhya Pradesh	1097.0	1169.4	1521.9	1169.4	924.1	1169.4	943.5	1169.4	1340	1169.4
4	Gujarat Region	652.0	943.4	1250.5	943.4	792.2	943.4	677.6	943.4	764.9	956.9
5	Saurashtra, Kutch	315.2	507.0	823.9	507.0	467.8	507.0	516.1	507.0	482.9	511.3
6	Konkan & Goa	2993.9	3100.5	3684.9	3100.5	2913.2	3100.2	2191.5	3100.2	3663.9	3101.1
7	Madhya Maharashtra	664.2	876.8	962.4	876.8	838.0	876.8	629.5	876.8	906.3	876.8
8	Marathwada	538.4	821.6	888	821.6	548.9	821.6	532.8	821.6	949	821.6
9	Vidarbha	1090.3	1084.5	1520	1084.5	919.2	1084.5	993.7	1084.5	1163	1084.5
10	Chhattisgarh	1366.8	1290.7	1418.3	1290.7	1274.7	1290.7	1136.0	1290.7	1315.8	1298.9
South Peninsula											
1	Andaman & Nicobar Islands	3515.9	2926.3	3757.8	2926.3	2622.4	2926.3	2904.4	2926.3	2851.9	2926.3
2	Coastal Andhra Pradesh	1183.4	1024.2	1081.8	1024.2	777.4	1024.2	987.9	1024.2	908.9	1024.2
3	Telangana	972.8	942.6	1272.1	942.6	685.6	942.6	747.9	942.6	1043.4	942.6
4	Rayalaseema	665.3	706.1	677.2	706.1	523.4	706.1	875.6	706.1	555.4	706.1
5	Tamilnadu & Puducherry	709.6	914.4	741.9	914.4	913.2	914.4	1204.5	914.4	535	914.4
6	Coastal Karnataka	3395.0	3526.3	4044.6	3526.3	3563.9	3526.3	2757.3	3526.3	2619.7	3526.3
7	North Interior Karnataka	529.4	740.3	723.2	740.3	756.8	740.3	549.9	740.3	625	740.3
8	South Interior Karnataka	832.1	1019.2	1110.7	1019.2	1184.1	1019.2	1083.8	1019.2	687.3	1019.2
9	Kerala	2187.5	2923.4	3255.4	2923.4	3046.4	2924.3	2602.9	2924.3	1870.9	2924.3
10	Lakshadweep	1433.2	1600.0	1426.3	1600.0	1395.0	1600	1640.0	1600.0	1065.7	1600

Source : India Meteorological Department, Ministry of Earth Sciences

Statement 1.06 : (a) State-wise rainfall distribution of districts

Season: Monsoon, 2016

Sl. No.	State/UT	LE	E	N	D	LD	NR	ND	Total	% of normal rainfall
1	Andhra Pradesh	0	4	8	1	0	0	0	**13**	**62**
2	Arunachal Pradesh	2	0	4	5	1	0	4	**16**	**25**
3	Assam	0	0	14	12	0	0	1	**27**	**52**
4	Bihar	0	7	20	11	0	0	0	**38**	**53**
5	Chhattisgarh	0	5	18	4	0	0	0	**27**	**67**
6	Goa	0	0	2	0	0	0	0	**2**	**100**
7	Gujarat	0	2	15	16	0	0	0	**33**	**45**
8	Haryana	0	0	9	11	1	0	0	**21**	**43**
9	Himachal Pradesh	0	0	8	3	1	0	0	**12**	**67**
10	Jammu & Kashmir	0	1	10	5	1	0	5	**22**	**45**
11	Jharkhand	1	3	15	5	0	0	0	**24**	**63**
12	Karnataka	0	2	16	12	0	0	0	**30**	**53**
13	Kerala	0	0	0	14	0	0	0	**14**	**0**
14	Madhya Pradesh	2	23	21	5	0	0	0	**51**	**41**
15	Maharashtra	0	17	17	2	0	0	0	**36**	**47**
16	Manipur	1	0	0	1	0	0	7	**9**	**0**
17	Meghalaya	0	1	1	2	0	0	3	**7**	**14**
18	Mizoram	0	0	3	1	0	0	5	**9**	**33**
19	Nagaland	0	1	1	2	0	0	7	**11**	**9**
20	Odisha	0	0	25	5	0	0	0	**30**	**83**
21	Punjab	0	2	8	8	2	0	0	**20**	**40**
22	Rajasthan	2	19	11	1	0	0	0	**33**	**33**
23	Sikkim	0	0	4	0	0	0	0	**4**	**100**
24	Tamil Nadu	0	1	14	16	1	0	0	**32**	**44**
25	Telangana	0	7	3	0	0	0	0	**10**	**30**
26	Tripura	0	0	2	2	0	0	0	**4**	**50**
27	Uttar Pradesh	0	6	30	31	5	0	0	**72**	**42**
28	Uttarakhand	0	2	6	5	0	0	0	**13**	**46**
29	West Bengal	0	0	17	2	0	0	0	**19**	**89**
30	Andaman & Nicobar Islands	0	0	2	1	0	0	0	**3**	**67**
31	Chandigarh	0	0	0	1	0	0	0	**1**	**0**
32	Dadra & Nagar Haveli	0	1	0	0	0	0	0	**1**	**0**
33	Daman & Diu	0	1	1	0	0	0	0	**2**	**50**
34	Delhi	0	0	6	2	0	0	1	**9**	**67**
35	Lakshadweep	0	0	0	1	0	0	0	**1**	**0**
36	Puducherry	0	0	2	0	0	0	2	**4**	**50**
Total		**8**	**105**	**313**	**187**	**12**	**0**	**35**	**660**	**47**

Source: India Meteorological Department, M/o Earth Sciences

Note: The rainfall categories have been modified w.e.f. 2016.

LE : Large Excess +60% or More

E : Excess +20% to +59%

N : Normal + 19% to -19%

D : Deficient -20% to -59%

LD :Large Deficient -60% to -90%

NR : No Rain -100%

Statement 1.06 : (b) State-wise rainfall distribution of districts

Season: Monsoon, 2011

Sl. NO.	STATE/UT	E	N	D	S	NR	ND	Total	% of normal rainfall
1	Andhra Pradesh	1	18	4	0	0	0	23	**78**
2	Arunachal Pradesh	1	2	7	1	0	5	16	**13**
3	Assam	0	6	18	0	0	3	27	**22**
4	Bihar	9	18	11	0	0	0	38	**47**
5	Chhattisgarh	3	14	1	0	0	0	18	**78**
6	Goa	1	1	0	0	0	0	2	**50**
7	Gujarat	10	12	4	0	0	0	26	**46**
8	Haryana	1	11	8	1	0	0	21	**52**
9	Himachal Pradesh	1	8	2	1	0	0	12	**67**
10	Jammu & Kashmir	3	11	3	2	0	3	22	**50**
11	Jharkhand	6	11	2	0	0	5	24	**46**
12	Karnataka	3	15	12	0	0	0	30	**50**
13	Kerala	2	10	2	0	0	0	14	**71**
14	Madhya Pradesh	20	28	2	0	0	0	50	**56**
15	Maharashtra	7	26	2	0	0	0	35	**74**
16	Manipur	0	1	0	0	0	8	9	**11**
17	Meghalaya	0	3	1	0	0	3	7	**43**
18	Mizoram	0	0	1	0	0	8	9	**0**
19	Nagaland	0	0	3	0	0	8	11	**0**
20	Orissa	4	22	4	0	0	0	30	**73**
21	Punjab	4	10	5	1	0	0	20	**50**
22	Rajasthan	29	4	0	0	0	0	33	**12**
23	Sikkim	0	3	0	0	0	1	4	**75**
24	Tamil Nadu	6	11	14	1	0	0	32	**34**
25	Tripura	0	3	1	0	0	0	4	**75**
26	Uttar Pradesh	9	40	21	1	0	0	71	**56**
27	Uttaranchal	7	6	0	0	0	0	13	**46**
28	West Bengal	8	10	1	0	0	0	19	**53**
29	Andaman & Nicobar Islands	1	2	0	0	0	0	3	**67**
30	Chandigarh	0	1	0	0	0	0	1	**100**
31	Dadra & Nagar Haveli	0	2	0	0	0	0	2	**100**
32	Daman & Diu	0	1	0	0	0	0	1	**100**
33	Delhi	1	4	4	0	0	0	9	**44**
34	Lakshadweep	0	1	0	0	0	0	1	**100**
35	Pondicherry	1	0	1	0	0	2	4	**0**
Total		**138**	**315**	**134**	**8**	**0**	**46**	**641**	**49**

Source: India Meteorological Department, M/o Earth Sciences

Legend :

E : Excess
N : Normal
ND : No Data
D : Deficient
S : Scanty
NR : No Rainfall
Blank figures indicate nil

Statement 1.07 : Wetlands in India

(Area in Ha.)

Sr. No.	Wettcode	Wetland Category	Number of wetlands	Total Wetland area	% of Wetland area	Open Water	
						Post-monsoon area	Pre-monsoon area
	1100	**Inland wetlands-Natural**					
1	1101	Lake/Pond	11740	729532	4.78	454416	198054
2	1102	Ox-bow lake/Cut-off meander	4673	104124	0.68	57576	37818
3	1103	High altitude lake	2707	124253	0.81	116615	109277
4	1104	Riverine wetland	2834	91682	0.60	48918	29739
5	1105	Waterlogged	11957	315091	2.06	197003	112631
6	1106	River/Stream	11747	5258385	34.46	3226238	2628182
	1200	**Inland Wetlands-Man-made**					
7	1201	Reservoir/Barrage	14894	2481987	16.26	2260574	1268237
8	1202	Tank/Pond	122370	1310443	8.59	916020	349512
9	1203	Waterlogged	5488	135704	0.89	85715	33822
10	1204	Salt pan	60	13698	0.09	5293	2599
		Total -Inland	**188470**	**10564899**	**69.22**	**7368368**	**4769871**
	2100	**Coastal Wetlands-Natural**					
11	2101	Lagoon	178	246044	1.61	208915	191301
12	2102	Creek	586	206698	1.35	199743	189489
13	2103	Sand/Beach	1353	63033	0.41	-	-
14	2104	Intertidal mud flat	2931	2413642	15.82	516636	366953
15	2105	Salt Marsh	744	161144	1.06	5369	2596
16	2106	Mangrove	3806	471407	3.09	-	-
17	2107	Coral Reef	606	142003	0.93	-	-
	2200	**Coastal Wetlands-Man-made**					
18	2201	Salt pan	609	148913	0.98	105253	94047
19	2202	Aquaculture pond	2220	287232	1.88	196514	186963
		Total -Coastal	**13033**	**4140116**	**27.13**	**1232430**	**1031349**
		Sub-Total	**201503**	**14705015**	**96.35**	**8600798**	**5801220**
		Wetlands(<2.25ha)	555557	555557	3.64	-	-
		Total	**757060**	**15260572**	**99.99**	**8600798**	**5801220**

Area under Aquatic Vegetation				1322837	2065096
Area under turbidity levels					
Low				3206003	1888493
Mooderate				4168401	2967523
High				1226394	945204

Source : National Wetlands Atlas, National Remote Sensing Centre, Government of India

Statement 1.08 : State-wise Inland Water Resources

Sl. No.	States	Rivers & Canals (Length in kms.)	Reservoirs (Lakh Ha.)	Tanks & Ponds (Lakh Ha.)	Floodplain Lakes & Derelict Water (Lakh Ha.)	Brackish Water (Lakh Ha.)	Total (Lakh Ha.)
1	Andhra Pradesh	11514	2.34	5.17	-	0.60	8.11
2	Arunachal Pradesh	2000	-	2.76	0.42	-	3.18
3	Assam	4820	0.02	0.23	1.10	-	1.35
4	Bihar	3200	0.60	0.95	0.05	-	1.60
5	Chhattisgarh	3573	0.84	0.63	-	-	1.47
6	Goa	250	0.03	0.03	-	NEG	0.06
7	Gujarat	3865	2.43	0.71	0.12	1.00	4.26
8	Haryana	5000	NEG	0.10	0.10	-	0.20
9	Himachal Pradesh	3000	0.42	0.01	-	-	0.43
10	Jammu & Kashmir	27781	0.07	0.17	0.06	-	0.30
11	Jharkhand	4200	0.94	0.29	-	-	1.23
12	Karnataka	9000	4.40	2.90	-	0.10	7.40
13	Kerala	3092	0.30	0.30	2.43	2.40	5.43
14	Madhya Pradesh	17088	2.27	0.60	-	-	2.87
15	Maharashtra	16000	2.79	0.59	-	0.10	3.48
16	Manipur	3360	0.01	0.05	0.04	-	0.10
17	Meghalaya	5600	0.08	0.02	NEG	-	0.10
18	Mizoram	1395	-	0.02	-	-	0.02
19	Nagaland	1600	0.17	0.50	NEG	-	0.67
20	Odisha	4500	2.56	1.14	1.80	4.30	9.80
21	Punjab	15270	NEG	0.07	-	-	0.07
22	Rajasthan	5290	1.20	1.80	-	-	3.00
23	Sikkim	900	-	-	0.03	-	0.03
24	Tamil Nadu	7420	5.70	0.56	0.07	0.60	6.93
25	Tripura	1200	0.05	0.13	-	-	0.18
26	Uttar Pradesh	28500	1.38	1.61	1.33	-	4.32
27	Uttrakhand	2686	0.20	0.01	0.00	-	0.21
28	West Bengal	2526	0.17	2.76	0.42	2.10	5.45
29	Andaman & Nicobar Islands	-	0.00367	0.001600	-	0.33	0.33527
30	Chandigarh	2	-	NEG	NEG	-	0.00
31	Dadra & Nagar Haveli	54	0.05	-	-	-	0.05
32	Daman & Diu	12	-	NEG	-	NEG	0.00
33	Delhi	150	0.04	-	-	-	0.04
34	Lakshadweep	-		-	-	-	0.00
35	Puducherry	247	-	NEG	0.01	NEG	0.01
TOTAL		**195095**	**29.26**	**24.32**	**7.98**	**11.55**	**73.12**

Source : Annual report 2016-17, Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture & Farmers Welfare
NEG: Negligible

Statement 1.09 : Water Sheds in India

Name of Basin & River length	S. No.	Name of Sub-Basin	Area (Sq. Km.)	Size Range of Watershed (Sq. Km.)	No. of Watersheds	Dams	Barrages	Weirs	Anicuts	Lifts	Power House
Indus - 1114 (2280) km	1	Beas	19002.47	389 - 999	30	11	2	5	0	4	16
	2	Chenab	29981.38	323 - 1127	48	4	0	2	0	5	6
	3	Ghaghar and others	26235.29	207 - 1158	45	2	0	0	0	5	0
	4	Gilgit	27088.70	340 - 1012	37	0	0	0	0	0	0
	5	Jhelum	29200.52	320 - 1322	44	3	1	5	0	26	8
	6	Lower Indus	23894.10	319 - 1270	31	0	0	0	0	0	0
	7	Ravi	13710.20	390 - 1303	20	7	3	1	0	2	9
	8	Shyok	38545.05	430 - 1374	53	0	0	0	0	0	0
	9	Satluj Lower	38442.79	329 - 1296	58	7	4	0	0	3	6
	10	Satluj Upper	21439.43	384 - 952	31	4	1	2	0	0	10
	11	Upper Indus	46450.13	383 - 974	70	1	2	3	0	0	4
Ganga - 2525 km	12	Above Ramganga Confluence	39104.61	430 - 1301	51	3	9	0	0	0	11
	13	Banas	51651.51	331 - 1433	64	76	0	0	0	0	0
	14	Bhagirathi and others (Ganga Lower)	64038.97	308 - 1755	75	12	10	3	0	0	4
	15	Chambal Lower	10941.26	406 - 1136	14	3	0	0	0	2	0
	16	Chambal Upper	25546.57	405 - 1404	30	31	1	0	0	1	2
	17	Damodar	41965.49	326 - 1301	60	39	3	6	0	0	4
	18	Gandak and others	56260.43	335 - 1309	76	30	5	36	0	6	0
	19	Ghaghara Confluence to Gomti confluence	58634.18	372 - 1762	36	11	7	0	0	7	3
	20	Ghaghara	26254.06	375 - 1300	76	12	0	7	0	7	2
	21	Gomti	29865.21	333 - 1331	41	0	1	0	0	0	0
	22	Kali Sindh and others up to Confluence with Parbati	48492.61	430 - 1275	64	125	1	2	0	0	1
	23	Kosi	18413.58	304- 1695	19	0	0	2	0	0	1
	24	Ramganga	30839.69	350 - 1443	40	11	9	1	0	0	1
	25	Sone	65110.05	381 - 1389	83	159	2	19	0	5	7
	26	Tons	16905.74	442 - 1173	23	32	3	1	0	2	2
	27	Upstream of Gomti confluence to Muzaffarnagar	29061.37	364 - 1281	40	14	0	1	0	2	1
	28	Yamuna Lower	124867.19	734 - 1781	98	201	5	11	1	7	3
	29	Yamuna Middle	34586.39	410 - 1232	43	19	1	0	0	0	0
	30	Yamuna Upper	35798.19	328 - 1241	47	6	9	3	0	6	14

Contd.

Name of Basin & River length	S. No.	Name of Sub-Basin	Area (Sq. Km.)	Size Range of Watershed (Sq. Km.)	No. of Watersheds	Dams	Barrages	Weirs	Anicuts	Lifts	Power House
Brahmapurta - 916(2900) km	31	Brahmaputra Lower	87392.22	429 - 1490	83	13	16	5	0	2	18
	32	Brahmaputra Upper	98972.87	489- 1473	97	3	1	0	0	2	3
Cauvery - 800 km	33	Cauvery Lower	17386.45	321 -979	28	2	0	1	3	0	0
	34	Cauvery Middle	57280.98	377-935	86	85	10	3	9	2	23
	35	Cauvery Upper	10958.80	363-991	18	9	0	0	0	7	1
Godavari - 1465 km	36	Wardha	46242.09	361 - 946	69	236	3	4	0	4	0
	37	Weinganga	49695.40	305 - 972	80	149	2	3	0	15	1
	38	Godavari Lower	44492.93	304 - 990	67	28	5	3	1	7	7
	39	Godavari Middle	36290.47	325 - 955	56	186	16	0	0	15	3
	40	Godavari Upper	21443.23	331 - 988	33	114	0	5	0	7	3
	41	Indravati	38306.10	343 - 993	60	21	0	0	0	0	0
	42	Manjra	29472.88	421 - 981	44	128	1	1	0	6	2
	43	Pranhita and others	36119.60	326 - 982	57	59	1	2	0	8	0
Subernarekha	44	Subernarekha	25792.16	387 - 962	45	38	4	12	-	-	3
Barak and Others	45	Barak	27658.98	365 – 844	47	1	0	0	0	0	1
	46	Kynchiang and other south flowing rivers	10267.39	309 – 790	17	2	0	0	0	0	1
	47	Naochchara and others	76,95.81	384 – 857	13	1	3	0	0	0	1
Krishna - 1401 km	48	Bhima Lower	23652.70	396 - 929	36	68	5	0	0	2	0
	49	Bhima Upper	44793.32	351 - 940	71	273	0	1	0	30	9
	50	Krishna Lower	39494.33	277 - 971	59	29	2	0	2	1	4
	51	Krishna Middle	22229.12	341 - 963	36	34	0	0	0	8	4
	52	Krishna Upper	54504.77	322 - 964	85	188	4	57	0	61	10
	53	Tungabhadra Lower	41556.48	357 - 976	59	37	0	0	3	4	3
	54	Tungabhadra Upper	28519.41	331 - 924	45	31	1	0	1	13	5
Brahmani and Baitarni - 799 km	55	Baitarni	14351.23	472 - 975	21	18	2	1	1	-	-
	56	Brahmani	37545.83	333 - 964	58	43	3	3	0	-	-
Pennar - 597 km	57	Pennar Lower	17979.85	358 - 851	29	19	0	0	2	-	-
	58	Pennar Upper	36263.58	310 - 927	61	39	0	1	0	-	-
Mahanadi-851km	59	Mahanadi Lower	57958.88	320 - 1458	91	75	7	4	-	-	-
	60	Mahanadi Middle	51895.91	301 - 902	88	116	3	5	-	-	-
	61	Mahanadi Upper	29796.64	314 - 908	48	62	4	4	-	-	-
West flowing rivers from Tapi to Tadri	62	Vasishti and others	27473.95	335- 979	47	113	0	2	0	1	9
	63	Bhatsol and others	29348.90	311 – 932	49	106	0	1	0	0	9

Contd.

Name of Basin & River length	S. No.	Name of Sub-Basin	Area (Sq. Km.)	Size Range of Watershed (Sq. Km.)	No. of Watersheds	Dams	Barrages	Weirs	Anicuts	Lifts	Power House
Mahi-583 km	64	Mahi Lower	13377.00	372 - 873	22	47	0	2	0	0	1
	65	Mahi Upper	24959.80	331 - 954	41	87	0	2	0	0	2
Tapi - 724 km	66	Tapi Lower	4108.90	427 - 782	7	6	0	2	0	0	1
	67	Tapi Middle	31766.67	366 - 938	47	225	6	7	0	5	1
	68	Tapi Upper	28047.34	322-937	46	125	2	2	0	8	0
East flowing rivers between Pennar and Kanyakumari	69	Vaippar and others	20356.69	318-888	33	18	0	1		-	2
	70	Palar and other	35392.34	322-957	56	18	2	5		-	0
	71	Pamba and others	18289.41	317-938	30	7	0	2		-	3
	72	Ponnaiyar and other	28249.49	357-900	46	18	0	5		-	1
Narmada- 1312 km	73	Narmada Lower	8904.02	308 - 750	16	22	0	1	-	0	2
	74	Narmada Middle	40575.72	338 - 957	63	134	1	0	-	3	4
	75	Narmada Upper	43192.68	327 - 986	71	121	1	1	-	1	3
West flowing rivers of Kutch and Saurashtra including Luni	76	Luni Upper	70202.58	381-1448	81	27	0	0	0	0	0
	77	Luni Lower	29180.12	316-1419	42	55	0	0	0	0	0
	78	Drainage of Rann	21229.90	311-968	40	107	0	1	0	0	0
	79	Saraswati	27260.84	309-1018	43	50	1	0	0	0	0
	80	Bhadar and other WFR	18489.70	331-965	30	70	0	6	0	0	0
	81	Shetrunji and other EFR	18221.67	300-856	32	99	0	3	0	0	0
Sabarmati - 371 km	82	Sabarmati Lower	8904.02	398 - 986	17	17	0	0	0	0	0
	83	Sabarmati Upper	40575.72	313 - 828	34	33	2	10	0	0	0
East flowing rivers between Mahanadi and Pennar	84	Vamsadhara & other	21870.63	392-930	34	27	2	12	6	0	0
	85	Nagvati & other	24372.24	358-928	41	21	2	0	3	0	0
	86	East flowing rivers between Godavari & Krishna	10342.29	472-902	16	3	0	0	0	0	0
	87	East flowing rivers between Krishna & Pennar	23334.63	205-1404	41	13	1	0	3	0	0
West flowing rivers from Tadri to Kanyakumari	88	Netravati and others	18762.09	317 -929	32	9	1	1	1	0	6
	89	Periyar and others	21895.21	340 - 934	37	40	4	2	0	0	17
	90	Varrar and others	14164.70	363- 978	23	20	1	3	3	0	6
Minor rivers draining into Myanmar and Bangladesh	92	Imphal and others Sub Basin	16754.90	321 - 900	29	3	5	0	0	3	0
	93	Karnaphuli and Others Sub Basin	3776.84	312 - 882	6	-	-	-	-	-	-
	94	Mangpui Lui and others Sub Basin	7976.18	359 - 656	16	-	-	-	-	-	-
	95	Muhury and Others Sub Basin	1676.39	532 - 608	3	-	-	-	-	-	-

Source : Basin-wise Reports as downloaded from India WRIS

Statement 1.10: Catchment area of major river basins

Sl. No.	Name of the River	Origin	Length (Km.)	Catchment Area (Sq. Km.)
1	Indus	Mansarovar (Tibet)	1114 (2880)	321289 (1165500)
2	a) Ganga	Gangotri	2525	861452 (1186000)
	b) Brahmaputra	Kailash Range (Tibet)	916 (2900)	194413 (580000)
	c) Barak & other rivers flowing into Meghna like Gomti, Muhari, Fenny etc.	Manipur Hills (Manipur)		41723
3	Sabarmati	Aravalli Hills (Rajasthan)	371	21674
4	Mahi	Dhar (Madhya Pradesh)	583	34842
5	Narmada	Amarkantak (Madhya Pradesh)	1312	98796
6	Tapi	Betul (Madhya Pradesh)	724	65145
7	Brahmani	Ranchi (Bihar)	799	39033
8	Mahanadi	Nazri Town (Madhya Pradesh)	851	141589
9	Godavari	Nasik (Maharashtra)	1465	312812
10	Krishna	Mahabaleshwar (Maharashtra)	1401	258948
11	Pennar	Kolar (Karnataka)	597	55213
12	Cauvery	Coorg (Karnataka)	800	81155
Total				**2528084**

Source : Water Year Book 2012, Central Water Commission

Note: Figures within bracket indicate the total river basin in India and neighbouring countries.

Statement 1.11 : Status of monitored glacial lakes & water bodies

Month	No. of Glacial Lakes /Water Bodies Monitored	Water Spread Area		
		Increased	Decreased	No Change
June-Oct, 2011	391	218	35	138
June-Oct, 2012	391*	88	110	190
June-Oct, 2013	476**	165	115	195
June-Oct, 2014	438#	88	178	170
June-Oct, 2015	459$	119	144	195
June-Oct, 2016				
June 2016	372	25	247	100
July 2016	112	21	55	36
August 2016	181	21	95	65
September 2016	195	29	110	56
October 2016	398	105	168	125
June-Oct, 2017				
June 2017	192	58	90	44
July 2017	176	47	87	42
August 2017	165	37	86	42
September 2017	273	80	116	77
October 2017	326	97	122	107

Note:
*: Includes 3 new Glacial lakes that were missed earlier
**: Includes 1 Glacial lake that is dry
#: Includes 2 Water Bodies that are dry
$: Includes 1 Glacial lake that is dry

Source: Monitoring of Glacier, Lakes and water Bodies in Himalayan region of Indian river basin (Report of the respective months), Centre Water Commission

Statement 1.12 : Glacial lakes with significant change in water spread

(a) : Lakes with increasing water spread

S. No.	UID	Lake_ID	Water spread area in Ha	% Difference in Water spread area				
			2009 (Inventory)	2017	2016	2015	2014	2013
1	JK_5	01_42H_005	52	25.11	Cloud	-3.8	-7.7	-3.8
2	JK_120	01_43M_003	208	23.92	11.54	21.2	-3.8	10.6
3	JK_159	01_43N_032	49	30.08	22.45	12.2	8.2	-4.1
4	JK_115	01_43K_014	112	23.25	Cloud	16.1	13.4	6.3
5	HP_1	01_52D_001	688	29.05	26.16	8.6	9.4	11.3
6	HP_12	01_53E_001	72	81.65	79.17	15.3	20.8	29.2
7	HP_3	01_52H_002	62	44.58	29.03	25.8	21	21
8	JK_195	01_52I_003	180	24.12	23.33	17.2	Dry	9.4
9	CH_38	01_61C_010	88	27.28	Cloud	9.1	4.5	0
10	CH_39	01_61C_011	408	27.3	Cloud	12.5	0.5	-1.7
11	CH_53	01_61D_001	70	28.93	Cloud	8.6	7.1	-2.9
12	CH_55	01_61D_003	46	66.97	Cloud	-4.3	0	17.4
13	CH_101	01_62F_010	45	49.72	Cloud	13.3	8.9	4.4
14	CH_298	03_62J_026	103	24.69	Cloud	10.7	9.7	12.6
15	CH_303	03_62J_031	166	36.51	Cloud	15.7	2.4	4.8
16	CH_304	03_62J_032	77	21.32	Cloud	3.9	0	2.6
17	CH_313	03_62K_009	250	22.25	Cloud	17.6	14.4	12.4
18	CH_423	03_71G_014	140	22.22	Cloud	16.4	20.7	12.1
19	CH_430	03_71K_007	80	20.4	Cloud	-3.8	1.3	11.3
20	CH_132	02_71H_012	89	40.63	Cloud	41.6	34.8	23.6
21	CH_834	03_82J_004	378	45.7	Cloud	34.1	11.6	9
22	CH_1075	03_91C_024	239	31.5	Cloud	16.7	8.4	19.2
23	CH_183	02_71L_028	77	25.26	Cloud	14.3	15.6	3.9
24	CH_188	02_71L_034	46	29.97	Cloud	21.7	8.7	17.4
25	CH_244	02_72I_004	121	71.92	Cloud	26.4	15.7	2
26	NP_64	02_72I_011	100	44.68	Cloud	23	14	2
27	CH_235	02_71P_047	71	20.64	Cloud	16.9	5.6	7
28	CH_217	02_71P_029	80	21.21	Cloud	13.8	-6.3	10
29	CH_269	02_78A_003	124	22.35	Cloud	14.5	6.5	4.8
30	CH_270	02_78A_004	84	24.71	Cloud	10.7	8.3	9.5
31	CH_159	02_71L_004	86	38.86	Cloud	10.7	9.3	12.8
32	JK_67	01_43G_001	22154	21.2	Cloud	23.4	19	7.6
33	JK_187	01_52C_003	45	27.36	35.56	24.4	8.9	11.1
34	HP_5	01_52H_004	46	42.26	202.17	178.3	173.9	163
35	CH_432	03_71K_009	170	35.3	Cloud	0	11.8	18.8
36	NP_57	02_72E_001	142	20.9	Cloud	2.8	5.6	23.9
37	UK_8	02_53O_005	1510	21.17	0	2.2	-1.1	-31.8
38	SK_19	03_78A_013	63	28.29	60.32	28.6	14.3	0

Source: Monitoring of Glacier, Lakes and water Bodies in Himalayan region of Indian river basin for October 2017, Centre Water Commission

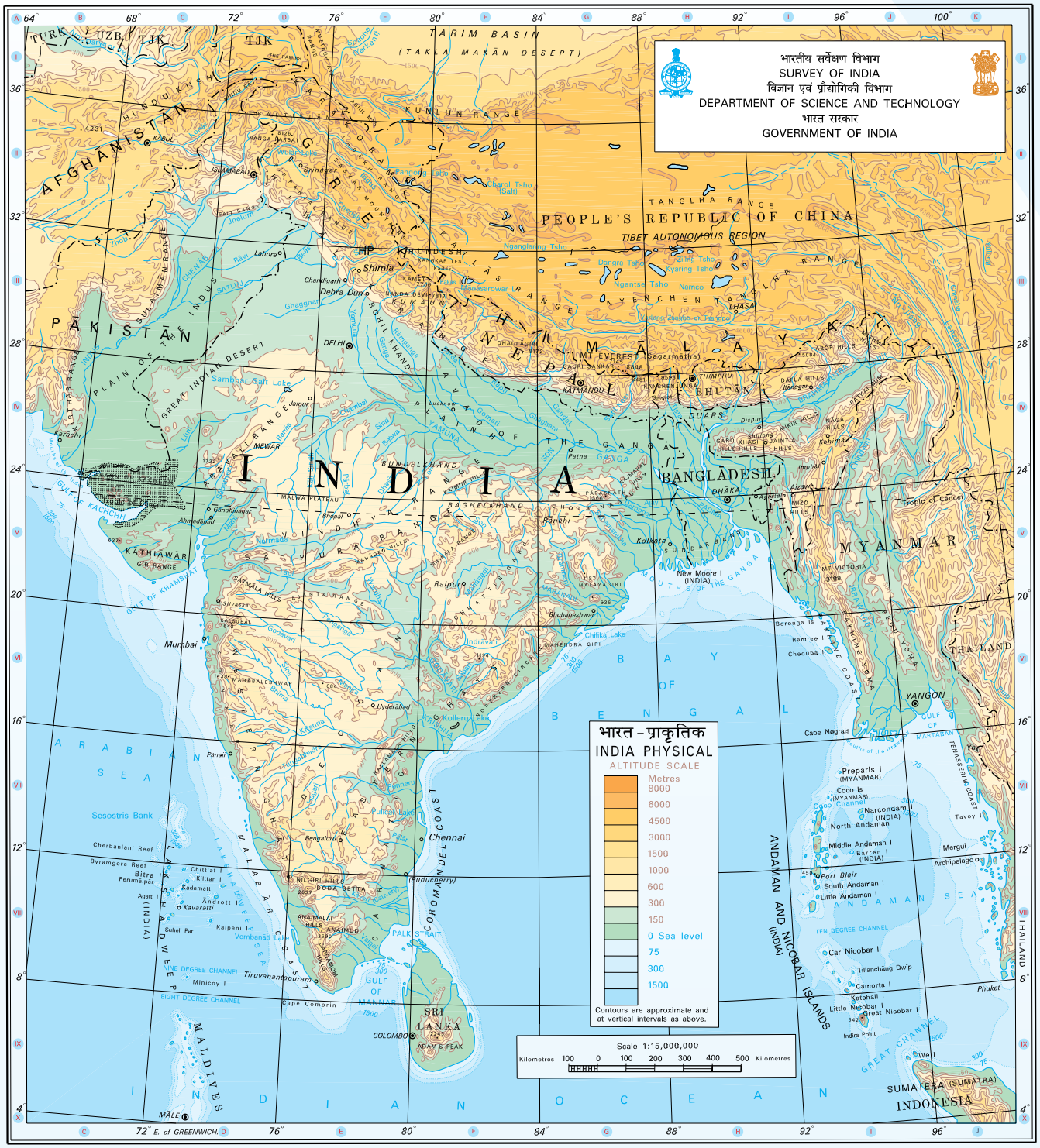
Statement 1.12 : Glacial lakes with significant change in water spread
(b) Lakes with decreasing water spread

S. NO.	UID	Lake_ID	Water spread Area in Ha	% Difference in Water spread area				
			2009 (Inventory)	2017	2016	2015	2014	2013
1	CH_73	01_62B_001	440	-33.62	Cloud	-9.50	-2.50	1.80
2	UK_11	02_53P_003	1078	-40.56	-29.78	1.60	-14.80	-13.60
3	CH_809	03_82G_048	55	-31.04	Cloud	-29.10	-27.30	0.00
4	CH_259	02_77D_004	1273	-41.75	Cloud	-15.60	-14.30	-9.80
5	CH_256	02_77D_001	5831	-65.74	Cloud	-19.80	-18.50	-13.60
6	HP_6	01_52H_005	45	-41.51	Cloud	-6.70	2.20	11.10
7	CH_812	03_82G_051	49	-75.85	Cloud	Cloud	-20.40	0.00
8	CH_816	03_82G_055	62	-22.69	Cloud	-16.10	-17.70	0.00
9	CH_959	03_82K_103	50	-31.14	Cloud	-22.00	-18.00	-16.00
10	CH_1098	03_91C_070	57	-25.37	Cloud	-22.80	Cloud	-24.60
11	CH_1085	03_91C_052	64	-29.00	Cloud	-20.30	Cloud	-23.40
12	CH_1182	03_91H_017	46	-26.55	Cloud	-21.70	Cloud	-19.60
13	CH_1194	03_91H_029	50	-28.01	Cloud	-16.00	Cloud	-8.00
14	CH_33	01_61C_005	139	-54.99	Cloud	76.30	33.80	23.30
15	CH_438	03_71O_002	48	-33.38	Cloud	-18.80	10.40	2.10
16	CH_347	03_62O_002	52	-22.27	Cloud	-15.40	-32.70	-19.20
17	UK_10	02_53P_002	734	-40.59	-36.51	21.30	-42.00	-36.00
18	AP_54	03_82O_061	54	-21.84	-14.81	3.70	0.00	-9.30
19	CH_990	03_82N_019	55	-20.41	Cloud	-7.30	-10.90	5.50
20	AP_100	03_91C_064	89	-20.20	-32.58	-15.70	Cloud	-12.40

Source: Monitoring of Glacier, Lakes and water Bodies in Himalayan region of Indian river basin for October 2017, Centre Water Commission

Statement 1.13 : Geographical Characteristics of India

a) Physical Map of India



Refer to this map as: 1:15,000,000
INDIA–PHYSICAL
Showing sea depths THIRD EDITION (PRM)

TJK.....TAJIKISTĀN TURK.....TURKMENISTĀN UZB.....UZBEKISTĀN

भारत के महासर्वेक्षक मेजर जनरल गिरीश कुमार, विशिष्ट सेवा मैडल के निदेशन में प्रकाशित,
Published under the direction of Major General Girish Kumar, VSM *Surveyor General of India,*
Survey of India, Hāthibarkala Estate, Post Box No. 37, DehraDūn–248001 (Uttrākhand)
Department of Science & Technology, Government of India.
2018.

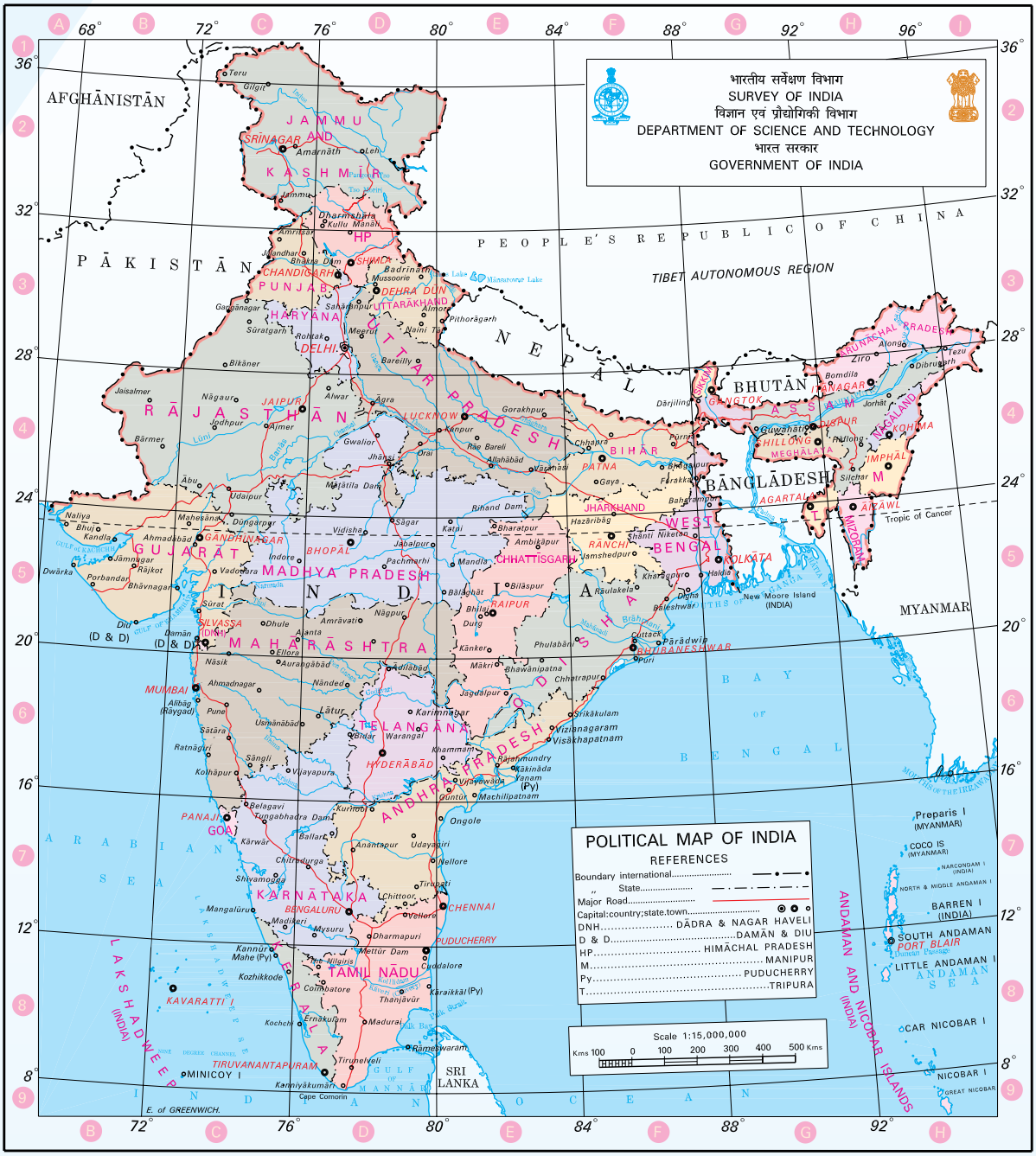
The territorial waters of India extend into the sea to distance of twelve nautical miles from the appropriate base line.

PRINTED AT THE NORTHERN PRINTING GROUP OF SURVEY OF INDIA.

Projection: Lambert Conical Orthomorphic

Statement 1.13 : Geographical Characteristics of India

b) Political Map of India



Refer to this map as:- 1:15,000,000
POLITICAL MAP OF INDIA SECOND EDITION

भारत के महासर्वेक्षक मेजर जनरल गिरीश कुमार, विशिष्ट सेवा मैडल के निदेशन में प्रकाशित,
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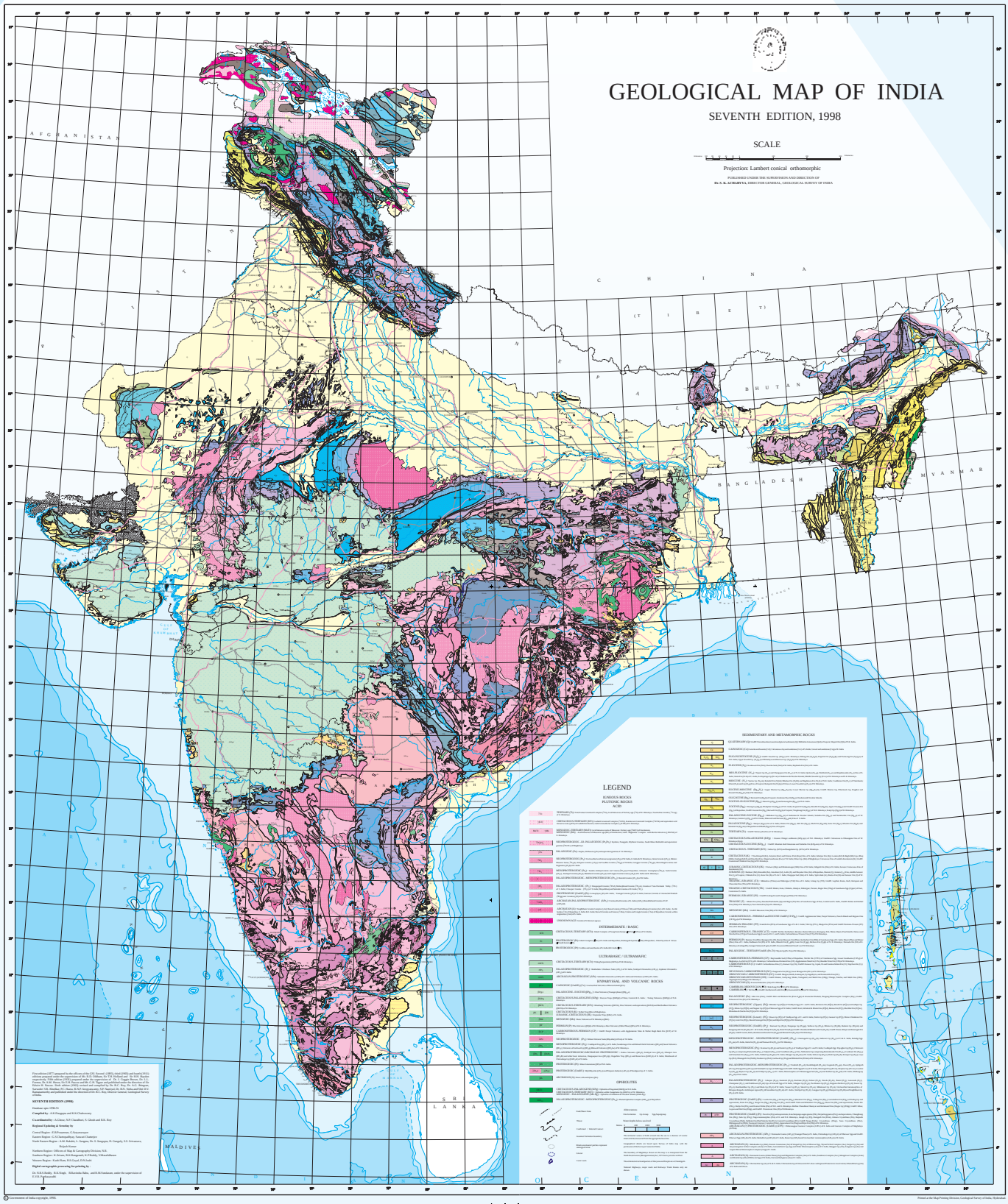
Department of Science & Technology, Government of India.
2018.

Projection: Lambert Conical Orthomorphic

The Administrative headquarters of Chandīgarh, Haryāna and Punjab are at Chandīgarh.
The Administrative headquarters of Telangāna and Andhra Pradesh are at Hyderābād.
The interstate boundaries between Arunāchal Pradesh, Assam and Meghālaya shown on this map are as interpreted from the North-Eastern Areas (Reorganisation) Act 1971, but yet to be verified.
The interstate boundaries between Bihār–Jhārkhand and Andhra Pradesh–Telangana are yet to be verified by the Concerned Governments.
The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line.

Statement 1.14 Geological Characteristics of India



LEGEND

IGNEOUS ROCKS

PLUTONIC ROCKS

ACID

γTt — TERTIARY (Tt): Tiriv/ Kakset Granitoid Complex (?Ttt), Acid Intrusives of Tertiary age (?Tt) of W. Himalaya; Tourmaline Granite (?Tt-tg) of E. Himalaya.

γKTt — CRETACEOUS-TERTIARY (KTt): Ladakh Granitoid Complex (?KTtl), Karakoram Granitoid Complex (?KTtk) and equivalent acid intrusive rocks (?KTt) of Ladakh Karakoram; Lohit Granodiorite Complex (?KTtlh) of E. Himalaya.

MzTt, γMz — MESOZOIC-TERTIARY (MzTt): Acid Intrusive rocks of Mesozoic-Tertiary age (?MzTt) of Karakoram.
MESOZOIC (Mz) : Acid Intrusives of Mesozoic age (Mz) of Karakoram; Lohit Migmatite Complex with diorite intrusives (?Mz?Idc) of E. Himalaya.

γPt_3Pz_1 — NEOPROTEROZOIC -LR. PALAEOZOIC (Pt_3Pz_1): Kyrdem, Nongpoh, Mylliem Granites, South Khasi Batholith and equivalent granites ($?Pt_3Pz_1$) of Meghalaya.

γPz — PALAEOZOIC (Pz) : Kaplas, Dalhousie (?Pz) and equivalent granites of W. Himalaya.

γPt_3 — NEOPROTEROZOIC (Pt_3) : Unclassified acid intrusives/granite ($?Pt_3$) of W. India, E. India & W. Himalaya, Jalore Granite ($?Pt_3j$), Malani Plutonic Suite ($?Pt_3m$), Erinpura Granite ($?Pt_3e$) and Godhra Granite ($?Pt_3g$) of W.India; Gangpur Granite ($?Pt_3ga$), Hazaribagh Granite and Pegmatite ($?Pt_3h$) of E. India.

γPt_2 — MESOPROTEROZOIC (Pt_2) : Sendra-Ambaji Granite and Gneiss ($?Pt_2sa$) of Rajasthan; Arkasani Granophyre ($?Pt_2a$), Soda Granite ($?Pt_2s$), Kuilapal Granite ($?Pt_2k$), Manbhum Granite ($?Pt_2m$) and Lingtse Granite Gneiss ($?Pt_2l$) of E. India and E. Himalaya.

γ_1 — PALAEOPROTEROZOIC - MESOPROTEROZOIC (Pt_{12}) : Bairath Granite ($?Pt_{12}b$) of W. India.

γPt_1 — PALAEOPROTEROZOIC (Pt_1) : Dongargarh Granite ($?Pt_1d$), Malanjkhand Granite ($?Pt_1m$), Granite of Son-Narmada Valley ($?Pt_1$) of C. India; Closepet Granite ($?Pt_1c$) of S. India; Mayurbhanj and Sukinda Granites of E. India ($?Pt_1$).

γPt — PROTEROZOIC (Undiff.) (Pt) : Granophyre (?Pt) of E. India; Younger Granite (?Pt) of S. India; Gneissic Granite of Arunachal Pradesh (?Ptgg) and Granites (?Pt) of W. Himalaya.

γAPt_1 — ARCHAEAN-PALAEOPROTEROZOIC (APt_1) : Unclassified Granites of S. India ($?APt_1$); Bundelkhand Granite of U.P. ($?APt_1bd$).

γA — ARCHAEAN (A) : Singhbhum Granite Complex (?As); Bonai Granite of Orissa (?Ab) and Chakradharpur Granite (?Ac) of E. India; Acidic bodies (?A) of Rajasthan, S. India & E. India; Berach Granite and Gneiss (?ABe), Untala and Gingla Granite (?Au) of Rajasthan; Granite within migmatites (?Am) of S. India.

UNKNOWN AGE: Granite of Unknown age (γ).

INTERMEDIATE / BASIC

KTt — CRETACEOUS-TERITARY (KTt): Alkali Complex of Sung Samchampi (ζKTs/ ζKTsa) of N.E.India.

Pt — PROTEROZOIC (Pt): Alkali Complex (ζPtc) of S. India and Rajasthan, Kishengarh Syenite (ζPtk) of Rajasthan; Alkali Syenite of Orissa (ζPto) & Kerala (ζPt).

Pt — PROTEROZOIC (Pt) : Gabbro and anorthosite of S. India & E. India (ʊPt).

ULTRABASIC / ULTRAMAFIC

σKTt — CRETACEOUS-TERTIARY (KTt) : Tiding Serpentinite ($\sigma KTts$) of N.E.Himalaya.

σPt_1 — PALAEOPROTEROZOIC (Pt_1) : Rakhabdev Ultrabasic Suite (σPt_1r) of W. India, Similpal Ultramafics (σPt_1s), Jojiahatu Ultramafics (σPt_1ji) of E. India.

σAPt — ARCHAEAN-PROTEROZOIC (APt) : Sukinda Ultramafics (σAPt) of E. India and Ultrabasic (σAPt) of S. India.

HYPABYSSAL AND VOLCANIC ROCKS

βCz — CAINOZOIC (Undiff.) (Cz) : Unclassified Volcanics of Barren Island (βCz).

βPg_{12} — PALAEOCENE - EOCENE (βPg_{12}) : Abor Volcanics (Younger phase) ($\beta Pg_{12}a$)

βKPg — CRETACEOUS-PALAEOGENE (KPg) : Deccan Traps ($\beta KPgd$) of West, Central & S. India ; Tuting Volcanics ($\beta KPgt$) of N.E. Himalaya.

βKTt — CRETACEOUS-TERTIARY (KTt) : Khardung Volcanics ($\beta KTtk$), Dras Volcanics and equivalents ($\beta KTtd$) and Balchadhura Volcanics ($\beta KTtb$) of W. Himalaya.

βK, βJK — CRETACEOUS (K) : Sylhet Trap (βKs) of Meghalaya.
JURASSIC-CRETACEOUS (JK) : Rajmahal Trap (βJKr) of E. India.

βMz — MESOZOIC (Mz) : Basic Volcanics of W. Himalaya (βMz).

βP — PERMIAN (P) : Phe-Volcanics (βPph) of W. Himalaya; Abor Volcanics (Older Phase) (βPa) of N.E. Himalaya.

βCP — CARBONIFEROUS-PERMIAN (CP) : Undiff. Panjal Volcanics with Agglomerate Slate & Nishat Bagh Beds Fm (βCP) of W. Himalaya.

λPt_3 — NEOPROTEROZOIC (Pt_3) : Malani Volcanic Suite (Rhyolite) (λPt_3m) of W. India.

βPt_2 — MESOPROTEROZOIC (Pt_2) : Cuddapah Trap (βPt_2c) of S. India; Sundernagar Fm with Mandi Darla Volcanics (βPt_2md) Sauni Volcanics (βPt_2s), Volcanics of Garhwal Gp (βPt_2g), Bhawali Volcanics (βPt_2bw) of W. Himalaya.

βPt_1, βAPt_1 — PALAEOPROTEROZOIC/ARCHAEAN PROTEROZOIC : Dalma Volcanics (βPt_1d), Simlipal lava (βPt_1sl), Dhanjori lava (βPt_1dh) and other basic intrusives, Dangoaposi lava (βPt_1dp), Ongarbira Trap (βPt_1o) and Bonai lava (βAPt_1b) of E. India; Metabasalt of Chitradurga Gp (βAPt_1dc) of S. India.

βPt — PROTEROZOIC (Pt) : Khasi Greenstone (βPt) of N.E. India.

λPt_1n, αPt_1n — PROTEROZOIC (Undiff.) : Bijli Rhyolite (λPt_1n) and Pitepani Andesite (αPt_1n) of Nandgaon Gp of C. India.

βA — ARCHAEAN (A) : Basic sills and dykes (βA).

OPHIOLITES

ΩKTt — CRETACEOUS-PALAEOGENE (KPg) : Ophiolite of Nagaland (ΩKPg) in N.E. India.
CRETACEOUS-TERTIARY (KTt) : Ophiolite within Sangeluma Gp ($\Omega KTts$) of W. Himalaya.
MESOZOIC - PALAEOGENE (Mz-Pg) : Ophiolite of Andaman & Nicobar Islands (ΩMz-Pg).

ΩPt_{12} — PALAEOPROTEROZOIC - MESOPROTEROZOIC (Pt_{12}) : Phulad Ophiolite Complex ($\Omega Pt_{12}p$) of Rajasthan.

Fault/Shear Zone

Thrust

Confirmed / Inferred Contact

Assumed formation boundary

Blank uncoloured patches represent unmapped areas

Glacier

Coral reefs

Abbreviations

Fm-Formation Gp-Group Spg-Supergroup

Water depths below sea level

Metres 0 200 1000 3000

The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line.

Geographical details are based upon Survey of India map with the permission of the Surveyor General of India.

The boundary of Meghalaya shown on this map is as interpreted from the North Eastern areas (Reorganization) Act, 1971 but is yet to be verified.

The administrative headquarters of Haryana and Punjab are at Chandigarh.

National Highways, major roads and Railways Trunk Routes only are shown.

SEDIMENTARY AND METAMORPHIC ROCKS

Q — QUATERNARY (Q): Undiff. fluvial/aeolian/coastal and glacial sediments (Q); Milliolite Limestone (Qml) of Gujarat; Hapoli Fm (Qh) of N.E. India.

Cz — CAINOZOIC (Cz): Laterite and bauxite (Czl); Calcareous clay and sandstone (Czc) of S. India; Gravel and sandstone (Czg) of E. India

N_2Q_1, NQ_1 — PLIO-PLEISTOCENE (N_2Q_1): Undiff. Siwalik Gp. (NQ_1s) of E. Himalaya; Dihing Fm (N_2Q_1di); Dupitila Fm (N_2Q_1dp) and Namsang Fm (N_2Q_1n) of N.E. India; Upper Siwalik Gp. (N_2Q_1s) of Himalayas and Karewa Gp. (N_2Q_1k) of W. Himalaya.

N_2 — PLIOCENE (N_2) : Kankawati Fm (N_2k); Dwarka beds (N_2d) of W. India; Rajdanda Fm (N_2r) of E. India.

N_{12} — MIO-PLIOCENE (N_{12}) : Tipam Gp ($N_{12}t$) and Chengapara Fm ($N_{12}c$) of N. E. India; Quilon ($N_{12}q$), Warkhali ($N_{12}w$) and Rajahmundry ($N_{12}r$) Fms of S. India; Katni Fm ($N_{12}k$) of C. India; Archipelago Gp ($N_{12}ar$) of Andaman & Nicobar Islands; Middle Siwalik Gp ($N_{12}s$) of W. Himalaya and N.E. Himalaya.

N_1 — MIOCENE (N_1) : Surma Gp (N_1sm), Bokabil Fm (N_1bk); Bhuban Fm (N_1bh) and Baghmara Fm (N_1b) of N.E. India; Cuddalore Fm (N_1c) of Tamilnadu; Khari (N_1k) and Gaj (N_1g) Fms of Gujarat; Baripada Fm (N_1bp) of Orissa; Lower Siwalik Gp (N_1s) of W. Himalaya.

$Pg_{23}N_1$ — EOCENE-MIOCENE ($Pg_{23}N_1$) : Upper Murree Gp ($Pg_{23}N_1um$), Lower Murree Gp ($Pg_{23}N_1lm$), Undiff. Murree Gp, Dharmsala Gp, Dagshai and Kasauli Fm ($Pg_{23}N_1md$) of W. Himalaya.

Pg_3, Pg_{23} — OLIGOCENE (Pg_3) : Bermoti Fm (Pg_3b) of Gujarat; Andaman Flysch (Pg_3) of Andaman & Nicobar Islands.
EOCENE-OLIGOCENE (Pg_{23}) : Barail Gp ($Pg_{23}b$) and Simsang Fm ($Pg_{23}s$) of N.E. India.

Pg_2 — EOCENE (Pg_2) : Disang Gp (Pg_2d), Phokphur Fm (Pg_2p) of N.E. India; Kapurdi Fm (Pg_2ka), Bandah Fm (Pg_2ba), Jogira Fm (Pg_2j) and Undiff. Eocene Fm (Pg_2r) of Rajasthan, Undiff. Eocene Fm (Pg_2y); Berwali Fm (Pg_2b) of Gujarat; Yingkiong Fm (Pg_2y) of N.E. Himalaya; Kanji Gp (Pg_2k) of W. Himalaya.

Pg_{12} — PALAEOCENE-EOCENE (Pg_{12}) : Mithakari Gp ($Pg_{12}m$) of Andaman & Nicobar Islands; Subathu Fm ($Pg_{12}sb$) and Nummulitic Fm ($Pg_{12}n$) of W. Himalaya; Jaintia Gp ($Pg_{12}j$) of N.E. India, Manaveli and Karrsur ($Pg_{12}mk$) Fms of S. India.

Pg_1 — PALAEOCENE (Pg_1) : Niniyur (Pg_1n) Fm of S. India; Palana Fm (Pg_1p), Akli Fm (Pg_1a), Marh Fm (Pg_1mh), Sanu Fm (Pg_1s), Khuiala Fm (Pg_1k) and Mandal Fm (Pg_1ma) of Rajasthan and Madh (Pg_1m) Fms of Gujarat.

Tt — TERTIARY (Tt) : Undiff. Tertiary (Tt) Fms of W. Himalaya.

KPg, KPg_{12} — CRETACEOUS-PALAEOGENE (KPg) : Oceanic Pelagic sediments (KPg ops) of N.E. Himalaya; Undiff. Cretaceous to Palaeogene Fms of W. Himalaya (Kpg).
CRETACEOUS-EOCENE (KPg_{12}) : Undiff. Manikot shell limestone and Subathu Fm ($KPg_{12}ms$) of W. Himalaya.

KTt — CRETACEOUS - TERTIARY (KTt) : Indus Gp. (KTti) and Sangeluma Gp. (KTts) of W. Himalaya.

K — CRETACEOUS (K) : Tiruchirapalli (Kt), Ariyalur (Kar) and Uttatur- Patti (Kpa) Fms of S. India; Jabalpur Fm (Kj), Lameta (Kl) & Bagh (Kb) Gps, Bhuj (Kbh), Fatehgarh (KF) and Abu (Ka) Fms, Wagad sandstone (Kw) of W. India; Khasi Gp. (Kk) of Meghalaya; Cretaceous Fms of Ladakh-Karakoram (K), Undiff. Giumal and Chikkim Fms (Kg) of W. Himalaya.

JK, J, TJ — JURASSIC-CRETACEOUS (JK) : Pariwar (JKp) and Himmatnagar (JKh) Fms of W. India; Athgarh Fm (JKa) of E. India; Jurassic Cretaceous Fms of Karakoram (JK).
JURASSIC (J) : Badesar (Jbd), Baisakhi (Jbs), Jaisalmer (Jsl), Lathi (Jl), and Mayakar Fms (Jm) of Rajasthan, Jhuram (Jj), Jumara (J_{2-3}) Fms, middle Jurassic Fm (J_2) of Gujarat, Chikiala Fm (Jc), Kota Fm (Jk) of S. & C. India; Durgapur bed (Jdu) of E. India, Spiti shale (Js), Burtsa Fm (Jb) and Jurassic Fm (J) of W. Himalaya;
TRIASSIC-JURASSIC (TJ) : Mahadeva (TJma) and Dubrajpur (TJd) Fms of E. India; Lilang Gp (TJl), Undiff. Lapthal, Kioto, Kufi, Kalapani and Chocolate Fms (TJu) of W. Himalaya.

TK — TRIASSIC-CRETACEOUS (TK) : Undiff. Maleri, Kota, Chikiala, Jabalpur, Dubrajpur, Parsora, Bagra Fms (TKg) of Gondwana Sgp (Upper) of East, Central and S. India.

PJ — PERMIAN-JURASSIC (PJ) : Undiff. Kuling Fm and Lilang Gp (PJkl) of W. Himalaya.

T — TRIASSIC (T) : Maleri Fm (Tm), Panchet/Pachmarhi (Tp) and Bagra (Tb) Fms of Gondwana Sgp of East, Central and S. India, Undiff. Bishot and Kalhel Fms (Tbk) of W. Himalaya; Too-Lhamo Fm (Ts) of E. Himalaya.

Mz — MESOZOIC (Mz) : Undiff. Mesozoic Fms (Mz) of W. Himalaya.

CP-Pg_2 — CARBONIFEROUS - PERMIAN and EOCENE Undiff (CP-Pg_2) : Undiff. Agglomerate Slate; Panjal Volcanics, Punch-Mandi and Rajpura Fms (CP-Pg_2u) of W. Himalaya.

PT — PERMIAN-TRIASSIC (PT) : Kamthi Fm (PTk) of Gondwana Sgp of S. & C. India; Vihi Gp (PTv), Murga Fm (PTm) and Undiff. Permian-Triassic (PT) Fms of W. Himalaya.

CT — CARBONIFEROUS -TRIASSIC (CT) : Undiff. Talchir, Karharbari, Barakar, Barren Measure, Raniganj, Pali, Motur, Bijori, Panchmarhi, Denwa and Panchet Fms (CTg) of Gondwana Sgp (Lower) of E. C. and S. India; Carboniferous-Triassic Fms (CT) of W. Himalaya.

P — PERMIAN (P) : Barakar Fm (Pbr), Raniganj Fm (Pr), Barren Measure Fm (Pbm), Karharbari Fm (Pkh) of Gondwana Sgp of E. India; Bijori (Pbo) and Motur (Pmo) Fms of C. India, Badhaura Fm (Pb) of W. India, Bhareli Fm ($P_{12}gbb$), Garu Fm (P_1ga), Bichom Fm (P_1gb) of N. E. Himalaya; Damuda Fm (Pd) of E. Himalaya; Kuling (Pk), Gamgul-Salooni (P-gm), Undiff. Zewan and Mamal Fms (P-z) of W. Himalaya.

Pz-Tt — PALAEOZOIC - TERTIARY Undiff. (Pz-Tt) : Shyok Gp (Pz-Tts) of W. Himalaya.

CP, C — CARBONIFEROUS-PERMIAN (CP) : Bap boulder bed (CPba) of Rajasthan, Talchir Fm ($C?P_1t$) of Gondwana Sgp, Lower Gondwana (C_1P-g) of Meghalaya, Lachi Fm (CPl) of E. Himalaya; Carboniferous-Permain Fms (CP), Agglomerate Slate Fm (CPa), Boulder Slate Fm (CPb) of W. Himalaya.
CARBONIFEROUS (C) : Undiff. Carboniferous Fms (C), Kanwar Gp (Ck), Undiff. Kanwar Gp, Lipak, Po and Ganmachidam Fm (Cl), Yapchan Fm (Cy) of W. Himalaya.

DC, OC, OD, O — DEVONIAN-CARBONIFEROUS (DC) : Pungmarla Fm (DCp), Saser Brangsa Fm (DCs) of W. Himalaya.
ORDOVICIAN-CARBONIFEROUS (OC) : Undiff. Morgan, Muth, Aismuqom, Syringothyris, and Fennestella Fms (OC).
ORDOVICIAN-DEVONIAN (OD) : Undiff. Ralam, Garbyang, Shiala, Variegated, and Muth Fms (ODg), Thango, Takche, and Muth Fms (ODt), Taglamsa Fm (ODtg) of W. Himalaya.
ORDOVICIAN (O) : Everest limestone (Oe) of E. Himalaya.

◀O, ◀ — CAMBRIAN-ORDOVICIAN (◀O) : Rokchung Fm (◀Or) of W. Himalaya.
CAMBRIAN (◀) : Tal Fm (◀t), Undiff. Karihul and Lolab Fm (◀l), Kunzamla Fm (◀k) of W. Himalaya.

Pz — PALAEOZOIC (Pz) : Miri Fm (Pzm), Undiff. Miri and Bichom Fm (Pzm-P_1gb) of Arunachal Pradesh, Pangong Metamorphic Complex (Pzp), Undiff. Palaeozoic Fms (Pz) of W. Himalaya.

Pt_3^3 — NEOPROTEROZOIC (Upper) (Pt_3^3) : Bhander Gp (Pt_3^3b) of Vindhyan Sgp of C. and N. India, Birmania Fm (Pt_3^3bi), Randa Fm (Pt_3^3ra) and Jodhpur Gp (Pt_3^3j), Bilara Gp (Pt_3^3bl), and Nagaur Gp (Pt_3^3n) of Marwar Sgp of W. India; Undiff. Krol, Infrakrol & Blaini Fms (Pt_3^3kl), Ramsu Fm (Pt_3^3r), Machhal Fm (Pt_3^3me), Bhimdasa & Sincha Fm (Pt_3^3si) of W. Himalaya.

Pt_3^1 — NEOPROTEROZOIC (Lower) (Pt_3^1) : Rewa Gp (Pt_3^1r) of Vindhyan Sgp of C. and E. India, Simla Gp (Pt_3^1s), Jaunsar Gp (Pt_3^1j), Morar-Chakkrata Fm (Pt_3^1m), Amri Fm (Pt_3^1a), Banali-Setangal Fm (Pt_3^1bn) and Bijini Fm (Pt_3^1bj) of W. Himalaya.

Pt_3 — NEOPROTEROZOIC (Undiff.) (Pt_3) : Kurnool Gp (Pt_3k), Penganga Gp (Pt_3pg), Sullavai Gp (Pt_3s), Bhima Gp (Pt_3bh), Badami Gp (Pt_3bm) and Banganapalli Fm (Pt_3kb) of C. & S. India; Manjir Fm (Pt_3m), Batal Fm (Pt_3b) Undiff. Chamba & Bhaderwah Fm (Pt_3cb), Undiff. Batal, Manjir and Katarigali Fm (Pt_3kl), Undiff. Gamir, Balia, Ramban and Sincha Fm (Pt_3g) and Martoli Fm (Pt_3mt) of W. Himalaya.

Pt_{23} — MESOPROTEROZOIC - NEOPROTEROZOIC (Undiff.) (Pt_{23}) : Chattisgarh Gp ($Pt_{23}ch$), Indravati Gp ($Pt_{23}i$) of C.& E. India, Kaladgi Sgp ($Pt_{23}ka$) of S. India, Kulu Fm ($Pt_{23}k$) and Tanawal Fm ($Pt_{23}t$) of W. Himalaya.

Pt_2 — MESOPROTEROZOIC (Pt_2) : Kaimur Gp (Pt_2k) and Semri Gp (Pt_2s) of Vindhyan Sgp of C. and N. India; Cuddapah Sgp: Papaghni Gp (Pt_2p), Chitravati Gp (Pt_2c) comprising Pulivendla (Pt_2c_1), Tadpatri (Pt_2c_2) and Gandikota (Pt_2c_3) Fms, Nallamalai Gp comprising Bairenkonda Fm (Pt_2n_1), Cumbum Fm (Pt_2n_2) and Srisailam Fm (Pt_2n_3) of S. India; Pakhal Gp (Pt_2pk) of S. India; Munger Gp (Pt_2mu) of E. India; Sirban Gp (Pt_2sr), Shali Gp (Pt_2sh), Rampur Gp (Pt_2r), Larji Gp (Pt_2l), Dharagarh Fm (Pt_2dh), Deoban Gp (Pt_2d), Garhwal Gp (Pt_2g) and Bhimtal Fm (Pt_2bm) of W. Himalaya.

Pt_{12} — PALAEOPROTEROZOIC-MESOPROTEROZOIC (Pt_{12}) : Sindreth ($Pt_{12}sd$), Kumbhalgarh ($Pt_{12}ku$), Gogunda ($Pt_{12}go$), Alwar ($Pt_{12}al$), Ajabgarh ($Pt_{12}aj$), Punagarh Gp ($Pt_{12}p$) and Sirohi ($Pt_{12}s$) Gps of Delhi Sgp and Undiff. Delhi Sgp ($Pt_{12}u$) of W. India; Khairagarh Gp ($Pt_{12}k$), Abujmar Gp ($Pt_{12}ar$), Gwalior Gp ($Pt_{12}g$), Bijawar Gp ($Pt_{12}b$) and Chilpi Gp ($Pt_{12}c$) of C. India; Metamorphics of Chhotanagpur belt ($Pt_{12}m$) and Kolhan Gp ($Pt_{12}kh$) of E. India; Shillong Gp ($Pt_{12}sh$) of N.E. India.

Pt_1 — PALAEOPROTEROZOIC (Pt_1) : Udaipur (Pt_1u), Kankroli (Pt_1k), Barilake (Pt_1b), Debari (Pt_1d), Dovda (Pt_1dv), Jharol (Pt_1j), Lunavada (Pt_1l), Champaner (Pt_1c), and Nathdwara (Pt_1nd) Gps of Aravalli Sgp of W. India, Jahajpur Gp (Pt_1ja), Pur-Banera Gp (Pt_1pb), Raipura-Dariba Gp (Pt_1rd), Sawar Gp (Pt_1sa), Rambanbhor Gp (Pt_1r) and Rialo Gp (Pt_1ri) of W. India; Sausar Gp (Pt_1s), Sakoli Gp (Pt_1sk), Mahakosal Gp (Pt_1ma), Unclassified metamorphics of Bilaspur-Raigarh-Ambikapur region (Pt_1) & Sonakhan Gp (Pt_1sk) of C. India., Simlipal Gp (Pt_1sl) , Gangpur Gp (Pt_1g), Dhanjori Gp (Pt_1dh) and Singhbhum Gp (Pt_1si) of E. India.

Pt — PROTEROZOIC (Undiff.) (Pt) : Lumla Fm ($Ptlp_3$), Dirang Fm (Ptp_3), Khetabari Fm (Ptp_4), Tiding Fm (Ptp_5); Gorubathan Fm (Pt_{g1}) of Daling Gp and equivalents, Potin Fm (Ptg_2), Tenga Fm (Ptg_3), Reyang Fm (Ptr_1) and Undiff. Potin and Khetabari Fm (Ptg_2p_4), Buxa Fm (Ptb_1) and equivalents, Nuimi Fm (Ptb_2), Dedja Fm (Ptb_3) and Everest Pelite (Ptec) of N.E. and E. Himalaya. Bafliaz Chandimar/ Baniyar and Kalamund Fms (Dogra Gp) (Ptdg), Undiff. Kilbar, Lopara and Dul Fms (Ptdg), and Undiff. Proterozoic Fms (Pt) of W.Himalaya.

Pt, A?Pt — PROTEROZOIC (Undiff.) (Pt) : Paro Fm (Ptp) and equivalents, Kanchenjunga augen gneiss (Ptk), Darjeeling gneiss (Ptd_1) and equivalents, Chungthang Fm (Ptd_2), Sela Gp (Ptd_3); Naga metamorphics (Ptn) of E. and N.E. Himalaya, Jutogh Gp (Ptj), Ramgarh Fm (Ptrm), Almora Crystallines (Pta), Baijnath Crystallines (Ptab), Salkhala Fm (Pts)/Vaikrita Fm (Ptvr), Central Crystallines (Ptc), Undiff. Nanga Parbat Crystallines (Ptnp), Suru Crystallines (Ptsr), Bhilangana Fm (Ptbh), Tsomorari Gneissic Complex (Pttm), Agastamuni Fm (Ptag) and Bijni Fm (Ptbj) of W. Himalaya.
ARCHAEAN (?) PROTEROZOIC (Undiff.) (A?Pt) : Chhotanaggur Gneissic Complex (A?Ptc) of E. India and Gneissic Complex of Meghalaya (A?Ptm).

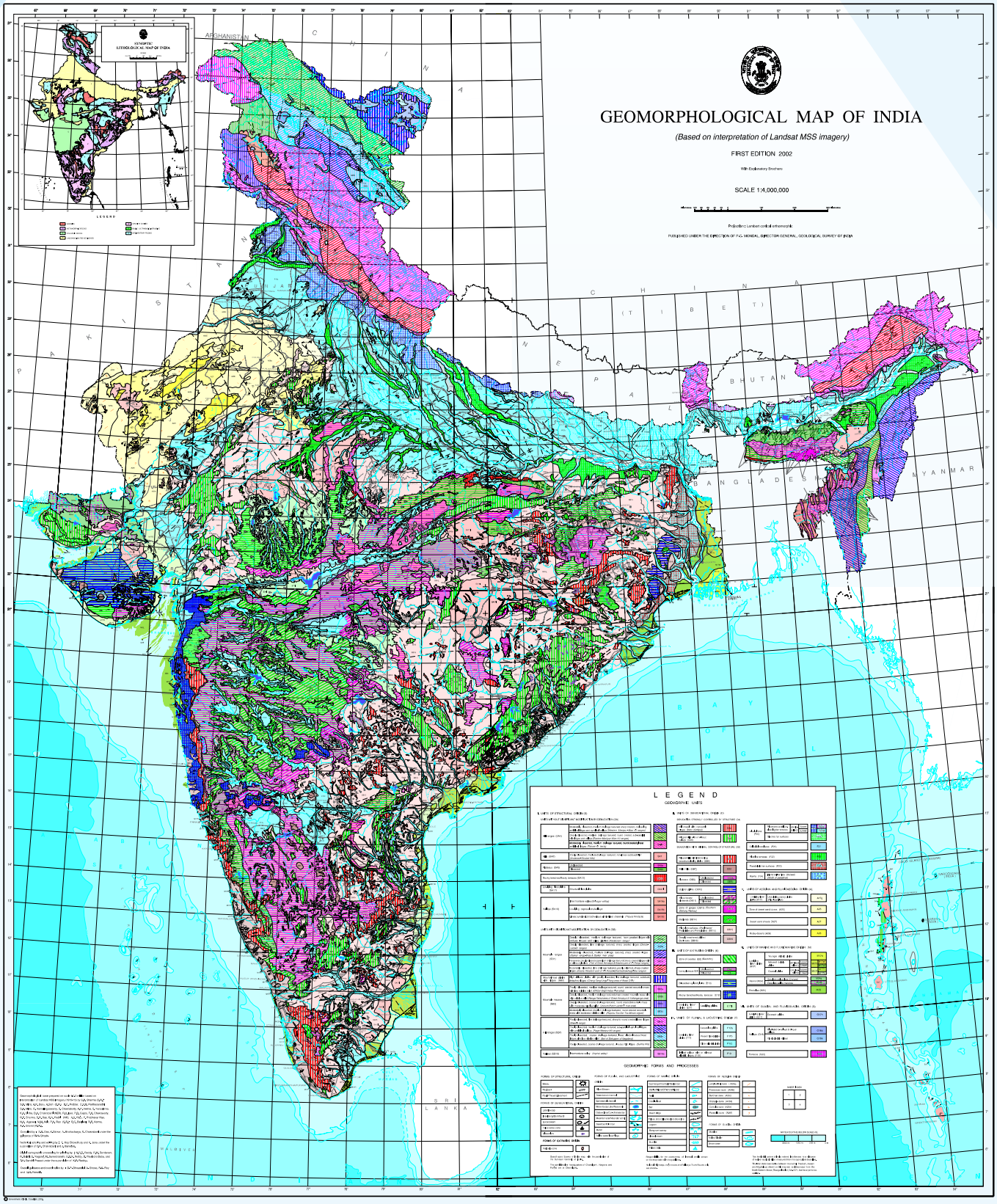
APt_1 — ARCHAEAN-PROTEROZOIC (APt_1) : Peninsular Gneiss (APt_1p) (Younger Phase) of S. India, Chitradurga Gp (APt_1dc) of Dharwar Sgp and Undiff. Dharwar Sgp (APt_1d) of S. India; Bailadila Gp (APt_1bl) of C. India, Bonai Gp (APt_1b) and Unclassified metamorphics (APt_1m) of E. India.

A — ARCHAEAN (A) : Bababudan Gp (Abd), Eastern Greenstone (Ae) & Vengad Gp (Av) of Dharwar Sgp, Wynad Schist Complex (Aw), Sargur Gp (As) and Satyamangalam Schist Complex (Asm) of S.India, Gorumahisini Gp (Ag) and Older Metamorphics (Ao) of E. India; Bengpal Gp (Ab), Amgaon Gp (Aa) and Gopad-Banas Metamorphic Complex (Aog) of C. India.

A — ARCHAEAN (A) : Peninsular Gneiss (Older Phase) (Ap) and Migmatite Complex (Am) of S. India, Sandmata Complex (Asc), Mangalwar Complex (Amn) and Hindoli Gp (Ah) of Bhilwara Sgp of W. India, Unclassified gneiss (Au) of C. India.

Ac, Ak — ARCHAEAN (A) : Charnockite Gp (Ac) of S. & E. India. Charnockite Gp of Orissa and A.P. show widespread Proterozoic reactivation; Khondalite Gp (Ak) of S. India and Orissa.

Statement 1.15 Geomorphological Characteristics of India



L E G E N D

GEOMORPHIC UNITS

I. UNITS OF STRUCTURAL ORIGIN (S)

UNITS WITHOUT SIGNIFICANT MODIFICATION BY DENUDATION (SA)

Hill ranges (SA4)	Moderately dissected, medium drainage textured, sharp crested, coalescing anticlinal ridges and synclinal valleys *(Western Manipur -Mizo hill ranges)*	SA4a
	Deeply dissected, medium drainage textured, round crested, sub-parallel fold ridges and valleys *(Eastern Manipur-Mizo hill ranges)*	SA4b
	Moderately dissected, medium drainage textured, round crested, linear anticlinal ridges *(Tripura hill tracts)*	SA4c
Hills (SA7)	Poorly dissected, medium drainage textured, non-linear subdued hills *(Andaman-Nicobar hills)*	SA7
Plateaus (SA9)	Undissected	SA9a
	Dissected	SA9b
Rocky benches/Rocky terraces (SA12)		SA12
Lowlying flats/plains (SA17)	Structural flats/plains	SA17l
Valleys (SA18)	Intermontane valley *(Srinagar valley)*	SA18a
	Lowlying depressions/valleys	SA18b
	Linear,synclinal, broad valleys with infilled channels *(Tripura hill tracts)*	SA18c

UNITS WITH SIGNIFICANT MODIFICATION BY DENUDATION (SB)

Mountain ranges (SB1)	Deeply dissected, medium drainage textured, horn peaked ridges with profuse cirques and valley glaciers *(Karakoram range)*	SB1a
	Deeply dissected, fine drainage textured, sharp crested ridges *(Deosai-Ladakh ranges)*	SB1b
	Moderately dissected, medium drainage textured, sharp crested ridges *(Zaskar range-Dras & Zaskar river area)*	SB1c
	Transverse,deeply dissected,medium drainage textured,sharp crested ridges with or without glaciers *(Part of Great Himalaya & Eastern part of Pir Panjal ranges)*	SB1d
	Moderately dissected, fine drainage textured, poorly oriented, sharp crested ridges *(mainly Western part of Pir Panjal-Dhaoladhar-Nagtibba ranges)*	SB1e
Mountainous plains with ridges (SB2)	High altitude plains with poorly dissected, fine drainage textured, subdued, detached ridges *(Chang Tang-Lingzi Tang area of Aksai Chin)*	SB2
Mountain masses (SB3)	Poorly dissected, medium drainage textured, round crested mountain mass with low relative relief *(Ghizar-Gilgit-Indus river area)*	SB3a
	Deeply dissected, medium drainage textured,sharp crested mountain mass with high relative relief *(Nanga Parbat area of Great Himalaya & Kishanganga area)*	SB3b
	Deeply dissected, coarse drainage textured, round crested mountain mass with moderate relative relief *(Jhelum-Punch-Jambhir river area)*	SB3c
	Moderately dissected, medium drainage textured, round crested mountain mass with moderate relative relief *(Rupshu-Tso Kar-Tso Morari region)*	SB3d
Hill ranges (SB4)	Poorly dissected, fine drainage textured, sharp to round crested linear ridges *(Siwalik range)*	SB4a
	Poorly dissected, medium drainage textured, sub-parallel, synclinal ridges with anticlinal valleys *(Naga-Manipur hill ranges)*	SB4b
	Poorly dissected, coarse drainage textured, linear, discontinuous thrust ridges with low relative relief *(Belt of Schuppen of Nagaland)*	SB4c
	Poorly dissected, coarse drainage textured, sinuous fold ridges *(Surma hills)*	SB4d
Valleys (SB18)	Intermontane valley *(Imphal valley)*	SB18a

II. UNITS OF DENUDATIONAL ORIGIN (D)

DENUDATION STRONGLY CONTROLLED BY STRUCTURE (DA)

Hill massif with concentric ridges (DA5) *(Simlipal)*		DA5
Ridges/Hills with or without valleys (DA6)		DA6

DENUDATION WITH MINIMAL CONTROL OF STRUCTURE (DB)

Ridges/Hills with intervening broad undulating plains (DB6)		DB6
Relict hills (DB7)		DB7
Plateaus (DB9)	Undissected	DB9a
	Dissected	DB9b
Upland plains (DB10)		DB10
Slope facets/ elements (DB11)	Undissected	DB11a
	Dissected	DB11b
Zone of gorges (DB13) *(Southern Shillong Plateau)*		DB13
Badlands (DB14)		DB14
Planation surfaces (Pediments/ Pediplains and Peneplains) (DB15)		DB15
Deeply weathered plains / Duricrusts (DB16)		DB16

III. UNITS OF EXTRUSIVE ORIGIN (E)

Zone of cuestas (E8) *(Kachchh)*		E8
Lava plateaus (E9)	Undissected	E9a
	Dissected	E9b
Dissected upland plains (E10)		E10
Rocky benches/Rocky terraces (E12)		E12
Lowlying flats / plains (E17)	Lowlying plains	E17l

IV. UNITS OF FLUVIAL & LACUSTRINE ORIGIN (F)

Lowlying flats/ plains (F17)	Lacustrine plains	F17a
	Present floodplains	F17b
	Older alluvial plains	F17c
Infilled valleys with or without alluvial ridges (F19)		F19

Alluvial fans (F20)	Piedmont cut &fill,coalescing fan terraces	(Unclassified)	Upper	F20a1
			Lower	F20a2
	Discrete fan surfaces			F20b
Colluvial footslopes (F21)				F21
Riverine terraces (F22)				F22
Paradeltaic fan surfaces (F23)				F23
Ranns (F24)	Inland saline flats (dry/wet) *(North of Jaisalmer)*			F24

V. UNITS OF AEOLIAN AND FLUVIOAEOLIAN ORIGIN (A)

Lowlying flats/ plains (A17)	Undulating sandy plains (Fluvioaeolian)	A17g
Zone of desert sand dunes (A26)		A26
Desert sand sheets (A27)		A27
Rocky deserts (A28)		A28

VI. UNITS OF MARINE AND FLUVIOMARINE ORIGIN (M)

Lowlying flats/ plains (M17)	Younger deltaic plains			M17d
	Matured deltaic plains	(Unclassified)	Upper	M17e1
			Lower	M17e2
	Coastal plains	(Unclassified)	Upper	M17f1
			Lower	M17f2
Ranns (M24)	Desolate saline flats (Dry/wet)			M24a
	Desolate saline marshes			M24b
Prodeltas (M25)				M25

VII. UNITS OF GLACIAL AND FLUVIOGLACIAL ORIGIN (G)

Lowlying flats/ plains (G17)	Outwash plains	G17h
Valleys (G18)	Glaciated U-valleys & cirque valleys	G18d
	Fluvioglacial valleys	G18e
Terraces (G22)		G22

GEOMORPHIC FORMS AND PROCESSES

FORMS OF STRUCTURAL ORIGIN

- Mesa
- Hogback
- Fault/Thrust/Lineament

FORMS OF DENUDATIONAL ORIGIN

- Laterite cap
- Inselberg/Bornhardt
- Escarpment
- Talus scree cone
- Dissection

FORMS OF EXTRUSIVE ORIGIN

- Volcanic cone

FORMS OF FLUVIAL AND LACUSTRINE ORIGIN

- River/Stream
- Abandoned channel
- Ephemeral channel
- Water body/Lake/Reservoir
- Oxbow lake/Cut-off meander
- Meander scar/Meander scroll
- Sand bar/Point bar
- Marsh
- Saline water lake/Playa

FORMS OF MARINE ORIGIN

- Submerged bar/Spit/Barrier bar
- Barrier island/Off-shore island
- Atoll
- Coral Island
- Bet
- Beach ridge
- Palaeo strand line/Ancient shore line
- Lagoon
- Mangrove swamp
- Littoral marsh
- Mud flat
- Palaeo delta

FORMS OF AEOLIAN ORIGIN

- Longitudinal dune (A26a)
- Transverse dune (A26b)
- Barchan dune (A26c)
- Obstacle dune (A26d)
- Complex dune (A26e)
- Parabolic dune (A26f)

FORMS OF GLACIAL ORIGIN

- Moraine
- Valley Glacier
- Snow cover

SHEET INDEX

1	2
3	4

WATER DEPTHS BELOW SEALEVEL

3000 m 1000 m 200 m 0 m

Based upon Survey of India map, with the permission of the Surveyor General of India.

The administrative headquarters of Chandigarh, Haryana and Punjab are at Chandigarh.

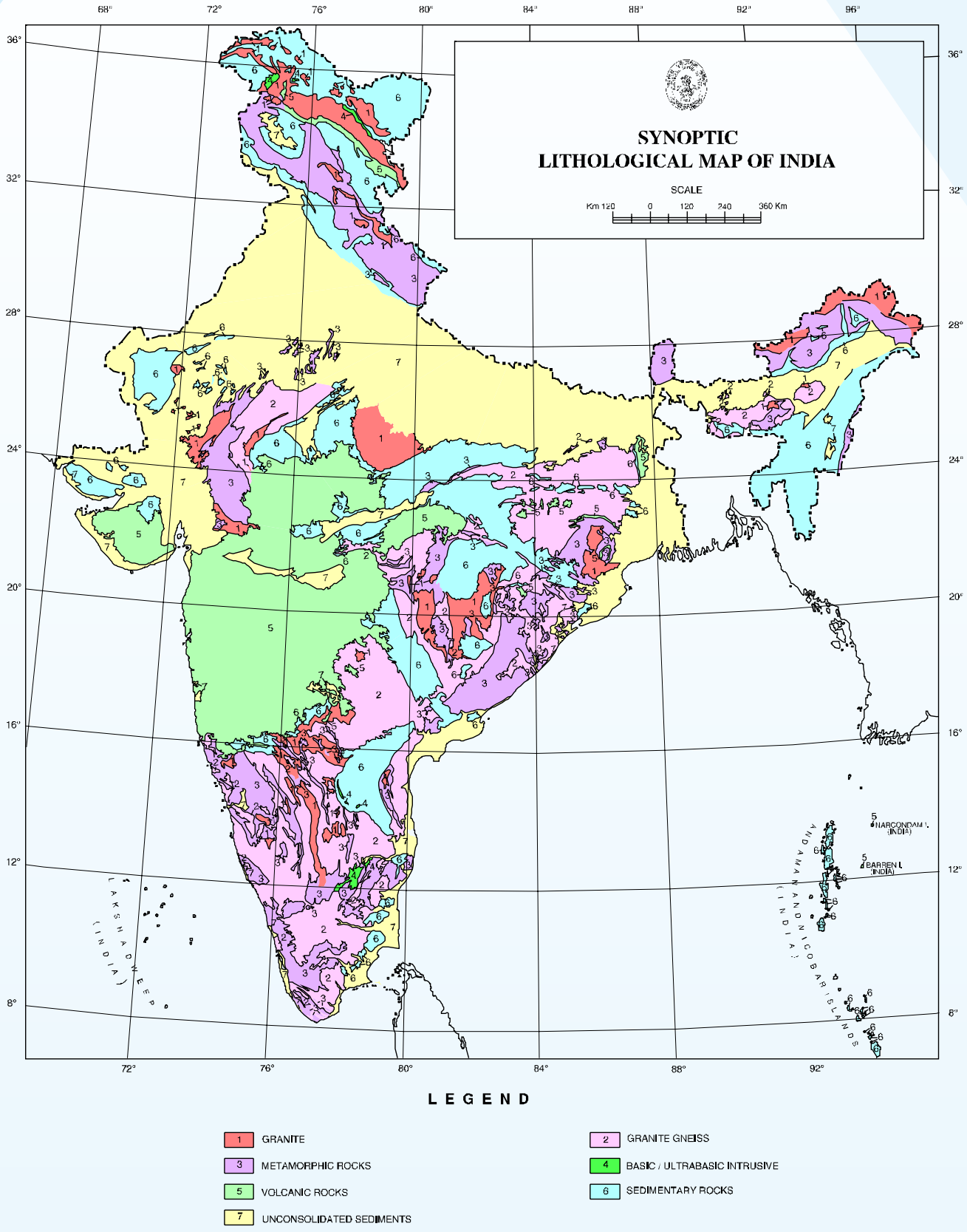
Responsibility for the correctness of internal details shown on the map rests with the publisher.

National Highways, major roads and Railways Trunk Routes only are shown.

The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line.

The inter state boundaries between Arunachal Pradesh, Assam and Meghalaya shown on this map are as interpreted from the North Eastern Areas (Reorganisation) Act,1971, but have yet to be verified.

Statement 1.16 Synoptic lithological Characteristics of India



Statement 1.17: Marine Fisheries Resources of India

State/U.T.	Coastal length (Kms.)	Landing Centres	Fishing Villages	Fishermen Families	Traditional Fisherman Families	BPL Families	Fisherfolk Population
West Bengal	158	59	188	76981	53532	48870	380138
Odisha	480	73	813	114238	87541	56279	605514
Andhra Pradesh	974	353	555	163427	161039	159101	605428
Tamil Nadu	1076	407	573	192697	185465	127245	802912
Puducherry	45	25	40	14271	14248	10998	54627
Kerala	590	187	222	118937	116321	65459	610165
Karnataka	300	96	144	30713	28533	23624	167429
Goa	104	33	39	2189	2147	489	10545
Maharashtra	720	152	456	81492	74203	15509	386259
Gujarat	1600	121	247	62231	59469	15784	336181
Daman & Diu	21	5	11	7374	7181	333	40016
Total	**6068**	**1511**	**3288**	**864550**	**789679**	**523691**	**3999214**

Source: Marine Fisheries Census, 2010, CMFRI, D/o Animal Husbandry, Dairying & Fisheries
Note : In West Bengal, villages mean Gram Panchayats.

Statement 1.18 : Coral Reefs in India

(a) :Area-distribution of Coral Reefs

Sr. No	Lakshadweep Class Name	Area Km²	Sr. No	Gulf of Kachchh Class Name	Area Km²
1	Shallow Lagoon	107.15	1	Turbid Water	7.62
2	Deep Lagoon	135.88	2	Mud	90.01
3	Inlet	0.48	3	Sand	13.13
4	Lagoonal Patch Reef	1.6	4	Matty Algae	3.82
5	Beach/Exposed Sand	9.78	5	Algae with Mud and Sand	30.04
6	Lagoon(Shallow Sandy)	110.21	6	Inner Reef (Live Corals with Algae)	77.11
7	Sea Grass/Algae	9.77	7	Outer Reef (Live Corals with Algae)	26.77
8	Boulders/Dead Corals	7.31	8	Algal Ridge (live Corals with Algae)	14.81
9	Live Corals Zone (Open/ Scattered)/Aligned Coral Zone	29.77	9	Sea Grass/Algae	5.74
10	Live Corals Zone (Dense)/Aligned Coral Zone	7.24	10	Live Corals (More than 80%)	16.25
11	Coralline shelf	118	11	Deep Water Live Corals	5.46
12	Live Corals Zone (Deep Lagoon)	57.17	12	Deep Corals with sand and Algae	1.01
13	Live Corals Zone (Intermediate Depth)	4.48	13	Dead Corals	2.28
14	Coral Knolls	2.47	14	Sandy Substrate	2.52
15	Reef Front (Live Corals)	3.48	15	Reef Slope (No Live Corals)	0.19
			16	Windward Reef Front	3.6
Gulf of Mannar			**Andaman & Nicobar Islands**		
S. No.	**Class Name**	**Area Km²**	**S. No.**	**Class Name**	**Area Km²**
1	Sand	1.65	1	Sandy Beach	16.71
2	Sandy substrate	18.56	2	Sandy Substrate (<5 m)	49.07
3	Sandy substrate Deep	34.12	3	Sandy Substrate Deep (>5 m)	67.23
4	Sea Grass	11.16	4	Rock with sandy substrate	25.52
5	Rubbles Zone	1.01	5	live Corals with Rocks	5.74
6	Live Corals Zone with sea grass	9.15	6	Live Corals with Sand	3.12
7	Dead Corals	2.45	7	Exposed Rocky Land	5.2
8	Windward Reef Front	3.22	8	Sea Grass	0.04
9	Algal Ridge	0.32	9	Dead Corals	0.12

Source: State of Forest Report 2011, FSI

Statement 1.18 : Coral Reefs in India

(b) : Diversity of hermatypic corals in the Indian Ocean

Locality	Genera	species
Gulf of Kutch*	24	37
West Coast Patches*	17	29
Lakshadweep Islands	37	103
Palk bay and Gulf of Mannar	36	96
Tuticorin	19	21
Andaman Islands	31	82
Nicobar Islands	43	103
Total for India*	37	199

Source: Bakus G.J (1994) (ed.) *"Coral reef Ecosystem,"* Oxford and IBH Publishing Co. India. C.M.F.R.I (1989), *Bulletin No 43: "Marine Living Resources of the U.T of Lakshadweep,* CMFRI, Cochin. India

* Pillai, C.S.G. (1996) "Coral reefs of India: Their Conservation and Management, in *(Pillai CSG and Menon N.G. eds) "Marine Biodiversity, Conservation and Management,"* CMFRI, Cochin, India.

Statement 1.19: State-wise area by major soil type

Sr. No.	State	Major Soils Area (Thousand ha)										
		Alluvial soils	Coastal Alluvial soils	Black Soils	Brown forest soils	Beaches	Mountain meadow soils	Laterites	Sub-montane soils	Salt Waste	Sand dunes	Greeks and Lagoons
1	Andaman & Nicobar	197.00	362.70									
2	Andhra Pradesh	2432.68	785.15	4727.26				7003.35				
3	Arunachal Pradesh	251.61										
4	Assam	1204.68										
5	Bihar (including Jharkhand)	9012.82		11.52								
6	Delhi	94.58										
7	Goa	281.98										
8	Gujarat	6703.43	2021.06	5308.68								
9	Haryana	3828.93		12.74								
10	Himachal Pradesh	1054.00					-					
11	Jammu & Kashmir	11869.76					60.14		103.84			
12	Karnataka	1825.54	913.21	6685.43	263.30			4446.77				
13	Kerala	315.16	191.20					955.16				
14	Lakshadweep		2.49								0.05	
15	Madhya Pradesh*	11867.72		15203.57								
16	Maharashtra	8577.24		15423.78	276.72			64.05				
17	Manipur	318.04										
18	Meghalaya	167.62										
19	Mizoram	107.30										
20	Nagaland											
21	Odisha	4527.71	2214.89	908.30				1960.63				
22	Puducherry	11.31	10.53	14.61		0.92		1.32				0.09
23	Punjab	3897.48										
24	Rajasthan	6992.47		1678.12						36.92	49.08	
25	Sikkim											
26	Tamil Nadu	704.44	178.64	2334.74				1934.27				
27	Tripura	243.08										
28	Uttar Pradesh *	23089.58		1494.46								
29	West Bengal	3247.43	3369.40					1727.96				

Source: National Bureau of Soil Survey and Land Use Planning (ICAR) Nagpur

* Including Uttarakhand (with UP) and Chhattisgarh(with MP)

Contd.

Statement 1.19: State-wise area by major soil type

Major Soils Area (Thousand ha)													
Gullied land	Glaciers	Desert Soils	Hill Soils	Water bodies	Peat Soils	Red Soils	Rock outerops	Rock Land	Terai Soils	Mangrove swamps	Miscellaneous	Others	Total
						89.57				114.46		61.17	824.90
						9930.11						2625.95	27504.50
						8004.46						118.23	8374.30
						6292.32						346.80	7843.80
						7113.67	18.72					470.12	16626.85
						6.06						47.66	148.30
						70.04						18.18	370.20
		2534.87				101.40						2932.96	19602.40
		409.07										170.46	4421.20
	248.04					2917.11	1348.15						5567.30
	850.60			113.70		-	9225.56					-	22223.60
						4344.98		355.61				344.26	19179.10
						2044.90	202.88					177.00	3886.30
											0.56	0.10	3.20
						16601.28	13.51					658.52	44344.60
						4302.86	274.75					1844.60	30764.00
			428.44			1432.40	3.90					49.92	2232.70
						2075.28							2242.90
						1840.44						160.36	2108.10
						1604.44						53.46	1657.90
			1372.06			3948.85						638.26	15570.70
0.20						0.74						9.48	49.20
		957.51	131.81									49.40	5036.20
		22381.95				588.22	1656.60				837.46	2586.22	36807.04
	101.40					523.16			78.34			6.70	709.60
						7009.01	73.21	474.57				296.92	13005.80
			90.92		2.40	706.69						5.51	1048.60
						3926.97			83.01			847.08	29441.10
			238.54				18.20					273.67	8875.20

Statement 1.20 : State-wise district-wise degraded land

Upto March 2017 (hectare)

Sl. No.	State/UT	District		Total Area	Total Degraded Land area	% Degraded Land Area
1	Andhra Pradesh	1	Chittor	1492644	127725	8.56
		2	Kurnool	1761393	309412	17.57
		3	Nellore	1307600	169808	12.99
			Total of affected districts	**4561637**	**606945**	**13.31**
	State Total			**16296800**	**606945**	**3.72**
2	Bihar	1	Banka	278768	29294	10.51
		2	Bhagalpur	255822	32589	12.74
		3	Gaya	473659	7727	1.63
		4	Munger	634594	144617	22.79
		5	Siwan	221900	22611	10.19
			Total of affected districts	**1864743**	**236838**	**12.70**
	State Total			**9416300**	**236838**	**2.52**
3	Goa	1	North Goa	175592	24634	14.03
		2	South Goa	194608	19639	10.09
			Total of affected districts	**370200**	**44273**	**11.96**
	State Total			**370200**	**44273**	**11.96**
4	Gujarat	1	Bharuch	776430	192841	24.84
		2	Bhavnagar	1115500	271337	24.32
		3	Surat	776161	85469	11.01
			Total of affected districts	**2668091**	**549647**	**20.60**
	State Total			**19624400**	**549647**	**2.80**
5	Himachal Pradesh	1	Chamba	671500	74238	11.06
		2	Kullu	566604	259127	45.73
			Total of affected districts	**1238104**	**333365**	**26.93**
	State Total			**5567300**	**333365**	**5.99**
6	Jharkhand	1	East Singhbhum	337155	27783	8.24
		2	Palamau	802291	50363	6.28
		3	Sarailela- Kharsawan	272340	37050	13.60
		4	West Singhbhoom	529021	58539	11.07
			Total of affected districts	**1940807**	**173735**	**8.95**

Contd.

Statement 1.20 : State-wise district-wise degraded land

Upto March 2017 (hectare)

Sl. No.	State/UT	District		Total Area	Total Degraded Land area	% Degraded Land Area
	State Total			**7971600**	**173735**	**2.18**
7	Karnataka	1	Bagalkot	658877	135145	20.51
		2	Bijapur	1053471	256010	24.30
		3	Chickmagalur	722072	16038	2.22
		4	Gulbarga	1610208	313347	19.46
		5	Tumkur	1055090	58808	5.57
			Total of affected districts	**5099718**	**779348**	**15.28**
	State Total			**19179100**	**779348**	**4.06**
8	Kerala	1	Palghat	448000	16204	3.62
			Total of affected districts	**448000**	**16204**	**3.62**
	State Total			**3885200**	**16204**	**0.42**
9	Madhya Pradesh	1	Balaghat	924500	112941	12.22
		2	Chattarpur	863120	191511	22.19
		3	Gwalior	456449	144079	31.57
		4	Jhabua	646912	322601	49.87
		5	Morena	1168336	373553	31.97
		6	Ratlam	486007	160244	32.97
		7	Sidhi	1039194	228736	22.01
		8	Ujjain	609874	129700	21.27
			Total of affected districts	**6194392**	**1663365**	**26.85**
	State Total			**30825200**	**1663365**	**5.40**
10	Maharashtra	1	Bhandara	934716	49933	5.34
		2	Nasik	1527764	647462	42.38
		3	Wardha	630900	69308	10.99
			Total of affected districts	**3093380**	**766703**	**24.79**
	State Total			**30771300**	**766703**	**2.49**
11	Manipur	1	East Imphal	57800	10238	17.71
		2	West Imphal	51900	15098	29.09
			Total of affected districts	**109700**	**25336**	**23.10**
	State Total			**2232700**	**25336**	**1.13**

Contd.

Statement 1.20 : State-wise district-wise degraded land

Upto March 2017 (hectare)

Sl. No.	State/UT	District		Total Area	Total Degraded Land area	% Degraded Land Area
12	Meghalaya	1	East Garohills	260300	34201	13.14
		2	Jaintia Hills	381900	178666	46.78
		3	South Garohills	185700	8003	4.31
		4	West Garohills	370700	42516	11.47
			Total of affected districts	**1198600**	**263386**	**21.97**
	State Total			**2242900**	**263386**	**11.74**
13	Mizoram	1	Aizawl	357631	109184	30.53
		2	Champhai	318583	184795	58.01
		3	Kolasib	138251	16865	12.20
		4	Lawngtlai	199119	95965	48.19
		5	Lunglei	453800	59913	13.20
		6	Mamit	302575	50986	16.85
		7	Saiha	196581	29416	14.96
		8	Serchhip	142160	70702	49.73
			Total of affected districts	**2108700**	**617826**	**29.30**
	State Total			**2108700**	**617826**	**29.30**
14	Nagaland		Kohima, Phek, Wokha, Zunheboto, Tuensang,Mokokchung, Mon	1657900	441339	26.62
			Total of affected districts	**1657900**	**441339**	**26.62**
	State Total			**1657900**	**441339**	**26.62**
15	Rajasthan	1	Ajmer	842388	398913	47.36
		2	Jhunjhunu	591681	81478	13.77
		3	Nagaur	1764504	361120	20.47
		4	Rajsamand	455093	136908	30.08
			Total of affected districts	**3653666**	**978419**	**26.78**
	State Total			**34223900**	**978419**	**2.86**
16	Sikkim	1	East	95400	5922	6.21
		2	West	116600	17274	14.81
		3	North	422600	94963	22.47
		4	South	75000	5323	7.10

Contd.

Statement 1.20 : State-wise district-wise degraded land

Upto March 2017 (hectare)

Sl. No.	State/UT	District		Total Area	Total Degraded Land area	% Degraded Land Area
			Total of affected districts	**709600**	**123482**	**17.40**
	State Total			**709600**	**123482**	**17.40**
17	Tamilnadu	1	Coimbatore	746128	19566	2.62
		2	Dharmapuri	962247	194502	20.21
		3	Erode	825997	5579	0.68
		4	Thirunelveli	682308	36240	5.31
		5	Tuticorin	459054	78213	17.04
			Total of affected districts	**3675734**	**334100**	**9.09**
	State Total			**13006000**	**334100**	**2.57**
18	Tripura	1	West	303300	21385	7.05
		2	South	314000	33396	10.64
		3	North	210070	60732	28.91
		4	Dhalai	221230	47323	21.39
			Total of affected districts	**1048600**	**162836**	**15.53**
	State Total			**1048600**	**162836**	**15.53**
19	Uttar Pradesh	1	Agra	400369	92650	23.14
		2	Bijnor	454057	37732	8.31
		3	Lalitpur	504149	95450	18.93
		4	Mathura	376432	22975	6.10
		5	Sitapur	570633	88717	15.55
			Total of affected districts	**2305640**	**337524**	**14.64**
	State Total			**24092800**	**337524**	**1.40**
20	West Bengal	1	North 24 Pargana	378090	64062	16.94
		2	Puruliya	625100	198619	31.77
		3	South 24 Paragna	966171	263635	27.29
			Total of affected districts	**1969361**	**526316**	**26.73**
	State Total			**8875200**	**526316**	**5.93**
GRAND TOTAL		**82 Districts**		**45916573**	**8853262**	**19.28**
India Total				**328746900**	**8853262**	**2.69**

Source: Soil and Land Use Survey of India, Ministry of Agriculture and Farmers Welfare

Statement 1.21: State-wise degraded land by type of soil degradation

(Area in Ha.)

State Name	Vegetation Degradation		Water Erosion		Wind Erosion		Salinity		Water Logging		Frost Shattering		Mass Movement	
	2011-13	2003-05	2011-13	2003-05	2011-13	2003-05	2011-13	2003-05	2011-13	2003-05	2011-13	2003-05	2011-13	2003-05
Andhra Pradesh	1164257	1168447	789433	783830	3986	4722	117952	117239	132334	125755	-	-	-	-
Arunachal Pradesh	120499	107845	-	-	-	-	-	-	-	-	20186	19072	-	-
Assam	471958	322540	31424	31424	-	-	-	-	186667	193669	-	-	-	-
Bihar	242525	255073	321175	304364	-	-	-	-	106628	78450	-	-	-	-
Chhattisgarh	1348089	1348122	783645	770387	-	-	-	-	-	-	-	-	-	-
Delhi	9980	9980	-	-	-	-	-	-	347	347	-	-	-	-
Goa	138172	132301	33889	33892	-	-	-	-	9005	9003	-	-	-	-
Gujarat	2319826	2255417	3859497	3788099	1177105	1179548	2645405	2643828	3375	3375	-	-	-	-
Haryana	41411	40514	13568	13568	151797	148151	27841	27841	12530	8822	-	-	-	-
Himachal Pradesh	1790803	1582938	268261	233990	-	-	-	-	-	-	332423	322417	-	-
Jammu and Kashmir	1951000	1907187	146932	110222	1670244	1650577	-	-	70563	46548	2968279	2750257	927986	843554
Jharkhand	1379038	1307162	4036785	4037261	-	-	-	-	-	-	-	-	-	-
Karnataka	1712386	1704569	5043041	5059629	2159	2159	86740	86582	-	-	-	-	-	-
Kerala	337613	328638	-	-	-	-	-	-	11989	12906	-	-	-	-
Madhya Pradesh	2523801	2514983	1125418	1120221	-	-	-	-	7788	7788	-	-	-	-
Maharashtra	4884005	4890778	8060753	7622800	-	-	29089	30054	-	-	-	-	-	-
Manipur	575603	574706	8070	8070	-	-	-	-	5026	5026	-	-	-	-
Meghalaya	435527	414659	53149	54046	-	-	-	-	1548	5881	-	-	-	-
Mizoram	167050	81854	8119	7444	-	-	-	-	-	-	-	-	-	-
Nagaland	778421	637957	-	-	-	-	-	-	-	-	-	-	-	-
Orissa	745122	752929	4409413	4442556	-	-	-	-	36439	36439	-	-	-	-
Punjab	32561	18705	14116	1897	-	-	-	-	-	-	-	-	-	-
Rajasthan	2606221	2596003	2116314	2116082	15197874	15332054	363768	365666	18421	18421	-	-	-	-
Sikkim	74318	74205	-	-	-	-	-	-	-	-	3730	3730	-	-
Tamil Nadu	1385478	1368330	6411	6411	30429	30429	9878	9878	-	-	-	-	-	-
Telangana	541145	538533	2854285	2951871	-	-	86514	81917	-	-	-	-	-	-
Tripura	236374	125058	186900	189533	-	-	-	-	-	-	-	-	-	-
Uttar Pradesh	413476	414176	586961	610989	-	-	307571	636202	33620	33907	-	-	-	-
Uttarakhand	606616	545610	11943	11943	-	-	-	-	-	-	13786	13786	-	-
West Bengal	265277	264325	1329539	1299542	-	-	-	-	17627	13261	-	-	-	-
Total	**29298553**	**28283544**	**36099042**	**35610069**	**18233594**	**18347639**	**3674759**	**3999206**	**653908**	**599597**	**3338404**	**3109262**	**927986**	**843554**

Source: Desertification and Land Degradation Atlas Of India - 2016, Space Applications Centre, ISRO

Contd.

Statement 1.21: State-wise degraded land by type of soil degradation

(Area in Ha.)

State Name	Manmade		Barren/Rocky		Settlement		Total Area under Desertification		Total Area under Desertification (%)		No Apparent Degradation	
	2011-13	2003-05	2011-13	2003-05	2011-13	2003-05	2011-13	2003-05	2011-13	2003-05	2011-13	2003-05
Andhra Pradesh	20833	20565	20521	20521	49441	26649	2298758	2267728	14.35	14.16	13447078	13476591
Arunachal Pradesh	-	-	-	-	13247	9769	153933	136686	1.84	1.63	8144850	8162237
Assam	-	-	-	-	26548	24583	716596	572215	9.14	7.3	6591013	6735134
Bihar	984	984	-	-	23496	20669	694809	659539	7.38	7	8511828	8527091
Chhattisgarh	40541	31972	7222	7222	31656	18685	2211153	2176388	16.36	16.1	11130592	11166012
Delhi	-	-	-	-	79541	63187	89868	73514	60.6	49.57	57307	73661
Goa	3374	3374	-	-	8533	7889	192973	186458	52.13	50.37	168648	174991
Gujarat	51637	50524	39218	39218	165578	117447	10261641	10077455	52.29	51.35	8533439	8718876
Haryana	5962	4894	-	-	85855	70792	338964	314583	7.67	7.12	4082236	4106617
Himachal Pradesh	656	656	-	-	2097	1365	2394240	2141366	43.01	38.46	3123624	3376690
Jammu and Kashmir	-	-	218679	218679	15924	11790	7969607	7538814	35.86	33.92	14027316	14455333
Jharkhand	52734	49730	-	-	30169	24503	5498726	5418657	68.98	67.97	2398866	2469577
Karnataka	20876	18704	3389	2887	82409	66413	6951000	6940943	36.24	36.19	11984329	11994157
Kerala	-	-	-	-	29984	28968	379587	370512	9.77	9.54	3455238	3464358
Madhya Pradesh	19454	16024	31495	30457	96359	82379	3804315	3771853	12.34	12.24	26502030	26648676
Maharashtra	19912	19912	506163	509789	326013	275272	13825935	13348604	44.93	43.38	16415568	16873660
Manipur	-	-	-	-	13260	5290	601959	593093	26.96	26.56	1613978	1622844
Meghalaya	-	-	-	-	4656	4239	494880	478825	22.06	21.35	1746580	1762634
Mizoram	-	-	-	-	12285	6575	187453	95873	8.89	4.55	1903762	1998679
Nagaland	-	-	-	-	8257	4347	786678	642304	47.45	38.74	869562	1013937
Orissa	63851	51445	5128	5053	44161	33481	5304114	5321903	34.06	34.18	9758929	9741425
Punjab	1641	652	-	-	96335	71861	144653	93115	2.87	1.85	4849651	4901242
Rajasthan	53058	50865	1052374	1047818	118482	98696	21526512	21625604	62.9	63.19	12546925	12448140
Sikkim	-	-	-	-	700	546	78749	78482	11.1	11.06	630234	630500
Tamil Nadu	13965	13965	515	515	97223	87133	1543898	1516660	11.87	11.66	11344261	11371500
Telangana	16982	14592	1979	1979	97951	69591	3598856	3658482	31.34	31.86	7689491	7631019
Tripura	-	-	-	-	13854	12711	437128	327302	41.69	31.21	608776	716717
Uttar Pradesh	5970	4028	-	-	181399	135962	1528997	1835263	6.35	7.62	22115961	21831845
Uttarakhand	-	-	-	-	15908	9903	648253	581241	12.12	10.87	4667750	4738936
West Bengal	15102	14112	-	-	106386	90941	1733931	1682181	19.54	18.95	6884910	6926022
Total	**407531**	**366998**	**1886682**	**1884137**	**1877708**	**1481638**	**96398166**	**94525643**	**29.32**	**28.76**	**225804731**	**227759103**

Source: Desertification and Land Degradation Atlas Of India - 2016, Space Applications Centre, ISRO

Statement 1.22: State-wise nutrient status of soil

(a) Status of macro nutrients

(For cycle I - 2015-16 to 2016-17)- as on 23.01.2018

	Nitrogen (N)					Phosphorus (P)				
State Name	Very Low	Low	Medium	High	Very High	Very Low	Low	Medium	High	Very High
Andaman And Nicobar Island	1150	6788	16		5	1694	4661	1185	274	161
Andhra Pradesh	316070	618195	60663	3052	2869	90235	39086	255901	185493	446416
Arunachal Pradesh	528	202	3151	12484	10	6267	3629	4775	793	894
Assam	5266	508	13051	7983	189	8384	6858	12249	5339	2468
Bihar	84242	1566	39528	140	146	13714	2305	33475	49673	27108
Chhattisgarh	404923	75837	166588	11075	7677	137845	86060	309268	73784	64719
Dadra And Nagar Haveli						1		1769	204	224
Delhi	49	41	20			6		65	32	7
Goa	5188	383	12374	1301	2290	2266	7278	3566	3600	1747
Gujarat	2874	26322	1166	52	133	71774	38253	190237	302923	469322
Haryana	273	34459	4		13	246702	207300	250798	48563	57824
Himachal Pradesh	35905	5024	47695	2915	113	11913	4190	57264	14413	12133
Jammu And Kashmir	18745	4865	56078	9109	8577	19602	5680	63006	39622	30164
Jharkhand	18545	3623	14744	1107	749	5420	4501	16407	5151	7185
Karnataka	198685	165260	187707	36865	72398	74249	36097	417206	289509	631670
Kerala	270	691	61		1	16252	14387	42716	59995	55897
Maharashtra	299990	119743	306366	35962	31785	230286	110773	548054	133665	155132
Manipur	8	35				12	1	19	7	17
Meghalaya	171	101	86	6	1	7637	5263	12743	2906	2611
Madhya Pradesh	436234	38450	157066	4570	1616	64262	15174	323127	143850	92084
Mizoram	1239	52	7898	17		1250	21	7763	120	51
Nagaland	918	46	8172	10219	30	6936	2294	7239	1139	1778
Odisha	783	834	620	7	4	56304	54537	128383	46133	42136
Puducherry	1062	3220	50		3	142	3550	321	199	124
Punjab	80	528	1981	508	321	12841	4079	10740	299	166
Rajasthan	1	4	2			11791	3078	328968	311559	149813
Sikkim	2901	161	7284	545	19	23	978	4250	3656	2002
Telangana	293547	95724	39625	5593	1653	38092	8352	84718	81935	315152
Tamil Nadu	588363	605711	21913	181	912	157832	77571	393707	172321	423949
Tripura	48	64	91	3		286	269	16526	673	11202
Uttar Pradesh	293524	3700876	61390	1172	6514	901780	408356	3160925	255173	98468
Uttarakhand	152	235	159	8	3	19898	17501	54493	20573	9878
West Bengal	552	1470	845	23	7	53	10	486	765	2412
Total	**3012286**	**5511018**	**1216394**	**144897**	**138038**	**2215749**	**1172092**	**6742349**	**2254341**	**3114914**

Source: http://soilhealth.dac.gov.in/, Department of Agriculture Cooperation and Farmer Welfare, (As retrieved on 07.03.2018)

Contd.

Statement 1.22: State-wise nutrient status of soil

(a) Status of macro nutrients

(For cycle I - 2015-16 to 2016-17)- as on 23.01.2018

Potassium (K)					Organic Carbon (OC)					Total No. of samples
Very Low	Low	Medium	High	Very High	Very Low	Low	Medium	High	Very High	
3784	2265	1588	251	3	3777	2738	874	236	710	8080
190926	98095	425073	207120	67132	300596	107342	191613	251170	165639	1021258
996	528	8921	4720	1245	1088	437	1273	1900	11682	16426
17308	9863	6085	1810	250	4200	727	5743	6507	28233	36036
11226	560	82659	8085	585	42448	6120	58910	16493	2286	125401
50446	30078	328198	234475	29401	231300	81341	174061	71630	86341	679858
5	2	167	761	1263	759	80	912	412	35	2198
11	1	54	44		50	29	23	8		110
2472	599	10745	5353	3114	1788	350	2043	2919	15196	22307
43674	110038	270618	602428	44339	380434	72253	378009	159575	80716	1077841
157103	84365	294288	214965	59481	595704	186169	27825	2541	4966	814775
10645	2787	53073	25728	7669	7292	1089	16334	20004	55020	99960
27571	12080	89393	26169	2518	28961	7127	37525	25115	59186	158017
5834	5298	18158	7559	1920	11451	4175	11163	5760	5974	38786
134758	121410	470086	565041	157653	479963	225586	367440	186001	179953	1443964
35703	16129	79953	49090	8348	29331	9189	34451	29114	86788	189556
34392	27048	261005	561222	293951	462430	147626	334999	123863	105309	1179424
33	9	14			12	5	12	5	22	56
11015	6838	10447	2623	181	1866	531	3855	3945	20530	31062
26342	12416	238218	307640	53187	198328	27553	250136	95740	72986	644058
764	18	7704	691	10	4656	88	4150	210	176	9236
1548	1561	9668	5474	1136	689	244	724	1323	16401	19396
76187	22739	154135	57469	16578	127618	66692	85277	28468	19474	326511
841	297	1864	1189	144						4336
14452	3293	2928	2888	15	18847	517	10454	1211	73	32134
38599	1961	364698	381850	17940	366191	293265	120456	20986	4306	781424
100	115	5729	3920	1039	32	4	123	245	10483	10914
39309	11700	182099	215278	77910	293701	44382	78494	53392	8383	528505
238902	89719	505447	277558	113375	596711	292982	169412	42687	29220	1212303
17171	2143	7096	2563	37	5031	1495	10958	11454	261	29353
382338	158525	3696212	565996	17928	3243542	1012181	429585	61396	86052	4847020
17804	3320	80201	19133	1804	46474	8580	39580	17201	10422	122282
487	474	1777	853	134	612	157	1273	813	871	3728
1592746	**836274**	**7668301**	**4359946**	**980290**	**7485882**	**2601054**	**2847687**	**1242324**	**1167694**	**15516315**

Source: http://soilhealth.dac.gov.in/, Department of Agriculture Cooperation and farmer Welfare, (As retrieved on 07.03.2018)

Statement No. 1.22: State-wise nutrient status of soil

(b) Status of micro nutrients

(For cycle I - 2015-16 to 2016-17) - As on 23.01.2018

State Name	Boron (B)		Copper (Cu)		Iron (Fe)		Manganese (Mn)		Sulphur (S)		Zinc (Zn)		Total No. of samples
	Deficient	Sufficient	Deficient	Sufficient	Deficient	Sufficient	Deficient	Sufficient	Deficient	Sufficient	Deficient	Sufficient	
Andaman and Nicobar Islands	215	7028	309	7709	111	7914	63	7960	7988	70	2016	6023	8080
Andhra Pradesh	104438	395852	47187	829879	283173	592987	94009	778488	128494	844179	344549	529918	1021258
Arunachal Pradesh	132	337	4099	12107	1285	14928	4071	11833	1779	11909	7782	8629	16426
Assam	21463	6265	754	34057	4592	30285	1063	32610	1330	25707	3194	32108	36036
Bihar		64	672	25712	4248	22307	4566	21795	4	271	9583	17037	125401
Chhattisgarh	155531	294119	16298	580125	74420	537897	32177	563986	151609	462999	212019	393965	679858
Dadra and Nagar Haveli		2198	2	2196	178	2018	6	2191	1	2197	251	1947	2198
Delhi	28	82	14	96	46	64	38	71		110	16	94	110
Goa	734	1478	46	2256	31	2279	30	2275	42	203	493	1807	22307
Gujarat	287499	546484	36588	882652	268403	656221	115094	807984	315868	607593	306438	619982	1077841
Haryana	45	556	26480	391896	214074	594163	177793	624056	65484	717423	145105	665508	814775
Himachal Pradesh	2938	30333	4831	83869	10199	78638	25357	63044	1924	56571	9405	79584	99960
Jammu And Kashmir	2569	5821	20501	66415	29775	56305	42488	43739	23284	45475	38170	49958	158017
Jharkhand	11511	22277	1731	23333	2623	33170	2021	23003	15548	20148	12753	23413	38786
Karnataka	645996	775075	117221	1327545	745285	701794	261815	1170905	509304	919582	767737	679348	1443964
Kerala	79059	70237	8309	177705	6891	178452	17471	167475	70144	77856	18062	168119	189556
Maharashtra	280911	384064	26691	1140215	739653	430702	152864	1010870	415453	346552	593544	576760	1179424
Manipur		29	1	42	28	15	23	19	3	36	7	36	56
Meghalaya		15		257	109	158	43	207	13	29	12	255	31062
Madhya Pradesh	85784	259047	22693	480004	124830	382546	40324	463672	91722	303120	200674	310369	644058
Mizoram	44	127		118	11	122	2	116	44	145	10	167	9236
Nagaland	5	15	8264	11076	2617	16764	5176	14165	1164	18215	7546	11831	19396
Odisha	6414	3962	3	278	35	438	13	244	8364	6829	6273	6777	326511
Puducherry	3625	2	111	4223	801	3534	384	3928	1	776	373	3963	4336
Punjab	11	8	58	2591	943	2292	1207	2162	15	32	879	2562	32134
Rajasthan	3	1626	32873	757826	387419	405411	56660	731445	2	2	299381	493945	781424
Sikkim	3908	7001	3075	7823	554	10351	3600	7202	2277	8633	2738	8173	10914
Telangana	193	822	255	8961	4196	4801	1058	8157	6521	66891	4831	4545	528505
Tamil Nadu	627175	464460	49273	1165339	403548	814613	233113	965121	384506	767994	331969	885742	1212303
Tripura	53	358	489	25522	1397	24312	300	24818	14	469	2607	23330	29353
Uttar Pradesh	531857	1432353	243913	4503353	1113374	3647114	556103	4180637	1690958	2896104	1374940	3386149	4847020
Uttarakhand	571	342	12482	109432	16233	105824	15093	105076	35947	85505	27376	94534	122282
West Bengal	1228	1234	14	3423	849	2589	496	2921	2295	993	252	3191	3728
Total	**2853940**	**4713671**	**685237**	**12668035**	**4441931**	**9361008**	**1844521**	**11842175**	**3932102**	**8294618**	**4730985**	**9089769**	**15516315**

Source: http://soilhealth.dac.gov.in/, Department of Agriculture Cooperation and Farmer Welfare, (As retrieved on 07.03.2018)

Statement 1.23 : Land use and land cover classes - India

S. No.	L 1	L 2	Area (Sq. Kms.)		
			1985	1995	2005
1	Agriculture	Crop land	1,558,712	1,556,346	1,614,921
		Current Shifting cultivation			
		Fallow	252,073	266,671	221,136
		Plantation	77,493	77,956	78,560
		Sub Total -1	**1,888,278**	**1,900,973**	**1,914,617**
2	Barren/ unculturable/ Wastelands	Barren Rocky	65,484	71,250	69,855
		Gullied / Ravinous Land	84,414	78,649	74,355
		Rann			
		Salt Affected Land			
		Sandy Area			
		Scrub Land	182,860	188,342	192,873
		Sub Total-2	***332,758***	***338,241***	***337,083***
3	Builtup	Mining			
		Rural			
		Urban	34,019	40,090	47,239
		Sub Total-3	**34,019**	**40,090**	**47,239**
4	Forest	Deciduous	317,429	294,777	280,684
		Evergreen/Semi evergreen	208,063	205,160	197,992
		Forest Plantation	150,163	149,523	147,284
		Scrub Forest	84,368	91,188	98,723
		Swamp / Mangroves	4120	4525	4579
		Sub Total-4	***764,143***	***745,173***	***729,262***
5	Grass / Grazing	Grass / Grazing	54,553	56,604	61,595
		Sub Total-5	***54,553***	***56,604***	***61,595***
6	Snow and Glacier[2]	Snow and Glacier	97,152	91,636	92,522
		Sub Total-6	**97,152**	**91,636**	**92,522**
7	Wet lands / Water bodies[1]	Inland Wetland			
		Coastal Wetland			
		River/Stream/Canals			
		Water bodies	116,119	121,148	114,856
		Sub Total-7	***116,119***	***121,148***	***114,856***
	Grand Total		***3,287,022***	***3,293,865***	***3,297,174***

1 Includes Aqua Culture, Water bodies, and Permanent Wetlands;
2 Includes Salt Pan, Snow and Ice.
Source: Remote Sens. 2015, 7(3), 2401-2430; doi:10.3390/rs70302401 Article "Development of Decadal (1985-1995-2005) Land Use and Land Cover Database for India

Statement 1.24 : State-wise area by land cover classes

(Area in Sq. Kms.)

S. No.	L 1	L 2	Andhra Pradesh		Arunachal Pradesh		Assam		Bihar		Chhatisgarh	
			2005-06	2011-12	2005-06	2011-12	2005-06	2011-12	2005-06	2011-12	2005-06	2011-12
1	Agriculture	Crop land	133351.42	137611.64	2372.56	2508.03	23730.42	23370.18	59754.51	65147.86	57661.80	58616.14
		Current Shifting cultivation	16.28	15.40	1016.77	916.32	150.37	123.09			1.85	20.40
		Fallow	25967.36	19003.64	48.13	74.34	249.60	626.40	10809.76	5945.20	3252.22	2998.50
		Plantation	6777.10	8496.27	35.10	55.18	3810.17	3825.61	2438.06	2450.29	219.97	236.16
		Sub Total -1	***166112.15***	***165126.94***	***3472.55***	***3553.87***	***27940.56***	***27945.28***	***73002.34***	***73543.35***	***61135.83***	***61871.20***
2	Barren/ unculturable/ Wastelands	Barren Rocky	2926.39	2906.75	140.28	183.77	7.91	8.05	151.24	151.24	567.33	560.84
		Gullied / Ravinous Land	371.31	370.33			6.78	6.78	60.01	56.16	63.88	22.94
		Rann									0.29	0.29
		Salt Affected Land	1553.47	1608.74							97.04	87.42
		Sandy Area	299.45	250.05	8.71	9.13	69.98	217.10	6.78	5.87	4515.89	4292.13
		Scrub Land	17282.66	16943.53	2425.55	2297.00	3762.46	3780.27	3210.54	3015.81		
		Sub Total-2	***22433.28***	***22079.40***	***2574.54***	***2489.90***	***3847.13***	***4012.20***	***3428.57***	***3229.08***	***5244.43***	***4963.61***
3	Builtup	Mining	740.19	984.10	0.63	0.63	34.66	60.57	46.21	53.74	236.47	293.38
		Rural	4922.85	4931.03	411.40	411.73	558.75	616.93	4463.73	4489.57	3100.17	3100.17
		Urban	2596.83	3348.51	125.61	125.91	561.59	580.25	796.13	834.16	708.95	845.75
		Sub Total-3	***8259.87***	***9263.64***	***537.64***	***538.27***	***1154.99***	***1257.74***	***5306.07***	***5377.46***	***4045.59***	***4239.30***
4	Forest	Deciduous	44925.17	44629.46	133.23	147.23	23910.45	23722.18	4586.67	4637.04	58139.14	57346.44
		Evergreen/Semi evergreen	257.55	257.55	60194.63	59711.05	7889.11	7814.48			0.01	0.01
		Forest Plantation	1023.04	1067.44	22.84	24.76	124.54	124.01	2.83	2.83	51.21	58.75
		Scrub Forest	13014.71	13216.05	623.89	1386.83	2043.80	2187.39	1073.78	1023.76	3381.14	3368.11
		Swamp / Mangroves	330.24	376.09								
		Sub Total-4	***59550.71***	***59546.59***	***60974.59***	***61269.87***	***33967.91***	***33848.06***	***5663.28***	***5663.62***	***61571.50***	***60773.32***
5	Grass / Grazing	Grass / Grazing	129.91	129.18	5655.22	5499.48	2684.73	3053.55	17.41	20.80	0.15	0.15
		Sub Total-5	***129.91***	***129.18***	***5655.22***	***5499.48***	***2684.73***	***3053.55***	***17.41***	***20.80***	***0.15***	***0.15***
6	Snow and Glacier	Snow and Glacier			8954.27	8776.33						
		Sub Total-6			***8954.27***	***8776.33***						
7	Wet lands / Water bodies	Inland Wetland	238.10	470.23	5.46	5.42	1807.18	1496.65			0.05	0.50
		Coastal Wetland	1116.51	1067.50					2022.44	1840.48		
		River/Stream/Canals	5690.48	5920.46	1532.46	1572.73	6965.71	6750.84	4555.79	4324.55	1773.81	1786.38
		Water bodies	11537.00	11464.06	36.26	37.11	69.78	73.67	175.10	171.65	1422.64	1559.54
		Sub Total-7	***18582.09***	***18922.25***	***1574.19***	***1615.27***	***8842.68***	***8321.16***	***6753.32***	***6336.68***	***3196.50***	***3346.42***
		Grand Total	***275068.00***	***275068.00***	***83743.00***	***83743.00***	***78438.00***	***78438.00***	***94171.00***	***94171.00***	***135194.00***	***135194.00***

Contd.

Statement 1.24 : State-wise area by land cover classes

(Area in Sq. Kms.)

S. No.	L 1	L 2	Goa		Gujarat		Haryana		Jammu &Kashmir		Karnataka	
			2005-06	2011-12	2005-06	2011-12	2005-06	2011-12	2005-06	2011-12	2005-06	2011-12
1	Agriculture	Crop land	593.19	590.25	110717.00	109778.58	40571.48	40580.62	10782.16	10768.25	110912.14	111604.92
		Current Shifting cultivation										
		Fallow	176.24	173.67	13959.47	14367.28	469.53	264.82	148.86	143.70	5112.57	4052.52
		Plantation			82.42	329.83	79.00	79.57	2105.78	2110.60	19443.84	19574.25
		Sub Total -1	***769.43***	***763.91***	***124758.88***	***124475.69***	***41120.02***	***40925.01***	***13036.79***	***13022.54***	***135468.55***	***135231.69***
2	Barren/ unculturable/ Wastelands	Barren Rocky	56.42	56.42	204.36	204.36	92.34	91.80	93180.50	103186.52	1151.34	1144.80
		Gullied / Ravinous Land			438.84	444.05	0.21	0.21	574.17	575.09	61.46	61.52
		Rann			16995.58	16995.29						
		Salt Affected Land			972.14	970.36	31.87	27.64	63.57	63.57	526.08	525.40
		Sandy Area	2.42	2.42	187.72	186.47	17.38	9.42	1799.13	1815.92	12.46	12.39
		Scrub Land	270.39	264.73	18677.16	18593.18	395.26	378.10	7349.22	8087.48	6891.82	6873.33
		Sub Total-2	***329.23***	***323.57***	***37475.81***	***37393.71***	***537.06***	***507.17***	***102966.59***	***113728.59***	***8643.16***	***8617.44***
3	Builtup	Mining	73.29	84.38	114.02	125.80	38.18	51.28	8.17	8.81	555.19	579.38
		Rural	19.86	19.92	1497.67	1498.60	381.45	428.04	367.54	370.53	3005.48	3006.02
		Urban	287.24	290.05	1700.47	1964.14	635.17	809.11	371.22	386.64	2309.05	2575.84
		Sub Total-3	***380.40***	***394.34***	***3312.16***	***3588.53***	***1054.81***	***1288.43***	***746.93***	***765.97***	***5869.72***	***6161.23***
4	Forest	Deciduous	1160.38	1158.37	10031.74	10021.00	645.56	647.11	2560.37	1841.01	15928.49	15912.61
		Evergreen/Semi evergreen	621.78	621.78	10.56	10.56	8.67	8.67	14223.45	15216.36	10040.53	10039.66
		Forest Plantation	41.15	41.15	188.54	188.13	4.31	4.31	16.03	15.46	3012.11	3017.58
		Scrub Forest	208.42	208.42	1897.53	1926.25	108.73	106.94	23212.99	26754.94	4913.03	4892.65
		Swamp / Mangroves	16.46	16.46	549.67	606.01					5.81	5.81
		Sub Total-4	***2048.19***	***2046.18***	***12678.04***	***12751.96***	***767.27***	***767.04***	***40012.83***	***43827.76***	***33899.98***	***33868.32***
5	Grass / Grazing	Grass / Grazing	0.18	0.18	17.36	19.81	415.92	382.80	4622.26	4883.59	682.32	681.67
		Sub Total-5	***0.18***	***0.18***	***17.36***	***19.81***	***415.92***	***382.80***	***4622.26***	***4883.59***	***682.32***	***681.67***
6	Snow and Glacier	Snow and Glacier							56873.20	42027.26		
		Sub Total-6							***56873.20***	***42027.26***		
7	Wet lands / Water bodies	Inland Wetland	55.05	54.44	8937.22	8851.59	25.43	29.20	669.03	670.28	23.85	23.85
		Coastal Wetland	20.18	20.18	981.57	981.08					23.34	22.82
		River/Stream/Canals	68.91	69.02	3047.96	3060.56	238.46	251.63	2097.37	2072.37	1964.69	1967.70
		Water bodies	30.43	30.18	4815.01	4901.07	53.02	60.72	1211.04	1237.67	5215.38	5216.27
		Sub Total-7	***174.57***	***173.82***	***17781.75***	***17794.30***	***316.91***	***341.55***	***3977.43***	***3980.32***	***7227.27***	***7230.64***
	Grand Total		***3702.00***	***3702.00***	***196024.00***	***196024.00***	***44211.99***	***44211.99***	***222236.04***	***222236.04***	***191791.00***	***191791.00***

Contd.

Statement 1.24 : State-wise area by land cover classes

(Area in Sq. Kms.)

S. No.	L 1	L 2	Kerala		Maharashtra		Meghalaya		Manipur		Mizoram	
			2005-06	2011-12	2005-06	2011-12	2005-06	2011-12	2005-06	2011-12	2005-06	2011-12
1	Agriculture	Crop land	2693.72	2643.67	184975.05	188314.38	1259.89	1289.31	1554.12	1534.14	860.97	181.69
		Current Shifting cultivation					317.52	233.74	491.92	451.23	1014.11	790.39
		Fallow	77.55	98.80	19153.88	14625.03	0.33	1.32	8.78	8.88		
		Plantation	19014.06	18930.06	6196.40	6073.31	581.03	565.14	37.55	38.14	69.78	83.50
		Sub Total -1	***21785.33***	***21672.54***	***210325.33***	***209012.72***	***2158.76***	***2089.51***	***2092.36***	***2032.39***	***1944.85***	***1055.58***
2	Barren/ unculturable/ Wastelands	Barren Rocky	258.06	256.31	1113.03	1103.87	263.08	263.03				5.14
		Gullied / Ravinous Land			501.91	485.92						
		Rann										
		Salt Affected Land			17.06	8.12						
		Sandy Area	6.31	4.39	0.88	0.97	4.63	4.40				
		Scrub Land	1385.17	1398.17	22427.32	22175.08	2782.66	2835.55	3145.07	3055.59	39.18	139.68
		Sub Total-2	***1649.54***	***1658.87***	***24060.21***	***23773.96***	***3050.37***	***3102.97***	***3145.07***	***3055.59***	***39.18***	***144.82***
3	Builtup	Mining	53.65	56.11	292.45	347.38	0.83	1.78				
		Rural	2413.46	2416.34	2982.07	3084.27	709.97	775.07	302.92	308.28	112.65	124.33
		Urban	538.40	644.06	3024.36	3767.77	66.81	85.82	101.38	102.79	60.94	65.24
		Sub Total-3	***3005.51***	***3116.51***	***6298.88***	***7199.42***	***777.61***	***862.67***	***404.30***	***411.07***	***173.60***	***189.56***
4	Forest	Deciduous	1610.70	1587.43	40462.88	40060.08	14714.62	9705.09	11770.32	11669.49	7593.55	7233.73
		Evergreen/Semi evergreen	6054.25	6034.80	7188.13	7186.38	758.62	750.02	2799.15	2784.06	6433.71	6984.55
		Forest Plantation	2137.76	2132.58	255.91	347.24	13.63	13.70	1.58	1.58	83.97	105.84
		Scrub Forest	897.05	923.54	8810.53	9045.16	601.27	615.01	1571.51	1823.61	4554.37	5093.17
		Swamp / Mangroves	0.24	0.24	255.92	255.92	0.58	4943.21				
		Sub Total-4	***10700.00***	***10678.60***	***56973.37***	***56894.77***	***16088.72***	***16027.02***	***16142.56***	***16278.76***	***18665.60***	***19417.28***
5	Grass / Grazing	Grass / Grazing	199.36	199.43	1.77	1.76	0.03	0.03	2.58	2.58	120.07	112.18
		Sub Total-5	***199.36***	***199.43***	***1.77***	***1.76***	***0.03***	***0.03***	***2.58***	***2.58***	***120.07***	***112.18***
6	Snow and Glacier	Snow and Glacier										
		Sub Total-6										
7	Wet lands / Water bodies	Inland Wetland	86.41	86.45	914.65	910.99						0.04
		Coastal Wetland	257.55	267.58	2.42	2.28	62.36	55.40	287.32	287.32		
		River/Stream/Canals	556.07	555.12	3883.76	3896.22	273.25	273.42	138.69	145.18	134.83	136.07
		Water bodies	623.22	627.90	5229.62	5997.88	17.89	17.98	116.70	116.70	2.87	25.47
		Sub Total-7	***1523.25***	***1537.05***	***10030.45***	***10807.37***	***353.50***	***346.80***	***542.71***	***549.20***	***137.71***	***161.58***
	Grand Total		***38863.00***	***38863.00***	***307690.00***	***307690.00***	***22429.00***	***22429.00***	***22329.58***	***22329.58***	***21081.00***	***21081.00***

Contd.

Statement 1.24 : State-wise area by land cover classes

(Area in Sq. Kms.)

S. No.	L 1	L 2	Madhya Pradesh		Nagaland		Odisha		Punjab		Rajasthan	
			2005-06	2011-12	2005-06	2011-12	2005-06	2011-12	2005-06	2011-12	2005-06	2011-12
1	Agriculture	Crop land	183013.08	182424.85	574.20	574.06	76712.89	76104.07	43169.08	42786.97	139162.10	155432.55
		Current Shifting cultivation			1135.81	1160.42	1050.78	716.77				
		Fallow	6518.62	5776.13	15.45	20.68	2106.79	2286.76	28.11	69.66	77355.28	65966.12
		Plantation	50.47	56.11	9.30	9.84	334.22	337.64	567.39	822.41	101.05	106.79
		Sub Total -1	***189582.18***	***188257.08***	***1734.75***	***1765.00***	***80204.68***	***79445.25***	***43764.58***	***43679.04***	***216618.43***	***221505.45***
2	Barren/ unculturable/ Wastelands	Barren Rocky	434.53	419.32	0.86	0.86	478.70	478.70			5011.88	4996.01
		Gullied / Ravinous Land	1468.02	1466.73			716.33	717.57	38.25	35.38	2599.38	2476.31
		Rann									196.10	196.20
		Salt Affected Land					28.94	15.52	59.45	25.64	939.95	799.15
		Sandy Area					52.15	54.36	438.38	128.71	30038.70	25036.14
		Scrub Land	23791.24	23534.51	2127.74	2355.57	10733.01	10791.78	340.04	357.53	41218.89	41294.37
		Sub Total-2	***25693.79***	***25420.56***	***2128.60***	***2356.43***	***12009.14***	***12057.93***	***876.13***	***547.26***	***80004.90***	***74798.18***
3	Builtup	Mining	227.78	286.57	8.89	8.89	165.07	221.86	48.56	122.17	330.78	398.87
		Rural	2787.14	2777.99	239.84	251.08	4980.75	4975.29	1658.56	1739.59	3046.86	3072.35
		Urban	1427.56	1613.47	89.17	90.23	853.36	1080.89	1566.95	1820.37	1696.94	1927.94
		Sub Total-3	***4442.48***	***4678.03***	***337.90***	***350.20***	***5999.18***	***6278.04***	***3274.07***	***3682.13***	***5074.57***	***5399.16***
4	Forest	Deciduous	69149.74	69010.95	9940.54	9527.72	43263.43	43182.88	1428.29	1425.08	16852.89	17302.46
		Evergreen/Semi evergreen			341.62	340.33	0.36	0.36	12.75	12.65		
		Forest Plantation	34.38	61.38	127.51	126.82	874.65	874.32	16.20	14.81	120.61	141.55
		Scrub Forest	12345.75	12273.65	1747.15	1890.93	5965.79	6416.18	69.18	70.50	11185.85	10739.91
		Swamp / Mangroves					220.81	247.28				
		Sub Total-4	***81529.87***	***81345.99***	***12156.83***	***11885.80***	***50325.04***	***50721.03***	***1526.43***	***1523.03***	***28159.36***	***28183.92***
5	Grass / Grazing	Grass / Grazing	1.89	1.61	19.33	19.33				0.11	6059.58	5597.07
		Sub Total-5	***1.89***	***1.61***	***19.33***	***19.33***				***0.11***	***6059.58***	***5597.07***
6	Snow and Glacier	Snow and Glacier										
		Sub Total-6										
7	Wet lands / Water bodies	Inland Wetland					1178.66	1130.32	125.55	114.63	203.15	245.33
		Coastal Wetland					468.89	464.71				
		River/Stream/Canals	3237.33	3237.63	180.68	181.10	3031.54	3028.80	717.04	731.86	3331.44	3343.57
		Water bodies	3764.36	5311.01	20.91	21.14	2489.88	2580.92	78.20	83.94	2787.57	3166.33
		Sub Total-7	***7001.69***	***8548.64***	***201.59***	***202.24***	***7168.97***	***7204.75***	***920.79***	***930.43***	***6322.17***	***6755.23***
		Grand Total	***308251.90***	***308251.90***	***16579.00***	***16579.00***	***155707.00***	***155707.00***	***50362.00***	***50362.00***	***342239.00***	***342239.00***

Contd.

Statement 1.24 : State-wise area by land cover classes

(Area in Sq. Kms.)

S. No.	L 1	L 2	Sikkim		Tamil Nadu		Tripura		Uttarakhand		Uttar Pradesh	
			2005-06	2011-12	2005-06	2011-12	2005-06	2011-12	2005-06	2011-12	2005-06	2011-12
1	Agriculture	Crop land	586.75	585.78	64493.82	64140.35	1390.11	1404.68	9644.67	9649.74	170293.00	181083.59
		Current Shifting cultivation			9477.76	9498.31	756.54	730.87	1006.29	968.93		
		Fallow	0.57	0.57	14111.10	13989.48	17.69	32.26	170.00	166.38	12337.90	5260.90
		Plantation	7.53	7.55			80.92	125.61			4382.95	4550.34
		Sub Total -1	***594.85***	***593.90***	***88082.67***	***87628.14***	***2245.27***	***2293.43***	***10820.97***	***10785.05***	***187013.85***	***190894.82***
2	Barren/ unculturable/ Wastelands	Barren Rocky	996.98	811.33	535.13	530.59					687.72	679.07
		Gullied / Ravinous Land	0.43	7.48	66.16	69.77	0.08	0.08	4.25	4.25	3126.42	2886.69
		Rann			4962.22	4967.59	566.78	617.83	679.81	695.67		
		Salt Affected Land			181.85	171.20	4.67	4.68	7.03	7.03	4438.31	3741.69
		Sandy Area	3.57	3.56	284.49	272.26			3122.27	6037.41	95.91	9.68
		Scrub Land	20.70	19.71							9967.44	7052.30
		Sub Total-2	***1021.69***	***842.07***	***6029.84***	***6011.42***	***571.53***	***622.59***	***3813.37***	***6744.37***	***18315.80***	***14369.43***
3	Builtup	Mining		0.09	2075.40	2312.27	332.86	342.70	376.61	379.51	98.53	116.33
		Rural	5.37	5.54	3722.79	3784.21	469.32	493.51	205.14	205.42	7001.23	6953.45
		Urban	16.70	18.23	229.76	380.34	4.96	5.37	19.09	19.39	4141.60	4328.26
		Sub Total-3	***22.08***	***23.86***	***6027.95***	***6476.82***	***807.14***	***841.58***	***600.84***	***604.32***	***11241.37***	***11398.04***
4	Forest	Deciduous	186.34	187.09	5075.04	5077.61	3979.59	3864.21	16101.24	16099.33	8855.87	8881.39
		Evergreen/Semi evergreen	2662.19	2646.96	11222.48	11219.34	1955.64	1933.98	6555.31	6548.66		
		Forest Plantation	4.04	4.00	1380.17	1379.29	310.90	307.42	792.26	790.54	72.38	77.19
		Scrub Forest	47.41	47.00	2648.44	2646.11	501.24	511.30	2318.55	2316.86	3472.42	3416.12
		Swamp / Mangroves			79.61	79.61			8.31	8.31	217.84	214.47
		Sub Total-4	***2899.99***	***2885.05***	***20405.74***	***20401.96***	***6747.37***	***6616.90***	***25775.68***	***25763.71***	***12618.51***	***12589.18***
5	Grass / Grazing	Grass / Grazing	692.49	628.62	174.71	172.42			4150.44	4412.15	376.45	310.48
		Sub Total-5	***692.49***	***628.62***	***174.71***	***172.42***			***4150.44***	***4412.15***	***376.45***	***310.48***
6	Snow and Glacier	Snow and Glacier	1809.89	2063.55					7080.74	3884.64		
		Sub Total-6	***1809.89***	***2063.55***					***7080.74***	***3884.64***		
7	Wet lands / Water bodies	Inland Wetland			43.82	49.93	7.18	5.52	0.05	0.05		
		Coastal Wetland			874.21	868.94					2754.33	2307.48
		River/Stream/Canals	41.20	41.21	1751.73	1702.88	51.55	50.63	1064.31	1092.55		
		Water bodies	13.83	17.74	6667.09	6745.25	55.97	55.34	176.60	196.17	6855.17	7255.18
		Sub Total-7	***55.03***	***58.95***	***9336.84***	***9367.00***	***114.70***	***111.50***	***1240.96***	***1288.77***	***9609.50***	***9562.66***
	Grand Total		***7096.00***	***7096.00***	***130057.76***	***130057.76***	***10486.00***	***10486.00***	***53483.00***	***53483.00***	***239175.47***	***239124.60***

Contd.

Statement 1.24 : State-wise area by land cover classes

(Area in Sq. Kms.)

S. No.	L 1	L 2	Himachal Pradesh		Jharkhand		West Bengal		Andaman and Nicobar		Delhi	
			2005-06	2011-12	2005-06	2011-12	2005-06	2011-12	2005-06	2011-12	2005-06	2011-12
1	Agriculture	Crop land	6629.85	6527.03	32708.65	33013.68	55151.35	54888.03	39643.53	61678.38	469.52	452.58
		Current Shifting cultivation					2285.29	2371.58		2285.29		
		Fallow	1.51	1.51	4914.47	4503.42	159.87	54.18	4504.93	161.38	91.55	76.68
		Plantation	2164.11	2050.91	24.37	47.84			2211.95	2050.91	2.43	15.93
		Sub Total -1	***8795.47***	***8579.45***	***37647.49***	***37564.94***	***57596.52***	***57313.79***	***46360.41***	***66175.96***	***563.51***	***545.19***
2	Barren/unculturable/ Wastelands	Barren Rocky	6415.43	9463.15	466.99	462.87	38.60	31.85	6878.30	9501.75	0.10	0.10
		Gullied / Ravinous Land	143.84	129.01	78.36	78.38	15.79	15.36	222.22	144.80	6.74	6.05
		Rann					48.47	45.66		48.47		
		Salt Affected Land	2.47	2.47					2.47	2.47	0.15	0.15
		Sandy Area	25.45	22.69	0.08	0.17	0.20	0.97	25.62	22.89		
		Scrub Land	3646.94	3913.33	6069.72	6027.87	1211.96	1235.16	9674.80	5125.29	65.45	62.18
		Sub Total-2	***10234.12***	***13530.65***	***6615.14***	***6569.29***	***1315.01***	***1329.00***	***16803.41***	***14845.66***	***72.45***	***68.48***
3	Builtup	Mining	11.42	14.97	486.42	554.61	2553.33	2685.18	566.03	2568.29	0.89	0.67
		Rural	400.64	308.26	2955.11	2951.63	12660.95	12662.90	3352.27	12969.20	49.91	50.70
		Urban	204.74	299.30	963.71	1000.18	154.36	212.84	1204.93	453.66	735.90	754.19
		Sub Total-3	***616.80***	***622.52***	***4405.24***	***4506.42***	***15368.64***	***15560.91***	***5123.23***	***15991.16***	***786.70***	***805.57***
4	Forest	Deciduous	2323.28	2337.67	23748.67	23713.13	184.20	184.63	26036.41	2521.88	9.09	10.58
		Evergreen/Semi evergreen	11098.84	11018.10			6276.59	6293.13	11098.84	17294.68		
		Forest Plantation	5.83	5.83	20.45	29.37	526.49	601.34	35.20	532.31	0.38	0.38
		Scrub Forest	1222.92	1208.25	5299.59	5297.58	455.39	422.72	6520.50	1663.64	12.05	12.05
		Swamp / Mangroves	0.32	0.32			1972.13	1969.28	0.32	1972.45		
		Sub Total-4	***14651.19***	***14570.16***	***29068.71***	***29040.09***	***9414.80***	***9471.11***	***43691.27***	***23984.96***	***21.52***	***23.02***
5	Grass / Grazing	Grass / Grazing	9151.49	8660.77	0.00	3.29	137.56	100.41			6.24	5.71
		Sub Total-5	***9151.49***	***8660.77***	***0.00***	***3.29***	***137.56***	***100.41***			***6.24***	***5.71***
6	Snow and Glacier	Snow and Glacier	10784.74	8261.72								
		Sub Total-6	***10784.74***	***8261.72***								
7	Wet lands / Water bodies	Inland Wetland	7.73	3.51	13.16	13.16	338.14	337.11	20.89	341.65	4.10	4.10
		Coastal Wetland					156.06	139.22		156.06		
		River/Stream/Canals	1004.87	1013.92	1310.68	1312.90	3320.16	3240.29	2317.76	4334.08	24.71	27.15
		Water bodies	426.59	430.30	645.57	695.92	1105.13	1260.15	1122.51	1535.42	3.79	3.79
		Sub Total-7	***1439.18***	***1447.73***	***1969.42***	***2021.98***	***4919.48***	***4976.77***	***3461.16***	***6367.21***	***32.59***	***35.04***
	Grand Total		***55673.00***	***55673.00***	***79706.00***	***79706.00***	***88752.00***	***88752.00***	***115439.48***	***127364.96***	***1483.00***	***1483.00***

Contd.

Statement 1.24 : State-wise area by land cover classes

(Area in Sq. Kms.)

S. No.	L 1	L 2	Chandigarh		Daman & Diu		Lakshadweep		Puducherry		Dadra & Nagar Haveli	
			2005-06	2011-12	2005-06	2011-12	2005-06	2011-12	2005-06	2011-12	2005-06	2011-12
1	Agriculture	Crop land	13.91	12.85	40096.11	61692.29			178535.94	55370.41	120.27	112.51
		Current Shifting cultivation				2285.29			6855.88	2371.58		
		Fallow	3.82	1.08	4581.61	165.20	0.02	0.02	490.27	146.83	87.39	89.93
		Plantation	0.93	1.02	2227.88	2051.84	17.08	17.08	4103.68	20.53	15.95	15.31
		Sub Total -1	***18.66***	***14.96***	***46905.60***	***66194.62***	***17.09***	***17.09***	***189985.76***	***57909.35***	***223.61***	***217.76***
2	Barren/ unculturable/ Wastelands	Barren Rocky			6878.41	9501.75			19042.09	31.96		
		Gullied / Ravinous Land	0.07	0.07	228.27	144.87			305.53	22.17		
		Rann				48.47			145.40	45.66		
		Salt Affected Land			2.62	2.47			4.94	0.15		
		Sandy Area			25.62	22.89	0.62	0.62	45.98	1.59		
		Scrub Land	1.18	1.35	9736.98	5126.47			11464.90	1301.97	43.40	42.35
		Sub Total-2	***1.25***	***1.42***	***16871.89***	***14846.92***	***0.62***	***0.62***	***31008.84***	***1403.49***	***43.40***	***42.35***
3	Builtup	Mining	0.12		566.70	2568.42			7690.16	2686.07	0.49	1.03
		Rural	2.79	2.90	3402.97	12971.99	0.03	0.03	38604.93	12715.73	0.25	1.74
		Urban	80.23	83.84	1959.12	533.89	5.33	5.33	1222.15	1037.92	25.97	30.86
		Sub Total-3	***83.14***	***86.75***	***5928.79***	***16074.30***	***5.36***	***5.36***	***47517.24***	***16439.72***	***26.71***	***33.63***
4	Forest	Deciduous	8.75	8.59	26046.99	2530.63	8.90	8.90	5245.46	211.21	119.11	118.51
		Evergreen/Semi evergreen			11098.84	17294.68			40865.96	6293.13	6.87	6.85
		Forest Plantation			35.58	532.31			1591.12	601.73		
		Scrub Forest			6532.56	1663.64			3782.67	434.77	50.32	51.03
		Swamp / Mangroves			0.32	1972.45			5917.02	1969.28		
		Sub Total-4	***8.75***	***8.59***	***43714.29***	***23993.72***	***8.90***	***8.90***	***57402.23***	***9510.12***	***176.30***	***176.38***
5	Grass / Grazing	Grass / Grazing										
		Sub Total-5										
6	Snow and Glacier	Snow and Glacier										
		Sub Total-6										
7	Wet lands / Water bodies	Inland Wetland	0.02	0.02	24.99	341.67			1021.49	341.24		
		Coastal Wetland				156.06			468.17	139.22		
		River/Stream/Canals	0.75	0.75	2344.91	4334.83			11989.81	3265.74	8.05	8.05
		Water bodies	1.43	1.52	1126.29	1536.85	0.02	0.02	4178.82	1265.47	12.88	12.82
		Sub Total-7	***2.19***	***2.28***	***3496.20***	***6369.41***	***0.02***	***0.02***	***17658.29***	***5011.67***	***20.93***	***20.87***
	Grand Total		***114.00***	***114.00***	***116916.78***	***127478.96***	***32.00***	***32.00***	***343572.36***	***90274.35***	***490.96***	***491.00***

Source: National Remote Sensing Centre, Government of India

Statement 1.25: State-wise area of wastelands

(Area in Sq. Kms.)

State	No of Districts	Total Geographic Area (TGA)	Total Waste Land (WL)		Change	Total Reduction	Total Increase	% of WL to TGA		% Change over 2005-06
			2005-06	2008-09				2005-06	2008-09	
Andhra Pradesh	23	275068	38788.22	37296.62	-1491.60	1682.10	190.46	14.10	13.56	-0.54
Arunachal Pradesh	16	83743	5743.83	14895.24	9151.41	108.48	9259.89	6.86	17.79	10.93
Assam	23	78438	8778.02	8453.86	-324.16	862.56	538.04	11.19	10.78	-0.41
Bihar	37	94171	6841.09	9601.01	2759.92	1895.09	4654.41	7.26	10.20	2.93
Chhattisgarh	16	135194	11817.82	11482.18	-335.64	379.06	43.15	8.74	8.49	-0.25
Delhi	1	1483	83.34	90.21	6.87	3.62	10.27	5.62	6.08	0.46
Goa	2	3702	496.27	489.08	-7.19	11.48	3.99	13.41	13.21	-0.19
Gujarat	25	196024	21350.38	20108.06	-1242.32	2858.99	1616.67	10.89	10.26	-0.63
Haryana	21	44212	2347.05	2145.98	-201.07	232.20	31.92	5.31	4.85	-0.45
Himachal Pradesh	12	55673	22470.05	22347.88	-122.17	197.25	75.57	40.36	40.14	-0.22
Jammu & Kashmir	14	101387	73754.38	75435.77	1681.39	1191.48	2872.78	72.75	74.40	1.66
Jharkhand	24	79706	11670.14	11017.38	-652.76	1183.50	531.16	14.64	13.82	-0.82
Karnataka	27	191791	14438.12	13030.62	-1407.50	1477.98	70.82	7.53	6.79	-0.73
Kerala	14	38863	2458.69	2445.62	-13.07	247.55	234.44	6.33	6.29	-0.03
Madhya Pradesh	48	308252	40042.98	40113.27	70.29	258.95	329.25	12.99	13.01	0.02
Maharashtra	35	307690	38262.81	37830.82	-431.99	469.93	38.22	12.44	12.30	-0.14
Manipur	9	22327	7027.47	5648.53	-1378.94	2391.10	1012.14	31.48	25.30	-6.18
Meghalaya	7	22429	3865.76	4127.43	261.67	93.86	355.13	17.24	18.40	1.17
Mizoram	8	21081	6021.14	4958.64	-1062.50	2669.27	1606.71	28.56	23.52	-5.04
Nagaland	7	16579	4815.18	5266.72	451.54	721.75	1172.60	29.04	31.77	2.72
Odisha	30	155707	16648.27	16425.76	-222.51	271.75	48.69	10.69	10.55	-0.14
Punjab	20	50362	1019.50	936.83	-82.67	112.70	30.56	2.02	1.86	-0.16
Rajasthan	32	342239	93689.47	84929.10	-8760.37	10264.60	1503.37	27.38	24.82	-2.56
Sikkim	4	7096	3280.88	3273.15	-7.73	11.83	4.29	46.24	46.13	-0.11
Tamil Nadu	30	130058	9125.56	8721.79	-403.77	426.78	22.74	7.02	6.71	-0.31
Tripura	4	10486	1315.17	964.64	-350.53	486.15	135.07	12.54	9.20	-3.34
Uttarakhand	13	53483	12790.06	12859.53	69.47	440.35	509.86	23.91	24.04	0.13
Uttar Pradesh	70	240928	10988.59	9881.24	-1107.35	1269.71	163.08	4.56	4.10	-0.46
West Bengal	19	88752	1994.41	1929.20	-65.21	92.98	28.46	2.25	2.17	-0.07
Union Territory	8	9490	337.30	315.00	-22.30	27.33	4.68	3.55	3.32	-0.23
Total	**599**	**3166414**	**472261.95**	**467021.16**	**-5240.79**	**32340.38**	**27098.42**	**14.91**	**14.75**	**-0.17**

Source: Wastelands Atlas of India 2011, Department of Land Resources, Ministry of Rural Development

Statement 1.26 : India's major biogeographic zones

No.	Name	Biotic Province	State Covered	Total Area (sq.km)	%
1	Trans Himalaya		Jammu and Kashmir, Himachal Pradesh, Sikkim, Uttarakhand	174225	
		Ladakh		98618	3.3
		Tibetan Plateau		75607	2.3
2	Himalaya		Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, Arunachal Pradesh, West Bengal	210385	
		North-Western		69033	2.1
		Western		52596	1.6
		Central		6575	0.2
		Eastern		82182	2.5
3	Desert		Rajasthan, Punjab, Haryana, Gujarat	213672	
		Kachchh		36160	1.1
		Thar		177512	5.4
4	Semi-Arid		Punjab, Jammu and Kashmir, Rajasthan, Gujarat, Madhya Pradesh, Uttar Pradesh, Haryana	545686	
		Central India		121629	3.7
		Gujarat-Rajputana		424057	12.9
5	Western Ghats		Gujarat, Maharashtra, Goa, Karnataka, Tamil Nadu, Kerala	131491	
		Malabar coast		65745	2.0
		Western Ghat Mountains		65745	2.0
6	Deccan Peninsula		Karnataka, Andhra Pradesh, Tamil Nadu, Kerala, Odisha, Madhya Pradesh, Maharashtra	1377363	
		Deccan South Plateau		341875	10.4
		Deccan Central Plateau		410908	12.5
		Eastern Plateau		207098	6.3
		Chhota Nagpur		177512	5.4
		Central Highlands		239970	7.3
7	Gangetic Plain		Uttar Pradesh, Bihar, West Bengal	355024	
		Upper Gangetic		207098	6.3
		Lower Gangetic		147927	4.5
8	Coasts			82182	
		East Coast		62458	1.9
		West Coast		19724	0.6
9	North East		Assam, Meghalaya, Manipur, Mizoram, Nagaland & Tripura	170938	
		Brahmaputra Valley		65745	2.0
		North-Eastern Hills		105192	3.2
10	Island		Andaman and Nicobar Islands, Lakshadweep	12971	
		Andaman Islands		6575	0.2
		Nicobar Islands		3287	0.1
		Lakshadweep Islands		3110	0.1
	Marine Influenced Area			10440	0.3
Grand Total				**3287263**	

Source: Wildlife Institute of India (Rodgers et al. 2002)/Zoological Survey of India

Rodgers, W.A., Panwar, H.S. and Mathur, V. B. (2002). Wildlife Protected Area Network in India: A Review (Executive summary), Wildlife Institute of India, Dehradun

Statement 1.27 : Conservation Measures in India

S.no	Category	Number	Total Geographic Area (km^2)
I	**Within Habitats (in situ)**		
1	Biosphere Reserves ++	18	91272.22
2	Conservation Reserves ++	73	2547.16
3	community Reserves ++	45	59.66
4	National Parks ++	103	40500.13
5	Wildlife Sanctuaries ++	543	118918
6	Reserve Forest+	na	434705
7	Protected Forest +	na	219432
8	Unclassed Forest +	na	113881
II	**Outside Habitats (ex situ)**		
1	Botanical gardens **	131	na
2	Gene banks	na	na

Source:
++ National Wildlife Database of Wildlife Institute of India;
+ 'State of Forest Report - 2017', Forest Survey of India
** BGCI Website

Statement 1.28 : National Parks and Wildlife Sanctuaries of India

Year	National Parks		Wildlife Sanctuaries		Total Area (Sq.Km)
	Number	Area	Number	Area	
1995	80	34684.53	441	114164.58	148849.11
1999	87	34021.15	485	113163.03	147184.18
2004	90	36881.53	502	120051.88	156933.41
2006	100	38024.11	514	117913.77	155980.15
2010	102	39888.00	515	119930.00	159818.00
2014	102	39888.00	517	120208.00	160096.00
2015	103	40500.00	531	117607.00	158107.00
2016	103	40500.13	535	118004.00	158504.13
2017	103	40500.58	543	118917.00	159417.58

Source: ENVIS Centre on Wildlife and Protected Area, M/o Environment, Forests & Climate Change

Statement 1.29 : State-wise Terrestrial Protected Areas

Sr. No	State	State Area km²	National Parks			Wildlife Sanctuaries		
			No.	Area km²	% of State Area	No.	Area km²	% of State Area
1	Andhra Pradesh	160,205	2	356.02	0.22	13	5,942.23	3.71
2	Arunachal Pradesh	83,743	2	2,290.82	2.74	11	7,487.75	8.94
3	Assam	78,438	5	1,977.79	2.52	18	1,840.14	2.35
4	Bihar	94,163	1	335.65	0.36	12	2,901.67	3.08
5	Chhattisgarh	135,191	3	2,899.08	2.14	11	3,760.29	2.78
6	Goa	3,702	1	107	2.89	6	6,47.91	17.5
7	Gujarat	196,022	4	480.12	0.24	23	16,618.42	8.48
8	Haryana	44,212	2	48.25	0.11	8	2,33.21	0.53
9	Himachal Pradesh	55,673	5	2,271.38	4.08	28	6,116.10	10.99
10	Jammu & Kashmir	222,236	4	3,925.00	1.77	15	10,243.11	4.61
11	Jharkhand	79,714	1	226.33	0.28	11	1,955.82	2.45
12	Karnataka	191,791	5	2,795.76	1.46	30	6,774.81	3.53
13	Kerala	38,863	6	558.16	1.44	17	1,928.24	4.96
14	Madhya Pradesh	308,245	9	3,656.36	1.19	25	7,158.42	2.32
15	Maharashtra	307,713	6	1,273.60	0.41	42	7,604.44	2.47
16	Manipur	22,327	1	40	0.18	2	184.81	0.83
17	Meghalaya	22,429	2	267.48	1.19	4	94.1	0.42
18	Mizoram	21,081	2	150	0.71	8	1,090.75	5.17
19	Nagaland	16,579	1	202.02	1.22	3	20.34	0.12
20	Odisha	155,707	2	990.7	0.64	19	7,094.65	4.56
21	Punjab	50,362	0	0	0	13	3,26.60	0.65
22	Rajasthan	342,239	5	3,947.07	1.15	25	5,592.38	1.63
23	Sikkim	7,096	1	1,784.00	25.14	7	3,99.10	5.62
24	Tamil Nadu	130,058	5	307.85	0.24	29	6,157.12	4.73
25	Telangana	114,840	5	1,032.47	0.9	9	5,675.91	4.94
25	Tripura	10,486	2	36.71	0.35	4	5,66.93	5.41
26	Uttar Pradesh	240,928	1	490	0.2	25	5,828.36	2.42
27	Uttarakhand	53,483	6	4,915.02	9.19	7	2,690.12	5.03
28	West Bengal	88,752	6	1,981.65	2.23	15	1,442.12	1.62
29	A& N Islands	8,249	9	1,153.94	13.99	96	389.39	4.72
30	Chandigarh	114	0	0	0	2	26.01	22.82
31	D&N Haveli	491	0	0	0	1	92.16	18.77
33	Daman & Diu	112	0	0	0	1	2.19	1.96
34	Delhi	1,483	0	0	0	1	27.82	1.88
32	Lakshadweep	32	0	0	0	1	0.01	0.03
35	Puducherry	480	0	0	0	1	3.9	0.81
	Total	**32,87,263**	**103**	**40,500.13**	**1.23**	**543**	**1,18,918**	**3.62**

Source:Annual Report, Ministry of Environment, Forests & Climate Change
State-wise break up of NPA & Wildlife Sanctuaries (As on July, 2017)

Statement 1.30: Biosphere Reserves in India

Sl. No.	Name of Biosphere Reserve	Area (in sq.km.)	Date of Notification	Location (State) and Bio-Geographic Zones
1	Nilgiri	5520.00	01.08.1986	Part of Wynad, Nagarhole, Bandipur and Mudumalai, Nilambur, Silent Valley and Siruvani hills (Tamil Nadu, Kerala and Karnataka)-Western Ghats
2	Nanda Devi	5860.69	18.01.1988	Part of Chamoli, Pithoragarh & Almora Districts and valley of flowers (Uttarakhand)-West Himalayas
3	Nokrek	820.00	01.09.1988	Part of Garo Hills (Meghalaya)-East Himalayas
4	Manas	2837.00	14.03.1989	Part of Kokrajhar, Bongaigaon, Barpeta, Nalbari, Kamrup and Darang districts (Assam)-East Himalayas
5	Sunderbans	9630.00	29.03.1989	Part of Delta of Ganges & Barahamaputra river system (West Bengal)-Gigantic Delta
6	Gulf of Mannar	10500.00	18.02.1989	Indian part of Gulf of Mannar between India and Sri Lanka (Tamil Nadu)-Coasts
7	Great Nicobar	885.00	06.01.1989	Southern Most Islands of Andaman and Nicobar (A&N Islands)-Islands
8	Similipal	4374.00	21.06.1994	Part of Mayurbhanj district (Orissa)-Deccan Peninsula
9	Dibru-Saikhowa	765.00	28.07.1997	Part of Dibrugarh and Tinsukhia districts (Assam)-East Himalayas
10	Dehang Debang	5111.50	02.09.1998	Part of Siang and Debang Valley in Arunachal Pradesh-East Himalayas
11	Pachmarhi	4926.00	03.03.1999	Part of Betul, Hoshangabad and Chindwara Districts of Madhya Pradesh-Semi-Arid-Gujarat Rajputana
12	Kanchanjunga	2619.92	07.02.2000	Parts of North and West Sikkim
13	Agasthyamalai	1828.00	12.11.2001	Part of Thirunelvedi and Kanya Kumari Districts in Tamil Nadu and Thiruvananthapuram, Kollam and Pathanmthita of Kerala (Tamil Nadu & Kerala)
14	Achankmar-Amarkantak	3835.51	30.3.2005	Part of Anuppur and Dindori Distt.,of MP, part of Bilaspur distts., of Chhattisgarh State (Madhya Pradesh & Chattisgarh)
15	Kachchh	12454.00	29.01.2008	Parts of Kachchh, Rajkot, Surendranagar and Patan Civil Districts of Gujarat State
16	Cold Desert	7770.00	28.08.09	Pin Valley National Park and surroundings; Chandratal and Sarchu & Kibber Wildlife Sanctuary in Himachal Pradesh.
17	Seshachalam	4756.00	20.09.2010	Seshachalam hill range in Eastern Ghats encompsssing part of Chitoor and Kadapa district in Andhra Pradesh
18	Panna	2998.98	25.08.2011	Part of Panna and Chhattarpur district in Madhya Pradesh

Source: *Ministry of Environment, Forests & Climate Change*

Statement 1.31 : State-wise Location of Major Zoos

Sl. No	State	Name of Zoo	Location
1	Andaman & Nicobar Islands	Biological Park, Chidyatapu	Port Blair
2	Andhra Pradesh	Indira Gandhi Zoological Park	Visakhapatnam
3		Nehru Zoological Park	Hyderabad
4		Sri Venkateswara Zoological Park	Tirupati
5	Arunachal Pradesh	Biological Park Itanagar	Itanagar
6	Assam	Assam State Zoo Cum Botanical Garden	Guwahati
7	Bihar	Sanjay Gandhi Biological Park	Patna
8	Chhattisgarh	Kanan Pandari Zoo	Bilaspur
9		Maitri Baagh Zoo	Bhilai
10	Delhi	National Zoological Park	Delhi
11	Goa	Bondla Zoo	Usgao
12	Gujarat	Dr. Shyamaprasad Mukharjee Zoological Garden	Surat
13		Indoda Nature Park	Gandhi Nagar
14		Kamla Nehru Zoological Garden	Ahemdabad
15		Sakkarbaug Zoo	Junagarh
16		Sayaji Baug Zoo	Vadodara
17	Haryana	Rohtak Zoo	Rohtak
18	Himachal Pradesh	Himalayan Nature Park (Kufri)	Kufri
19	Jammu & Kashmir	Jammu Zoo	Ram Nagar, Jammu
20		Kashmir Zoo	Srinagar
21	Jharkhand	Bhagwan Birsa Biological Park	Ranchi
22		Jawaharlal Nehru Biological Park	Bokaro
23		Tata Steel Zoological Park	Jamshedpur
24	Karnataka	Bellary Childrens Park-Cum-Zoo (Bellary Zoo)	Bellary
25		Children Park & Zoo (Gadag Zoo)	Gadag
26		Dr. K.Shivarma Karanth Pilikula Biological Park	Mangalore
27		National Park, Bannerghatta Zoological Garden	Bangalore
28		Sri Chamarajendra Zoological Gardens	Mysore
29		Tiger & Lion Safari, Thyyarekoppa	Shimoga
30	Kerala	State Museum & Zoo	Thrissur
31		Thiruvananthapuram Zoo	Thiruvananthapuram
32	Madhya Pradesh	Gandhi Zoological Park	Gwalior
33		Kamla Nehru Prani Sanghrahalay Zoo	Indore
34		Van Vihar National Park	Bhopal

Contd.

Statement 1.31 : State-wise Location of Major Zoos

Sl. No	State	Name of Zoo	Location
35	Maharashtra	Aurangabad Municipal Zoo	Aurangabad
36		Mahatma Gandhi Rashtriya Udyan Zoo	Solapur
37		Nisargakavl Bahlnabai Choudhary Pranisansangahralay	Pune
38	Maharashtra	Rajiv Gandhi Zoological Park And Wildlife Research Centre	Pune
39		Veermata Jijabai Bhosale Udyan & Zoo	Mumbai
40	Manipur	Manipur Zoological Garden	Imphal
41	Meghalaya	Lady Hydari Park Animal	Shillong
42	Mizoram	Aizawl Zoo (Mizoram Zoo)	Aizwal
43	Odisha	Indira Gandhi Park Zoo & Deer Park	Rourkela
44		Nandankanan Biological Park	Bhubaneswar
45		Wild Animal Conservation Centre	Mothijharan Sambalpur
46	Punjab	Deer Park, Bir Moti Bagh (patiala Zoo)	Patiala
47		Ludhiana Zoo	Ludhiana
48		Mahendra Chaudhury Zoological Park	Chhatbir
49	Rajasthan	Bikaner Zoo	Bikaner
50		Jaipur Zoo	Jaipur
51		Jodhpur Zoo	Jodhpur
52		Udaipur Zoo	Udaipur
53	Tamil Nadu	Amirdhi Zoo	Vellore
54		Arignar Anna Zoological Park	Vandalur Chennai
55		Chennai Snake Park Trust	Guindy
56		Children's Corner	Guindy
57		Madras Crocodile Bank Trust/Centre For Herpetology	Mahabalipuram
58		V.O.C. Park Mini Zoo	Coimbatore
59	Tripura	Sepahijala Zoological Park	Sepahijala
60	Uttar Pradesh	Kanpur Zoological Park	Kanpur
61		Lucknow Prani Udyan	Lucknow
62	Uttarakhand	Pt Govind Ballabh Pant High Altitude Zoo	Nainital
63	West Bengal	Alipore Zoological Garden	Kolkata
64		Calcutta Snake Park	Badu
65		Jhargram Zoo	Jhargram
66		Marble Palace Zoo	Kolkata
67		Padmaja Naidu Himalayan Zoological Park	Darjeeling

Source : Central Zoo Authority, Ministry of Environment, Forest and Climate Change

Statement 1.32: Marine Protected Areas

(a) Marine Protected Areas in Peninsular India

S. No.	Name of MPA	State	Category	Area	Year of establishment
1	Coringa	Andhra Pradesh	Sanctuary	235.7	1978
2	Krishna	Andhra Pradesh	Sanctuary	194.81	1989
3	Pulicat Lake	Andhra Pradesh	Sanctuary	500	1980
4	Dadra & Nagar Haveli	Dadra & Nagar Haveli	Sanctuary	92.16	2000
5	Fudam	Daman & Diu	Sanctuary	2.18	1991
6	Chorao Island	Goa	Sanctuary	1.78	1988
7	Marine (Gulf of Kachchh)	Gujarat	National Park	162.89	1995
8	Khijadia	Gujarat	Sanctuary	6.05	1981
9	Marine (Gulf of Kachchh)	Gujarat	Sanctuary	295.03	1980
10	Kadalundi Vallikkunnu Community Reserve	Kerala	Community Reserve	1.5	2007
11	Malvan Marine	Maharashtra	Sanctuary	29.12	1987
12	Thane Creek Flamingo	Maharashtra	Sanctuary	16.905	2015
13	Bhitarkanika	Odisha	National Park	145	1998
14	Bhitarkanika	Odisha	Sanctuary	672	1975
15	Chilka (Nalaban)	Odisha	Sanctuary	15.53	1987
16	Gahirmatha	Odisha	Sanctuary	1435	1997
17	Balukhand Konark	Odisha	Sanctuary	71.72	1984
18	Gulf of Mannar Marine	Tamil Nadu	National Park	6.23	1980
19	Point Calimere	Tamil Nadu	Sanctuary	172.6	1967
20	Pulicat Lake	Tamil Nadu	Sanctuary	153.67	1980
21	Sundarbans	West Bengal	National Park	1330.1	1984
22	West Sundarbans	West Bengal	Sanctuary	556.45	2013
23	Haliday Island	West Bengal	Sanctuary	5.95	1976
24	Sajnakhali	West Bengal	Sanctuary	2091.12	1976
25	Lothian Island	West Bengal	Sanctuary	38	1976

**excluding small island MPAs of Andaman and Nicobar Islands*

Source: K Sivakumar, *Coastal and Marine Biodiversity Protected Areas in India: Challenges and Way Forward*,K. Venkataraman et al. (eds.),Ecology and Conservation of Tropical Marine Faunal Communities, Springer-Verlag Berlin Heidelberg 2013.

Statement 1.32: Marine Protected Areas

(b) Marine Protected Areas in Islands of India

Sl.No.	PA Name	State	National Park/ Sanctuary	Area	Year of establishment
1	Arial Island	Andaman & Nicobar	Sanctuary	0.05	1977
2	Bamboo Island	Andaman & Nicobar	Sanctuary	0.05	1977
3	Barren Island	Andaman & Nicobar	Sanctuary	11.99	1977
4	Battimalv Island	Andaman & Nicobar	Sanctuary	5.03	1977
5	Belle Island	Andaman & Nicobar	Sanctuary	0.08	1977
6	Bennett Island	Andaman & Nicobar	Sanctuary	3.46	1977
7	Bingham Island	Andaman & Nicobar	Sanctuary	0.08	1977
8	Blister Island	Andaman & Nicobar	Sanctuary	0.26	1977
9	Bluff Island	Andaman & Nicobar	Sanctuary	1.14	1977
10	Bondoville Island	Andaman & Nicobar	Sanctuary	2.55	1977
11	Brush Island	Andaman & Nicobar	Sanctuary	0.23	1977
12	Buchanan Island	Andaman & Nicobar	Sanctuary	9.33	1977
13	Campbell	Andaman & Nicobar	National Park	426.23	1992
14	Chanel Island	Andaman & Nicobar	Sanctuary	0.13	1977
15	Cinque Islands	Andaman & Nicobar	Sanctuary	9.51	1977
16	Clyde Island	Andaman & Nicobar	Sanctuary	0.54	1977
17	Cone Island	Andaman & Nicobar	Sanctuary	0.65	1977
18	Curlew (B.P.) Island	Andaman & Nicobar	Sanctuary	0.16	1977
19	Curlew Island	Andaman & Nicobar	Sanctuary	0.03	1977
20	Defence Island	Andaman & Nicobar	Sanctuary	10.49	1977
21	Dot Island	Andaman & Nicobar	Sanctuary	0.13	1977
22	Dottrell Island	Andaman & Nicobar	Sanctuary	0.13	1977
23	Duncan Island	Andaman & Nicobar	Sanctuary	0.73	1977
24	East Island	Andaman & Nicobar	Sanctuary	6.11	1977
25	East Of Inglis Island	Andaman & Nicobar	Sanctuary	3.55	1977
26	Egg Island	Andaman & Nicobar	Sanctuary	0.05	1977
27	Elat Island	Andaman & Nicobar	Sanctuary	9.36	1977
28	Entrance Island	Andaman & Nicobar	Sanctuary	0.96	1977
29	Galathea	Andaman & Nicobar	National Park	110	1992
30	Gander Island	Andaman & Nicobar	Sanctuary	0.05	1977
31	Girjan Island	Andaman & Nicobar	Sanctuary	0.16	1977
32	Goose Island	Andaman & Nicobar	Sanctuary	0.01	1977
33	Hump Island	Andaman & Nicobar	Sanctuary	0.47	1977
34	Interview Island	Andaman & Nicobar	Sanctuary	133.87	1977
35	James Island	Andaman & Nicobar	Sanctuary	2.1	1977
36	Jungle Island	Andaman & Nicobar	Sanctuary	0.52	1977
37	Kyd Island	Andaman & Nicobar	Sanctuary	8.00	1977

Contd.

Statement 1.32: Marine Protected Areas

(b) Marine Protected Areas in Islands of India

Sl.No.	PA Name	State	National Park/ Sanctuary	Area	Year of establishment
38	Landfall Island	Andaman & Nicobar	Sanctuary	29.48	1977
39	Latouche Island	Andaman & Nicobar	Sanctuary	0.96	1977
40	Lohabarrack	Andaman & Nicobar	Sanctuary	22.21	1977
41	Mahatma Gandhi Marine	Andaman & Nicobar	National Park	281.5	1983
42	Mangrove Island	Andaman & Nicobar	Sanctuary	0.39	1977
43	Mask Island	Andaman & Nicobar	Sanctuary	0.78	1977
44	Mayo Island	Andaman & Nicobar	Sanctuary	0.10	1977
45	Megapode Island	Andaman & Nicobar	Sanctuary	0.12	1977
46	Middle Button Island	Andaman & Nicobar	National Park	0.44	1987
47	Montogemery Island	Andaman & Nicobar	Sanctuary	0.21	1977
48	Mount Harriett	Andaman & Nicobar	National Park	46.62	1987
49	Narcondam Island	Andaman & Nicobar	Sanctuary	6.81	1977
50	North Brother Island	Andaman & Nicobar	Sanctuary	0.75	1977
51	North Button Island	Andaman & Nicobar	National Park	0.44	1987
52	North Island	Andaman & Nicobar	Sanctuary	0.49	1977
53	North Reef Island	Andaman & Nicobar	Sanctuary	3.48	1977
54	Oliver Island	Andaman & Nicobar	Sanctuary	0.16	1977
55	Orchid Island	Andaman & Nicobar	Sanctuary	0.10	1977
56	Ox Island	Andaman & Nicobar	Sanctuary	0.13	1977
57	Oyster Island-I	Andaman & Nicobar	Sanctuary	0.08	1977
58	Oyster Island-II	Andaman & Nicobar	Sanctuary	0.21	1977
59	Paget Island	Andaman & Nicobar	Sanctuary	7.36	1977
60	Parkinson Island	Andaman & Nicobar	Sanctuary	0.34	1977
61	Passage Island	Andaman & Nicobar	Sanctuary	0.62	1977
62	Patric Island	Andaman & Nicobar	Sanctuary	0.13	1977
63	Peacock Island	Andaman & Nicobar	Sanctuary	0.62	1977
64	Pitman Island	Andaman & Nicobar	Sanctuary	1.37	1977
65	Point Island	Andaman & Nicobar	Sanctuary	3.07	1977
66	Potanma Islands	Andaman & Nicobar	Sanctuary	0.16	1977
67	Ranger Island	Andaman & Nicobar	Sanctuary	4.26	1977
68	Rani Jhansi	Andaman & Nicobar	National Park	256.14	1996
69	Reef Island	Andaman & Nicobar	Sanctuary	1.74	1977
70	Roper Island	Andaman & Nicobar	Sanctuary	1.46	1977
71	Ross Island	Andaman & Nicobar	Sanctuary	1.01	1977
72	Rowe Island	Andaman & Nicobar	Sanctuary	0.01	1977
73	Saddle Peak	Andaman & Nicobar	National Park	32.54	1987
74	Sandy Island	Andaman & Nicobar	Sanctuary	1.58	1977

Contd.

Statement 1.32: Marine Protected Areas

(b) Marine Protected Areas in Islands of India

Sl.No.	PA Name	State	National Park/ Sanctuary	Area	Year of establishment
75	Sea Serpent Island	Andaman & Nicobar	Sanctuary	0.78	1977
76	Shark Island	Andaman & Nicobar	Sanctuary	0.60	1977
77	Shearme Island	Andaman & Nicobar	Sanctuary	7.85	1977
78	Sir Hugh Rose Island	Andaman & Nicobar	Sanctuary	1.06	1977
79	Sisters Island	Andaman & Nicobar	Sanctuary	0.36	1977
80	Snake Island-I	Andaman & Nicobar	Sanctuary	0.73	1977
81	Snake Island-II	Andaman & Nicobar	Sanctuary	0.03	1977
82	South Brother Island	Andaman & Nicobar	Sanctuary	1.24	1977
83	South Button Island	Andaman & Nicobar	National Park	0.03	1987
84	South Reef Island	Andaman & Nicobar	Sanctuary	1.17	1977
85	South Sentinel Island	Andaman & Nicobar	Sanctuary	1.61	1977
86	Spike Island-I	Andaman & Nicobar	Sanctuary	0.42	1977
87	Spike Island-II	Andaman & Nicobar	Sanctuary	11.70	1977
88	Stoat Island	Andaman & Nicobar	Sanctuary	0.44	1977
89	Surat Island	Andaman & Nicobar	Sanctuary	0.31	1977
90	Swamp Island	Andaman & Nicobar	Sanctuary	4.09	1977
91	Table (Delgarno) Island	Andaman & Nicobar	Sanctuary	2.29	1977
92	Table (Excelsior) Island	Andaman & Nicobar	Sanctuary	1.69	1977
93	Talabaicha Island	Andaman & Nicobar	Sanctuary	3.21	1977
94	Temple Island	Andaman & Nicobar	Sanctuary	1.04	1977
95	Tillongchang Island	Andaman & Nicobar	Sanctuary	36.43	1977
96	Tree Island	Andaman & Nicobar	Sanctuary	0.03	1977
97	Trilby Island	Andaman & Nicobar	Sanctuary	0.96	1977
98	Tuft Island	Andaman & Nicobar	Sanctuary	0.29	1977
99	Turtle Islands	Andaman & Nicobar	Sanctuary	0.39	1977
100	Kwangtung Island	Andaman & Nicobar	Sanctuary	0.57	1987
101	West Island	Andaman & Nicobar	Sanctuary	6.40	1977
102	Wharf Island	Andaman & Nicobar	Sanctuary	0.11	1977
103	White Cliff Island	Andaman & Nicobar	Sanctuary	0.47	1977
104	Galathea Bay	Andaman & Nicobar	Sanctuary	11.44	1997
105	Cuthbert Bay	Andaman & Nicobar	Sanctuary	5.82	1997
106	Pitti	Lakshadweep	Sanctuary	0.01	2002

Source: K Sivakumar, *Coastal and Marine Biodiversity Protected Areas in India: Challenges and Way Forward*,K. Venkataraman et al. (eds.),Ecology and Conservation of Tropical Marine Faunal Communities, Springer-Verlag Berlin Heidelberg 2013.

Statement 1.33: Number of threatened species at global level by major groups of organisms

	Estimated Number of described species [1]	Number of species evaluated by 2016 (IUCN Red List version 2016-3)	Number of threatened species[2]							
			2010 (IUCN Red List version 2010.4)	2011 (IUCN Red List version 2011.2)	2012 (IUCN Red List version 2012.2)	2013 (IUCN Red List version 2013.2)	2014 (IUCN Red List version 2014.3	2015 (IUCN Red List version 2015-4)	2016 (IUCN Red List version 2016-3)	2017 (IUCN Red List version 2017-1)
Vertebrates										
Mammals[5]	5567	5567	1131	1138	1139	1143	1199	1197	1194	1194
Birds	11121	11121	1240	1253	1313	1308	1373	1375	1460	1460
Reptiles	10450	5338	594	772	807	879	927	944	1079	1090
Amphibians	7571	6534	1898	1917	1933	1950	1957	1994	2068	2067
Fishes	33400	16134	1851	2028	2058	2110	2222	2271	2359	2359
Subtotal	**68109**	**44694**	**6714**	**7108**	**7250**	**7390**	**7678**	**7781**	**8160**	**8170**
Invertebrates										
Insects	1000000	6587	733	741	829	896	993	1046	1268	1298
Molluscs	85000	7276	1288	1673	1857	1898	1950	1950	1984	1984
Crustaceans[6]	47000	3177	596	596	596	723	725	728	732	732
Corals	2175	862	235	235	236	235	235	237	237	237
Arachnids	102248	212	19	19	20	21	163	164	166	170
Velvet Worms	165	11	9	9	9	9	9	9	9	9
Horseshoe Crabs	4	4	0	0	0	0	0	0	1	1
Other	68658	480	24	24	23	40	65	67	73	122
Subtotal	**1305250**	**18609**	**2904**	**3297**	**3570**	**3822**	**4140**	**4201**	**4470**	**4553**
Plants[7]										
Mosses[8]	16236	102	80	80	76	76	76	76	76	76
Ferns and Allies[9]	12000	417	148	163	167	187	194	197	217	217
Gymnosperms	1052	1011	371	377	374	399	400	400	400	400
Flowering Plants	268000	20652	8116	8527	8764	9394	9905	10551	10941	10972
Green Alqae[10]	6050	13	0	0	0	0	0	0	0	0
Red Algae[10]	7104	58	9	9	9	9	9	9	9	9
Subtotal	**310442**	**22253**	**8724**	**9156**	**9390**	**10065**	**10584**	**11233**	**11643**	**11674**
Fungi & Protists										
Lichens	17000	8	2	2	2	7	4	7	7	7
Mushrooms	31496	25	1	1	1	21	1	22	21	21
Brown Algae[10]	**3784**	**15**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**
Subtotal	**52280**	**48**	**9**	**9**	**9**	**34**	**11**	**35**	**34**	34
Total	**1736081**	**85604**	**18351**	**19570**	**20219**	**21311**	**22413**	**23250**	**24307**	**24431**

Source : IUCN Website

Contd.

NOTES (for rows and columns as indicated by the superscripted numbers):

1. The sources used for the numbers of described species in each taxonomic group are listed below

2. Threatened species are those listed as Critically Endangered (CR), Endangered (EN) or Vulnerable (VU).

3. Where <80% of species within a group have been evaluated, figures for % threatened species are not provided because there is insufficient coverage for these groups. It is only possible to provide reliable figures for % threatened species for those groups that are completely or almost completely evaluated (e.g., mammals, birds, amphibians and gymnosperms).

4. The percentage of threatened species can be calculated for those groups that are completely or almost completely evaluated (>80% of species evaluated), but the actual number of threatened species is often uncertain because it is not known whether Data Deficient (DD) species are actually threatened or not. Therefore, a range of percentages is provided: lower estimate = % threatened extant species (if all DD species are not threatened); best estimate = % threatened extant species (if DD species are equally threatened as data sufficient species); upper estimate = % threatened extant species (if all DD species are threatened). If a single figure is required for reporting purposes, the best estimate figure should be used.

5. The number of described and evaluated mammals excludes domesticated species like sheep (Ovis aries), goats (Capra hircus), Dromedary (Camelus dromedarius), etc.

6. Crustaceans include six classes: Malacostraca (crabs, lobsters, shrimp, woodlice, etc.); Branchiopoda (fairy shrimp, clam shrimp, etc.); Cephalocardia (horseshoe shrimp); Ostracoda (seed shrimp); Maxillopoda (barnacles, copepods, etc.); and Remipedia (remipedes)

7. The plant numbers DO NOT include species from the 1997 IUCN Red List of Threatened Plants (Walter and Gillett 1998) as those were all assessed using the pre-1994 IUCN system of threat categorization. Hence the numbers of of threatened plants are very much lower when compared to the 1997 results. The results from this Red List and the 1997 Plants Red List should be combined together when reporting on threatened plants.

8. Mosses include the true mosses (Bryophyta), the hornworts (Anthoceratophyta), and liverworts (Marchantiophyta).

9. The ferns and allies include club mosses and spike mosses (Lycopodiopsida), quillworts (Isoetopsida), horsetails (Equisetopsida) and ferns (Marattiopsida, Polypodiopsida and Psilotopsida).

10. Seaweeds are included in the green algae (Chlorophyta,Charophyta),red algae(Rhodophyta), and brown algae (Ochrophyta or Heterokontophyta).

Statement 1.34 : Category -wise status summary of plants at global level

STATUS	IUCN Red List version 2010	IUCN Red List version 2011.1	IUCN Red List version 2012.1	IUCN Red List version 2013.1	IUCN Red List version 2014.2	IUCN Red List version 2015.2	IUCN Red List version 2016.2	IUCN Red List version 2017-2
1	2	3	4	5	6	7	8	9
Extinct	86	87	91	90	97	99	105	116
Extinct in the Wild	28	31	31	29	37	37	37	35
Critically Endangered	1581	1716	1752	1920	2104	2205	2484	2637
Endangered,	2318	2528	2572	2871	3178	3381	3643	3921
Vulnerable,	4605	4854	4869	5038	5203	5310	5435	5544
Near Threatened (includes LR/ nt - Lower Risk/near threatened)	1077	1230	1246	1447	1544	1583	1645	1709
Lower Risk/ conservation dependent,	237	225	224	211	210	209	209	204
Data Deficient	744	1011	1070	1358	1526	1599	1674	1841
Least Concern (includes LR/ lc - Lower Risk, least concern).	1531	2507	2727	4640	5481	5762	6635	7067
TOTAL	**12207**	**14189**	**14582**	**17604**	**19380**	**20185**	**21867**	**23074**

Source : Botanical Survey of India

Statement 1.35: Category-wise plants summary by major taxonomic group

(Including algae, Fungi and Lichens) (IUCN Red list version 2017-2)

CLASS*	EX	EW	CR	EN	VU	LR/ cd	NT	DD	LC	Total
ANTHOCEROTOPSIDA	0	0	0	2	0	0	0	0	0	2
BRYOPSIDA	2	0	12	13	7	0	1	3	3	41
CHAROOHYACEAE	0	0	0	0	0	0	0	3	8	11
CHLOROPHYCEAE	0	0	0	0	0	0	0	1	0	1
CYCADOPSIDA	0	4	53	65	74	0	63	3	45	307
FLORIDEOPHYCEAE	1	0	6	0	3	0	0	44	4	58
GINKGOOPSIDA	0	0	0	1	0	0	0	0	0	1
GNETOPSIDA	0	0	0	1	3	0	7	10	76	97
JUNGERMANNIOPSIDA	1	0	10	11	12	0	1	0	10	45
LILIOPSIDA	4	4	445	675	636	16	277	498	2108	4663
LYCOPODIOPSIDA	0	0	13	11	16	0	9	8	28	85
MAGNOLIOPSIDA	106	26	2007	2975	4632	188	1299	1106	4379	16718
MARATTIOPSIDA	0	0	1	0	0	0	0	0	0	1
MARCHANTIOPSIDA	0	0	1	3	2	0	0	4	1	11
PINOPSIDA	0	0	29	96	79	0	98	7	298	607
POLYPODIOPSIDA	2	1	61	68	77	0	24	53	107	393
PSILOTOPSIDA	0	0	1	0	0	0	0	0	3	4
SPHAGNOPSIDA	0	0	0	0	2	0	0	0	0	2
TAKAKIOPSIDA	0	0	0	0	1	0	0	0	0	1
ULVOPHYCEAE	0	0	0	0	0	0	0	1	0	1
TOTAL	**116**	**35**	**2639**	**3921**	**5544**	**204**	**1709**	**1841**	**7067**	**23074**
OTHER GROUPS										
AGARICOMYCETES	0	0	3	8	11	0	2	1	0	25
LECANOROMYCETES	0	0	3	3	2	0	1	0	0	8
PEZIZOMYCETES	0	0	0	0	0	0	1	0	0	1
PHAEOPHYCEAE	0	0	4	1	1	0	0	9	0	15
TOTAL	**0**	**0**	**9**	**12**	**14**	**0**	**4**	**10**	**0**	**49**

Source : ENVIS-Botanical Survey of India

*Plants: Anthocerotopsida (hornworts); Bryopsida, Sphagnopsida and Takakiopsida (true mosses); Charophyaceae, Chlorophyceae and Ulvophyceae (green algae); Cycadopsida (cycads); Equisetopsida (horsetails); Florideophyceae (red algae); Ginkgoopsida (ginkgo); Gnetopsida (gnetums); Isoetopsida (quillworts); Jungermanniopsida and Marchantiopsida (liverworts); Liliopsida (monocotyledons); Lycopodiopsida (club mosses and spike mosses); Magnoliopsida (dicotyledons); Marattiopsida, Polypodiopsida and (ferns); Pinopsida (conifers).

Other groups: Agaricomycetes (mushroom, etc.); Lecanoromyctes (discolichens); Pezizomycetes(apothecial fungi);Phaeophyceae (brown algae).

EX - Extinct **EW** - Extinct in the Wild **CR** - Critically Endangered **EN** - Endangered

VU - Vulnerable **LR/cd** - Lower Risk/conservation dependent **NT** - Near Threatened

DD - Data Deficient **LC** - Least Concern (includes **LR/lc** - Lower Risk, Least Concern).

Statement 1.36 : Number and status of plant species in India

Sl. No.	Type	No. of Known Species					Percentage of Occurrence in India				No. of Endemic Species in India				No. of Threatened Species in India			
		World	India															
			2013	2014	2015	2017	2013	2014	2015	2017	2013	2014	2015	2017	2013	2014	2015	2017
I	**Flowering Plants**																	
1	Gymnosperms	1021	74	75	78	79	7.25	7.35	7.64	7.73	8	8	8	12	7	7	7	7
2	Angiosperms	268600	17926	18043	18259	18386	6.67	6.72	6.80	6.84	ca. 4045	ca. 4036	4036	4303	1700	1700	1700	1700
II	**Non-flowering Plants**																	
1	Bryophytes	16236	2504	2523	2550	2748	15.42	15.54	15.71	16.92	629	629	629	629	ca.80	ca.80	ca.80	c.80
2	Pteridophytes	12000	1265	1268	1288	1289	10.54	10.57	10.73	10.74	47	47	47	66	414	414	414	414
III	**Others**																	
1	Virus & Bacteria	11813	986	1036	1120	1170	8.35	8.77	9.48	9.90	Not Known							Not Known
2	Algae	40000	7244	7284	7331	7357	18.11	18.21	18.33	18.39	1924	1924	1924	1924	Not Known			Not Known
3	Fungi	98998	14756	14883	15053	15115	14.91	15.03	15.21	15.26	ca.4100	ca.4100	ca.4100	c. 4100	ca.580	ca.580	ca.580	ca.580
4	Lichens	17000	2390	2401	2479	2511	14.06	14.12	14.58	14.77	ca.520	ca.520	ca.520	c.520	Not Known			Not Known

Source : Botanical Survey of India, Kolkata.

Statement 1.37 : State-wise distribution of threatened wetland flora and fauna

State	Endemic plants	Threatened birds	Threatened fishes	Threatened turtles
Tamil Nadu	46	3	35	4
Kerala	65	0	37	3
Karnataka	64	5	15	2
Goa	17	0	15	0
Andhra Pradesh	13	6	19	2
Odisha	6	0	22	6
Madhya Pradesh & Chhattisgarh	20	5	16	7
Maharashtra	69	2	19	3
Gujarat	11	6	12	1
Rajasthan	9	6	17	3
Haryana	0	6	15	1
Punjab	0	4	15	5
Jammu & Kashmir	2	2	20	2
Himachal Pradesh	0	2	19	0
Uttar Pradesh	3	13	34	10
Bihar & Jharkhand	5	6	19	9
West Bengal	5	6	32	11
Assam	2	10	35	10
North East States*	5	12	34	9
Total	**342**	**94**	**430**	**88**

* - Arunachal Pradesh, Meghalaya, Nagaland, Manipur, Mizoram, Sikkim, Tripura

Source: Vijayan et al. 2004; SACON, Coimbatore(table reproduced from India's 4th National Report to the convention on Biological Diversity, MOEF-2009)

Vijayan VS, Prasad SN, Vijayan L, Muralidharan S (2004) Inland wetlands of India—conservation priorities. Salim Ali Centre for Ornithology and Natural History, Coimbatore

Statement 1.38: Marine faunal diversity in India and the world

Group	World	India	
		Total aquatic	Marine$
Protista	36400	3510	750
Acanthocephala	1199	229	
Amphibia	7534	386	3
Annelida	17426	1004	440
Arachnida	114275	5907	
Arthropda	1270711	73657	
Aves	9026	1340	145
Brachiopoda	7390	4	
Bryozoa	11474	272	
Chilopoda	3118	101	
Chordata	66471	6002	
Ctenophora	187	12	12
Diplopoda	7842	162	
Echinodermata	6600	779	765
Echiura	198	43	33
Entoprocta	172	10	
Gastrotricha	794	100	88
Hemichordata	126	12	12
Insecta	1070781	63880	
Kinorhyncha	196	10	99
Mammalia	5751	427	29
Mesozoa	136	10	10
Mollusca	118061	5188	3370
Nematoda	25043	2914	
Nemertea	1362	6	
Nematomorpha	360	20	
Onychophora	187	1	
Phoronida	16	3	
Pisces	33888	3287	1800
Platyhelminthes	29488	1666	550
Porifera	10876	502	486
Protochordate	3000	119	116
Pycnogonida	1346	17	16
Reptilia	10272	562	26
Rotifera	2049	466	
Sipuncula	147	35	38
Symphyla	204	4	
Tardigrada	1335	30	10

Source: Current Status of FRESHWATER FAUNAL DIVERSITY IN INDIA-2017, Zological Survey of India (Data of marine diversity in india ($) is retrieved from India's Fifth National Report to the convention on Biological Diversity- 2014, Ministry of Environment and Forests(MoEF))

Statement 1.39 : Number of rare and threatened species in vertebrates

Sl. No.	Category	Approximate Number				
		Mammal	Aves	Reptilia	Amphibia	Pisces
1	2	3	4	5	6	7
1	Extinct	0	0	0	1	0
2	Critically Endangered	10	16	5	13	5
3	Endangered	39	17	9	31	6
4	Vulnerable	47	53	11	21	29
5	Near Threatened	26	96	10	9	25
Total		**122**	**182**	**35**	**75**	**65**

Source : Zoological Survey of India

Statement 1.40: Number of threatened Indian faunal species

Group	Threatened	No change or stable	Upwards or improving	Downwards or decreasing	Indeterminate	Trends not available
Mammals	213	4	1	47	87	74
Birds	149	2	-	80	10	57
Reptiles	33	-	-	2	2	29
Amphibia	148	5	-	68	73	2
Pisces	75	-	-	21	42	12
Crustacea	12	-	-	-	-	12
Mollusca	5	-	-	-	1	4
Hymenoptera	5	-	-	-	-	5
Lepidoptera	4	-	-	-	1	4
Odonata	3	-	-	-	1	3
Anoplura	1	-	-	-	-	1
Total	**648**	**11**	**1**	**218**	**217**	**203**

Source: India's 4th National Report to the Convention on Biological Diversity, MOEF-2009

Statement 1.41 : List of threatened/ endangered species notified in India

As per the Gazette Notification in the Central Government (Ministry of Environment and Forests) has made following amendments in the Schedule of the Wild Life (Protection) Act, 1972 and included the following species in the Schedules of Threatened and endangered species (amended upto 2011).

1	**Schedule 1**
	PART I
	MAMMALS
	42*. Wroughton's free tailed bat (Otomops wroughtoni)
	PART IIA
	****FISHES**
2.	Shark and Ray
(i)	Anoxypristis cuspidata
(ii)	Carcharhinus hemiodon
(iii)	Glyphius gangetics
(iv)	Glyphius glyphius
(v)	Himantura fluviatilis
(vi)	Pristis microdon
(vii)	Pristis zijsron
(viii)	Rhychobatus djiddensis
(ix)	Urogymnus asperrimus
	PART III
	BIRDS
	*19. Swiftlets (Collocalia unicolor and Collacalia fusiphaga)
	Part IV B- **Mollusca
1	Cassis cornuta
2	Charonia tritonis
3	Conus milneedwardsi
4	Cypraecssis rufa
5	Hippopus hippopus
6	Nautilus Pompilius
7	Tridacna maxima
8	Tridacna squamosa
9	Tudicla Spirillus
	Schedule II
	PART II
	*16. Mangooses (All species of genus Herpestes)
2	**Schedule IV**
	* 6- A. Small Game - Omitted

Contd.

19.	****Mollusca**
i.	Cypraea lamanica
ii.	Cypraea mappa
iii.	Cypraea talpa
iv.	Fasciolaria trapezium
v.	Harpulina arausiaca
vi.	Lambis chiragra
vii.	Lambis chiragra arthitica
viii.	Lambis crocea
ix.	Lambis millepeda
x.	Lambis scorpius
xi.	Lambis truncata
xii.	Placenta placenta
xiii.	Strombus plicatus sibbaldii
xiv.	Turbomarmoratus
xv.	Turbo marmoratus Linnaeus
20	Horseshoe Crab (Tachypleus gigas and Carcinoscorpius rotundicauda)
	(Ins. By S.O. 2293 (E), dated 4th September,2009 (w.e.f. 9-9-2009)
	* (Vide Notification No. S.O. 1085 (E), dated 30th September 2002, published in the Gazetted of India, Extra., Pt. II, Sec. 3 (ii), dated 11th October, 2002)
	** (Subs. By/Added by S.O. 1197 (E), dated 5th December, 2001 (w.e.f. 6-12-2001) and corrected by S.O. 233 (E), dated 19th February 2002).

S.O. 3653 E - In exercise of the powers conferred by sub-section (1) of Section 61 of the Wild Life (Protection)Act, 1972 (53 of 1972), the Central Government, being of the opinion that it is expedient so to do, hereby makes the following amendments in Schedule I, Schedule II, Schedule III and Schedule IV to the said Act, namely:-

1 In Schedule I to the said Act, -

(a) in Part I relating to "MAMMAL", after entry 43, the following entry shall be inserted, namely:"44. **Hog Deer (Axis Porchinus)".**

(b) in Part III relating to"BIRDS", the word" ***Collocatia fusiphaga***" in the entry 19 shall be omitted.

2 In Schedule II to the said Act, in Part II, the entry 5 shall be omitted.

3 In Schedule II to the said Act, the entry 11 shall be omitted.

4 In Schedule IV to the said Act,

(a) In entry 11, for item 57 and entry relating thereto, the following item and the entry shall be substituted, namely:-

"57. ***Quails (Phasinidae)***- except ***Coturnix japonica (Japanese Quails)*** of farm bred variety:,

(b) after entry 15, the following entry shall be inserted, namely:-

"15-A. ***Tokay gecko (Gecko gecko)***".

Source : Ministry of Environment, Forests & Climate Change, Government of India/ Zoological Survey of India

Statement 1.42 : State-wise population of wild elephants

STATE	Population in the Year				
	1993	1997	2002	2007	2012
Arunachal	2102	1800	1607	1690	890
Assam	5524	5312	5246	5281	5620
Meghalaya	2872	1840	1868	1811	1811#
Nagaland	178	158	145	152	212
Mizoram	15	22	33	-	-
Manipur	50	30	12	-	-
Tripura	100	70	40	59	59
West Bengal	200	276	328	325-350	647
Jharkhand	550*	618*	772	624	688
Odisha	1750	1800	1841	1862	1930
Chhattisgarh	-	-	-	122	247
Uttarakhand	828*	1130*	1582	1346	1346#
Uttar Pradesh	47	70	85	380	291
Tamil Nadu	2307	2971	3052	3867	4015
Karnataka	5500	6088	5838	4035	5648-6488
Kerala	3500	3600	3850	6068	5942-6422
Andhra Pradesh	46	57	74	28	41
Maharashtra	-	-	-	7	4
Andaman & Nicobar	35	35	40	-	-
Grand Total	**24226**	**25604**	**25877**	**27657-27682**	**29391-30711**

Source: Project Elephant Division, Ministry of Environment, Forests & Climate Change 2013

* As part of Bihar, Madhya Pradesh and Uttar Pradesh respectively

Meghalaya and Uttarakhand has not conducted elephant census after 2007. Therefore, the figure of 2007 has been maintained for 2012 as well.

Statement 1.43: State-wise population of Tiger and their occupancy

State	Tiger Population			Tiger Km²		
	2006	2010	2014	2006	2010	2014
Shivalik-Gangetic Plain Landscape Complex						
Uttarakhand	178	227	340	1901	3476	6576
Uttar Pradesh	109	118	117	2766	2511	2519
Bihar	10	8	28	510	750	922
Shivalik Gangetic	**297**	**353**	**485**	**5177**	**6737**	**10017**
Central Indian Landscape Complex and Eastern Ghats Landscape Complex						
Andhra Pradesh	95	72	68	14126	4495	4686
Chhattisgarh	26	26	46	3609	3514	4735
Madhya Pradesh	300	257	308*	15614	13833	15156
Maharashtra	103	168	190	4273	11960	11643
Odisha	45	32	28	9144	3398	3981
Rajasthan	32	36	45	356	637	1147
Jharkhand	-	10	3+	1488	1180	626
Central Indian	**601**	**601**	**688**	**48610**	**39017**	**41974**
Western Ghats Landscape Complex						
Karnataka	290	300	406	**18715**	14414	14523
Kerala	46	71	136	6168	6804	7137
Tamil Nadu	76	163	229	9211	8389	7229
Goa			5			622
Western Ghats	**412**	**534**	**776**	**34094**	**29607**	**29511**
North East Hills and Brahmaputra Flood Plains						
Assam	70	143	167	1164	2381	3848
Arunachal Pradesh	14	-	28*	1685	1304	1169
Mizoram	6	5	3+	785	416	100
Northern West Bengal	10	-	3	596	799	704
North East Hills, and Brahmaputra	100	148	201	4230	4900	5821
Sunderbans	-	70	76	1586	1645	1841
Total Tiger Population	**1411**	**1706**	**2226**	**93697**	**81906**	**89164**

Source : National Tiger Conservation Authority, Ministry of Environment, Forest and Climate Change

* Likely to be revised as sampling is ongoing in the state

\+ From scat DNA

Statement 1.44 : Tiger Reserves in India

(Area in sq. Kms.)

Sl. No.	Year of Creation	Name of Tiger Reserve	State	Area of core/ critical tiger habitat	Area of the buffer/ peripheral	Total area
1	1973-74	Bandipur	Karnataka	872.24	584.06	1456.30
2	1973-74	Corbett	Uttarakhand	821.99	466.32	1288.31
		Amangarh (buffer of Corbett TR)	Uttar Pradesh		80.60	80.60
3	1973-74	Kanha	Madhya Pradesh	917.43	1134.36	2051.79
4	1973-74	Manas	Assam	840.04	2310.88	3150.92
5	1973-74	Melghat	Maharashtra	1500.49	1268.03	2768.52
6	1973-74	Palamau	Jharkhand	414.08	715.85	1129.93
7	1973-74	Ranthambore	Rajasthan	1113.36	297.93	1411.29
8	1973-74	Similipal	Odisha	1194.75	1555.25	2750.00
9	1973-74	Sunderbans	West Bengal	1699.62	885.27	2584.89
10	1978-79	Periyar	Kerala	881.00	44.00	925.00
11	1978-79	Sariska	Rajasthan	881.11	332.23	1213.34
12	1982-83	Buxa	West Bengal	390.58	367.32	757.90
13	1982-83	Indravati	Chhattisgarh	1258.37	1540.70	2799.07
14	1982-83	Namdapha	Arunachal Pradesh	1807.82	4.00	1811.82
15	1982-83	Nagarjunsagar Srisailam (part)*	Andhra Pradesh	2595.72	700.59	3296.31
16	1987-88	Dudhwa	Uttar Pradesh	1093.79	1107.98	2201.77
17	1988-89	Kalakad-Mundanthurai	Tamil Nadu	895.00	706.54	1601.54
18	1988-89	Valmiki	Bihar	598.45	300.93	899.38
19	1989-90	Pench	Madhya Pradesh	411.33	768.30	1179.63
20	1992-93	Tadoba-Andhari	Maharashtra	625.82	1101.77	1727.59
21	1993-94	Bandhavgarh	Madhya Pradesh	716.90	820.04	1536.94
22	1993-94	Panna	Madhya Pradesh	576.13	1021.97**	1598.10
23	1994-95	Dampa	Mizoram	500.00	488.00	988.00
24	1994-95	Bhadra	Karnataka	492.46	571.83	1064.29
25	1998-99	Pench	Maharashtra	257.26	483.96	741.22
26	1999-2000	Pakke	Arunachal Pradesh	683.45	515.00	1198.45
27	1999-2000	Nameri	Assam	320.00	144.00	464.00
28	1999-2000	Satpura	Madhya Pradesh	1339.26	794.04	2133.31

Contd.

Statement 1.44 : Tiger Reserves in India

(Area in sq. Kms.)

Sl. No.	Year of Creation	Name of Tiger Reserve	State	Area of core/ critical tiger habitat	Area of the buffer/ peripheral	Total area
29	2008-09	Anamalai	Tamil Nadu	958.59	521.28	1479.87
30	2008-09	Udanti-Sitanadi	Chattisgarh	851.09	991.45	1842.54
31	2008-09	Satkosia	Odisha	523.61	440.26	963.87
32	2008-09	Kaziranga	Assam	625.58	548	1173.58
33	2008-09	Achanakmar	Chattisgarh	626.195	287.822	914.017
34	2008-09	Dandeli-Anshi	Karnataka	814.88	282.63	1097.51
35	2008-09	Sanjay-Dubri	Madhya Pradesh	812.57	861.93	1674.50
36	2008-09	Mudumalai	Tamil Nadu	321.00	367.59	688.59
37	2008-09	Nagarahole	Karnataka	643.35	562.41	1205.76
38	2008-09	Parambikulam	Kerala	390.89	252.77	643.66
39	2009-10	Sahyadri	Maharashtra	600.12	565.45	1165.57
40	2010-11	Biligiri Ranganatha Temple	Karnataka	359.10	215.72	574.82
41	2012-13	Kawal	Telangana	892.23	1123.21	2015.44
42	2013-14	Sathyamangalam	Tamil Nadu	793.49	614.91	1408.40
43	2013-14	Mukandra Hills	Rajasthan	417.17	342.82	759.99
44	2013-14	Nawegaon-Nagzira	Maharashtra	653.67	0.00	653.67
45	2014	Amrabad	Telangana	2166.37	445.02	2611.39
46	2014	Pilibhit	Uttar Pradesh	602.80	127.45	730.25
47	2014	Bor	Maharashtra	138.12	678.15	816.27
48	2015	Rajaji Tiger Reserve	Uttarakhand	819.54	255.63	1075.17
49	2016 (24.2.2016)	Orang	Assam	79.28	413.18	492.46
50	2016 (8.9.2016)	Kamlang	Arunachal Pradesh	671.00	112.00	783.00
		TOTAL		**40145.30**	**32603.72**	**72749.05**

Source : National Tiger Conservation Authority, Ministry of Environment, Forest and Climate Change

*Revised area details are awaited from the State Governments concerned after reorganization.

** Notifed vide notification No. F. 15-21/2010/10-2 dated 24.7.2014 by the State Government of Madhya Pradesh (old area of the buffer was 1002.42 sq.km.)

Statement 1.45 : Tiger Mortality

Year	Natural and other causes	Poaching including seizure	Cases under srcutiny	Total
1990	9	24	-	33
2000	1	9	-	10
2001	8	36	-	44
2002	23	36	-	59
2003	24	20	-	44
2004	17	5	-	22
2005	17	-	-	17
2006	17	5	-	22
2007	20	10	-	30
2008	22	9	-	31
2009	45	21	-	66
2010	25	28	-	53
2011	40	16	-	56
2012	40	25	23	88
2013	31	22	15	68
2014	47	19	13	79
2015	50	21	10	81
2016	55	35	32	122
2017 (as on 19.12.2017)	21	28	59	108

Source : National Tiger Conservation Authority, Ministry of Environment, Forest and Climate Change

Statement 1.46 : State-wise Forest Area

Sl. No.	State/UT	Total Forest Area in Sq.Km												
		1991	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
1	Andhra Pradesh	63726	63814	63814	63814	63814	63821	63821	63814	63814	63814	63814	37258	37258
2	Arunachal Pradesh	51540	51540	51540	51540	51540	51540	51540	51540	51540	51540	51541	51407	51407
3	Assam	30708	30708	30708	30708	27018	27018	26832	26832	26832	26832	26832	26832	26832
4	Bihar	29226	29226	29226	29226	6078	6473	6473	6473	6473	6473	6473	6493	6877
5	Chhattisgarh					59285	59772	59772	59772	59772	59772	59772	59772	59772
6	Delhi	42	42	42	85	85	85	85	85	85	85	85	102	102
7	Goa	1256	1424	1424	1424	1224	1224	1224	1224	1224	1224	1225	1225	1225
8	Gujarat	19388	19393	19393	19393	18999	19113	18962	18927	18927	18927	21647	21647	21647
9	Haryana	1687	1673	1673	1673	1551	1558	1559	1559	1559	1559	1559	1559	1559
10	Himachal Pradesh	37591	35407	35407	35407	37033	37033	37033	37033	37033	37033	37033	37033	37033
11	Jammu & Kashmir #	20174	20182	20182	20182	20230	20230	20230	20230	20230	20230	20230	20230	20230
12	Jharkhand					23605	23605	23605	23605	23605	23605	23605	23605	23605
13	Karnataka	38646	38724	38724	38724	38724	43084	38284	38284	38284	38284	38284	38284	38284
14	Kerala	11222	11221	11221	11221	11221	11268	11265	11265	11265	11265	11309	11309	11309
15	Madhya Pradesh	155414	154497	154497	154497	95221	95221	94689	94689	94689	94689	94689	94689	94689
16	Maharashtra	63861	63842	63842	63842	61939	61939	61939	61939	61939	61939	61357	61579	61579
17	Manipur	15154	15154	15154	15154	17418	17418	17418	17418	17418	17418	17418	17418	17418
18	Meghalaya	9496	9496	9496	9496	9496	9496	9496	9496	9496	9496	9496	9496	9496
19	Mizoram	15935	15935	15935	15935	15935	16717	16717	16717	16717	16717	16717	5641	5641
20	Nagaland	8625	8629	8629	8629	8629	8629	9222	9222	9222	9222	9222	9222	8623
21	Odisha$	59555	57184	57184	57184	58135	58136	58136	58136	58136	58136	58136	58136	61204

Contd.

Statement 1.46 : State-wise Forest Area

Sl. No.	State/UT	Total Forest Area in Sq.Km												
		1991	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
22	Punjab	2842	2901	2901	2901	3059	3084	3084	3084	3058	3084	3084	3084	3084
23	Rajasthan	31559	31700	31700	31700	32494	32488	32488	32639	32639	32639	32737	32737	32737
24	Sikkim	2650	2650	2650	2650	5765	5841	5841	5841	5841	5841	5841	5841	5841
25	Tamil Nadu	22699	22628	22628	22628	22871	22877	22877	22877	22877	22877	22877	22877	22877
26	Telangana**												26904	26904
27	Tripura	6292	6293	6293	6293	6293	6293	6294	6294	6294	6294	6294	6294	6294
28	Uttar Pradesh	51502	51663	51663	51663	16826	16826	16796	16583	16583	16583	16583	16582	16582
29	Uttarakhand					34662	34662	34651	34651	34651	34651	34651	38000	38000
30	West Bengal	11879	11879	11879	11879	11879	11879	11879	11879	11879	11879	11879	11879	11879
31	A & N Islands	7171	7171	7171	7171	7171	7171	7171	7171	7171	7171	7171	7171	7171
32	Chandigarh	31	31	31	31	32	34	33	34	34	34	35	35	35
33	Dadra and Nagar Haveli	207	203	203	203	203	204	204	204	204	204	204	204	204
34	Daman & Diu	*	*	NA	0.7	1	1	6	8	8	8	8	8	8
35	Lakshadweep	nil	nil	NA	0	0	0	0	0	0	0	0	0	0
36	Puducherry	nil	nil	NA	0	0	0	0	13	13	13	13	13	13
Total		**770078**	**765210**	**765210**	**765253**	**768436**	**774740**	**769626**	**769512**	**769512**	**769538**	**771821**	**764566**	**767419**

Source: State Forest Report 1991 - 2017, FSI

* Included in Goa

**Included in Andhra Pradesh for 1991-2013

$ - Reserved Forest(RF) in Odisha includes 9175 sq. km of proposed RF, Protected Forest (PF) includes 15117 sq. km revenueforest/deemed forest and 191 sq km private forest.

- Includes Jammu & Kashmir area outside LOC that is under illegal occupation of Pakistan and China.

Statement 1.47 : Forest cover in India - classwise

Class	2005		2011		2013		2015		2017	
	Area (Sq. Km)	Percentage of Geographic Area	Area (Sq. Km)	Percentage of Geographic Area	Area (Sq. Km)	Percentage of Geographic Area	Area (Sq. Km)	Percentage of Geographic Area	Area (Sq. Km)	Percentage of Geographic Area
Forest Cover										
Very Dense Forest	54,569	1.66	83,471	2.54	83,502	2.54	85,904	2.61	98,158	2.99
Moderately Dense Forest	332,647	10.12	320,736	9.76	318,745	9.7	315,374	9.59	308,318	9.38
Open Forest	289,872	8.82	287,820	8.75	295,651	8.99	300,395	9.14	301,797	9.18
Total Forest Cover*	677,088	20.6	692,027	21.05	697,898	21.23	701,673	21.34	**708,273**	**21.54**
Scrub	38,475	1.17	42,176	1.28	41,383	1.26	41,362	1.26	45,979	1.4
Non-forest	2,571,700	78.23	2,553,060	77.67	2,547,982	77.51	2,544,228	77.4	2,533,217	77.06
Total Geographic Area	**3,287,263**	**100**	**3,287,263**	**100**	**3,287,263**	**100**	**3,287,263**	**100**	**3,287,469**	**100**

Source : India State of Forest Report 2005-2017, FSI
*Includes 4,921 sq km under Mangrove Cover

Statement 1.48 : State-wise Forest Cover

(Sq.Km)

Sl. No.	State/UT	1991 #	1993 #	1995 #	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
1	Andhra Pradesh	47290	47256	47112	43290	44229	44637	44419	45231	45102	46670	46389	46116	26006	28147
2	Arunachal Pradesh	68757	68661	68621	68602	68847	68045	68019	67472	67353	67484	67410	67321	67154	66964
3	Assam	24751	24508	24061	23824	23688	27714	27826	27758	27692	27692	27673	27671	27538	28105
4	Bihar	26668	26587	26561	4832	4830	5720	5558	6807	6804	6804	6845	7291	7254	7299
5	Chhattisgarh				56435	56693	56448	55998	55929	55870	55678	55674	55621	55559	55547
6	Delhi	22	22	26	26	88	111	170	177	177	177	176	180	188.77	192.41
7	Goa	1255	1250	1247	1252	1251	2095	2156	2156	2151	2212	2219	2219	2210	2229
8	Gujarat	11907	12044	12320	12578	12965	15152	14946	14604	14620	14620	14619	14653	14710	14757
9	Haryana	513	513	603	604	964	1754	1517	1604	1594	1594	1608	1586	1580	1588
10	Himachal Pradesh	12480	12502	12501	12521	13082	14360	14353	14666	14668	14668	14679	14683	14707	15100
11	Jammu & Kashmir	20499	20443	20433	20440	20441	21237	21267	22689	22686	22537	22539	22538	22988	23241
12	Jharkhand				21692	21644	22637	22716	22722	22894	2894	22977	23473	23524	23553
13	Karnataka	32199	32343	32382	32403	32467	36991	36449	36200	36190	36190	36194	36132	36449	37550
14	Kerala	10292	10336	10336	10334	10323	15560	15577	17284	17324	17324	17300	17922	19278	20321
15	Madhya Pradesh	135541	135396	135164	74760	75137	77265	76429	77739	77700	77700	77700	77522	77426	77414
16	Maharashtra	44044	43859	43843	46143	46672	47482	46865	50661	50650	50650	50646	50632	50699	50682
17	Manipur	17685	17621	17558	17418	17384	16926	17219	16952	17280	17280	17090	16990	17083	17346
18	Meghalaya	15875	15769	15714	15657	15633	15584	16839	17205	17321	17321	17275	17288	17262	17146
19	Mizoram	18853	18697	18576	18775	18338	17494	18430	18600	19240	19183	19117	19054	18717	18186
20	Nagaland	14321	14348	14291	14221	14164	13345	13609	13665	13464	13464	13318	13044	12939	12489
21	Odisha	47205	47145	47107	46941	47033	48838	48366	48755	48855	48855	48903	50347	50460	51345
22	Punjab	1343	1343	1342	1387	1412	2432	1580	1660	1664	1664	1764	1772	1771	1837
23	Rajasthan	12889	13099	13280	13353	13871	16367	15826	16012	16036	16036	16087	16086	16106	16572
24	Sikkim	3041	3119	3127	3129	3118	3193	3262	3357	3357	3359	3359	3358	3353	3344
25	Tamil Nadu	16992	17005	17045	17064	17078	21482	22643	23314	23338	23551	23625	23844	26208	26281

Contd.

Statement 1.48 : State-wise Forest Cover

(Sq.Km)

Sl. No.	State/UT	1991 #	1993 #	1995 #	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
26	Telangana$													19854	20419
27	Tripura	5535	5538	5538	5546	5745	7065	8093	8173	8073	7985	7977	7866	7890	7726
28	Uttar Pradesh	33609	33961	33986	10751	10756	13746	14118	14346	14341	14341	14338	14349	14401	14679
29	Uttarakhand				23243	23260	23938	24465	24493	24495	24495	24496	24508	24272	24295
30	West Bengal	8015	8186	8276	8349	8362	10693	12343	12970	12994	12994	12995	16805	16826	16847
31	A & N Islands	7622	7624	7615	7613	7606	6930	6964	6663	6662	6662	6724	6711	6751	6742
32	Chandigarh	5	5	7	7	7	9	15	17	17	17	17	17	21.66	21.56
33	Dadra and Nagar Haveli	206	206	204	204	202	219	225	216	211	211	211	213	206	207
34	Daman & Diu	*	*	3	3		6	8	6	6	6	6	9	19.61	20.49
35	Lakshadweep	0	0	0	0	0	27	23	26	26	26	27	27	27.06	27.1
36	Puducherry	0	0	0	0	0	36	40	42	44	50	50	50	56.95	53.67
Total		**639364**	**639386**	**638879**	**633397**	**637293**	**675538**	**678333**	**690171**	**690899**	**692394**	**692027**	**697898**	**701495**	**708273**
% of Geographical Area		**19.45**	**19.45**	**19.43**	**19.27**	**19.39**	**20.55**	**20.64**	**20.99**	**21.02**	**21.06**	**21.05**	**21.23**	**21.34**	**21.54**

Source : India State of Forest Report- 1991-2017, FSI

Revised estimate as provided by State Forest Report 1997 by incorporating interpretational corrections

* Included in Goa :

$ Included in Andhra Pradesh for 1991-2013

Note: The forest cover includes all lands which have a tree canopy density of more than ten percent when projected vertically on the horizontal ground, within a minimum areal extent of one hectare. The forest cover reported by FSI does not make any distinction between the origin of tree crops (whether natural or man made) or tree species; and encompasses all type of lands irrespective of their ownership, land use and legal status. A land may be recorded as forest area and under management of forest department but may not have any discernible forest cover. On the other hand, all wooded lands or plantations, delineated as forest cover from satellite data may not be legally recorded as forest area as there could be private plantations or institutional wood lots.

Statement 1.49: Tree Cover in India

(a) State-wise tree cover

(Sq.Km)

Sl. No.	State/UT	2001	2003	2005	2009	2011	2013	2015	2017
1	Andhra Pradesh	9011	12120	7640	7191	7152	7187	3965	3753
2	Arunachal Pradesh	478	363	446	592	549	660	761	807
3	Assam	1942	935	1484	1590	1564	1582	1613	1496
4	Bihar	3693	1620	2522	2495	2369	2164	2182	2263
5	Chhattisgarh	3535	6723	4492	4027	3866	3463	3629	3833
6	Delhi	40	98	107	123	120	118	111	113
7	Goa	62	136	268	286	286	334	325	323
8	Gujarat	4036	10586	7621	8390	7837	8358	7914	8024
9	Haryana	1526	1415	1565	1409	1395	1282	1355	1415
10	Himachal Pradesh	397	491	709	638	623	697	757	822
11	Jammu & Kashmir	2217	3826	5633	6764	6550	7664	8354	7815
12	Jharkhand	2694	5012	3080	3032	2914	2629	2783	2922
13	Karnataka	7446	5371	5467	5683	5733	5920	5552	5713
14	Kerala	1146	1903	2632	2801	2755	3146	2951	2959
15	Madhya Pradesh	5751	7250	6267	6871	7090	7087	7773	8073
16	Maharashtra	8269	9320	8978	9466	9079	9142	9558	9831
17	Manipur	95	136	142	197	193	224	243	220
18	Meghalaya	140	352	405	542	578	668	710	657
19	Mizoram	95	130	122	172	190	223	535	467
20	Nagaland	70	217	238	300	322	372	381	379
21	Odisha	4364	6381	4598	4435	4301	4013	3986	3993
22	Punjab	1634	1608	1823	1699	1699	1499	1544	1622
23	Rajasthan	5286	8638	8379	8274	8272	7860	8269	8266
24	Sikkim	14	22	27	20	25	31	35	35
25	Tamil Nadu	6054	4991	5621	4968	4718	4866	4505	4671
26	Telangana							2549	2669
27	Tripura	68	116	134	171	184	213	233	215
28	Uttar Pradesh	7545	7715	8203	7381	7382	6895	7044	7442
29	Uttarakhand	448	571	658	665	642	703	752	767
30	West Bengal	3264	1731	2269	2458	2335	2144	2088	2136
31	A & N Islands	83	33	53	44	39	41	37	35
32	Chandigarh	2	8	9	11	10	10	9	10
33	Dadra & Nagar Haveli	27	35	28	27	29	29	28	30
34	Daman & Diu	4	6	9	9	9	9	10	10
35	Lakshadweep	0	2	4	4	5	5	4	2
36	Puducherry	35	35	42	34	31	29	27	27
Total		**81472**	**99896**	**91663**	**92769**	**90844**	**91267**	**92571**	**93815**
Percent of Geographical Area		**2.48**	**3.04**	**2.79**	**2.82**	**2.76**	**2.78**	**2.82**	**2.85**

Source : India State of Forest Report - 2001-2017, FSI

Statement 1.49: Tree Cover in India
(b) Physiographic zone-wise tree cover

Sl. No.	Physiographic Zone	Geographic Area (Km²)	Year							
			2011		2013		2015		2017	
			Area (Km²)	% of Geog. Area	Area (Km²)	% of Geog. Area	Area (Km²)	% of Geog. Area	Area (Km²)	% of Geog. Area
1	2	3	4	5	6	7	8	9	10	11
1	Western Himalayas	328952	7859	2.39	9035	2.74	9835.0	2.99	9393	2.86
2	Eastern Himalayas	81752	356	0.44	448	0.60	537.0	0.66	610	0.75
3	North East Ranges	127857	2275	1.78	2655	1.98	3132.0	2.45	2792	2.18
4	Northern Plains	295909	9366	3.17	8609	2.91	8756.0	2.96	9196	3.11
5	Eastern Plains	222365	5168	2.32	4722	2.11	4628.0	2.08	4759	2.14
6	Western Plains	320507	7038	2.20	6245	1.96	6297.0	1.96	6352	1.98
7	Central Highlands	371281	9886	2.66	10127	2.71	11004.0	2.96	11534	3.11
8	North Deccan	365711	7007	1.92	6762	1.90	7912.0	2.16	7994	2.19
9	East Deccan	333824	10718	3.21	9644	2.87	10120.0	3.03	10663	3.19
10	South Deccan	291317	8012	2.75	8244	2.82	7531.0	2.59	7857	2.70
11	Western Ghats	73681	4083	5.54	4189	5.79	3678.0	4.99	4109	5.58
12	Eastern Ghats	192068	4420	2.30	4194	2.19	4041.0	2.10	3936	2.05
13	West Coast	113611	8863	7.80	10391	8.57	9744.0	8.58	9445	8.31
14	East Coast	168634	5791	3.43	6001	3.58	5358.0	3.18	5175	3.07
Total		**3287469**	**90844**	**2.76**	**91266**	**2.78**	**92573.0**	**2.82**	**93815**	**2.85**

Source : India State of Forest Report- 2001 - 2017, Forest Survey of India

Statement 1.50: State-wise Mangrove Cover

(Sq. km)

Sl No.	State/UT	Year												
		1991	1993	1995	1997	1999	2001	2003	2005	2009	2011	2013	2015	2017
1	2	5	6	3	4	5	6	7	8	9	10	11	12	13
1	Andhra Pradesh	399	378	383	383	397	333	329	354	353	352	352	367	404
2	Goa	3	3	3	5	5	5	16	16	17	22	22	26	26
3	Gujarat	397	419	689	901	1031	911	916	991	1046	1058	1103	1107	1140
4	Karnataka	0	0	2	3	3	2	3	3	3	3	3	3	10
5	Kerala	0	0	0	0	0	0	8	5	5	6	6	9	9
6	Maharashtra	113	155	155	124	108	118	158	186	186	186	186	222	304
7	Orissa	195	195	195	211	215	219	203	217	221	222	213	231	243
8	Tamil Nadu	47	21	21	21	21	23	35	36	39	39	39	47	49
9	West Bengal	2119	2119	2119	2123	2125	2081	2120	2136	2152	2155	2097	2106	2114
10	A&N Islands	971	966	966	966	966	789	658	635	615	617	604	617	617
11	Daman & Diu	0	0	0	0	0	0	1	1	1	1.56	1.63	3	3
12	Puducherry	0	0	0	0	0	1	1	1	1	1	1	2	2
Total		**4244**	**4256**	**4533**	**4737**	**4871**	**4482**	**4448**	**4581**	**4639**	**4663**	**4628**	**4740**	**4921**

Source: India State of Forest Report, 1991- 2017, FSI

Statement 1.51 : Number of incidence of Frest Fire

STATE	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2013	2014	2015	2016	2017
Andaman & Nicobar Island	0	1	6	0	1	7	0	12	9	96	1	24	8
Andhra Pradesh	1108	1569	1931	1454	2442	1837	1119	2559	2143	2458	1075	1699	1877
Arunachal Pradesh	97	514	635	349	786	576	485	560	501	535	358	293	733
Assam	213	1369	902	1020	1901	2511	1321	2172	1608	2536	1656	1766	1887
Bihar	67	126	84	84	143	397	81	196	273	140	45	321	272
Chandigarh	0	0	0	0	2849	0	0	0	0	0	0	0	1
Chhattisgarh	789	848	1762	1389	0	2835	1074	3448	1530	1018	1272	2808	4373
Dadra & Nagar Haveli	0	0	1	3	0	0	0	1	3	1	0	0	0
Daman & Diu	0	0	0	0	0	0	0	0	0	0	0	0	0
Delhi	0	0	0	0	0	0	1	0	0	0	0	2	5
Goa	6	9	1	0	2	0	3	0	4	3	0	10	32
Gujarat	140	208	100	131	182	179	101	146	179	74	117	262	574
Haryana	7	11	14	75	21	29	5	42	5	5	6	43	185
Himachal Pradesh	9	12	48	104	168	125	6	249	34	32	22	199	170
Jammu & Kashmir	29	81	92	54	117	30	7	127	23	74	13	217	113
Jharkhand	151	548	140	394	430	1314	192	307	554	202	457	740	1133
Karnataka	417	631	414	275	604	428	370	724	606	424	295	831	1333
Kerala	90	51	130	19	166	106	10	223	98	114	91	165	456
Lakshadweep	0	0	0	0	0	0	0	0	0	0	0	0	0
Madhya Pradesh	901	1101	871	2705	2894	2386	1451	3076	753	534	294	2675	4781
Maharashtra	534	1009	1243	1426	2257	1789	882	3329	1433	702	721	1874	3487
Manipur	295	1666	1223	1415	1477	2487	1275	1507	1303	1774	1286	1105	1094
Meghalaya	69	1285	504	699	1010	1743	879	911	804	1123	1373	966	1454
Mizoram	1513	4479	2733	2095	3434	4675	1691	2218	2259	2189	2468	1318	1587
Nagaland	131	1200	851	568	984	1654	919	927	846	886	722	678	930
Odisha	1127	1646	1587	1184	2087	2515	780	3022	2221	1904	1467	2763	4416
Puducherry	0	0	0	0	0	0	0	0	0	0	0	0	9
Punjab	21	33	18	147	41	56	10	83	36	20	7	45	320
Rajasthan	14	47	53	118	96	117	87	83	75	53	90	66	260
Sikkim	0	7	0	0	1	5	1	3	0	0	3	0	8
Tamil Nadu	193	109	123	40	276	148	34	262	89	284	95	113	301
Telangana											1052	1154	1748
Tripura	324	1421	788	358	717	1127	634	1233	588	1160	476	346	431
Uttar Pradesh	235	253	305	379	370	737	198	560	237	218	130	691	1170
Uttarakhand	143	165	222	717	631	855	85	1265	119	379	207	1501	376
West Bengal	31	168	6	62	100	224	197	117	118	116	138	142	364
Total	**8654**	**20567**	**16787**	**17264**	**26187**	**30892**	**13898**	**29362**	**18451**	**19054**	**15937**	**24817**	**35888**

Source : Forest Survey of India

Statement 1.52 : State wise level of SO_2, NO_2, PM10 and PM 2.5

State	2010					2012				
	No. of City	No. of Location	SO2 Annual average (µg/m3)	NO2 Annual average (µg/m3)	PM10 Annual average (µg/m3)	No. of City	No. of Location	SO2 Annual average (µg/m3)	NO2 Annual average (µg/m3)	PM10 Annual average (µg/m3)
Andhra Pradesh	14	31	5	17	73	14	31	7	18	72
Arunachal Pradesh	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Assam	12	23	7	15	73	13	23	6	13	72
Bihar	1	2	7	40	181	1	2	6	36	166
Chandigarh	1	5	2	16	92	1	5	2	19	110
Chattisgarh	4	10	12	28	168	4	10	11	26	151
Dadra & Nagar Haveli	1	2	7	18	39	1	2	8	20	
Daman & Diu	1	2	7	18	35	1	2	8	20	
Delhi	1	9	5	55	261	1	10	5	59	237
Goa	10	10	12	22	89	16	16	11	17	96
Gujarat	7	19	15	23	85	7	20	15	26	94
Haryana	3	5	13	20	156	3	5	9	23	147
Himachal Pradesh	7	14	3	15	89	10	20	2	14	99
Jammu & Kashmir	1	3	7	15	115	1	3	6	12	119
Jharkhand	7	10	23	39	191	7	10	23	41	173
Karnataka	9	19	12	26	92	17	29	9	20	83
Kerala	11	24	4	13	42	11	24	4	12	
Lakshwadeep *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Madhya Pradesh	10	25	11	17	122	10	27	14	22	128
Maharashtra	21	65	18	31	101	24	77	17	33	105
Manipur*	NA	NA	NA	NA	NA	1	1			
Meghalaya	4	5	18	10	93	4	5	9	11	73
Mizoram	1	3	2	6	42	4	11	2	7	54
Nagaland	2	4	2	6	71	2	3	2	6	86
Orissa	9	16	4	15	82	10	23	4	17	82
Punjab	10	23	8	26	179	11	24	10	27	162
Puducherry	1	3	6	13	38	1	3	8	14	42
Rajasthan	5	21	7	30	166	5	21	8	34	173
Sikkim	NA	NA	NA	NA	NA	1	2			
Tamilnadu	5	15	9	20	70	6	26	11	21	71
Telangana	@	@	@	@	@	@	@	@	@	@
Uttar Pradesh	15	41	12	30	181	20	57	12	29	184
Uttarakhand	6	8	28	30	145	6	8	26	28	162
West Bengal	10	39	10	64	110	9	39	12	58	137

SO_2 : Sulphur dioxide NO_2 : Nitrogen Dioxide PM 10 - Particulate Matter (<10µm) PM 2.5 - Particulate Matter (<2.5µm)

NA- Data not available @ - included in Andhra Pradesh for 2010 to 2014 µg/m3 : Micrograms per metre cube

Source : Central Pollution Control Board

Contd.

Statement 1.52 : State wise level of SO_2, NO_2, PM10 and PM 2.5

State	2014													
	No. of city	No of location	SO2 (µg/m3)			NO2 (µg/m3)			PM 10 (µg/m3)			PM 2.5 (µg/m3)		
			Min.	Max	Avg	Min.	Max	Avg	Min.	Max	Avg	Min.	Max	Avg
Andhra Pradesh	13	23	4	37	9	5	102	19	3	637	73			
Arunachal Pradesh	2	2	2	37	2	5	102	5	3	637	70			
Assam	13	22	2	37	7	5	102	14	3	637	74			
Bihar	1	2	2	37	7	5	102	32	3	695	178			
Chandigarh	1	5	2	37	2	5	102	21	3	695	91			
Chattisgarh	4	8	2	37	11	5	209	23	3	695	128			
Dadra & Nagar Haveli	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Daman & Diu	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delhi	1	10	2	37	5	5	209	62	3	841	217	14	232	80
Goa	17	17	2	37	5	5	209	10	3	841	55	9	53	20
Gujarat	7	19	2	37	14	5	209	20	3	841	87	10	55	30
Haryana	2	3	2	42	13	5	696	23	3	841	155			
Himachal Pradesh	11	21	2	42	2	5	696	14	3	841	87			
Jammu & Kashmir	1	3	2	42	5	5	696	13	3	841	123			
Jharkhand	4	6	2	42	14	5	76	36	3	862	172			
Karnataka	16	26	2	33	8	5	36	19	3	400	91			
Kerala	11	24	2	75	4	5	49	13	7	279	55			
Lakshwadeep *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Madhya Pradesh	9	22	2	75	11	7	177	18	7	458	120	5	218	63
Maharashtra	22	68	3	112	17	5	177	34	8	571	110			
Manipur*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Meghalaya	6	7	2	112	5	5	177	10	8	571	59			
Mizoram	4	11	2	112	2	5	177	6	7	571	43			
Nagaland	2	4	2	112	2	5	48	5	7	571	110			
Orissa	14	32	2	17	5	7	78	17	9	551	88			
Punjab	14	27	4	19	8	5	78	22	27	403	123			
Puducherry	2	6	2	33	11	5	876	12	9	403	39			
Rajasthan	5	21	2	33	7	9	71	34	9	546	165			
Sikkim	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tamilnadu	8	30	2	32	12	5	134	22	13	269	63			
Telangana	12	25	2	33	5	5	106	21	3	341	83	3	504	44
Uttar Pradesh	17	50	2	52	11	5	106	28	34	717	173			
Uttarakhand	3	5	2	52	25	5	444	29	36	521	144			
West Bengal	8	17	2	110	8	19	136	59	4	392	114			

SO_2 : Sulphur dioxide NO_2 : Nitrogen Dioxide µg/m3 : Micrograms per metre cube PM 10 - Particulate Matter (<10µm)
@ - included in Andhra Pradesh for 2010 to 2014 NA- Data not available PM 2.5 - Particulate Matter (<2.5µm)

Source : Central Pollution Control Board

Contd.

Statement 1.52 : State wise level of SO_2, NO_2, PM10 and PM 2.5

State	2016													
	No. of city	No of location	SO2 (µg/m3)			NO2 (µg/m3)			PM 10 (µg/m3)			PM 2.5 (µg/m3)		
			Min.	Max	Avg	Min.	Max	Avg	Min.	Max	Avg	Min.	Max	Avg
Andhra Pradesh	15	25	4	18	7	9	144	23	19	193	76			
Arunachal Pradesh	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Assam	13	23	3	31	7	7	35	16	11	392	84			
Bihar	1	2	2	10	4	10	84	32	23	611	212			
Chandigarh	1	5	2	25	2	5	97	21	15	344	105	90	73	123
Chattisgarh	4	8	4	17	10	13	40	24	9	212	111			
Dadra & Nagar Haveli	1	1	14	26	21	26	36	32	24	68	37	85	68	73
Daman & Diu	1	1	12	25	19	22	35	29	20	68	34			
Delhi	1	9	2	42	7	5	270	67	24	772	276	46	25	109
Goa	17	18	2	33	5	5	69	11	13	424	70	131	35	30
Gujarat	7	21	6	31	13	8	50	25	51	210	101	62	24	32
Haryana	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Himachal Pradesh	11	22	2	11	2	5	43	13	10	380	80			
Jammu & Kashmir	1	3	2	11	4	10	25	17	83	181	131			
Jharkhand	7	10	9	70	22	17	108	38	50	402	181			
Karnataka	15	25	2	30	3	5	68	21	9	336	80	35	24	43
Kerala	11	24	2	19	4	5	91	16	7	232	47			
									7	59	30			
Madhya Pradesh	13	36	2	38	11	5	66	19	3	248	83	80	46	38
Maharashtra	22	67	2	102	15	5	331	39	3	609	107			
Manipur*									8.33	95	29			
Meghalaya	7	8	2	92	7	5	75	13	9	271	68			
Mizoram	4	11	2	3	2	5	31	6	4	343	44			
Nagaland	2	4	2	2	2	5	30	8	15	297	105			
Orissa	13	30	2	43	6	5	61	18	29	715	94	69	36	41
Punjab	2	6	3	30	9	5	22	12	15	87	39			
Puducherry	12	24	4	22	8	9	48	21	23	493	129			
Rajasthan	7	30	4	25	7	11	65	30	11	562	166			
Sikkim	8	9	2	60	12	5	51	12	3	75	29			
Tamilnadu	9	31	2	69	11	5	68	20	8	663	78	57	32	30
Telangana	11	24	2	36	6	5	121	24	10	448	80	125	88	47
Uttar Pradesh	20	61	2	68	10	5	109	30	11	794	194			
Uttarakhand	3	5	20	30	25	24	35	29	38	501	171			
West Bengal	9	36	2	45	9	5	273	46	3	441	135	0	0	68

SO_2 : Sulphur dioxide NO_2 : Nitrogen Dioxide µg/m3 : Micrograms per metre cube PM 10 - Particulate Matter (<10µm)
@ - included in Andhra Pradesh for 2010 to 2014 NA- Data not available PM 2.5 - Particulate Matter (<2.5µm)

Source : Central Pollution Control Board

Statement 1.53: Ambient air quality in major cities

(µg/m3)

Sulphur dioxide (SO_2)															
City	1996	1997	1998	1999	2000	2001	2002	2003	2004	2008	2009	2012	2013	2014	2015
Ahmedabad	25.0	15.1	-	12.2	8.4	10	12.3	16	15.7	12.3	16	12	12	13	13
Bangalore	20.7	27.9	20.3	38.2	20.7	20	13.4	12	8.5	15.2	14	14	13	13	6
Chennai	8.1	15.9	12.6	11.9	12.5	17	19.9	15	12.2	9.5	9	12	14	13	13
Delhi	17.3	16.3	15.4	17.5	15.2	13	11.3	10	9.89	6.6	6	5	4	5	5
Hyderabad	16.8	16.4	11.8	14	12.4	10	7.27	6	5.63	5.5	5	4	5	5	4
Kolkata	21.3	NA	34.3	44.5	17.4	18	11.4	17	9.33	7.7	11	12	11	9	7
Mumbai	18	25.1	11.5	14.9	12.1	16	9.07	8	6.67	8.7	6	5	3	4	4

(µg/m3)

Oxides of Nitrogen (NO_2)															
City	1996	1997	1998	1999	2000	2001	2002	2003	2004	2008	2009	2012	2013	2014	2015
Ahmedabad	14.8	20	-	33	28.6	39	31.8	25	24.3	20.0	21	24	17	20	21
Bangalore	28	20.4	25	27.1	40.2	23	25.5	35	51.8	40.8	37	28	26	30	20
Chennai	9	13	16.7	10.7	14.4	18	18.4	26	16.8	15.4	17	21	22	22	20
Delhi	39.7	34	33.9	35.7	39.9	37	37.3	42	46.1	56.7	19	59	66	61	65
Hyderabad	25	30.7	30.8	24.3	25.2	31	25.5	26	30.3	26.2	23	28	24	24	23
Kolkata	29.3	NA	32	30.5	34.8	74	81.7	71	59.7	64.0	68	70	70	70	56
Mumbai	35.3	34.3	19.5	29.6	25.5	23	17.4	21	18.3	39.3	41	20	13	20	25

(µg/m3)

Particulate Matter (<10µm) (µg/m3) - PM10												
City	1999	2000	2001	2002	2003	2004	2008	2009	2012	2013	2014	2015
Ahmedabad	161	237	198	169	154	152	88	94	83	79	84	89
Bangalore	NA	89.7	68	64.3	76	69	100	112	121	113	139	119
Chennai	71.7	65	77.6	74.8	86	60	63	73	57	75	57	59
Delhi	172	155	146	158	151	149	214	252	237	221	217	220
Hyderabad	127	98	68.8	71	64	71	85	81	79	90	95	93
Kolkata	140	145	117	128	121	134	103	126	135	159	122	105
Mumbai	115	107	67.2	68.7	70	78	127	117	117	117	96	107

Source: Central Pollution Control Board
PM10 : Particulate matter size less than or equal to 10 µm
SO_2 : Sulphur dioxide
NO_2 : Nitrogen Dioxide
µg/m3 : Micrograms per metre cube

Statement 1.54 : Water Quality in Indian Rivers

Name of the River	Length (Km)	Year	2010	2011	2012	2013	2014	2015	2016	2017
Ganga	2525	No of Monitoring locations	57	61	61	61	62	63	64	80
		Temp.(°C) (Min-Max)	4 - 35	3 - 37	8 - 35	3.3 - 35	13 - 35	12 - 40	5 - 36	3 - 36
		pH	6.7-9.0	6.7-9.1	5.9-9.1	6.8-9.3	6.3-8.9	6.7-9.3	6.3-8.7	6.3 - 8.8
		Conductivity (µmhos/cm)	21 - 5250	49 - 10240	18 - 6220	18 - 6270	42 - 6320	153 - 6250	98 - 13370	81 - 7526
		DO(mg/l)	3.6 - 12	4 - 14.3	0.6 - 14.1	3.6 - 11.6	2.8 - 11.1	2.9 - 11.6	2.5 - 10.6	3.6 - 11.3
		BOD(mg/l)	<1- 15	<1- 11	<1- 27	<1- 15.6	<1 - 12	<1- 16	<1 - 12.2	<1- 7.3
		Total Coliform (MPN/100 ml)	2 - 400000	5 - 1100000	21 - 3000000	40 - 1100000	370 - 1300000	370 - 700000	220 - 300000	2 - 16000000
		Faecal Coliform (MPN/100 ml)	3 - 1400000	5 - 2500000	30 - 5000000	14 - 4500000	4 - 5000000	2 - 1400000	21 - 500000	2 - 16000000
Yamuna	1376	No of Monitoring locations	27	27	27	26	27	22	25	25
		Temp.(°C) (Min-Max)	5 - 35	4 - 38	3.2 - 35	3 - 30	14 - 34	13 - 38	6 - 34	4 - 34
		pH	6.1-9.4	6.9-8.8	6.1-8.9	6.9 - 8.5	6.4 - 8.8	7.1-9.2	6.7 - 8.6	7 - 8.5
		Conductivity (µmhos/cm)	100-2220	60-1905	52-1110	74-374	112 - 2860	147-2150	179 - 4060	173 - 3770
		DO(mg/l)	NT -21.1	NT -17	NT -11.4	0.6- 27	0.3- 12.8	NT - 15.5	NT - 18	NT -12
		BOD(mg/l)	8 - 84	<1-41	1 -113	1 - 43	1 -79	<1 - 97	<1- 67	<1- 80
		Total Coliform (MPN/100 ml)	9 - 29000000	4-1100000000	6-2000000000	3-48000	7-540000	2 -13000000	6 - 92000000	2 - 110000000
		Faecal Coliform (MPN/100 ml)	13 - 390000000	10-1600000000	12-2000000000	10-9200000	17-160000000	2 -17000000	2 - 160000000	2 - 140000000
Mahi	583	No of Monitoring locations	9	11	11	11	3	6	11	12
		Temp.(°C) (Min-Max)	20 - 34	18-36.5	23-32	23-38	17-32	20-34	19-33	18 - 33
		pH	7.4 – 8.7	7.1-9.1	7.43-8.6	6.7-7.8	7.3-8.4	7.1-9.4	6.6 - 9	7.21 - 9.02
		Conductivity (µmhos/cm)	230-7234	256 -1310	192-1276	129-2420	320-1013	234-773	28 - 2612	191 - 16660
		DO(mg/l)	3.5 – 9.9	3.2-8.9	4.41-20	3.8-10.2	4.8-8	4.7-8.9	3 - 9.5	2.5 - 8.9
		BOD(mg/l)	<1- 4.0	<1-8.0	<1- 6	<1-3.3	<1-2.1	1 - 5	<1- 7.03	<1- 2.8
		Total Coliform (MPN/100 ml)	2 - 7	2 - 9	2 - 21	2 - 170		4-58	2 - 49	2 - 40
		Faecal Coliform (MPN/100 ml)	4 - 110	7 - 28	4 - 210	2-1600	4 - 300	4 - 300	7 - 300	4 - 140

Contd.

Statement 1.54 : Water Quality in Indian Rivers

Name of the River	Length (Km)	Year	2010	2011	2012	2013	2014	2015	2016	2017
Tapi	724	No of Monitoring locations	14	14	14	9	7	12	14	14
		Temp.(°C) (Min-Max)	15 - 42	24-41.5	20-43	19-34	18-31	19-36	18 - 31	19.4 - 35
		pH	7.0-8.7	7.0-8.7	7.02-8.8	7.29 - 8.69	7.14 - 8.7	7.07 - 8.6	7.11 - 8.76	6.44 - 8.9
		Conductivity (µmhos/cm)	125- 39400	172-41836	125-39720	23-5670	270-1575	153-42880	192 - 40650	192 - 43460
		DO(mg/l)	1 -8.1	3.2-7.6	3.3-7.7	4.4 - 8.6	4.1-7.8	2.1-7.7	2.4 - 8.8	1.2 - 9.8
		BOD(mg/l)	<1- 16	1.2-10	1.0 -18	<1 - 7	<1 -9	1.0 -18	<1 - 8	<1 - 19
		Total Coliform (MPN/100 ml)	2 - 4300	9 - 9000	2 - 50	9-170000	4-140	2 - 170	2 - 5420	2 - 542
		Faecal Coliform (MPN/100 ml)	2 - 9300	22-24000	26-1600	23-9300	50-920	2 - 2400	2 - 5420	15 - 900
Narmada	1312	No of Monitoring locations	21	26	26	16	17	18	26	27
		Temp.(°C) (Min-Max)	19 - 39	14.7-38	17-32	18 - 31	18-34	18-32.8	18 - 32	17 - 36
		pH	7.2 – 8.5	7.1- 8.6	7.1-8.8	7.1-8.8	6.9-9	6 - 8.6	7.03 - 8.8	6.9 - 8.9
		Conductivity (µmhos/cm)	194 - 727	217 - 651	206 - 710	164 - 19452	12 - 693	96 - 817	91 - 4320	156 - 7580
		DO(mg/l)	4.8 - 11	6.2 - 9.9	5.8 - 13	1.3 - 11.7	5.8 - 10.2	6.4 - 9.4	1.3 - 9.6	6.16 - 8.9
		BOD(mg/l)	<1 - 5.4	<1 - 5	<1 - 7.9	<1 - 7.7	<1 - 14	<1 - 9	<1 - 8	<1 - 3
		Total Coliform (MPN/100 ml)	2 - 4600	2 - 17	3 - 30	2 - 2200	2 - 75	2 - 28	2 - 1400	2 - 170
		Faecal Coliform (MPN/100 ml)	4 - 11000	4 - 1600	5 - 900	4 - 9200	7 - 350	7 - 240	12 - 28000	2 - 1700
Godavari	1465	No of Monitoring locations	35	35	35	35	35	35	35	35
		Temp.(°C) (Min-Max)	12 - 40	18-40	17-38	19-38	18-30	14-41	16 - 35	12 - 36
		pH	5.4-8.9	6.4-9.1	6.51-9.3	6.4-9.8	6.8-9.2	6.9-8.9	5.7 - 9	6.5 - 8.9
		Conductivity (µmhos/cm)	91 - 1670	132 - 1959	113 - 2985	158 - 2075	162 - 1703	141 - 1632	139 - 2404	145 - 1840
		DO(mg/l)	1.8 - 14.2	1.2 - 12.2	NT - 12.6	2.6 - 7.4	NT - 7.5	2.2 - 8.4	3.7 - 8.2	NT - 8.6
		BOD(mg/l)	<1 - 60	<1 - 37	<1 - 40	<1 - 22	<1 - 28	<1 - 25	1 - 16	1.1 - 80
		Total Coliform (MPN/100 ml)	2 - 1600	2 - 500	2 - 1600	2 - 500	2 - 460	2 - 500	2 - 158	2 - 150
		Faecal Coliform (MPN/100 ml)	2 - 2400	7 - 2400	3 - 2700	22 - 21000	4 -2400	7 - 2400	7 - 3200	14 - 2400

Contd.

Statement 1.54 : Water Quality in Indian Rivers

Name of the River	Length (Km)	Year	2010	2011	2012	2013	2014	2015	2016	2017
Krishna	1401	No of Monitoring locations	24	23	25	25	24	24	24	24
		Temp.(°C) (Min-Max)	17 - 39	19.2 - 38	17 - 36	17 - 34	20 - 34	19 - 41	18 - 41	17 - 36
		pH	6.5 - 9.1	6.9 - 8.7	6.2 - 9.6	6.8 - 9.5	6.6 - 9.1	6.7 - 9.3	6.2 - 8.7	6.8 - 8.8
		Conductivity (µmhos/cm)	42 - 16720	99 - 8570	77 - 14140	108 - 2098	78 - 33200	91 - 37400	72 - 34700	85 - 34100
		DO(mg/l)	1.5 - 11.8	1.7 - 15.8	NT - 15	2.8 - 11.7	1.6 - 9.2	3.2 - 13.7	2.5 - 9.9	3.9 - 11.8
		BOD(mg/l)	<1 - 10	<1 - 16	<1 - 24	<1 - 14	<1 - 14	<1 - 12	<1 - 14	<1 - 9.5
		Total Coliform (MPN/100 ml)	2 - 1600	2 - 9000	2 - 900	2 - 1600	2 - 1600	2 - 1700	2 - 1100	2 - 1800
		Faecal Coliform (MPN/100 ml)	2 - 4000	4 - 16000	2 - 2700	12 - 1800	60 - 2200	2 - 2400	10 - 9000	13 - 3200
Cauvery	800	No of Monitoring locations	29	31	31	29	40	40	40	40
		Temp.(°C) (Min-Max)	21-30	20-34	20-37	16-35	19-35	13-35	20-36	18 - 35
		pH	6.5-8.9	4.3-8.9	6.6-9.1	6.2-9.4	6.2-8.9	6.1-9.4	6.8 - 9.4	6.5 - 9.2
		Conductivity (µmhos/cm)	18-8430	07-3640	05-4110	35-50400	32 - 29600	30-26800	54 - 47600	40 - 78500
		DO(mg/l)	0.4-12.2	1.7-10.9	1.3-12.9	NT - 19.7	NT -10.8	NT - 9.8	0.6 - 8.4	NT - 9.6
		BOD(mg/l)	<1 - 27	<1 - 7.2	<1 - 21.9	<1- 8.5	<1 - 58	<1- 25.1	<1- 16.8	<1- 32
		Total Coliform (MPN/100 ml)	20-12000	20-2200	2-11000	2 - 540000	26-28000000	45-22000	2 - 49000	40 - 27000
		Faecal Coliform (MPN/100 ml)	70-15000	90-6200	2-22000	2 -920000	49-35000000	52-54000	14-79000	140 - 47000
Mahanadi	851	No of Monitoring locations	22	23	23	23	23	23	23	26
		Temp.(°C) (Min-Max)	17-39	18-36	20-37	20-38	20-37	18-37.5	17-44	17 - 38
		pH	7.0 – 9.3	7.1–8.5	7.0-8.4	6.5-8.5	6.9-8.5	6.7-8.5	5.56-10	7.13 - 8.5
		Conductivity (µmhos/cm)	92 - 42350	90 - 13190	39-39030	21-34350	78 - 38730	140-33410	131 - 42170	27 - 41140
		DO(mg/l)	4.4-11	4.9 -10.5	4.0 -12.0	4.2 - 9.2	4.5-11.5	4.6 - 9.8	4.2 - 10.3	5.1 - 9.6
		BOD(mg/l)	<1– 14.3	<1 -3.6	<1- 4.9	<1- 4.2	<1- 3.9	<1- 4.2	<1- 8	<1- 3.5
		Total Coliform (MPN/100 ml)	45 - 92000	78-160000	5-156000	2-160000	2-160000	20-160000	13 - 160000	2 - 160000
		Faecal Coliform (MPN/100 ml)	10 - 160000	10- 160000	11-200000	8-160000	16-160000	22-160000	20 - 160000	2 - 160000

Contd.

Statement 1.54 : Water Quality in Indian Rivers

Name of the River	Length (Km)	Year	2010	2011	2012	2013	2014	2015	2016	2017
Brahamani	799	No of Monitoring locations	16	16	16	16	16	16	16	19
		Temp.(°C) (Min-Max)	17-37	15 - 38	19-37	19-39	14 - 42	10 - 39	13 - 44	15 - 35
		pH	6.6-8.5	6.7 - 8.5	64-8.5	6.4-8.6	6.9-8.4	6.8-8.6	6.5-9	6.5 - 8.4
		Conductivity (µmhos/cm)	97-623	93 - 458	99-363	104 - 429	110-502	117-412	88 - 363	91 - 406
		DO(mg/l)	5.6-12	5 - 9.9	5.2 - 12	5.1 - 11.7	5.2- 13.5	5.3-10.4	4 - 10.3	4.4 - 10.5
		BOD(mg/l)	<1 - 5.6	<1 - 6.6	<1 - 7	<1 - 5.6	<1 - 5.5	<1 -5.3	<1 - 5.8	<1 - 6
		Total Coliform (MPN/100 ml)	130-35000	170 - 35000	20-92000	45-160000	20-160000	20-160000	2 - 160000	2 - 160000
		Faecal Coliform (MPN/100 ml)	330-92000	330 - 92000	78-200000	45-160000	45-160000	78-160000	20 - 160000	20 - 160000
Baitarni	360	No of Monitoring locations	5	5	5	5	5	5	5	9
		Temp.(°C) (Min-Max)	18 - 36	15-36	19-37	15-37	10-37	10-37	13 - 40	15 - 41
		pH	6.6-8.3	7.1-8.4	7.1-8.4	7.0-8.5	6.8-8.4	6.5-8.4	7.1 - 8.4	7.2 - 8.4
		Conductivity (µmhos/cm)	98 - 33320	83- 32540	93-42560	88-52170	94-35200	107-34380	103 - 50910	77 - 43350
		DO(mg/l)	5.6 – 8.8	5.2-11.9	5.6-10	4.5-8.8	4.8-9	5.1-9.2	5 - 8.8	4.9 - 9.1
		BOD(mg/l)	<1– 2.6	<1- 3.2	<1 -2.8	<1 - 2.8	<1 - 3	<1 -2.9	<1 - 2.7	<1 - 2.8
		Total Coliform (MPN/100 ml)	210 - 5400	140 - 24000	130-11000	130-35000	45-160000	78-160000	45 - 24000	20 - 160000
		Faecal Coliform (MPN/100 ml)	470 - 16000	350 - 54000	230-17000	330 - 54000	45-160000	170-160000	230 - 160000	20 - 160000
Subarnarekha	395	No of Monitoring locations	12	12	12	6	1	6	11	11
		Temp.(°C) (Min-Max)	19-38	15-38	18-39	20-29	17-30	15-35	16 - 42	14 - 41
		pH	6.8-8.0	6.5-8.4	6-8.5	6.6-8.5	7.6-8.4	6.8-8.4	6.4 - 8.5	6.5 - 8.3
		Conductivity (µmhos/cm)	152-244	126-408	82-1211	127-472	133-320	172-402	123 - 411	154 - 402
		DO(mg/l)	5.9-8.2	3.0-8.6	3.6-8.4	6.8-8.4	7.4-8.4	5-8.7	3 -8.8	2.5 - 8.6
		BOD(mg/l)	<1- 2.8	<1 -7.0	<1- 8	<1- 4.2	<1- 2.9	<1- 3.4	<1- 8	<1- 10
		Total Coliform (MPN/100 ml)	-	110-15000	90-54000	220-4900	490-11000	78-3500	150 - 4900	130 - 16000
		Faecal Coliform (MPN/100 ml)	-	750-43000	640-92000	790-13000	2200-17000	230-9200	490 - 7900	330 - 54000

Contd.

Statement 1.54 : Water Quality in Indian Rivers

Name of the River	Length (Km)	Year	2010	2011	2012	2013	2014	2015	2016	2017
Brahmaputra	916	No of Monitoring locations	10	10	10	10	10	10	10	11
		Temp.(°C) (Min-Max)	18-32	17-32	17-32	16-31	15-33	16-38	14 - 34	17 - 32
		pH	6.5-8.1	6.1-8.5	6.6-8.1	6 - 8.5	6.2- 8	6.4-8.3	6.5 - 8.4	6.5 - 7.9
		Conductivity (µmhos/cm)	49-371	68-238	67-359	83 - 573	20 - 573	68 - 406	54 - 271	57 - 367
		DO(mg/l)	3.6-9.4	4.4-30	4.2-11	4.6 - 10.3	3.8 - 11.4	4.4 - 9.8	4.7 - 10.5	3.6 - 10.5
		BOD(mg/l)	<1 - 6.3	<1 - 9.2	<1 - 3.6	<1 - 4.1	<1- 3.4	<1- 3.5	<1- 4.8	<1 - 6.4
		Total Coliform (MPN/100 ml)	2 - 360	2 - 1500	20 - 910	2 - 2800	2 - 110000	2 - 240000	2 - 4300	2 -7500
		Faecal Coliform (MPN/100 ml)	2 - 3000	2 - 15000	2 - 2800	2 - 24000	2 - 240000	2 - 240000	360 - 120000	2 - 110000
Satluj	1078	No of Monitoring locations	23	23	23	22	22	22	23	27
		Temp.(°C) (Min-Max)	4 - 27	1.8-25	2.3-26.9	1 -32	4-31	5 - 27	8 - 33	5 - 35
		pH	4.2-8.6	6.8-8.69	6.8-8.7	6.3-8.9	6.6 - 9.7	7 - 8.7	6 - 8.7	6.7 - 8.5
		Conductivity (µmhos/cm)	155-982	87-1022	73-664	20-940	96 -1080	67 - 1096	125 - 894	92 - 1733
		DO(mg/l)	4.1-11.1	3.8-12	4 - 12	0.4 - 11.8	2.4 - 11	2.1 - 10.1	1 - 10	1 - 10
		BOD(mg/l)	<1- 40	<1- 32	<1 - 27	<1- 13	<1 -15	<1- 24	<1- 43	<1 - 108
		Total Coliform (MPN/100 ml)	2 - 50000	2 - 50000	4 -70000	11 - 22000	13 - 46000	12 - 43000	6 - 21000	2 - 210000
		Faecal Coliform (MPN/100 ml)	6 - 100000	4 - 90000	27 - 100000	22 - 50000	46 - 75000	33 - 64000	94 - 63000	17 - 380000
Beas	460	No of Monitoring locations	23	23	23	23	23	23	23	27
		Temp.(°C) (Min-Max)	5 - 26	2.5-24	2-29.5	1 - 32	1 - 24	1.5 - 25	5 - 27	4 - 30
		pH	6.2-8.8	6.5-8.87	6.6-7.9	6 - 9	6.8 - 9.1	6.7 - 9	6.5 - 8.7	6.6 - 8.7
		Conductivity (µmhos/cm)	63-548	49-638	47-513	29 - 472	41 - 488	60 - 607	59 - 502	27 - 548
		DO(mg/l)	5.8-11.2	5-12.5	3.8-12	4.5 - 12.1	5.6 - 12.2	5.1 - 13	5 - 12.8	5.2 - 11.4
		BOD(mg/l)	<1- 2.8	<1- 1.5	<1- 8.7	<1- 6	<1- 2.7	<1- 10	<1- 6	<1- 2.6
		Total Coliform (MPN/100 ml)	2 - 7000	2 - 920	11-900	14 - 2400	8 - 790	2-390	4 - 270	4 - 1700
		Faecal Coliform (MPN/100 ml)	7-39000	7 - 2800	34-1600	28 - 2400	23 - 1600	13 - 2400	46 - 790	58 -3500

BOD : Biological Oxygen Demand ; DO- Dissolved Oxygen.
(µmhos/cm) : Micromhos per centimeter; MPN: Most Probable Number
Source: Central Pollution Control Board.

Statement 1.55 : State-wise River Water Quality

Sl.No.	State	Dissolved Oxygen (mg/l)			pH			Conductivity (µmhos/cm)		
		MIN	MAX	MEAN	MIN	MAX	MEAN	MIN	MAX	MEAN
1	Andhra Pradesh	0	11.7	6.6	2	9.6	7.8	76	14920	641
2	Assam	0	18	7.2	5.8	8.1	7.2	43	868	193
3	Bihar	2.6	9.4	8.4	7.1	8.6	8	162	476	329
4	Chhattisgarh	0.8	8.5	7.3	7	8.8	7.7	85.5	755	258
5	Daman Diu	-	-	-	7.2	8.1	7.6	202	348	277
6	Delhi	0	10.5	2.6	7.1	8.3	7.7	230	1590	767
7	Goa	3.6	8.1	6.5	6.6	8	7.2	8.2	1370	118
8	Gujarat	0	12.8	6.1	6.8	8.9	8	138	55300	2627
9	Haryana	0.42	10.6	7.3	4.5	8.7	7.6	150	3640	665
10	Himachal Pradesh	2.2	13.3	8.8	7	8.7	7.8	53	1495	324
11	Jammu & Kashmir	1.8	9.8	7.5	6.7	8.8	7.6	163	548	247
12	Jharkhand	5.1	8.9	7.6	6	7.8	7	-	-	-
13	Karnataka	0.7	14	7.1	6	8.9	7.9	20	2400	482
14	Kerala	0	8	6.2	5.4	8.2	6.6	24	44000	923
15	Madhya Pradesh	0	16	7.1	6.8	10	7.8	104	9340	734
16	Maharashtra	0	9.9	5.8	5.8	8.9	7.6	44	55830	651
17	Manipur	3.8	9.6	7.2	6.5	8	7.4	141	735	404
18	Meghalaya	1.4	10	6.8	2.9	7.4	6.2	123	950	294
19	Mizoram	4.3	8.7	6.8	7.5	8.3	7.9	70	220	148
20	Nagaland	2.4	9.2	6.2	4.7	8.7	7.8	62	400	160
21	Odisha	3.4	9.7	7.7	6.7	8.5	7.8	17.4	48400	1384
22	Puducherry	6.6	7.6	7	6.7	8. 4	7.6	398	715	593
23	Punjab	1.2	8.9	6.2	6.5	7.9	7.4	162	1600	575
24	Rajasthan	3.2	7.8	5.7	7.2	8.7	8.1	250	880	453
25	Sikkim	8	12.5	10.8	6	7.2	6.6	210	290	255
26	Tamilnadu	0.6	9.3	6.9	5.7	8.8	7.4	42	28700	556
27	Tripura	4.2	6.9	5.8	7.1	8.1	7.6	110	180	141
28	Uttar Pradesh	0	20.6	6.7	7	9.5	7.9	122	8010	610
29	Uttarakhand	5.6	10.2	8.5	6.5	8.4	7.3	40	398	154
30	West Bengal	2.5	15.2	6.7	6.8	8.7	7.9	60	68700	1244

contd.

Statement 1.55: State-wise River Water Quality

Sl. No.	State	BOD (mg/l)			Total Coliform (MPN/100ml)			Fecal Coliform (MPN/100ml)		
		MIN	MAX	MEAN	MIN	MAX	MEAN	MIN	MAX	MEAN
1	Andhra Pradesh	0.1	50	2.7	3	28000	1888	0	800	44
2	Assam	0.3	32	1.9	1	240000	3816	0	24000	653
3	Bihar	1.7	2.9	2.3	700	90000	11707	300	50000	4823
4	Chhattisgarh	0.2	3.4	1.6	4	1100	110	0	0	0
5	Daman Diu	-	-	-	-	-	-	-	-	-
6	Delhi	1	70	19.9	19000	103000000	12024579	500	10900000	1256411
7	Goa	0.7	4.7	2	4	5400	511	2	1300	168
8	Gujarat	0.1	50	4.4	0	2100000	31885	0	460000	12567
9	Haryana	1	590	18.8	112000	6600000	804484	180	760000	76726
10	Himachal Pradesh	0.1	7.6	0.7	2	4400000	127730	0	430000	6349
11	Jammu & Kashmir	0.1	40	2.4	-	-	-	-	-	-
12	Jharkhand	0.4	10.5	2.9	750	2400	1516	110	930	287
13	Karnataka	0.1	7	1.7	1	160000	4791	0	90000	2031
14	Kerala	0.1	11	1.1	0	56000	2318	0	44000	1236
15	Madhya Pradesh	0.2	50	4.4	0	2400	349	0	280	7
16	Maharashtra	1.2	50	7.6	0	1800	439	0	1600	100
17	Manipur	-	-	-	5	415	101	-	-	-
18	Meghalaya	1	7.7	3.3	31	2200	552	23	1700	402
19	Mizoram	0.3	1.7	0.9	3	15	5	-	-	-
20	Nagaland	0.4	2.8	1.1	-	-	-	-	-	-
21	Odisha	0.4	6.4	1.9	630	1600000	18088	230	160000	6293
22	Puducherry	0	1	0.3	-	-		-	-	-
23	Punjab	0	50	9.9	35	2500000	81441	0	500000	13787
24	Rajasthan	0.1	6.2	1.7	4	210	32	3	14	4
25	Sikkim	2	3.8	2.8	80	350	238	40	220	118
26	Tamilnadu	0.1	23	1.7	21	5400	574	13	3500	375
27	Tripura	0.5	4	2.3	180	620	483	17	560	356
28	Uttar Pradesh	1	364	9.2	160	140000000	1808500	20	1790000	90302
29	Uttarakhand	0.9	7.6	1.8	0	10100000	559977	1	380000	27016
30	West Bengal	0	6.8	2.3	540	1400000	139135	280	850000	62013

Source: Central Pollution Control Board (2009)
Note : BOD : Bio chemical Oxygen demand
(µmhos/cm) : Micromhos per centimeter; MPN: Most Probable Number

Statement 1.56 : State-wise habitations with quality-affected groundwater

(As on 01/04/2017)

S. No.	State	Contamination Wise Number Of Habitations & Population													
		Total		Flouride		Arsenic		Iron		Salinity		Nitrate		Heavy Metal	
		Habitations	Population	Habitations	Population	Habitations	Population	Habitations	Population	Habitations	Population	Habitations	Population	Habitations	Population
1	Andaman & Nicobar	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Andhra Pradesh	424	322373	352	229458	0	0	1	2729	65	76308	6	13878	0	0
3	Arunachal Pradesh	31	5690	0	0	0	0	31	5690	0	0	0	0	0	0
4	Assam	11048	4161395	291	116222	4523	1702450	6227	2338030	0	0	0	0	7	4693
5	Bihar	4240	4851425	901	1102329	877	1329866	2462	2419230	0	0	0	0	0	0
6	Chhattisgarh	1181	309703	406	131631	20	7385	743	167830	2	753	10	2104	0	0
7	Goa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Gujarat	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Haryana	128	310424	119	296751	0	0	0	0	9	13673	0	0	0	0
10	Himachal Pradesh	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Jammu & Kashmir	17	36275	5	10576	0	0	12	25699	0	0	0	0	0	0
12	Jharkhand	3092	1171006	610	339307	102	92270	2372	736183	0	0	5	2277	0	0
13	Karnataka	1265	1010552	745	529326	4	3221	92	76359	45	39614	378	361900	1	132
14	Kerala	399	934997	68	198250	0	0	201	459685	98	194505	32	82557	0	0
15	Madhya Pradesh	190	86375	174	75849	0	0	5	1387	11	9139	0	0	0	0
16	Maharashtra	293	564780	82	157133	0	0	18	31782	96	148633	97	227232	0	0
17	Manipur	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Meghalaya	32	10637	0	0	0	0	32	10637	0	0	0	0	0	0
19	Mizoram	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	Nagaland	43	21597	0	0	0	0	43	21597	0	0	0	0	0	0
21	Odisha	3077	1002292	106	30205	0	0	2587	851536	384	120551	0	0	0	0
22	Puducherry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Punjab	3743	4531558	310	372072	752	949204	292	254975	16	12577	151	173470	2222	2769260
24	Rajasthan	20643	8466380	6695	4559725	0	0	5	4123	12800	3031188	1143	871344	0	0
25	Sikkim	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	Tamil Nadu	198	95765	0	0	0	0	176	87290	22	8475	0	0	0	0
27	Telangana	1392	1997079	1028	1415235	0	0	36	48492	183	314792	145	218560	0	0
28	Tripura	2583	1225904	0	0	0	0	2583	1225904	0	0	0	0	0	0
29	Uttar Pradesh	1379	1325148	179	310011	748	573767	362	374055	80	47203	10	20112	0	0
30	Uttarakhand	16	78893	0	0	0	0	13	66083	0	0	3	12810	0	0
31	West Bengal	19310	19477602	1421	963129	11232	12359770	5875	5595109	506	393789	0	0	276	165805
Total		**74724**	**51997850**	**13492**	**10837209**	**18258**	**17017933**	**24168**	**14804405**	**14317**	**4411200**	**1980**	**1986244**	**2506**	**2939890**

Source : www.indiawater.nic.in (Report retrieved on 15.02.2018)

Statement 1.57 : Sea Water Quality

(a) : Coastal Water Quality - Biochemical Oxygen Demand(BOD)

Unit - mg/l

State	Location	Upto 2 kms			Upto 5 kms			All Distances		
		Min	Mean	Max	Min	Mean	Max	Min	Mean	Max
Gujarat	Vadinar	0.32	1.90	6.02	0.12	1.88	6.02	0.10	1.58	6.02
Gujarat	Veraval	0.06	2.66	110.00	0.06	2.66	110.00	0.00	2.10	110.00
Gujarat	Hazira	0.00	2.85	19.10	0.00	2.72	19.10	0.00	2.56	19.10
Maharashtra	Mumbai	0.00	2.00	9.92	0.00	2.00	9.92	0.00	1.90	9.92
Maharashtra	Worli	0.60	2.85	6.97	0.60	2.85	6.97	0.60	2.85	6.97
Maharashtra	Ratnagiri	0.20	1.90	20.50	0.13	1.58	20.50	0.00	1.54	20.50
Maharashtra	Malvan	0.32	2.26	6.41	0.32	2.26	6.65	0.32	2.26	6.65
Goa	Mandovi	0.00	0.99	5.56	0.00	0.99	5.56	0.00	0.99	5.56
Goa	Zuari	0.01	0.68	2.09	0.01	0.66	2.09	0.01	0.66	2.09
Kerala	Kochi	0.65	1.72	4.47	0.31	1.56	4.68	0.07	1.39	5.20
Lakshadweep	Kavaratti	0.56	1.39	2.48	0.36	1.23	2.48	0.36	1.19	2.48
Karnataka	Mangalore	0.01	1.58	3.64	0.01	1.40	4.25	0.01	1.35	4.40
Tamilnadu	Tuticorin	0.03	2.31	46.40	0.02	2.22	46.40	0.02	2.21	56.00
Tamilnadu	Ennore	1.42	0.00	20.20	1.36	0.00	20.20	1.33	0.00	20.20
Puducherry	Puducherry	0.05	1.58	14.80	0.05	1.49	14.80	0.05	1.51	14.80
Andaman & Nicobar Islands	Port Blair	0.00	1.19	5.21	0.00	1.19	5.21	0.00	1.19	5.21
Andhra Pradesh	Visakhapatnam	0.01	10.80	212.00	0.01	9.74	212.00	0.01	9.38	212.00
Andhra Pradesh	Kakinada	0.00	1.78	8.30	0.00	1.74	8.30	0.00	1.72	8.30
Odisha	Mahanadi	2.00	0.08	5.54	1.89	0.06	5.54	1.83	0.06	5.54
Odisha	Paradip	0.11	1.90	5.17	0.11	1.75	5.17	0.11	1.75	5.17
Odisha	Dhamra	0.32	2.18	4.85	0.11	2.02	4.85	0.11	1.93	4.85
West Bengal	Sandheads	0.74	2.29	4.49	0.74	2.30	4.49	0.10	2.04	4.49
West Bengal	Hooghly	0.23	1.89	5.96	0.23	1.89	5.96	0.23	1.89	5.96

Source: ICMAM Project Directorate

Statement 1.57 : Sea Water Quality
(b) : Coastal Water Quality - Dissolved Oxygen(DO)

Unit - mg/l

State	Location	Upto 2 kms			Upto 5 kms			All Distances		
		Min	Mean	Max	Min	Mean	Max	Min	Mean	Max
Gujarat	Vadinar	3.23	6.72	8.49	1.94	6.65	8.49	1.94	6.72	9.54
Gujarat	Veraval	0.00	2.88	8.44	0.00	2.88	8.44	0.00	5.11	16.00
Gujarat	Hazira	0.20	6.00	9.44	0.20	6.08	9.44	0.20	6.14	9.44
Maharashtra	Mumbai	0.60	5.20	10.10	0.49	5.39	10.80	0.49	5.49	10.80
Maharashtra	Worli	1.58	5.76	8.00	1.58	5.76	8.00	1.58	5.76	8.00
Maharashtra	Ratnagiri	0.64	6.34	11.09	0.34	6.21	11.09	0.34	6.11	11.09
Maharashtra	Malvan	1.27	6.59	8.24	1.27	6.46	8.24	1.27	6.46	8.24
Goa	Mandovi	0.22	5.17	8.67	0.22	5.18	8.93	0.22	5.18	8.93
Goa	Zuari	2.46	5.24	8.38	2.46	5.19	8.38	2.46	5.19	8.38
Kerala	Kochi	2.10	4.96	8.47	1.20	4.87	8.67	1.20	4.84	8.80
Lakshadweep	Kavaratti	2.50	5.02	8.54	2.50	4.74	8.54	2.50	4.68	8.54
Karnataka	Mangalore	1.82	5.08	8.42	1.82	5.05	8.42	1.82	5.03	8.42
Tamilnadu	Tuticorin	0.80	4.91	8.08	0.80	4.92	8.08	0.12	5.00	8.08
Tamilnadu	Ennore	4.97	0.16	8.39	5.04	0.16	8.39	5.04	0.16	8.40
Puducherry	Puducherry	0.65	5.00	7.74	0.65	5.04	8.14	0.65	5.10	9.08
Andaman Nicobar Islands	Port Blair	2.88	6.15	9.32	2.88	6.15	9.32	2.88	6.15	9.32
Andhra Pradesh	Visakhapatnam	0.11	5.13	14.24	0.11	5.21	14.24	0.11	5.22	14.24
Andhra Pradesh	Kakinada	0.06	5.69	11.43	0.06	5.71	11.43	0.06	5.75	11.43
Odisha	Mahanadi	7.16	4.03	10.25	7.12	4.03	10.25	7.09	4.03	10.25
Odisha	Paradip	1.73	6.76	9.73	1.00	6.71	9.73	1.00	6.71	9.73
Odisha	Dhamra	2.57	6.97	11.00	2.57	6.93	11.00	2.57	6.95	11.00
West Bengal	Sandheads	5.02	7.28	10.65	5.02	7.09	10.65	5.02	7.12	10.65
West Bengal	Hooghly	3.00	7.07	9.00	3.00	6.96	9.00	3.00	6.93	9.00

Source: ICMAM Project Directorate

Statement 1.57 : Sea Water Quality
(c) : Coastal Water Quality - Total Nitrogen (TN)

Unit -µ mol/l

State	Location	Upto 2 kms			Upto 5 kms			All Distances		
		Min	Mean	Max	Min	Mean	Max	Min	Mean	Max
Gujarat	Vadinar	19.90	82.13	139.53	7.90	79.88	139.53	7.90	78.54	139.53
Gujarat	Veraval	7.90	124.98	2381.90	7.90	124.98	2381.90	2.90	90.63	2381.90
Gujarat	Hazira	16.70	144.70	613.60	9.40	139.52	613.60	7.10	135.26	613.60
Maharashtra	Mumbai	7.80	346.12	867.34	7.80	336.62	867.34	3.00	281.10	867.34
Maharashtra	Worli	60.11	342.57	672.70	52.54	336.92	672.70	52.54	336.92	672.70
Maharashtra	Ratnagiri	1.49	48.74	631.67	1.25	40.96	631.67	1.25	37.67	631.67
Maharashtra	Malvan	5.41	50.74	92.22	5.41	51.21	93.31	5.41	51.21	93.31
Goa	Mandovi	2.09	15.80	78.88	2.09	15.31	79.90	2.09	15.31	79.90
Goa	Zuari	3.31	15.92	56.50	3.31	15.73	56.50	3.31	15.73	56.50
Kerala	Kochi	1.00	21.37	116.00	0.46	19.03	116.00	0.38	17.24	116.00
Lakshadweep	Kavaratti	0.44	9.13	44.07	0.44	7.55	44.07	0.44	6.86	44.07
Karnataka	Mangalore	1.81	17.55	54.72	1.81	15.87	54.72	1.81	14.92	54.72
Tamilnadu	Tuticorin	1.94	21.15	644.00	0.39	21.31	758.00	0.39	22.80	758.00
Tamilnadu	Ennore	24.97	3.10	540.42	23.60	0.87	540.42	23.46	0.46	540.42
Puducherry	Puducherry	1.86	20.65	127.40	1.58	20.66	127.40	1.58	20.93	127.40
Andaman Nicobar Islands	Port Blair	0.33	14.48	102.52	0.33	14.48	102.52	0.33	14.48	102.52
Andhra Pradesh	Visakhapatnam	1.78	82.43	658.00	1.37	76.00	658.00	1.37	73.39	658.00
Andhra Pradesh	Kakinada	0.89	63.03	792.00	0.89	58.09	792.00	0.89	54.89	792.00
Odisha	Mahanadi	39.91	2.85	150.00	39.98	2.85	150.00	39.77	2.85	150.00
Odisha	Paradip	1.34	35.10	227.56	1.34	34.25	227.56	1.34	34.25	227.56
Odisha	Dhamra	10.40	35.47	72.09	10.40	35.79	94.83	10.40	35.51	94.83
West Bengal	Sandheads	1.92	34.83	153.69	1.92	41.57	179.29	1.92	44.16	179.29
West Bengal	Hooghly	11.86	60.24	166.57	11.86	63.68	228.86	8.71	63.76	228.86

Source: ICMAM Project Directorate

Statement 1.57 : Sea Water Quality

Table (d) : Coastal Water Quality - Total Phosphorus (TP)

Unit -µ mol/l

State	Location	Upto 2 kms			Upto 5 kms			All Distances		
		Min	Mean	Max	Min	Mean	Max	Min	Mean	Max
Gujarat	Vadinar	0.50	2.42	8.88	0.50	2.43	9.32	0.50	2.57	10.61
Gujarat	Veraval	0.44	4.70	147.98	0.44	4.70	147.98	0.40	2.82	147.98
Gujarat	Hazira	1.50	3.82	11.54	1.40	3.81	11.54	1.20	3.73	11.54
Maharashtra	Mumbai	0.50	5.22	44.20	0.50	4.72	44.20	0.50	4.22	44.20
Maharashtra	Worli	1.38	4.14	11.77	1.38	4.12	11.77	1.38	4.12	11.77
Maharashtra	Ratnagiri	0.44	1.39	19.45	0.30	1.37	19.45	0.20	1.39	19.45
Maharashtra	Malvan	0.69	1.67	5.48	0.69	1.64	5.48	0.69	1.64	5.48
Goa	Mandovi	0.17	1.90	23.71	0.17	1.91	23.71	0.17	1.91	23.71
Goa	Zuari	0.19	2.21	16.84	0.19	2.24	16.84	0.19	2.24	16.84
Kerala	Kochi	0.16	2.79	47.60	0.16	2.68	47.60	0.16	2.59	47.60
Lakshadweep	Kavaratti	0.13	1.47	5.86	0.11	1.54	5.86	0.11	1.54	5.86
Karnataka	Mangalore	0.42	2.33	8.91	0.25	2.07	8.91	0.23	1.99	8.91
Tamilnadu	Tuticorin	0.04	1.95	5.83	0.02	1.85	13.38	0.02	1.84	13.38
Tamilnadu	Ennore	2.83	0.02	67.14	2.69	0.02	67.14	2.69	0.02	67.14
Puducherry	Puducherry	0.20	2.35	12.88	0.20	2.25	12.88	0.13	2.20	12.88
Andaman Nicobar Islands	Port Blair	0.00	2.06	17.35	0.00	2.06	17.35	0.00	2.06	17.35
Andhra Pradesh	Visakhapatnam	0.05	29.46	446.00	0.05	25.45	446.00	0.05	24.11	446.00
Andhra Pradesh	Kakinada	0.05	7.48	135.00	0.05	6.82	135.00	0.05	6.35	135.00
Odisha	Mahanadi	10.52	0.58	80.62	10.38	0.58	80.62	9.87	0.45	80.62
Odisha	Paradip	0.32	5.18	125.62	0.29	4.98	125.62	0.29	4.98	125.62
Odisha	Dhamra	0.26	5.21	187.00	0.26	4.85	187.00	0.26	4.72	187.00
West Bengal	Sandheads	0.84	2.91	22.50	0.55	3.15	22.50	0.55	3.40	22.50

Source: ICMAM Project Directorate

Environmental Resources and their Use

- ★ Stock & changes of mineral & energy resources
- ★ Production, trade & consumption of energy
- ★ Forest land & timber resources
- ★ Production of farm and livestock products
- ★ Consumption of fertilizers and water resources.

Table 2.01 : Mineral Reserves and Resources

Sl. No.	Minerals/ Metal	Unit	As on 01.04.2005			As on 01.04.2010			As on 01.04.2015		
			Reserves	Remaining Resources	Total Reserves	Reserves	Remaining Resources	Total Reserves	Reserves	Remaining Resources	Total Reserves
1	Alexandrite	-	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.
2	Andalusite	'000 tonnes	0	18450	18450	-	18,450	18,450	0	28,201	28,201
3	Antimony										
	Ore	tonne	0	10588	10588	-	10,588	10,588	0	10,588	10,588
	Metal	tonne	0	174	174	-	174	174	0	174	174
4	Apatite	tonne	6145575	20719133	26864708	2,090,216	22,138,530	24,228,746	29,395	24,016,082	24,045,477
5	Asbestos	tonne	6040544	15695817	21736361	2,510,841	19,655,762	22,166,603	24,633	22,922,751	22,947,384
6	Ball clay	tonne	32529793	46761403	79291196	16,777,842	66,615,662	83,393,504	49,493,621	85,249,716	134,743,337
7	Barytes	tonne	34312780	39890567	74203347	31,584,128	41,149,746	72,733,874	51,346,825	35,323,825	86,670,650
8	Bauxite	'000 tonnes	899384	2390432	3289817	592,938	2,886,682	3,479,620	656,422	3,240,442	3,896,864
9	Bentonite	tonne	25060508	505512898	530573406	25,060,508	543,306,838	568,367,346	14,585,633	568,302,781	582,888,414
10	Borax	tonne	0	74204	74204	-	74,204	74,204	0	74,204	74,204
11	Calcite	tonne	6742030	15831937	22573967	2,664,338	18,281,110	20,945,448	3,448,867	19,555,082	23,003,949
12	Chalk	'000 tonnes				4,332	585	4,917	5,064	1,687	6,751
13	China clay	'000 tonnes	222121	2373540	2595661	177,158	2,528,049	2,705,207	229,469	2,711,777	2,941,247
14	Chromite	'000 tonnes	66128	146935	213063	53,970	149,376	203,346	102,210	241,806	344,016
15	Cobalt (Ore)	million tonnes	0	44.91	44.91	-	44.91	44.91	0	45	45
16	Copper										
	Ore	'000 tonnes	369493	1024934	1394427	394,372	1,164,086	1,558,458	207,767	1,303,730	1,511,498
	Metal	'000 tonnes	4383.97	7033.75	11417.72	4,768.33	7,518.34	12,286.67	2,734.62	9,423.53	12,158.15
17	Corundum	tonne	605	83190	83795	597	740,194	740,792	200	293,497	293,697
18	Diamond	carats	1205577	3376336	4581913	1,045,318	30,876,432	31,921,750	959,659	30,876,432	31,836,091
19	Diaspore	tonne	3125032	2212361	5337393	2,859,674	3,125,144	5,984,818	7,882,434	2,310,817	10,193,251
20	Diatomite	'000 tonnes	634	2251	2885	-	2,885	2,885	0	2,885	2,885
21	Dolomite	'000 tonnes	985156	6547952	7533108	738,185	6,992,372	7,730,557	677,884	7,737,007	8,414,891
22	Dunite	'000 tonnes	128074	39855	167929	17,137	168,232	185,369	12,768	175,049	187,818
23	Emerald	kilogram				N. E.	N. E.	N. E.	0	55,869	55,869

Contd.

Table 2.01 : Mineral Reserves and Resources

Sl. No.	Minerals/ Metal	Unit	As on 01.04.2005			As on 01.04.2010			As on 01.04.2015		
			Reserves	Remaining Resources	Total Reserves	Reserves	Remaining Resources	Total Reserves	Reserves	Remaining Resources	Total Reserves
24	Feldspar	tonne	38049836	52731827	90781663	44,503,240	87,832,212	132,335,452	319,841,612	313,725,741	633,567,353
25	Fire clay	'000 tonnes	59301	645462	704763	30,104	683,415	713,519	27,037	695,791	722,829
26	Fluorite	tonne	9213831	10951838	20165669	4,712,316	13,501,588	18,213,904	288,684	17,893,423	18,182,107
27	Fuller's Earth	tonne	58200	256593879	256652079	58,200	256,593,879	256,652,079	3,941,000	257,437,959	261,378,959
28	Garnet	tonne	20975605	36680028	57655633	19,324,793	37,638,032	56,962,824	12,783,856	43,377,166	56,161,022
29	Gold										
	Ore (Primary)	tonne	19253951	371035286	390289237	24,124,537	469,570,375	493,694,912	17,228,174	484,611,458	501,839,632
	Metal (Primary)	tonne	85.12	405.69	490.81	110.54	549.3	659.84	70.09	584.65	654.74
	Ore (Placer)	tonne	0	26121000	26121000	-	26,121,000	26,121,000	0	26,121,000	26,121,000
	Metal (Placer)	tonne	0	5.86	5.86	-	5.86	5.86	0	5.86	5.86
30	Granite (Dimen. stone)	000 cubic meter	1130024	36295977	37426001	263,692	45,966,608	46,230,300	263,692	46,056,098	46,319,790
31	Graphite	tonne	10750	158025	168775	8,031,864	166,817,781	174,849,645	7,960,793	186,925,987	194,886,779
32	Gypsum	'000 tonnes	68658	1168218	1236876	39,096	1,247,402	1,286,498	36,621	1,292,892	1,329,513
33	Iron Ore (Haematite)	'000 tonnes	7004168	7626219	14630387	8,093,546	9,788,551	17,882,097	5,421,751	17,065,214	22,486,965
34	Iron Ore (Magnetite)	'000 tonnes	58503	10560978	10619481	21,755	10,622,305	10,644,060	52,699	10,736,455	10,789,155
35	Kyanite	tonne	1374191	101239031	102613222	1,574,853	101,670,767	103,245,620	688,079	104,293,480	104,981,559
36	Laterite	'000 tonnes				24,714	446,119	470,833	124,733	581,819	706,552
37	Lead-Zinc										
	Ore	'000 tonnes	125754	396826	522580	108,980	576,615	685,595	106,116	643,343	749,459
	Lead Metal	'000 tonnes	2590.55	4616.7	7207.25	2,245.01	9,304.38	11,549.39	2,482.34	10,521.36	13,003.70
	Zinc Metal	'000 tonnes	11092.89	13166.79	24259.68	12,453.26	24,211.64	36,664.90	9,999.52	26,363.24	36,362.76
	Lead + Zinc Metal	'000 tonnes	0	118.45	118.45	0	118.45	118.45	0	143.13	143.13
38	Limestone	'000 tonnes	12715	162630	175345	14,926,392	170,008,720	184,935,112	16,335,753	186,888,998	203,224,752

Contd.

Table 2.01 : Mineral Reserves and Resources

Sl. No.	Minerals/ Metal	Unit	As on 01.04.2005			As on 01.04.2010			As on 01.04.2015		
			Reserves	Remaining Resources	Total Reserves	Reserves	Remaining Resources	Total Reserves	Reserves	Remaining Resources	Total Reserves
39	Magnesite	'000 tonnes	76133	261749	337882	41,950	293,222	335,172	82,276	311,711	393,988
40	Manganese Ore	'000 tonnes	138151	240418	378569	141,977	288,003	429,980	93,475	402,399	495,874
41	Marble	'000 tonnes	4700	1787938	1792638	276,495	1,654,968	1,931,463	4,551	1,941,341	1,945,891
42	Marl	tonne				139,976,150	11,704,870	151,681,020	123,855,856	11,704,870	135,560,726
43	Mica	kilogram	68569843	325285576	393855419	190,741,448	341,495,531	532,236,979	114,432,777	520,869,364	635,302,141
44	Molybdenum										
	Ore	tonne	1500000	17786732	19286732	-	19,286,732	19,286,732	0	19,371,698	19,371,698
	Contained MoS_2	tonne	1050	11590	12640	-	12,640	12,640	0	12,668.37	12,668.37
45	Nickel Ore	million tonnes	0	188710	188710	-	189	189	0	189	189
46	Ochre	tonne	47867858	45573436	93441294	54,942,176	89,319,089	144,261,265	36,933,805	130,859,201	167,793,006
47	Perlite	'000 tonnes	504	1385	1889	428	1,978	2,406	0	2,406	2,406
48	Platinum gp. of metals (PGM)	tonnes of metal contained	0	14.2	14.2	-	15.7	15.7	0	15.71	15.71
49	Potash	million tonnes	0	21815	21815	-	21,816	21,816	0	22,508	22,508
50	Pyrite	'000 tonnes	56726	1617675	1674401	-	1,674,401	1,674,401	0	1,674,401	1,674,401
51	Pyrophyllite	tonne	19489617	14205319	33694936	23,275,451	32,807,451	56,082,902	24,932,958	34,682,745	59,615,703
52	Quartz-Silica Sand	'000 tonnes	771508	2466703	3238211	429,223	3,069,808	3,499,031	647,528	3,260,420	3,907,948
53	Quartzite	'000 tonnes	98544	1046413	1144957	86,599	1,164,649	1,251,248	83,472	1,575,325	1,658,798
54	Rare Earth Elements (REE)	tonne							0	25,493	25,493
55	Rock Phosphate	tonne	52723492	252585084	305308576	34,778,650	261,505,701	296,284,351	45,807,485	266,871,130	312,678,615
56	Rock Salt	'000 tonnes	13530	0	13530	16,026	-	16,026	0	16,025	16,025
57	Ruby	kilogram	1925.1	3345364	5270.74	236	5,112	5,348	0	5,349	5,349
58	Sapphire	kilogram	0	450	450	-	450	450	0	450	450

Contd.

Table 2.01 : Mineral Reserves and Resources

Sl. No.	Minerals/ Metal	Unit	As on 01.04.2005			As on 01.04.2010			As on 01.04.2015		
			Reserves	Remaining Resources	Total Reserves	Reserves	Remaining Resources	Total Reserves	Reserves	Remaining Resources	Total Reserves
59	Shale	'000 tonnes				15,331	580	15,911	15,472	3,781	19,253
60	Sillimanite	tonne	11423994	62915875	74339869	4,085,052	62,902,385	66,987,437	6,502,115	63,702,027	70,204,142
61	Silver										
	Ore	tonne	115912738	128720729	244633467	187,558,668	279,426,291	466,984,959	150,443,903	361,510,732	511,954,635
	Metal	tonne	6058.33	4154.29	10212.62	8,039.57	19,588.68	27,628.25	7,171.94	22,809.88	29,981.82
62	Slate	'000 tonnes				0	2,369	2,369	20,286	2,586	22,872
63	Sulphur (Native)	'000 tonnes	0	210	210	-	210	210	0	210	210
64	Talc-Steatite-Soapstone	'000 tonnes	115526	196810	312335	90,026	178,996	269,022	106,490	209,434	315,924
65	Tin										
	Ore	tonne	249497	86302812	86552310	7,131	83,719,066	83,726,197	4,419	83,720,749	83,725,168
	Metal	tonne	134.08	101103.02	101237.1	1,132.43	101,142.41	102,274.84	154.2	102,259.16	102,413.36
66	Titanium	tonne	25148538	363239828	388388366	22,030,223	371,965,694	393,995,917	14,420,716	399,204,829	413,625,545
67	Tungsten										
	Ore	tonne	0	87387464	87387464	-	87,387,464	87,387,464	0	87,387,464	87,387,464
	Contained WO3	tonne	0	142094.35	142094.35	-	142,094.35	142,094.35	0	142,094.35	142,094.35
68	Vanadium										
	Ore	tonne	6318663	18529225	24847888	410,955	24,307,933	24,718,888	0	24,633,855	24,633,855
	Contained V2O3	tonne	10769.78	54620.49	65390.27	1,602.72	63,284.45	64,887.17	0	64,594.01	64,594.01
69	Vermiculite	tonne	1763630	674631	2438261	1,704,007	803,003	2,507,010	1,632,885	719,582	2,352,467
70	Wollastonite	tonne	8533311	11708312	20241623	2,487,122	14,082,751	16,569,873	2,241,462	14,227,824	16,469,286
71	Zircon	tonne	3705912	569748	4275660	1,347,470	1,786,482	3,133,952	1,158,290	2,264,913	3,423,203

Source: National Mineral Inventry, Indian Bureau of Mines, Nagpur

N.E. - Not Estimated

Statement 2.02: Production of Minerals

Sl. No.	Minerals	Unit	2005-06	2010-11	2014-15	2015-16	2016-17(p)
1	2	3	4	5	6	7	8
Fuel Minerals							
1	Coal	Thousand Tonnes	407039	532694	609200	639230	660402
2	Lignite	Thousand Tonnes	30066	37733	48300	43842	45124
3	Natural Gas (Ut.)	M.C.M.	32202	52222	33656	32249	30866
4	Petroleum (Crude)	Thousand Tonnes	32190	37712	37461	36950	36009
Metallic Minerals							
5	Bauxite	Tonne	12595803	12640785	22493671	28123789	24664632
6	Chromite	Tonne	3714284	4262207	2164163	2915584	3727777
7	Copper Ore	Tonne	2642706	3615038	3505348	3907823	3846427
8	Copper Conc.	Tonne	125392	136856	10604	151837	134788
9	Gold Ore	Tonne	479353	727020	447278	562956	582280
10	Gold (Primary)	Kg.	2880	2239	1441	1323	1594
12	Iron Ore (Total)	Thousand Tonnes	165230	207998	129321	158108	192081
13	Lead & Zinc Ore	Tonne	4801184	7489693	9362659	10453038	11881236
14	Lead Conc.	Tonne	95738	145043	197668	261857	268051
15	Zinc Conc.	Tonne	889007	1420105	1489374	1473811	148245
16	Manganese Ore	Tonne	1906353	2881080	2369481	2166947	2393182
17	Silver	Kg.	27961	148288	327647	426443	460811
18	Tin Conc.	Kg.	98734	61355	24685	13541	12120
Non-Metallic Minerals							
19	Agate#	Tonne	9	19	0	0	0
20	Apatite	Tonne	9053	3846	930	110	0
21	Phosphorite	Tonne	-	2097490	1607215	3759071	3894738
22	Asbestos	Tonne	2323	268	0	0	0
23	Ball Clay#	Tonne	406675	958454			
24	Barytes#	Tonne	1156227	2333805			
25	Calcite#	Tonne	73558	39370			
26	Chalk#	Tonne	148352	174914			
27	Clay (Others)#	Tonne	805765	590702			
28	Diamond	Carat	44170	19774	36107	36044	36516
29	Diaspore#	Tonne	24494	26905			
30	Dolomite#	Tonne	4750512	5064875			
31	Dunite#	Tonne	36621	18591			
32	Felspar#	Tonne	426498	472041			
33	Fireclay#	Tonne	535735	571421			

Contd.

Statement 2.02: Production of Minerals

Sl. No.	Minerals	Unit	2005-06	2010-11	2014-15	2015-16	2016-17(p)
1	2	3	4	5	6	7	8
34	Felsite#	Tonne	981	1670			
35	Fluorite (Graded)	Tonne	5577	59954	2946	2333	1175
36	Flint Stone	Tonne			244	253	26
37	Garnet (Abrasive)	Tonne	674541	2126337	91394	82001	85411
38	Graphite (R.O.M.)	Tonne	125651	115697	116712	135528	122437
39	Gypsum#	Tonne	3291478	4918170			
40	Kaolin#	Tonne	1335744	2727946			
41	Kyanite	Tonne	8869	5954	6255	2901	3254
42	Sillimanite	Tonne	33119	48784	66025	69942	68137
43	Laterite#	Tonne	1040816	1220304			
44	Limestone	Thousand Tonnes	170029	246336	292810	307001	313196
45	Lime Kankar#	Tonne	291926	383817			
46	Limeshell	Tonne	110296	30410	16353	10353	12343
47	Magnesite	Tonne	340674	235762	285009	327663	299167
48	Marl	Tonne	-	4399379	2179488	2389707	2203701
49	Mica (Crude)#	Tonne	2115797	1333			
50	Mica (Waste & Scrap)**#	Tonne	4754362	7311			
51	Ochre #	Tonne	1007088	1218261			
52	Pyrophyllite#	Tonne	182526	240082			
53	Quartz#	Tonne	302259	497546			
54	Quartzite#	Tonne	109210	118177			
55	Silica Sand#	Tonne	2369977	3380968			
56	Moulding Sand	Tonne			6383	26042	27686
57	Sand (Others)#	Tonne	2277632	2057119			
58	Shale#	Tonne	2683853	3081622			
59	Slate#	Tonne	2527	-			
60	Steatite#	Tonne	681534	6728			
61	Selenite	Tonne	0	6736	207	3103	4327
62	Sulphur***	Tonne	152090	236998	429258	441153	527539
63	Vermiculite	Tonne	6674	19234	19336	23279	6543
64	Wollastonite	Tonne	128582	183381	186524	175348	166186

Source : MSMP March 2017 & earlier publication, Indian Bureau of Mines
Note : Excluding Atomic and Minor Minerals
(p): Provisional
- not available
** Includes mine waste and waste obtained while dressing of crude mica at the mine site.
*** Obtained as by-product from fertilizer plants and oil refineries.
# Data for 2014-15 onwards is not available as these minerals have been declared as minor minerals vide notification dated 10.02.2015.

Statement 2.03 : Import of Ores and Minerals

(Value in Rs.'000)

Mineral	Unit	2013-14		2014-15		2015-16(p)	
		Quantity	Value	Quantity	Value	Quantity	Value
All Minerals	tonne	*	12158267979	*	10717327996	*	7387889416
Abrasive (natural)	tonne	4312	56954	5775	80934	4943	63748
Alabaster	tonne	877	23975	912	24831	970	24062
Alumina	tonne	1169523	27542194	790305	21244790	998446	22924844
Andalusite	tonne	8738	187621	9350	201731	14072	306082
Antimony ores & conc.	tonne	3464	888707	4711	1004076	5330	924221
Arsenic sulphide (natural)	tonne	8	576	31	2041	5	297
Asbestos: Total	tonne	285870	13298986	396493	17168105	355686	14865511
Ball clay	tonne	130804	915231	125384	957636	167856	1298485
Barytes	tonne	5687	144378	7484	146614	8433	189198
Bauxite	tonne	421612	3662474	1800689	8560886	1116010	5982901
Bentonite	tonne	6071	201663	11002	316055	15225	353710
Borax: Total	tonne	112775	3551233	146301	4474017	133551	4429452
Building and monumental stones NES	tonne	958905	1147451	759539	1438610	521202	1138893
Calcite	tonne	75863	427442	66450	369703	43812	219917
Chalk	tonne	17172	108515	26734	47715	6174	46310
Chromite: Total	tonne	261336	3099722	242685	2871479	187663	2266406
Clay (others)	tonne	17016	256640	14347	231877	19485	266435
Coal (excl. lignite)	'000 tonnes	166861	923353960	212106	1045300819	204000	861073457
Coal:lignite	'000 tonnes	0	5629	0	11131	0	5518
Coal gas	tonne	0	306	0	1290	0	75
Cobalt ores & conc.	tonne	16	17358	272	366480	25	44193
Coke	tonne	4167206	67948149	3290324	43751479	3019502	31956111
Copper ores & conc.	tonne	2048240	332267404	1702247	285028249	1886199	262965392
Corundum (natural)	tonne	2	96	-	-	-	-
Diamond: Total		*	1349155094	*	1252140913	*	1105651211
Diamond (industrial)	ct	3135870	6755910	520983	298568	527650	495371
Diamond (mostly cut)	ct	146612350	1341171052	150487349	1250347957	151535456	1103784712
Diamond powder	'000	168540	1228132	351378	1494388	287431	1371128
Diatomite	tonne	6006	186713	2122	87085	2023	87085
Dolomite	tonne	2511602	3736522	2014760	3146097	1931136	2998295
Earth clay	tonne	586	16862	4617	2979	12	850

Contd.

Statement 2.03 : Import of Ores and Minerals

(Value in Rs.'000)

Mineral	Unit	2013-14		2014-15		2015-16(p)	
		Quantity	Value	Quantity	Value	Quantity	Value
Emerald (cut & uncut)		*	22328772	*	63062394	*	87263267
Emerald (uncut)	tonne	85	5117924	32	6432925	42	6643105
Emerald (cut)	'000 ct	8714	17210848	65144	56629469	85280	80620162
Felspar (natural)	tonne	42448	212990	66749	242645	25716	177877
Felspar (cut & uncut)		*	12453	*	9639	*	21268
Felspar (uncut)	tonne	2	12422	25	7288	1	14827
Felspar (cut)	'000 ct	0	31	77	2351	399	6441
Fire clay	tonne	146	4473	4	137	393	16839
Flint	tonne	-	-	141	2257	1279	17412
Fluorspar	tonne	117254	2412179	155673	2967071	163113	2908708
Garnet (abrasive)	tonne	626	10542	647	10297	883	11053
Garnet (cut and uncut)		*	46894	*	68743	*	62629
Garnet (uncut)	tonne	58	45309	33	59753	7	59779
Garnet (cut)	'000 ct	2	1585	210	8990	26	2850
Granite : Total	tonne	71378	2402008	65595	2269307	70288	2474283
Graphite (natural)	tonne	22916	1235588	28552	1335288	26160	1213356
Gypsum & plaster	tonne	3231930	5252011	4421048	6747745	4068412	5713627
Iron ore: Total	'000 tonnes	369	3423552	12093	65947375	7099	31971445
Kaolin	tonne	80204	1420872	93322	1662634	118524	1996778
Kieselguhr	tonne	20	717	20	803	0	73
Kyanite	tonne	394	13711	508	17006	478	16913
Lead ores & conc.	tonne	33405	3880931	39441	3846804	5334	264662
Limestone	tonne	13214179	21580366	13943781	22138585	17187164	23772767
Magnesite : Total	tonne	66001	2216905	102077	3327761	118788	3256837
Manganese ore: Total	tonne	2179334	28306272	3172858	34669120	2216864	17413687
Marble : Total	tonne	757948	22107203	778503	23839858	858061	27392156
Mica: Total	tonne	2049	563468	2240	703135	2471	895588
Mica (unmanufactured) Total	tonne	883	36515	967	38596	984	56496
Mica (worked)	tonne	1166	526953	1273	664539	1487	839092
Molybdenum ores & conc.	tonne	5572	5558080	8093	8646302	7511	4903722
Natural gas	tonne	13020689	516992878	13289155	563400559	14376924	437824475
Nickel ores & conc.	tonne	1343	1207103	4185	3842487	3295	2453862
Niobium or tantalum ores & conc.	tonne	61	163720	115	179733	191	246581

Contd.

Statement 2.03 : Import of Ores and Minerals

(Value in Rs.'000)

Mineral	Unit	2013-14		2014-15		2015-16(p)	
		Quantity	Value	Quantity	Value	Quantity	Value
Ochre: Total	tonne	282	30443	176	25953	135	33920
Petroleum (crude)	'000 tonnes	189176	8696574352	187913	7093793565	202314	4293999334
Precious & semi-precious stones (cut & uncut):Total		9584	12574990	121156	14675049	50122	21000375
Precious & semi stones (uncut)	tonne	2722	8225057	1440	11430258	733	18329978
Precious & semi precious stones cut	'000 ct	6862	4349933	119716	3244791	49389	2670397
Precious metal ores & concentrates	kg	179	106977	101602	22252599	78654	13658294
Quartz & quartzite: Total	tonne	377	10924	215	10403	1224	43801
Rock phosphate	tonne	7160798	55177899	8273261	61888711	8037745	65290421
Salt (other than common salt)	tonne	35591	120999	41300	113604	55642	173742
Sand (excl. metal bearing)	tonne	15688	61432	58237	98437	165150	375079
Sandstone	tonne			0	18	26	3101
Silica sand	tonne	97526	938842	76529	556336	18788	226225
Sillimanite	tonne	110	14307	116	10754	214	9043
Slate	tonne	850	23951	472	16814	134	11295
Steatite : Total	tonne	2935	129217	3693	130505	4533	198579
Sulphur (excl. sublimed precipitated & colloidal)	tonne	1289979	11002926	1626407	17445433	1432632	14172608
Tin ores & conc.	tonne	1	380			82	58039
Titanium ores & conc.: Total	tonne	91775	1933433	51991	971521	106422	1637171
Tripoli earth	tonne	19	740			20	825
Tungsten ores & conc.	tonne	17	28235	191	61582	78	34081
Vanadium ores & conc.	tonne	61	8674	19	1378	64	6301
Vermiculite	tonne	176	8396	391	11486	439	15092
Witherite	tonne	344	7122	184	5261	0	20
Wollastonite	tonne	1305	30479	1948	32549	2818	53216
Zinc ores & conc.	tonne	33113	1562269	35696	1693837	385	18722
Zirconium ores & conc.	tonne	50945	3772861	47656	3331466	53208	3691652
Other minerals NES	tonne	52993	592588	74553	2285428	59203	805956

(p) - Provisional

Source: Indian Minerals Yearbook 2016, Indian Bureau of Mines

* : Quantity not given due to partial coverage, value figures however have full coverage.

++: Negligible

Statement 2.04 : Export of Ores and Minerals (including re-export)

(Value in Rs.'000)

Mineral	Unit	2013-14		2014-15		2015-16(p)	
		Quantity	Value	Quantity	Value	Quantity	Value
All Minerals		*	1947835200	*	1780194116	*	1709463270
Abrasive (natural)	tonne	16023	242884	31901	516071	4477	59894
Alabaster	tonne	-	-	21	140	-	-
Alumina	tonne	1294651	25423465	1583590	32974205	1368526	25895763
Andalusite	tonne	5	244	4	127	-	-
Antimony ores & conc.	tonne	++	8	-	-	264	115561
Arsenic sulphide (natural)	tonne	-	-	-	-	15	98
Asbestos: Total	tonne	96	487	393	12026	524	23587
Ball clay	tonne	35694	158847	57557	194269	61536	148435
Barytes	tonne	1067755	8699416	651571	4525674	743407	6517077
Bauxite	tonne	3492546	6736456	6808588	14050662	8914624	19527405
Bentonite	tonne	1225568	3860451	1300083	3999734	1572469	4814345
Borax: Total	tonne	1623	125007	2655	164699	1724	124646
Building and monumental Stones NES	tonne	1686357	6268602	6127052	7786183	5133276	8489454
Calcite	tonne	23222	187542	30768	192309	25198	177978
Chalk	tonne	418	3860	490	2978	481	3816
Chromite: Total	tonne	195125	3468440	25361	659259	71839	1314084
Clay (others)	tonne	19604	172389	25515	217300	23341	312553
Coal (excluding lignite)	'000 tonnes	2188	10843195	1237	7202914	1576	9006273
Coal lignite	'000 tonnes	1	55575	1	13882	++	2752
Coke	tonne	150636	1478657	98003	1090634	89847	1073159
Coal gas	tonne	9	891	32	7820	1	99
Cobalt ores & conc.	tonne	253	47733	++	4	++	45
Copper ores & conc.	tonne	38912	3349917	1	10	11432	712919
Diamond		*	1581348137	*	1481021701	*	1427340191
Diamond (mostly cut)	ct	83850627	1580049655	74999043	1480557682	60737949	1426640488
Diamond (industrial)	ct	2121451	126895	4351127	168693	5651009	342213
Diamond powder	'000 ct	13532	1171587	18705	295326	9702	357490
Diatomite	tonne	58265	521672	87845	778088	30597	328270
Dolomite	tonne	32511	125328	44620	156629	85273	155665
Earth clay	tonne	7115	35053	8915	60466	9000	87141
Emerald (cut & uncut):Total		*	21570148	*	15945392	*	17879969
Emerald (uncut)	tonne	2	242508	3	731854	2	1938487

Contd.

Statement 2.04 : Export of Ores and Minerals (including re-export)

(Value in Rs.'000)

Mineral	Unit	2013-14		2014-15		2015-16(p)	
		Quantity	Value	Quantity	Value	Quantity	Value
Emerald (cut)	'000 ct	93300	21327640	142515	15213538	138459	15941482
Felspar (natural)	tonne	437144	2234475	589820	2876166	426172	2232789
Felspar (cut & uncut): Total		*	22694	*	26488	*	41184
Felspar (uncut)	tonne	++	241	++	841	38	1277
Felspar (cut)	'000 ct	1102	22453	4031	25647	143300	39907
Fire clay	tonne	2100	16879	2503	16318	887	10774
Flint	tonne	2524	18156	484	3991	867	7660
Fluorspar	tonne	876	16549	561	20763	316	11581
Garnet (abrasive)	tonne	480774	6060269	448559	5673827	480408	5950865
Garnet (cut and uncut): Total		*	39395	*	31070	*	25404
Garnet (uncut)	tonne	3	2722	++	2870	++	273
Garnet (cut)	'000 ct	1373	36673	1009	28200	1062	25131
Granite : Total	tonne	6802309	98685772	6563271	98322398	5674568	92720985
Graphite (natural)	tonne	820	112370	2669	86578	286	17071
Gypsum	tonne	48924	109055	65645	158036	110882	291059
Iron ore: Total	'000 tonnes	16302	94811058	7297	31436684	5441	12639631
Iron ore pyrites	'000 tonnes	3	3118	++	8579	++	7746
Kaolin	tonne	276165	1053487	258330	941752	304702	1105589
Kieselguhr	tonne	196	2984	137	2494	90	1901
Kyanite	tonne	52	1174	39	505	144	2703
Lead ores & conc.	tonne	7	201	509	22298	++	216
Limestone	tonne	2779074	3432311	3812759	4671971	3236010	4694273
Magnesite : Total	tonne	6118	127502	6612	120898	6204	124464
Manganese ore: Total	tonne	66030	189342	11026	65399	444	18946
Marble : Total	tonne	337937	5703435	325707	5990617	289853	5998401
Mica: Total	tonne	127882	3759755	141100	4263736	135805	4229711
Mica (unmanufactured): Total	tonne	127233	3058559	140450	3421154	135085	3444185
Mica (worked): Total	tonne	649	701196	650	842582	720	785526
Molybdenum ores & conc.	tonne	351	324538	24	17801	45	2199
Niobium or tantalum ores & conc.	tonne	25	31537	24	24238	-	-
Natural gas	tonne	4922	282766	138168	4901801	126951	3798602
Nickel ores & conc.	tonne	32	541	41	1452	125	11511
Ochre: Total	tonne	3550	72785	4034	92570	3633	75048

Contd.

Statement 2.04 : Export of Ores and Minerals (including re-export)

(Value in Rs.'000)

Mineral	Unit	2013-14		2014-15		2015-16(p)	
		Quantity	Value	Quantity	Value	Quantity	Value
Precious & semi-precious stones (cut & uncut):Total		*	16965361	*	12993424	*	12590265
Precious & semi precious stones (uncut)	tonne	2335	2873111	1278	1772426	1318	1169575
Precious & semi precious stones (cut)	'000 ct	377994	14092250	1869867	11220998	3672035	11420690
Precious metal ores & concentrates	kg	36361	181906	10000	24	144051	3167
Quartz and quartzite: Total	tonne	308409	2233315	410497	2938736	388192	3025916
Rock phosphate	tonne	948	7005	437	2916	14242	69096
Salt (other than common salt)	tonne	4956931	6562929	4776491	6390687	5926639	6701178
Sand (excl. metal bearing)	tonne	5444	369627	10751	342836	14476	491908
Sandstone	tonne	540874	7579286	627008	8523123	744657	10161784
Silica sand	tonne	4497	33142	1216	9802	709	6727
Sillimanite	tonne	28152	148779	17304	141262	15078	110846
Slate : Total	tonne	86090	1688206	100447	1867164	97591	1927308
Talc/Steatite/Soapstone : Total	tonne	149343	2028614	158405	2156562	187287	2709697
Steatite blocks	tonne	2585	22406	1056	19327	2621	33769
Steatite lumps	tonne	9351	104043	7926	96594	12736	222370
Steatite powder & others	tonne	137407	1902165	149423	2040641	171930	2453558
Sulphur (exc. sublimed precipitated & colloidal)	tonne	577695	3949918	397399	3714082	628164	5157083
Tin ores & conc.	tonne	8	1125	-	-	++	14
Titanium ores & conc.: Total	tonne	687923	10412481	779598	7179648	790489	6644934
Tungsten ores & conc.	tonne	323	64205	175	29666	1	391
Vanadium ores & conc.	tonne	2	7386	-	-	-	-
Vermiculite	tonne	737	8706	1044	9906	528	6402
Witherite	tonne	6	79	10	526	++	241
Wollastonite	tonne	19033	310240	17864	288087	16616	279263
Zinc ores & conc.	tonne	45660	1620063	41	744	558	11345
Zirconium ores & conc.	tonne	18036	648740	12230	488129	4859	241901
Other Minerals NES	tonne	855864	1180653	1768058	1773765	1362345	1200058

(p) - Provisional

Source: Indian Minerals Yearbook 2016, Indian Bureau of Mines

* : Quantity not given due to partial coverage, value figures however have full coverage.

++: Negligible

Statement 2.05 : Inventory of geological reserves of coal by type

(Million tonnes)

Type of Coal\ As on April of Year		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1. Coking											
I. Prime coking	**Proved**	4614	4614	4614	4614	4614	4614	4614	4614	4614	4614
	Indicated	699	699	699	699	699	699	699	699	699	699
	Inferred	0	0	0	0	0	0	0	0	0	0
	Total	5313	5313	5313	5313	5313	5313	5313	5313	5313	5313
II. Medium coking	**Proved**	12308	12448	12573	12573	12837	13269	13303	13389	13389	13501
	Indicated	12136	12064	11940	12001	11951	11893	11867	12114	12114	12133
	Inferred	1880	1880	1880	1880	1800	1879	1879	1879	1879	1879
	Total	26324	26393	26393	26454	26669	27041	27049	27382	27382	27513
III. Blendable/ semi-coking	**Proved**	482	482	482	482	482	482	482	482	482	519
	Indicated	1003	1003	1003	1003	1003	1003	1004	1004	1004	995
	Inferred	222	222	222	222	222	222	222	222	222	193
	Total	1707	1707	1707	1707	1707	1707	1708	1708	1708	1707
2. Non-coking (Including High Sulphur)	**Proved**	84425	88175	92129	96333	100211	104816	107509	113129	119602	124423
	Indicated	110378	109804	117012	123768	128515	129037	128937	129425	125335	125485
	Inferred	36388	35819	34257	32287	31082	30999	31047	29638	29462	30706
	Total	231191	233798	243398	252388	259808	264852	267494	272192	274398	280615
Total	**Proved**	101829	105720	109798	114002	118145	123182	125909	131614	138087	143058
	Indicated	124216	123570	130654	137471	142169	142632	142506	143241	139151	139311
	Inferred	38490	37921	36359	34389	33183	33100	33148	31739	31563	32779
	Total	**264535**	**267211**	**276811**	**285862**	**293497**	**298914**	**301564**	**306596**	**308802**	**315149**

Source : Provisional Coal Statistics 2016-17,Coal Controller's Organization, Kolkata, Ministry of Coal

Note: The coal resources of India are available in older Gondwana Formations of peninsular India and younger Tertiary formations of north- eastern region. Based on the results of Regional Promotional Exploration, where the boreholes are normally placed 1-2 Km apart, the resources are classified into '**Indicated**' or '**Inferred**' category. Subsequent detailed exploration in selected blocks, where boreholes are less than 400 meter apart, upgrades the resources into more reliable '**Proved**' category

Statement 2.06 : State-wise inventory of geological reserves of coal

(Million tonnes)

S.No.	State	Resources	1-4-2010	1-4-2011	1-4-2012	1-4-2013	1-4-2014	1-4-2015	1-4-2016	1-4-2017
Gondawana Coal Fields										
1	Andhra Pradesh	Proved	9257	9297	9567	9604	9729	0	0	0
		Indicated	9730	9728	9554	9554	9670	1149	1149	1149
		Inferred	3029	3029	3034	3049	3068	432	432	432
		Total	22016	22054	22155	22207	22468	1581	1581	1581
2	Assam	Proved	0	0	0	0	0	0	0	0
		Indicated	3	3	3	3	4	4	14	14
		Inferred	0	0	0	0	0	0	0	0
		Total	3	3	3	3	4	4	14	14
3	Jharkhand	Proved	39633	39761	40163	41155	41377	41463	42323	44341
		Indicated	30992	32592	33609	32986	32780	33026	32301	31876
		Inferred	6338	6584	6584	6559	6559	6559	6548	6223
		Total	76964	78937	80356	80701	80716	81049	81172	82440
4	Bihar	Proved	0	0	0	0	0	0	0	0
		Indicated	0	0	0	0	0	0	0	0
		Inferred	160	160	160	160	160	160	160	1354
		Total	160	160	160	160	160	160	160	1354
5	Madhya Pradesh	Proved	8505	8871	9309	9818	10411	10411	10918	11269
		Indicated	11267	12192	12291	12355	12382	12784	12696	12760
		Inferred	2216	2063	2777	2889	2879	3341	3293	3645
		Total	21988	23126	24377	25061	25673	26536	26907	27673
6	Chhattisgarh	Proved	12441	12879	13988	14779	16052	18237	19136	19997
		Indicated	30230	32390	33448	34107	33253	34390	34614	34462
		Inferred	4011	4011	3410	3283	3228	2285	2287	2202
		Total	46682	49280	50846	52169	52533	54912	56036	56661
7	Maharashtra	Proved	5360	5490	5667	5667	5667	5953	6208	7038
		Indicated	2984	3094	3104	3186	3186	3190	3151	3158
		Inferred	1965	1950	2110	2110	2110	2110	2077	2063

Contd.

Statement 2.06 : State-wise inventory of geological reserves of coal

(Million tonnes)

S.No.	State	Resources	1-4-2010	1-4-2011	1-4-2012	1-4-2013	1-4-2014	1-4-2015	1-4-2016	1-4-2017
		Total	10308	10534	10882	10964	10964	11253	11436	12259
8	Odisha	Proved	21507	24492	25548	27284	27791	30747	34295	34810
		Indicated	32074	33987	36466	37110	37873	36545	33284	34060
		Inferred	12726	10680	9434	9316	9408	8507	8318	8415
		Total	66307	69159	71447	73710	75073	75799	75896	77285
9	Sikkim	Proved	0	0	0	0	0	0	0	0
		Indicated	58	58	58	58	58	58	58	58
		Inferred	43	43	43	43	43	43	43	43
		Total	101	101	101	101	101	101	101	101
10	Uttar Pradesh	Proved	866	866	884	884	884	884	884	884
		Indicated	196	196	178	178	178	178	178	178
		Inferred	0	0	0	0	0	0	0	0
		Total	1062	1062	1062	1062	1062	1062	1062	1062
11	West Bengal	Proved	11753	11753	12425	13396	13403	13518	13602	13723
		Indicated	13030	13132	13358	12995	13022	13010	13021	12954
		Inferred	5071	5071	4832	4892	4893	4907	4907	4990
		Total	29853	29956	30615	31283	31318	31435	31529	31667
12	Telangana	Proved	-	-	-	-	-	9807	10128	10402
		Indicated	-	-	-	-	-	8808	8586	8542
		Inferred	-	-	-	-	-	2597	2700	2520
		Total	-	-	-	-	-	21211	21415	21464
Gondawana (Total)		Proved	**109320**	**113408**	**117551**	**122588**	**125315**	**131020**	**137493**	**142464**
		Indicated	**130564**	**137372**	**142070**	**142532**	**142407**	**143142**	**139052**	**139212**
		Inferred	**35559**	**33590**	**32384**	**32301**	**32350**	**30941**	**30764**	**31885**
		Total	**275444**	**284370**	**292005**	**297421**	**300072**	**305103**	**307309**	**313561**

Contd.

Statement 2.06 : State-wise inventory of geological reserves of coal

(Million tonnes)

S.No.	State	Resources	1-4-2010	1-4-2011	1-4-2012	1-4-2013	1-4-2014	1-4-2015	1-4-2016	1-4-2017
Tertiary Coal Fields										
1	Arunachal Pradesh	Proved	31	31	31	31	31	31	31	31
		Indicated	40	40	40	40	40	40	40	40
		Inferred	19	19	19	19	19	19	19	19
		Total	90	90	90	90	90	90	90	90
2	Assam (Tertiary)	Proved	349	465	465	465	465	465	465	465
		Indicated	33	43	43	43	43	43	43	43
		Inferred	3	3	3	3	3	3	3	3
		Total	385	511	511	511	511	511	511	511
3	Meghalaya (Tertiary)	Proved	89	89	89	89	89	89	89	89
		Indicated	17	17	17	17	17	17	17	17
		Inferred	471	471	471	471	471	471	471	471
		Total	576	576	576	576	576	576	576	576
4	Nagaland (Tertiary)	Proved	9	9	9	9	9	9	9	9
		Indicated	0	0	0	0	0	0	0	0
		Inferred	307	307	307	307	307	307	307	402
		Total	315	315	315	315	315	315	315	410
Tertiary Coalfields (Total)		**Proved**	**478**	**594**	**594**	**594**	**594**	**594**	**594**	**594**
		Indicated	**90**	**99**	**99**	**99**	**99**	**99**	**99**	**99**
		Inferred	**799**	**799**	**799**	**799**	**799**	**799**	**799**	**895**
		Total	**1367**	**1492**	**1493**	**1493**	**1493**	**1493**	**1493**	**1588**
India (Total)		**Proved**	**109798**	**114002**	**118145**	**123182**	**125909**	**131614**	**138087**	**143058**
		Indicated	**130654**	**137471**	**142169**	**142633**	**142506**	**143241**	**139151**	**139311**
		Inferred	**36359**	**34390**	**33183**	**33100**	**33149**	**31741**	**31564**	**32780**
		Total	**276811**	**285862**	**293497**	**298914**	**301564**	**306596**	**308802**	**315149**

Note : (i) Data may not add upto respective total due to rounding off.

(ii) Singrimari coalfield of Assam (Non- coking) is included in Gondawana coalfield, not considered in Tertiary coalfields.

Source : Provisional Coal Statistics 2016-17, Coal Controller's Organization, *Kolkata, Ministry of Coal*

Statement 2.07 : State-wise inventory of geological reserve of Lignite

(as on 1st April 2012 to 2017)

State	Resources (QMT)	Year					
		2012	2013	2014	2015	2016	2017(p)
Gujarat	Proved	1278.65	1278.65	1278.65	1278.65	1278.65	1278.65
	Indicated	283.70	283.70	283.70	283.70	283.70	283.70
	Inferred	1159.70	1159.70	1159.70	1159.70	1159.70	1159.70
	Total	**2722.05**	**2722.05**	**2722.05**	**2722.05**	**2722.05**	**2722.05**
J & K	Proved	0.00	0.00	0.00	0.00	0.00	0.00
	Indicated	20.25	20.25	20.25	20.25	20.25	20.25
	Inferred	7.30	7.30	7.30	7.30	7.30	7.30
	Total	**27.55**	**27.55**	**27.55**	**27.55**	**27.55**	**27.55**
Kerala	Proved	0.00	0.00	0.00	0.00	0.00	0.00
	Indicated	0.00	0.00	0.00	0.00	0.00	0.00
	Inferred	9.65	9.65	9.65	9.65	9.65	9.65
	Total	**9.65**	**9.65**	**9.65**	**9.65**	**9.65**	**9.65**
Puducherry	Proved	0.00	0.00	0.00	0.00	0.00	0.00
	Indicated	405.61	405.61	405.61	405.61	405.61	405.61
	Inferred	11.00	11.00	11.00	11.00	11.00	11.00
	Total	**416.61**	**416.61**	**416.61**	**416.61**	**416.61**	**416.61**
Rajasthan	Proved	1167.02	1167.02	1167.02	1168.53	1168.53	1168.53
	Indicated	2152.59	2671.93	2671.93	2670.84	2670.84	2670.83
	Inferred	1587.40	1850.57	1881.39	1887.34	1896.60	1896.60
	Total	**4907.01**	**5689.52**	**5720.35**	**5726.71**	**5735.97**	**5735.96**
Tamil Nadu	Proved	3735.23	3735.23	3735.23	3735.23	3735.23	4043.53
	Indicated	22900.05	22900.05	22900.05	22900.05	22991.17	22632.87
	Inferred	7242.85	7712.43	7712.43	8573.62	8953.53	9055.98
	Total	**33878.13**	**34347.71**	**34347.71**	**35208.9**	**35679.93**	**35782.38**
West Bengal	Proved	0.00	0.00	0.00	0.00	0.00	0.00
	Indicated	0.93	1.13	1.13	1.13	1.13	1.13
	Inferred	0.86	1.64	1.64	1.64	1.64	2.8
	Total	**1.79**	**2.77**	**2.77**	**2.77**	**2.77**	**3.93**
All India	Proved	6180.90	6180.90	6180.90	6182.41	6182.41	6540.70
	Indicated	25763.13	26282.67	26282.67	26281.58	26372.70	26014.39
	Inferred	10018.76	10752.29	10783.11	11650.25	12039.42	12143.03
	Total	**41962.79**	**43215.86**	**43246.68**	**44114.24**	**44594.53**	**44698.13**

Source : Provisional Coal Statistics 2016-17, Coal Controller's Organization, M/o Coal (Figures compiled by Neyveli Lignite Corporation Ltd.)

QMT : Quantiy in Million Tonnes.

(p) : Provisional

Statement 2.08: Total Primary supply of Coal & Lignite

(Million tonnes)

Year	Fuel Type	Production	Imports	Exports	Net Imports	Opening Stock	Closing Stock	Stock Change	Total Primary Supply
	Coal	407.039	38.586	1.989	36.597	23.969	34.334	-10.365	433.271
2005-06	Lignite	30.228			0.000	0.536	0.525	0.011	30.239
	Total	437.267	38.586	1.989	36.597	24.505	34.859	-10.354	463.510
	Coal	430.832	43.081	1.554	41.527	34.334	44.348	-10.014	462.345
2006-07	Lignite	31.285			0.000	0.525	1.002	-0.477	30.808
	Total	462.117	43.081	1.554	41.527	34.859	45.350	-10.491	493.153
	Coal	457.082	49.794	1.627	48.167	44.348	46.779	2.431	502.818
2007-08	Lignite	33.980			0	1.002	0.328	-0.674	34.654
	Total	491.062	49.794	1.627	48.167	45.350	47.107	1.757	537.472
	Coal	492.757	59.003	1.655	57.348	46.779	47.317	0.538	549.567
2008-09	Lignite	32.421			0	0.328	0.903	0.575	31.846
	Total	525.178	59.003	1.655	57.348	47.107	48.220	1.113	581.413
	Coal	532.042	73.255	2.454	70.801	47.317	64.863	17.546	585.297
2009-10	Lignite	34.071				0.903	0.565	-0.338	34.409
	Total	566.113	73.255	2.454	70.801	48.220	65.428	17.208	619.706
	Coal	532.694	68.198	4.409	64.509	64.863	72.192	7.329	589.874
2010-11	Lignite	37.733				0.565	0.61	0.045	37.688
	Total	570.427	68.198	4.409	64.509	65.428	72.802	7.374	627.562
	Coal	539.95	102.853	2.014	100.839	72.192	74.04	1.848	642.637
2011-12	Lignite	42.332				0.61	1.051	0.441	42.773
	Total	582.282	102.853	2.014	100.839	72.802	75.091	2.289	685.410
	Coal	556.402	145.785	2.443	143.342	74.04	63.049	-10.991	688.753
2012-13	Lignite	46.453	0.001	0.069	-0.068	1.051	1.493	0.442	46.827
	Total	602.855	145.786	2.512	143.274	75.091	64.542	-10.549	735.580
	Coal	565.766	168.439	2.153	166.286	63.049	55.178	-7.871	724.181
2013-14	Lignite	44.271	0.001	0.002	-0.001	1.493	1.86	0.367	44.637
	Total	610.037	168.440	2.155	166.285	64.542	57.038	-7.504	768.818
	Coal	612.435	212.103	1.238	210.865	55.178	59.389	4.211	827.511
2014-15	Lignite	48.257	0.001	0.003	-0.002	1.860	3.176	1.316	49.571
	Total	660.692	212.104	1.241	210.863	57.038	62.565	5.527	877.082
	Coal	639.23	203.949	1.575	202.374	59.389	65.361	5.972	847.576
2015-16	Lignite	43.842	0.001	0.001	0.001	3.176	4.809	1.633	45.476
	Total	683.072	203.95	1.576	202.375	62.565	70.170	7.605	893.052
	Coal	662.792	190.953	1.773	189.18	65.361	77.285	11.924	863.896
2016-17(p)	Lignite	45.23	0.019	0.005	0.014	4.809	6.883	2.074	47.318
	Total	708.022	190.972	1.778	189.194	70.170	84.168	13.998	911.214

Source : Provisional Coal Statistics 2016-17, Coal Controller's Organization, M/o Coal

Note: Total Primary supply is estimated as sum of indiginous production, Net Import & Stock Change. For simplicity, only stock change of pit head stock is taken.

(p) : Provisional

Statement 2.09: State-wise production of raw coal by types

State	2005-06	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17(p)
Coking								
Chhattisgarh	0.150	0.163	0.189	0.157	0.125	0.126	0.135	0.110
Jharkhand	30.295	48.931	51.108	51.065	55.088	54.430	58.548	59.604
Madhya Pradesh	0.932	0.403	0.319	0.330	0.249	0.310	0.209	0.131
West Bengal	0.134	0.036	0.044	0.030	1.356	0.580	1.995	1.816
Total Coking	**31.511**	**49.533**	**51.660**	**51.582**	**56.818**	**57.446**	**60.887**	**61.661**
Non-Coking								
Andhra Pradesh	36.138	51.333	-	-	-	-	-	-
Arunachal Pradesh	-	0.299	0.221	0.073	0.000	0.000	0.000	0.000
Assam	1.101	1.101	0.602	0.605	0.664	0.779	0.487	0.600
Chhattisgarh	76.208	113.662	113.769	117.673	126.970	134.638	130.470	143.739
Jammu & Kashmir	0.019	0.024	0.020	0.019	0.019	0.013	0.013	0.010
Jharkhand	55.128	60.398	58.458	60.209	58.003	67.713	62.519	66.831
Madhya Pradesh	54.647	70.701	70.804	75.618	75.341	87.299	107.505	104.882
Maharashtra	-	39.336	39.159	39.134	37.223	38.257	38.351	40.559
Meghalaya	5.566	6.974	7.206	5.640	5.732	2.524	3.712	3.712
Odisha	70.540	102.565	105.476	110.132	112.917	123.627	138.461	139.359
Telangana	-	-	52.211	53.190	50.469	52.536	60.380	59.532
Uttar Pradesh	15.721	15.526	16.178	16.090	14.721	14.957	12.689	16.056
West Bengal	24.341	21.624	24.186	26.437	26.888	29.390	23.756	25.851
Total Non-Coking	**375.528**	**483.543**	**488.290**	**504.820**	**508.947**	**551.733**	**578.343**	**601.131**
Total	**407.039**	**533.076**	**539.950**	**556.402**	**565.765**	**609.179**	**639.230**	**662.792**

Source : Provisional Coal Statistics 2016-17, Coal Controller's Organization*, Kolkata, Ministry of Coal*
(p) : Provisional

Statement 2.10 : State-wise production of coal and lignite

(Million tonnes)

Sl. No.	States	2005-06	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17 (p)
1	2	3	4	5	6	7	8	9	10
I.	**Coal**	**407.00**	**532.69**	**539.95**	**556.40**	**565.77**	**609.18**	**639.23**	**662.79**
1	Andhra Pradesh	36.13	51.33	52.21	53.19	50.47	0.00	0.00	0.00
2	Arunachal Pradesh	—	0.30	0.20	0.07	0.00	0.00	0.00	0.00
3	Assam	1.10	1.10	0.60	0.61	0.66	0.78	0.49	0.60
4	Chhatisgarh	76.35	113.82	113.96	117.83	127.10	134.76	130.61	143.85
5	Jammu & Kashmir				0.02	0.02	0.01	0.01	0.01
6	Jharkhand	85.38	108.95	109.57	111.27	113.09	124.14	121.07	126.44
7	Meghalaya	5.57	6.97	7.20	5.64	5.73	2.52	3.71	3.71
8	Madhya Pradesh	55.58	71.10	71.12	75.95	75.59	87.61	107.71	105.01
9	Maharashtra	36.12	39.34	39.16	39.13	37.22	38.26	38.35	40.56
10	Odisha	70.54	102.57	105.48	110.13	112.92	123.63	138.46	139.36
11	Telangana					0.00	52.54	60.38	59.53
12	Uttar Pradesh	15.72	15.53	16.18	16.09	14.72	14.96	12.69	16.06
13	West Bengal	24.47	21.66	24.23	26.47	28.24	29.97	25.75	27.67
II.	**Lignite**	**30.10**	**37.73**	**42.33**	**46.45**	**44.27**	**48.27**	**43.84**	**45.23**
1	Gujarat	8.90	13.06	14.78	14.53	11.59	12.32	10.12	10.55
2	Rajasthan	0.70	1.53	2.96	7.08	7.63	10.76	9.49	8.48
3	Tamilnadu	20.40	23.14	24.59	24.84	25.06	25.19	24.23	26.20

Source : Provisional Coal Statistics 2005-06 to 2016-17, Coal Controller's Organization*, Kolkata, Ministry of Coal*
(p): Provisional

Statement 2.11 : Key indicators of petroleum industry

Item	Unit	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17 (p)
1. Production									
(i) Crude Oil	MMT	33.69	37.68	38.09	37.86	37.79	37.46	36.94	36.01
(ii) Natural Gas	BCM	47.5	52.22	47.56	40.68	35.41	33.66	32.25	31.9
(iii) Petroleum Products	MMT	184.61	194.82	203.2	217.74	220.76	221.14	231.92	243.55
2. Consumption									
(i) Crude Oil (in terms of refinery crude processed)	MMT	186.55	196.99	204.12	219.21	222.50	223.24	232.86	245.36
(ii) Natural Gas (including LNG)	BCM	48.34	52.02	60.68	53.91	48.99	46.95	47.85	50.78
(iii) Petroleum Products	MMT	137.81	141.04	148.13	157.06	158.41	165.52	184.67	193.75
3. Reserves (Balance Recoverable) as on 31st March									
(i) Crude Oil	MMT	774.66	660.04	652.16	651.55	647.38	635.59	621.28	604.1
(ii) Natural Gas	BCM	1148.54	1141.59	1166.77	1171.69	1199.1	1251.89	1227.4	1289.81
4. Imports & Exports									
(i) Gross Imports :									
(a) Qty : Crude Oil	MMT	159.26	163.6	171.73	184.8	189.24	189.43	202.85	213.93
LNG	MMT	9.15	9.93	13.21	13.14	12.99	14.09	16.14	18.63
Petroleum Products	MMT	14.67	17.38	15.85	16.35	16.7	21.30	29.46	35.41
Total (a)	MMT	183.08	190.91	200.79	214.29	218.93	224.82	248.45	267.97
(b) Value: Crude Oil	₹ Billion	3752.77	4552.76	6722.2	7846.52	8648.75	6874.16	4165.79	4702.51
LNG	₹ Billion	106.95	143.62	317.18	419.02	531.23	573.84	450.38	408.13
Petroleum Products	₹ Billion	336.87	559.98	680.91	688.52	758.96	746.44	653.61	707.27
Total (b)	₹ Billion	4196.59	5256.36	7720.29	8954.06	9938.94	8194.44	5269.78	5817.91
(ii) Exports :									
(a) Qty : Petroleum Products		51.15	59.08	60.84	63.41	67.86	63.93	60.54	65.51
(b) Value: Petroleum Products	₹ Billion	1446.87	1968.61	2846.44	3200.90	3682.79	2885.8	1767.8	1948.93
(iii) Net Imports :									
(a) Qty : Crude Oil	MMT	159.26	163.6	171.73	184.8	189.24	189.43	202.85	213.93
LNG	MMT	9.15	9.93	13.21	13.14	12.99	14.09	16.14	18.63
Petroleum Products	MMT	-36.49	-41.7	-44.99	-47.05	-51.17	-42.63	-31.08	-30.1
Total (a)	MMT	131.92	131.83	139.95	150.89	151.06	160.89	187.91	202.46
(b) Value: Crude Oil	₹ Billion	3752.77	4552.76	6722.2	7846.52	8648.75	6874.16	4165.79	4702.51
LNG	₹ Billion	106.95	143.62	317.18	419.02	531.23	573.84	450.38	408.13
Petroleum Products	₹ Billion	-1110.00	-1408.62	-2165.53	-2512.38	-2923.83	-2139.36	-1114.19	-1241.66
Total (b)	₹ Billion	**2749.72**	**3287.76**	**4873.85**	**5753.16**	**6256.15**	**5308.64**	**3501.98**	**3868.98**

Source: Indian Petroleum & Natural Gas Statistics -2016-17

(p): Provisional

Statement 2.12: State-wise energy Supply Position

April 2016- March 2017

Region/State/U.Ts.	Energy Requirement (MU)	Energy Supplied (MU)	Energy not supplied		Peak Demand (MW)	Peak Met (MW)	Demand no met	
			(MU)	(%)			(MW)	%
Chandigarh	1,645	1,645	0	0.0	361	361	0	0.0
Delhi	30,829	30,797	32	0.1	6,342	6,261	81	1.3
Haryana	48,895	48,895	0	0.0	9,262	9,262	0	0.0
Himachal Pradesh	8,831	8,779	52	0.6	1,499	1,499	0	0.0
Jammu & Kashmir	17,398	14,194	3204	18.4	2,675	2,140	535	20.0
Punjab	53,098	53,098	0	0.0	11,408	11,408	0	0.0
Rajasthan	67,838	67,415	423	0.6	10,613	10,348	265	2.5
Uttar Pradesh	107,569	105,701	1868	1.7	17,183	16,110	1,073	6.2
Uttarakhand	13,069	12,986	83	0.6	2,037	2,037	0	0.0
NORTHERN REGION	**349,172**	**343,613**	**5659**	**1.6**	**53,372**	**52,612**	**760**	**1.4**
Chhattisgarh	23,750	23,697	53	0.2	3,875	3,851	25	0.6
Dadra & Nagar Haveli	6,021	6,021	0	0.0	784	784	0	0.0
Daman & Diu	2,398	2,398	0	0.0	334	334	0	0.0
Goa	4,319	4,317	2	0.0	564	531	14	2.6
Gujarat	103,706	103,705	1	0.0	14,724	14,719	5	0.0
Madhya Pradesh	65,759	65,758	1	0.0	11,512	11,501	11	0.1
Maharashtra	139,295	139,228	67	0.0	22,516	22,207	309	1.4
WESTERN REGION	**345,247**	**345,127**	**120**	**0.0**	**48,531**	**48,313**	**218**	**0.4**
Andhra Pradesh	54,300	54,257	43	0.1	7,969	7,965	4	0.1
Karnataka	66,899	66,537	362	0.5	10,261	10,242	19	0.2
Kerala	24,296	24,261	35	0.1	4,132	3,996	135	3.3
Lakshadweep #	48	48	0	0.0	8	8	0	0.0
Puducherry	2,548	2,545	3	0.1	371	368	3	0.7
Tamil Nadu	104,511	104,487	24	0.0	14,823	14,823	0	0.0
Telangana	53,030	53,018	12	0.0	9,187	9,187	0	0.0
SOUTHERN REGION	**305,586**	**305,107**	**480**	**0.2**	**42,232**	**42,232**	**0**	**0.0**
Andaman Nicobar #	240	180	60	25.0	40	32	8	20.0
Bihar	25,711	25,130	581	2.3	3,883	3,759	125	3.2
DVC	18,929	18,791	138	0.7	2,721	2,721	0	0.0
Jharkhand	7,960	7,906	54	0.7	1,498	1,498	0	0.0
Orissa	26,758	26,756	2	0.0	4,012	4,012	0	0.0
Sikkim	475	475	0	0.0	112	112	0	0.0
West Bengal	47,948	47,807	141	0.3	7,931	7,886	45	0.6
EASTERN REGION	**127,783**	**126,868**	**916**	**0.7**	**18,908**	**18,788**	**120**	**0.6**
Arunachal Pradesh	729	714	15	2.1	148	140	8	5.4
Assam	9,020	8,694	326	3.6	1,673	1,633	40	2.4
Manipur	764	740	24	3.1	163	163	0	0.2
Meghalaya	1,715	1,715	0	0.0	331	331	0	0.0
Mizoram	514	501	13	2.5	98	98	0	0.0
Nagaland	757	745	12	1.6	148	147	1	0.7
Tripura	1,644	1,621	23	1.4	284	284	0	0.0
NORTH EAST REGION	**15,140**	**14,720**	**420**	**2.8**	**2,487**	**2,475**	**12**	**0.5**
ALL INDIA	**1,142,929**	**1,135,334**	**7595**	**0.7**	**159,542**	**156,934**	**2,608**	**1.6**

:# Lakshadweep & A & N Islands are stand-alone systems, power supply position of these does not form part of regional requirement and availability.

MU: Million unit

MW: Megawatt

Note : Total may not tally

Source : General Review 2017, Central Electricity Authority

Statement 2.13 : Installed capacity of power utilities

on 31st March, 2016 (Mega Watts)

Sl. No.	State/Union Territory	Thermal			Total Thermal	Nuclear	Hydro Renewable	RES* (MNRE)	Grand Total
		Coal	Gas	Diesel					
1	2	3	4	5	6	7	8	9	10
I	**Northern Region**	**45644.50**	**5331.26**	**0.00**	**50975.76**	**1620.00**	**18246.77**	**9753.85**	**80596.38**
1	Chandigarh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	Delhi	135.00	2050.40	0.00	2185.40	0.00	0.00	0.00	2185.40
3	Haryana	3160.00	25.00	0.00	3185.00	0.00	884.51	59.30	4128.81
4	Himachal Pradesh	0.00	0.00	0.00	0.00	0.00	393.60	256.11	649.71
5	Jammu & Kashmir	0.00	175.00	0.00	175.00	0.00	1230.00	106.53	1511.53
6	Punjab	2630.00	25.00	0.00	2655.00	0.00	2230.23	127.80	5013.03
7	Rajasthan	5190.00	603.80	0.00	5793.80	0.00	987.96	23.85	6805.61
8	Uttar Pradesh	5923.00	0.00	0.00	5923.00	0.00	524.10	25.10	6472.20
9	Uttarkhand	0.00	0.00	0.00	0.00	0.00	1252.15	62.87	1315.02
10	Private sector	16606.00	108.00	0.00	16714.00	0.00	2478.00	9092.29	28284.29
11	Central sector	12000.50	2344.06	0.00	14344.56	1620.00	8266.22	0.00	24230.78
II	**Western Region**	**72153.01**	**10815.41**	**0.00**	**82968.42**	**1840.00**	**7447.50**	**15986.98**	**108242.90**
1	Chhattisgarh	2780.00	0.00	0.00	2780.00	0.00	120.00	11.05	2911.05
2	Dadra & Nagar Haveli	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Daman & Diu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
5	Gujarat	4970.00	2321.82	0.00	7291.82	0.00	772.00	8.00	8071.82
6	Madhya Pradesh	4080.00	0.00	0.00	4080.00	0.00	1703.66	83.96	5867.62
7	Maharashtra	10970.00	672.00	0.00	11642.00	0.00	2884.84	208.13	14734.97
8	Private sector	36455.00	4288.00	0.00	40743.00	0.00	447.00	15675.79	56865.79
9	Central sector	12898.01	3533.59	0.00	16431.60	1840.00	1520.00	0.00	19791.60
III	**Southern Region**	**36442.50**	**6473.66**	**917.48**	**43833.64**	**2320.00**	**11558.03**	**19068.02**	**76779.69**
1	Andhra Pradesh	3085.91	0.00	0.00	3085.91	0.00	1758.87	89.50	4934.28
2	Karnataka	4220.00	0.00	127.92	4347.92	0.00	3599.80	155.33	8103.05
3	Kerala	0.00	0.00	234.60	234.60	0.00	1881.50	138.92	2255.02
4	NLC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Puducherry	0.00	32.50	0.00	32.50	0.00	0.00	0.00	32.50
6	Tamil Nadu	4770.00	524.08	0.00	5294.08	0.00	2182.20	122.70	7598.98
7	Tanalgana	4806.59	0.00	0.00	4806.59	0.00	2135.66	0.00	6942.25
8	Private sector	7670.00	5557.50	554.96	13782.46	0.00	0.00	18561.57	32344.03
9	Central sector	11890.00	359.58	0.00	12249.58	2320.00	0.00	0.00	14569.58

Contd.

Statement 2.13 : Installed capacity of power utilities

on 31st March, 2016 (Mega Watts)

Sl. No.	State/Union Territory	Thermal			Total Thermal	Nuclear	Hydro Renewable	RES* (MNRE)	Grand Total
		Coal	Gas	Diesel					
1	2	3	4	5	6	7	8	9	10
IV	**Eastern Region**	**30622.87**	**190.00**	**0.00**	**30812.87**	**0.00**	**4289.12**	**840.37**	**35942.36**
1	Bihar	210.00	0.00	0.00	210.00	0.00	0.00	70.70	280.70
2	D.V.C.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Jharkhand	1190.00	0.00	0.00	1190.00	0.00	130.00	4.05	1324.05
4	Odisha	420.00	0.00	0.00	420.00	0.00	2061.92	6.30	2488.22
5	Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	52.11	52.11
6	West Bengal	5720.00	100.00	0.00	5820.00	0.00	977.00	91.95	6888.95
7	Private sector	8731.38	0.00	0.00	8731.38	0.00	195.00	615.26	9541.64
8	Central sector	14351.49	90.00	0.00	14441.49	0.00	925.20	0.00	15366.69
V	**North-Eastern Region**	**310.00**	**1698.30**	**36.00**	**2044.30**	**0.00**	**1242.00**	**263.72**	**3550.02**
1	Arunachal Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	104.61	104.61
2	Assam	60.00	276.20	0.00	336.20	0.00	100.00	30.01	466.21
3	Manipur	0.00	0.00	36.00	36.00	0.00	0.00	5.45	41.45
4	Meghalaya	0.00	0.00	0.00	0.00	0.00	282.00	31.03	313.03
5	Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	36.47	36.47
6	Nagaland	0.00	0.00	0.00	0.00	0.00	0.00	30.67	30.67
7	Tripura	0.00	169.50	0.00	169.50	0.00	0.00	16.01	185.51
8	Private sector	0.00	24.50	0.00	24.50	0.00	0.00	9.47	33.97
9	Central sector	250.00	1228.10	0.00	1478.10	0.00	860.00	0.00	2338.10
	State	**0.00**	**0.00**	**40.05**	**40.05**	**0.00**	**0.00**	**11.10**	**51.15**
	Andaman & State	0.00	0.00	40.05	40.05	0.00	0.00	5.25	45.30
	Lakshadweep State	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Private sector	0.00	0.00	0.00	0.00	0.00	0.00	5.85	5.85
	Central sector	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	All INDIA	**185172.88**	**24508.63**	**993.53**	**210675.04**	**5780.00**	**42783.42**	**45924.04**	**305162.50**

Source : Central Electricity Authority

*: RES includes SHP,BP,U&I, Solar and Wind Energy. Installed capacity in respect ot RES (MNER) as on 30.9.2013

Statement 2.13: Installed capacity of power utilities

on 31st March, 2017 (Mega Watts)

Sl. No.	State/Union Territory	Thermal			Total Thermal	Nuclear	Hydro Renewable	RES* (MNRE)	Grand Total
		Coal	Gas	Diesel					
1	2	3	4	5	6	7	8	9	10
I	**Northern Region**	**51329.20**	**5781.26**	**0.00**	**57110.46**	**1620.00**	**19311.77**	**11523.36**	**89565.59**
1	Delhi	135.00	1800.40	0.00	1935.40	0.00	0.00	0.00	1935.40
1	Haryana	2720.00	150.00	0.00	2870.00	0.00	1084.51	59.30	4013.81
3	Himachal Pradesh	0.00	0.00	0.00	0.00	0.00	594.60	256.61	851.21
4	Jammu & Kashmir	0.00	175.00	0.00	175.00	0.00	1230.00	108.03	1513.03
5	Punjab	2630.00	150.00	0.00	2780.00	0.00	2570.23	127.80	5478.03
6	Rajasthan	5190.00	603.80	0.00	5793.80	0.00	1087.96	23.85	6905.61
7	Uttar Pradesh	5923.00	0.00	0.00	5923.00	0.00	724.10	25.10	6672.20
8	Uttarkhand	0.00	0.00	0.00	0.00	0.00	1252.15	62.87	1315.02
9	Chandigarh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Private sector	22100.83	558.00	0.00	22658.83	0.00	2502.00	10859.80	36020.63
11	Central sector	12630.37	2344.06	0.00	14974.43	1620.00	8266.22	0.00	24860.65
II	**Western Region**	**68293.62**	**11203.41**	**0.00**	**79497.03**	**1840.00**	**7447.50**	**18304.43**	**107088.96**
1	Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
2	Daman & Diu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Gujarat	5230.00	2321.82	0.00	7551.82	0.00	772.00	8.00	8331.82
4	Madhya Pradesh	4080.00	0.00	0.00	4080.00	0.00	1703.66	83.96	5867.62
5	Chhatisgharh	3280.00	0.00	0.00	3280.00	0.00	120.00	11.05	3411.05
6	Maharashtra	10580.00	672.00	0.00	11252.00	0.00	2884.84	208.13	14344.97
7	Dadra & Nagar Haveli	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Private sector	31465.67	4676.00	0.00	36141.67	0.00	447.00	17993.24	54581.91
9	Central sector	13657.95	3533.59	0.00	17191.54	1840.00	1520.00	0.00	20551.54
III	**Southern Region**	**43382.02**	**6473.66**	**761.58**	**50617.26**	**3320.00**	**11739.03**	**26132.07**	**91808.36**
1	Andhra Pradesh	4410.00	235.40	0.00	4645.40	0.00	1747.93	89.50	6482.83
2	Tanalgana	4082.50	0.00	0.00	4082.50	0.00	2306.60	0.00	6389.10
3	Karnataka	5020.00	0.00	127.92	5147.92	0.00	3599.80	155.33	8903.05
4	Kerala	0.00	0.00	159.96	159.96	0.00	1881.50	145.02	2186.48
5	Tamil Nadu	4320.00	524.08	0.00	4844.08	0.00	2203.20	122.70	7169.98
6	NLC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Puducherry	0.00	32.50	0.00	32.50	0.00	0.00	0.00	32.50
8	Private sector	12124.50	5322.10	473.70	17920.30	0.00	0.00	25619.52	43539.82
9	Central sector	13425.02	359.58	0.00	13784.60	3320.00	0.00	0.00	17104.60

Contd.

Statement 2.13: Installed capacity of power utilities

on 31st March, 2017 (Mega Watts)

Sl. No.	State/Union Territory	Thermal			Total Thermal	Nuclear	Hydro Renewable	RES* (MNRE)	Grand Total
		Coal	Gas	Diesel					
1	2	3	4	5	6	7	8	9	10
IV	**Eastern Region**	**28578.02**	**100.00**	**0.00**	**28678.02**	**0.00**	**4738.12**	**990.74**	**34406.88**
1	Bihar	210.00	0.00	0.00	210.00	0.00	0.00	70.70	280.70
2	Jharkhand	875.00	0.00	0.00	875.00	0.00	130.00	4.05	1009.05
3	West Bengal	5520.00	100.00	0.00	5620.00	0.00	986.00	91.95	6697.95
4	D.V.C.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Odisha	420.00	0.00	0.00	420.00	0.00	2061.92	6.30	2488.22
6	Sikkim	0.00	0.00	0.00	0.00	0.00	360.00	52.11	412.11
7	Private sector	7451.38	0.00	0.00	7451.38	0.00	195.00	765.63	8412.01
8	Central sector	14101.64	0.00	0.00	14101.64	0.00	1005.20	0.00	15106.84
V	**North-Eastern Region**	**580.02**	**1771.05**	**36.00**	**2387.07**	**0.00**	**1242.00**	**281.13**	**3910.20**
1	Assam	60.00	323.45	0.00	383.45	0.00	100.00	30.01	513.46
2	Arunachal Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	104.61	104.61
3	Meghalaya	0.00	0.00	0.00	0.00	0.00	282.00	31.03	313.03
4	Tripura	0.00	169.50	0.00	169.50	0.00	0.00	16.01	185.51
5	Manipur	0.00	0.00	36.00	36.00	0.00	0.00	5.45	41.45
6	Nagaland	0.00	0.00	0.00	0.00	0.00	0.00	30.67	30.67
7	Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	41.47	41.47
8	Private sector	0.00	24.50	0.00	24.50	0.00	0.00	21.88	46.38
9	Central sector	520.02	1253.60	0.00	1773.62	0.00	860.00	0.00	2633.62
	State	**0.00**	**0.00**	**40.05**	**40.05**	**0.00**	**0.00**	**12.52**	**52.57**
	Andaman & State	0.00	0.00	40.05	40.05	0.00	0.00	5.25	45.30
	Lakshadweep State	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Private sector	0.00	0.00	0.00	0.00	0.00	0.00	7.27	7.27
	Central sector	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	All INDIA	**192162.88**	**25329.38**	**837.63**	**218329.88**	**6780.00**	**44478.42**	**57244.23**	**326832.53**

Source : Central Electricity Authority.

*: RES includes SHP,BP,U&I, Solar and Wind Energy. Installed capacity in respect ot RES (MNER) as on 31.03.2017

Statement 2.14: Installed Power generating capacity in India

(Mega Watts)

Sr. No.	As on	Hydro	Thermal				Nuclear	RES#	Grand Total
			Coal	Gas	Diesel	Total			
1	31.12.47	508	756	0	98	854	0	0	1362
2	31.12.50	560	1004	0	149	1153	0	0	1713
3	31.03.56	1061	1597	0	228	1825	0	0	2886
4	31.03.61	1917	2436	0	300	2736	0	0	4653
5	31.03.66	4124	4417	134	352	4903	0	0	9027
6	31.03.69	5907	6640	134	276	7050	0	0	12957
7	31.03.74	6966	8652	165	241	9058	640	0	16664
8	31.03.79	10833	14875	168	164	15207	640	0	26680
9	31.03.80	11384	15991	268	165	16424	640	0	28448
10	31.03.85	14460	26311	542	177	27030	1095	0	42585
11	31.03.90	18307	41236	2343	165	43744	1565	0	63616
12	31.03.92	19194	44791	3095	168	48054	1785	32	69065
13	31.03.97	21658	54154	6562	2947	63663	2225	902	88448
14	31.03.02	26269	62131	11163	1135	74429	2720	1628	105046
15	31.03.03	26767	63951	11633	1178	76762	2720	1628	107877
16	31.03.04	29507	64957	11840	1172	77969	2720	2488	112684
17	31.03.05	30942	67791	11910	1202	80903	2770	3811	118426
18	31.03.06	32326	68518	12690	1202	82410	3360	6191	124287
19	31.03.07	34654	71121	13692	1202	86015	3900	7760	132329
20	31.03.08	35909	76049	14656	1202	91907	4120	11125	143061
21	31.03.09	36846	77649	14876	1200	93725	4120	13242	147933
22	31.03.10 *	36863	84198	17056	1200	102454	4560	15521	159398
23	31.03.12	38990	112022	18381	1200	131603	4780	24504	199877
24	31.03.13	39491	130221	20110	1200	151531	4780	27542	223344
25	31.03.14	40532	145273	21782	1200	168255	4780	31692	245259
26	31.03.15	41267	164636	23062	1200	188898	5780	35777	271722
27	31.03.16	42783	185173	24509	994	210676	5780	42849	302088
28	31.03.17	44479	192163	25329	838	218330	6780	57260	326849
29	31.12.2017	44963	192972	25150	838	218960	6780	60158	330861

Source: Central Electricity Authority RES: Renewable Energy Sources

: RES:- Renewable Energy Sources includes Hydro capacity of 25.00 MW and below as reported by MNRE.

* : After accounting for derations/uprations etc. and reconciliation with utilities, the installed capacity figure of 36863 MW would work out to 38990 as on 31.03.2012.

Statement 2.15: Annual gross generation of power by source and by sector

(in GWh)

Sl. No.	Year	Hydro	Thermal				Nuclear	RES	Total
			Coal/ Lignite	Gas	Diesel	Total			
1	1947	2195	1733	0	144	1877	0	0	4073
2	1950	2519	2387	0	200	2587	0	0	5106
3	1955-56	4295	5134	0	233	5367	0	0	9662
4	1960-61	7837	8732	0	368	9100	0	0	16937
5	1965-66	15225	17372	69	324	17765	0	0	32990
6	1968-69	20723	26394	123	194	26711	0	0	47433
7	1973-74	28972	34853	343	125	35321	2396	0	66689
8	1978-79	47159	52024	515	55	52594	2770	0	102523
9	1979-80	45478	55720	500	53	56273	2876	0	104627
10	1984-85	53948	96957	1834	45	98836	4075	0	156859
11	1989-90	62116	172643	5962	85	178690	4625	6	245438
12	1991-92	72757	197163	11450	95	208708	5525	38	287029
13	1996-97	68901	289378	26985	679	317042	9071	876	395889
14	2001-02	73580	370884	47099	4317	422300	19475	2085	517439
15	2006-07	113502	461794	64157	2539	528490	18,802	9,860	670,654
16	2007-08	120387	486998	69716	3357	560072	16,957	25,210	722,625
17	2008-09	110099	511895	71597	4789	588281	14,927	27,860	741,167
18	2009-10	104059	539586	96373	4248	640208	18,636	36,947	799,851
19	2010-11	114416	561298	100342	3181	664822	26,266	39,245	844,748
20	2011-12	130511	612497	93281	2649	708427	32,287	51,226	922,451
21	2012-13	113720	691341	66664	2449	760454	32,866	57,449	964,489
22	2013-14	134847	745533	44522	1998	792054	34,228	65,520	1,026,649
23	2014-15	129244	835291	41075	1576	877941	36,102	73,563	1,116,850
24	2015-16	121377	895340	47122	551	943013	37413	65781	1167584
25	2016-17(P)	122378	944861	49094	275	994230	37916	81869	1236392

Source: Growth Of Electricity Sector In India From 1947-2017, Central Electricity Authority & Energy Statistics 2017, MOSPI

1. BBMB generation has been considered in State Sector.
2. RES Generation upto 2013-2014 as per normative generation.
3. RES Generation during 2014-2015 onwards are as per actual generation received from utilities.

Statement 2.16 : Domestic production of petroleum products

(000' Tonne)

Sl. No.	Year	Light Distillates	Middle Distillates	Heavy Ends	Others	Total
1	1970-71	2900	8432	5277	501	17110
2	1971-72	3027	9224	5389	999	18639
3	1972-73	3138	9222	5233	267	17860
4	1973-74	3344	9606	5473	1072	19495
5	1974-75	3296	10007	5640	668	19611
6	1975-76	3516	10595	6282	436	20829
7	1976-77	3689	11028	6204	511	21432
8	1977-78	3926	11880	6892	521	23219
9	1978-79	4180	12268	7218	527	24193
10	1979-80	4333	12848	8040	573	25794
11	1980-81	4000	11876	7714	533	24123
12	1981-82	5028	13907	8754	493	28182
13	1982-83	5189	15412	9944	528	31073
14	1983-84	6029	16666	9675	556	32926
15	1984-85	6210	17000	9425	601	33236
16	1985-86	8131	21350	9755	645	39881
17	1986-87	8947	23087	9990	737	42761
18	1987-88	9150	24354	10571	653	44728
19	1988-89	9234	25078	10491	896	45699
20	1989-90	9734	26552	11445	959	48690
21	1990-91	9632	25966	11822	1142	48562
22	1991-92	9216	25764	11953	1416	48349
23	1992-93	9544	26577	13019	1219	50359
24	1993-94	9823	27341	12900	1020	51084
25	1994-95	11223	28186	12430	1088	52927
26	1995-96	11976	29406	12500	1199	55081
27	1996-97	12425	31843	13446	1291	59005
28	1997-98	12618	33448	14113	1129	61308
29	1998-99	13378	35682	14321	1163	64544
30	1999-00	16889	44444	15030	3048	79411
31	2000-01	22066	51760	17270	4518	95614

Contd.

Statement 2.16 : Domestic production of petroleum products

(000' Tonne)

Sl. No.	Year	Light Distillates	Middle Distillates	Heavy Ends	Others	Total
32	2001-02	23657	53878	18223	4246	100004
33	2002-03	24914	55367	18451	5408	104140
34	2003-04	27664	59451	20178	6170	113463
35	2004-05	30727	61948	22127	3777	118579
36	2005-06	34299	63947	21740	4419	124405
37	2006-07	39092	70718	24192	5746	139748
38	2007-08	40923	76124	25322	7103	149472
39	2008-09	41630	79973	27512	6033	155148
40	2009-10	51659	91777	27894	13279	184610
41	2010-11	55042	96045	28592	15142	194821
42	2011-12	55558	101308	31908	14429	203202
43	2012-13	58961	109562	31563	17650	217736
44	2013-14	58810	112820	31199	17927	220756
45	2014-15	59556	113448	29945	18188	221136
46	2015-16	63750	118309	29243	20622	231923
47	2016-17(p)	67865	122985	30112	22589	243551

Note: (p) - Provisional

1. Light Distillates includes Liquified Petroleum Gas , Petrol and Naphtha.
2. Middle Distillates includes Kerosene, Aviation Turbine, Hish Speed Diesel Oil and Light Diesel Oil
3. Heavy Ends includes Fuel Oil, Lubricant, Petroleum Coke and Bitumen
4. Others include waxes, Sulphur, MTO, SBPS, Benzene, LABFS etc.

Source : Ministry of Petroleum & Natural Gas.

Statement 2.17 : Industry-wise off-take of natural gas

(Million Cubic Meters)

Sl No.	Year	Energy Purposes							Non-Energy Purposes					Grand Total
		Power Genera-tion	Indus-trial	Tea Plan-tation	Domestic fuel / Transport*	Refinery	Miscel-laneous Sector $	Total	Fertil-izer	Captive Use/LPG Shrinkage	Sponge Iron	Petro-chemical	Total	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	2011-12	22628	284	175	5599	4257	9478	42422	14003	1068	1333	1858	18263	60684
2	2012-13	16078	269	182	5780	3891	8363	34562	14733	1027	1106	2486	19352	53915
3	2013-14	11284	156	196	5904	3968	7956	29464	15869	982	274	2405	19530	48994
4	2014-15	10720	395	180	5416	4575	6430	27716	15190	1005	154	2890	19239	46955
5	2015-16	10889	401	187	5464	5077	4665	26683	16135	754	544	3733	21167	47850
6	2016-17(P)	11616	688	-	7350	5374	4506	29535	15429	759	885	4170	21243	50778

Source : Ministry of Petroleum & Natural Gas.
(p): provisional
*:Includes Road Tansport Sectors & CGD Sector
$: Miscellaneous Sector =Manufacture + Internal consumption for pipeline system +others
Note: Sectors where nature gas is being used as feedstock are classified as consumption of gas under non energy purpose whereas those sectors where natural gas is use as fuel are classified as consumption of gas under energy purpose.

Statement 2.18: Availability of crude oil and petroleum products

('000 Tonne)

Sl. No.	Year	Crude Oil			Petroleum Products		
		Production	Net Imports	Gross Availability	Production@	Net Imports	Gross Availability
1	1970-71	6822	11683	18505	17110	752	17862
2	1971-72	7299	12951	20250	18639	2011	20650
3	1972-73	7321	12084	19405	17830	3399	21229
4	1973-74	7189	13855	21044	19495	3387	22882
5	1974-75	7684	14016	21700	19603	2473	22076
6	1975-76	8448	13624	22072	20829	2048	22877
7	1976-77	8898	14048	22946	21432	2550	23982
8	1977-78	10763	14507	25270	23219	2832	26051
9	1978-79	11633	14657	26290	24193	3834	28027
10	1979-80	11766	16121	27887	25794	4636	30430
11	1980-81	10507	16248	26755	24123	7253	31376
12	1981-82	16194	14460	30654	28182	4829	33011
13	1982-83	21063	12397	33460	31073	4233	35306
14	1983-84	26020	10445	36465	32926	2856	35782
15	1984-85	28990	7164	36154	33236	5159	38395
16	1985-86	30168	14616	44784	39881	1902	41783
17	1986-87	30480	15476	45956	42761	556	43317
18	1987-88	30357	17734	48091	44728	739	45467
19	1988-89	32040	17815	49855	45699	4200	49899
20	1989-90	34087	19490	53577	48690	3971	52661
21	1990-91	32160	20699	52859	48562	6012	54574
22	1991-92	30345	23994	54339	48349	6509	54858
23	1992-93	26950	29247	56197	50359	7564	57923
24	1993-94	27026	30822	57848	51084	8042	59126
25	1994-95	32494	27349	59843	52927	10697	63624
26	1995-96	35168	27342	62510	55081	16900	71981
27	1996-97	32900	33906	66806	59005	17103	76108
28	1997-98	33858	34493	68351	61308	20589	81897
29	1998-99	32722	39808	72530	64544	23052	87596
30	1999-00	31949	57805	89754	79411	15862	95273
31	2000-01	32426	74097	106523	95614	902	96516
32	2001-02	32032	78706	110738	100004	-3056	96948
33	2002-03	33044	81989	115033	104140	-3061	101079
34	2003-04	33373	90434	123807	113463	-6619	106844
35	2004-05	33981	95861	129842	118579	-9383	109196
36	2005-06	32190	99409	131599	124405	-10020	114385
37	2006-07	33988	111502	145490	139748	-15964	123784
38	2007-08	34118	121672	155790	149472	-18317	131155
39	2008-09	33508	132775	166284	155148	-20358	134789
40	2009-10	33690	159259	192949	184610	-36490	148120
41	2010-11	37684	163595	201279	194821	-41698	153123
42	2011-12	38090	171729	209819	203202	-44988	158214
43	2012-13	37862	184795	222657	217736	-47054	170683
44	2013-14	37788	189238	227027	220756	-51167	169589
45	2014-15	37461	189435	226896	221136	-42631	178505
46	2015-16	36942	202850	239792	231923	-31083	200840
47	2016-17 (P)	36009	213932	249941	243551	-29637	213914

Source : Indian Petroleum & Natural Gas Statistics 2016-17, Ministry of Petroleum & Natural Gas.

(P) : Provisional

'@ :Excludes LPG production from natural gas.

Statement 2.19: Gross and net production of natural gas

(Million cubic metres)

Sl. No.	Year	Gross Production	Re-injected *	Flared	Net Production
1	2	3	4	5	6
1	1970-71	1445	36	744	667
2	1971-72	1535	49	768	718
3	1972-73	1565	141	653	771
4	1973-74	1713	115	836	762
5	1974-75	2041	139	951	951
6	1975-76	2368	160	1084	1124
7	1976-77	2428	190	857	1381
8	1977-78	2839	184	1191	1464
9	1978-79	2812	148	953	1711
10	1979-80	2767	127	964	1676
11	1980-81	2358	43	793	1522
12	1981-82	3851	110	1519	2222
13	1982-83	4936	91	1888	2957
14	1983-84	5961	45	2515	3401
15	1984-85	7241	48	3052	4141
16	1985-86	8134	66	3118	4950
17	1986-87	9853	63	2715	7075
18	1987-88	11467	54	3445	7968
19	1988-89	13217	84	3883	9250
20	1989-90	16988	96	5720	11172
21	1990-91	17998	102	5131	12765
22	1991-92	18644	132	4072	14410
23	1992-93	18061	90	1854	16117
24	1993-94	18336	71	1924	16341
25	1994-95	19468	23	2108	17337
26	1995-96	22642	0	1710	20932
27	1996-97	23256	0	1932	21354
28	1997-98	26401	0	1856	24545
29	1998-99	27428	0	1722	25706
30	1999-00	28446	0	1561	26886
31	2000-01	29477	0	1617	27860
32	2001-02	29714	0	1677	28037
33	2002-03	31389	0	1426	29963
34	2003-04	31962	0	1056	30906
35	2004-05	31763	0	988	30775
36	2005-06	32202	4467	877	26858
37	2006-07	31747	4372	956	26419
38	2007-08	32417	4499	938	26981
39	2008-09	32845	4680	1099	27066
40	2009-10	47496	5661	975	40874
41	2010-11	52219	5211	968	46040
42	2011-12	47559	5313	1077	41168
43	2012-13	40679	5429	902	34348
44	2013-14	35407	5654	769	28984
45	2014-15	33657	6013	865	26780
46	2015-16	32249	5946	1007	25297
47	2016-17 (P)	31897	5928	977	24992

Source : Ministry of Petroleum & Natural Gas.

Note: Reinjected's (internal use) figures for the year 1995-96 to 2004-05 is not available.

(P) : Provisional

* : Reinjected=Internal use +Losses

Statement 2.20 :State-wise solar photovoltaic systems installed

(upto 31.12.2016)

S. No.	State/UT	Solar photovoltaic systems (numbers)				
		Lanterns	Home lights	Street lights	Pumps	Stands alone power plant
1	Andhra Pradesh	51360	22972	7812	8952	3786
2	Arunachal Pradesh	14433	18945	1671	22	600
3	Assam	1121	6926	318	45	1605
4	Bihar	50117	12303	955	2882	3969
5	Chhattisgarh	3311	7754	2042	5388	27868
6	Delhi	4807	0	301	90	1269
7	Goa	1093	393	707	15	33
8	Gujarat	31603	9253	2004	7620	13577
9	Haryana	93853	56727	22018	543	2321
10	Himachal Pradesh	33909	22592	58508	6	1391
11	Jammu & Kashmir	51224	65319	5806	39	7720
12	Jharkhand	23374	9450	620	2901	3540
13	Karnataka	7334	49644	2694	3200	4676
14	Kerala	54367	40412	1735	810	13894
15	Madhya Pradesh	9444	4016	9378	3813	3654
16	Maharashtra	68683	3497	10420	1503	3858
17	Manipur	4787	3900	1888	40	1241
18	Meghalaya	24875	7844	1273	19	885
19	Mizoram	9589	6801	5056	37	1719
20	Nagaland	6766	1045	6235	3	1506
21	Odisha	9882	5274	5834	6673	568
22	Punjab	17495	8626	21758	1857	1950
23	Rajasthan	4716	151964	6852	37306	10850
24	Sikkim	23300	15059	504	0	850
25	Tamil Nadu	16818	226946	36802	4763	12753
26	Telangana	0	0	244	424	5368
27	Tripura	64282	32723	1199	151	612
28	Uttar Pradesh	62015	235909	185091	8958	10041
29	Uttarakhand	93927	91595	21905	26	1534
30	West Bengal	17662	145332	8726	653	1730
31	Andaman & Nicobar	6296	468	390	5	167
32	Chandigarh	1675	275	898	12	730
33	Lakshadweep	5289	0	1725	0	2190
34	Puducherry	1637	25	417	21	121
35	Others	125797	24047	9150	0	23885
36	NABARD	0	108000	0	1744	0
Total		**996841**	**1396036**	**442936**	**100521**	**172458**

Source: Annual Report 2016-17, Ministry of New and Renewable Energy.

Statement 2.21 : State-wise details of small hydro power projects Setup & Under Implementation

(as on 31.03.2015)

Sr. No	States	Potential		Projects set-up		Project under Implementation	
		No.	Capacity (MegaWatt)	No.	Capacity (MegaWatt)	No	Capacity (MW)
1	Andhra Pradesh & Telangana	387	978.4	70	232.23	11	20.84
2	Arunachal Pradesh	677	1341.38	152	104.61	41	21.53
3	Assam	119	238.69	6	34.11	3	12
4	Bihar	93	223.05	29	70.70	5	17.7
5	Chhattisgarh	200	1107.15	9	52.00	5	115.25
6	Goa	6	6.5	1	0.05	-	-
7	Gujarat	292	201.97	6	16.60	-	-
8	Haryana	33	110.05	9	73.50	-	-
9	Himachal Pradesh	531	2397.91	176	754.81	15	0.3
10	Jammu & Kashmir	245	1430.67	39	156.53	5	8.65
11	Jharkhand	103	208.95	6	4.05	8	34.85
12	Karnataka	834	4141.12	161	1179.93	9	26.8
13	Kerala	245	704.1	29	198.92	6	9.25
14	Madhya Pradesh	299	820.44	11	86.16	3	4.9
15	Maharashtra	274	794.33	60	336.87	7	34.25
16	Manipur	114	109.13	8	5.45	3	2.75
17	Meghalaya	97	230.05	4	31.03	3	1.7
18	Mizoram	72	168.9	18	36.47	1	0.5
19	Nagaland	99	196.98	11	29.67	3	3.2
20	Odisha	222	295.47	10	64.63	4	3.6
21	Punjab	259	441.38	48	157.40	10	18.25
22	Rajasthan	66	57.17	10	23.85	-	-
23	Sikkim	88	266.64	17	52.11	1	0.2
24	Tamil Nadu	197	659.51	21	123.05	-	-
25	Tripura	13	46.86	3	16.01	-	-
26	Uttar Pradesh	251	460.75	9	25.10	1	1.5
27	Uttarakhand	448	1707.87	101	209.32	44	139.54
28	West Bengal	203	396.11	24	98.50	16	84.15
29	Andaman and Nicobar Islands	7	7.91	1	5.25	-	-
	Total	**6474**	**19749.44**	**1049**	**4176.91**	**204**	**561.71**

Source: Annual Report 2015-16, Ministry of New and Renewable Energy

Statement 2.21 : State-wise details of small hydro power projects Setup & Under Implementation

(as on 31.12.2016)

Sl. No	States	Potential		Projects set-up		Project under Implementation	
		Nos.	Capacity (MegaWatt)	Nos.	Capacity (MegaWatt)	Nos.	Capacity (MW)
1	Andhra Pradesh & Telangana	387	978.40	72	241.98	5	17.70
2	Arunachal Pradesh	677	1341.38	152	104.61	17	54.05
3	Assam	119	238.69	6	34.11	5	33.00
4	Bihar	93	223.05	29	70.70	10	8.30
5	Chhattisgarh	200	1107.15	10	76.00	1	24.00
6	Goa	6	6.50	1	0.05	0	0.00
7	Gujarat	292	201.97	6	16.60	13	92.31
8	Haryana	33	110.05	9	73.50	1	0.10
9	Himachal Pradesh	531	2397.91	180	798.81	27	211.00
10	Jammu & Kashmir	245	1430.67	40	158.03	25	45.15
11	Jharkhand	103	208.95	6	4.05	0	0.00
12	Karnataka	834	4141.12	166	1220.73	3	13.40
13	Kerala	245	704.10	31	205.02	9	74.02
14	Madhya Pradesh	299	820.44	11	86.16	0	0.00
15	Maharashtra	274	794.33	64	346.18	16	54.15
16	Manipur	114	109.13	8	5.45	0	0.00
17	Meghalaya	97	230.05	4	31.03	2	25.50
18	Mizoram	72	168.90	19	41.47	4	8.70
19	Nagaland	99	196.98	12	30.67	8	3.75
20	Odisha	222	295.47	10	64.63	3	18.50
21	Punjab	259	441.38	54	170.90	12	30.00
22	Rajasthan	66	57.17	10	23.85	0	0.00
23	Sikkim	88	266.64	17	52.11	2	15.00
24	Tamil Nadu	197	659.51	21	123.05	0	0.00
25	Tripura	13	46.86	3	16.01	0	0.00
26	Uttar Pradesh	251	460.75	9	25.10	1	1.50
27	Uttarakhand	448	1707.87	101	209.32	5	19.60
28	West Bengal	203	396.11	24	98.50	0	0.00
29	Andaman and Nicobar Islands	7	7.91	1	5.25	0	0.00
	Total	**6474**	**19749.44**	**1076**	**4333.86**	**169**	**749.73**

Source: Annual Report 2016-17, Ministry of New and Renewable Energy

Statement 2.22: Source-wise and State-wise estimated potential of Renewable Power in India

(Mega Watts)

S. No.	States/ UTs	Wind Power	Small Hydro Power	Bio-mass Power	Cogen-eration bagasse	Waste to Energy	Solar	Total	Distribu-tion (%)
1	Andhra Pradesh	14497	978	578	300	123	38440	54916	6.12
2	Arunachal Pradesh	236	1341	8	0	0	8650	10236	1.14
3	Assam	112	239	212	0	8	13760	14330	1.60
4	Bihar	144	223	619	300	73	11200	12559	1.40
5	Chhattisgarh	314	1107	236	0	24	18270	19951	2.23
6	Goa	0	7	26	0	0	880	912	0.10
7	Gujarat	35071	202	1221	350	112	35770	72726	8.11
8	Haryana	93	110	1331	350	24	4560	6470	0.72
9	Himachal Pradesh	64	2398	142	0	2	33840	36446	4.06
10	Jammu & Kashmir	5685	1431	43	0	0	111050	118208	13.18
11	Jharkhand	91	209	90	0	10	18180	18580	2.07
12	Karnataka	13593	4141	1131	450	0	24700	44015	4.91
13	Kerala	837	704	1044	0	36	6110	8732	0.97
14	Madhya Pradesh	2931	820	1364	0	78	61660	66853	7.46
15	Maharashtra	5961	794	1887	1250	287	64320	74500	8.31
16	Manipur	56	109	13	0	2	10630	10811	1.21
17	Meghalaya	82	230	11	0	2	5860	6185	0.69
18	Mizoram	0	169	1	0	2	9090	9261	1.03
19	Nagaland	16	197	10	0	0	7290	7513	0.84
20	Odisha	1384	295	246	0	22	25780	27728	3.09
21	Punjab	0	441	3172	300	45	2810	6768	0.75
22	Rajasthan	5050	57	1039	0	62	142310	148518	16.56
23	Sikkim	98	267	2	0	0	4940	5307	0.59
24	Tamil Nadu	14152	660	1070	450	151	17670	34152	3.81
25	Telangana						20410	20410	2.28
26	Tripura	0	47	3	0	2	2080	2131	0.24
27	Uttar Pradesh	1260	461	1617	1250	176	22830	27593	3.08
28	Uttarakhand	534	1708	24	0	5	16800	19071	2.13
29	West Bengal	22	396	396	0	148	6260	7222	0.81
30	Andaman & Nicobar	365	8	0	0	0	0	373	0.04
31	Chandigarh	0	0	0	0	6	0	6	0.00
32	Dadar & Nagar Haveli	0	0	0	0	0	0	0	0.00
33	Daman & Diu	4	0	0	0	0	0	4	0.00
34	Delhi	0	0	0	0	131	2050	2181	0.24
35	Lakshadweep	0	0	0	0	0	0	0	0.00
36	Puducherry	120	0	0	0	3	0	123	0.01
37	Others	0	0	0	0	1022	790	1812	0.20
	All India Total	**102772**	**19749**	**17536**	**5000**	**2556**	**748990**	**896602**	**100.00**
	Distribution (%)	**11.46**	**2.20**	**1.96**	**0.56**	**0.29**	**83.54**	**100.00**	

Source: Annual Report 2016-17, Ministry of New and Renewable Energy

Statement 2.23 :State-wise Installed Capacity of Grid Interactive Renewable Power

(as on 31st March)

States / UTs	Small Hydro Power (MW)		Wind Power (MW)		Bio-Power-BM Power/Cogen (MW)		Bio-Power-Waste to Energy (MW)		Solar Power (MWp)		Total Capacity (MW)	
	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
Andhra Pradesh	223.23	232.98	1032.00	1431.45	389.75	380.75	58.16	58.16	242.86	572.96	1946.00	2676.30
Arunachal Pradesh	104.61	104.61	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.27	104.64	104.88
Assam	34.11	34.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00		34.11	34.11
Bihar	70.70	70.70	0.00	0.00	43.42	43.42	0.00	0.00	0.00	5.10	114.12	119.22
Chhattisgarh	52.00	52.00	0.00	0.00	264.90	279.90	0.00	0.00	7.60	93.58	324.50	425.48
Goa	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
Gujarat	16.60	16.60	3645.00	4037.50	55.90	56.30	0.00	0.00	1000.05	1119.17	4717.55	5229.57
Haryana	71.50	73.50	0.00	0.00	52.30	45.30	0.00	0.00	12.80	15.39	136.60	134.19
Himachal Pradesh	723.91	793.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	723.91	793.51
Jammu & Kashmir	156.53	156.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	156.53	157.53
Jharkhand	4.05	4.05	0.00	0.00	0.00	0.00	0.00	0.00	16.00	16.19	20.05	20.24
Karnataka	1129.73	1217.73	2638.00	2869.15	664.28	872.18	1.00	1.00	77.22	145.46	4510.23	5105.52
Kerala	168.92	198.92	35.00	43.50	0.00	0.00	0.00	0.00	0.03	13.05	203.95	255.47
Madhya Pradesh	86.16	86.16	880.00	2141.10	36.00	35.00	3.90	3.90	558.58	776.37	1564.64	3042.53
Maharashtra	335.43	339.88	4446.00	4654.15	1033.40	1220.78	12.72	12.72	360.75	385.76	6188.30	6613.28
Manipur	5.45	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.45	5.45
Meghalaya	31.03	31.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.03	31.03
Mizoram	36.47	36.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	36.47	36.57
Nagaland	29.67	30.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.67	30.67
Odisha	64.63	64.63	0.00	0.00	20.00	20.00	0.00	0.00	31.76	66.92	116.39	151.55
Punjab	157.40	170.90	0.00	0.00	140.50	155.50	10.25	10.25	185.27	405.06	493.42	741.71

Contd.

Statement 2.23 :State-wise Installed Capacity of Grid Interactive Renewable Power

(as on 31st March)

States / UTs	Small Hydro Power (MW)		Wind Power (MW)		Bio-Power-BM Power/Cogen (MW)		Bio-Power-Waste to Energy (MW)		Solar Power (MWp)		Total Capacity (MW)	
	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
Rajasthan	23.85	23.85	3309.00	3993.95	111.30	108.30	0.00	0.00	942.10	1269.93	4386.25	5396.03
Sikkim	52.11	52.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.11	52.11
Tamil Nadu	123.05	123.05	7455.00	7613.86	662.30	641.90	8.05	8.05	142.58	1061.82	8390.98	9448.68
Telangana	0.00	0.00	0.00	77.70	0.00	0.00	0.00	0.00	61.25	527.84	61.25	605.54
Tripura	16.01	16.01	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	21.01	21.01
Uttar Pradesh	25.10	25.10	0.00	0.00	888.50	870.00	5.00	5.00	71.26	143.50	989.86	1043.60
Uttarakhand	209.32	209.33	0.00	0.00	30.00	76.00	0.00	0.00	5.00	41.15	244.32	326.48
West Bengal	98.50	98.50	0.00	0.00	26.00	26.00	0.00	0.00	7.21	7.77	131.71	132.27
Andaman & Nicobar	5.25	5.25	0.00	0.00	0.00	0.00	0.00	0.00	5.10	5.10	10.35	10.35
Chandigarh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.50	6.81	4.50	6.81
Dadar & Nagar Haveli	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daman & Diu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	4.00
Delhi	0.00	0.00	0.00	0.00	0.00	0.00	16.00	16.00	5.47	14.28	21.47	30.28
Lakshawadeep	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.75
Puducherry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03
Others	0.00	0.00	4.00	4.30	0.00	0.00	0.00	0.00	0.79	58.31	4.79	62.61
Total(MW)	**4055.37**	**4273.47**	**23444.00**	**26866.66**	**4418.55**	**4831.33**	**115.08**	**115.08**	**3743.99**	**6762.87**	**35776.99**	**42849.40**

Source: Ministry of New and Renewable Energy
0.0 : Not Available or indeterminate velue
MW: Mega-Watt
MWp: Mega-Watt Peak

Statement 2.24 :Energy Balance of India for 2015-16 (P)

(All figures in Ktoe)

	Coal	Crude Oil	Oil Products	Natural Gas	Nuclear	Hydro	Solar, Wind, Others	Electricity	Total
Production	2,39,112.66	36,950.00	-	29,664.69	9,750.32	10,447.88	35,413.60	-	3,61,339.15
Imports	1,29,326.88	2,02,850.00	29,157.69	20,210.19	-	-	-	450.98	3,81,995.74
Exports	-841.93	-	-62,554.05	-	-	-	-	-442.90	-63,838.88
International marine bunkers	-	-	-585.07	-	-	-	-	-	-585.07
International aviation bunkers	-	-	-	-	-	-	-	-	-
Stock changes	-3,506.13	-	-	-	-	-	-	-	-3,506.13
Total primary energy supply	**3,64,091.47**	**2,39,800.00**	**-33,981.42**	**49,874.88**	**9,750.32**	**10,447.88**	**35,413.60**	**8.08**	**6,75,404.81**
Statistical differences	2,06,152.75	-6,935.00	-5,966.04	-5,860.82	-	0.00	-	29,461.19	2,16,852.08
Main activity producer electricity plants	-3,50,947.31	-	-750.63	-10,016.32	-9,750.32	-10,438.42	-35,413.60	68,480.17	-3,48,836.43
Autoproducer electricity plants	-	-	-	-	-	-9.46	-	8,867.29	8,857.83
Oil refineries	-	-2,32,865.00	2,30,456.44	-	-	-	-	-	-2,408.56
Energy industry own use	-194.30	-	-1,224.50	-8,450.73	-	-	-	-	-9,869.52
Losses	-	-		-	-	-	-	-20,714.30	-20,714.30
Final consumption	**2,19,102.62**	**-**	**1,88,533.85**	**25,547.01**	**-**	**-**	**-**	**86,102.43**	**5,19,285.91**
Industry	**2,19,102.62**	**-**	**39,500.80**	**501.62**	**-**	**-**	**-**	**36,422.98**	**2,95,528.02**
Iron and steel	43,251.72	-	1,104.93	-	-	-	-	-	44,356.65
Chemical and petrochemical	1,830.75	-	12,255.85	-	-	-	-	-	14,086.60
Non-ferrous metals	-	-	373.51	-	-	-	-	-	373.51
Machinery	-	-	559.44	-	-	-	-	-	559.44
Mining and quarrying	-	-	50.89	-	-	-	-	-	50.89
Paper, pulp and print	908.57	-	-	-	-	-	-	-	908.57
Construction	6,210.08	-	225.38	-	-	-	-	-	6,435.46
Textile and leather	574.50	-	116.25	-	-	-	-	-	690.75

Contd.

Statement 2.24 :Energy Balance of India for 2015-16 (P)

(All figures in Ktoe)

	Coal	Crude Oil	Oil Products	Natural Gas	Nuclear	Hydro	Solar, Wind, Others	Electricity	Total
Non-specified (industry)	1,66,327.01	-	24,814.54	501.62	-	-	-	36,422.98	2,28,066.15
Transport	**-**	**-**	**36,268.71**	**376.75**	**-**	**-**	**-**	**1,427.08**	**38,072.55**
Road	-	-	26,375.69	-	-	-	-	-	26,375.69
Domestic aviation	-	-	5,983.65	-	-	-	-	-	5,983.65
Rail	-	-	2,822.29	-	-	-	-	1,427.08	4,249.37
Pipeline transport	-	-	-	376.75	-	-	-	-	376.75
Domestic navigation	-	-	698.25	-	-	-	-	-	698.25
Non-specified (transport)	-	-	388.84	-	-	-	-	-	388.84
Other	**-**	**-**	**1,12,764.35**	**5,198.93**	**-**	**-**	**-**	**48,252.36**	**1,66,215.64**
Residential	-	-	26,367.03	5,026.00	-	-	-	20,543.34	51,936.37
Commercial and public services	-	-	-	-	-	-	-	7,399.18	7,399.18
Agriculture/forestry	-	-	714.19	172.93	-	-	-	14,893.91	15,781.03
Fishing	-	-	-	-	-	-	-	-	-
Non-specified (other)	-	-	85,683.13	-	-	-	-	5,415.94	91,099.07
Non-energy use	**-**	**-**	**-**	**19,469.70**	**-**	**-**	**-**	**-**	**19,469.70**
Non-energy use industry/ transformation/en	-	-	-	19,469.70	-	-	-	-	19,469.70
Elect. output in GWh	**-**	**-**	**-**	**-**	**37,414.00**	**1,21,487.00**	**4,11,786.00**	**-**	**5,70,687.00**
Elec output-main activity producer ele plants	-	-	-	-	37,414.00	1,21,377.00	4,11,786.00	-	5,70,577.00
Elec output-autoproducer electricity plants	-	-	-	-	-	110.00	-	-	110.00

Source : Energy Statistics 2017, Ministry of Statistics and Programme Implementation
Ktoe: Kilo Tonne of oil equivalent

Statement 2.25 : Number of towns and villages electrified in India

(As on 31.03.2017)

Sl. No.	State/Union Territory	Towns		Villages		Percentage Electrified %
		Total (as per 2011 Census)	Electrified	Total (as per 2011 Census)	Electrified as on 31.03.2017	
1	2	3	4	5	6	
I.	**Northern Region**	**1999**	**1999**	**199959**	**199661**	**99.85**
	1 Chandigarh	6	6	5	5	100.00
	2 Delhi	113	113	103	103	100.00
	3 Haryana	154	154	6642	6642	100.00
	4 Himachal Pradesh	59	59	17882	17875	100.00
	5 Jammu & Kashmir	122	122	6337	6235	98.39
	6 Punjab	217	217	12168	12168	100.00
	7 Rajasthan	297	297	43264	43195	100.00
	8 Uttar Pradesh	915	915	97813	97751	99.99
	9 Uttarakhand	116	116	15745	15687	99.63
II.	**Western Region**	**1625**	**1625**	**130699**	**130219**	**99.63**
	1 Chhattisgharh	182	182	19567	19186	98.05
	2 Dadra & Nagar Haveli	6	6	65	65	100.00
	3 Daman & Diu	8	8	19	19	100.00
	4 Goa	70	70	320	320	100.00
	5 Gujarat	348	348	17843	17843	100.00
	6 Madhya Pradesh	476	476	51929	51830	99.81
	7 Maharashtra	535	535	40956	40956	100.00
III.	**Southern Region**	**2333**	**2333**	**69845**	**69820**	**99.96**
	1 Andhra Pradesh	195	195	16158	16158	100.00
	2 Karnataka	347	347	27397	27372	99.91
	3 Kerala	520	520	1017	1017	100.00
	4 Lakshadweep	6	6	6	6	100.00
	5 Puducherry	10	10	90	90	100.00
	6 Tamil Nadu	1097	1097	15049	15049	100.00
	7 Telangana	158	158	10128	10128	100.00
IV.	**Eastern Region**	**1573**	**1573**	**154526**	**152295**	**98.56**
	1 A & N Islands	5	5	396	396	100.00
	2 Bihar	199	199	39073	38636	98.88
	3 Jharkhand	228	228	29492	28821	97.72
	4 Odisha	223	223	47677	46559	97.66
	5 Sikkim	9	9	425	425	100.00
	6 West Bengal	909	909	37463	37458	99.99
V.	**North-Eastern Region**	**405**	**405**	**42435**	**40140**	**94.59**
	1 Arunachal Pradesh	27	27	5258	4029	76.63
	2 Assam	214	214	25372	24640	97.11
	3 Manipur	51	51	2379	2299	96.64
	4 Meghalaya	22	22	6459	6229	96.44
	5 Mizoram	23	23	704	686	97.44
	6 Nagaland	26	26	1400	1394	99.57
	7 Tripura	42	42	863	863	100.00
Total (All India)		**7935**	**7935**	**597464**	**592135**	**99.11**

Source : General Review 2017, Central Electricity Authority

Statement 2.26 : Decentralised/off-grid renewable energy systems devices

(Nos. in lakh) (as on 31.03.2016)

State	Bio-gas Plants	Water Pump-ing/Wind Mills#	SPV Pumps	Solar Photovoltaic (SPV)Systems				Aero-gen. Hybrid System
				SLS	HLS	SL	PP	
	Nos.)	(Nos.)	(Nos.)	(Nos.)	(Nos.)	(Nos.)	(KWP)	(Nos.)
Andhra Pradesh	5.32	6.0	615	0.1	0.2	0.5	3632.6	16.00
Arunachal Pradesh	0.03	0.0	18	0.0	0.2	0.1	600.1	6.80
Assam	1.14	3.0	45	0.0	0.1	0.0	1605.0	6.00
Bihar	1.30	46.0	1,666	0.0	0.1	0.5	1021.6	-
Chhattisgarh	0.51	1.0	435	0.0	0.1	0.0	22898.7	-
Goa	0.04	0.0	15	0.0	0.0	0.0	32.7	193.80
Gujarat	4.30	945.0	268	0.0	0.1	0.3	13576.6	20.00
Haryana	0.61	0.0	543	0.2	0.6	0.9	2321.3	10.00
Himachal Pradesh	0.47	0.0	6	0.3	0.2	0.4	1512.5	-
Jammu & Kashmir	0.03	0.0	39	0.1	0.7	0.5	7561.9	46.40
Jharkhand	0.07	0.0	-	0.0	0.1	0.2	3539.9	-
Karnataka	4.79	28.0	551	0.0	0.5	0.1	4676.4	39.20
Kerala	1.44	79.0	810	0.0	0.4	0.5	3894.4	8.00
Madhya Pradesh	3.54	0.0	87	0.1	0.0	0.1	2726.0	24.00
Maharashtra	8.71	26.0	251	0.1	0.0	0.7	3857.7	1613.00
Manipur	0.02	-	40	0.0	0.0	0.0	1241.0	140.00
Meghalaya	0.10	-	19	0.0	0.1	0.2	884.5	191.50
Mizoram	0.05	-	37	0.0	0.1	0.1	1185.0	-
Nagaland	0.08	-	3	0.0	0.0	0.1	1292.0	20.00
Odisha	2.66	-	57	0.1	0.1	0.1	567.5	13.10
Punjab	1.72	-	1857	0.1	0.1	0.2	1202.0	50.00
Rajasthan	0.70	222.0	27323	0.1	1.4	0.0	15540.0	14.00
Sikkim	0.09	-	-	0.0	0.2	0.2	795.0	15.50
Tamil Nadu	2.22	60.0	1245	0.4	1.3	0.2	7297.6	157.90
Telangana	0.10	-	-	-	-	-	1833.0	-
Tripura	0.03	-	155	0.0	0.3	0.6	369.0	2.00
Uttar Pradesh	4.39	-	1516	1.8	2.4	0.6	6263.5	-
Uttarakhand	0.18	-	26	0.2	0.9	0.9	628.0	24.00
West Bengal	3.67	-	48	0.1	1.5	0.2	1126.0	74.00
Andaman & Nicobar	0	2.0	5	0.0	0.0	0.1	167.0	-
Chandigarh	0	-	12	-	-	-	730.0	-
Dadar & Nagar Haveli	0	-	-	-	-	-	0.0	-
Daman & Diu	-	-	-	-	-	-	0.0	-
Delhi	0.01	-	90	-	-	-	1269.0	-
Lakshadweep	-	-	-	-	-	0.1	1090.0	-
Puducherry	0.01	-	21	-	-	-	40.0	5.00
Others*	-	-	-	0.1	1.3	1.3	23885.0	-
Total	**48.35**	**1418.08**	**37803.00**	**3.96**	**12.86**	**10.01**	**140862.44**	**2690.80**

Source : Energy Statistics 2017, Ministry of Statistics & Programme Implementation & Central Electricity Authority
SLS = Street Lighting System; HLS = Home Lighting System; SL = Solar Lantern; PP = Power Plants; SPV = Solar Photovoltaic; KWP = Kilowatt peak
*Others includes installations through NGOs/IREDA in different states.
Data reported for the year 2012.

Contd.

Statement 2.26 : Decentralised/off-grid renewable energy systems devices

(Nos. in lakh) (as on 31.03.2016)

State	Solar Cooker#	Biomass Gasifiers (Rural+Industrial)	Biomass (non bagasse)	Waste to Energy	Village Electrification	
					Villages	Percentage of village electified
	(Nos.)	(Nos.)	(Nos.)	(Nos.)	(Nos.)	(KWP)
Andhra Pradesh	23.15	22914	99.00	23.01	16158	100
Arunachal Pradesh	0.03	750	-	-	3854	73.3
Assam		2933	-	-	23422	92.3
Bihar		11688	8.20	1	38080	97.5
Chhattisgarh	4.00	1210	2.50	0.33	18892	96.6
Goa	1.69	-	-	-	320	100
Gujarat	824.09	21530	-	15.83	17843	100
Haryana	7.80	5423	77.10	4	6642	100
Himachal Pradesh	-	-	7.20	1	17848	99.8
Jammu & Kashmir	-	200	-	-	6230	98.3
Jharkhand	16.00	500	4.30	-	27717	94
Karnataka	14.00	7447	15.20	9.63	27358	99.9
Kerala	0.03	-	0.70	-	1017	100
Madhya Pradesh	11.75	11618	12.40	0.47	51671	99.5
Maharashtra	34.50	7150	16.40	22.05	40956	100
Manipur	-	-	-	-	2178	91.6
Meghalaya	-	250	13.80	-	5548	85.9
Mizoram	-	250	-	-	662	94
Nagaland	-	2100	-	-	1318	94.1
Odisha	13.00	270	8.20	0.02	45467	95.3
Punjab	9.33	-	123.10	7.98	12168	100
Rajasthan	222.90	3088	2.00	3.70	42932	99.2
Sikkim	-	-	-	-	425	100
Tamil Nadu	17.06	16262	24.10	13.10	15049	100
Telangana	-	-	-	-	846	98
Tripura	-	1050	-	-	10128	100
Uttar Pradesh	12.38	35852	170.40	46.18	97589	99.8
Uttarakhand	5.05	2150	47.50	5.02	15669	99.5
West Bengal	2.00	36368	19.90	1.16	37449	100
Andaman & Nicobar	-	-	-	-	396	100
Chandigarh	-	-	-	-	5	100
Dadar & Nagar Haveli	-	-	-	-	65	100
Daman & Diu	-	-	-	-	19	100
Delhi	2.53	-	-	-	103	100
Lakshadweep	-	250	-	-	6	100
Puducherry	-	-	-	-	90	100
Others*	-	-	-	-	-	-
Total	**1221.26**	**191253**	**651.90**	**154.48**	**586120**	**98.10**

Source : Energy Statistics 2017, Ministry of Statistics & Programme Implementation & Central Electricity Authority

SLS = Street Lighting System; HLS = Home Lighting System; SL = Solar Lantern; PP = Power Plants; SPV = Solar Photovoltaic; KWP = Kilowatt peak

*Others includes installations through NGOs/IREDA in different states.

Data reported for the year 2012.

Statement 2.27 : Per 1000 distribution of households by primary source of energy for cooking (Rural)

(For Year 2007-08)

States/UT	primary source of energy for cooking											estd. No of hhs (00)	no.of sample hhs
	No cooking arrange-ment	coke, coal and charcoal	fire wood and chips	L.P.G.	gobar gas	dung-cake	kero-sene	electricity	others	not record-ed	all		
Andhra Pradesh	42	1	806	136	3	2	6	0	4	0	1000	148825	2239
Arunachal Pradesh	0	3	805	168	0	0	4	0	2	18	1000	1644	348
Assam	0	0	862	138	0	0	0	0	0	0	1000	46001	800
Bihar	1	12	550	20	0	283	3	0	130	1	1000	136324	2844
Chhattisgarh	25	2	955	7	3	3	2	0	0	2	1000	39421	640
Gujarat	14	4	812	132	6	8	24	0	0	0	1000	65922	1084
Haryana	7	0	630	137	1	222	0	0	3	0	1000	30582	572
Himachal Pradesh	42	0	689	255	0	0	10	4	0	0	1000	13577	672
Jammu & Kashmir	0	4	696	168	0	128	2	1	0	0	1000	12913	472
Jharkhand	6	124	847	13	0	9	0	0	1	0	1000	41668	851
Karnataka	60	0	857	68	6	0	5	0	4	0	1000	76206	1180
Kerala	9	0	745	219	4	0	2	0	19	2	1000	54827	896
Madhya Pradesh	6	1	886	47	1	58	2	0	0	0	1000	92609	1779
Maharashtra	32	1	781	150	5	0	9	0	22	0	1000	125352	2014
Manipur	0	0	671	326	0	0	3	0	0	0	1000	3070	768
Meghalaya	0	11	941	35	0	3	9	1	0	0	1000	3990	512
Nagaland	0	0	579	415	0	0	3	0	3	0	1000	1496	512
Orissa	34	5	874	15	0	31	2	1	36	0	1000	70923	1532

Contd.

Statement 2.27 : Per 1000 distribution of households by primary source of energy for cooking (Rural)

(For Year 2007-08)

States/UT	No cooking arrange-ment	primary source of energy for cooking										estd. No of hhs (00)	no.of sample hhs
		coke, coal and charcoal	fire wood and chips	L.P.G.	gobar gas	dung-cake	kero-sene	electricity	others	not record-ed	all		
Punjab	14	0	326	295	6	333	9	3	15	0	1000	33812	704
Rajasthan	18	0	927	47	0	4	4	0	0	0	1000	87089	1501
Sikkim	9	0	605	326	0	0	49	6	5	0	1000	1107	480
Tamil Nadu	27	0	782	169	0	0	22	0	0	0	1000	95794	1436
Tripura	3	5	915	65	0	2	10	0	0	0	1000	6747	864
Uttar Pradesh	4	0	764	39	1	176	1	0	16	0	1000	247744	3611
Uttarakhand	9	0	693	220	1	57	20	0	0	0	1000	13701	412
West Bengal	5	36	785	42	1	42	7	0	83	0	1000	134337	2203
North- Eastern States	1	4	819	162	0	1	9	1	1	2	1000	19019	3740
Union Territories	34	0	498	252	0	0	215	0	0	0	1000	2445	372
All India	**17**	**8**	**776**	**91**	**2**	**74**	**6**	**0**	**26**	**0**	**1000**	**1592612**	**31673**

Source : NSS Report No. 530: Household Consumer Expenditure in India, 2007-08

Statement 2.27 : Per 1000 distribution of households by primary source of energy for cooking (Rural)

(For Year 2009-10)

States/UT	Primary source of energy for cooking											Estd. No of house holds (00)	No.of sample house holds surveyed
	Coke, Coal	Fire wood and chips	L.P.G.	Gobar gas	Dung-cake	Char-coal	Kero-sene	Electricity	Others	No cooking arrange-ment	all		
Andhra Pradesh	1	749	194	1	0	0	7	1	0	47	1000	148374	3924
Arunachal Pradesh	0	758	238	0	0	0	1	0	3	0	1000	1706	1041
Assam	0	850	142	0	0	0	5	0	0	0	1000	48810	2616
Bihar	12	743	35	0	148	0	2	0	61	0	1000	142999	3294
Chhattisgarh	0	941	20	1	9	0	8	3	17	1	1000	40353	1495
Delhi	0	0	664	0	0	0	264	0	0	71	1000	2021	57
Goa	0	332	603	0	0	0	50	0	13	2	1000	2301	160
Gujarat	0	857	106	4	11	0	22	0	0	0	1000	65945	1720
Haryana	0	580	214	1	180	0	15	3	2	5	1000	31782	1440
Himachal Pradesh	1	712	263	0	0	0	17	1	0	5	1000	12960	1660
Jammu & Kashmir	0	643	246	0	92	1	12	4	1	0	1000	11938	1446
Jharkhand	134	776	25	1	35	0	2	9	18	0	1000	42264	1758
Karnataka	0	857	107	1	0	0	15	0	1	20	1000	76532	2038
Kerala	0	700	265	4	0	0	3	1	0	28	1000	56673	2606
Madhya Pradesh	1	905	55	3	32	1	1	0	1	2	1000	98447	2734
Maharashtra	0	782	170	7	1	0	16	0	5	19	1000	124261	4012
Manipur	0	672	325	0	2	0	0	0	0	0	1000	3069	1376
Meghalaya	0	909	41	0	1	2	26	13	2	8	1000	4114	864

Contd.

Statement 2.27 : Per 1000 distribution of households by primary source of energy for cooking (Rural)

(For Year 2009-10)

States/UT	Primary source of energy for cooking											Estd. No of house holds (00)	No.of sample house holds surveyed
	Coke, Coal	Fire wood and chips	L.P.G.	Gobar gas	Dung-cake	Char-coal	Kero-sene	Electricity	Others	No cooking arrange-ment	all		
Mizoram	0	721	275	0	1	0	3	0	0	0	1000	937	632
Nagaland	0	516	466	0	0	0	0	0	0	12	1000	1509	704
Odisha	5	843	37	2	39	2	2	1	28	43	1000	73798	2974
Punjab	0	326	337	11	289	0	11	1	21	5	1000	31740	1558
Rajasthan	0	925	56	0	14	0	4	0	0	2	1000	87698	2575
Sikkim	0	475	454	0	0	0	23	2	0	34	1000	1195	608
Tamil Nadu	0	701	254	0	0	0	26	0	0	19	1000	98327	3319
Tripura	4	927	61	0	0	0	7	0	0	1	1000	6818	1311
Uttar Pradesh	1	700	58	0	196	0	1	1	39	4	1000	252276	5908
Uttarakhand	0	595	178	0	10	0	0	0	0	216	1000	17813	1045
West Bengal	39	734	48	0	44	1	6	0	123	6	1000	137303	3575
A&N Islands	0	493	305	0	0	0	131	0	0	71	1000	538	272
Chandigarh	0	153	620	0	7	0	220	0	0	0	1000	423	32
Dadar & N. Haveli	0	461	169	0	0	0	370	0	0	0	1000	344	96
Daman & Diu	0	102	893	0	0	0	2	0	3	0	1000	233	64
Lakshadweep	0	713	25	0	0	0	135	64	0	62	1000	59	55
Puducherry	0	487	467	0	0	0	18	0	0	28	1000	901	128
All India	**8**	**763**	**115**	**2**	**63**	**0**	**8**	**1**	**24**	**16**	**1000**	**1626461**	**59097**

Source : NSS Report No. 542: Energy Sources of Indian Households for Cooking and Lighting in India,2009-10 (NSS66th Round)

Statement 2.27 : Per 1000 distribution of households by primary source of energy for cooking (Rural)

(For Year 2011-12)

States/UT	Primary source of energy for cooking											Estd. No of house holds (00)	No.of sample house holds surveyed
	Coke, Coal	Fire wood and chips	L.P.G.	Gobar gas	Dung-cake	Char-coal	Kero-sene	Electricity	Others	No cooking arrange-ment	all*		
Andhra Pradesh	2	675	289	0	2	1	2	0	2	27	1000	151556	3925
Arunachal Pradesh	3	654	314	0	1	0	9	1	0	18	1000	1807	1066
Assam	1	810	172	4	0	0	3	0	1	9	1000	50592	2607
Bihar	6	564	59	0	208	0	5	0	157	1	1000	162107	3310
Chhattisgarh	9	932	15	1	31	0	2	1	3	6	1000	39514	1440
Delhi	0	23	922	0	0	0	0	0	0	55	1000	2387	63
Goa	0	169	662	6	0	0	164	0	0	0	1000	1610	159
Gujarat	0	797	139	6	9	0	35	1	0	12	1000	69060	1712
Haryana	0	417	267	0	244	0	12	2	56	3	1000	35153	1423
Himachal Pradesh	1	727	252	0	1	0	10	2	0	8	1000	13237	1657
Jammu & Kashmir	0	678	265	0	21	0	22	8	3	4	1000	14417	2032
Jharkhand	143	777	29	0	29	0	3	0	2	16	1000	44869	1757
Karnataka	0	805	147	7	0	0	20	0	0	21	1000	81325	2048
Kerala	1	663	308	5	0	0	1	2	0	20	1000	56925	2608
Madhya Pradesh	2	808	62	7	106	0	5	0	0	8	1000	105234	2735
Maharashtra	0	621	231	5	2	0	10	0	92	38	1000	134674	4031
Manipur	0	635	346	0	1	4	2	0	0	12	1000	3329	1376
Meghalaya	0	910	55	0	0	0	10	11	0	15	1000	4138	856

Contd.

Statement 2.27 : Per 1000 distribution of households by primary source of energy for cooking (Rural)

(For Year 2011-12)

States/UT	Primary source of energy for cooking											Estd. No of house holds (00)	No.of sample house holds surveyed
	Coke, Coal	Fire wood and chips	L.P.G.	Gobar gas	Dung-cake	Char-coal	Kero-sene	Electricity	Others	No cooking arrange-ment	all*		
Mizoram	0	602	391	0	0	0	7	0	0	0	1000	1090	640
Nagaland	0	466	534	0	0	0	0	0	0	0	1000	1448	672
Odisha	9	870	39	2	18	1	2	2	51	6	1000	76142	2974
Punjab	0	305	305	7	303	0	27	2	33	19	1000	34161	1552
Rajasthan	0	893	89	0	6	0	7	0	4	1	1000	94456	2579
Sikkim	1	404	560	4	0	0	6	0	0	26	1000	1038	608
Tamil Nadu	0	583	372	0	0	0	25	2	0	18	1000	101853	3319
Tripura	0	925	63	2	0	0	5	0	0	5	1000	7204	1312
Uttar Pradesh	2	561	67	0	334	0	1	0	28	6	1000	263726	5915
Uttarakhand	0	698	288	0	1	0	9	0	0	3	1000	15685	1048
West Bengal	65	629	66	0	53	0	5	0	175	6	1000	149793	3566
A&N Islands	0	411	382	0	0	0	189	1	0	17	1000	533	278
Chandigarh	0	3	752	0	15	0	229	0	0	0	1000	193	64
Dadar & N. Haveli	0	683	37	0	0	0	114	0	0	166	1000	404	96
Daman & Diu	0	130	238	0	0	0	542	0	0	90	1000	415	64
Lakshadweep	0	793	37	0	0	0	26	80	0	65	1000	56	63
Puducherry	0	306	592	0	3	0	40	0	0	59	1000	1175	128
All India	**11**	**673**	**150**	**2**	**96**	**0**	**9**	**1**	**46**	**13**	**1000**	**1721307**	**59683**

Source : NSS Report No. 567: Energy Sources of Indian Households for Cooking and Lighting in India, 2011-12 (NSS 68th Round) (P-A-37 to A-57)

* : all including n.r. cases

Statement 2.28 : Per 1000 distribution of households by primary source of energy for cooking (Urban)

(For Year 2007-08)

States/UT	primary source of energy for cooking											estd. No of hhs (00)	no.of sample hhs
	No cooking arrange-ment	coke, coal and charcoal	fire wood and chips	L.P.G.	gobar gas	dung-cake	kero-sene	electricity	other	not record-ed	all		
Andhra Pradesh	78	3	239	602	0	3	69	3	2	0	1000	54844	1244
Assam	21	4	134	747	0	0	62	11	11	11	1000	5771	416
Bihar	37	42	234	540	0	116	17	3	8	4	1000	14948	672
Chhattisgarh	7	109	276	535	1	0	72	2	0	0	1000	8262	319
Delhi	79	4	29	853	0	4	30	0	0	0	1000	29837	558
Gujarat	60	16	166	627	0	3	90	0	39	0	1000	42320	983
Haryana	3	0	124	831	0	19	12	10	0	0	1000	13055	384
Jammu & Kashmir	1	12	137	774	0	0	65	11	0	0	1000	2950	380
Jharkhand	71	196	74	585	0	1	3	4	30	37	1000	9770	384
Karnataka	104	0	205	545	0	0	144	2	0	0	1000	40338	918
Kerala	91	2	411	477	4	0	15	1	0	0	1000	18436	510
Madhya Pradesh	18	14	308	599	1	8	44	1	3	4	1000	30139	992
Maharashtra	50	2	109	702	0	0	125	2	10	0	1000	91380	2004
Manipur	0	25	291	675	1	0	7	1	0	0	1000	1174	384
Mizoram	0	2	158	831	0	0	9	0	0	0	1000	781	384
Orissa	150	55	266	448	5	17	41	6	12	0	1000	12700	544
Punjab	15	4	79	739	0	84	72	7	0	0	1000	19416	576
Rajasthan	73	2	301	577	0	18	29	1	0	0	1000	27543	695
Tamil Nadu	63	0	279	541	0	0	117	0	0	0	1000	73981	1398
Uttar Pradesh	26	4	268	618	0	49	28	2	6	0	1000	70622	1433
West Bengal	46	141	125	524	0	10	90	1	62	0	1000	47913	1307
North- Eastern States	8	23	224	695	0	0	40	5	0	4	1000	5760	1760
Union Territories	190	0	49	571	0	0	180	11	0	0	1000	4186	584
All India	**57**	**21**	**201**	**618**	**0**	**14**	**76**	**2**	**11**	**1**	**1000**	**632571**	**18624**

Source : NSS Report No. 530: Household Consumer Expenditure in India,2007-08

Statement 2.28 : Per 1000 distribution of households by primary source of energy for cooking (Urban)

(For Year 2009-10)

States/UT	Primary source of energy for cooking											Estd. No of house holds (00)	No.of sample house holds surveyed
	Coke, Coal	Fire wood and chips	L.P.G.	Gobar gas	Dung-cake	Char-coal	Kero-sene	Electricity	Others	No cooking arrange-ment	all		
Andhra Pradesh	1	157	686	0	1	3	50	0	3	101	1000	60162	2951
Arunachal Pradesh	2	170	769	0	14	0	28	2	7	0	1000	515	600
Assam	0	178	746	0	1	0	70	0	0	6	1000	6854	832
Bihar	65	295	502	0	68	0	6	4	18	41	1000	18097	1270
Chhattisgarh	29	251	623	0	13	1	20	7	19	37	1000	8564	736
Delhi	0	10	809	0	0	0	12	9	0	159	1000	29020	808
Goa	0	43	893	0	0	0	64	0	0	0	1000	1015	287
Gujarat	23	151	608	0	9	0	140	0	58	11	1000	47241	1698
Haryana	1	130	791	0	41	2	17	1	2	17	1000	15324	1180
Himachal Pradesh	18	68	738	0	0	0	69	8	0	98	1000	1537	382
Jammu & Kashmir	6	96	775	0	3	1	94	22	1	1	1000	4040	1269
Jharkhand	422	73	412	0	5	0	0	9	1	77	1000	11002	990
Karnataka	0	190	589	0	0	0	110	0	2	108	1000	48084	2037
Kerala	2	368	555	0	0	0	6	8	2	60	1000	20532	1845
Madhya Pradesh	8	293	602	0	16	0	23	1	0	58	1000	32234	1973
Maharashtra	2	86	733	0	0	1	102	3	9	66	1000	97279	3984
Manipur	0	260	705	0	0	24	5	1	24	4	1000	1161	1182
Meghalaya	4	236	444	0	0	121	124	46	121	26	1000	896	408

Contd.

Statement 2.28 : Per 1000 distribution of households by primary source of energy for cooking (Urban)

(For Year 2009-10)

States/UT	Primary source of energy for cooking											Estd. No of house holds (00)	No.of sample house holds surveyed
	Coke, Coal	Fire wood and chips	L.P.G.	Gobar gas	Dung-cake	Char-coal	Kero-sene	Electricity	Others	No cooking arrange-ment	all		
Mizoram	0	88	906	0	0	0	5	0	0	1	1000	752	896
Nagaland	0	227	732	0	0	0	27	1	3	10	1000	599	320
Odisha	47	378	414	1	6	2	32	13	9	100	1000	12759	1055
Punjab	0	108	714	0	34	0	127	5	1	11	1000	18934	1557
Rajasthan	0	290	631	0	6	0	17	0	4	53	1000	30579	1551
Sikkim	0	0	732	0	0	0	30	0	0	238	1000	216	160
Tamil Nadu	0	178	647	1	0	0	101	0	0	73	1000	82035	3320
Tripura	3	350	608	0	0	0	29	0	0	2	1000	1587	544
Uttar Pradesh	6	242	619	0	63	0	12	4	3	52	1000	71435	3086
Uttarakhand	1	141	769	0	2	0	59	0	0	28	1000	5012	730
West Bengal	145	124	564	0	5	2	63	0	44	55	1000	49559	2749
A&N Island	0	15	674	0	2	0	270	0	0	39	1000	344	288
Chandigarh	2	47	725	0	1	0	67	0	0	157	1000	2123	273
Dadar & N. Haveli	0	0	727	0	0	0	273	0	0	0	1000	152	96
Daman & Diu	0	79	882	0	0	0	40	0	0	0	1000	173	64
Lakshadweep	0	267	422	0	0	0	70	26	0	216	1000	52	128
Puducherry	0	93	734	0	2	0	86	2	0	82	1000	1905	448
All India	**23**	**175**	**645**	**0**	**13**	**1**	**65**	**3**	**11**	**65**	**1001**	**681770**	**41697**

Source : NSS Report No. 542: Energy Sources of Indian Households for Cooking and Lighting in India, 2009-10 (NSS 66th Round p-A-55 to72)

Statement 2.28 : Per 1000 distribution of households by primary source of energy for cooking (Urban)

(For Year 2011-12)

States/UT	Primary source of energy for cooking											Estd. No of house holds (00)	No.of sample house holds surveyed
	Coke, Coal	Fire wood and chips	L.P.G.	Gobar gas	Dung-cake	Char-coal	Kero-sene	Electricity	Others	No cooking arrange-ment	all*		
Andhra Pradesh	1	101	773	0	0	1	27	6	0	91	1000	75569	2971
Arunachal Pradesh	0	122	841	0	0	0	12	25	0	0	1000	486	608
Assam	1	168	710	0	1	0	57	0	23	40	1000	7287	832
Bihar	40	249	605	0	55	6	5	2	25	13	1000	17948	1270
Chhattisgarh	113	347	398	1	33	1	27	10	9	59	1000	11874	734
Delhi	2	6	856	0	0	0	17	3	46	71	1000	29486	882
Goa	0	33	903	0	0	0	26	0	0	38	1000	1710	288
Gujarat	9	159	620	0	3	0	105	0	57	47	1000	57668	1717
Haryana	0	60	865	0	31	1	14	1	3	25	1000	17793	1166
Himachal Pradesh	0	56	718	0	5	2	74	13	0	132	1000	2269	383
Jammu & Kashmir	1	98	783	0	3	4	39	37	0	28	1000	4708	1355
Jharkhand	311	56	539	0	5	0	12	9	0	68	1000	13323	980
Karnataka	0	148	640	1	0	0	68	3	0	139	1000	52095	2048
Kerala	0	363	554	0	0	0	6	4	1	72	1000	21916	1854
Madhya Pradesh	8	257	652	0	18	0	36	2	0	27	1000	36909	1981
Maharashtra	2	57	745	0	0	0	101	2	13	80	1000	117361	4013
Manipur	1	285	647	0	1	54	8	2	0	2	1000	1289	1184
Meghalaya	0	141	640	0	3	31	57	80	0	48	1000	1114	404

Contd.

Statement 2.28 : Per 1000 distribution of households by primary source of energy for cooking (Urban)

(For Year 2011-12)

States/UT	Primary source of energy for cooking											Estd. No of house holds (00)	No.of sample house holds surveyed
	Coke, Coal	Fire wood and chips	L.P.G.	Gobar gas	Dung-cake	Char-coal	Kero-sene	Electricity	Others	No cooking arrange-ment	all*		
Mizoram	0	58	936	0	0	1	5	0	0	0	1000	923	896
Nagaland	0	135	863	0	0	0	3	0	0	0	1000	866	352
Odisha	38	365	435	0	2	3	48	14	10	85	1000	15242	1052
Punjab	1	67	754	1	32	0	100	4	2	38	1000	22670	1566
Rajasthan	5	187	716	0	2	0	20	0	0	70	1000	31248	1552
Sikkim	0	3	826	0	0	0	22	0	0	149	1000	315	160
Tamil Nadu	0	112	709	0	0	0	85	2	0	92	1000	87098	3327
Tripura	0	281	668	0	0	0	38	0	0	13	1000	1548	544
Uttar Pradesh	6	210	668	0	75	1	10	4	3	23	1000	80002	3099
Uttarakhand	0	161	788	0	5	0	16	0	0	31	1000	5648	734
West Bengal	135	107	565	0	6	0	87	2	13	84	1000	60705	2746
A&N Island	0	22	713	0	0	0	215	0	5	46	1000	355	288
Chandigarh	0	48	756	0	0	0	136	0	0	61	1000	2152	248
Dadar & N. Haveli	0	54	731	0	0	0	211	0	0	3	1000	359	94
Daman & Diu	0	67	757	0	0	0	65	0	0	110	1000	154	64
Lakshadweep	0	263	453	0	0	0	163	55	0	67	1000	51	128
Puducherry	0	81	762	0	0	0	30	0	0	126	1000	2182	448
All India	**21**	**140**	**684**	**0**	**13**	**1**	**57**	**3**	**11**	**69**	**1000**	**782319**	**41968**

Source : NSS Report No. 567: Energy Sources of Indian Households for Cooking and Lighting in India, 2011-12 (NSS 68th Round) (P-A-37 to A-57)

* : all including n.r. cases

Statement 2.29(a) : Distribution of households by source of lighting

(Rural)

Sl. No.	India/ State/ Union Territory	Total No. of Households		Primary source of energy for lighting (%)							
				Electricity		Kerosene		Any other sources		No lighting	
		2011	2001	2011	2001	2011	2001	2011	2001	2011	2001
1	2	3	4	5	6	7	8	9	10	11	12
1	A & N Islands	59030	49653	79.4	68.1	19.3	29.9	0.8	1.2	0.6	0.8
2	Andhra Pradesh	14246309	12676218	89.7	59.7	9.2	39.7	0.6	0.4	0.5	0.3
3	Arunachal Pradesh	195723	164501	55.5	44.5	23.6	37.9	7.0	7.1	14.0	10.5
4	Assam	5374553	4220173	28.4	16.5	70.4	83.1	1.1	0.3	0.2	0.1
5	Bihar	16926958	12660007	10.4	5.1	88.4	94.5	1.2	0.4	0.1	0.0
6	Chandigarh	6785	21302	97.3	97.4	2.4	2.1	0.2	0.3	0.1	0.2
7	Chhattisgarh	4384112	3359078	70.0	46.1	28.2	52.9	1.5	0.6	0.3	0.4
8	Dadra & Nagar Haveli	35408	32783	91.7	82.6	7.9	16.0	0.1	0.3	0.6	1.0
9	Daman & Diu	12750	22091	98.3	97.5	1.5	2.0	0.1	0.2	0.2	0.4
10	Goa	124674	140755	95.6	92.4	3.4	6.9	0.3	0.3	0.6	0.4
11	Gujarat	6765403	5885961	85.0	72.1	12.8	26.2	0.8	0.7	1.4	0.1
12	Haryana	2966053	2454463	87.2	78.5	11.3	20.6	1.0	0.5	0.5	0.4
13	Himachal Pradesh	1310538	1097520	96.6	94.5	3.0	4.9	0.3	0.4	0.1	0.2
14	Jammu & Kashmir	1497920	1161357	80.7	74.8	12.6	19.2	4.1	5.4	2.6	0.6
15	Jharkhand	4685965	3802412	32.3	10.0	66.4	89.6	1.2	0.3	0.0	0.0
16	Karnataka	7864196	6675173	86.7	72.2	12.3	27.2	0.5	0.3	0.5	0.3
17	Kerala	4095674	4942550	92.1	65.5	7.4	33.8	0.4	0.7	0.0	0.0
18	Lakshadweep	2523	5351	99.8	99.7	0.2	0.1	0.0	0.1	0.0	0.0
19	Madhya Pradesh	11122365	8124795	58.3	62.3	40.9	37.2	0.6	0.3	0.2	0.2
20	Maharashtra	13016652	10993623	73.8	65.2	23.9	33.6	1.0	0.7	1.3	0.6
21	Manipur	383313	296354	63.5	52.5	30.2	45.1	5.6	1.2	0.7	1.1
22	Meghalaya	422197	329678	51.6	30.3	45.9	68.2	1.6	0.8	0.9	0.8
23	Mizoram	104874	79362	68.8	44.1	26.9	52.8	3.9	2.3	0.5	0.7
24	Nagaland	284911	265334	75.2	56.9	21.1	37.5	2.2	2.4	1.5	3.2
25	NCT of Delhi	79115	169528	97.8	85.5	1.4	13.0	0.6	0.9	0.2	0.6
26	Odisha	8144012	6782879	35.6	19.4	62.8	79.8	0.6	0.5	1.1	0.4
27	Puducherry	95133	72199	95.8	81.0	3.6	18.6	0.2	0.2	0.5	0.1
28	Punjab	3315632	2775462	95.5	89.5	2.9	8.9	0.7	0.5	0.9	1.1
29	Rajasthan	9490363	7156703	58.3	44.0	39.3	54.7	1.5	0.8	1.0	0.5
30	Sikkim	92370	91723	90.2	75.0	8.7	24.3	0.5	0.3	0.6	0.4
31	Tamil Nadu	9563899	8274790	90.8	71.2	8.3	28.2	0.3	0.3	0.6	0.4
32	Tripura	607779	539680	59.8	31.8	37.7	67.6	2.5	0.4	0.4	0.2
33	Uttar Pradesh	25475071	20590074	23.8	19.8	75.0	79.5	1.1	0.6	0.1	0.1
34	Uttarakhand	1404845	1196157	83.1	50.3	14.5	46.7	2.1	2.7	0.3	0.3
35	West Bengal	13717186	11161870	40.3	20.3	57.8	79.2	1.5	0.5	0.4	0.1
	INDIA	**167874294**	**138271559**	**55.3**	**43.5**	**43.2**	**55.6**	**1.0**	**0.6**	**0.5**	**0.3**

Source : Census 2001, 2011, Office of the Registrar General

Statement 2.29(b): Distribution of households by source of lighting

Urban)

Sl. No.	India/ State/ Union Territory	Total No. of Households		Primary source of energy for lighting (%)							
				Electricity		Kerosene		Any other sources		No lighting	
		2011	2001	2011	2001	2011	2001	2011	2001	2011	2001
1	2	3	4	5	6	7	8	9	10	11	12
1	A & N Islands	34346	23409	97.7	95.2	1.9	4.3	0.1	0.2	0.2	0.2
2	Andhra Pradesh	6778225	4173639	97.3	90.0	2.0	9.2	0.5	0.5	0.2	0.3
3	Arunachal Pradesh	65891	48114	96.0	89.4	3.2	9.4	0.4	0.5	0.4	0.7
4	Assam	992742	715185	84.1	74.3	15.2	25.0	0.5	0.6	0.3	0.2
5	Bihar	2013671	1322583	66.7	59.3	32.2	39.9	0.8	0.7	0.2	0.2
6	Chandigarh	228276	180576	98.4	96.7	1.1	2.9	0.2	0.2	0.2	0.2
7	Chhattisgarh	1238738	789440	93.7	82.9	5.7	16.5	0.3	0.3	0.2	0.3
8	Dadra & Nagar Haveli	37655	11190	98.5	95.8	1.4	3.8	0.0	0.3	0.1	0.0
9	Daman & Diu	47631	12251	99.3	98.3	0.6	1.3	0.1	0.1	0.1	0.3
10	Goa	198139	138461	97.7	94.7	1.8	4.6	0.3	0.3	0.3	0.4
11	Gujarat	5416315	3758028	97.2	93.4	2.1	5.5	0.2	0.5	0.5	0.7
12	Haryana	1751901	1075179	96.2	92.9	2.7	6.1	0.7	0.5	0.4	0.4
13	Himachal Pradesh	166043	143113	98.1	97.4	1.6	2.2	0.2	0.3	0.1	0.1
14	Jammu & Kashmir	517168	390411	98.0	97.9	1.2	1.6	0.6	0.4	0.2	0.1
15	Jharkhand	1495642	1060178	88.0	75.6	11.4	23.8	0.5	0.5	0.1	0.1
16	Karnataka	5315715	3556960	96.4	90.5	3.1	8.8	0.3	0.4	0.2	0.3
17	Kerala	3620696	1652656	97.0	84.3	2.8	15.1	0.2	0.5	0.0	0.0
18	Lakshadweep	8180	3889	99.7	99.7	0.2	0.3	0.1	0.0	0.0	0.0
19	Madhya Pradesh	3845232	2794858	92.7	92.3	6.6	7.1	0.4	0.3	0.2	0.2
20	Maharashtra	10813928	8069526	96.2	94.3	3.1	5.1	0.3	0.3	0.4	0.3
21	Manipur	171400	101302	82.4	82.0	11.2	17.3	5.9	0.5	0.5	0.3
22	Meghalaya	116102	90568	94.9	88.1	4.4	10.9	0.3	0.5	0.3	0.5
23	Mizoram	116203	81604	98.1	94.4	1.5	5.2	0.3	0.2	0.1	0.2
24	Nagaland	115054	66716	97.4	90.3	2.1	8.3	0.3	0.5	0.2	0.9
25	NCT of Delhi	3261423	2384621	99.1	93.4	0.6	5.7	0.2	0.7	0.1	0.2
26	Odisha	1517073	1087248	83.1	74.1	15.3	24.3	0.4	0.7	1.2	1.0
27	Puducherry	206143	136456	98.5	91.4	1.3	8.2	0.1	0.2	0.1	0.1
28	Punjab	2094067	1489694	98.3	96.5	1.0	2.6	0.3	0.4	0.3	0.5
29	Rajasthan	3090940	2185591	93.9	89.6	5.2	9.6	0.5	0.4	0.5	0.4
30	Sikkim	35761	13015	98.7	97.1	0.9	2.8	0.1	0.1	0.3	0.0
31	Tamil Nadu	8929104	5898836	96.1	88.0	3.4	11.1	0.2	0.4	0.3	0.4
32	Tripura	235002	122343	91.6	86.4	7.0	13.0	1.2	0.4	0.2	0.2
33	Uttar Pradesh	7449195	5170527	81.4	79.9	17.2	19.3	0.9	0.5	0.4	0.3
34	Uttarakhand	592223	390164	96.5	90.9	2.9	8.4	0.4	0.4	0.3	0.3
35	West Bengal	6350113	4554045	85.1	79.6	12.7	19.5	1.6	0.6	6.0	0.3
	INDIA	**78865937**	**53692376**	**92.7**	**87.6**	**6.5**	**11.6**	**0.5**	**0.5**	**0.3**	**0.4**

Source : Census 2001, 2011, Office of the Registrar General

TABLE 2.29(c): Distribution of households by source of lighting

(RURAL)

For year 2007-08

States/UT	primary source of energy for lighting						estd. No . Of hhs (00)	no. of sam-ple hhs
	With no lightng arrange-ment	kero-sene	elec-tricity	other	not re-corded	all		
Andhra Pradesh	3	110	885	3	0	1000	148825	2239
Arunachal Pradesh	38	285	491	152	33	1000	1644	348
Assam	3	606	370	20	0	1000	46001	800
Bihar	14	840	138	6	2	1000	136324	2844
Chhattisgarh	0	231	760	7	2	1000	39421	640
Gujarat	11	119	867	3	0	1000	65922	1084
Haryana	3	102	889	6	0	1000	30582	572
Himachal Pradesh	4	13	960	23	0	1000	13577	672
Jammu & Kashmir	4	31	944	21	0	1000	12913	472
Jharkhand	1	657	339	3	0	1000	41668	851
Karnataka	7	72	921	0	0	1000	76206	1180
Kerala	0	100	893	7	0	1000	54827	896
Madhya Pradesh	3	240	753	4	0	1000	92609	1779
Maharashtra	4	241	751	3	0	1000	125352	2014
Manipur	11	116	851	11	10	1000	3070	768
Meghalaya	0	272	728	0	0	1000	3990	512
Nagaland	0	9	990	0	0	1000	1496	512
Odisha	4	636	359	2	0	1000	70923	1532
Punjab	6	4	957	32	0	1000	33812	704
Rajasthan	10	432	551	7	0	1000	87089	1501
Sikkim	4	24	973	0	0	1000	1107	480
Tamil Nadu	6	80	914	0	0	1000	95794	1436
Tripura	11	393	592	2	2	1000	6747	864
Uttar Pradesh	5	706	279	10	0	1000	247744	3611
Uttarakhand	0	197	789	14	0	1000	13701	412
West Bengal	7	530	458	4	1	1000	134337	2203
North- Eastern States	10	249	719	17	5	1000	19019	3740
Union Territories	6	85	908	0	0	1000	2445	372
All India	**6**	**386**	**602**	**6**	**0**	**1000**	**1592612**	**31673**

Source : NSS Report No. 530: Household Consumer Expenditure in India, 2007-08

TABLE 2.29(d) :Distribution of households by source of lighting

(Urban)

For year 2007-08

States/UT	primary source of energy for lighting						estd. No. of hhs (00)	no.of sample hhs
	With no lighting arrangement	kero-sene	elec-tricity	others	not re-corded	all		
Andhra Pradesh	0	29	971	0	0	1000	54844	1244
Assam	0	107	843	46	4	1000	5771	416
Bihar	8	257	711	10	15	1000	14948	672
Chhattisgarh	0	24	976	0	0	1000	8262	319
Delhi	0	5	976	19	0	1000	29837	558
Gujarat	8	30	959	2	0	1000	42320	983
Haryana	0	5	982	13	0	1000	13055	384
Jammu & Kashmir	0	21	961	19	0	1000	2950	380
Jharkhand	0	39	937	24	0	1000	9770	384
Karnataka	4	25	970	0	0	1000	40338	918
Kerala	6	25	965	4	0	1000	18436	510
Madhya Pradesh	5	32	955	4	4	1000	30139	992
Maharashtra	2	21	975	2	0	1000	91380	2004
Manipur	0	18	965	17	0	1000	1174	384
Mizoram	0	14	986	0	0	1000	781	384
Odisha	5	124	871	0	0	1000	12700	544
Punjab	0	6	945	49	0	1000	19416	576
Rajasthan	4	48	948	0	0	1000	27543	695
Tamil Nadu	1	38	959	1	0	1000	73981	1398
Uttar Pradesh	2	130	843	24	0	1000	70622	1433
West Bengal	1	82	914	2	1	1000	47913	1307
North- Eastern States	3	31	946	12	8	1000	5760	1760
Union Territories	3	0	997	0	0	1000	4186	584
All India	**3**	**51**	**938**	**8**	**1**	**1000**	**632571**	**18624**

Source : NSS Report No. 530: Household Consumer Expenditure in India, 2007-08

Statement 2.30 : State-wise Land Use Classification- 2013-14

(Thousand Hectares)

Sl. No.	State/UT	Geo-graphi-cal Area	Report-ing area for land utilisation statis-tics (col. 5+8+12 +15+16)	Forest	Land not available for cultivation			Other uncultivated land excluding Fallow Land			
					Area put to non ag-ricultur-al uses	Bar-ren and uncul-tur-able land	Total (col. 6+ col. 7)	Perma-nent pas-tures & other grazing lands	Land un-der Mis-cellaneous Tree Crops & Groves not includ-ed in Net Area Sown	Cul-tur-able Waste Land	Total (col. 9+10 +11)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Andhra Pradesh	16020	**16020**	3493	2095	1341	**3436**	212	160	392	**764**
2	Arunachal Pradesh	8374	**7239**	6732*	26	38	**64**	18	35	63	**116**
3	Assam	7844	**7844**	1853	1274	1192	**2466**	168	222	144	**534**
4	Bihar	9416	**9360**	622	1712	432	**2144**	15	247	45	**308**
5	Chhattisgarh	13519	**13790**	6331	738	289	**1027**	882	1	349	**1232**
6	Delhi	148	**147**	1	75	18	**93**	0	1	10	**11**
7	Goa	370	**361**	125	37		**37**	1	1	53	**54**
8	Gujarat	19602	**19069**	1834	1171	2552	**3723**	851	4	1960	**2815**
9	Haryana	4421	**4371**	39	537	125	**662**	26	7	18	**51**
10	Himachal Pradesh	5567	**4576**	1126	350	777	**1127**	1510	64	122	**1696**
11	Jammu & Kashmir	22224	**4012***	2254*	267	306	**573**	114	65	134	**313**
12	Jharkhand	7972	**7970**	2239	706	568	**1274**	114	98	353	**565**
13	Karnataka	19179	**19050**	3073	1444	787	**2230**	906	281	411	**1598**
14	Kerala	3886	**3886**	1082	512	14	**526**	0	3	97	**100**
15	Madhya Pradesh	30825	**30756**	8691	2162	1346	**3507**	1291	20	1008	**2319**
16	Maharashtra	30771	**30758**	5206	1460	1724	**3184**	1242	250	915	**2407**
17	Manipur	2233	**2111**	1699*	26	1	**27**	1	6	1	**8**
18	Meghalaya	2243	**2241**	946	108	131	**239**		164	391	**555**
19	Mizoram	2108	**2093**	1585	91	8	**100**	5	74	7	**86**
20	Nagaland	1658	**1652**	863	93	2	**95**		94	70	**163**
21	Odisha	15571	**15467**	5814	1280	1052	**2332**	524	216	575	**1315**
22	Punjab	5036	**5033**	258	498	52	**550**	5	8	6	**19**
23	Puducherry	48	**49**	0	19	0	**19**		1	5	**6**
24	Rajasthan	34224	**34267**	2758	1889	2385	**4274**	1694	24	4000	**5718**
25	Sikkim	710	**443**	336*	10		**10**		4	4	**8**
26	Tamil Nadu	13006	**13033**	2125	2190	488	**2678**	110	245	328	**683**
27	Telangana	11487*	**11484**	2743	895	615	**1510**	302	114	178	**593**
28	Tripura	1049	**1049**	629	145		**145**	1	12	3	**16**
29	Uttar Pradesh	24093	**24170**	1658	3027	464	**3491**	65	325	410	**801**
30	Uttarakhand	5348	**5992**	3800	222	228	**450**	192	389	317	**898**
31	West Bengal	8875	**8684**	1174	1834	11	**1846**	2	49	18	**69**
32	Andaman & Nicobar Island	825	**757**	717	7	2	**9**	4	4	3	**11**
33	Chandigarh	11	**7**	0	5		**5**		0		**0**
34	Dadra and Nagar Haveli	49	**49**	20	4	0	**4**	1		0	**1**
35	Daman & Diu	11	**3**		0		**0**		0	0	**0**
36	Lakshadweep	3	**3**		1		**1**				**0**
Total		**328726**	**307796**	**71828**	**26913**	**16948**	**43860**	**10258**	**3187**	**12388**	**25832**

Source: Directorate of Economics & Statistics, Ministry of Agriculture and Farmers Welfare.

Contd.

Statement 2.30 : State-wise Land Use Classification- 2013-14

(Thousand Hectares)

Fallow Lands			Net Area Sown	Total Cropped Area (Gross Cropped Area)	Area Sown more than once (Col. 17-16)	Cropping Intensity (Col.17/ Col.16*100)	Agri.Land/ Cultiva-ble Land/ Cultur-able Land (Col.10+11 +15+16)	Cultivat-ed Land (Col.13 +15)	Uncul-tivable/ Unculturable Land (Col.4-20)	Uncul-tivated Land (Col.4-21)
Fallow Lands other than Current Fallows	Cur-rent Fal-lows	Total (col. 13+ 14)								
(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
792	1087	**1879**	6448	8128	1680	126.0	8879	7536	7142	8485
65	36	**101**	225	296	71	131.4	424	261	6815	6977
85	87	**172**	2820	4100	1280	145.4	3357	2906	4487	4938
120	913	**1034**	5252	7580	2328	144.3	6578	6166	2781	3194
254	260	**514**	4686	5698	1012	121.6	5550	4946	8240	8844
8	12	**20**	22	35	13	161.4	53	34	95	114
	15	**15**	129	158	29	122.2	197	144	164	217
16	379	**395**	10302	12487	2186	121.2	12661	10681	6408	8388
22	101	**123**	3497	6471	2974	185.0	3645	3598	726	773
22	54	**76**	550	943	393	171.4	812	604	3764	3971
16	114	**130**	741	1155	414	155.9	1070	856	2942	3156
1063	1445	**2508**	1384	1672	288	120.8	4343	2829	3627	5141
525	1700	**2225**	9923	12267	2344	123.6	12840	11623	6210	7427
57	71	**128**	2051	2617	566	127.6	2279	2122	1607	1764
468	350	**818**	15422	24047	8625	155.9	17267	15772	13489	14985
1192	1401	**2594**	17368	23328	5960	134.3	21127	18769	9632	11989
0	0	**0**	377	377		100.0	384	377	1727	1734
155	60	**215**	286	343	57	120.0	1056	346	1185	1896
161	47	**208**	114	114		100.0	402	161	1690	1932
100	50	**150**	380	499	119	131.2	693	431	958	1221
634	877	**1511**	4495	5168	673	115.0	6797	5372	8670	10095
6	55	**60**	4145	7848	3702	189.3	4219	4200	813	833
3	6	**8**	15	25	10	163.8	30	21	19	27
1847	1403	**3250**	18268	26120	7852	143.0	25542	19671	8725	14597
5	7	**12**	77	147	70	190.5	97	84	346	358
1718	1115	**2833**	4714	5897	1184	125.1	8120	5829	4913	7204
717	960	**1677**	4961	6288	1327	126.7	6929	5921	4555	5563
2	2	**3**	255	383*	128	150.2	273	257	776	793
539	1135	**1674**	16546	25896	9350	156.5	18955	17681	5215	6489
86	57	**143**	701	1099	398	156.8	1550	758	4442	5234
12	349	**362**	5234	9618	4385	183.8	5662	5583	3022	3101
3	3	**6**	15	24	10	165.1	28	17	730	740
0	0	**0**	1	2	1	151.5	2	1	5	6
2	2	**4**	19	23	4	122.2	24	21	25	28
0	0	**0**	3	3	1	122.6	3	3	0	0
		0	2	3	1	135.7	2	2	1	1
10694	**14154**	**24848**	**141428**	**200859**	**59431**	**142.0**	**181850**	**155581**	**125946**	**152215**

Statement 2.30: State-wise Land Use Classification- 2014-15

(Thousand Hectares)

Sl. No.	State/UT	Geo-graph-ical Area	Report-ing area for land utilisation statis-tics (col. 5+8+12 +15+16)	Forest	Land not available for cultivation			Other uncultivated land excluding Fallow Land			
					Area put to non agricul-tural uses	Barren and uncul-turable land	Total (col. 6+ col. 7)	Perma-nent pastures & other grazing lands	Land un-der Mis-cellaneous Tree Crops & Groves not includ-ed in Net Area Sown	Cul-tur-able Waste Land	Total (col. 9+10 +11)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Andhra Pradesh	16276	**16276**	3663	2002	1351	**3353**	214	159	391	**764**
2	Arunachal Pradesh	8374	**7228**	6725*	25	37	**62**	18	35	62	**115**
3	Assam	7844	**7844**	1853	1271	1190	**2460**	167	220	142	**529**
4	Bihar	9416	**9360**	622	1712	432	**2144**	15	248	45	**308**
5	Chhattisgarh	13519	**13790**	6316	741	288	**1030**	887	1	351	**1239**
6	Delhi	148	**147**	1	75	18	**93**	0	1	10	**11**
7	Goa	370	**361**	125	37		**37**	1	1	53	**54**
8	Gujarat	19602	**19069**	1834	1171	2552	**3723**	851	4	1960	**2815**
9	Haryana	4421	**4371**	38	534	119	**653**	25	9	17	**51**
10	Himachal Pradesh	5567	**4576**	1126	350	777	**1127**	1510	64	122	**1696**
11	Jammu & Kashmir	22224	**4058**	2299*	266	305	**571**	112	57	139	**308**
12	Jharkhand	7972	**7970**	2239	706	568	**1274**	114	98	353	**565**
13	Karnataka	19179	**19052**	3073	1461	787	**2248**	904	277	409	**1590**
14	Kerala	3886	**3886**	1082	526	13	**538**	0	3	101	**103**
15	Madhya Pradesh	30825	**30756**	8694	2149	1357	**3506**	1303	20	1010	**2333**
16	Maharashtra	30771	**30758**	5201	1482	1727	**3209**	1249	249	919	**2417**
17	Manipur	2233	**2117**	1699*	26	1	**27**	1	6	1	**8**
18	Meghalaya	2243	**2242**	946	111	129	**240**		165	390	**555**
19	Mizoram	2108	**2039**	1585	69	6	**75**	11	41	7	**60**
20	Nagaland	1658	**1652**	863	93	2	**95**		92	68	**161**
21	Odisha	15571	**15518**	5814	1318	1078	**2396**	524	211	550	**1285**
22	Punjab	5036	**5033**	256	430	58	**488**	5	8	69	**82**
23	Puducherry	48	**49**	0	19	0	**19**		1	5	**6**
24	Rajasthan	34224	**34267**	2740	1940	2403	**4343**	1674	26	4038	**5738**
25	Sikkim	710	**442**	336*	10		**10**		4	4	**8**
26	Tamil Nadu	13006	**13033**	2125	2199	489	**2688**	108	236	325	**669**
27	Telangana	11231	**11208**	2540	885	607	**1492**	299	112	183	**593**
28	Tripura	1049	**1049**	629	146		**146**	1	11	3	**15**
29	Uttar Pradesh	24093	**24170**	1659	3046	462	**3508**	65	305	405	**776**
30	Uttarakhand	5348	**5993**	3800	224	228	**452**	192	388	317	**897**
31	West Bengal	8875	**8683**	1173	1842	11	**1853**	2	49	17	**69**
32	Andaman & Nicobar Island	825	**757**	717	7	2	**9**	4	4	3	**11**
33	Chandigarh	11	**7**	0	5		**5**		0		**0**
35	Dadra and Nagar Haveli	49	**49**	20	4	0	**4**	1		0	**1**
35	Daman & Diu	11	**3**		0		**0**		0	0	**0**
36	Lakshadweep	3	**3**		1		**1**				
Total		**328726**	**307818**	**71794**	**26883**	**16996**	**43880**	**10258**	**3104**	**12469**	**25832**

Source: Directorate of Economics & Statistics, Ministry of Agriculture and Farmers Welfare.

Contd.

Statement 2.30: State-wise Land Use Classification- 2014-15

(Thousand Hectares)

Fallow Lands			Net Area Sown	Total Cropped Area (Gross Cropped Area)	Area Sown more than once (Col. 17-16)	Cropping Intensity (Col.17/ Col.16 *100)	Agri.Land/ Cultiva-ble Land/ Cultur-able Land (Col.10 +11+15+16)	Cultivat-ed Land (Col.13 +15)	Uncul-tivable/ Unculture-able Land (Col.4-20)	Uncul-tivated Land (Col.4-21)
Fallow Lands other than Current Fallows	Current Fallows	Total (col. 13+ 14)								
(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
858	1401	**2260**	6236	7690	1454	123.3	9047	7638	7230	8639
65	36	**101**	225	299	74	132.8	423	261	6805	6967
87	87	**175**	2827	4083	1255	144.4	3364	2915	4480	4929
119	889	**1008**	5278	7673	2395	145.4	6579	6167	2781	3193
258	267	**525**	4681	5728	1047	122.4	5558	4948	8232	8842
8	12	**20**	22	35	13	161.5	53	34	95	114
	15	**15**	129	158	28	122.0	197	144	164	217
16	379	**395**	10302	12773	2471	124.0	12661	10681	6408	8388
22	86	**108**	3522	6536	3014	185.6	3656	3608	716	764
22	54	**76**	550	918	368	167.0	812	604	3764	3971
15	106	**121**	758	1178*	419	155.3	1075	864	2982	3193
1122	1386	**2507**	1385	1554	169	112.2	4343	2770	3627	5200
525	1572	**2097**	10044	12247	2203	121.9	12827	11615	6225	7437
55	65	**120**	2043	2625	582	128.5	2266	2108	1620	1778
483	388	**871**	15351	23810	8459	155.1	17252	15740	13504	15017
1188	1399	**2587**	17345	23474	6129	135.3	21099	18744	9659	12015
0	0	**0**	383	383	0	100.0	390	383	1728	1734
155	60	**215**	286	343	57	120.0	1056	347	1186	1895
127	47	**174**	145	145	0	100.0	367	191	1672	1848
99	50	**149**	384	500	116	130.3	694	434	958	1218
631	918	**1549**	4474	5173	699	115.6	6784	5392	8734	10126
6	83	**89**	4119	7857	3738	190.8	4285	4202	748	831
3	5	**8**	16	27	11	168.3	29	21	19	28
2069	1856	**3925**	17521	24235	6714	138.3	25511	19377	8757	14890
5	7	**12**	77	136	59	176.0	97	84	346	358
1734	998	**2732**	4819	5995	1175	124.4	8112	5817	4921	7216
805	1401	**2206**	4377	5315	939	121.5	6877	5777	4331	5431
2	1	**3**	255	483	228	189.3	272	257	777	793
509	1122	**1631**	16598	26147	9549	157.5	18939	17720	5231	6451
86	57	**144**	700	1097	397	156.7	1549	757	4444	5235
11	339	**350**	5238	9690	4452	185.0	5655	5577	3028	3106
3	3	**6**	15	24	9	160.9	28	17	730	740
0	0	**0**	1	2	1	155.9	1	1	6	6
2	2	**4**	19	23	4	122.7	24	21	25	28
0	0	**0**	3	3	0	102.3	3	3	0	0
			2	3	1	135.7	2	2	1	1
11092	**15091**	**26182**	**140130**	**198360**	**58230**	**141.6**	**181886**	**155221**	**125931**	**152597**

Statement 2.31: Agricultural Land by Use in India

(Million Hectares)

S.No.	Classification	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10 &	2010-11	2011-12	2012-13	2013-14	2014-15 (P)
I	**Geographical Area for Land Utilisation Statistics**	328.73	328.73	328.73	328.73	328.73	328.73	328.73	328.73	328.73	328.73	328.73
II	**Reporting Area for Land Utilisation Statistics (1 to 5)**	305.59	306.88	307.09	307.23	307.41	307.41	307.48	307.39	307.49	307.80	307.82
1	Forest	69.96	71.43	71.46	71.53	71.54	71.56	71.59	71.60	71.57	71.83	71.79
	(%)	22.89	23.28	23.27	23.28	23.27	23.28	23.28	23.29	23.28	23.34	23.32
2	Not available for Cultivation (A+B)	42.23	42.32	42.73	42.90	43.06	43.33	43.58	43.53	43.58	43.86	43.88
(A)	Area under non-agricultural uses	24.76	24.99	25.45	25.88	26.21	26.16	26.40	26.31	26.50	26.91	26.88
	%	8.10	8.14	8.29	8.42	8.53	8.51	8.59	8.56	8.62	8.74	8.73
(B)	Barren & Un-culturable Land	17.47	17.33	17.29	17.02	16.85	17.18	17.18	17.22	17.07	16.95	17.00
	%	5.72	5.65	5.63	5.54	5.48	5.59	5.59	5.60	5.55	5.51	5.52
3	Other uncultivated land excluding fallow land (A+B+C)	27.09	27.06	27.04	26.81	26.42	26.50	26.15	26.11	26.08	25.83	25.83
(A)	Permanent Pasture & other Grazing Land	10.45	10.44	10.42	10.36	10.34	10.34	10.30	10.31	10.26	10.26	10.26
	%	3.42	3.40	3.39	3.37	3.37	3.36	3.35	3.36	3.34	3.33	3.33
(B)	Land under miscellaneous tree crops & groves not included in Net Area Sown	3.36	3.39	3.35	3.40	3.34	3.21	3.20	3.16	3.18	3.19	3.10
	%	1.10	1.10	1.09	1.11	1.09	1.05	1.04	1.03	1.03	1.04	1.01
(C)	Culturable Waste land	13.27	13.22	13.27	13.04	12.73	12.95	12.65	12.64	12.64	12.39	12.47

Contd.

Statement 2.31: Agricultural Land by Use in India

(Million Hectares)

S.No.	Classification	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10 &	2010-11	2011-12	2012-13	2013-14	2014-15 (P)
	%	4.34	4.31	4.32	4.25	4.14	4.21	4.11	4.11	4.11	4.02	4.05
4	Fallow Lands (A+B)	25.67	24.91	26.03	24.98	24.48	26.85	24.60	25.18	26.32	24.85	26.18
(A)	Fallow Lands other than Current Fallows	10.88	10.70	10.52	10.33	10.29	10.84	10.32	10.67	11.04	10.69	11.09
	%	3.56	3.49	3.42	3.36	3.35	3.53	3.36	3.47	3.59	3.47	3.60
(B)	Current Fallows	14.79	14.21	15.51	14.65	14.19	16.01	14.28	14.51	15.29	14.15	15.09
	%	4.84	4.63	5.05	4.77	4.62	5.21	4.64	4.72	4.97	4.60	4.90
5	Net Area Sown (6-7)	140.64	141.16	139.82	141.02	141.90	139.17	141.56	140.98	139.94	141.43	140.13
	%	46.02	46.00	45.53	45.90	46.16	45.27	46.04	45.86	45.51	45.95	45.52
6	Total Cropped Area (Gross Cropped Area)	191.10	192.74	192.38	195.22	195.33	189.19	197.68	195.80	194.25	200.95	198.36
7	Area Sown more than once	50.46	51.57	52.56	54.21	53.43	50.02	56.12	54.82	54.31	59.52	58.23
8	Cropping Intensity*	135.88	136.54	137.59	138.44	137.65	135.94	139.64	138.88	138.81	142.09	141.55
III	**Net Irrigated Area**	59.23	60.84	62.74	63.19	63.64	61.94	63.67	65.71	66.29	68.12	68.38
IV	**Gross Irrigated Area**	**81.08**	**84.28**	**86.75**	**88.06**	**88.90**	**85.09**	**88.94**	**91.79**	**92.25**	**95.77**	**96.46**

Source: Directorate of Economics & Statistics, Department of Agriculture Cooperation & Farmers Welfare.

&: In 2009-10, there is significant decline in total cropped area and net area sown due to decline in net area sown in the states of Andhra Pradesh, Bihar, Jharkhand, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal. This was mainly due to deficient rainfall

** Cropping Intensity is percentage of the gross cropped area to the net area sown.*

Note: Percentages worked out over Reported Area.

P: Provisional

Statement 2.32: Selected categories of agricultural land use in India

(Million Hectares)

Year	Net area sown	Total cropped area	Area sown more than once (3-2)	Net Irrigated Area	Gross Irrigated Area	Area Irrigated more than once (6-5)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1950-51	118.75	131.89	13.15	20.85	22.56	1.71
1960-61	133.20	152.77	19.57	24.66	27.98	3.32
1970-71	140.86	165.79	24.93	31.10	38.20	7.09
1980-81	140.29	172.63	32.34	38.72	49.78	11.06
1990-91	143.00	185.74	42.74	48.02	63.20	15.18
2000-01	141.34	185.34	44.00	55.20	76.19	20.98
2001-02	140.73	188.01	47.28	56.94	78.37	21.43
2002-03	131.94	173.89	41.95	53.90	73.06	19.16
2003-04	140.71	189.66	48.95	57.06	78.04	20.98
2004-05	140.64	191.10	50.46	59.23	81.08	21.85
2005-06	141.16	192.74	51.58	60.84	84.28	23.44
2006-07	139.82	192.38	52.56	62.74	86.75	24.01
2007-08	141.02	195.22	54.21	63.19	88.06	24.87
2008-09	141.90	195.33	53.43	63.64	88.90	25.26
2009-10	139.17	189.19	50.02	61.94	85.09	23.14
2010-11	141.56	197.68	56.12	63.67	88.94	25.27
2011-12	140.98	195.80	54.82	65.71	91.79	26.08
2012-13	139.94	194.25	54.31	66.29	92.25	25.96
2013-14	141.43	200.95	59.52	68.12	95.77	27.66
2014-15 (P)	140.13	198.36	58.23	68.38	96.46	28.07

Source: Land Use Statistics at a Glance , Directorate of Economics & Statistics, Department of Agriculture Cooperation & Farmers Welfare.
(P): Provisional

Statement 2.33: Net area irrigated from different sources and gross irrigated area - All India

(Thousand Hectares)

Year	Source of Irrigation							Net Irrigated Area (Col.4 to 8)	Gross Irrigated Area	Area Irrigated More than once (col. 10-9)
	Canals			Tanks	Tube-Wells	Other Wells	Other source			
	Govt.	Private	Total							
1	2	3	4	5	6	7	8	9	10	11
1996-97	16889	220	17109	2821	19338	12457	3388	55113	76025	20912
1997-98	17186	211	17397	2597	19680	12431	3106	55211	75670	20459
1998-99	17099	212	17311	2795	21394	12606	3329	57435	78670	21235
1999-00	17247	194	17441	2539	22042	12597	2912	57531	79216	21685
2000-01	15809	203	16012	2466	22566	11252	2909	55205	76187	20982
2001-02	14993	209	15202	2196	23245	11952	4342	56937	78371	21434
2002-03	13867	206	14073	1811	25627	8728	3659	53898	73056	19158
2003-04	14251	206	14458	1916	26691	9693	4299	57057	78042	20985
2004-05	14553	214	14766	1734	25235	9956	7538	59229	81078	21849
2005-06	16490	227	16718	2083	26025	10044	5966	60837	84279	23442
2006-07	16802	224	17027	2078	26942	10698	5999	62743	86752	24008
2007-08	16531	217	16748	1973	28496	9864	6107	63189	88057	24869
2008-09	16686	195	16881	1981	28366	10389	6020	63637	88895	25258
2009-10	14786	188	14975	1585	28370	9991	7024	61945	85087	23142
2010-11	15475	171	15646	1979	28543	10629	6869	63665	88940	25275
2011-12	15837	172	16008	1917	29943	10594	7245	65707	91786	26079
2012-13	15512	165	15677	1752	30543	10762	7552	66285	92247	25961
2013-14(P)	16115	163	16278	1841	31128	11311	7557	68116	95771	27656
2014-15(P)	16020	163	16182	1723	31606	11354	7519	68383	96457	28074

Source: Directorate of Economics & Statistics, *Department of Agriculture Cooperation* & Farmers Welfare.
(P): Provisional

Statement 2.34 :State-wise area under organic farming
(Registered under accredited certification bodies)

(area hectares)

State/UT	Certified cultivated organic Area 2013-14	In-conversion cultivated Area	Total area cultivated under certification process	Wild Area	Total cultivated+Wild
Andhra Pradesh	12325.03	6279.72	18604.75	2000.00	20604.75
Arunachal Pradesh	71.49	0.00	71.49	0.00	71.49
Assam	2828.26	45.33	2873.59	0.00	2873.59
Bihar	180.60	1303.62	1484.22	0.00	1484.22
Chhattisgarh	4113.25	126.93	4240.18	8000	12240.18
Delhi	0.83	138.82	139.65	0.00	139.65
Goa	12853.94	259.05	13112.99	0.00	13112.99
Gujarat	46863.89	6251.43	53115.32	0.00	53115.32
Haryana	3835.78	12420.54	16256.32	0.00	16256.32
Himachal Pradesh	4686.05	1781.41	6467.46	627855.12	634322.58
Jammu & Kashmir	10035.38	135.97	10171.35	0.00	10171.35
Karnataka	30716.21	10400.63	41116.84	69200.00	110316.84
Kerala	15020.23	2727.37	17747.60	0.00	17747.60
Madhya Pradesh	232887.36	27407.17	260294.53	2568209.00	2828503.53
Jharkhand	762.30	0.00	762.30	24300.00	25062.30
Maharashtra	85536.66	50298.44	135835.10	2500.00	138335.10
Manipur	0.00	455.30	455.30	0.00	455.30
Meghalaya	373.13	855.62	1228.75	0.00	1228.75
Mizoram	0.00	8072.53	8072.53	0.00	8072.53
Nagaland	5168.16	949.54	6117.70	0.00	6117.70
Odisha	49813.51	6218.56	56032.07	1315.26	57347.32
Punjab	1534.39	3907.56	5441.95	0.00	5441.95
Puducherry	2.84		2.84		2.84
Rajasthan	66020.35	9145.26	75165.61	151000.00	226165.61
Sikkim	60843.51	27.30	60870.81	308.00	61178.81
Tamil Nadu	3640.07	829.98	4470.05	30803.50	35273.55
Tripura	203.56	144.83	348.39	0.00	348.39
Uttar Pradesh	44670.10	23800.40	68470.50	70632.00	139102.50
Uttarkhand	24739.46	2073.03	26812.49	93879.20	120691.69
West Bengal	2095.51	1110.78	3206.29	0.00	3206.29
Andaman & Nicobar Island	321.28	334.68	655.96	0.00	655.96
Daman & Diu	0.00	0.00	0.00	0.00	0.00
Lakshadweep	895.91	12.13	908.04	0.00	908.04
Total	**723039.04**	**177513.91**	**900552.95**	**3650002.08**	**4550555.03**

Source: National Center of Organic Farming, Department of Agriculture & Cooperation, Ministry of Agriculture & Farmers Welfare

Statement 2.35: State-wise area under organic certification
(including in conversion)

(Area in Hectares)

State/UT	2012-13	2013-14	2014-15	2015-16	2016-17
Andhra Pradesh	5909.13	12325.03	20524.67	18251.586	17683.893
Arunachal Pradesh	231.49	71.49	3688.61	4185.26	4011.27
Assam	2299.212	2828.26	16258.02	28433.244	23870.399
Bihar	9351.955	180.6	247.1	91.7	1.2
Chhattisgarh	1887.64	4113.25	5163.53	10584.939	12712.137
Delhi	58.4	0.83	69.13	23.03	9.23
Goa	8290.60	12853.94	15621.24	16957.593	15762.433
Gujarat	45275.63	46863.89	49353.55	76813.064	64241.064
Haryana	7532.62	3835.78	6753.66	4869.048	5011.599
Himachal Pradesh	3965.386	4686.05	10053.92	12759.125	12376.722
Jammu & Kashmir	5121.141	10035.38	21111.22	25515.01	22608.315
Jharkhand	254.946	762.3	24698.8	30363.733	26813.947
Karnataka	27191.273	30716.21	52473.16	93963.34	81089.096
Kerala	10568.409	15020.23	22980.9	25899.395	24812.778
Madhya Pradesh	144239.76	232887.36	397546.62	461774.726	464859.434
Maharashtra	66504.92	85536.66	134524.27	198352.289	224007.521
Manipur	11.25	0	168.2	251.4	241.4
Meghalaya	1780.49	373.13	1989.29	4609.422	9629.598
Mizoram	1182	0	764.24	213.8	210
Nagaland	2916.96	5168.16	8362.43	6186.934	4699.934
Odisha	18186.405	49813.51	81533.83	95896.981	92190.1
Puducherry	0.00	2.84	2.84	2.835	2.835
Punjab	1601.474	1534.39	2677.58	961.203	1032.53
Rajasthan	38289.048	66020.35	107523.24	155020.273	151609.913
Sikkim	43107.744	60843.51	76392.38	75851.211	75218.279
Tamil Nadu	3066.977	3640.07	11964.08	14456.5	5712.796
Telangana	0	0	2902.83	10355.587	9687.841
Tripura	209.726	203.56	203.56	203.56	203.56
Uttar Pradesh	32889.853	44670.1	53954.84	61081.828	56249.385
Uttarakhand	20563.754	24739.46	36880.23	37221.387	30907.417
West Bengal	1279.412	2095.51	16266.61	17890.412	5176.026
Andaman & Nicobar Island	321.28	321.28	321.28	0	0
Lakshadweep	350.688	895.91	895.52	895.521	895.523
Total	**504439.566**	**723039.04**	**1183871.38**	**1489935.936**	**1443538.175**

Source: Data provided by the accredited certification bodies under National Programme for Organic Production (NPOP) on tracenet

Statement 2.36: Diversion of forest land for non-forest use since the enforcement of forest conservation act

(Area in ha.)

Sl. No.	Year	Forest Area Diverted	Cumulative Area Diverted
1	1980	9.30	9.30
2	1981	1328.96	1338.27
3	1982	3493.30	4831.57
4	1983	5106.01	9937.58
5	1984	9335.11	19272.69
6	1985	7574.75	26847.43
7	1986	8830.90	35678.33
8	1987	27048.94	62727.28
9	1988	19651.67	82378.95
10	1989	64142.84	146521.79
11	1990	127097.36	273619.15
12	1991	1196.64	274815.79
13	1992	8519.68	283335.47
14	1993	11134.58	294470.04
15	1994	14162.79	308632.83
16	1995	50766.05	359398.88
17	1996	30151.41	389550.29
18	1997	27050.00	416600.29
19	1998	10835.55	427435.84
20	1999	20446.93	447882.78
21	2000	17636.72	465519.49
22	2001	116786.53	582306.03
23	2002	30496.90	612802.93
24	2003	14692.88	627495.81
25	2004	27095.31	654591.12
26	2005	15979.11	670570.24
27	2006	17128.59	687698.83
28	2007	16545.25	704244.08
29	2008	16421.64	720665.72
30	2009	79975.66	800641.38
31	2010	23009.96	823651.34
32	2011	14240.99	837892.32
33	2012	10398.22	848290.54
34	2013	14696.38	862986.92
35	2014	18524.94	881511.87
36	2015	14953.09	896464.96
37	2016	8283.62	904748.58
38	2017	15102.97	919851.55
39	2018	2502.05	922353.60

Source : www.forestclearance.nic.in

Statement 2.37 : State-wise Carbon Stock in different forest carbon pools

State	Area in sq km	AGB	BGB	Dead wood	Litter	SOC	Total
Andhra Pradesh	28,147	100,539	38,585	568	4,527	118,471	262,690
		#35.72	#13.71	#0.2	#1.61	#42.09	#93.33
Arunachal Pradesh	66,964	243,462	53,378	4,305	16,231	677,163	994,539
		#36.36	#7.97	#0.64	#2.42	#101.12	#148.52
Assam	28,105	47,343	10,824	1,093	5,240	112,352	176,852
		#16.85	#3.85	#0.39	#1.86	#39.98	#62.93
Bihar	7,299	19,063	6,707	138	625	28,864	55,397
		#26.12	#9.19	#0.19	#0.86	#39.55	#75.9
Chhatisgarh	55,547	206,678	68,159	2,588	7,628	275,927	560,980
		#37.21	#12.27	#0.47	#1.37	#49.67	#100.99
Delhi	192	230	52	2	11	653	948
		#11.98	#2.71	#0.1	#0.57	#34.01	#49.38
Goa	2,229	5,153	1,512	250	417	11,684	19,016
		#23.12	#6.78	#1.12	#1.87	#52.42	#85.31
Gujarat	14,757	32,668	11,719	322	993	64,995	110,697
		#22.14	#7.94	#0.22	#0.67	#44.04	#75.01
Haryana	1,588	3,736	1,269	20	74	7,312	12,411
		#23.53	#7.99	#0.13	#0.47	#46.05	#78.15
Himachal pradesh	15,100	70,655	18,691	739	2,511	83,186	175,782
		#46.79	#12.38	#0.49	#1.66	#55.09	#116.41
Jammu & Kashmir	23,241	112,919	30,083	1,004	3,529	128,391	275,926
		#48.59	#12.94	#0.43	#1.52	#55.24	#118.72
Jharkhand	23,553	86,006	33,173	438	1,298	101,967	222,882
		#36.52	#14.08	#0.19	#0.55	#43.29	#94.63
Karnataka	37,550	128,098	35,045	2,545	19,745	289,652	475,085
		#34.11	#9.33	#0.68	#5.26	#77.14	#126.52
Kerala	20,321	74,166	19,245	1,058	7,436	153,976	255,881
		#36.5	#9.47	#0.52	#3.66	#75.77	#125.92
Madhya Pradesh	77,414	266,040	101,516	1,654	7,741	318,713	695,664
		#34.37	#13.11	#0.21	#1	#41.17	#89.86
Maharashtra	50,682	142,651	48,947	1,986	9,385	290,052	493,021
		#28.15	#9.66	#0.39	#1.85	#57.23	#97.28
Manipur	17,346	27,253	8,821	530	3,909	102,578	143,091
		#15.71	#5.09	#0.31	#2.25	#59.14	#82.49
Meghalaya	17,146	25,168	6,835	881	5,184	117,772	155,840
		#14.68	#3.99	#0.51	#3.02	#68.69	#90.89
Mizoram	18,186	15,359	3,173	633	2,652	73,224	95,041
		#8.45	#1.74	#0.35	#1.46	#40.26	#52.26
Nagaland	12,489	16,151	4,150	666	2,432	101,661	125,060
		#12.93	#3.32	#0.53	#1.95	#81.4	#100.14

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Statement 2.37 : State-wise Carbon Stock in different forest carbon pools

State	Area in sq km	AGB	BGB	Dead wood	Litter	SOC	Total
Odisha	51,345	152,525	50,407	2,108	9,087	238,776	452,903
		#29.71	#9.82	#0.41	#1.77	#46.5	#88.21
Punjab	1,837	5,095	1,883	26	63	8,971	16,038
		#27.74	#10.25	#0.14	#0.34	#48.84	#87.31
Rajasthan	16,572	32,558	12,736	216	721	43,429	89,660
		#19.65	#7.69	#0.13	#0.44	#26.21	#54.1
Sikkim	3,344	13,379	3,735	211	585	30,624	48,534
		#40.01	#11.17	#0.63	#1.75	#91.58	#145.14
Tamilnadu	26,281	84,067	29,252	1,006	5,579	109,434	229,338
		#31.99	#11.13	#0.38	#2.12	#41.64	#87.26
Telangana	20,419	72,498	28,388	333	3,117	80,639	184,975
		#35.51	#13.9	#0.16	#1.53	#39.49	#90.59
Tripura	7,726	15,674	3,224	556	1,613	42,341	63,408
		#20.29	#4.17	#0.72	#2.09	#54.8	#82.07
Uttar Pradesh	14,679	47,752	14,264	444	1,824	60,850	125,134
		#32.53	#9.72	#0.3	#1.24	#41.45	#85.25
Uttarakhand	24,295	105,173	26,961	1,316	5,665	145,549	284,664
		#43.29	#11.1	#0.54	#2.33	#59.91	#117.17
West Bengal	16,847	45,382	13,916	434	2,585	100,884	163,201
		#26.94	#8.26	#0.26	#1.53	#59.88	#96.87
Andaman & Nicobar Islands	6,742	39,426	11,901	2,048	3,702	57,996	115,073
		#58.48	#17.65	#3.04	#5.49	#86.02	#170.68
Chandigarh	22	61	19	0	2	122	204
		#27.73	#8.64	0	#0.91	#55.45	#92.73
Dadra & Nagar Haveli	207	447	106	10	35	827	1,425
		#21.59	#5.12	#0.48	#1.69	#39.95	#68.84
Daman & Diu	20	11	2	0	2	76	91
		#5.5	#1	0	#1	#38	#45.5
Lakshdweep	27	55	*0	1	5	100	161
		#20.37	0	#0.37	#1.85	#37.04	#59.63
Puducherry	54	108	23	1	8	311	451
		#20	#4.26	#0.19	#1.48	#57.59	#83.52
Total	**708,273**	**2,237,549**	**698,701**	**30,130**	**136,161**	**3,979,522**	**7,082,063**
		#31.59	**#9.86**	**#0.43**	**#1.92**	**#56.19**	**#99.99**

* In Lakshadweep, most of the forest cover is of Cocos nucifera for which no suitable ratio for BGB is available.
Note: # per ha stock in tonnes
Source :India State of Forest Report, 2017
AGB- Above Ground Biomass
BGB- Below Ground Biomass
SOC- Soil Organic Carbon

Statement 2.38: Forest type and density-wise carbon stock in different carbon pools

Forest Type Stratum	Density	Area in sq km	AGB	BGB	Dead wood	Litter	SOC	Total
Tropical Wet Evergreen Forests	VDF	8,761	57,107	19,754	3,173	4,969	82,619	167,622
			#65.18	#22.55	#3.62	#5.67	#94.3	#191.33
	MDF	9,022	38,686	13,155	320	3,381	75,577	131,119
			#42.88	#14.58	#0.35	#3.75	#83.77	#145.33
	OF	3,089	4,210	1,549	74	867	22,629	29,329
			#13.63	#5.01	#0.24	#2.81	#73.26	#94.95
Tropical Semi-Evergreen Forests	VDF	19,475	111,801	22,995	3,541	9,187	249,478	397,002
			#57.41	#11.81	#1.82	#4.72	#128.1	#203.85
	MDF	43,671	129,997	26,738	1,583	14,889	345,448	518,655
			#29.77	#6.12	#0.36	#3.41	#79.1	#118.76
	OF	34,893	32,943	6,776	737	7,934	160,382	208,772
			#9.44	#1.94	#0.21	#2.27	#45.96	#59.83
Tropical Moist Deciduous Forests	VDF	24,606	91,484	18,816	2,881	6,912	183,781	303,874
			#37.18	#7.65	#1.17	#2.81	#74.69	#123.5
	MDF	72,288	183,409	37,723	5,957	24,850	446,233	698,172
			#25.37	#5.22	#0.82	#3.44	#61.73	#96.58
	OF	47,853	56,807	11,684	1,914	8,638	241,925	320,968
			#11.87	#2.44	#0.4	#1.81	#50.56	#67.07
Littoral and Swamp Forests	VDF	1,924	13,482	4,664	4	224	15,639	34,013
			#70.07	#24.24	#0.02	#1.16	#81.28	#176.78
	MDF	2,318	10,093	3,491	5	157	13,253	26,999
			#43.54	#15.06	#0.02	#0.68	#57.17	#116.48
	OF	2,398	3,381	1,169	5	94	7,905	12,554
			#14.1	#4.87	#0.02	#0.39	#32.96	#52.35
Tropical Dry Deciduous Forests	VDF	23,480	146,704	57,605	1,075	15,231	139,076	359,691
			#62.48	#24.53	#0.46	#6.49	#59.23	#153.19
	MDF	122,916	725,220	284,765	1,812	7,568	647,378	1,666,743
			#59	#23.17	#0.15	#0.62	#52.67	#135.6
	OF	133,111	170,285	66,864	1,750	5,573	399,438	643,910
			#12.79	#5.02	#0.13	#0.42	#30.01	#48.37
Tropical Thorn Forests	VDF	330	439	170	12	72	899	1,592
			#13.3	#5.15	#0.36	#2.18	#27.24	#48.24
	MDF	3,547	4,168	1,624	89	467	10,701	17,049
			#11.75	#4.58	#0.25	#1.32	#30.17	#48.07
	OF	9,521	4,674	1,825	120	724	18,502	25,845
			#4.91	#1.92	#0.13	#0.76	#19.43	#27.15

Contd.

Statement 2.38: Forest type and density-wise carbon stock in different carbon pools

Forest Type Stratum	Density	Area in sq km	AGB	BGB	Dead wood	Litter	SOC	Total
Tropical Dry Evergreen Forests	VDF	141	685	269	17	14	1,255	2,240
			#48.58	#19.08	#1.21	#0.99	#89.01	#158.87
	MDF	492	1,640	644	18	94	2,087	4,483
			#33.33	#13.09	#0.37	#1.91	#42.42	#91.12
	OF	244	460	181	5	22	856	1,524
			#18.85	#7.42	#0.2	#0.9	#35.08	#62.46
Subtropical Broadleaved Hill Forest	VDF	1,948	6,463	2,098	185	368	23,677	32,791
			#33.18	#10.77	#0.95	#1.89	#121.55	#168.33
	MDF	8,590	19,512	7,219	314	2,417	72,680	102,142
			#22.71	#8.4	#0.37	#2.81	#84.61	#118.91
	OF	8,621	13,648	5,282	173	1,606	59,996	80,705
			#15.83	#6.13	#0.2	#1.86	#69.59	#93.61
Subtropical Pine Forests	VDF	2,069	10,007	2,526	248	298	19,554	32,633
			#48.37	#12.21	#1.2	#1.44	#94.51	#157.72
	MDF	9,908	30,154	7,611	363	1,293	62,773	102,194
			#30.43	#7.68	#0.37	#1.31	#63.36	#103.14
	OF	7,917	16,678	4,210	159	728	40,761	62,536
			#21.07	#5.32	#0.2	#0.92	#51.49	#78.99
Subtropical Dry Evergreen Forest	VDF	7	40	16	1	0	79	136
			#57.14	#22.86	#1.43	0	#112.86	#194.29
	MDF	61	245	96	2	3	582	928
			#40.16	#15.74	#0.33	#0.49	#95.41	#152.13
	OF	115	347	136	2	4	610	1,099
			#30.17	#11.83	#0.17	#0.35	#53.04	#95.57
Montane Wet Temperate Forests	VDF	1,795	7,385	1,864	245	435	16,376	26,305
			#41.14	#10.38	#1.36	#2.42	#91.23	#146.55
	MDF	1,759	4,684	1,182	64	341	13,326	19,597
			#26.63	#6.72	#0.36	#1.94	#75.76	#111.41
	OF	1,431	1,364	344	29	232	8,245	10,214
			#9.53	#2.4	#0.2	#1.62	#57.62	#71.38
Himalayan Moist Temperate Forest	VDF	8,480	61,887	15,622	1,156	2,548	70,853	152,066
			#72.98	#18.42	#1.36	#3	#83.55	#179.32
	MDF	13,376	74,476	18,799	489	3,393	97,859	195,016
			#55.68	#14.05	#0.37	#2.54	#73.16	#145.8
	OF	7,360	19,568	4,940	148	1,466	41,935	68,057
			#26.59	#6.71	#0.2	#1.99	#56.98	#92.47

Contd.

Statement 2.38: Forest type and density-wise carbon stock in different carbon pools

Forest Type Stratum	Density	Area in sq km	AGB	BGB	Dead wood	Litter	SOC	Total
Himalayan Dry Temperate Forests	VDF	1,376	15,403	4,176	165	236	13,469	33,449
			#111.94	#30.35	#1.2	#1.72	#97.89	#243.09
	MDF	2,144	12,342	3,346	78	316	14,199	30,281
			#57.57	#15.61	#0.36	#1.47	#66.23	#141.24
	OF	1,663	6,313	1,711	33	145	6,914	15,116
			#37.96	#10.29	#0.2	#0.87	#41.58	#90.9
Sub-Alpine Forests	VDF	2,991	21,159	5,737	358	558	32,990	60,802
			#70.74	#19.18	#1.2	#1.87	#110.3	#203.28
	MDF	5,416	22,514	6,104	198	534	35,477	64,827
			#41.57	#11.27	#0.37	#0.99	#65.5	#119.7
	OF	4,517	13,891	3,766	91	291	20,507	38,546
			#30.75	#8.34	#0.2	#0.64	#45.4	#85.34
Moist Alpine Scrubs	VDF	208	1,044	283	25	19	1,643	3,014
			#50.19	#13.61	#1.2	#0.91	#78.99	#144.9
	MDF	417	1,169	317	15	35	2,915	4,451
			#28.03	#7.6	#0.36	#0.84	#69.9	#106.74
	OF	516	879	238	10	34	2,605	3,766
			#17.03	#4.61	#0.19	#0.66	#50.48	#72.98
Dry Alpine Scrub	VDF	195	1,588	431	23	23	1,687	3,752
			#81.44	#22.1	#1.18	#1.18	#86.51	#192.41
	MDF	444	1,415	384	16	53	3,621	5,489
			#31.87	#8.65	#0.36	#1.19	#81.55	#123.63
	OF	986	2,843	771	20	99	2,757	6,490
			#28.83	#7.82	#0.2	#1	#27.96	#65.82
Plantation/ TOF	VDF	372	1,456	300	2	77	3,373	5,208
			#39.14	#8.06	#0.05	#2.07	#90.67	#140
	MDF	11,949	35,774	7,350	427	2,797	89,464	135,812
			#29.94	#6.15	#0.36	#2.34	#74.87	#113.66
	OF	37,562	45,623	9,381	0	3,946	153,537	212,487
			#12.15	#2.5	0	#1.05	#40.88	#56.57
	Total	**708,273**	**2,237,546**	**698,701**	**30,131**	**136,162**	**3,979,525**	**7,082,065**
			#31.59	**#9.86**	**#0.43**	**#1.92**	**#56.19**	**#99.99**

Note: # per ha stock in tonnes

Source :India State of Forest Report, 2017

AGB- Above Ground Biomass

VDF: Very Dense Forest

BGB- Below Ground Biomass

MDF : Moderatly Dense Forest

SOC- Soil Organic Carbon

OF : Other Forests

Statement 2.39 : State-wise growing stock

State/UT	Geographical Area (sq km)	Recorded Forest Area (sq km)	Volume of Growing Stock (million cum)		
			In Forest	In Tree Outside Forest	Total
Andhra Pradesh	162,968	37,258	156.0	62.3	218.4
Arunachal Pradesh	83,743	51,407	420.8	90.7	511.5
Assam	78,438	26,832	133.1	30.2	163.3
Bihar	94,163	6,877	28.5	37.5	66.0
Chhattisgarh	135,192	59,772	323.7	86.3	410.0
Delhi	1,483	102	0.5	1.3	1.8
Goa	3,702	1,225	9.5	3.8	13.3
Gujarat	196,244	21,647	52.0	114.0	166.0
Haryana	44,212	1,559	5.4	15.5	20.9
Himachal Pradesh	55,673	37,033	315.6	23.2	338.8
Jammu & Kashmir	222,236	20,230	232.8	146.1	378.9
Jharkhand	79,716	23,605	117.1	64.4	181.5
Karnataka	191,791	38,284	327.7	89.6	417.2
Kerala	38,852	11,309	167.1	51.9	219.0
Madhya Pradesh	308,252	94,689	285.6	97.5	383.1
Maharashtra	307,713	61,579	252.6	164.5	417.1
Manipur	22,327	17,418	53.2	7.8	61.0
Meghalaya	22,429	9,496	38.7	17.3	56.0
Mizoram	21,081	5,641	19.1	42.8	61.8
Nagaland	16,579	8,623	36.9	11.4	48.3
Odisha	155,707	61,204	258.0	81.5	339.6
Punjab	50,362	3,084	12.9	20.0	33.0
Rajasthan	342,239	32,737	46.3	81.9	128.1
Sikkim	7,096	5,841	26.3	2.0	28.2
Tamil Nadu	130,060	22,877	127.8	66.3	194.1
Telengana	112,077	26,904	60.5	39.7	100.1
Tripura	10,486	6,294	21.7	6.5	28.2
Uttar Pradesh	240,928	16,582	135.8	88.3	224.2
Uttarakhand	53,483	38,000	418.3	19.9	438.2
West Bengal	88,752	11,879	76.6	38.1	114.7
Andaman & Nicobar Islands	8,249	7,171	55.9	0.6	56.5
Chandigarh	114	35	0.3	0.1	0.4
Dadra & Nagar Haveli	491	204	1.9	0.8	2.6
Daman & Diu	111	8	0.0	0.1	0.1
Lakshadweep	30	0	0.0	0.1	0.1
Puducherry	490	13	0.1	0.3	0.4
Total	**3287469***	**767419***	**4218.4**	**1604.0**	**5822.4**

*: Includes Jammu & Kashmir area outside LoC that is under illegal occupation of Pakistan and China.
Source :India State of Forest Report, 2017

Statement 2.40 : Physiographic zone-wise growing stock

Physiographic Zone	Areas of Phy. Zone (sqkm)	Growing Stock (million cum)		
		Forest	TOF	Total
Western Himalayas	328,952	960.0	189.5	1149.5
Eastern Himalayas	81,752	391.6	82.3	473.9
North East Ranges	127,857	287.2	114.1	401.3
Northern Plains	295,909	141.1	108.9	250.0
Eastern Plains	222,365	178.3	76.8	255.2
Western Plains	320,507	11.3	60.5	71.7
Central Highlands	371,281	135.9	118.3	254.2
North Deccan	365,711	293.7	106.1	399.8
East Deccan	333,824	671.5	237.9	909.4
South Deccan	291,317	219.3	112.7	332.0
Western Ghats	73,681	423.1	117.7	540.8
Eastern Ghats	192,068	272.2	66.0	338.3
West Coast	113,611	150.2	136.8	287.0
East Coast	168,634	83.0	76.5	159.4
Total	**3,287,469**	**4218.4**	**1604.0**	**5822.4**
Growing stock (ISFR 2015)		**4195.0**	**1573.3**	**5768.4**
Change		**23.3**	**30.7**	**54.0**

Source :India State of Forest Report, 2017

Statement 2.41: Year-wise Fish Production-India

(in lakh tonnes)

Sl No.	Year	Marine	Inland	Total
1	1950-51	5.34	2.18	7.52
2	1960-61	8.80	2.80	11.60
3	1970-71	10.86	6.70	17.56
4	1980-81	15.55	8.87	24.42
1	1990-91	23.00	15.36	38.36
11	2000-01	28.11	28.45	56.56
12	2001-02	28.30	31.26	59.56
13	2002-03	29.90	32.10	62.00
14	2003-04	29.41	34.58	63.99
15	2004-05	27.79	35.25	63.04
16	2005-06	28.16	37.56	65.72
17	2006-07	30.24	38.45	68.69
18	2007-08	29.20	42.07	71.27
19	2008-09	29.78	46.38	76.16
20	2009-10	31.04	48.94	79.98
21	2010-11	32.50	49.81	82.31
22	2011-12	33.72	52.95	86.67
23	2012-13	33.21	57.20	90.41
24	2013-14	34.43	61.36	95.79
25	2014-15	35.69	66.91	102.60
26	2015-16	36.00	71.62	107.62
27	2016-17 (P)	36.41	77.69	114.10

Source : Annual Report -2016-17, Department of Animal Husbandry ,Dairying and Fisheries
P: Provisional

Statement 2.42: State-wise fish production

(in '000 tonnes)

Sl. No.	State	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17(P)
1	Andhra Pradesh	891.09	856.93	1010.09	1252.78	1293.86	1368.20	1603.17	1808.08	2018.42	1978.58	2352.26	2766.19
2	Arunachal Pradesh	2.75	2.77	2.83	2.88	2.65	3.15	3.30	3.71	3.62	4.00	4.05	4.11
3	Assam	188.01	181.48	190.32	206.15	218.82	227.24	228.62	254.27	266.70	282.70	294.20	306.60
4	Bihar	279.53	267.04	319.10	300.65	297.40	299.91	344.47	400.14	432.30	479.80	506.89	510.00
5	Chattisgarh	131.75	137.75	139.37	158.70	174.25	228.21	250.70	255.61	284.96	314.16	342.30	376.80
6	Goa	104.95	102.39	33.43	86.21	84.33	93.27	89.96	77.88	114.06	117.98	111.91	117.89
7	Gujarat	733.81	747.33	721.91	765.90	771.52	774.90	783.72	788.49	793.42	809.93	809.56	812.10
8	Haryana	48.20	60.08	67.24	76.29	100.46	96.20	106.00	111.48	116.897	111.20	121.00	144.21
9	Himachal Pradesh	7.30	6.89	7.85	7.79	7.75	7.38	8.05	8.56	9.83	10.74	11.80	12.48
10	Jammu & Kashmir	19.15	19.20	17.33	19.27	18.94	19.70	19.85	19.95	20.00	20.30	20.08	18.80
11	Jharkhand	34.27	34.27	67.89	75.80	70.50	71.89	91.68	96.60	104.82	106.43	116.00	145.16
12	Karnataka	297.57	292.46	297.69	361.85	408.05	526.58	546.44	525.57	555.31	623.24	580.57	557.49
13	Kerala	636.89	677.63	667.33	685.99	663.12	681.61	693.21	679.74	708.65	726.01	727.51	608.72
14	Madhya Pradesh	61.08	65.04	63.89	68.47	66.12	56.45	75.41	85.16	96.26	109.12	115.02	138.69
15	Maharashtra	580.54	595.94	556.45	523.10	538.35	595.25	578.79	586.37	602.68	608.07	579.69	662.91
16	Manipur	18.22	18.61	18.60	18.80	19.20	20.20	22.22	24.50	28.54	30.50	32.04	32.00
17	Meghalaya	4.12	5.49	4.00	3.96	4.21	4.56	4.77	5.42	5.75	6.04	11.34	0.01
18	Mizoram	3.75	3.76	3.76	2.89	3.04	2.90	2.93	5.43	5.94	6.39	6.83	7.63
19	Nagaland	5.50	5.80	5.80	6.18	6.36	6.59	6.84	7.13	7.47	7.84	8.22	8.61
20	Odisha	325.45	342.04	349.48	374.82	370.54	386.19	381.18	410.14	413.79	469.55	521.28	608.10
21	Punjab	85.64	86.70	78.73	86.21	122.86	97.04	97.62	99.13	104.02	114.77	120.09	112.13
22	Rajasthan	18.50	22.20	25.70	24.10	26.91	28.20	47.85	55.16	35.10	45.42	42.46	50.20
23	Sikkim	0.15	0.15	0.18	0.17	0.17	0.18	0.28	0.49	0.42	0.44	0.40	0.40
24	Tamil Nadu	463.03	542.28	559.36	534.17	534.17	614.81	611.49	620.40	624.30	697.61	709.16	669.31
25	Telangana										268.36	236.75	198.92
26	Tripura	23.87	28.63	36.25	36.00	42.27	49.23	53.34	57.46	61.95	65.16	69.06	72.45
27	Uttrakhand	2.79	3.03	3.09	3.16	3.49	3.82	3.83	3.85	3.89	3.94	4.14	4.30
28	Uttar Pradesh	289.58	306.73	325.95	349.27	392.93	417.48	429.72	449.75	464.48	494.27	504.81	617.69
29	West Bengal	1250.00	1359.10	1447.26	1484.00	1505.00	1443.26	1472.05	1490.02	1580.65	1617.32	1671.42	1701.82
30	Andaman & Nicobar Island	12.10	28.68	28.69	32.49	33.16	33.92	35.26	36.62	36.95	37.18	37.33	38.81
31	Chandigarh	0.09	0.17	0.21	0.24	0.24	0.24	0.10	0.05	0.11	0.12	0.13	0.13
32	Dadra & Nagar Haveli	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.00	0.00
33	Daman & Diu	17.79	16.41	26.36	14.14	15.88	16.98	17.43	19.01	19.86	31.82	23.03	24.02
34	Delhi	0.70	0.61	0.61	0.72	0.72	0.82	0.74	0.69	0.88	0.68	0.71	0.72
35	Lakshadweep	11.96	11.75	11.04	12.59	12.37	12.37	12.37	12.37	18.72	13.19	15.94	29.80
36	Puducherry	21.45	39.66	39.01	40.30	41.95	41.95	42.40	41.07	42.08	47.40	53.81	50.25
	Total	**6571.63**	**6869.05**	**7126.83**	**7616.09**	**7851.61**	**8230.71**	**8666.49**	**9040.34**	**9578.969**	**10260.283**	**10761.76**	**11409.45**

Source: Annual Report-2016-17, Department of Animal Husbandry ,Dairying and Fisheries, Ministry of Agriculture and Farmers Welfare P : Provisional

Statement 2.43: Area under major crops

(Thousand Hectares)

Year	FOODGRAINS													
	Rice	Jowar	Bajra	Maize	Ragi/ Marua	Wheat	Barley	Other Cereals & Millets	Total Cereals & Millets (col.2 to 9)	Gram	Tur or Arhar	Other pulses (Excl. Gram & Tur or Arhar)	Total Pulses (col.11 to 13)	Total Foodgrains (col.10+14)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1950-51	31056	15554	9744	3250	2254	10010	3198	5576	80642	7803	2228	10523	20554	101196
1960-61	34056	18426	11470	4401	2478	12931	3140	4997	91899	9274	2429	11962	23665	115564
1970-71	37381	16871	13391	5856	2474	18293	2556	4962	101784	7820	2639	12667	23126	124910
1980-81	40237	16412	11658	6032	2504	22225	1799	4033	104900	6547	2877	13284	22708	127608
1990-91	42744	14158	10735	5893	2145	24046	972	2372	103065	7471	3609	13803	24883	127948
2000-01	44761	9915	10022	6805	1816	25797	789	1449	101354	5318	3665	12343	21326	122680
2001-02	44904	9795	9529	6582	1647	26345	660	1311	100771.2	6416	3328	12265	22008.4	122779.6
2002-03	41176	9300	7740	6635	1415	25196	702	1201	93364	5906	3359	11231	20496.2	113860.2
2003-04	42593	9331	10612	7343	1666	26595	657	1191	99988	7048	3516	12894	23458	123446
2004-05	41907	9092	9233	7430	1553	26383	617	1101	97315.1	6715	3519	12530	22763	120078
2005-06	43660	8667	9581	7588	1534	26484	630	1064	99208.3	6926	3581	11884	22391	121600
2006-07	43814	8473	9508	7894	1177	27995	646	1010	100516.3	7494	3562	12137	23192	123708
2007-08	43914	7764	9571	8117	1387	28039	603	1039	100434.5	7544	3726	12364	23633	124068
2008-09	45537	7531	8753	8174	1381	27752	706	905	100739	7893	3378	10824	22094	122833
2009-10	41918	7787	8904	8262	1268	28457	624	831	98050.8	8169	3466	11647	23282	121332
2010-11	42863	7382	9612	8553	1286	29069	705	800	100270	9186	4367	12849	26402	126672
2011-12	44006	6245	8777	8782	1176	29865	643	799	100293	8299	4007	12156	24462	124755
2012-13	42754	6214	7297	8673	1131	29995	695	754	97514	8522	3893	10842	23257	120771
2013-14	44136	5793	7811	9066	1194	30473	674	682	99829	9927	3905	11379	25211	125040
2014-15	44111	6161	7318	9185	1208	31466	707	590	100746	8251	3854	11448	23553	124299
2015-16	43499	6077	7129	8806	1138	30418	589	650	98306	8399	3963	12549	24911	123217

Sources: : Directorate of Economics and Statistics, Ministry of Agriculture and Farmers Welfare

Statement 2.44 : Production of major crops

(as on 27.02.2018) (in Million Tonnes)

S. No.	Crop	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18*
1	Rice	88.53	83.13	91.79	93.36	96.69	99.18	89.09	95.98	105.3	105.24	106.65	105.48	104.41	109.7	111.01
2	Wheat	72.16	68.64	69.35	75.81	78.57	80.68	80.8	86.87	94.88	93.51	95.85	86.53	92.29	98.51	97.11
3	Coarse Cereals	37.6	33.46	34.07	33.92	40.75	40.04	33.55	43.4	42.01	40.04	43.29	42.86	38.52	43.77	45.42
4	Cereals	198.28	185.23	195.22	203.08	216.01	219.9	203.45	226.25	242.2	238.79	245.79	234.87	235.22	251.98	253.54
5	Total Pulses	14.91	13.13	13.38	14.2	14.76	14.57	14.66	18.24	17.09	18.34	19.25	17.15	16.35	23.13	23.95
6	Total Foodgrains	213.19	198.36	208.6	217.28	230.78	234.47	218.11	244.49	259.29	257.13	265.04	252.02	251.57	275.11	277.49
																(in Lakh Tonnes)
7	Groundnut	81.27	67.74	79.93	48.64	91.83	71.68	54.28	82.65	69.64	46.95	97.14	74.02	67.33	74.62	82.17
8	Castorseed	7.97	7.93	9.91	7.62	10.54	11.71	10.09	13.5	22.95	19.64	17.27	18.7	17.52	13.76	14.97
9	Sesamum	7.82	6.74	6.41	6.18	7.57	6.4	5.88	8.93	8.1	6.85	7.15	8.28	8.5	7.47	7.16
10	Nigerseed	1.09	1.12	1.08	1.21	1.1	1.17	1	1.08	0.98	1.02	0.98	0.76	0.74	0.85	0.73
11	Rapeseed & Mustard	62.91	75.93	81.31	74.38	58.34	72.01	66.08	81.79	66.04	80.29	78.77	62.82	67.97	79.17	75.4
12	Linseed	1.97	1.7	1.73	1.68	1.63	1.69	1.54	1.47	1.52	1.49	1.41	1.55	1.25	1.84	1.77
13	Safflower	1.35	1.74	2.29	2.4	2.25	1.89	1.79	1.5	1.45	1.09	1.13	0.9	0.53	0.94	0.41
14	Sunflower	9.3	11.87	14.39	12.28	14.63	11.58	8.51	6.51	5.17	5.44	5.04	4.34	2.96	2.51	2.3
15	Soyabean	78.18	68.76	82.74	88.51	109.68	99.05	99.64	127.36	122.14	146.66	118.61	103.74	85.7	131.59	113.9
16	Total Nine Oilseeds	251.86	243.54	279.78	242.89	297.55	277.19	248.82	324.79	297.99	309.43	327.49	275.11	252.51	312.76	298.82
17	Cotton #	137.29	164.29	184.99	226.32	258.84	222.76	240.22	330	352	342.2	359.02	348.05	300.05	325.77	339.15
18	Jute # #	102.52	93.99	99.7	103.17	102.2	96.34	112.3	100.09	107.36	103.4	110.83	106.18	99.4	104.32	99.78
19	Mesta # #	9.21	8.73	8.7	9.56	9.9	7.31	5.87	6.11	6.63	5.9	6.07	5.08	5.83	5.3	5.28
20	Jute & Mesta # #	111.73	102.72	108.4	112.73	112.11	103.65	118.17	106.2	113.99	109.3	116.9	111.26	105.24	109.62	105.05
21	Sugarcane	2338.62	2370.88	2811.72	3555.2	3481.88	2850.29	2923.02	3423.82	3610.37	3412	3521.42	3623.33	3484.48	3060.69	3532.26

Sources: : Directorate of Economics and Statistics, Ministry of Agriculture and Farmers Welfare

#: Lakh bales of 170 kgs each ##: lakh bales of 180 kgs each *: Second advance estimates

Statement 2.45: Use of agricultural inputs

Sl. No.	Programme	Unit	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
1.	**Seeds**															
	I. Production of Breeder Seeds	Thousand Quintals	48.42	61.82	66.46	68.64	73.83	91.96	94.41	102	118.85	123.38	110.2	82.29	86.21	90.37
	II. Production of Foundation Seeds	Lakh Quintals	6.14	6.50	6.90	7.40	7.96	8.22	9.69	10.5	17.53	21.86	16.17	17.43	15.76	14.95
	III. Distribution of Certified/Quality Seeds	Lakh Quintals	98.03	108.59	120.26	126.75	155.01	179.05	215.81	257.11	277.34	294.85	313.44	301.39	303.12	304.04
2.	**Consumption of Chemical Fertilizers**															
	I. Nitrogenous(N)	Lakh Tonnes	104.74	110.77	117.13	127.23	137.73	144.19	150.91	155.8	165.58	173.00	168.21	167.5	169.46	173.72
	II. Phosphatic(P)	Lakh Tonnes	40.19	41.24	46.24	52.04	55.43	55.15	65.06	72.74	80.5	79.14	66.53	56.33	60.98	69.79
	III. Potassic(K)	Lakh Tonnes	16.01	15.98	20.60	24.13	23.35	26.36	33.13	36.32	35.14	25.76	20.62	20.99	25.32	24.02
	Total (N+P+K)	Lakh Tonnes	160.94	167.99	183.97	203.40	216.51	225.70	249.10	264.86	281.22	277.90	255.36	244.82	255.76	267.53
	Per Hectare*	Kg	91.45	88.05	94.52	105.50	111.76	115.27	127.53	140.15	142.52	142.33	130.79	125.39	128.08	130.66
3.	**Consumption of Pesticides(Technical Grade)**	Thousand Tonnes	48.30	41.00	40.67	39.77	43.41	41.64	43.86	41.82	55.54	52.98	45.62	60.28	56.12	50.41
4	**Area covered under Soil Conservation#**	Lakh ha	4.30	5.55	7.37	8.67	11.41	7.34	6.90	5.32	7.49	4.72	5.46	-	-	-

Source : Agricultural Statistics at a Glance 2016. Department of Agriculture Cooperation and Farmers Welfare
3. States/UTs Zonal Conference, Kharif & Rabi
*Based on Gross Cropped Area upto 2012-13 and for 2013-14 and 2014-15,GCA is estimated in Zonal conference.

Statement 2.46 : All-India consumption of fertilisers in terms of nutrients (N, P & K)

(Thousand Tonnes)

Year	N	P	K	Total
1950-51	58.7	6.9	-	65.6
1960-61	210.0	53.1	29.0	292.1
1970-71	1487.0	462.0	228.0	2177.0
1980-81	3678.1	1213.6	623.9	5515.6
1990-91	7997.2	3221.0	1328.0	12546.2
2000-01	10920.2	4214.6	1567.5	16702.3
2001-02	11310.2	4382.4	1667.1	17359.7
2002-03	10474.1	4018.8	1601.2	16094.1
2003-04	11077.0	4124.3	1597.9	16799.1
2004-05	11713.9	4623.8	2060.6	18398.3
2005-06	12723.3	5203.7	2413.3	20340.3
2006-07	13772.9	5543.3	2334.8	21651.0
2007-08	14419.1	5514.7	2636.3	22570.1
2008-09	15090.5	6506.2	3312.6	24909.3
2009-10	15580.0	7274.0	3632.4	26486.4
2010-11	16558.2	8049.7	3514.3	28122.2
2011-12	17300.3	7914.3	2575.4	27790.0
2012-13	16820.9	6653.4	2061.8	25536.2
2013-14	16750.1	5633.5	2098.9	24482.4
2014-15	16945.4	6098.4	2532.3	25576.1
2015-16	17372.3	6978.8	2401.5	26752.6

N : Nitrogen P : Phosphorous K : Potash (Potassium)

Source: Agricultural Statistics at a Glance-2016, Department of Agriculture Cooperation and Farmers Welfare

Statement 2.47: State-wise, Nutrient-wise consumption of Fertilizers

(Kg/Hectare)

State	2011-12				2012-13				2013-14			
	N	P	K	Total	N	P	K	Total	N	P	K	Total
Andhra Pradesh	143.71	75.81	23.41	242.93	130.47	52.30	18.48	201.25	140.36	57.03	22.74	220.13
Arunachal Pradesh	1.96	0.36	0.11	2.43	1.58	0.11	0.32	2.01	0.00	0.00	0.00	0.00
Assam	36.19	11.76	18.09	66.04	35.99	11.69	17.99	65.67	49.18	13.56	26.04	88.78
Bihar	126.56	38.84	15.09	180.49	142.86	41.86	11.57	196.29	128.67	28.27	12.93	169.87
Chandigarh	0.00	0.00	0.00	0.00	-	-	-	-	-	-	-	-
Chhattisgarh	62.92	31.31	10.92	105.15	65.93	31.63	8.17	105.73	54.41	24.77	7.27	86.45
Delhi	8.97	5.64	0.26	14.87	23.06	1.43	0.00	24.49	32.96	0.00	0.00	32.96
Goa	18.66	16.28	11.52	46.46	17.06	10.00	5.95	33.01	30.66	13.54	9.33	53.53
Gujarat	90.38	31.85	10.14	132.37	79.98	20.46	6.07	106.51	88.60	24.11	6.93	119.64
Haryana	157.33	56.96	5.78	11.52	160.44	48.71	2.61	211.76	168.87	35.26	2.78	206.91
Himachal Pradesh	34.49	10.20	9.39	54.08	35.61	7.20	7.53	50.34	34.08	8.45	8.79	51.32
Jammu & Kashmir	56.96	24.68	4.56	86.20	65.26	20.74	8.39	94.39	-	-	-	-
Jharkhand	94.04	33.47	9.04	136.55	67.49	45.91	5.86	119.26	30.05	6.31	1.34	37.70
Karnataka	100.83	65.24	27.60	193.67	75.90	33.17	21.27	130.34	88.51	41.41	23.73	153.65
Kerala	50.92	24.85	37.43	113.20	47.51	24.30	35.13	106.94	26.36	13.64	22.48	62.48
Madhya Pradesh	47.16	33.34	3.53	84.03	46.81	30.94	3.07	80.82	51.23	26.85	2.38	80.46
Maharashtra	73.51	46.17	18.23	137.91	62.55	32.72	17.76	113.03	67.08	32.69	17.95	117.72
Manipur	18.05	2.66	1.21	21.92	29.39	4.14	1.55	35.08	33.85	5.61	4.75	44.21
Meghalaya	9.65	3.66	0.74	14.05	9.88	3.38	1.00	14.26	34.41	10.2	2.65	47.26
Mizoram	9.48	2.16	0.62	12.26	14.14	0.78	0.26	15.18	-	-	-	-

Contd.

Statement 2.47: State-wise, Nutrient-wise consumption of Fertilizers

(Kg/Hectare)

State	2011-12				2012-13				2013-14			
	N	P	K	Total	N	P	K	Total	N	P	K	Total
Nagaland	1.58	1.03	0.42	3.03	2.25	1.41	0.78	4.44	2.62	1.72	0.83	5.17
Odisha	65.15	27.29	1.24	93.68	62.15	24.50	10.06	96.71	36.69	13.8	6.62	57.11
Puducherry	541.11	144.44	113.33	798.88	436.15	108.46	62.69	607.30	491.09	84.62	61.94	637.65
Punjab	179.20	56.76	6.69	242.65	188.78	58.76	3.06	250.60	174.68	41.65	3.08	219.41
Rajasthan	37.28	16.98	1.07	55.33	40.35	14.87	0.90	56.12	35.05	10.62	0.19	45.86
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	-
Tamil Nadu	116.22	53.72	44.81	214.75	111.79	43.39	29.02	184.20	86.77	31.13	25.15	143.05
Telangana					-	-	-	-	155.47	45.52	12	212.99
Tripura	28.09	14.80	7.36	50.25	37.17	19.65	12.31	69.13	23.58	17.45	9.62	50.65
Uttar Pradesh	118.84	39.68	6.45	164.97	129.81	45.17	5.14	180.12	107.08	27.54	3.77	138.39
Uttarakhand	109.35	28.54	9.13	147.02	107.91	21.16	6.62	135.69	135.70	21.96	6.47	164.13
West Bengal	88.95	50.91	33.04	172.90	85.14	46.88	29.21	161.23	71.65	27.19	28.02	126.86
Andaman & Nicobar Island	20.56	20.56	9.44	50.56	17.20	12.80	10.00	40.00	11.77	8.96	7.42	28.15
Dadra & Nagar Haveli	27.27	18.64	0.00	45.91	24.17	15.83	0.00	40.00	-	-	-	-
Daman & Diu	20.00	3.33	0.00	23.33	46.67	6.67	3.33	56.67	19.05	4.76	2.38	26.19
Lakshadweep	0.00	0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00
ALL INDIA AVERAGE	**88.61**	**40.54**	**13.19**	**142.34**	**86.53**	**34.23**	**10.61**	**131.37**	**81.07**	**27.27**	**10.16**	**118.49**

N : Nitrogen P : Phosphorous K : Potash (Potassium)

Source: Agricultural Statisatics at Glance, Ministry of Agriculture & Farmers Welfare, Department of Agriculture & Cooperation (Integrated Nutrient Management Division)

Contd.

Statement 2.47: State-wise, Nutrient-wise consumption of Fertilizers

(Kg/Hectare)

State	2014-15				2015-16			
	N	P	K	Total	N	P	K	Total
Andhra Pradesh	146.88	60.52	29.83	237.23	135.96	65.09	24.65	225.70
Arunachal Pradesh	0.00	0.00	0.00	0.00	1.62	0.11	0.33	2.06
Assam	68.09	21.91	35.08	125.08	31.24	6.19	7.36	44.79
Bihar	132.70	31.20	14.75	178.65	162.19	44.24	13.78	220.21
Chandigarh	-	-	-	-	-	-	-	-
Chhattisgarh	56.75	26.69	8.63	92.07	61.36	29.79	8.97	100.12
Delhi	82.25	0.00	0.00	82.25	53.06	4.44	0.00	57.50
Goa	26.12	11.82	8.91	46.85	24.04	14.71	10.34	49.09
Gujarat	96.00	27.76	9.03	132.79	90.45	25.74	8.33	124.52
Haryana	172.18	43.10	6.15	221.43	169.65	47.54	3.22	220.41
Himachal Pradesh	35.63	8.65	9.67	53.95	37.14	9.96	10.00	57.10
Jammu & Kashmir	-	-	-	-	42.90	14.65	6.25	63.80
Jharkhand	30.75	6.56	1.09	38.40	39.59	13.22	1.74	54.55
Karnataka	96.31	47.89	31.95	176.15	96.50	52.24	26.22	174.96
Kerala	20.23	8.35	11.97	40.55	21.25	7.87	14.65	43.77
Madhya Pradesh	48.68	26.35	3.14	78.17	52.45	27.66	3.49	83.60
Maharashtra	68.76	33.95	22.88	125.59	65.20	37.83	19.42	122.45
Manipur	45.10	8.80	7.94	61.84	28.94	7.79	4.89	41.62
Meghalaya	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mizoram	-	-	-	-	12.62	2.27	3.29	18.18
Nagaland	3.24	1.93	1.17	6.34	2.82	1.93	1.21	5.96
Odisha	36.14	14.53	6.82	57.49	39.43	16.11	7.09	62.63
Puducherry	196.11	42.57	46.01	284.69	190.05	37.71	34.44	262.20
Punjab	179.03	43.46	4.97	227.46	185.10	53.55	9.94	248.58
Rajasthan	39.97	13.91	0.64	54.52	42.99	17.83	0.74	61.56
Sikkim	-	-	-	-	-	-	-	-
Tamil Nadu	96.98	36.01	30.68	163.67	104.52	40.81	29.86	175.19
Telangana	162.52	52.71	16.20	231.43	179.23	66.97	22.71	268.91
Tripura	18.45	14.25	8.45	41.15	18.47	12.60	11.93	43.00
Uttar Pradesh	111.64	32.27	6.60	150.51	107.73	40.37	7.43	155.53
Uttarakhand	128.96	24.11	6.88	159.95	143.76	19.75	5.67	169.18
West Bengal	77.86	40.21	32.84	150.91	90.23	48.55	35.07	173.85
Andaman & Nicobar Island	12.50	9.95	6.63	29.08	0.00	0.00	0.00	0.00
Dadra & Nagar Haveli	40.25	27.67	0.00	67.92	36.31	19.75	0.00	56.06
Daman & Diu	0.00	0.00	0.00	0.00	35.99	5.14	0.00	41.13
Lakshadweep	0.00	0.00	0.00	0.00	-	-	-	-
ALL INDIA AVERAGE	**84.44**	**30.39**	**12.62**	**127.45**	**84.84**	**34.08**	**11.73**	**130.66**

N : Nitrogen P : Phosphorous K : Potash (Potassium)

Source: Agricultural Statisatics at Glance, Ministry of Agriculture & Farmers Welfare, Department of Agriculture & Cooperation (Integrated Nutrient Management Division)

Statement 2.48 : State-wise production of organic manures

Year 2015-16

Sl. No	State	Rural Com-post	Farm-yard Manure	City Com-post	organic manure	Ver-mi-com-post	Other ma-nures	Total Manure lakh MT	Area Cover (Lakh Ha.)	Green Ma-nuring
1	Andhra Pradesh	62.00	0.35	22.10		1.52		85.97	8.39	29.10
2	Arunachal Pradesh	0.70	0.21		0.01	0.62	0.06	1.60	0.10	0.08
3	Assam		841.00			93.10	1.56	935.66	123.00	3.20
4	Bihar	10.32	8.50	0.32	5.01	9.12		33.27	1.80	411500.00
5	Chandigarh	8.30	6.95							
6	Chhattisgarh	11.05	42.51	11.23		3.02	53.09	97.88	18.68	490462.00
7	Delhi						1.10	1.10	0.98	
8	Goa	0.04		0.50	0.04	0.03	0.21	0.82	0.10	3.20
9	Gujarat		375.00			0.78	4.90	380.68	62.00	3.50
10	Haryana	10.20	8.60		2.18	0.20	0.01	2.39	0.01	
11	Himachal Pradesh				15.00	25.10	14.00	29.00	2.92	0.58
12	Jammu & Kashmir	1.90		0.23				2.13	1.11	1501.00
12	Jharkhand					396.00		700.00	72.10	
13	Karnataka	5.90	6.30	6.55	2.72	19.14	0.16	28.57	1.22	
14	Kerala	0.72		0.68		3.25	0.01	4.66	0.45	33000.00
15	Madhya Pradesh	26.38	15.17	1.03	0.91	10.10	1.26	19.84	0.90	70650.00
16	Maharashtra	10.36	6.58	7.50		2.50	4.00	14.00	1.05	6080.00
17	Manipur		0.72			0.09		0.81	0.08	
18	Meghalaya		1.12			1.06		2.18	0.01	
19	Mizoram		19.00			9.00		28.00	2.10	
20	Nagaland	0.42	1.30			1.21		2.93	0.01	151.00
21	Odisha	10.60		8.42	0.22	6.17		25.40	3.21	
22	Puducherry			3.12			1.43	4.55		
23	Punjab			0.19	0.83	0.34	7.53	8.70	0.45	20100.00
24	Rajasthan	21.92	12.20		0.01		0.01	34.14		
25	Sikkim	0.34				0.05		0.39	0.05	
26	Tamil Nadu	0.05		9.29		5.78	1.30	18.42	2.21	
27	Telengana	3.20								
28	Tripura	2.60				0.91		0.91		
29	Uttar Pradesh	25.30	19.50			0.23		0.23	0.03	249001.00
30	Uttarakhand	10.60	14.60			0.50		25.70	3.31	0.11
31	West Bengal	8.50	29.99	8.30	4.20	1.95	4.99	57.93	22.00	69.00
	Total	**231.40**	**1409.60**	**79.46**	**31.13**	**591.76**	**95.62**	**2547.87**	**328.28**	**1282553.77**

Source: Annual Report 2015-16, National Center of Organic Farming , Department of Agriculture Cooperation & Farmers Welfare
Blank cell : means data not provided by the State Government

Statement 2.49: State-wise Production of Biofertilizers

Sl. No	State	Actual production of biofertilizers							
		2010-11	2011-12	2012-13	2013-14	2014-15		2015-16	
		Carrier+ Liquid based (in MT)	Carrier+ Liquid based (in MT)	Carrier+ Liquid based (in MT)	Carrier+ Liquid based (in MT)	Carrier based (in metric tonnes)	Liquid Based (in KL)	Carrier based (in metric tonnes)	Liquid Based(in KL)
South Zone									
1	Andaman & Nicobar Island	0	0	0	0	0	0	0	0
2	Andhra Pradesh	999.60	1126.35	1335.74	2714.22	2668.8	274.856	3062.6	317.81
3	Daman & Diu	0.00	0.00		0.00	0	0	0	0
4	Karnataka	6930.00	5760.32	7683.72	9907.33	16462.62	23.06	23042.91	488.14
5	Kerala	3257.00	904.17	1045.64	3520.66	4916.97	10.51	4926.04	56.58
6	Lakshadweep	0.00	0.00		0.00	0	0	0	0
7	Puducherry	783.00	509.45	621.00	516.98	560.95	1.49	283.64	4.09
8	Tamil Nadu	8691.00	3373.81	11575.70	14104.80	15373.29	11.3	23721.21	861.95
West Zone									
9	Chhattisgarh	0.00	276.34	501.63	712.07	1024.68	9.62	954.37	9.38
10	Gujarat	6318.00	2037.35	978.48	6411.43	3667.93	2800.5	3963.42	2873.3
11	Goa	443.40	0.00	370.00	66.26	802.52	0	820.52	0
12	Madhya Pradesh	2455.57	2309.06	1408.08	4824.19	2637.99	119.22	2741.31	131.03
13	Maharashtra	2924.00	8743.69	5897.91	6218.60	14847.39	324.77	7825.14	389.66
14	Rajasthan	819.75	199.78	982.00	1315.00	599.89	0	680	0
15	Dadar & Nagar Haveli	0.00	0.00	0.00	0.00	0	0	0	0
North Zone									
16	Delhi	1205.00	1617.00	0.00	396.00	104.5	0	106.2	0
17	Chandigarh	0.00	0.00		0.00	0	0	0	0
18	Haryana	6.53	914.41	5832.61	1146.48	872.96	46.49	1097.46	58.03
19	Himachal Pradesh	9.00	1.29	0.00	26.15	0.77	33.07	2.71	190.05
20	Jammu & Kashmir	0.00	0.00	0.00	45.26	0	0	0	0
21	Punjab	2.50	692.22	2311.33	2124.85	6305.45	74.28	2197.19	149.58
22	Uttar Pradesh	1217.45	8695.08	1310.02	2682.22	4099.07	98.04	3053.12	223.34
23	Uttarakhand	45.00	263.01	2758.21	5493.85	2129.95	208.03	3549.39	428.22
Bihar									
24	Bihar	136.26	75.00	52.4	52.40	64.9	0	97	0
25	Jharkhand	0.00	8.38	35.30	14.20	9.08	0	9.17	0
26	Odisha	357.66	590.12	407.10	1097.61	1074.46	4.7	467.63	13.7
27	West Bengal	393.39	603.20	1110.00	1682.70	2061.83	14.63	2826.27	23.54
North East Zone									
28	Arunachal Pradesh	0.00	0.00	0	59	59	0	118	0
29	Assam	130.00	68.33	89.00	149.00	88	0	1315	22.5
30	Manipur	0.00	0.00	0.00	0.00	0	0	0	0
31	Meghalaya	0.00	0.00	0.00	0.00	0	0	0	0
32	Mizoram	2.00	0.00	0.00	4.00	3.6	0	4.2	0
33	Nagaland	21.50	13.00	7.45	7.45	7.45	0	8.81	0
34	Sikkim	0.00	0.00	9.50	10.10	12.4	0	12.91	0
35	Tripura	850.00	1542.85	514.00	225.00	240	0	1143.07	0
	Total	**37997.61**	**40324.21**	**46836.82**	**65527.81**	**80696.45**	**4054.57**	**88029.30**	**6240.93**

Source: Annual Report 2015-16, National Center of Organic Farming , Department of Agriculture Cooperation & Farmers Welfare

Statement 2.50 : Production of biofertilizers

(a): State-wise type-wise production of Biofertilisers (Carrier Base)

(during 2015-16) (in Metric Tonnes)

Sl. No	State	Name of Biofertiliser										
		AZB	AZS	RZB	PSB	KMB	ZSB	VAM	ACT	NPK consortium	Other Inoculants*	Grand Total
1	Andhra Pradesh	449.93	441.45	267.52	1184.56	209.58	13.70	403.54	76.50	14.63	1.20	3062.60
2	Arunachal Pradesh	18.00	19.00	22.00						59.00		118.00
3	Assam	472	189	180.00	474.00							1315.00
4	Bihar	28.00	21.00	18.00	30.00							97.00
5	Chhattisgarh	54.22	0.37	127.02	500.80			271.96				954.37
6	Delhi										106.20	106.20
7	Goa							820.52				820.52
8	Gujarat	338.30	280.36	267.73	927.81	370.87	26.05	1641.62	110.68			3963.42
9	Haryana	323.35	14.00	83.37	112.38	48.78	6.40	267.60	241.00	0.58		1097.46
10	Himachal Pradesh	0.20	0.90	0.27	0.44	0.90						2.71
11	Jammu & Kashmir											
12	Jharkhand	2.36		4.11	2.70							9.17
13	Karnataka	3252.45	2710.47	2023.98	10079.87	3195.69	669.09	941.46	25.00			23042.91
14	Kerala	251.71	589.11	372.63	715.55	266.90	26.70	812.30		670.34	1220.80	4926.05
15	Madhya Pradesh	392.27	0.54	351.47	1229.66	339.39	67.85	230.14	30.00	50.00	50.00	2741.31
16	Maharashtra	1611.29	555.79	1122.42	3101.16	595.82	184.47	344.92	169.27	122.68	17.33	7825.14
17	Manipur											
18	Meghalaya											
19	Mizoram	1.40	1.40		1.40							4.20
20	Nagaland	2.80	1.09	1.01	3.90							8.80
21	Odisha	185.88	9.02	22.03	250.70							467.63
22	Punjab	395.67	73.92		472.65	292.77	460.23	420.56		81.41		2197.20
23	Puducherry	35.00	140.70	0.44	50.50	33.00	24.00					283.64
24	Rajasthan	115.00		90.00	291.00					84.00	100.00	680.00
25	Sikkim	3.51		3.60	5.80							12.91
26	Tamil Nadu	2701.12	5148.78	1887.74	5270.09	94.59	0.15	1313.18	305.56		7000.00	23721.21
27	Telengana											
28	Tripura	380.69	381.19		381.19							1143.07
29	Uttarakhand	75.33	23.00	23.00	91.03	382.00	382.00	417.00		1150.03	1006.00	3549.39
30	Uttar Pradesh	617.27	16.03	236.35	1076.20	10.00		10.00	69.00	523.00	495.27	3053.12
31	West Bengal	1005.20	417.70	416.24	663.38	43.75					280.00	2826.27
	Total	**12712.94**	**11034.83**	**7520.93**	**26916.78**	**5884.03**	**1860.63**	**7894.80**	**1027.01**	**2755.66**	**10421.70**	**88029.29**

Source: Annual Report 2015-16, National Center of Organic Farming , Department of Agriculture Cooperation & Farmers Welfare

* : Others include compost enrichers (Trichoderma,Paceliomyces etc.) PGPRs, BGA Azolla

Note: AZB : Azotobacter RZB : Rhizobium AZS : Azospirillum PSB : Phosphate Solubilizing Biofertilizers KMB :Pottassium Mobilizing Bacteria

ZSB : Zinc Solubizing Biofertilizers VAM : Vesicular - Arbuscular Mycorrhiza

Statement 2.50 : Production of biofertilizers

(b): State-wise type-wise production of Biofertilisers (Liquid Base)

(during 2015-16) (in KL)

Sl. No	State	Name of Biofertiliser (Liquid Base)										
		AZB	AZS	RZB	PSB	KMB	ZSB	VAM	ACT	NPK consortium	Other Inoculants*	Grand Total
1	Andhra Pradesh	76.91	0.53	9.90	191.53	30.12	2.50	1.60	1.50	3.22		317.81
2	Arunachal Pradesh											
3	Assam	2			2.00						18.50	22.50
4	Bihar											
5	Chhattisgarh	2.50	1.38	0.09	3.23	1.28	0.90					9.38
6	Delhi											
7	Goa											
8	Gujarat	425.17	270.96	157.39	740.43	313.49	20.81		81.23	654.84	209.00	2873.32
9	Haryana	5.91		5.96	10.10	2.39	0.15		0.01	33.51		58.03
10	Himachal Pradesh	20.00		5.00	22.50	20.00	20.00	3.00		50.00	50.00	190.50
11	Jammu & Kashmir											
12	Jharkhand											
13	Karnataka	52.21	45.99	54.47	157.37	88.42	72.10	0.00		16.42	1.15	488.13
14	Kerala	12.73	7.95	18.27	14.57	3.05						56.57
15	Madhya Pradesh	1.22	13.92	5.03	16.99	91.64	0.83	0.30	0.10	1.00		131.03
16	Maharashtra	64.04	36.77	56.22	85.37	62.83		15.88	15.70	9.84	43.02	389.67
17	Manipur											
18	Meghalaya											
19	Mizoram											
20	Nagaland											
21	Odisha	4.36	2.64	2.65	3.46	0.30	0.30					13.71
22	Punjab	42.21	17.93	10.29	30.34	13.90		0.54		34.37		149.58
23	Puducherry	0.96	0.27	0.33	0.34	0.37				1.11	0.71	4.09
24	Rajasthan											
25	Sikkim											
26	Tamil Nadu	1.67	89.81	40.85	706.82	5.41	0.10	4.19	5.81	5.44	1.86	861.96
27	Telengana											
28	Tripura											
29	Uttarakhand	86.88	14.95	25.64	32.59	14.00	15.00	27.00		212.16		428.22
30	Uttar Pradesh	29.13	2.89		81.26	12.01	0.01			97.00	1.04	223.34
31	West Bengal	4.47	0.97	7.39	8.79	0.50	0.52			0.90		23.54
	Total	**832.37**	**506.96**	**399.48**	**2107.69**	**659.71**	**133.22**	**52.51**	**104.35**	**1119.81**	**325.28**	**6241.38**

Source: Annual Report 2015-16, National Center of Organic Farming , Department of Agriculture Cooperation & Farmers Welfare

* : Others include compost enrichers (Trichoderma,Paceliomyces etc.) PGPRs, BGA Azolla

Note: Arunachal Pradesh figures are not included in the grand total.

AZB : Azotobacter RZB : Rhizobium AZS : Azospirillum PSB : Phosphate Solubilizing Biofertilizers KMB : Pottassium Mobilizing Bacteria ZSB : Zinc Solubizing Biofertilizers

VAM : Vesicular - Arbuscular Mycorrhiza

Statement 2.51: Capacity and production of pesticides
(Fungicides, Herbicides, Weedicides,Rodenticides, Fumigants)

(in '000MT)

Sl. No.	Products	1999-2000		2000-2001		2008-09		2009-10		2013-14		2014-15		2015-16	
		In-stalled Capac-ity	Pro-duc-tion	In-stalled Capac-ity	Pro-duc-tion	Capac-ity	Produc-tion	Capac-ity	Pro-duc-tion	Capac-ity	Pro-duc-tion	Capac-ity	Pro-duc-tion	Capac-ity	Pro-duc-tion
I	**Fungicides**	**14.20**	**12.30**	**14.40**	**12.10**	**24.50**	**35.60**	**24.50**	**31.24**	**79.17**	**61.13**	**78.92**	**65.92**	**79.42**	**70.26**
1	Captan & Captafol	1.80	1.10	1.80	1.40	1.80	0	1.80	0.00	4.73	1.12	3.85	2.38	3.45	2.12
2	Ziram (Thio Barbamate)	0.20	*	0.40	0.10	0.50	0.07	0.50	0.00	0.65	0.60	0.70	0.58	0.70	0.51
3	Carbendazim (Bavistin)	1.20	0.90	1.20	0.70	1.50	0.19	1.50	0.19	0.98	0.31	0.98	0.36	0.98	0.24
4	Mancozab	11.00	10.30	11.00	9.90	20.70	35	20.70	31.05	71.56	57.82	71.56	61.40	72.46	66.38
5	Hexaconazole									0.50	0.58	1.08	0.59	1.08	0.62
6	Metconazole									0.75	0.70	0.75	0.61	0.75	0.39
II	**Herbicides**	**3.80**	**2.00**	**3.80**	**1.50**	**1.70**	**0.33**	**1.70**	**0.33**	**29.80**	**24.91**	**30.30**	**16.87**	**31.66**	**24.91**
1	2, 4-D	2.90	1.30	2.9	1.3	1.20	0	1.20	0.21	22.00	17.90	22.00	11.62	22.00	18.46
2	Butachlor	0.90	0.70	0.9	0.2	0.50	0	0.50	0.12	0.50	0.04	0.50	0.00	0.50	0.00
3	Ethofumesate Technical									1.25	1.01	1.65	0.62	1.56	0.50
4	Thiamethoxam Technical									3.00	3.31	3.10	1.66	3.10	1.92
5	Pendimethalin									2.00	1.71	2	2.26	3	2.82
6	Metribuzin									0.75	0.74	0.75	0.52	1.2	0.91
7	Triclopyr Acid Tech									0.30	0.20	0.30	0.19	0.30	0.30
III	**Weedicides**	**10.44**	**6.40**	**10.38**	**4.62**	**8.60**	**5.58**	**8.60**	**5.57**	**16.06**	**12.14**	**16.34**	**13.44**	**19.31**	**11.38**
1	Isoproturon	8.50	4.60	8.50	3.80	5.40	3	5.40	2.98	6.25	2.35	6.25	2.43	6.25	1.95
2	Glyphoshate	1.80	1.70	1.80	0.70	2.60	2	2.60	2.33	9.26	8.48	9.26	9.69	9.26	6.96
3	Diuron	0.04	0.00	0.04	0.02	0.10	0.01	0.10	0.26	0.05	0.07	0.33	0.12	3.30	1.26
4	Atrazine	0.10	0.10	0.04	0.10	0.50	0.26	0.50	0.00	0.50	1.24	0.50	1.20	0.50	1.21
IV	**Rodenticides**	**3.20**	**2.30**	**3.20**	**3.10**	**3.16**	**1722.33**	**3.16**	**2.49**	**5.22**	**5.12**	**5.22**	**6.34**	**5.22**	**7.25**
1	Zinc Phosphide	0.90	0.50	0.90	0.60	0.9	0	0.9	0.33	1.32	0.65	1.32	1.29	1.32	1.50
2	Aluminium Phosphide	2.30	1.80	2.30	2.50	2.3	1722	2.3	2.16	3.9	4.47	3.9	5.05	3.90	5.75
V	**Fumigants**	**0.20**	**0.10**	**0.20**	**0.10**	**0.02**	**88.00**	**0.02**	**2.00**	**0.15**	**0.07**	**0.09**	**0.11**	**0.15**	**0.09**
1	Dicofol	0.20	0.10	0.20	0.10	0.02	88.00	0.02	2.00	0.15	0.07	0.09	0.11	0.15	0.09

Source : Chemical and Petrochemical Statistics at a Glance-2016, Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers

Statement 2.52 : Capacity and production of insecticides

(in '000MT)

Sl. No.	Product	2013-14		2014-15		2015-16	
		Installed capacity	Production	Installed capacity	Production	Installed capacity	Production
1	D.D.T	6.34	2.79	6.34	3.63	6.34	2.09
2	Malathion	3.80	2.04	2.60	2.24	3.80	2.04
3	Dimethoate	1.45	1.36	1.45	1.43	1.45	1.44
4	D.D.V.P.	32.48	5.52	35.72	6.66	35.72	7.22
5	Quinalphos	2.80	1.74	2.80	1.88	2.80	0.84
6	Monocrotophos	12.24	4.27	13.18	6.97	13.94	5.48
7	Phosphamidon	2.00	0.05	2.00	0.13	2.00	0.13
8	Phorate	10.13	6.85	10.13	6.62	10.13	5.92
9	Ethion	2.50	1.51	2.50	1.60	2.20	1.72
10	Endosulphan	0.00	0.00	0.00	0.00	0.00	0.00
11	Fenvalerate	2.10	0.75	2.10	0.51	2.10	0.56
12	Cypermethrin	15.69	9.26	15.69	8.59	13.92	8.53
13	Acephate	19.25	14.51	19.25	17.97	19.67	16.58
14	Chlorpyriphos	14.30	9.54	16.46	9.73	16.85	6.87
15	Triazophos	3.90	0.99	3.90	1.00	3.90	1.72
16	Temephos	0.25	0.25	0.25	0.00	0.25	0.08
17	Deltamethrin	0.63	0.52	0.63	0.51	0.59	0.38
18	Alphamethrin	0.35	0.56	0.51	0.75	0.50	0.23
19	Profenofos Technical	14.60	7.18	14.90	7.58	12.90	6.85
20	Pretilachlor Technical	2.84	2.22	2.56	1.88	2.58	1.94
21	Lambda Cyhalothrin	0.60	0.55	0.60	0.47	0.60	0.42
22	Phenthoate	0.90	1.24	0.90	1.40	0.90	1.11
23	Permethrin Tech	1.80	1.39	1.80	1.70	1.97	1.30
24	Imidacaloprid Tech	0.83	0.94	0.98	0.56	1.13	0.20

Source : Chemical and Petrochemical Statistics at a Glance-2016, Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers

Statement 2.53: Livestock population

S. No.	All India census estimates (in Million Numbers)													
	Species	1951	1956	1961	1966	1972	1977	1982	1987	1992	1997	2003	2007	2012
1	Cattle	155.30	158.70	175.60	176.20	178.30	180.00	192.45	199.69	204.58	198.88	185.18	199.08	190.90
2	Adult female cattle*	54.40	47.30	51.00	51.80	53.40	54.60	59.21	62.07	64.36	64.43	64.51	72.92	76.69
3	Buffaloes	43.40	44.90	51.20	53.00	57.40	62.00	69.78	75.97	84.21	89.92	97.92	105.34	108.70
4	Adult female buffaloes**	21.00	21.70	24.30	25.40	28.60	31.30	32.50	39.13	43.81	46.77	50.97	54.47	56.59
5	Total cattle & buffaloes	198.70	203.60	226.80	229.20	235.70	242.00	262.36	275.82	289.00	288.80	283.10	304.42	299.98
6	Sheep	39.10	39.30	40.20	42.40	40.00	41.00	48.76	45.70	50.78	57.49	61.47	71.56	65.07
7	Goats	47.20	55.40	60.90	64.60	67.50	75.60	95.25	110.21	115.28	122.72	124.36	140.54	135.17
8	Horses & ponies	4.50	1.50	1.30	1.10	0.90	0.90	0.90	0.80	0.82	0.83	0.75	0.61	0.63
9	Camels	0.60	0.80	0.90	1.00	1.10	1.10	1.08	1.00	1.03	0.91	0.63	0.52	0.40
10	Pigs	4.40	4.90	5.20	5.00	6.90	7.60	10.07	10.63	12.79	13.29	13.52	11.13	10.29
11	Mules	0.06	0.04	0.05	0.08	0.08	0.09	0.13	0.17	0.19	0.22	0.18	0.14	0.20
12	Donkeys	1.30	1.10	1.10	1.10	1.00	1.00	1.02	0.96	0.97	0.88	0.65	0.44	0.32
13	Yaks	NC	NC	0.02	0.03	0.04	0.13	0.13	0.04	0.06	0.06	0.06	0.08	0.08
	Total Livestock	**292.80**	**306.60**	**335.40**	**344.10**	**353.60**	**369.00**	**419.59**	**445.29**	**470.86**	**485.39**	**485.00**	**529.70**	**512.06**
15	Poultry	73.50	94.80	114.20	115.40	138.50	159.20	207.74	275.32	307.07	347.61	489.01	648.83	729.21
16	Dogs	NC	NC	NC	NC	NC	NC	18.54	17.92	21.77	25.48	29.03	19.09	11.67
17	Rabbits	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	0.48	0.42	0.59

Source: Livestock Census, Directorate of Economics & Statistics and Animal Husbandary Statistics Division, Department of Animal Husbandary, Dairying & Fisheries , Ministry of Agriculture and Farmers' Welfare

* : Includes number of Exotic/Crossbred and Indigenous Cattle over the age 2.5 years for crossbred other 3 years

**: Includes Buffaloes over 3 years of age

NC : Not Collected

Statement 2.54 (a): Number of animals slaughtered and Meat Production in the year 2016-17

S. No.	States/ UTs	Animal Slaughtered (In 000 nos.)						Meat Production (In 000 tons)					
		Cattle	Buffalo	Sheep	Goat	Pig	Poultry	Cattle	Buffalo	Sheep	Goat	Pig	Poultry
1	Andhra Pradesh	-	919.64	13023.80	3730.44	57.67	223899.31	-	87.12	177.94	47.57	2.08	317.80
2	Arunachal Pradesh	89.57	11.85	32.62	214.77	92.16	475.34	10.15	1.66	0.38	2.40	5.33	0.57
3	Assam	52.22	1.58	236.10	2061.24	570.84	7221.28	3.20	0.11	1.53	14.60	18.72	8.69
4	Bihar	545.00	1006.82	230.14	8600.34	3282.52	69338.11	32.02	74.29	1.87	85.38	79.38	53.32
5	Chhattisgarh	-	-	116.14	855.13	73.77	29327.72	-	-	1.49	10.86	2.10	34.71
6	Delhi	-	-	-	-	-	-	-	-	-	-	-	-
7	Goa	1.13	-	-	257.14	50.16	2253.43	0.09	-	0.00	3.33	0.85	2.93
8	Gujarat	-	14.44	46.12	90.31	3.83	29184.85	-	1.33	0.50	1.01	0.09	30.41
9	Haryana	-	-	370.70	354.57	150.93	318541.78	-	-	6.63	6.24	6.86	407.75
10	Himachal Pradesh	-	-	51.85	114.89	2.21	867.58	-	-	0.99	2.25	0.11	1.05
11	Jammu & Kashmir	-	51.29	1353.85	1016.62	-	37081.05	-	6.06	19.59	14.74	-	44.71
12	Jharkhand	-	32.90	153.90	2049.55	478.59	13250.40	-	2.99	1.36	18.71	19.00	12.67
13	Karnataka	387.42	85.16	1450.58	1902.65	370.97	54707.90	41.34	9.52	22.59	28.65	19.85	87.12
14	Kerala	1300.52	1159.11	0.00	1631.73	93.19	125835.30	146.05	106.07	-	21.17	6.80	188.76
15	Madhya Pradesh	-	229.15	61.48	1603.55	51.82	31199.63	-	25.78	0.81	23.96	1.67	26.41
16	Maharashtra	-	900.62	1202.05	8698.96	1070.01	211717.77	-	165.43	14.97	102.50	44.66	517.45
17	Manipur	98.63	43.70	11.17	30.39	161.91	3459.16	8.65	4.52	0.11	0.28	6.85	7.06
18	Meghalaya	251.80	4.73	-	132.81	319.21	1981.40	22.63	0.56	-	1.37	13.84	2.61
19	Mizoram	39.60	1.46	-	15.62	85.80	1026.77	5.07	0.20	-	0.13	7.37	2.03
20	Nagaland	68.80	27.54	-	42.56	213.22	972.93	8.50	4.41	-	0.67	17.01	0.78
21	Odisha	-	-	1348.38	5656.39	254.34	137116.78	-	-	15.52	69.48	9.14	82.37

Contd.

Statement 2.54 (a): Number of animals slaughtered and Meat Production in the year 2016-17

S. No.	States/ UTs	Animal Slaughtered (In 000 nos.)						Meat Production (In 000 tons)					
		Cattle	Buffalo	Sheep	Goat	Pig	Poultry	Cattle	Buffalo	Sheep	Goat	Pig	Poultry
22	Punjab	-	890.70	204.73	511.80	17.12	119831.50	-	124.49	3.12	8.00	0.96	112.07
23	Puducherry	15.07	0.85	87.33	584.33	0.35	5166.68	1.26	0.09	0.89	4.94	0.01	7.43
24	Rajasthan	-	472.51	4700.65	5914.27	381.88	7659.08	-	24.83	57.32	73.98	15.57	8.40
25	Sikkim	9.08	1.22	-	4308.61	5.73	775.25	1.55	0.29	-	0.18	1.01	1.36
26	Tamil Nadu	351.11	18.60	3778.37	5083.25	56.34	276328.60	43.16	2.57	45.23	52.24	2.11	427.53
27	Telangana	-	948.34	11100.45	4823.65	119.98	224584.20	-	96.03	145.53	58.30	3.17	288.00
28	Tripura	-	-	-	400.72	229.72	18155.49	-	-	-	1.77	12.43	25.48
29	Uttar Pradesh	-	5171.85	1558.38	8402.68	3040.43	299607.53	-	694.64	17.32	143.60	137.06	353.49
30	Uttarakhand	-	32.51	144.40	665.29	67.68	7749.10	-	4.01	2.22	10.15	3.16	8.86
31	West Bengal	107.49	102.62	1956.08	26732.88	978.23	118577.81	13.97	13.94	17.94	232.09	30.78	397.16
32	Andaman & Nicobar Island	0.36	0.22	-	8.51	8.62	2582.55	0.08	0.05	-	0.12	0.48	4.32
33	Chandigarh	-	-	20.72	40.25	7.39	-	-	-	0.21	0.40	0.33	-
34	Dadra & Nagar Haveli	-	-	-	-	-	-	-	-	-	-	-	-
35	Daman & Diu	1.62	-	28.13	-	-	-	0.17	-	0.39	-	-	-
36	Lakshadweep	0.72	-	-	11.15	-	214.85	0.04	-	-	0.06	-	0.32
Total		**3320.15**	**12129.38**	**43268.10**	**96547.01**	**12296.60**	**2380691.14**	**337.91**	**1450.98**	**556.44**	**1041.11**	**468.80**	**3463.65**

"-" not received/not available
Note: estimated number of animals from rural and urban area are taken together
Source: Department of Animal Husbandary Dairying & Fisheries, Ministry of Agriculture & Farmers Welfare, State/UT Animal Husbandry Departments

Statement 2.54 (b): Number of animals slaughtered and Meat Production in the year 2015-16

S. No.	States/ UTs	Animal Slaughtered (In 000 nos.)						Meat Production (In 000 tons)					
		Cattle	Buffalo	Sheep	Goat	Pig	Poultry	Cattle	Buffalo	Sheep	Goat	Pig	Poultry
1	Andhra Pradesh	-	954.42	10982.82	3550.73	71.96	229383.09	-	79.83	139.26	43.16	2.57	301.47
2	Arunachal Pradesh	81.59	13.51	46.53	194.33	82.77	352.29	9.48	1.84	0.53	2.23	4.87	0.42
3	Assam	51.09	1.42	209.26	2074.99	547.44	6634.75	3.16	0.10	1.47	14.54	17.49	8.00
4	Bihar	609.73	960.98	216.41	8302.42	3108.85	65446.43	34.54	68.31	1.65	77.74	72.48	47.02
5	Chhattisgarh	-	-	94.18	721.21	57.96	26069.17	-	-	1.20	9.14	1.65	29.39
6	Delhi	-	258.59	-	1279.82	-	18604.68	-	41.36	-	11.08	-	17.37
7	Goa	0.46	-	-	261.30	53.50	2712.63	0.04	-	-	3.40	0.91	3.53
8	Gujarat	-	12.89	51.60	103.70	10.34	29498.39	-	1.19	0.56	1.16	0.23	30.80
9	Haryana	-	-	385.34	361.99	157.49	300497.28	-	-	6.87	6.35	7.13	382.45
10	Himachal Pradesh	-	-	48.29	117.22	2.80	471.47	-	-	0.93	2.37	0.12	0.58
11	Jammu & Kashmir	-	55.67	1194.54	845.25	-	33957.32	-	6.05	17.19	12.10	-	39.74
12	Jharkhand	-	34.85	145.72	1948.06	448.87	10862.85	-	3.19	1.32	17.87	17.62	10.71
13	Karnataka	290.44	140.82	1786.52	1258.74	462.86	57901.54	27.93	14.94	28.55	19.51	22.13	83.54
14	Kerala	1239.93	938.63	-	1350.91	193.11	134093.43	146.73	110.16	-	19.72	14.41	175.02
15	Madhya Pradesh	-	208.55	55.91	1437.82	46.56	26953.41	-	23.54	0.73	21.28	1.50	22.78
16	Maharashtra	13.95	763.40	913.31	4773.89	435.99	272493.01	1.82	139.86	11.32	54.98	17.02	450.11
17	Manipur	97.00	41.19	10.51	28.67	157.75	3246.59	8.54	4.23	0.10	0.25	6.61	6.55
18	Meghalaya	263.30	5.19	-	128.46	262.75	3164.07	23.63	0.61	-	1.33	11.39	4.17
19	Mizoram	31.40	0.86	-	10.89	86.24	965.45	4.01	0.12	-	0.09	7.50	1.84
20	Nagaland	111.54	30.16	-	49.42	215.81	1133.97	11.51	5.58	-	0.76	17.14	0.94

Contd.

Statement 2.54 (b): Number of animals slaughtered and Meat Production in the year 2015-16

S. No.	States/ UTs	Animal Slaughtered (In 000 nos.)						Meat Production (In 000 tons)					
		Cattle	Buffalo	Sheep	Goat	Pig	Poultry	Cattle	Buffalo	Sheep	Goat	Pig	Poultry
21	Odisha	-	-	1411.27	5636.76	246.00	47741.27	-	-	16.18	65.01	8.74	74.83
22	Punjab	-	939.20	186.74	462.74	15.23	111559.40	-	130.96	2.84	7.18	0.86	108.08
23	Puducherry	18.49	0.93	76.07	607.87	0.08	5109.85	1.55	0.10	0.83	4.78	-	7.35
24	Rajasthan	-	446.23	3505.79	6175.44	248.87	22084.25	-	22.48	46.03	75.63	12.87	22.92
25	Sikkim	6.54	6.31	-	5.85	4.75	1563.20	0.84	0.71	-	0.08	0.27	3.95
26	Tamil Nadu	356.24	8.02	2977.98	4822.75	68.78	271666.70	43.70	0.99	36.48	48.26	2.88	412.15
27	Telangana	-	877.03	10255.53	4382.45	112.22	205567.65	-	87.68	135.36	53.98	2.98	262.06
28	Tripura	-	-	-	374.04	208.06	17371.48	-	-	-	1.65	11.23	24.48
29	Uttar Pradesh	-	6306.40	1559.53	7979.35	2786.17	287634.74	-	846.19	15.77	130.78	90.91	334.23
30	Uttarakhand	-	32.81	140.71	639.62	67.68	7720.49	-	4.05	2.16	9.67	3.13	8.58
31	West Bengal	88.40	122.37	1913.97	26233.26	952.34	189445.86	11.56	16.88	17.59	226.24	30.26	383.80
32	Andaman & Nicobar Island	0.42	0.25	-	7.11	6.66	2583.48	0.09	0.06	-	0.10	0.37	4.28
33	Chandigarh	-	-	22.35	41.98	6.56	-	-	-	0.24	0.45	0.30	-
34	Dadra & Nagar Haveli	-	-	-	-	-	-	-	-	-	-	-	-
35	Daman & Diu	1.54	-	26.79	-	-	-	0.16	-	0.36	-	-	-
36	Lakshadweep	0.70	-	-	12.99	-	212.31	0.04	-	-	0.06	-	0.68
Total		**3262.74**	**13160.68**	**38217.67**	**86182.01**	**11126.47**	**2394702.51**	**329.34**	**1611.01**	**485.52**	**942.91**	**387.55**	**3263.81**

"-" not received/not available
Note: estimated number of animals from rural and urban area are taken together
Source: Basic Animal Husbandry Statistics 2017, Department of Animal Husbandary Dairying & Fisheries, Ministry of Agriculture & Farmers Welfare, State/UT Animal Husbandry Departments

Statement 2.55 : Species-wise incidence of livestock diseases in India

Sl. No	Disease	Species	January 2017 to October, 2017		
			Outbreak	Attack	Death
1	**Foot & Mouth Disease**	Bovine	106	20604	152
		Buffalo	8	322	33
		Ovine/ Caprine	2	107	0
		Swine	8	377	200
		Total	**124**	**21410**	**385**
2	**Haemorrhagic Septicaemia**	Bovine	43	875	122
		Buffalo	8	35	15
		Ovine/ Caprine	13	462	103
		Total	**64**	**1372**	**240**
3	**Black Quarter**	Bovine	55	680	62
		Buffalo	2	4	4
		Ovine/ Caprine	1	2	0
		TOTAL	**58**	**686**	**66**
4	**Anthrax**	Bovine	19	102	102
		Buffalo	12	121	121
		Ovine/ Caprine	1	2	2
		Total	**32**	**225**	**225**
5	**Fascioliasis**	Bovine	82	2782	0
		Buffalo	36	316	0
		Ovine/ Caprine	27	1092	0
		Total	**145**	**4190**	**0**
6	**Enteroxaemia**	Ovine/ Caprine	30	676	263
7	**Sheep and Goat Pox**	Ovine/ Caprine	34	3330	943
8	**Blue Tongue**	Ovine/ Caprine	5	354	44
9	**CCPP**	Ovine/ Caprine	1	7	2
10	**Amphistomiasis**	Bovine	39	4323	0
		Buffalo	8	62	0
		Ovine/ Caprine	24	2862	0
		Total	**71**	**7247**	**0**
11	**Swine Fever**	Swine	30	1055	377
12	**Salmonellosis**	Avian	52	228025	7148
13	**Coccidiosis**	Bovine	104	25272	5
		Buffalo	40	764	1
		Ovine/ Caprine	77	6342	0
		Avian	70	137083	4637
		Total	**291**	**169461**	**4643**
14	**Ranikhet Disease**	Avian	97	332293	2939
15	**Fowl Pox**	Avian	66	21594	784
16	**Fowl Cholera**	Avian	17	5418	658
17	**Marek's Disease**	Avian	1	2	0
18	**Infectious Bursal Disease (I.B.D)**	Avian	77	440522	5858

Contd.

Statement 2.55 : Species-wise incidence of livestock diseases in India

Sl. No	Disease	Species	January 2017 to October, 2017		
			Outbreak	Attack	Death
19	**Duck Plague**	Avian	9	626	56
20	**Coryza**	Avian	21	74403	1538
21	**Chronic Respiratory Disease (CRD)**	Avian	321	5719535	9961
22	**Canine Distemper**	Canine	67	1514	50
23	**Rabies**	Bovine	61	220	220
		Canine	20	85	85
		Total	**81**	**305**	**305**
24	**Babesiosis**	Bovine	151	10679	14
		Buffalo	31	263	1
		Ovine/ Caprine	56	744	0
		Canine	1	1	0
		Total	**239**	**11687**	**15**
25	**Mastitis**	Bovine	126	58490	0
		Buffalo	54	456	0
		Ovine/ Caprine	85	13304	0
		Total	**265**	**72250**	**0**
26	**Trypanosomosis**	Bovine	46	824	13
		Buffalo	9	38	7
		Total	**55**	**862**	**20**
27	**Mange**	Bovine	14	93	0
		Ovine/ Caprine	2	14	0
		Canine	3	10	0
		Total	**19**	**117**	**0**
28	**Peste des petits Ruminants (PPR)**	Ovine/ Caprine	31	1303	459
29	**Anaplasmosis**	Bovine	77	2329	1
		Buffalo	15	78	0
		Ovine/ Caprine	28	266	0
		Total	**120**	**2673**	**1**
30	**Brucelliosis**	Bovine	5	46	0
		Buffalo	1	3	0
		Ovine/ Caprine	1	30	4
		Total	**7**	**79**	**4**
31	**Glanders**	Equine	87	197	197

Source: Department Animal Husbandry, Dairying and Fisheries,Ministry of Agriculture and Farmers Welfare (as retrieved on 06.03.2018)

Statement 2.56 : Water availability in India

Sl. No	Items	Quantity
1	Annual Precipitation (including snowfall)	4000 BCM
2	Average Annual Availability	1869 BCM
3	(i) Per Capita Water Availability (2001) in cubic metres	1816Cu.M
	(ii) Per Capita Water Availability (2010) in cubic metres	1588Cu.M
4	Estimated Utilizable Water Resources	1123 BCM
	(i)Surface Water Resources	690 BCM
	(ii) Ground Water Resources	433 BCM

BCM: Billion Cubic Meters; CuM: Cubic Meter.
Source: Water Resources at a Glance 2011 Report, Central Water Commission

Statement 2.57: Water resources -Basinwise

Sl.No	Name of the River Basin	Average Annual Availability (cubic km/year)
1	Indus (up to Border)	73.31
2	a) Ganga	525.02
	b) Brahmaputra, Barak & Others	585.6
3	Godavari	110.54
4	Krishna	78.12
5	Cauvery	21.36
6	Pennar	6.32
7	East Flowing Rivers Between Mahanadi & Pennar	22.52
8	East Flowing Rivers Between Pennar and Kanyakumari	16.46
9	Mahanadi	66.88
10	Brahmani & Baitarni	28.48
11	Subernarekha	12.37
12	Sabarmati	3.81
13	Mahi	11.02
14	West Flowing Rivers of Kutch, Sabarmati including Luni	15.1
15	Narmada	45.64
16	Tapi	14.88
17	West Flowing Rivers from Tapi to Tadri	87.41
18	West Flowing Rivers from Tadri to Kanyakumari	113.53
19	Area of Inland drainage in Rajasthan desert	Negligible
20	Minor River Basins Draining into Bangladesh & Burma	31
	Total	**1869.35**

Source: Ministry of Water Resources, RD & GR

Statement 2.58: Water flow in stream

For Year (2013-14) **(MCM)**

Sl. No.	Name of Basin/ River	Average#			Minimum#			Maximum#		
		Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual	Monsoon	Non-Monsoon	Annual
1	Mahanadii	7707	502	8209	227	0	237	46492	5149	51640
2	Subernekha etc.	4478	307	4785	340	0	390	8897	724	9184
3	Brahmani	6925	842	7766	677	64	741	12689	3139	15811
4	Rushikulia etc.	2966	289	2823	657	86	743	4923	404	5100
5	Godavari	17256	1148	21994	0	0	0	143249	11682	149873
6	Krishna	3773	340	4019	2	0	2	12522	3315	15837
7	Cauveri	1547	180	1538	0	0	0	6610	1431	7348
8	East Flowing Rivers	257	67	324	0	0	0	2833	797	3401
9	West Flowing Rivers	2713	179	2892	0	0	0	13006	1327	13171
10	Tapi	7607	65	7672	2313	0	2374	12353	198	12353
11	Narmada	12488	1904	15001	316	3	319	51905	13137	65042
12	Mahi, etc	1089	95	1074	0	0	0	8225	754	8787

Source : Intergrated Hydrological Data Book, 2017,CWC

Average, minimum and manimum values of respective sites of each Basin/River

Statement 2.59 : State-wise navigable waterways

Year 2015-16 *(Km.)*

Sl. No.	State/ River/ Canals/ Lakes	Total Length	Navigable Length	Sl. No.	State/ River/ Canals/ Lakes	Total Length	Navigable Length
1	**ANDHRA PRADESH**			4	**GOA**		
	Godavari	1530	171		Mandovi	78	66
	Krishna	1400	157		Zuari	68	68
	Others **	649	476		Mapusa	27	27
	Total	**3579**	**804**		Chapora	34	32
					Tiracol	29	23
2	**ASSAM**				Sal	20	15
	Brahmaputra	2800	891		Others	18	18
	Borak	900	121		**Total**	**274**	**249**
	Subansiri	468	111				
	Dhansiri	135	25	5	**GUJARAT***		
	Manash	375	104		Narmada	161	50
	Aai	.	64		Tapti	140	15
	Beki	85	55		Ambica	136	20
	Jiabhoroli	90	60		Auranga	75	4
	Puthimari	..	64		Purna	141	13
	Disang	25	25		**Total**	**653**	**102**
	Kopili	50	50				
	Dikhow	92	40	6	**KARNATAKA^**		
	Katakhal/ Dhaleswari	150	120		Sharavathi	80	27
	Soani	.	48		Tungabhadra	375	375
	Mahura	.	32		Malaprabha	230	230
	Buridihing	120	80		Ghataprabha	160	160
	Chiri	.	42		Krishna	325	125
	Jiri	.	64		Cauvery	270	34
	Total	**5290**	**1996**		Kabini	117	30
					Gurupur	80	20
3	**BIHAR**				Gangolli	48	20
	Ganga	510	510		Bheema	860	125
	Gandak	300	300		Udyavara	37	14
	Koshi	233	160		Netravathi	96	26
	Ghaghra	100	100		Kali	184	29
	Sone	226	31		**Total**	**2862**	**1215**
	Mahananda	140	--				
	Burhi Gandak	400	--	7	**KERALA^**		
	Punpun	200	--		Manjeswar	16	3.2
	Phalgu Harihar	300	--		Uppala	50	-
	Kiul	100	--		Shiriya	67	4.8
	Kari Koshi	150	--		Mogral	34	-
	Chandan	100	--		Chandragiri	105	12.8
	Karmnasha	144	--		Chittari	25	-
	Others	860	290		Nileswar	46	11.2
	Total	**3763**	**1391**		Kariangoda	64	24
					Kavvai	31	9.6

Contd.

Statement 2.59 : State-wise navigable waterways

Year 2015-16 *(Km.)*

Sl. No.	State/ River/ Canals/ Lakes	Total Length	Navigable Length
	Peruvamba	51	16
	Ramapuram	19	6.4
	Kuppan	82	24
	Valapattanam	110	44.8
	Anjara Kandy	48	27.2
	Teiciherry	28	21.6
	Mahe	54	24
	Kuthiadi	74	9.6
	Korapuzha	40	25
	Kallai	22	10
	Chaliyar	169	68
	Kadalundy	130	43.2
	Tirur	48	9.6
	Bharathappujha	209	40
	Keecheri	51	-
	Puzhakkal	29	-
	Karivannur	48	24
	Chalakkudy	130	16
	Periyar	244	72
	Muvattei Puzha	121	25.6
	Meenachil	78	41.6
	Manimala	90	54.4
	Pamba	176	73.6
	Achan coil	128	32
	Pallickal	42	2
	Kallada	121	40
	Ithikkara	56	16
	Ayroor	17	1
	Vamanapuram	88	11.2
	Mamom	27	1
	Karamana	68	-
	Neyyar	56	-
	Total	**3092**	**845.2**
8	**MAHARASHTRA ******		
	Dande River	2	1
	Pangere River	2	1
	Girye River	3	1
	Kajali River	35	5
	Kalbadevi River	10	2
	Are River	6	1
	Jog River	10	5
	Kelshi River	10	3
	Savitri River (Bankot to Mahad)	45	40
	Kal River	6	4
	Vaitarna River	24	9
	Ulhas River	32.5	28
	Mahim River (Bay)	1.5	1
	Amba River	23	20
	Patalganga River/Creek (Aware to Kharpada)	11	6.5
	Kundalika River	16	16
	Mandad River (Rajpuri to Mandad)	14	10
	Mhasla River (Turmad to Mhasla)	9	5
	Vashisti River (Dabhol to Govalkot)	45	38
	Jagbudi River (Karambavne to Khed)	20	20
	Shastri River/Jaigad Creek (Jaigad to Kurudunda)45	45	40
	Rajapur River (Musakazi to Rajapur)	30	30
	Vagothan River/ Vijaydurg Creek (Vijaydurg to Kharepatan)	38	22
	Gad River (Kalaval Creek)	13	7
	Terekhol River/Creek (Terekhol to Ban)	28	28
	Karli River (Malva)	23	13
	Others	129	105
	Total	**631**	**462**
9	**ORISSA**		
	Mahanadi	493	199
	Brahmani	541	277
	Baitarani	344	32
	Subarnarekha	--	50
	Budha Balanga	--	35
	Dhamara	--	20
	Salandi	--	17
	Panchputra	--	21
	Pernei	--	45
	Hatel	--	30

Contd.

Statement 2.59 : State-wise navigable waterways

Year 2015-16 *(Km.)*

Sl. No.	State/ River/ Canals/ Lakes	Total Length	Navigable Length
	Bansagadal	--	32
	Hansua	--	37
	Tirkota	--	18
	Jamboo	--	6
	Gobari	--	16
	Ramchandi	--	16
	Kharansi	--	14
	Batigharia	--	14
	Birupa	--	110
	Genguti	--	45
	Luna	--	37
	Devi	--	20
	Pradhi	--	15
	Kadha	--	30
	Kusavadra	--	25
	Daya	--	9
	Rajua	--	7
	Makara	--	11
	Ohers **	--	367
	Total $	**1378**	**1555**
10	**TAMIL NADU ^**		
	Ananths Victoria Marthandavarna	27	12
	North Buckingam Canal	58	.
	Central Buckingam Cananl	7	.
	South Buckingam Canal	105	.
	Total	**197**	**12**
11	**UTTAR PRADESH*** **		
	Gomti	960	
	Rapti	778	
	Ghaghra	1116	
	Ganga	2345	425#
	Sai	760	
	Tons	485	
	Total	**6444**	
12	**WEST BENGAL**		
	Hooghly	580	580
	Mahananda	206	58
	Ajoy	174	174
	Jalangi	232	232
	Dwarka	129	129
	Bakreswar	102	102
	Damodar	437	437
	Dwarekeswar	103	103
	Silabati	135	135
	Kumari	347	347
	Ichamati	232	232
	Others @	2064	2064
	Total	**4741**	**4593**
13	**NAGALAND*** **		
	Doyans	185	105
	Tizu/Zungki	287	90
	Dhansiri/Chathe	170	75
	Dikhu	120	52
	Tapi-Yangnyn	95	18
	Tsurang/Disai	60	15
	Others	20	20
	Total	**937**	**375**
14	**MIZORAM**		
	R.TlawNg (Dhaleswari)	238	81
	R.Kolodyne (Chhimtuipoi)	196	22
	Khawtthlang Tuipui	134	17
	R. Tuichawrg	167	19
	Tul River	55	16
	Others	-	-
	Total	**790**	**155**

Source : IWT Directorate of States & IWAI (Statistics of Inland water transport 2015-16, Ministry of Shipping)
*Relates to 2012-13 **Including Canals ***Related to 2007-08 ***Relates to 2007-08 - Not available
Navigable length pertains to NW I for Allahabad-Buxar stretch in Uttar Pradesh is available.
$ Total length is less than navigable length as length of canals is not provided whereas navigable length of canals is provided.
@ Includes 268 Kms. Each of Total Length and Navigable Length pertaining to cannals.
^ The information for the year 2016 from the States of Assam, Karnataka, Kerala and Tamil Nadu has not received. Hence last year data has been repeated.

Statement 2.60: Projected Water Demand in India
(By Different Use)

S. No.	Sector	Water Demand in BCM								
		Standing Sub-Committee of MoWRRDGR			NCIWRD					
		2010	2025	2050	2010		2025		2050	
					Low	High	Low	High	Low	High
1	Irrigation	688	910	1072	543	557	561	611	628	807
2	Drinking Water	56	73	102	42	43	55	62	90	111
3	Industry	12	23	63	37	37	67	67	81	81
4	Energy	5	15	130	18	19	31	33	63	70
5	Other	52	72	80	54	54	70	70	111	111
6	**Total**	**813**	**1093**	**1447**	**694**	**710**	**784**	**843**	**973**	**1180**

Source: Report of the Standing Sub-Committee on "Assessment of Availability & requirement of Water for Diverse uses-2000", Basin Planning Directorate, CWC, XI Plan Document.
BCM: Billion Cubic Meters
MoWRRD &GR:Ministry of Water Resources, River Development & Ganga Rejuvenation
NCIWRD: National Commission on Integrated Water Resources Development

Statement 2.61: Ground water resource potential as per basin

Sl. No.	Basin	Total Replenishable Ground Water Resource (M.C.M/Yr)	Provision of Domestic Industrial & Other Uses (M.C.M/Yr)	Available for Irrigation (M.C.M/Yr)	Net Draft (M.C.M/Yr)	Balance for future Use (M.C.M/Yr)	% Level of Ground Water Development
1	Brahmaputra	26545.69	3981.35	22564.34	760.06	21804.29	3.37
2	Brahmani with Baitarni	4054.23	608.13	3446.09	291.22	3154.88	8.45
3	Cambai composite	7187.25	1078.09	6109.16	2449.06	3660.10	40.09
4	Caveri	12295.71	1844.35	10451.35	5782.85	4668.50	55.33
5	Ganga	170994.74	26030.47	144964.26	48593.67	96370.56	33.52
6	Godavari	40649.82	9657.69	30992.12	6054.23	24937.90	19.53
7	Indus	26485.42	3053.95	23431.47	18209.30	5222.17	77.71
8	Krisnhna	26406.97	5578.34	20828.63	6330.45	14498.19	30.39
9	Kutch & Saurashtra	11225.09	1738.10	9486.99	4851.87	4791.02	51.14
10	Madras & Southern	18219.72	2732.95	15486.77	8933.25	6553.52	57.68
11	Mahanadi	16460.55	2471.10	13989.45	972.63	13016.81	6.95
12	Meghna	8516.69	1277.48	7239.21	285.34	6953.87	3.94
13	Narmada	10826.54	1653.75	9172.79	1994.18	7178.61	21.74
14	Northeast Composite	18842.61	2826.39	16016.22	2754.93	13261.29	17.20
15	Pennar	4929.29	739.39	4189.89	1533.38	2656.51	36.60
16	Subranarekha	1819.41	272.91	1546.50	148.06	1398.43	9.57
17	Tapi	8269.50	2335.79	5933.70	1961.33	3972.38	33.05
18	Western Ghat	17693.72	3194.78	14499.18	3318.12	11181.06	22.88
Total		**431422.93**	**71075.02**	**360348.15**	**115223.93**	**245280.08**	**31.92**

Source: Central Ground Water Board
Note: Totals may not tally.

MCM/yr : Million Cubic Metre/Year

Statement 2.62: State-wise ground water resources

Unit:BCM/Yr

Sr. No.	States	Annual Replenishable Ground Water Resources				Total	Natural Dischage during non-monsoon season	Net Annual Ground Water Availability
		Monsoon Season		Non-monsoon Season				
		Recharge from rainfall	Recharge from other sources	Recharge from rainfall	Recharge from other source			
1	Andhra Pradesh	8.97	4.25	3.21	3.97	20.39	1.91	18.48
2	Arunachal Pradesh	3.340	0.0003	1.092	0.001	4.433	0.443	3.990
3	Assam	20.56	1.82	9.22	0.49	32.11	3.21	28.90
4	Bihar	20.66	3.48	3.36	3.81	31.31	2.82	28.49
5	Chhattisgarh	10.11	0.76	0.87	1.06	12.80	0.90	11.90
6	Delhi	0.09	0.02	0.014	0.22	0.34	0.03	0.31
7	Goa	0.15	0.011	0.01	0.08	0.24	0.10	0.15
8	Gujarat	13.93	3.22	0.00	3.71	20.85	1.07	19.79
9	Haryana	3.62	3.10	1.03	3.60	11.36	1.06	10.30
10	Himachal Pradesh	0.40	0.02	0.11	0.03	0.56	0.03	0.53
11	Jammu & Kashmir	1.22	2.69	0.79	0.55	5.25	0.43	4.82
12	Jharkhand	5.61	0.06	0.73	0.16	6.56	0.57	5.99
13	Karnataka	6.74	4.18	2.67	3.40	17.00	2.16	14.83
14	Kerala	4.51	0.04	0.59	1.13	6.27	0.60	5.66
15	Madhya Pradesh	28.59	1.27	0.82	5.30	35.98	1.82	34.16
16	Maharashtra	21.96	1.64	1.83	7.76	33.19	1.71	31.48
17	Manipur	0.244	0.010	0.201	0.019	0.474	0.047	0.426
18	Meghalaya	3.05	0.00	0.15	0.107	3.31	0.33	2.98
19	Mizoram	0.02899	Negligible	0.01042	Negligible	0.03942	0.00394	0.03548
20	Nagaland	1.30	0	0.64	0	1.94	0.194	1.75
21	Odisha	11.29	2.53	1.33	2.63	17.78	1.09	16.69
22	Punjab	5.75	13.21	1.32	5.64	25.91	2.52	23.39
23	Rajasthan	9.06	0.69	0.27	2.49	12.51	1.26	11.26
24	Sikkim	-	-	-	-	-	-	-
25	Tamil Nadu	7.12	9.87	1.52	2.15	20.65	2.07	18.59
26	Telangana	8.13	2.12	1.65	2.84	14.74	1.35	13.39
27	Tripura	1.141	0.000	0.738	0.593	2.471	0.202	2.269
28	Uttar Pradesh	41.97	11.52	4.60	18.25	76.34	4.75	71.58
29	Uttarakhand	1.10	0.22	0.24	0.43	2.00	0.03	1.97
30	West Bengal	18.71	5.26	1.51	3.85	29.33	2.77	26.56
	Total State	**259.33**	**72.00**	**40.53**	**74.28**	**446.14**	**35.49**	**410.64**
	Union Territories							
31	Andaman & Nicobar	0.38	0.04	0.0002	0.00005	0.420	0.0420	0.378
32	Chandigarh	0.015	0.0004	0.005	0.001	0.022	0.0022	0.0194
33	Dadara & Nagar Haveli	0.054	0.002	0.010	0.004	0.070	0.007	0.063
34	Daman & Diu	0.012	0.001	0.000	0.001	0.015	0.001	0.014
35	Lakshdweep	0	0	0	0	0.01055	0.00704	0.00350
36	Puducherry	0.095	0.060	0.009	0.028	0.193	0.019	0.174
Union Territories		**0.56**	**0.10**	**0.024**	**0.035**	**0.73**	**0.08**	**0.65**
Grand Total		**259.89**	**72.10**	**40.55**	**74.32**	**446.87**	**35.57**	**411.30**

Source: Central Ground Water Board, Dynamic Ground Water Resources of India, (as on 31st March, 2013)

BCM: Billion Cubic Meter.

: The stage of Ground water development is to be computed as : E/N (Where E: Existing Gross draft for all uses and N: Net annual availability.)

Contd.

Statement 2.62: State- Wise ground water resources

Unit:BCM/Yr

Sr. No.	States	Annual Ground Water Draft			Projected Demand for Domestic and Industrial uses upto 2025	Ground Water availability for future irrigation	#Stage of Ground Water Development (%)
		Irrigation	Domestic and Industrial uses	Total			
1	Andhra Pradesh	7.29	0.81	8.10	1.64	10.21	44
2	Arunachal Pradesh	0.002	0.007	0.01	0.020	3.967	0.23
3	Assam	4.06	0.68	4.74	0.84	24.00	16
4	Bihar	10.36	2.37	12.73	0.60	17.52	45
5	Chhattisgarh	3.76	0.64	4.40	0.76	7.38	37
6	Delhi	0.14	0.25	0.39	0.25	0.02	127
7	Goa	0.02	0.03	0.05	0.04	0.09	37
8	Gujarat	12.30	1.14	13.44	1.46	6.77	68
9	Haryana	13.32	0.60	13.92	0.56	-3.58	135
10	Himachal Pradesh	0.16	0.11	0.27	0.07	0.30	51
11	Jammu & Kashmir	0.20	0.98	1.18	1.07	3.55	24
12	Jharkhand	0.63	0.72	1.35	0.17	5.19	23
13	Karnataka	8.76	0.99	9.76	1.49	5.55	66
14	Kerala	1.18	1.45	2.63	1.55	2.93	47
15	Madhya Pradesh	17.95	1.41	19.36	2.35	13.86	57
16	Maharashtra	15.93	1.14	17.07	2.21	13.72	54
17	Manipur	0.004	0.001	0.004	0.049	0.374	1.01
18	Meghalaya	0.0080	0.0040	0.0120	0.207	2.76	0.4
19	Mizoram	0	0.00104	0.00104	0.00238	0.0331	2.9
20	Nagaland	0.00	0.03	0.03	0.01	1.74	2.0
21	Odisha	4.14	0.87	5.02	1.35	11.20	30
22	Punjab	34.05	0.77	34.81	0.97	-11.63	149
23	Rajasthan	13.79	1.92	15.71	2.32	0.90	140
24	Sikkim	-	-	-	-	-	-
25	Tamil Nadu	12.98	1.38	14.36	1.53	4.08	77
26	Telangana	7.00	0.76	7.77	1.55	4.83	58
27	Tripura	0.093	0.072	0.165	0.200	1.976	7.3
28	Uttar Pradesh	48.35	4.41	52.76	6.44	19.01	74
29	Uttarakhand	0.84	0.15	0.99	0.30	0.82	50
30	West Bengal	10.84	1.00	11.84	1.53	14.19	45
	Total State	**228.16**	**24.71**	**252.87**	**31.55**	**161.76**	**62**
	Union Territories						
31	Andaman & Nicobar	0.0001	0.0035	0.0037	0.016	0.361	1
32	Chandigarh	0	0	0	0	0	0
33	Dadara & Nagar Haveli	0.008	0.013	0.020	0.014	0.042	32
34	Daman & Diu	0.008	0.002	0.010	0.003	0.003	70
35	Lakshdweep	0.00000	0.00237	0.00237	0	0	68
36	Puducherry	0.124	0.029	0.153	0.047	0.053	88
Union Territories		**0.139**	**0.050**	**0.189**	**0.08**	**0.46**	**29**
Grand Total		**228.30**	**24.76**	**253.06**	**31.63**	**162.22**	**62**

Source: Central Ground Water Board, Dynamic Ground Water Resources of India, (as on 31st March, 2013)

BCM: Billion Cubic Meter.

: The stage of Ground water development is to be computed as : E/N (Where E: Existing Gross draft for all uses and N: Net annual availability.)

Residuals

- ★ Production of waste and wastewater
- ★ Emission of substance to air
- ★ Management waste and wastewater

Statement 3.01 : Energy related cumulative CO2 Emissions

million tonnes of CO_2	1971	1981	1990	1991	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
World	**13942**	**17476**	**20509**	**20622**	**23483**	**23888**	**24936**	**26111**	**27045**	**27902**	**28999**	**29166**	**28730**	**30434**	**31334**	**31581**	**32122**	**32325**	**32294**
India	181	288	530	572	905	936	954	1028	1080	1151	1265	1345	1513	1594	1674	1791	1853	2019	2066
China (incl. Hong Kong, China)	789	1372	2109	2223	3284	3538	4095	4765	5399	5954	6512	6651	7072	7749	8511	8666	9042	9084	9085
Brazil	87	156	184	191	299	298	292	310	310	314	330	348	324	371	390	422	451	475	451
United States	4288	4533	4802	4765	5605	5536	5609	5688	5702	5602	5686	5512	5120	5347	5211	5031	5103	5168	4998
Europe	*3043*	*3158*	*3113*	*3163*	*3224*	*3215*	*3290*	*3295*	*3274*	*3266*	*3205*	*3140*	*2907*	*2992*	*2838*	*2832*	*2773*	*2606*	*2641*
Annex I Parties	..	..	*13723*	*13592*	*13560*	*13524*	*13808*	*13867*	*13876*	*13853*	*13989*	*13642*	*12709*	*13223*	*13098*	*12889*	*12841*	*12632*	*12407*
Non-Annex I Parties	..	..	..	*6391*	*9101*	*9504*	*10258*	*11296*	*12174*	*13003*	*13914*	*14420*	*14971*	*16091*	*17095*	*17607*	*18180*	*18561*	*18701*

Source:
IEA *CO_2 Emissions from Fuel Combustion*, OECD/IEA, Paris, 2017.
Annex I Parties -
Australia, Austria, Belarus, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, United States of America
Non-annex I Parties - All the remaining countries are referred to as Non- annex I Parties

Statement 3.02: Greenhouse gas emission by source and removal by sinks from India

(For year 2010) (values in Gigagrams)

	CO_2 emission	CO_2 removal	CH_4	N_2O	HFC-134a	HFC 23	CF_4	$C2F_6$	SF_6	CO_2 equivalent
TOTAL without LULUCF	**1574362.14**	**0.00**	**19623.15**	**368.92**	**0.00**	**1.43**	**2.13**	**0.58**	**0.0042**	**2136841.24**
TOTAL with LULUCF	**1632623.84**	**314586.77**	**19776.18**	**370.79**	**0.00**	**1.43**	**2.13**	**0.58**	**0.0042**	**1884309.46**
1. ENERGY	**1441882.67**	**0.00**	**2534.30**	**48.44**	**0.00**	**0.00**	**0.00**	**0.00**	**0.0000**	**1510120.76**
A. Fuel Combustion Activities	1441882.67	0.00	204.36	48.44	0.00	0.00	0.00	0.00	0.0000	1461192.10
1. Energy Industries	876180.80	0.00	11.85	12.06	0.00	0.00	0.00	0.00	0.0000	880168.90
2. Manufacturing Industries and Construction	299151.88	0.00	5.28	4.37	0.00	0.00	0.00	0.00	0.0000	300618.29
3. Transport	184230.69	0.00	25.51	10.46	0.00	0.00	0.00	0.00	0.0000	188008.96
4. Other sectors	82319.31	0.00	161.72	21.55	0.00	0.00	0.00	0.00	0.0000	92395.96
B. Fugitive Emission from fuels	0.00	0.00	2329.94	0.00	0.00	0.00	0.00	0.00	0.0000	48928.66
1. Solid fuels	0.00	0.00	772.00	0.00	0.00	0.00	0.00	0.00	0.0000	16212.00
2. Oil and Natural gas	0.00	0.00	1557.94	0.00	0.00	0.00	0.00	0.00	0.0000	32716.66
2. Industrial Processes and Product Use	**132479.47**	**0.00**	**22.97**	**8.11**	**0.00**	**1.43**	**2.13**	**0.58**	**0.0042**	**171502.87**
A. Minerals	104545.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	104545.23

Contd.

Statement 3.02: Greenhouse gas emission by source and removal by sinks from India

(For year 2010) (values in Gigagrams)

	CO_2 emission	CO_2 removal	CH_4	N_2O	HFC-134a	HFC 23	CF_4	$C2F_6$	SF_6	CO_2 equivalent
B. Chemicals	19506.71	0.00	21.46	8.11	0.00	0.00	0.00	0.00	0.0000	22470.76
C. Metal Production	6824.27	0.00	1.52	0.00	0.00	0.00	2.13	0.58	0.0042	26171.33
D. Other Production	0.00	0.00	0.00	0.00	0.00	1.43	0.00	0.00	0.0000	16712.28
E. Non energy product use	1603.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	1603.27
3. AGRICULTURE	**0.00**	**0.00**	**14612.78**	**268.70**	**0.00**	**0.00**	**0.00**	**0.00**	**0.0000**	**390165.14**
4. LULUCF	**58261.70**	**314586.77**	**153.02**	**1.87**	**0.00**	**0.00**	**0.00**	**0.00**	**0.0000**	**-252531.78**
5. WASTE	**0.00**	**0.00**	**2453.10**	**43.67**	**0.00**	**0.00**	**0.00**	**0.00**	**0.0000**	**65052.47**
Memo Item (not accounted in total Emissions)	**589760.13**	**0.00**	**0.05**	**0.10**	**0.00**	**0.00**	**0.00**	**0.00**	**0.0000**	**589793.42**

Source: India First Biennial Update Report to the United Nations Framework Convention on Climate Change -2015.
Note: LULUCF: Land Use, Land Use Change & Forestry

Statement 3.03: Production of Ozone Depleting Substances in India

(MT: Metric tons)

Sl. No.	ODS	2000	2005	2010	2011	2012	2013	*2014*	*2015*
1	CFC-11 Trichlorofluoromethane (CFCl3)	5634.0	1543.4	83.5 *	0.0	0.0	*0.0*	*0.0*	*0.0*
2	CFC – 12 Dichlorodifluoromethane (CF2Cl2)	*14770.0*	9702.2	234.8 *	0.0	0.0	*0.0*	*0.0*	*0.0*
3	CFC – 113 Trichlorotrifluoroethane (C2F3Cl3)	5.0	18.0	*0.0*	*0.0*	0.0	*0.0*	*0.0*	*0.0*
4	Halon –1211 Bromochlorodifluoromethane (CF2BrCl)	_	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
5	Halon –1301 Bromotrifluoromethane (CF3Br)	_	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
6	*Halon –2402 Dibromotetrafluoroethanes (C2F4Br2)*	_	_	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
7	CTC Carbon tetrachloride *(CCl4)*	17509.0	17433.3	15222.8	17741.0	15412.0	17663.8	*19621.3*	*19324.79*
8	MCh Methyl chlorofrom *(C2H3Cl3)*	_	*0.0*	_	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
9	HCFC – 22 *Chlorodifluoromethane (CHF2Cl)*	14061.0	24789.2	47613.3	48476.6	*48177.8*	40650.6	*54937.9*	*53313.73*
10	MBr Methyl Bromide (*CH3Br)*	107.0	*15.00 ** *	*425.598 ** *	*460.330 ** *	*543.918 ** *	*848.071 ** *	*1248.342 ** *	*1332.632 ** *
	Total	***52093.00***	**53501.10**	**63580.00**	**66677.93**	***64133.72***	**59162.47**	***75807.54***	***73971.15***

Source: Website of the Ozone Cell, Ministry of Environment, *Forest and Climate Change*
ODS: Ozone Depleting Substance
CFC: Chloro-Fluoro- Carbon
HCFC: Hydro Chloro Fluoro Carbon
* For Essential Use Nominatins (EUN)
** The quantities for pre-shipment & quarantine application

Statement 3.04: Consumption of ozone depleting substances in India

(MT: Metric tons)

Sl. No.	ODS	2000	2005	2010	2011	2012	2013	*2014*	*2015*
1	CFC-11 Trichlorofluoromethane (CFCl3)	3002.0	337.3	78.616*	0.0	0.0	0.0	*0.0*	*0.0*
2	CFC – 12 Dichlorodifluoromethane (CF2Cl2)	2612.0	1609.0	212.117 *	0.0	0.0	0.0	*0.0*	*0.0*
3	CFC – 113 Trichlorotrifluoroethane (C2F3Cl3)	_	14.3	*0.0*	0.0	0.0	0.0	*0.0*	*0.0*
4	*Halon –1211 Bromochlorodifluoromethane (CF2BrCl)*	*52.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
5	*Halon –1301 Bromotrifluoromethane (CF3Br)*	*40.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
6	*Halon –2402 Dibromotetrafluoroethanes (C2F4Br2)*	_	_	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
7	CTC Carbon tetrachloride *(CCl4)*	11043.0	1494.5	*0.0*	0.0	0.0	0.0	*0.0*	*0.0*
8	*MCh Methyl chlorofrom (C2H3Cl3)*	*1274.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
9	*HCFC – 22 Chlorodifluoromethane (CHF2Cl)*	3583.0	8854.3	12503.0	10266.39	*15646.511*	8029.435	*8050.091*	*11777.72*
10	*HCFC-123 Dichlorotrifluoroethanes (CHCl2CF3)*	20.0	15.3	115.085	0.0	136.0	196.952	*180.817*	*174.87*
11	*HCFC-124 Chlorotetrafluoroethane(CHFClCF3)*	_	_	*603.2*	*288.7*	*69.2*	*0.0*	*0.0*	*0.0*
12	*HCFC-141b Dichlorofluoroethanes (CH3CFCl2)*	483.0	2155.9	7836.8	7924.0	6400.0	4568.216	*4112.563*	*3028.00*
13	*HCFC-142b Chlorodifluoroethanes (CH3CF2Cl)*	_	_	*805.0*	*645.0*	*1308.4*	*428.9*	*120.319*	*126.00*
14	MBr Methyl Bromide (*CH3Br)*	*107.0*	*316.150* **	*703.978***	*864.566***	*1054.132***	*1175.785***	*968.512***	*329.542* **
	Total	***22216.00***	***14796.75***	***22857.78***	***19988.66***	***24614.24***	***14399.29***	***13432.30***	***15436.13***

Source: Website of the Ozone Cell, Ministry of Environment, *Forest and Climate Change*
ODS: Ozone Depleting Substance
CFC: Chloro-Fluoro- Carbon
HCFC: Hydro Chloro Fluoro Carbon
* For Essential Use Nominatins (EUN)
** The quantities for pre-shipment & quarantine application

Statement 3.05 : Waste water generation, collection, treatment in Metro Cities

Sl. No.	Name of Metro City	Total Population	Municipal Population	Volume of Waste Water Generated (mld)			Waste Water Collected		Capacity (mld)	Treatment		Mode of Disposal
				Domestic	Industrial	Total	Volume (mld)	%		Primary	Secondary	
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Ahmedabad	3312216	2876710	520.0	36.0	556.0	445.0	80.0	430.0	Y	Y	Sabarmati river
2	Bengaluru	4130288	4130288	375.0	25.0	400.0	300.0	75.0	290.0	Y	Y	V. Valley,Ksc Valley
3	Bhopal	1062771	1062771	189.3	--	189.3	94.6	50.0	87.0	Y	Y	Agriculture
4	Mumbai	12596243	12288519	2228.1	227.9	2456.0	2210.0	90.0	109.0	Y	Y	Sea
5	Kolkata	11021918	9643211	1383.8	48.4	1432.2	1074.9	75.1	--	--	--	Hughly river/ Fish Farm
6	Coimbatore	1100746	816321	60.0	--	60.0	45.0	75.0	--	--	--	Nayal river, Irrigation
7	Delhi	8419084	8419084	1270.0	--	1270.0	1016.0	80.0	981.0	Y	Y	Agriculture, Yamuna River
8	Hyderabad	4344437	4098734	348.3	25.0	373.3	299.0	80.1	115.0	Y	--	River, Irrigation
9	Indore	1109056	1091674	145.0	--	145.0	116.0	80.0	14.0	Y	--	Khan River, Irrigation
10	Jaipur	1518235	1458483	220.0	--	220.0	165.0	75.0	27.0	Y	Y	Agriculture
11	Kanpur	2029889	1874409	200.0	--	200.0	150.0	75.0	41.0	Y	Y	Ganga, Sewage Farm
12	Kochi	1140605	670009	75.0	--	75.0	45.0	60.0	--	--	--	Cochin Back waters
13	Lucknow	1669204	1619115	106.0	--	106.0	80.0	75.5	--	--	--	Gomati River
14	Ludhiana	1042740	1042740	94.4	--	94.4	47.0	49.8	--	--	--	Agriculture

Contd.

Statement 3.05 : Waste water generation, collection, treatment in Metro Cities

Sl. No.	Name of Metro City	Total Population	Municipal Population	Volume of Waste Water Generated (mld)			Waste Water Collected		Capacity (mld)	Treatment		Mode of Disposal
				Domestic	Industrial	Total	Volume (mld)	%		Primary	Secondary	
1	2	3	4	5	6	7	8	9	10	11	12	13
15	Chennai	5421985	4752974	276.0	--	276.0	257.0	93.1	257.0	Y	Y	Agriculture, Sea
16	Madurai	1085914	940989	48.0	--	48.0	33.6	70.0	--	--	--	Agriculture
17	Nagpur	1664006	1624752	204.8	--	204.8	163.0	79.6	45.0	Y	Y	Agriculture
18	Patna	1099647	917243	219.0	--	219.0	164.0	74.9	105.0	Y	N	River, Fisheries
19	Pune	2493987	2244196	432.0	--	432.0	367.0	85.0	170.0	Y	Y	River
20	Surat	1518950	1498817	140.0	--	140.0	112.0	80.0	70.0	Y	-	Garden/Creek
21	Vadodara	1126824	1031346	120.0	20.0	140.0	105.0	75.0	81.0	Y	Y	river, Agriculture
22	Varanasi	1030863	1030863	170.0	--	170.0	127.0	74.7	101.0	Y	Y	Ganga, Agriculture
23	Vishakhapatnam	1057118	752037	68.0	--	68.0	55.0	80.9	--	--	--	--
Total		**70996726**	**65885285**	**8892.7**	**382.3**	**9275.0**	**7471.1**	**80.6**	**2923.0**			

Source : Central Pollution Control Board

Y = Yes N = No

Note : Data Collected During 1995-96

mld - Million Litre per day

Statement 3.06 : Sewage generation and treatment capacity in most populated cities

State	Population Class-I Cities	Sewage Generation (in MLD)	Sewage Treatment Capacity (in MLD)
Delhi	20086422	4399	2693.7
Kolkata (M.Corp)	15802272	3461	328.2
Greater Mumbai (M.Corp)	12657766	2772	2600.9
Bengluru (M. Corp)	9965309	2182	721
Ahmedabad (M. Corp)	7303277	1599	1283
Chennai (M.Corp)	5155687	1129	608
Greater Hyderabad (M.Corp)	3899838	854	657.3
Jaipur (M.Corp)	3393996	743	269
Lucknow(M.Corp)	3105918	680	325
Indore(M.Corp)	2055721	450	90
Total	**83426206**	**18269**	**9576.1**

Source: Central Pollution Control Board (as received on 22.08.2017)
MLD: Million litre per day

Statement 3.07: State-wise sewage generation of class-I cities and class-II towns

Sl. No.	State/Union Territory	No. of Cities*	Sewage Generation* (in MLD)	Sewage Treatment Capacity* (in MLD)	No of Class -II Towns	Sewage generation of Class-II Towns (in MLD)	Sewage Treatment capacity (in MLD)
1	Andaman & Nicobar	1	12.00	10.42	-	-	-
2	Andhra Pradesh	99	1978.19	654.00	52	217.59	10.42
3	Assam	13	386.60	-	8	6.46	-
4	Bihar	37	1117.12	137.50	14	107.42	2.00
5	Chandigarh	1	429.76	164.79	-	-	-
6	Chhattisgarh	14	391.29	69.00	7	40.82	-
7	Delhi	1	3800.00	2330.00	-	-	-
8	Goa	3	23.68	18.18	2	13.89	18.18
9	Gujarat	59	1908.47	782.50	31	227.55	-
10	Haryana	27	670.21	312.00	7	43.52	-
11	Himachal Pradesh	1	28.94	35.63	-	-	-
12	Jammu & Kashmir	6	241.79	-	4	27.86	-
13	Jharkhand	24	908.68	-	10	78.21	-
14	Karnataka	59	2023.77	55.62	26	233.37	12.18
15	Kerala	34	806.49	-	26	231.32	-
16	Madhya Pradesh	48	1379.62	195.10	23	130.90	9.00
17	Maharashtra	84	10200.02	4254.25	34	213.73	29.00
18	Manipur	1	26.74	-	-	-	-
19	Meghalaya	2	32.09	-	1	11.25	-
20	Mizoram	1	5.71	-	-	-	-
21	Nagaland	2	14.98	-	1	1.36	-
22	Odisha	24	739.15	53.00	12	78.42	-
23	Puducherry	3	64.44	-	1	7.98	-
24	Punjab	33	1685.66	453.80	14	157.40	42.80
25	Rajasthan	45	1530.16	54.00	21	147.79	-
26	Tamilnadu	84	1261.88	362.72	42	184.67	29.30
27	Tripura	1	24.00	-	-	-	-
28	Uttar Pradesh	107	3851.71	1252.74	46	345.70	12.61
29	Uttarakhand	7	186.04	24.33	1	9.07	6.33
30	West Bengal	87	2525.63	567.80	27	180.42	61.88
Total		**908**	**38254.824**	**11787.38**	**410**	**2696.70**	**233.70**

Source: Central Pollution Control Board.
MLD: Million litre per day
* Based on the report, CPCB reported that out of 38254 MLD of sewage generated by class I cities and class II towns of the country, only 11787 MLD has been treated. CPCB reassessed sewage generation and treatment capacity for Urban Population of India for the year 2015.

Statement 3.08 : Status of grossly polluting industries discharging their effluents into rivers and lakes

Sl. No.	Name of the State/UT	2010				2011			
		Total	Com-plying	Closed	De-fault-ing	Total	Com-plying	Not Com-plying*	Closed
1	2	3	4	5	6	7	8	9	10
1	Andhra Pradesh	17	11	6	0	17	11	0	6
2	Assam	9	9	0	0	9	4	5	0
3	Bihar	22	16	6	0	22	16	0	6
4	Chattisgarh	1	1	0	0	1	1	0	0
5	Daman Diu & Dadar Nagar Haveli	2	2	0	0	2	2	0	0
6	Goa	-	-	-	-	2	2	0	0
7	Gujarat	17	12	4	1	3	2	1	0
8	Haryana	76	71	1	4	142	112	17	13
9	Himachal Pradesh	-	-	-	-	2	2	0	0
10	Jharkhand	38	38	0	0	5	2	3	0
11	Karnataka	10	8	1	1	10	8	1	1
12	Kerala	36	18	7	11	29	20	2	7
13	Madhya Pradesh	1	0	0	1	1	1	0	0
14	Maharashtra	214	139	2	73	214	139	73	2
15	Odisha	20	6	5	9	19	6	8	5
16	Puducherry	1	0	0	1	1	1	0	0
17	Punjab	20	9	4	7	20	14	2	4
18	Tamil Nadu	366	248	118	0	1	1	0	0
19	Tripura	-	-	-	-	12	7	3	2
20	Uttar Pradesh	432	294	89	49	569	391	62	116
21	Uttarakhand	45	25	4	16	49	29	16	4
22	West Bengal	31	19	3	9	32	21	7	4
	Total	**1358**	**926**	**250**	**182**	**1162**	**792**	**200**	**170**

Source : Central Pollution Control Board

* : Not complying : industries with effluent treatment installed but found not complying with few parameter of prescribed standard at the time of monitoring.

Note : Up-dated information in respect of Maharashtra, Andhra Pradesh, Chhattisgarh and Daman are awaited. The status of these states is based on previous available data.

Statement 3.09: State- wise municipal solid waste generation in India

S.No	State	Quantity Generated (TPD)	Collected (TPD)	Treated (TPD)	Landfilled (TPD)	Nos. of compost plant	Nos. of landfill
1	Andaman & Nicobar	70	70	5	0	1	0
2	Andhra Pradesh	6440	6331	500	143	18	2
3	Arunachal Pradesh	13	11	0	0	0	1
4	Assam	650	350	0	0	0	0
5	Bihar	1670	0	0	0	0	0
6	Chandigarh	370	360	250	230	0	1
7	Chhattisgarh	1896	1704	168	-	3	0
8	Daman Diu & Dadra	85	85	0	0	0	0
9	Delhi	8370	8300	3240	5060	2	4
10	Goa	450	400	182	-	8	7
11	Gujarat	10480	10480	2565	7730	93	11
12	Haryana	3103	3103	188	-	10	3
13	Himachal Pradesh	276	207	125	150	9	0
14	Jammu & Kashmir	1792	1322	320	375	3	1
15	Jharkhand	3570	3570	65	0	1	3
16	Karnataka	8697	7288	3000	-	155	13
17	Kerala	1339	655	390	0	33	0
18	Lakshadweep	21	-	-	-	0	0
19	Madhya Pradesh	6678	4351	-	-	10	5
20	Maharashtra	21,867	21,867	6993	14894	74	8
21	Manipur	176	125	-	-	1	1
22	Meghalaya	208	175	55	122	2	1
23	Mizoram	552	276	0	0	0	0
24	Nagaland	344	193	-	-	1	1
25	Odisha	2575	2284	30	-	1	0
26	Puducherry	495	485	0	0	0	0
27	Punjab	4456	4435	3.72	3214	3	8
28	Rajasthan	5037	2491	490		-	1
29	Sikkim	49	49	0.3	0	1	1
30	Tamil Nadu	14500	14234	1607	-	182	3
31	Tripura	415	368	250.4	164	2	1
32	Telengana	6628	6225	3175	3050	3	1
33	Uttar Pradesh	19180	19180	5197	-	-	16
34	Uttrakhand	918	918	0	0	0	0
35	West Bengal	9500	8075	851	515	23	15
	TOTAL	**142870**	**129967**	**29650.42**	**35647**	**639**	**108**
			(91%)	(23% of collected)	(27% of collected)		

Source: Central Pollution Control Board (as received on 22.08.2017)
TPD : Tonnes per day

Statement 3.10 : Municipal solid waste generation in metro cities / state capitals

S. No.	Name of City	Population (Census-2011)	Waste Generation (TPD)			
			1999-2000	2004-2005	2010-11	2015-16
1	Mumbai	12442373	5355	5320	6500	11000
2	Delhi	11034555	400	5922	6800	8700
3	Bangalore	8443675	200	1669	3700	3700
4	Chennai	7088000	3124	3036	4500	5000
5	Hyderabad	6731790	1566	2187	4200	4000
6	Ahmedabad	5577940	1683	1302	2300	2500
7	Kolkata	4496694	3692	2653	3670	4000
8	Surat	4467797	900	1000	1200	1680
9	Pune	3124458	700	1175	1300	1600
10	Jaipur	3046163	580	904	310	1000
11	Lucknow	2817105	1010	475	1200	1200
12	Kanpur	2765348	1200	1100	1600	1500
13	Nagpur	2405665	443	504	650	1000
14	Vishakhapatnam	2035922	300	584	334	350
15	Indore	1960631	350	557	720	850
16	Thane	1818872	-	-	-	700
17	Bhopal	1798218	546	574	350	700
18	Pimpro-chinchwad	1729359	-	-	-	700
19	Patna	1683200	330	511	220	450
20	Vadodara	1666703	400	357	600	700
21	Ghaziabad	1636068	-	-	-	-
22	Ludhiana	1613878	400	735	850	850
23	Coimbatore	1601438	350	530	700	850
24	Agra	1585704	-	654	520	790
25	Madurai	1561129	370	275	450	450
26	Nashik	1486973	-	200	350	500
27	Vijayawada	1476931	-	374	600	550
28	Faridabad	1404653	-	448	700	400
29	Meerut	1309023	-	490	520	500
30	Rajkot	1286995	-	207	230	450
31	Kalian-dombivali	1246381	-	-	510	650
32	Vasai-virar	1221233	-	-	-	600
33	Varanasi	1201815	412	425	450	500
34	Srinagar	1192792	-	428	550	550
35	Aurangabad	1171330	-	-	-	-
36	Dhanbad	1161561	-	77	150	180
37	Amritsar	1132761	-	438	550	600
38	Navi Mumbai	1119477	-	-	-	675
39	Allahabad	1117094	-	509	350	450
40	Ranchi	1073440	-	208	140	150
41	Howrah	1072161	-	-	-	740
42	Jabalpur	1054336	-	216	400	550
43	Gwalior	1053505	-	-	285	300
44	Jodhpur	1033918	-	-	-	-
45	Raipur	1010087	-	184	224	230
46	Kota	1001694	-	-	-	-

Source: Central Pollution Control Board

Statement 3.11 : State-wise status of hazardous waste generation

Sl. NO.	STATE/UT	Year	No. Of unit generating HW	Quantity of Hazardous Waste Generation (MTA)			
				Landfill able	Incinerable	Recyclable	Total
1	Andhra Pradesh	2015-16	2088	162023	21610	147476	331109
2	Arunachal Pradesh	Information not provided by SCPCB					
3	Assam	2015-16	50	5039	326	16697	22062
4	Bihar	2015-16	95	55	108	6668	6831
5	Chandigarh	2015-16	575	99	24	3454	3577
6	Chattisgarh	2015-16	215	8041	10044	24113	42198
7	Dadra & Nagar Haveli	2007-08	1937	17219	421	56350	73990
8	Delhi	2007-08	1995	3338	1740	203	5281
9	Goa	2012-13	1093	5514	28566	2474	36554
10	Gujarat	2015-16	22418	974296	157099	566575	1697970
11	Haryana	2009-10	1646	14862	6745	7952	29559
12	Himachal Pradesh	2015-16	2521	19315	-	9393	28708
13	Jammu & Kashmir	2015-16	368	7032	163	8037	15232
14	Jharkhand	2015-16	573	382836	1262	9462	393560
15	Karnataka	2015-16	3832	67110	61338	118766	247214
16	Kerala	2008-09	442	46295	184	16750	63229
17	Madhya Pradesh	2015-16	1792	167584	10350	109031	286965
18	Maharashtra	2014-15	5862	588839	313973	740826	1643638
19	Manipur	2015-16	0	0	0	0	0
20	Meghalaya	2015-16	11	309	0	42	351
21	Mizoram	2009-10	211	31	0	186	217
22	Nagaland	2015-16	2	61	0	11	72
23	Odisha	2014-15	674	33895	2804	166167	202866
24	Puducherry	2015-16	112	136	27	39325	39488
25	Punjab	2015-16	3012	37210	6185	51007	94402
26	Rajasthan	2015-16	1090	598916	57484	217202	873602
27	Sikkim	2015-16	18	-	7253	-	7253
28	Tamil Nadu	2015-16	3513	66295	38401	256851	361547
29	Telangana	2015-16	1887	151967	120705	21020	293692
30	Tripura	2015-16	142	4	25	239	268
31	Uttar Pradesh	2015-16	2290	92725	15479	125792	233996
32	Uttarakhand	2011-12	984	5278	4824	45525	55627
33	West Bengal	2015-16	958	53189	6265	83747	143201
	Total		**62406**	**3509513**	**873405**	**2851341**	**7234259**

Source: Central Pollution Control Board

Extreme Events and Disasters

- ★ Frequency and intensity of natural extreme events
- ★ Impact on human lives and habitats

Statement 4.01 : Number of Heat Waves in India

State / UT	1970-79	1980-89	1990-99	2000-09	2010	2011	2012	2013	2014	2015	2016	Total
Andhra Pradesh	8	5	12	6	-	-	5	1	1	23	-	61
Assam	-	0	0	5	-	-		1	-	-	-	6
Bihar	10	11	9	5	1	-	2	-	-	-	-	38
Chandigarh	0	3	1	7	-	-	-	-	-	-	-	11
Chhattisgarh	1	0	1	0	-	-	2	-	3	-	5	12
Delhi	1	0	4	0	-	-	-	-	-	-	-	5
Gujarat	1	2	4	3	1	-	-	1	1	1	2	16
Haryana	1	3	5	13	-	-	-	-	-	-	-	22
Himachal Pradesh	-	1	0	2	-	-	-	-	-	-	-	3
Jharkhand	-	0	0	5	5	-	9	2	-	-	-	21
Karnataka	1	1	0	2	-	-	-	-	-	-	2	6
Kerala	-	0	0	1	-	1	-	-	1	-	10	13
Madhya Pradesh	1	4	7	10	1	-	-	1	-	1	2	27
Maharashtra	3	12	14	37	5	2	3	2	4	-	5	87
Mizoram	-	0	0	0	1	-	-	-	-	-	-	1
Odisha	2	5	7	31	2	1	3	1	10	3	2	67
Puducherry	-	0	0	0	-	-	-	-	-	-	1	1
Punjab	1	8	4	31	-	-	1	-	-	-	-	45
Rajasthan	5	5	32	29	3	-	-	2	3	2	-	81
Tamil Nadu	-	1	2	4	-	-	-	-	-	-	2	9
Telangana	1	0	5	0	-	-	-	1	1	-	-	8
Uttar Pradesh	6	13	4	15	1	-	4	-	-	-	-	43
Uttarakhand	-	0	0	1	-	-	-	-	-	-	-	1
West Bengal	2	8	20	19	1	-	8	2	6	5	6	77
Grand Total	**44**	**82**	**131**	**226**	**21**	**4**	**37**	**14**	**30**	**35**	**37**	**661**

Source: India Meteorological Department, Ministry of Earth Sciences

Statement 4.02 Number of Cold Waves in India

S. No.	State/UT	1970-79	1980-89	1990-99	2000-09	2010	2011	2012	2013	2014	2015	2016	Total
1	Andhra Pradesh	-	-	-	-	-	-	1	-	-	-	-	1
2	Bihar	14	22	29	17	6	3	2	1	-	-	1	95
3	Chandigarh	-	2	-	7	3	-	-	-	-	-	-	12
4	Chhattisgarh	1	-	-	-	-	1	-	-	-	-	1	3
5	Delhi	-	1	-	4	-	-	-	-	2	-	1	8
6	Gujarat	7	3	1	-	1	-	-	-	-	-	-	12
7	Haryana	-	4	6	19	4	-	-	1	2	-	-	36
8	Himachal Pradesh	3	4	3	8	-	-	-	-	-	2	-	20
9	Jammu and Kashmir	5	10	2	2	2	2	-	-	-	-	-	23
10	Jharkhand	-	-	-	3	4	5	4	2	-	-	1	19
11	Madhya Pradesh	5	4	1	1	-	1	1	3	2	1	1	20
12	Maharashtra	3	4	3	2	-	1	-	1	1	-	-	15
13	Northwest India	-	-	1	-	-	-	-	-	-	-	-	1
14	Odisha	-	-	1	3	-	1	-	-	-	-	-	5
15	Punjab	1	24	3	19	5	-	-	1	1	-	-	54
16	Rajasthan	7	2	37	31	1	2	1	1	5	1	-	88
17	Uttar Pradesh	14	24	13	28	6	6	3	1	6	2	2	105
18	Uttarakhand	-	-	1	1	-	-	-	-	-	-	-	2
19	West Bengal	2	2	23	8	1	2	1	1	-	-	1	41
Grand Total		**63**	**106**	**124**	**153**	**33**	**24**	**13**	**12**	**19**	**6**	**8**	**561**

Source: India Meteorological Department, Ministry of Earth Sciences

Statement 4.03 : Number of cyclonic storms formed over the North Indian Ocean

Year	Jan	Feb	March	April	May	June	July	Jul	Aug	Sept	Oct	Nov	Dec	Total
1967-80	0	0	0	0	4	1	1	1	2	5	6	13	2	35
1981-90	0	0	0	0	3	1	0	1	1	5	9	3	2	25
1991-2000	0	0	0	0	1	5	0	0	0	0	5	11	1	23
2001	0	0	0	0	0	0	0	0	0	0	1	0	0	1
2002	0	0	0	0	0	0	0	0	0	0	0	2	0	2
2003	0	0	0	0	0	0	0	0	0	0	0	0	1	1
2004	0	0	0	0	1	0	0	0	0	0	0	0	0	1
2005	0	0	0	0	0	0	0	0	0	1	0	0	2	3
2006	1	0	0	0	0	0	0	0	0	0	0	0	0	1
2007	0	0	0	0	0	0	0	0	0	0	0	1	0	1
2008	0	0	0	0	0	0	0	0	0	0	2	2	0	4
2009	0	0	0	0	1	0	0	0	0	0	0	1	0	2
2010	0	0	0	0	1	0	0	0	0	0	0	1	0	2
2011	0	0	0	0	0	0	0	0	0	0	0	0	1	1
2012	0	0	0	0	0	0	0	0	0	0	2	0	0	2
2013	0	0	0	0	0	0	0	0	0	0	2	1	0	3
2014	0	0	0	0	0	0	0	0	0	0	1	0	0	1
2015	0	0	0	0	0	0	0	3	0	0	0	0	0	3
2016	0	0	0	0	1	0	0	0	0	0	0	0	1	2
Grand Total	**1**	**0**	**0**	**0**	**12**	**7**	**1**	**5**	**3**	**11**	**28**	**35**	**10**	**113**

Source: India Meteorological Department, Ministry of Earth Sciences

Statement 4.04: Major natural disasters in India

Sl. No.	Year	Type	Affected Population Location/Area
1	1990	Cyclone	Andhra Pradesh
2	1993	Earthquake	Latur, Marathwada region of Maharashtra
3	1996	Cyclone	Andhra Pradesh
4	1999	Cyclone	Odisha
5	2001	Earthquake	Rapar, Bhuj, Bhachau, Anjar, Ahmedabad and Surat in Gujarat State
6	2004	Tsunami	Coastline of Tamil Nadu, Kerala, Andhra Pradesh, Puducherry and Andaman and Nicobar Islands of India
7	2005	Kashmir	Mostly Pakistan, Partially Kashmir
8	2005	Floods	Maharashtra State
9	2008	Cyclone Nisha	Tamil Nadu
10	2008	Kosi Floods	North Bihar
11	2009	Floods	Andhra Pradesh, Karnataka
12	2009	Drought	252 Districts in 10 States
13	2010	Cloudburst	Leh, Ladakh in Jammu & Kashmir
14	2011	Earthquake	North Eastern India with epicenter near Nepal Border and Sikkim
15	2011	Floods	19 Districts of Odisha
16	2011	Earthquake	Sikkim, West Bengal, Bihar
17	2011	Cyclone Thane	Tamil Nadu, Puducherry
18	2012	Floods	Assam
19	2012	Floods	Uttarkashi, Rudraprayag and Bageshwar Districts of Uttarakhand
20	2012	Cyclone Nilam	Tamil Nadu
21	2013	Cyclone Mahasen	Tamil Nadu
22	2013	Floods/Landslides	Uttarakhand and Himachal Pradesh
23	2013	Cyclone Phailin	Odisha and Andhra Pradesh
24	2013	Floods	Andhra Pradesh
25	2013	Floods	Odisha
26	2014	Cyclone Hud Hud	Andhra Pradesh & Odisha
27	2014	Floods	Jammu & Kashmir
28	2015	Cyclonic Storms	West Bengal
29	2015	Floods and Heavy Rains	Tamil Nadu
30	2015	Floods and Heavy Rains	Rajasthan
31	2015	Floods and Heavy Rains	Andhra Pradesh
32	2015	Floods and Heavy Rains	Gujarat
33	2016	Cyclonic Storms	Tamil Nadu

Source: India Meteorological Department, Ministry of Earth Sciences

Statement 4.05 : Major earthquakes in India

Sl. No.	Date	Lattitude (Degree N)	Longitude (Degree E)	Magnitude	Region
1	16.06.1819	24.00	70.00	8.0	Kutch
2	12.06.1897	25.00	92.00	8.7	Assam
3	04.04.1905	32.30	76.25	8.0	Kangra
4	15.01.1934	26.60	86.80	8.3	India-Nepal Border
6	26.06.1941	12.40	92.50	8.1	Andaman Islands
7	15.08.1950	28.46	96.66	8.5	Assam
8	06.08.1988	25.14	95.12	5.8	Burma-India Border
9	20.08.1988	26.78	86.61	6.5	Nepal-India Border
10	19.10.1991	30.75	78.86	6.6	West UP Hills(Uttarkashi)
11	30.09.1993	18.07	76.00	6.3	Latur, Osmanabad
12	22.05.1997	23.08	80.06	6.0	Jabalpur
13	29.03.1999	30.41	79.42	6.8	Uttar Pradesh
14	26.01.2001	23.40	70.28	7.9	Gujarat
15	08.10.2005	34.6	37	7.6	Pakistan & Kashmir
16	10.08.2009	14.1	92.8	7.7	Andaman Islands
17	18.09.2011	27.72	88.06	6.9	Gangtok,Sikkim
18	05.03.2012	28.60	77.40	5.2	New Delhi
19	25.04.2012	9.90	94.00	6.2	Andaman & Nicobar Islands
20	21.03.2014	7.60	94.40	6.7	Andaman & Nicobar Islands
21	25.04.2015	28.14	84.70	7.8	Northern India,N-E India
22	25.04.2015	28.19	84.86	6.6	Northern India
23	26.04.2015	27.79	85.97	6.7	Northern India,N-E India
24	12.05.2015	27.79	85.97	6.7	Northern India,N-E India
25	28.06.2015	26.50	90.10	5.6	Dibrugarh,Assam
26	26.10.2015	36.14	71.50	7.7	Northern India,Pakistan,Afghanistan
27	03.01.2016	24.80	93.60	6.7	N-E India

Source: India Meteorological Department, Ministry of Earth Sciences

Statement 4.06 : Deaths due to Heat waves and Cold waves in India

Year	Heat Wave	Cold Wave
1970-74	2029	785
1975-79	459	235
1980-84	450	1083
1985-89	1055	1105
1990-94	632	522
1995-99	2284	585
2000	55	368
2001	56	490
2002	807	107
2003	1539	1156
2004	117	462
2005	585	90
2006	135	58
2007	419	63
2008	111	114
2009	216	79
2010	242	450
2011	12	722
2012	729	139
2013	1433	271
2014	547	58
2015	2081	18
2016	137	42

Source: India Meteorological Department, Ministry of Earth Sciences

Statement 4.07 : Year-wise damage due to natural extreme events in India

Year	Live Lost human (in No)	Cattle Lost (in No)	Houses damaged (in No)	Cropped areas affected (in Lakh hectares)
2001-02	834	21269	346878	18.72
2002-03	898	3729	462700	21.00
2003-04	1992	25393	682209	31.98
2004-05	1995	12389	1603300	32.53
2005-06	2698	110997	2120012	35.52
2006-07	2402	455619	1934680	70.87
2007-08	3764	119218	3527041	85.13
2008-09	3405	53833	1646905	35.56
2009-10	1677	128452	1359726	47.13
2010-11	2310	48778	1338619	46.25
2011-12	1600	9126	876168	18.87
2012-13	946	24293	667319	14.44
2013-14	5677*	102998	1210227	63.75
2014-15	1674	92180	725390	26.85
2015-16	1460	59057	1313371	31.09
2016-17 (P)	1487	41965	546518	25.49

Source: Annual Reports 2015-16 & 2016-17, Ministry of Home Affairs

**: - This include persons missing in the natural disaster.*

(P) Provisional as on 31.12.2016

Statement 4.08 : State-wise damage due to natural extreme events

S. No.	State/UT	2015 -16				2016 -17(P)			
		No. of Human lives lost	No. of Cattle heads lost	No. of Houses damaged	Cropped area affected (lakh hectares)	No. of Human lives lost	No. of Cattle heads lost	No. of Houses damaged	Cropped area affected (lakh hectares)
1	Andhra Pradesh	81	3,509	29,941	2.19	19	-	3,351	0.46
2	Arunachal Pradesh	20	1,237	550	0.14	41	15,671	354	0.02
3	Assam	64	2,488	51,434	3.290	44	3,191	66,887	2.35
4	Bihar	158	51	130,576	8.08	243	5,383	129,922	3.72
5	Chhattisgarh	-	-	-	-	9	15	694	2.98
6	Goa	-	-	-	-	-	-	119	-
7	Gujarat	156	19,388	62,006	2.59	85	252	128	-
8	Haryana	-	-	-	-	3	-	8	-
9	Himachal Pradesh	133	686	3,264	0.43	40	136	2,283	0.20
10	Jammu & Kashmir	21	97	1,989	-	3	-	-	-
11	Jharkhand	-	-	-	-	8	-	1,483	-
12	Karnataka	-	-	-	-	48	183	23,654	3.78
13	Kerala	67	4	6,431	-	48	56	5,770	0.017
14	Madhya Pradesh					184	400	80,000	-
15	Maharashtra	2	-	-	-	145	1,035	8,164	0.15
16	Manipur	16	-	4,679	0.39	-	-	49,436	0.018
17	Meghalaya	5	-	4	-	4	-	-	-
18	Nagaland	5	-	180	0.04	-	1,200	3,537	-
19	Odisha	5	-	839	-	3	-	-	-
20	Punjab	11	14	126	-	12	-	98	0.005
21	Rajasthan	40	-	17	-	82	635	15,010	-
22	Sikkim	1	1	2,012	-	13	2,090	361	0.018
23	Tamil Nadu	406	7,351	172,978	0.92	6	-	-	-
24	Telangana	-	-	-	-	46	6,535	19,435	1.23
25	Tripura	1	-	11,179	-	5	1	937	-
26	Uttar Pradesh	40	15	14	-	82	287	46,793	5.97
27	Uttarakhand	31	177	410	-	114	1,575	3,324	0.10
28	West Bengal	193	23,120	822,978	13.02	200	3,320	84,765	4.48
29	Puducherry	4	919	1,764	-	-	-	5	-
	Total	**1,460**	**59,057**	**1,313,371**	**31.09**	**1,487**	**41,965**	**546,518**	**25.49**

Source: Annual Report -2015-16 & 2016-17, Ministry of Home Affairs
(P): Provisional

Statement 4.09: Number of deaths by type of natural extreme event

Sl. No	Causes	2010		2011		2012		2013		2014		2015	
		Number of Deaths	% to total deaths	Number of Deaths	% to total deaths	Number of Deaths	% to total deaths	Number of Deaths	% to total deaths	Number of Deaths	% to total deaths	Number of Deaths	% to total deaths
1	Avalanche	45	0.18	60	0.25	40	0.17	52	0.2	23	0.1	38	0.4
2	Exposure to Cold	937	3.74	849	3.58	997	4.34	946	4.2	913	4.5	1149	10.9
3	Cyclone/tornado/Tsunami	106	0.42	117	0.49	47	0.20	52	0.2	104	0.5	28	0.3
4	Starvation/Thirst	210	0.84	136	0.57	217	0.95	109	0.5	50	0.2	30	0.3
5	Earthquake	8	0.03	69	0.29	3	0.01	9	0.0	2	0.0	92	0.9
6	Epidemic	57	0.23	127	0.54	80	0.35	57	0.3	48	0.2	218	2.1
7	Flood	965	3.85	585	2.47	420	1.83	700	3.1	541	2.7	846	8.0
8	Heat Stroke	1274	5.08	793	3.35	1247	5.43	1216	5.3	1248	6.2	1908	18.2
9	Landslide	347	1.38	302	1.27	282	1.23	264	1.2	499	2.5	232	2.2
10	Lightening	2622	10.46	2550	10.76	2263	9.86	2833	12.4	2582	12.8	2641	25.1
11	Torrential Rains	123	0.49	170	0.72	203	0.88	142	0.6	156	0.8	195	1.9
12	Forest Fire	0	0.00	0	0.00	0	0.00	0	0.0	11	0.1	19	0.2
13	Other Natural Causes	18372	73.29	17932	75.69	17161	74.74	16379	72.0	14024	69.4	3114	29.6
	Total	**25066**	**100.0**	**23690**	**100.0**	**22960**	**100.0**	**22759**	**100.0**	**20201**	**100.0**	**10510**	**100.0**

Source :Annual Report, NCRB

Statement 4.10: Drought years with percentage of affected area

Sl. No.	Year	Moderate drought (%)	Severe drought (%)	Total (%)
1	1877	30.6	28.9	59.5
2	1891	22.4	0.3	22.7
3	1899	44.1	24.3	68.4
4	1901	19.3	10.7	30.0
5	1904	17.5	16.9	34.4
6	1905	25.2	12.0	37.2
7	1907	27.9	1.2	29.1
8	1911	13.0	15.4	28.4
9	1913	24.5	0.0	24.5
10	1915	18.8	3.4	22.2
11	1918	44.3	25.7	70.0
12	1920	35.7	2.3	38.0
13	1925	21.1	0.0	21.1
14	1939	17.8	10.7	28.5
15	1941	35.5	0.0	35.5
16	1951	35.1	0.0	35.1
17	1965	38.3	0.0	38.3
18	1966	35.4	0.0	35.4
19	1968	22.0	0.0	21.9
20	1972	36.6	3.8	40.4
21	1974	27.1	6.9	34.0
22	1979	33.0	1.8	34.8
23	1982	29.1	0.0	29.1
24	1985	25.6	16.7	42.3
25	1987	29.8	17.9	47.7
26	2002	19.0	10.0	29.0
27	2009	32.5	13.5	46.0

Source: India Meteorological Department ; Disaster Management in India-2011, Ministry of Home Affairs

Statement 4.11 : State-wise, year-wise number of drought-affected districts

S. No.	State	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	Andhra Pradesh	-	13	13	13	13	13	4	-	-	13	-	13	6	3	6	10	7
2	Assam	-	-	-	-	-	-	20	-	-	27	-	-	-	-	-	-	-
3	Bihar	-	37	-	-	19	-	-	-	-	26	38	-	-	33	-	-	-
4	Chhattisgarh	12	-	14	-	14	-	-	-	-	-	-	-	-	-	-	25	-
5	Gujarat	22	-	14	-	-	-	-	-	-	-	-	-	16	-	-	6	-
6	Haryana	-	-	19	-	-	-	-	-	-	-	-	-	-	-	21	-	-
7	Himachal Pradesh	12	-	12	-	-	12	-	-	-	12	-	-	-	-	-	-	-
8	Jammu & Kashmir	6	-	-	-	-	-	-	-	-	18	-	-	-	-	-	-	-
9	Jharkhand	-	-	22	15	20	22	-	-	-	24	24	-	-	-	-	22	-
10	Karnataka	-	25	24	25	21	-	23	-	21	20	-	24	26	22	9	24	-
11	Kerala	-	-	11	14	-	-	-	-	-	14	-	-	14	-	-	-	14
12	Madhya Pradesh	30	6	33	-	26	-	10	38	-	37	-	-	-	-	-	43	-
13	Maharahtra	26	16	32	11	25	-	-	-	-	28	-	15	17	-	26	28	-
14	Manipur	-	-	-	-	-	-	-	-	-	9	-	-	-	-	-	-	-
15	Nagaland	-	-	-	-	-	-	-	-	-	11	-	-	-	-	-	-	-
16	Odisha	28	-	30	-	-	-	-	-	-	17	16	-	-	-	-	25	-
17	Puducherry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
18	Punjab	-	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	Rajasthan	31	18	32	3	25	22	22	-	12	26	-	-	12	29	-	23	13
20	Tamil Nadu	-	-	28	29	-	-	-	-	-	-	-	-	31	-	-	-	-
21	Telangana	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-
22	Uttar Pradesh	-	-	68	-	60	-	-	9	-	56	-	-	-	-	43	49	-
23	Uttarakhand	1	-	13	8	-	11	-	9	11	-	-	-	-	-	-	8	-
24	West Bengal	-	-	3	-	-	-	6	-	-	-	11	-	-	-	-	-	-
	Total	**168**	**115**	**383**	**118**	**223**	**80**	**85**	**56**	**44**	**338**	**89**	**52**	**122**	**87**	**105**	**270**	**36**

Source: Farmers' Portal, Ministry of Agriculture and Farmers Welfare (as retrieved on 15.03.2018)

Human Settlements and Environmental Health

- ★ Population, housing condition, access to basic services
- ★ Environmental concerns specific to urban settlements.
- ★ Morbidity and mortality associated with air, water and vector-borne diseases

Statement 5.01: Houses, Households and Population in India

Sl. No.	Year	Total Population	No. of Households	No. of Houses **	Av. Size of Households	Av. No of Household Per House	Av. No. of Persons Per House	No. of Occupied Residential Houses	Numbers of houseless households
1	**1981***								
	Total	665,287,849	119,772,545	121,782,109	5.6	1.0	5.5	113,735,542	629,929
	Urban	157,680,171	28,905,949	29,897,491	5.5	1.0	5.3	27,604,947	209,520
	Rural	507,607,678	90,866,596	91,884,618	5.6	1.0	5.5	86,130,595	420,409
2	**1991+**								
	Total	838,583,988	152,009,467	159,425,666	5.5	1.0	5.3	147,013,766	522,445
	Urban	215,771,612	40,418,141	43,518,317	5.3	0.9	5.0	39,073,337	216,917
	Rural	622,812,376	111,591,326	115,907,349	5.6	1.0	5.4	107,940,429	305,528
3	**2001#**								
	Total	1,028,737,436	193,579,954	202,973,364	5.3	1.0	5.1	187,162,172	447,585
	Urban	286,119,689	55,832,570	58,514,738	5.1	1.0	4.9	52,062,718	187,810
	Rural	742,617,747	137,747,384	144,458,626	5.4	1.0	5.1	135,099,454	259,775
4	**2011**								
	Total	1,210,854,977	249,501,663	271,413,517	4.9	0.7	3.7	306,162,799	449,787
	Urban	377,106,125	80,888,766	89,959,567	4.7	0.8	3.4	99,046,223	256,896
	Rural	833,748,852	168,612,897	181,453,950	3.8	0.8	3.8	207,116,576	192,891

Source : Office of Registrar General of India

** : Excluding Assam* *+ : Excluding J & K*

*** : No. of Census houses (Occupied residential + vacant) at the time of house listing.*

#: The population figure exclude population of the area under unlawful occupation of Pakistan &25:25China where Census could not be taken.

Statement 5.02: State-wise Area and Population of Rural and Urban Areas

State/ UT	2001						2011					
	Population		Area (sq km)		Population per sq. km.		Population		Area (sq km)		Population per sq. km.	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Andaman & Nicobar Island	239954	116198	8222.66	26.34	29	4411	237,093	143,488	8211.08	37.92	29	3,784
Andhra Pradesh	55401067	20808940	270297.50	4747.50	205	4383	56,361,702	28,219,075	267190.50	7854.50	211	3,593
Arunachal Pradesh	870087	227881	NA	NA	NA	NA	1,066,358	317,369	NA	NA	NA	NA
Assam	23216288	3439240	77476.23	961.77	300	3576	26,807,034	4,398,542	77178.12	1259.88	347	3,491
Bihar	74316709	8681800	92358.40	1804.60	805	4811	92,341,436	11,758,016	91838.28	2324.72	1,005	5,058
Chandigarh	92120	808515	34.66	79.34	2658	10191	28,991	1,026,459	4.47	109.53	6,486	9,371
Chhattisgarh	16648056	4185747	133325.25	1865.75	125	2243	19,607,961	5,937,237	131940.34	3251.66	149	1,826
Dadra & Nagar Haveli	170027	50463	473.83	17.17	359	2939	183,114	160,595	445.30	45.70	411	3,514
Daman & Diu	100856	57348	88.64	23.36	1138	2455	60,396	182,851	62.48	48.52	967	3,769
Goa	677091	670577	3190.33	511.67	212	1311	551,731	906,814	2937.21	764.79	188	1,186
Gujarat	31740767	18930250	190796.50	5227.50	166	3621	34,694,609	25,745,083	188838.60	7405.40	184	3,477
Haryana	15029260	6115304	42931.63	1280.37	350	4776	16,509,359	8,842,103	42235.92	1976.08	391	4,475
Himachal Pradesh	5482319	595581	55431.29	241.71	99	2464	6,176,050	688,552	55402.18	270.82	111	2,542
Jammu & Kashmir	7627062	2516638	221272.69	963.31	76	2612	9,108,060	3,433,242	220990.10	1245.90	91	2,755
Jharkhand	20952088	5993741	77921.57	1792.43	269	3344	25,055,073	7,933,061	77292.06	2423.94	324	3,273
Karnataka	34889033	17961529	186590.02	5200.98	187	3453	37,469,335	23,625,962	185776.57	6014.43	202	3,928
Kerala	23574449	8266925	35611.14	3251.86	662	2542	17,471,135	15,934,926	31253.20	7598.80	559	2,097
Lakshadweep	33683	26967	21.41	10.59	1573	2546	14,141	50,332	9.17	20.83	1,542	2,416
Madhya Pradesh	44380878	15967145	301283.24	6961.76	147	2294	52,557,404	20,069,405	300505.59	7746.41	175	2,591
Maharashtra	55777647	41100980	300357.20	7355.80	186	5588	61,556,074	50,818,259	298619.45	9093.55	206	5,588
Manipur	1717928	575968	22176.81	150.19	77	3835	2,021,640	834,154	22147.50	179.50	91	4,647

Contd.

Statement 5.02: State-wise Area and Population of Rural and Urban Areas

State/ UT	2001						2011					
	Population		Area (sq km)		Population per sq. km.		Population		Area (sq km)		Population per sq. km.	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Meghalaya	1864711	454111	22199.28	229.72	84	1977	2,371,439	595,450	22146.11	282.89	107	2,105
Mizoram	447567	441006	20494.08	586.92	22	751	525,435	571,771	20494.00	587.00	26	974
Nagaland	1647249	342787	16431.76	147.24	100	2328	1,407,536	570,966	16335.52	243.48	86	2,345
NCT of Delhi	944727	12905780	558.32	924.68	1692	13957	419,042	16,368,899	326.44	1156.56	1,284	14,153
Odisha	31287422	5517238	152912.87	2794.13	205	1975	34,970,562	7,003,656	152355.34	3351.66	230	2,090
Puducherry	325726	648619	345.59	133.41	943	4862	395,200	852,753	335.44	154.56	1,178	5,517
Punjab	16096488	8262511	48265.38	2096.62	334	3941	17,344,192	10,399,146	47847.40	2514.60	362	4,136
Rajasthan	43292813	13214375	336807.81	5431.19	129	2433	51,500,352	17,048,085	335606.04	6632.96	153	2,570
Sikkim	480981	59870	NA	NA	NA	NA	456,999	153,578	7057.75	38.25	65	4,015
Tamil Nadu	34921681	27483998	117532.75	12525.25	297	2194	37,229,590	34,917,440	116424.47	13635.53	320	2,561
Tripura	2653453	545750	10345.60	140.40	256	3887	2,712,464	961,453	10094.12	391.88	269	2,453
Uttar Pradesh	131658339	34539582	234369.81	6558.19	562	5267	155,317,278	44,495,063	233365.71	7562.29	666	5,884
Uttarakhand	6310275	2179074	52686.23	796.77	120	2735	7,036,954	3,049,338	52581.08	901.92	134	3,381
West Bengal	57748946	22427251	85427.26	3324.74	676	6746	62,183,113	29,093,002	83626.43	5125.57	744	5,676
India*	**742617747**	**286119689**	**$ 3118237.74**	**$ 78163.26***	**247**	**3657**	**833,748,852**	**377,106,125**	**3101473.97**	**102252.03**	**279**	**3,685**

Source: Census 2001 and 2011, Registrar General of India

*The population figures exclude population of the area under unlawful occupation of Pakistan and China where Census could not be taken.

Area figures include the area under unlawful occupation of Pakistan and China. The area includes 78,114 Sq.km under illegal occupation of Pakistan, 5180 Sq.km illegally handed over by

$Rural and urban area of Arunachal Pradesh excluded due to non availability.

The total area of India represents 'Geographical Area' supplied by Survey of India.

The State area figures are provided by Survey of India.

Density has been worked out on comparable data.

Density for rural portion of Jammu & Kashmir has been worked out after excluding the entire area of the illegal occupied portion of Pakistan and China as its rural-urban breakup is not available.

Rural and Urban population of Arunachal Pradesh has also been excluded as Rural and urban area figures are not available.

NA: Not available

Statement 5.03: State-wise percentage of population below the poverty line -Rural, Urban & Combined

(% of Population)

Sl. No.	States/ Union Territories	1993-94			2004-05			2011-12		
		Rural	Urban	Combined	Rural	Urban	Combined	Rural	Urban	Combined
1	Andhra Pradesh	48.10	35.20	44.60	32.30	23.40	29.90	10.96	5.81	9.20
2	Arunachal Pradesh	60.00	22.60	54.50	33.60	23.50	31.10	38.93	20.33	34.67
3	Assam	54.90	27.70	51.80	36.40	21.80	34.40	33.89	20.49	31.98
4	Bihar	62.30	44.70	60.50	55.70	43.70	54.40	34.06	31.23	33.74
5	Chhattisgarh	55.90	28.10	50.90	55.10	28.40	49.40	44.61	24.75	39.93
6	Delhi	16.20	15.70	15.70	15.60	12.90	13.10	12.92	9.84	9.91
7	Goa	25.50	14.60	20.80	28.10	22.20	25.00	6.81	4.09	5.09
8	Gujarat	43.10	28.00	37.80	39.10	20.10	31.80	21.54	10.14	16.63
9	Haryana	40.00	24.20	35.90	24.80	22.40	24.10	11.64	10.28	11.16
10	Himachal Pradesh	36.70	13.60	34.60	25.00	4.60	22.90	8.48	4.33	8.06
11	Jammu & Kashmir	32.50	6.90	26.30	14.10	10.40	13.20	11.54	7.20	10.35
12	Jharkhand	65.90	41.80	60.70	51.60	23.80	45.30	40.84	24.83	36.96
13	Karnataka	56.60	34.20	49.50	37.50	25.90	33.40	24.53	15.25	20.91
14	Kerala	33.90	23.90	31.30	20.20	18.40	19.70	9.14	4.97	7.05
15	Madhya Pradesh	49.00	31.80	44.60	53.60	35.10	48.60	35.74	21.00	31.65
16	Maharashtra	59.30	30.30	47.80	47.90	25.60	38.10	24.22	9.12	17.35
17	Manipur	64.40	67.20	65.10	39.30	34.50	38.00	38.80	32.59	36.89
18	Meghalaya	38.00	23.00	35.20	14.00	24.70	16.10	12.53	9.26	11.87
19	Mizoram	16.60	6.30	11.80	23.00	7.90	15.30	35.43	6.36	20.40
20	Nagaland	20.10	21.80	20.40	10.00	4.30	9.00	19.93	16.48	18.88
21	Odisha	63.00	34.50	59.10	60.80	37.60	57.20	35.69	17.29	32.59
22	Punjab	20.30	27.20	22.40	22.10	18.70	20.90	7.66	9.24	8.26
23	Puducherry	28.10	32.40	30.90	22.90	9.90	14.10	17.06	6.30	6.69
24	Rajasthan	40.80	29.90	38.30	35.80	29.70	34.40	16.05	10.69	14.71
25	Sikkim	33.00	20.40	31.80	31.80	25.90	31.10	9.85	3.66	8.19
26	Tamil Nadu	51.00	33.70	44.60	37.50	19.70	28.90	15.83	6.54	11.28
27	Tripura	34.20	25.40	32.90	44.50	22.50	40.60	16.53	7.42	14.05
28	Uttarkhand	36.70	18.70	32.00	35.10	26.50	32.73	11.62	10.48	11.26
29	Uttar Pradesh	50.90	38.30	48.40	42.70	34.10	40.90	30.40	26.06	29.43
30	West Bengal	42.50	31.20	39.40	38.20	24.40	34.30	22.52	14.66	19.98
31	Andaman & Nicobar Islands	NA	NA	NA	NA	NA	NA	1.57	0.00	1.00
32	Chandigarh	NA	NA	NA	NA	NA	NA	1.64	22.31	21.81
33	Dadar & Nagar Haveli	NA	NA	NA	NA	NA	NA	62.59	15.38	39.31
34	Daman & Diu	NA	NA	NA	NA	NA	NA	0.00	12.62	9.86
35	Lakshadweep	NA	NA	NA	NA	NA	NA	0.00	3.44	2.77
	All India	**50.10**	**31.8**	**45.30**	**41.80**	**25.70**	**37.20**	**25.70**	**13.70**	**21.92**

Source : NITI Aayog

Note:

1. Population as on 1st March 2012 has been used for estimating number of persons below poverty line. (2011 Census population extrapolated)
2. Poverty line of Tamil Nadu is used for Andaman and Nicobar Island.
3. Urban poverty line of Punjab is used for both rural and urban areas of Chandigarh.
4. Poverty line of Maharasthra is used for Dadra & Nagar Haveli.
5. Poverty line of Goa is used for Daman & Diu
6. Poverty line of Kerala is used for Lakshadweep.

Statement 5.04 : Distribution of households by major source of drinking water

S. No.	Area		Rural						Urban					
	Year / Major Source of Drinking Water		2002 (NSS 58th Round)	2008-09 (NSS 65th Round)	2012 (NSS 69th Round)	1998-99 (NFHS 2)	2005-06 (NFHS 3)	2015-16 (NFHS 4)	2002 (NSS 58th Round)	2008-09 (NSS 65th Round)	2012 (NSS 69th Round)	1998-99 (NFHS 2)	2005-06 (NFHS 3)	2015-16 (NFHS 4)
1	Bottled Water			0.5	1.6		0.1	2.1		2.7	5.2		0.9	5.1
2	Piped water / Tap/ Public Tap/ Standpipe		27.5	30.1	31.2	25.0	27.9	33.7	73.6	74.3	69.1	74.5	71.0	69.0
3	Tube well/ Hand pump		51.3	54.7	52.4	47.3	53.2	50.9	19.6	17.5	19.9	18.1	21.3	17.4
4	Well	Protected	17.9	5.5	2.7	23.5	2.8	3.6	5.1	2.1	1.1	6.0	1.8	3.7
		Unprotected		6.3	9.0		12.4	6.0		1.2	2.2		2.9	1.0
5	Rain water (Harvested or Improved)			0.1	0.2		0.2	0.2		0.0	0.0		0.0	0.1
6	Surface Water (River/ Canal/ Lake/ Tank/ Pond)		2.3	1.8	1.1	3.5	2.1	0.8	0.3	0.3	0.1	0.4	0.8	0.4
7	Spring		0.8	0.7	0.7		1.1	1.0	0.1	0.1	0.0		0.2	0.3
8	Other source		0.3	0.3	1.1	0.7	0.1	2.7*	1.3	1.9	2.4	1.0	1.1	3.0*

Source: National Sample Survey (NSS) reports and National Family Health Survey (NFHS) reports
*Note: * In NFHS 4, Other source includes 0.5% and & 0.7% Improved source of drinking water from Coumunity RO Plant in Rural and Urban Areas respectively*

Statement 5.05: State-wise Distribution of households by major source of drinking water

Sl. No.	State/ Union Territory	Tap Water		Well		Hand-pump	Tube-well	Spring, River Canal	Tank, Pond, Lake	Any other source	Availability of Drinking Water Source		
		From treated source	From un-treated source	Cov-ered well	Un-cov-ered well						Within the premises	Near the premises	Away
1	Andhra Pradesh	49.0	20.9	0.5	5.9	13.7	6.9	0.8	0.3	2.1	43.2	37.3	19.5
2	Arunachal Pradesh	26.4	39.1	1.4	4.3	10.7	2.4	11.7	0.9	3.2	41.1	37.4	21.6
3	Assam	9.2	1.3	1.7	17.2	50.2	9.2	4.7	4.6	2.0	54.8	26.7	18.5
4	Bihar	3.1	1.3	0.7	3.7	86.6	3.0	0.2	0.1	1.4	50.1	37.9	12.0
5	Chhattisgarh	12.3	8.4	0.8	10.6	58.4	7.2	1.6	0.2	0.5	19.0	54.5	26.5
6	Delhi #	75.2	6.1	0.1	0.0	5.3	8.4	0.0	1.2	3.6	78.4	15.4	6.2
7	Goa	82.1	3.4	4.0	7.1	0.1	0.3	1.5	0.4	1.3	79.7	15.5	4.8
8	Gujarat	39.9	29.2	2.3	4.8	11.6	9.6	0.4	0.2	2.0	64.0	23.5	12.4
9	Haryana	55.9	12.9	0.7	2.3	12.0	12.9	0.3	0.9	1.9	66.5	21.4	12.1
10	Himachal Pradesh	83.9	5.6	1.6	1.3	3.6	0.7	1.0	0.5	1.9	55.5	35.0	9.5
11	Jammu & Kashmir	34.7	29.2	1.9	4.7	11.4	1.5	12.9	0.7	3.1	48.2	28.7	23.1
12	Jharkhand	10.0	2.9	1.9	34.6	43.8	3.5	2.4	0.2	0.8	23.2	44.9	31.9
13	Karnataka	41.2	24.8	1.0	8.0	5.5	16.0	1.1	1.0	1.4	44.5	37.3	18.2
14	Kerala	23.4	6.0	14.6	47.4	0.5	3.7	1.6	0.7	2.1	77.7	14.1	8.2
15	Madhya Pradesh	16.4	6.9	1.1	18.9	47.1	7.6	1.0	0.4	0.6	23.9	45.6	30.5
16	Maharashtra	56.3	11.6	2.2	12.2	9.9	5.7	0.8	0.4	1.0	59.4	27.6	13.1
17	Manipur	24.7	14.1	2.7	4.9	5.9	0.3	21.3	22.8	3.1	15.5	47.3	37.2
18	Meghalaya	27.8	11.5	6.9	18.5	2.8	2.6	21.6	5.7	2.6	24.1	43.2	32.7
19	Mizoram	39.4	19.3	2.0	2.7	0.8	0.9	26.1	1.8	6.9	31.2	46.7	22.2
20	Nagaland	6.1	41.1	6.6	19.1	2.2	4.5	7.6	10.3	2.7	29.3	42.4	28.3
21	Odisha	10.0	3.9	2.2	17.3	41.5	20.0	3.5	0.9	0.8	22.4	42.2	35.4
22	Puducherry #	90.8	4.5	0.1	1.8	1.2	1.4	0.0	0.0	0.3	77.4	21.5	1.1
23	Punjab	41.1	9.9	0.2	0.2	24.7	21.9	0.2	0.1	1.7	85.9	10.0	4.1
24	Rajasthan	32.0	8.5	1.2	9.6	25.3	12.2	0.9	5.9	4.3	35.0	39.0	25.9
25	Sikkim	29.2	56.1	0.5	0.2	0.0	0.0	11.5	0.6	2.0	52.6	29.7	17.7
26	Tamil Nadu	55.8	24.0	1.2	3.8	4.6	8.2	0.4	0.5	1.5	34.9	58.1	7.0
27	Tripura	20.3	12.9	2.9	24.5	18.1	16.3	3.7	0.5	0.9	37.1	30.5	32.4
28	Uttar Pradesh	20.2	7.1	0.6	3.4	64.9	2.9	0.1	0.1	0.7	51.9	36.0	12.1
29	Uttarakhand	53.9	14.3	0.7	0.4	22.0	2.0	2.0	0.7	4.0	58.3	26.6	15.2
30	West Bengal	21.0	4.4	0.7	5.4	50.1	16.7	0.8	0.2	0.8	38.6	34.7	26.6
31	Andaman & Nicobar Islands	68.9	16.2	0.7	6.6	0.0	0.5	3.8	1.5	1.9	60.6	27.0	12.4
32	Chandigarh #	93.7	3.0	0.1	0.0	1.8	0.9	0.0	0.1	0.5	86.2	11.7	2.2
33	Dadra & Nagar Haveli #	26.0	20.5	1.5	5.7	24.5	20.6	0.9	0.0	0.4	52.6	36.4	11.0
34	Daman & Diu #	54.6	20.6	0.5	0.2	5.5	18.1	0.0	0.0	0.5	76.4	22.1	1.5
35	Lakshadweep #	9.1	11.1	6.9	64.9	2.5	0.1	0.0	0.4	5.1	83.7	14.3	2.0
	INDIA	**32.0**	**11.6**	**1.6**	**9.4**	**33.5**	**8.5**	**1.1**	**0.8**	**1.5**	**46.6**	**35.8**	**17.6**

Note: #Total being no. of Households (Excluding institutional households)
Source: Census 2011, Registrar General of India

Statement 5.06: Distribution of Households with access to sanitation

Year	Total number of Households	Toilet Installation	
		With Toilet of Any Type*	Without Toilet of Any Type*
1981			
Total	118,614,803		
Urban	28,541,877	16,596,103	11,945,774
		(58.15)	(41.85)
Rural	90,072,926		
1991			
Total	151,111,383	35,819,780	115,291,603
		(23.7)	(76.3)
Urban	39,523,184	25,236,449	14,286,735
		(63.85)	(36.15)
Rural	111,588,199	10,583,331	101,004,868
		(9.48)	(90.52)
2001			
Total	191,963,935	69,885,799	122,078,136
		(36.41)	(63.59)
Urban	53,692,376	39,581,440	14,110,936
		(73.72)	(26.28)
Rural	138,271,559	30,304,359	107,967,200
		(21.92)	(21.92)
2011			
Total	246,740,228	115,737,458	131,002,770
		(46.91)	(53.09)
Urban	78865937	64,162,119	14,703,818
		(81.36)	(18.64)
Rural	167874291	51,575,339	116,298,952
		(30.72)	(69.28)

Source : Office of the Registrar General of India
** Within the Premises*
Note: Figures in brackets are percentages

Statement 5.07: State-wise Number of Towns/ Cities Reporting Slums and percentage of Slum Population

(Year 2011)

Sl. No	States/ UTs	Number of Towns		Type wise slum population				% of slum population to total urban population
		Statutory towns	Slum reported towns	Notified slums	Recognised slums	Identified slums	Total Population	
1	A&N Islands	1	1	0	0	14172	14172	9.88
2	Andhra Pradesh	125	125	8338154	877172	971608	10186934	36.10
3	Arunachal Pradesh	26	5	0	0	15562	15562	4.90
4	Assam	88	31	9163	70979	117124	197266	4.48
5	Bihar	139	88	0	0	1237682	1237682	10.53
6	Chandigarh	1	1	95135	0	0	95135	9.27
7	Chhattisgarh	168	94	713654	764851	420426	1898931	31.98
8	D&N Haveli	1	0	0	0	0	0	0.00
9	Daman & Diu	2	0	0	0	0	0	0.00
10	Delhi	3	22	738915	0	1046475	1785390	10.91
11	Goa	14	3	6107	0	20140	26247	2.89
12	Gujarat	195	103	0	0	1680095	1680095	6.53
13	Haryana	80	75	14912	0	1647393	1662305	18.80
14	Himachal Pradesh	56	22	60201	0	1111	61312	8.90
15	Jammu & Kashmir	86	40	162909	136649	362504	662062	19.28
16	Jharkhand	40	31	64399	59432	249168	372999	4.70
17	Karnataka	220	206	2271990	445899	573545	3291434	13.93
18	Kerala	59	19	186835	8215	6998	202048	1.27
19	Lakshadweep	0	0	0	0	0	0	0.00
20	Madhya Pradesh	364	303	1900942	2530637	1257414	5688993	28.35
21	Maharashtra	256	189	3709309	3485783	4653331	11848423	23.32
22	Manipur	28	0	0	0	0	0	0.00
23	Meghalaya	10	6	34699	8006	14713	57418	9.64
24	Mizoram	23	1	0	78561	0	78561	13.74
25	Nagaland	19	11	0	48249	34075	82324	14.42
26	Odisha	107	76	0	812737	747566	1560303	22.28
27	Puducherry	6	6	70092	73928	553	144573	16.95
28	Punjab	143	73	787696	193305	479517	1460518	14.04
29	Rajasthan	185	107	0	0	2068000	2068000	12.13
30	Sikkim	8	7	31378	0	0	31378	20.43
31	Tamil Nadu	721	507	2541345	1978441	1278673	5798459	16.61
32	Tripura	16	15	0	124036	15744	139780	14.54
33	Uttar Pradesh	648	293	562548	4678326	999091	6239965	14.02
34	Uttarakhand	74	31	185832	52278	249631	487741	15.99
35	West Bengal	129	122	48918	3703852	2665824	6418594	22.06
	India	**4041**	**2613**	**22535133**	**20131336**	**22828135**	**65494604**	**17.37**

Source: Registrar General of India, Census of India 2011

Note: Manipur, Daman & Diu, Dadra & Nagar Haveli and Lakshadweep have not reported any slum in 2011 Census.

Statement 5.08: Water supply of Class - I cities and Class - II Towns

S. No.	State / UT	Total no. of Class- I cities and Class- II town	Total population of Class-I cities and Class-II town	Total Water supply (in MLD)
1	Andaman & Nicobar Island	1	107,200	15
2	Andhra Pradesh	99	23,591,660	2477.03
3	Assam	13	1,991,110	503.28
4	Bihar	37	6,897,354	1396.43
5	Chandigarh	1	994,820	537.2
6	Chhattisgarh	14	3,081,180	489.12
7	Goa	3	295,180	29.53
8	Delhi	1	14,858,800	4346
9	Gujarat	59	16,858,830	2385.64
10	Haryana	27	6,038,150	833.07
11	Himachal Pradesh	1	163,490	36.18
12	Jammu & Kashmir	6	2,155,050	302.26
13	Jharkhand	24	5,790,471	1135.86
14	Karnataka	59	16,902,631	2529.78
15	Kerala	34	5,465,176	883.03
16	Madhya Pradesh	48	12,540,050	1724.55
17	Maharashtra	84	42,758,250	12750.05
18	Manipur	1	249,870	43.43
19	Meghalaya	2	267,780	40.12
20	Mizoram	1	282,550	39.56
21	Nagaland	2	298,330	41.76
22	Odisha	24	4,240,440	923.97
23	Puducherry	3	583,820	80.56
24	Punjab	33	7,439,530	2033.94
25	Rajasthan	45	11,210,750	1912.72
26	Tamil Nadu	84	20,107,890	1577.4
27	Tripura	1	214,327	30
28	Uttar Pradesh	107	29,144,800	4814.77
29	Uttarakhand	7	1,318,840	232.55
30	West Bengal	87	21,822,911	3949.09
	Total	**908**	**257,671,240**	**48093.88**

Source: Status of water supply, wastewater generation and treatment in class- I cities & class -II towns of India, Series CUPS/70/2009-10, Central Pollution Control Board
MLD: Millions of Liters Per Day

Statement 5.09: State-wise slum households by availability of sanitation facilities

Sl.No	States/Uts	Total number of slum households	Number of households having toilet within the premises	Number of households not having toilet within the premises	No toilet within premises Alternative source	
					Public latrine	Open
1	Andhra Pradesh	2421268	1993862	427406	69498	357908
2	Arunachal Pradesh	4005	3351	654	113	541
3	Assam	48122	41593	6529	1468	5061
4	Bihar	194065	104494	89571	7118	82453
5	Chhattisgarh	395297	192393	202904	38278	164626
6	Delhi	383609	192171	191438	143589	47849
7	Goa	4846	2953	1893	1537	356
8	Gujarat	360291	232075	128216	51636	76580
9	Haryana	325997	260675	65322	8878	56444
10	Himachal Pradesh	14240	12169	2071	727	1344
11	Jammu & Kashmir	96990	85539	11451	2630	8821
12	Jharkhand	79200	41731	37469	4297	33172
13	Karnataka	728277	461029	267248	85387	181861
14	Kerala	54849	51123	3726	1895	1831
15	Madhya Pradesh	1086692	683061	403631	59725	343906
16	Maharashtra	2449530	1019634	1429896	1191026	238870
17	Meghalaya	10936	10141	795	392	403
18	Mizoram	16240	16120	120	41	79
19	Nagaland	15268	14240	1028	830	198
20	Odisha	350306	168666	181640	12315	169325
21	Punjab	296482	262906	33576	2488	31088
22	Puducherry	35070	22014	13056	4322	8734
23	Rajasthan	383134	274306	108828	8219	100609
24	Sikkim	8612	7840	772	544	228
25	Tamil Nadu	1451690	885619	566071	231050	335021
26	Tripura	33830	32259	1571	891	680
27	Uttar Pradesh	992728	769145	223583	37311	186272
28	Uttarakhand	89398	81977	7421	2000	5421
29	West Bengal	1393319	1149877	243442	88733	154709
30	Andaman & Nicobar Islands	3053	2017	1036	610	426
31	Chandigarh	22080	869	21211	16921	4290
	India	**13749424**	**9075849**	**4673575**	**2074469**	**2599106**

Source: Census of India 2011, Slum Houses, Household Amenities and Assets.
Note : This table excludes institutional households.

Statement 5.10: State-wise slum households by source and location of drinking water

Sl. No.	States/Uts	Number of households (Hhs) by source of drinking water						
		Total number of households	Tap		Hand pump & tube well, borehole	Well		All others
			Treated source	Un treated source		Covered	Uncovered	
1	Andhra Pradesh	2421268	1883817	150341	261637	10417	47244	67812
2	Arunachal Pradesh	4005	444	1494	1861	12	38	156
3	Assam	48122	12410	1074	25490	1521	4677	2950
4	Bihar	194065	22760	7509	152564	1515	5252	4465
5	Chhattisgarh	395297	168218	72374	127204	3891	19432	4178
6	Delhi	383609	281081	42153	44138	474	247	15516
7	Goa	4846	4538	189	6	17	18	78
8	Gujarat	360291	261793	42761	37413	1478	708	16138
9	Haryana	325997	208355	30227	72908	1558	932	12017
10	Himachal Pradesh	14240	13174	218	503	86	37	222
11	Jammu & Kashmir	96990	61904	26350	5080	567	139	2950
12	Jharkhand	79200	17134	4631	39013	2531	14319	1572
13	Karnataka	728277	491339	117819	75900	4903	15130	23186
14	Kerala	54849	29185	2601	1273	7742	13619	429
15	Madhya Pradesh	1086692	525635	135668	325874	12871	51128	35516
16	Maharashtra	2449530	2121907	90313	153705	11617	22251	49737
17	Meghalaya	10936	6717	543	215	637	483	2341
18	Mizoram	16240	9189	1707	377	460	289	4218
19	Nagaland	15268	626	4859	2331	1383	2304	3765
20	Odisha	350306	122649	19897	137272	15335	46841	8312
21	Punjab	296482	179047	27849	85062	377	258	3889
22	Puducherry	35070	31959	2487	406	12	136	70
23	Rajasthan	383134	291176	26933	41139	2059	2461	19366
24	Sikkim	8612	6170	1808	6	24	-	604
25	Tamil Nadu	1451690	974400	196122	193264	12137	28245	47522
26	Tripura	33830	16372	3555	12527	203	732	441
27	Uttar Pradesh	992728	383273	67573	518549	3602	3772	15959
28	Uttarakhand	89398	61001	4944	22357	132	51	913
29	West Bengal	1393319	776557	103869	452838	8305	28696	23054
30	A & N Islands	3053	2923	16	3	-	94	17
31	Chandigarh	22080	16019	4544	1121	81	7	308
	India	**13749424**	**8981772**	**1192428**	**2792036**	**105947**	**309540**	**367701**

Source: Census of India 2011, Slum Houses, Household Amenities and Assets.
Note : This Statement excludes institutional households.

Statement 5.11 : State-wise Slum households by type of drainage connectivity for waste water outlet

Sl. No.	States/UT's	Total number of slum households	Waste water outlet connected to		
			Closed drainage	Open Drainage	No Drainage
1	Andhra Pradesh	2421268	1046362	1073653	301253
2	Arunachal Pradesh	4005	167	1342	2496
3	Assam	48122	5816	18197	24109
4	Bihar	194065	37351	76664	80050
5	Chhattisgarh	395297	40181	224370	130746
6	Delhi	383609	186803	174837	21969
7	Goa	4846	2980	1155	711
8	Gujarat	360291	182157	78861	99273
9	Haryana	325997	125103	169676	31218
10	Himachal Pradesh	14240	8249	4497	1494
11	Jammu & Kashmir	96990	26103	52575	18312
12	Jharkhand	79200	11437	32909	34854
13	Karnataka	728277	253874	357117	117286
14	Kerala	54849	17411	16842	20596
15	Madhya Pradesh	1086692	225749	620412	240531
16	Maharashtra	2449530	1407141	853050	189339
17	Meghalaya	10936	2140	6733	2063
18	Mizoram	16240	3866	9964	2410
19	Nagaland	15268	765	12208	2295
20	Odisha	350306	32821	128589	188896
21	Punjab	296482	147782	115160	33540
22	Puducherry	35070	7324	18656	9090
23	Rajasthan	383134	101944	216983	64207
24	Sikkim	8612	3043	5149	420
25	Tamil Nadu	1451690	610503	421360	419827
26	Tripura	33830	1315	14665	17850
27	Uttar Pradesh	992728	213616	702274	76838
28	Uttarakhand	89398	26661	57555	5182
29	West Bengal	1393319	347827	609599	435893
30	Andaman & Nicobar Islands	3053	313	2506	234
31	Chandigarh	22080	3441	12545	6094
India		**13749424**	**5080245**	**6090103**	**2579076**

Source: Census of India 2011, Slum houses, Households Amenities and assets
Note : This table excludes institutional households.

Statement 5.12: Statistics related to Road Transport

	Unit	2000-01	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
1. Length of roads								
Total[a]	Thousand Km	3373.5	4690.3	4865.4	5231.9	5402.5	5472.1	5603.3
Surfaced		1601.7	2524.7	2698.6	3171.0	3220.5	3341.0	3501.9
2. Length of national Highways								
Total[a]	Thousand Km.	57.7	70.9	76.8	79.1	91.3	98.0	101.0
Surfaced		57.7	70.9	76.8	79.1	91.3	98.0	101.0
3. Length of State Highways								
Total[a]	Thousand Km.	132.1	163.9	164.4	169.2	170.8	167.1	176.2
Surfaced		129.9	161.9	163.0	167.2	169.0	165.3	170.2
4. No. of Registered vehicles								
All vehicles	Thousand	54991.0	141866.0	159491.0	176044 (R)	190704	210023	229917 (P)
Goods vehicles		2948.0	7064.0	7658.0	8307 (R)	8698	9344	10495 (P)
Buses*		634.0	1604.0	1677.0	1814.0 (R)	1887	1971	1748 (P)
5. Revenue realised from Road Transport								
Central	(Crore)	23861.0	75453.2	75572.5	90931.2 (R)	89084.1	109941	199659.7 (P)
States		12901.7	45992.4	55161.1	50602.7 (R)	56749.8	61230.7	70938.9 (P)
6. Freight and Passenger Movement by Road Transport								
Freight	Billion Tonnes Km	494.0	1287.3	1407.8	1515.4	1650.8	1824.3	2026.1
Pessenger	Billion Passengers Km	2076	8409	9478	10461	11730	13403	15415

Source: Ministry of Road Transport & Highways

1. Basic Road Statistics of India 2015-16
2. Road Transport Year Book 2015-16 (under compilation)

Notes:

a : Includes rural roads constructed under Jawahar Rojgar Yojna as on 31st March, 1996.

*: Included omni buses.

P: Provisional

R: Revised

Statement 5.13 : Status of registered motor vehicles

(a) : Year-wise State-wise Registered motor vehicles

(in numbers)

Sl. No.	States/UT	Transport						Non- Transport					
		2010	2011	2012	2013	2014	2015	2010	2011	2012	2013	2014	2015
1	Andhra Pradesh	1049945	1187621	1331416	1301472	922583	1013986	7873194	9001726	11092912	11386231	6079560	6868276
2	Arunachal Pradesh	5430	...	..	...	...	...	16671	..	..	...	...	...
3	Assam	245737	274522	309186	202784	377127	409050	1137984	1307606	1497934	1674738	1839880	2100687
4	Bihar	200866	232188	272594	336941	388302	440632	2156120	2441021	2840286	3280286	3775094	4336964
5	Chhattisgarh	147126	162495	184918	206189	267570	293803	2288647	2603542	2919120	3231053	3603787	4020124
6	Delhi	507820	541620	280469	317963	334434	354665	6239028	6686051	7069651	7467320	7958323	8496055
7	Goa	84134	90,751	100749	106035	111120	115807	642908	699324	764860	832337	898242	967861
8	Gujarat	1218969	1326972	1462815	1586748	1685570	1805276	10653604	11666163	12950902	14185705	15406029	16915291
9	Haryana	484878	539940	584573	630231	687498	751638	4306947	4837063	5393537	5969363	6551250	7175912
10	Himachal Pradesh	122937	132076	140440	180127	190032	198069	415404	489638	596164	695934	784238	879335
11	Jammu & Kashmir	128724	141791	154995	171561	185306	199443	610181	785170	761903	849225	947771	1044828
12	Jharkhand	766936	863,333	965287	930461	196292	219856	2000472	2249849	2192699	2486316	1522468	1845750
13	Karnataka	887999	973,110	1062081	1180736	1289580	1404626	8155977	8957373	9847520	10882950	12045526	13380335
14	Kerala	1394162	1,507,041	1622543	1751514	1845241	1912392	4003490	4564978	5270771	6106308	6929800	7735928
15	Madhya Pradesh	378888	419211	467206	520521	569970	640175	6211688	6936491	7676953	8239518	9151655	10500952
16	Maharashtra	1774852	1872845	1983759	2091627	2241906	2339973	13993569	15561254	17448602	19396525	21151870	23222202
17	Manipur	22140	26082	29942	37895	42011	48658	172312	180420	184581	258032	352533	258485
18	Meghalaya	48290	53,746	59933	66453	82398	85992	109823	121991	137904	153568	165867	181112
19	Mizoram	17230	19517	22758	25476	28694	30546	63226	73131	79072	95860	108537	120940

Contd.

Statement 5.13 : Status of registered motor vehicles

(a) : Year-wise State-wise Registered motor vehicles

(in numbers)

Sl. No.	States/UT	Transport						Non- Transport					
		2010	2011	2012	2013	2014	2015	2010	2011	2012	2013	2014	2015
20	Nagaland	106946	129699	128748	138309	134680	141271	133786	142954	147670	157566	167357	176189
21	Odisha	315152	347722	392443	437391	481243	525889	2616680	2990316	3366087	3778149	4220563	4692706
22	Punjab	270415	270415	317191	317191	317191	317191	5003839	5003839	5945748	5945748	5945748	5945748
23	Puducherry	24933	26296	28200	26298	27111	27855	574196	646507	727076	673316	723787	774726
24	Rajasthan	600766	663421	738280	816107	833014	952581	6564896	7322844	8247198	9255838	10300406	11426348
25	Sikkim	12102	12967	14306	14415	16409	17465	21524	25816	29028	21862	23199	25745
26	Tamil Nadu	1257410	1414580	1545346	1679608	1757430	1827887	12804123	14223665	15866902	17552453	19106232	20690782
27	Telangana				629389	690011	751001				5747088	6383098	7093715
28	Tripura	37773	42339	44663	50188	45581	50198	122346	145334	159555	194734	210589	231936
29	Uttarakhand	72229	81951	97379	103708	114653	122473	759143	915210	1146663	1356428	1525275	1704564
30	Uttar Pradesh	459076	532695	608433	725149	825816	914353	11529273	12754537	14836841	16323035	18288876	20721178
31	West Bengal	376778	421605	465613	672493	720148	761919	2370360	2839019	3395128	5438241	6024856	6641322
32	A & N Islands	6630	7012	7679	8073	8301	8572	55144	62088	69384	77369	85390	93729
33	Chandigarh	23755	31290	34365	35525	17913	19159	925609	976602	1024043	1070824	612812	657317
34	Dadra & Nagar Haveli	11851	12707	13419	14317	15233	15775	56981	63650	71102	79129	87477	95881
35	Daman & Diu	7921	8,668	9043	9457	7421	7809	64421	68920	75813	82088	87904	92570
36	Lakshadweep	920	1096	1355	1620	2078	2375	6935	7657	8542	9485	10946	11856
	Total	**13071720**	**14369324**	**15482127**	**17323972**	**17459867**	**18728360**	**114660501**	**127351749**	**143842151**	**164954622**	**173076945**	**191127349**

Source : Road Transport year book, Transport Research Wing, Ministry of Road Transport & Highways

...: Not reported.

Statement 5.13 : Status of registered motor vehicles

(b) State-wise Category-wise Registered motor vehicles

(as on 31st March,2010) (in numbers)

Sl. No.	States/UT	Transport						Non-Transport	
		Multi-axled/Articulated Vehicles/Trucks & Lorries	Light Motor Vehicles (Goods)	Buses	Taxies	Light Motor Vehicles (Passengers)	Total Transport	Two Wheelers	Cars
1	Andhra Pradesh	236211	219332	56664	103290	434448	1049945	6,514,593	777,746
2	Arunachal Pradesh##	2355	601	682	343	1449	5430	11,112	2,595
3	Assam	124132	32473	13859	24088	51185	245737	830,836	232,546
4	Bihar	66485	0	21209	38204	74968	200866	1,606,613	188,031
5	Chhattisgarh	78488	38434	7658	7499	15047	147126	1,964,769	108,326
6	Goa	37040	8218	8332	13143	4238	84134*	502,042	133,717
7	Gujarat	259231	367113	60023	67740	464862	1218969	8,716,981	1,057,383
8	Haryana	838	102541	33520	15081	83745	235725	2,975,418	720,441
9	Himachal Pradesh	49582	42877	5714	21993	2771	122937	283,081	95,791
10	Jammu & Kashmir	35109	43238	23480	15939	10958	128724	407,928	172,071
11	Jharkhand	156196	160778	12256	259542	160778	766936*	1,738,566	174,320
12	Karnataka	200316	177179	53874	115410	237295	887999^^	6,404,905	1,005,291
13	Kerala	68777	251471	383229	84792	491879	1394162^^	2,900,238	826,538
14	Madhya Pradesh	105025	72029	35105	99241	67488	378888	5,165,023	314,464
15	Maharashtra	374705	521692	83816	168307	626332	1774852	11,181,762	1,790,259
16	Manipur	7639	2871	2769	1595	7266	22140	139,650	15,113
17	Meghalaya	21372	4955	4007	12607	5348	48290*	51,709	37,981
18	Mizoram	3507	4003	1036	6465	2219	17230	39,902	10,382
19	Nagaland	65729	16345	5041	6428	13403	106946	55,208	47,984
20	Odisha	109804	86729	19335	41828	57456	315152	2,302,694	133,529
21	Punjab	149367	20186	27146	15837	57879	270415	3,956,279	484,064
22	Rajasthan	198089	148892	73257	67542	112986	600766	5,230,454	455,924
23	Sikkim	3214	795	524	7569	0	12102	6,308	8,905
24	Tamil Nadu	404652	280388	123999	209689	238682	1257410	11,156,048	1,204,156
25	Tripura	10432	6199	2194	3199	15749	37773	97,895	10,095
26	Uttarakhand	18026	16393	7527	18660	11622	72229*	583,927	119,859
27	Uttar Pradesh	137436	131181	28124	38629	123706	459076	9,493,677	873,251
28	West Bengal	222716	$	31996	73696	48370	376778	1,864,861	435,352
	Total States (1)	**3146473**	**2756913**	**1126376**	**1538356**	**3422129**	**12487890**	**86,182,479**	**11,436,114**
1	A & N Islands	2366	0	825	489	2950	6630	43,762	10,988
2	Chandigarh	2210	15466	3062	3017	0	23755	686,316	239,014
3	Dadra & Nagar Haveli	8048	2761	295	142	605	11851	38,635	17,507
4	Daman & Diu	3112	3130	461	45	1173	7921	43,991	19,332
5	Delhi	85384	140872	43250	55530	182784	507820	4,107,912	1,956,574
6	Lakshadweep	0	494	0	105	321	920	6,206	64
7	Puducherry	7745	7799	2373	1892	5124	24933	488,490	69,813
	UT's (2)	**108865**	**170522**	**50266**	**61220**	**192957**	**583830**	**5,415,312**	**2,313,292**
	Grand Total (1+2)	**350491**	**2927435**	**1176642**	**1599576**	**3615086**	**13071720**	**91,597,791**	**13,749,406**

Contd.

Statement 5.13 : Status of registered motor vehicles

(b) State-wise Category-wise Registered motor vehicles

(as on 31st March,2010) (in numbers)

Sl. No.	States/UT	Jeeps	Omni Buses	Tractors	Trailers	Others	Total Non-Tpt.	Grand Total (Transport +Non- Tpt.)
1	Andhra Pradesh	29,587	49,130	261,509	229,149	11,480	7,873,194	8,923,139
2	Arunachal Pradesh##	2,284	0	345	155	180	16,671	22,101
3	Assam	20,742	1,225	16,177	10,805	25,653	1,137,984	1,383,721
4	Bihar	66,132	...	175,500	104,272	15,572	2,156,120	2,356,986
5	Chhattisgarh	13,277	30,879	91,621	72,839	6,936	2,288,647	2,435,773
6	Goa	^	0	2,562	...	4,587	642,908	727,042
7	Gujarat	152,985	...	410,516	278,921	36,818	10,653,604	11,872,573
8	Haryana	115,852	0	490,828	0	4,408	4,306,947	4,791,825
9	Himachal Pradesh	20,693	634	9,292	1,836	4,077	415,404	538,341
10	Jammu & Kashmir	11,601	1,219	11,640	2,861	2,861	610,181	738,905
11	Jharkhand	52,155	...	35,431	...	...	2,000,472	2,767,408
12	Karnataka	40,225	105,503	318,844	215,575	65,634	8,155,977	9,043,976
13	Kerala	137,547	3,748	10,665	3,653	121,101	4,003,490	5,397,652
14	Madhya Pradesh	41,396	...	458,445	215,333	17,027	6,211,688	6,590,576
15	Maharashtra	373,958	18,752	331,694	270,078	27,066	13,993,569	15,768,421
16	Manipur	11,472	1,524	3,155	680	718	172,312	194,452
17	Meghalaya	14,328	1	609	2,713	2,482	109,823	158,113
18	Mizoram	8,813	0	227	90	3,812	63,226	80,456
19	Nagaland	25,888	497	2,260	1,020	929	133,786	254,483 &
20	Odisha	36,726	3,451	64,354	55,370	20,556	2,616,680	2,931,832
21	Punjab	54,798	...	497,551	966	10,181	5,003,839	5,274,254
22	Rajasthan	203,692	...	605,539	69,287	...	6,564,896	7,165,662
23	Sikkim	4,869	1,393	49	0	...	21,524	33,626
24	Tamil Nadu	57,417	19,957	150,432	62,260	153,853	12,804,123	14,061,533
25	Tripura	12,340	...	976	326	714	122,346	160,119
26	Uttarakhand	8,103	1,289	42,921	1,508	1,536	759,143	831,372
27	Uttar Pradesh	159,128	18,740	953,959	15,373	15,145	11,529,273	11,988,349
28	West Bengal	^	...	51,233	...	18,914	2,370,360	2,747,138
	Total States (1)	**1,676,008**	**257,942**	**4,998,334**	**1,615,070**	**572,240**	**106,738,187**	**119,239,828**
1	A & N Islands	^	^	^	^	394	55,144	61,774
2	Chandigarh	...	130	149	0	...	925,609	949,364
3	Dadra & Nagar Haveli	549	20	152	77	41	56,981	68,832
4	Daman & Diu	477	42	300	195	84	64,421	72,342
5	Delhi	79,418	89,367	5,294	99	364	6,239,028	6,746,848
6	Lakshadweep	95	0	72	0	498	6,935	7,855
7	Puducherry	3,881	2,958	900	1,732	6,422	574,196	599,129
	UT's (2)	**84,420**	**92,517**	**6,867**	**2,103**	**7,803**	**7,922,314**	**8,506,144**
	Grand Total (1+2)	**1,760,428**	**350,459**	**5,005,201**	**1,617,173**	**580,043**	**114,660,501**	**127,745,972**

Source : Road Transport year book-2009-10 & 2010-11, Transport Research Wing, Ministry of Road Transport & Highways

Statement 5.13 : Status of registered motor vehicles

(b) State-wise Category-wise Registered motor vehicles

(As on 31st March, 2015) (in numbers)

Sl. No.	States/UT	Transport						Non-Transport	
		Multi-axled/Articulated Vehicles/Trucks & Lorries	Light Motor Vehicles (Goods)	Buses	Taxies	Light Motor Vehicles (Passengers)	Total Transport	Two Wheelers	Cars
1	Andhra Pradesh	145,466	167,612	38,269	73,324	397,126	**1013986***	6,147,523	454,054
2	Arunachal Pradesh ^^	...	...	...	...	...	**...**	...	...
3	Assam	133,617	109,792	19,846	53,859	91,936	**409,050**	1,520,260	508,135
4	Bihar	91,823	31,921	29,384	85,119	202,385	**440,632**	3,489,796	235,762
5	Chhattisgarh	110,629	76,331	52,783	20,960	33,100	**293,803**	3,471,643	226,044
6	Goa	43,402	15,840	11,224	17,616	4,186	**115807***	743,037	216,414
7	Gujarat	352,225	589,984	76,435	108,268	678,364	**1,805,276**	13,704,879	2,008,748
8	Haryana **	348,732	167,901	50,207	40,444	144,334	**751638#**	4,988,518	1,420,621
9	Himachal Pradesh	76,650	66,358	14,358	34,796	5,907	**198,069**	545,152	245,106
10	Jammu & Kashmir	45,802	67,077	29,695	37,092	19,777	**199,443**	644,458	338,475
11	Jharkhand	67,674	50,085	8,323	30,031	63,743	**219,856**	1,522,228	191,006
12	Karnataka	274,971	331,381	80,911	205,174	380,790	**1404626***	10,644,368	1,741,831
13	Kerala	89,571	409,745	414,748	150,361	731,417	**1912392#***	5,722,224	1,690,690
14	Madhya Pradesh	150,921	146,267	45,976	174,916	122,095	**640,175**	8,831,709	637,626
15	Maharashtra	491,582	868,632	120,750	163,390	695,619	**2,339,973**	18,603,835	3,113,773
16	Manipur	10,852	7,827	3,807	6,484	19,688	**48,658**	207,540	27,523
17	Meghalaya	28,340	11,486	5,120	21,504	19,542	**85,992**	85,996	68,236
18	Mizoram	5,324	8,723	1,231	10,720	4,548	**30,546**	90,122	19,276
19	Nagaland	90,458	20,149	5,436	8,163	17,065	**141,271**	75,158	62,346
20	Odisha	148,519	154,516	25,001	91,902	105,951	**525,889**	4,126,257	272,976
21	Punjab ^^	125,898	75,860	30,160	18,539	66,734	**317,191**	4,729,594	616,549
22	Rajasthan	472,365	91,787	97,650	123,275	167,504	**952,581**	9,272,233	814,079
23	Sikkim	3,371	1,364	272	12,458	...	**17,465**	3,633	14,300
24	Tamil Nadu	526,485	419,747	171,581	349,029	361,045	**1,827,887**	18,097,975	1,972,354
25	Telangana	129,600	199,156	43,422	82,296	296,524	**751001#**	5,815,937	878,981
26	Tripura	8,082	8,690	2,484	12,076	18,866	**50,198**	200,721	20,760
27	Uttarakhand	27,831	34,958	10,716	32,830	16,128	**122473#**	1,336,114	294,481
28	Uttar Pradesh	217,609	294,022	51,866	98,303	252,552	**914353#**	17,398,458	1,572,217
29	West Bengal	212,623	283,167	56,878	125,162	84,089	**761,919**	5,280,246	1,001,618
	TOTAL STATES (1)	**4,430,422**	**4,710,378**	**1,498,533**	**2,188,091**	**5,001,015**	**18,292,150**	**147,299,614**	**20,663,981**
	UTs								
1	A & N Islands	2,638	0	1,039	489	4,406	**8,572**	72,800	20,370
2	Chandigarh	1,815	8,216	2,561	3,908	2,659	**19,159**	395,565	261,752
3	D & N Haveli	9,887	4,355	714	165	654	**15,775**	66,874	28,124
4	Daman & Diu	4,191	1,706	566	66	1,280	**7,809**	64,140	26,961
5	Delhi	7,503	145,903	19,695	62,405	11,301	**354665***	5,698,242	2,730,071
6	Lakshadweep	0	1,337	37	435	566	**2,375**	10,943	180
7	Puducherry	4,603	11,510	4,251	1,060	6,431	**27,855**	689,568	76,547
	TOTAL UTs (2)	**30,637**	**173,027**	**28,863**	**68,528**	**27,297**	**436,210**	**6,998,132**	**3,144,005**
	GRAND TOTAL (1+2)	**4,461,059**	**4,883,405**	**1,527,396**	**2,256,619**	**5,028,312**	**18,728,360**	**154,297,746**	**23,807,986**

Contd.

Statement 5.13 : Status of registered motor vehicles

(b) State-wise Category-wise Registered motor vehicles

(As on 31st March, 2015)

(In numbers)

Sl. No.	States/UT	Jeeps	Omni Buses	Tractors	Trailers	Others	Total Non-Tpt.	Grand Total (Transport +Non- Tpt.)
1	Andhra Pradesh	10,878	21,875	126,862	93,155	13,929	**6,868,276**	**7,882,262**
2	Arunachal Pradesh ^^	...	...	...	...	...	**...**	**151,279**
3	Assam	16,128	1,555	35,082	19,527	0	**2,100,687**	**2,509,737**
4	Bihar	113,377	...	315,048	157,877	25,104	**4,336,964**	**4,777,596**
5	Chhattisgarh	20,251	6,112	171,648	107,423	17,003	**4,020,124**	**4,313,927**
6	Goa	^	0	3,562	##	4,848	**967,861**	**1,083,668**
7	Gujarat	180,556	...	610,077	353,613	57,418	**16,915,291**	**18,720,567**
8	Haryana **	148,479	2,433	603,663	0	12,198	**7,175,912**	**7,927,550**
9	Himachal Pradesh	17,612	2,806	28,367	235	40,057	**879,335**	**1,077,404**
10	Jammu & Kashmir	26,288	2,687	23,427	3,356	6,137	**1,044,828**	**1,244,271**
11	Jharkhand	61,892	4,767	37,811	27,287	759	**1,845,750**	**2,065,606**
12	Karnataka	45,257	123,892	442,705	301,049	81,233	**13,380,335**	**14,784,961**
13	Kerala	137,547	3,872	13,045	3,656	164,894	**7,735,928**	**9,648,320**
14	Madhya Pradesh	58,792	0	714,844	227,970	30,011	**10,500,952**	**11,141,127**
15	Maharashtra	496,255	19,352	572,395	372,054	44,538	**23,222,202**	**25,562,175**
16	Manipur	16,492	1,770	4,210	950	0	**258,485**	**307,143**
17	Meghalaya	19,197	65	850	2,847	3,921	**181,112**	**267,104**
18	Mizoram	5,735	0	315	0	5,492	**120,940**	**151,486**
19	Nagaland	31,282	497	2,483	1,030	3,393	**176,189**	**333761&**
20	Odisha	47,379	3,668	113,384	99,305	29,737	**4,692,706**	**5,218,595**
21	Punjab ^^	63,527	...	517,743	1,172	17,163	**5,945,748**	**6,262,939**
22	Rajasthan	357,188	....	907,139	75,709	0	**11,426,348**	**12,378,929**
23	Sikkim	7,509	0	186	0	117	**25,745**	**43,210**
24	Tamil Nadu	60,036	20,246	226,124	77,426	236,621	**20,690,782**	**22,518,669**
25	Telangana	15,035	45,002	119,047	68,108	151,605	**7,093,715**	**7,844,716**
26	Tripura	5,604	0	554	706	3,591	**231,936**	**282,134**
27	Uttarakhand	13,333	1,641	51,410	5,923	1,662	**1,704,564**	**1,827,037**
28	Uttar Pradesh	491,013	28,594	1,197,985	15,166	17,745	**20,721,178**	**21,635,531**
29	West Bengal	10,276	148,602	125,526	21,106	53,948	**6,641,322**	**7,403,241**
	TOTAL STATES (1)	**2,476,918**	**439,436**	**6,965,492**	**2,036,650**	**1,023,124**	**180,905,215**	**199,364,945**
	UTs							
1	A & N Islands	^	^	^	^	559	**93,729**	**102,301**
2	Chandigarh	^	...	0	##	...	**657,317**	**676,476**
3	D & N Haveli	606	21	96	62	98	**95,881**	**111,656**
4	Daman & Diu	610	51	409	221	178	**92,570**	**100,379**
5	Delhi	67,144	5	100	0	493	**8,496,055**	**8,850,720**
6	Lakshadweep	132	0	102	0	499	**11,856**	**14,231**
7	Puducherry	1,321	3,877	2,367	722	324	**774,726**	**802,581**
	TOTAL UTs (2)	**69,813**	**3,954**	**3,074**	**1,005**	**2,151**	**10,222,134**	**10,658,344**
	GRAND TOTAL (1+2)	**2,546,731**	**443,390**	**6,968,566**	**2,037,655**	**1,025,275**	**191,127,349**	**210,023,289**

Source: Road Transport Year Book 2013-14 & 2014-15 (Annexure 3.5) # : Includes Motor Cycles on hire ## : Included in tractors ...: Not reported. ^ : Included in cars. ^^ : Data relates to 2011-12 **: Data relates to 2013-14 *: includes other vehicles not covered in item numbers I to VII of 'Transport Vehicles'. &: Includes 16301 Government Vehicles(for which category-wise break-up is not available.)

Statement 5.14: Registered motor vehicles in million plus cities of India

(in number)

Sl. No.	Name of City	2011			2012		
		Transport	Non- Transport	Total	Transport	Non- Transport	Total
1	Agra	29994	610064	640058	32,528	671,233	703,761
2	Ahmedabad						
3	Allahabad	23711	659303	683014	28,211	709,529	737,740
4	Aurangabad	27317	225482	252799	28,918	251,697	280,615
5	Bengaluru#	368953	3422365	3791318	398,939	3,757,193	4,156,132
6	Bhopal	51714	703369	755083	56,612	771,957	828,569
7	Chandigarh						
8	Chennai	382592	3073197	3455789	405,421	3,361,873	3,767,294
9	Coimbatore	52470	1188626	1241096	61,065	1,325,064	1,386,129
10	Delhi	541620	6686051	7227671	280,469	7,069,651	7,350,120
11	Dhanbad*	25100	15812	40912	118,468 *	343,455	461,923
12	Durg Bhilai						
13	Ghaziabad	37673	432408	470081	42,790	482,181	524,971
14	Greater Mumbai	232766	1637545	1870311	238,730	1,789,770	2,028,500
15	Gwalior	35666	413591	449257	38,975	450,541	489,516
16	Hyderabad	347143	2685596	3032739	403,448	2,983,127	3,386,575
17	Indore	122399	1090566	1212965	135,057	1,202,899	1,337,956
18	Jabalpur	37914	521242	559156	41,975	563,513	605,488
19	Jaipur	143346	1550626	1693972	160,299	1,710,750	1,871,049
20	Jamshedpur*	43423	23465	66888	154,921 *	527,156	682,077
21	Jodhpur	70645	565496	636141	103,868	764,583	868,451
22	Kannur						
23	Kanpur	37693	964091	1001784	28,069	1,039,371	1,067,440
24	Kochi	58633	349889	408522	68,798	411,540	480,338
25	Kolkata*	67670	377048	444718	70,787	425,519	496,306
26	Kollam						
27	Kota	32406	440743	473149	53,281	899,250	952,531
28	Kozhikode						
29	Lucknow	35401	1175488	1210889	37,623	1,277,082	1,314,705
30	Madurai	53950	548902	602852	59,241	620,269	679,510
31	Malappuram						
32	Meerut	11177	411965	423142	13,817	406,124	419,941
33	Nagpur	58830	1098204	1157034	62,700	1,174,399	1,237,099
34	Nashik	35623	362202	397825	37,809	406,580	444,389
35	Patna	97758	559898	657656	82,469	660,420	742,889
36	Pune	183313	1910577	2093890	151,581	2,115,542	2,267,123
37	Raipur	46058	481249	527307	50,292	528,227	578,519
38	Rajkot						
39	Ranchi						
40	Srinagar	43438	140334	183772	45,740	155,266	201,006
41	Surat						
42	Tiruchirapalli	35632	421111	456743	39,910	481,468	521,378
43	Thiruvananthapur						
44	Thrissur						
45	Varanasi	39234	498782	538016	44,710	542,823	587,533
46	Vijayawada	70394	395890	466284	29,379	524,034	553,413
47	Vadodara						
48	Visakhapatnam	63085	553553	616638	72,533	610,822	683,355
	Total	**3,544,741**	**36,194,700**	**39,739,441**	**3,679,433**	**41,014,908**	**44,694,341**

Source: Transport Research Wing, Ministry of Road Transport & Highways .

Includes other vehicles which are not covered in 'Transport Vehicles'

* Includes motor cycles on hire

Contd.

Statement 5.14: Registered motor vehicles in million plus cities of India

(in number)

2013			2014			2015		
Transport	Non- Transport	Total	Transport	Non- Transport	Total	Transport	Non- Transport	Total
32,984	719210	752,194	34,552	790579	825,131	32,904	872,119	905,023
195,712	1599936	1,795,648	324,808	2871322	3,196,130	342,431	3,077,397	3,419,828
31805	714863	746,668	44094	773355	817,449	48,781	848,254	897,035
32621	276891	309,512	38473	323864	362,337	44,725	381,521	426,246
447040	4144136	4,591,176	488044#	4562013	5,050,057	533736#	5,025,994	5,559,730
61923	814757	876,680	67407	865396	932,803	73,807	1,006,670	1,080,477
35525	1070824	1,106,349	17913	612812	630,725	88,203	657,317	745,520
428244	3643735	4,071,979	439460	3914771	4,354,231	467,290	4,467,122	4,934,412
70212	1457830	1,528,042	73510	1575279	1,648,789	83,236	1,818,041	1,901,277
317963	7467320	7,785,283	334434#	7958323	8292757#	354665#	8,496,055	8,850,720
118478*	371945	490,423	54010	467172	521,182	58,723	504,703	563,426
21531	468196	489,727	37493	683248	720,741	41,080	727,842	768,922
38341	589438	627,779	40056	645300	685,356	44,230	707,373	751,603
244713	1942685	2,187,398	244618	2088188	2,332,806	266,932	2,304,272	2,571,204
41470	488283	529,753	37335	535918	573,253	39707*	577,974	617,681
181483	1858475	2,039,958	196700	2006225	2,202,925	204890*	2,163,928	2,368,818
148271	1342498	1,490,769	150515	1417499	1,568,014	163,003	1,549,699	1,712,702
45771	600709	646,480	48060	537320	585,380	50,628	587,591	638,219
157305	1804322	1,961,627	168556	1952457	2,121,013	170,440	2,078,800	2,249,240
155115*	527156	682,271	41805	378955	420,760	45,091	426,960	472,051
87337	705662	792,999	91999	761702	853,701	97,749	818,423	916,172
			28730	138118	166,848	30,387	158,110	188,497
31286	1112114	1,143,400	37412	1189720	1,227,132	40,793	1,420,737	1,461,530
78963	468191	547,154	82109	494139	576,248	84,641	521,048	605,689
178773	1099585	1,278,358	185305	1153889	1,339,194	191,541	1,210,097	1,401,638
			35790	209376	245,166	38,606	235,400	274,006
37477	516396	553,873	39298	557922	597,220	41,691	612,350	654,041
			47805	324739	372,544	50,121	362,183	412,304
40598	1383880	1,424,478	43108	1509647	1,552,755	47,878	1,661,784	1,709,662
76504	691235	767,739	77960	755391	833,351	71,460	883,433	954,893
			61481	195099	256,580	63,111	213,654	276,765
27655	384755	412,410	21284	437482	458,766	25,534	499,701	525,235
61023	1208654	1,269,677	62399	1211801	1,274,200	55,087	1,220,488	1,275,575
40635	448963	489,598	39894	500779	540,673	44,949	577,257	622,206
93573	735148	828,721	104078	837421	941,499	109,009	909,789	1,018,798
158040	2188843	2,346,883	136434	2048277	2,184,711	128,658	2,208,427	2,337,085
56057	582758	638,815	70965	908871	979,836	107,580	1,004,165	1,111,745
61324	765376	826,700	64358	823423	887,781	69,358	910,065	979,423
209041*	475413	684,454	4940	68633	73,573	75,704	471,332	547,036
48475	169932	218,407	48269	170068	218,337	50,215	185,399	235,614
102724	1138129	1,240,853	178377	2065507	2,243,884	188,474	2,270,637	2,459,111
44479	548566	593,045	46613	602025	648,638	52,897	710,499	763,396
			60593	474033	534,626	64,635	507,321	571,956
			49709	279757	329,466	51,727	303,764	355,491
49661	583418	633,079	52972	641710	694,682	61,194	707,575	768,769
69484	447435	516,919	73237	495139	568,376	75,675	534,646	610,321
85193	828730	913,923	90839	888976	979,815	86,248	955,570	1,041,818
55968	586553	642,521	62409	627863	690,272	65,494	665,378	730,872
4,500,777	**48,972,945**	**53,473,722**	**4780210**	**55331503**	**60,111,713**	**5,224,918**	**61,018,864**	**66,243,782**

Statement 5.15 : Cargo Movement on Waterways

STRETCH		2013-14	2014-15	2015-16	2016-17	Type of cargo moved
National Waterways-1 The Ganga	**Lakh Tonne**	33.49	50.5	62.37	45.05	Cement, Fly Ash, Iron Ore Fines, Coal, Steel Shed, Tyres, Iron fines, Iron Ingots, Galvanized Steel Plain Sheet, Stone Chips, Furnace oil, HF HSD, Lube Oil, Boulder, Pulses, Aluminium block, Sand, Clips, Ship block, Log, Pulses, Manganese Ore, Petroleum Coke, Cooking coal, Rock Phosphate, Timber, Peas, Slag oil, Non cooking coal ODC & Etc.
	TKM (in lakh)	18512	22636	26995	24598	
National Waterways-2 * The Brahmaputra	**Lakh Tonne**	24.75	24.92	25.84	25.91	Transformers of power grid, Transmission equipments ,Goods, Passengers,Bicycle, bikes,live stockBamboo, Bamboo products, Coal, Plant & machinery, Cement, Building material, fertilizer, Food grains, Milk & other essential commodities etc.
	TKM (in lakh)	594	508	505	503	
National Waterways-3 West Coast Canal	**Lakh Tonne**	10.66	8.44	10.61	10.33	Phosphoric Acid & Stone aggregates, Sulphur, Zinc, Furnace oil, Rock Phosphate, Various commodities in containers, Furnance oil-bunkering, POL (bunkering to ships), Potable water, Lime shell with clay and other impurities, Liquid Effluent.
	TKM (in lakh)	116	92	105	109	
Sub Total of National Waterways(1+2+3)	**Lakh Tonne**	**68.90**	**83.86**	**98.82**	**81.29**	
	TKM (in lakh)	**19222**	**23236**	**27605**	**25210**	
The GOA Waterways-4	**Lakh Tonne**	5.99	7.94	49.75	157.68	Iron ore, iron ore pellets, coal & pig iron.
	TKM (in lakh)	270	340	1987	7884	
Maharashtra Waterways-5	**Lakh Tonne**	247.74	273.57	288.49	348.9	Coal, cement, bauxite, iron ore pellets, stone, HR steel, project cargo and related raw material, Sulphur, rock phosphate, cement, lime stone & clinker etc.
	TKM (in lakh)	4691	4892	5005	6428	
Grand Total(1+2+3+4+5)	**Lakh Tonne**	**322.63**	**365.37**	**437.06**	**587.87**	
	TKM (in lakh)	**24183**	**28468**	**34597**	**39522**	

Source: Statistics of Inland Water Transport, Ministry of Shipping

Note: 1. These figures are collected by IWAI field offices from IWT operators.

* Provisional data has been considered in absence of cargo data received from IWTD, Government of Assam for National Waterways-II for the year 2015-16 and 2016-17.

3. Cargo handled in Kolkata-Bangladesh-Kolkata route is included in the traffic on National Waterway No.I. The route is a link between NW-I & NW-II through Bangladesh

MT : Million tonne TKM : Tonne Kms BTKM : Billion Tonnes Km

Statement 5.16 : Statistics related to Indian Shipping

('000 metric tonnes)

Year	Coastal			Overseas			Total		
	No. of Vessels	Gross Regis-tered tonnage	Average Gross Regis-tered tonnage	No. of Vessels	Gross Regis-tered tonnage	Average Gross Regis-tered tonnage	No. of Vessels	Gross Regis-tered tonnage	Average Gross Regis-tered tonnage
1980	58	253	4.4	325	5426	16.7	383	5679	14.8
1985	95	296	3.1	273	5654	20.7	368	5950	16.2
1990	162	523	3.2	256	5504	21.5	418	6027	14.4
1991	169	561	3.3	246	5378	21.9	415	5939	14.3
1992	187	640	3.4	254	5648	22.2	441	6288	14.3
1993	202	642	3.2	241	5625	23.3	443	6267	14.1
1994	206	681	3.3	231	5665	24.5	437	6346	14.5
1995	219	698	3.2	251	6304	25.1	470	7002	14.9
1996	231	705	3.1	253	6347	25.1	484	7052	14.6
1997	232	654	2.8	244	6224	25.5	476	6878	14.4
1998	247	654	2.6	237	6131	25.9	484	6785	14.0
1999	269	680	2.5	241	6373	26.4	510	7053	13.8
2000	312	709	2.3	237	6244	26.3	549	6953	12.7
2001	329	731	2.2	228	6237	27.4	557	6968	12.5
2002	424	805	1.9	193	5402	28.0	617	6207	10.1
2003	429	806	1.9	196	5817	29.7	625	6623	10.6
2004	454	808	1.8	215	6893	32.1	669	7701	11.5
2005	485	816	1.7	236	7427	31.5	721	8243	11.4
2006	526	841	1.6	250	7576	30.3	776	8417	10.8
2007	573	893	1.6	277	8136	29.4	850	9030	10.6
2008	616	964	1.6	296	8346	28.2	912	9310	10.2
2009	662	980	1.5	312	8499	27.2	974	9479	9.7
2010	700	1013	1.4	340	9152	26.9	1040	10165	9.8
2011	750	1048	1.4	372	10013	26.9	1122	11061	9.9
2012	804	1086	1.4	350	9331	26.7	1154	10417	9.0
2013	835	1135	1.4	364	9248	25.0	1199	10383	8.7
2014	846	1218	1.4	358	9090	25.0	1204	10309	8.6
2015	873	1502	1.7	373	9006	24.1	1246	10508	8.4
2016	898	1518	1.7	403	9907	24.6	1301	11425	8.8
2017	928	1469	1.6	443	10883	24.6	1371	12352	9.0

Source: Indian Shipping Statistics 2017, Ministry of Shipping

Statement 5.17: Statistics related to Indian Railways

	1950-51	1960-61	1970-71	1980-81	1990-91	2000-01	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17 (P)
1. Route Kilometres (000's)													
Electrified	0.4	0.8	3.7	5.4	10.0	14.9	19.6	20.3[b]	20.9[b]	21.6[b]	22.2[b]	23.6[b]	25.4[b]
Total	53.6	56.2	59.8	61.2	62.4	63.0	64.4	64.6[b]	65.4[b]	65.8[b]	66.0[b]	66.7[b]	67.4[b]
2. Originating traffic (million tonnes)													
Revenue Earning	73.2	119.8	167.9	195.9	318.4	473.5	921.7[a]	969.1[a]	1008.1[a]	1051.6[a]	1095.3[a]	1101.5[a]	1106.15[a]
Total Traffic	93.0	156.2	196.5	220.0	341.4	504.2	926.4[a]	975.2[a]	1014.2[a]	1058.8[a]	1101.1[a]	1108.6[a]	1110.95[a]
3. Goods carried (billion tonne km.)													
Revenue Earning	37.6	72.3	110.7	147.7	235.8	312.4	625.7[a]	667.6	691.7[a]	665.8[a]	681.7[a]	654.5[a]	620.18[a]
Total Traffic	44.1	87.7	127.4	158.5	242.7	315.5	626.5[a]	668.6	692.6[a]	666.7[a]	682.6[a]	655.6[a]	620.86[a]
4. Earnings from goods carried (Rs. Crore)	139.3	280.5	600.7	1550.9	8247.0	23045.4	60687.1[a]	67761.4[a]	83478.8[a]	91570.9[a]	103015.2[a]	106940.6[a]	102027[a]
5. Average Lead: all goods traffic (Km)	470	561	648	720	711	626	676	686	683	630	620	591	559
6. Average rate/tonne km. (paise)	3.2	3.9	5.4	10.5	35.0	73.8	97.0	101.5	120.7	137.5	151.2	163.4	164.51
7. Passengers Originating (million)	1284	1594	2431	3613	3858	4833	7651.1	8224.4[b]	8420.7[b]	8397.1[b]	8224.1[b]	8107.3[b]	8116.1[b]
8. Passengers kilometres (billion)	66.5	77.7	118.1	208.6	295.6	457	978.5	1046.5[b]	1098.1[b]	1158.7[b]	1147.2[b]	1143.0[b]	1149.83[b]
9. Passengers Earnings (Rs. Crore)	98.2	131.6	295.5	827.5	3144.7	10515.1[b]	25792.6[b]	28246.4[b]	31322.8[b]	36532.3[b]	42189.6[b]	44283.3[b]	46280.4[b]
10. Average lead : passenger traffic (km)	51.8	48.7	48.6	57.7	76.6	94.6	127.9	127.2[b]	130.4[b]	135.8[b]	139.5[b]	141.0[b]	141.7[b]
11. Average rate per passenger - kilometre (paise)	1.5	1.7	2.5	4.0	10.6	22.9	26.3	27.0[b]	28.5[b]	31.5[b]	36.8[b]	38.7[b]	40.3[b]

Source : Ministry of Railways

Notes: a: Excluding Konkan Railways Corporation Limited Loading b: Includes Metro Railway/Kolkata. P: Provisional

Statement 5.18: Anuual total Domestic Traffic and operating statistics of Indian Air Transport carriers

Year	Aircraft flow		Passengers		Available seat Kms. (Million)	Pax. load factor (%)	Cargo carried (Tonne)*			Tonne Kms. Performed (Million)				Available tonne Kms. (Million)
	Hours (No)	Kms. (000)	Carried (No)	Kms. performed (Million)			Frieght	Mail	Total	Pax	Fright	Mail	Total	
2009-10	131403	66380	6439640	6576	9591	68.6	66706.0	15247.0	81953.0	559.0	75.0	16.0	650.0	1032.0
2010-11	140220	71971	7370854	7352	10485	70.1	76838.0	12584.0	89422.0	623.0	90.0	14.0	728.0	1136.0
2011-12	140247	75644	7878905	8005	11004	72.7	57314.0	10935.0	68249.0	681.9	65.7	11.9	759.5	1183.7
2012-13	156111	89844	9683582	9769	14281	68.4	67409.0	0.0*	67409.0	897.2	77.3	13.5	987.9	1674.7
2013-14	176293	92022	10355226	10419	14698	70.9	81129.0	0.0*	81129.0	957.8	91.9	15.8	1065.5	1701.5
2014-15	1012899	528582	70083961	67023	84805	79.0	564539.8	27379.0	591918.8	5841.8	114384.2	27.3	120253.4	166905.8
2015-16	1159684	624770	85197675	80958	97713	82.9	590793.7	32770.9	623564.6	7037.2	124416.1	34.0	131487.2	191733.0
2016-17	1946015	1214419	124562836	170085	208190	81.7	891126.8	39954.8	931081.6	15080.5	133022.7	61.3	148164.5	221350.6

Source: Air Transport Statistics,Directorate General of Civil Aviation, Ministry of Civil Aviation
NOTE:- Load factors have been calculated as per actuals not as rounded figures
* Included in freight.

Statement 5.19: State-wise cases & deaths - Cholera

Sl. No.	Affected States/UTs	2010		2011		2012		2013		2014		2015		2016 (P)	
		Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
1	Andhra Pradesh	178	0	227	0	109	0	31	0	0	0	0	0	0	0
2	Arunachal Pradesh	0	0	0	0	0	0	0	0	0	0	0	0	9	0
3	Assam	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Bihar	-	-	0	0	0	0	0	0	0	0	0	0	0	0
5	Chhattisgarh	12	0	1	0	13	0	2	0	20	0	7	0	55	0
6	Delhi	77	0	380	7	111	0	25	0	65	1	91	0	228	0
7	Goa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Gujarat	132	1	79	0	71	0	327	1	158	0	52	0	88	0
9	Haryana	105	0	1	0	16	0	16	0	7	0	0	0	0	0
10	Himachal Pradesh	5	0	0	0	3	0	0	0	0	0	0	0	0	0
11	Jammu & Kashmir	2976	3	0	0	0	0	0	0	0	0	0	0	0	0
12	Jharkhand	-	-	0	0	0	0	9	0	0	0	36	0	5	0
13	Karnataka	301	3	166	0	175	0	200	0	32	0	14	2	29	1
14	Kerala	2	0	19	1	4	1	23	0	3	0	0	0	7	0
15	Madhya Pradesh	3	0	0	0	12	0	8	0	17	0	104	0	94	1
16	Maharashtra	384	1	210	2	317	0	293	1	252	2	213	1	107	0
17	Manipur	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Meghalaya	-	-	0	0	0	0	0	0	1	1	0	0	0	0
19	Mizoram	0	0	0	0	0	0	0	0	0	0	26	0	17	0
20	Nagaland	0	0	0	0	0	0	0	0	0	0	0	0	6	0

Contd.

Statement 5.19: State-wise cases & deaths - Cholera

Sl. No.	Affected States/UTs	2010		2011		2012		2013		2014		2015		2016 (P)	
		Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
21	Odisha	2	0	0	0	0	0	0	0	0	0	2	0	0	0
22	Punjab	43	1	9	0	0	0	0	0	0	0	0	0	0	0
23	Puduchery	0	0	0	0	15	0	3	0	3	0	1	0	0	0
24	Rajasthan	37	0	0	0	0	0	5	0	56	0	3	0	2	0
25	Sikkim	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	Tamil Nadu	156	0	580	0	523	0	42	3	14	0	15	0	8	0
27	Telangana											0	0	0	0
28	Tripura	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	Uttrakhand	20	0	9	0	0	0	1	0	0	0	0	0	0	0
30	Uttar Pradesh	-	-	0	0	0	0	0	0	0	0	47	0	4	0
31	West Bengal	570	0	652	0	181	0	120	0	173	0	155	0	157	0
32	Andaman & Nicobar Island	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	Chandigarh	-	-	0	0	0	0	0	0	15	0	133	0	10	0
34	Dadra & Nagar Haveli	1	0	8	0	33	0	25	0	28	1	14	1	15	1
35	Daman & Diu	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	Lakshadweep	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	**5004**	**9**	**2341**	**10**	**1583**	**1**	**1130**	**5**	**844**	**5**	**913**	**4**	**841**	**3**

Source: National Health Profile of India,Central Bureau of Health Intelligence, MOHFW.
P: Provisional
Note: 10 districts of Telangana is included in Andhra Pradesh till July 2014

Statement 5.20: State-wise cases and deaths - Acute Diarrhoeal Disease

Sl. No.	State/UT	2010		2011		2012		2013		2014		2015		2016(P)	
		Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
1	Andhra Pradesh**	2291375	214	2235614	107	2092340	100	1855496	110	1332145	10	1122740	5	1194005	11
2	Arunachal Pradesh	19104*	3	32228	11	44570	7	30756	3	12657	5	10834	4	11715	2
3	Assam	75681	0	96816	16	134295	147	105876	147	83373	73	128392	121	88736	282
4	Bihar	-	-	130276*	0	493559	8	550281	24	550038	24	455125	36	392224	8
5	Chhattisgarh	51480*	2	64575	5	108238	26	104966	37	115561	32	132278	13	157064	33
6	Delhi	115478	89	102983	62	136567	98	129367	62	120618	77	157445	96	135907	109
7	Goa	16417	5	15146	2	13696	1	16485	0	16097	4	13204	1	14245	4
8	Gujarat	357922	3	367450	0	410508	7	427523	8	504857	3	567123	3	641451	0
9	Haryana	215717	43	224223	21	215111	27	168527	27	197898	8	190390	4	224780	14
10	Himachal Pradesh	284548	28	310227	51	338708	58	349904	56	350459	52	334168	41	310789	56
11	Jammu Division	324255	4	342670	0	550645	2	381062	1	333498	0	284415	2	330530	0
	Kashmir Division	169883	1	202041	0			210169	0	181515	0	188428	0	203811	0
12	Jharkhand	58767	0	98258	1	72170	6	81045	4	81451	17	81934	0	93547	0
13	Karnataka	583103	62	591989	49	582347	84	545794	81	810781	12	832356	13	930369	4
14	Kerala	373945	2	260938	0	360743	10	372440	12	402106	9	428374	2	476686	15
15	Madhya Pd.	305438	107	290705	92	488743	91	535012	89	768021	112	740690	74	740236	122
16	Maharashtra	813445	12	507046	4	457001	1	527115	0	664014	4	877638	27	1051445	52
17	Manipur	13869	12	17605	39	27469	56	25333	37	29954	32	29159	23	33193	21
18	Meghalaya	181411	16	148801	20	201819	19	186023	12	197024	29	167691	32	165404	29
19	Mizoram	16148	12	16192	11	15957	7	13518	12	14201	10	14215	11	13602	12

Contd.

Statement 5.20: State-wise cases and deaths - Acute Diarrhoeal Disease

Sl. No.	State/UT	2010		2011		2012		2013		2014		2015		2016(P)	
		Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
20	Nagaland	36535	0	30458	1	20939	0	21672	0	22301	0	15511	0	15062	0
21	Odisha	681659	104	632493	143	743493	235	656838	217	767575	190	782151	139	775824	103
22	Punjab	204936	39	190022	15	197059	27	183533	13	170438	22	179211	37	195281	44
23	Puducherry	82659	5	80766	3	96210	21	79751	28	87248	11	92599	2	92379	5
24	Rajasthan	223106	11	227571	7	508512	12	545293	18	676832	17	810518	13	897209	7
25	Sikkim	55223	2	44094	2	53516	0	42410	1	39983	2	53295	3	46289	0
26	Tamil Nadu	455668	49	210074	24	199930	17	278701	23	250264	14	308358	8	367815	9
27	Telangana											963573	20	871497	17
28	Tripura	119945	88	109777	83	98417	22	92826	17	80388	22	88064	5	95278	6
29	Uttarakhand	431893	164	554770	185	740328	254	84792	12	90428	14	108974	6	110942	7
30	Uttar Pradesh	100065	42	79643	26	101927	21	828367	272	754582	301	814481	320	1066342	303
31	West Bengal	1970448	398	1854651	288	2033180	280	1830310	302	1896182	200	1798754	196	2045451	192
32	A& N Island	28028	8	19679	0	33513	3	29391	0	23947	2	22398	0	23547	0
33	Chandigarh	-	-	42615	0	38218	0	44664	2	39277	29	45284	90	49891	61
34	D&N Haveli	69265	1	81322	1	74007	0	62259	0	63337	0	51195	4	43280	12
35	Daman & Diu	8169	0	12638	0	12559	0	8615	2	12831	0	18169	2	13062	0
36	Lakshadweep	6742	0	4693	0	5461	0	7496	0	6750	0	4472	0	4387	0
	Total	**10742327**	**1526**	**10231049**	**1269**	**11701755**	**1647**	**11413610**	**1629**	**11748631**	**1337**	**12913606**	**1353**	**13923275**	**1540**

Source: National Health Profile of India,Central Bureau of Health Intelligence, MOHFW.
* : Data of only small number of districts
- : Not Reported
Note: 10 districts of Telangana is included in Andhra Pradesh till July 2014

Statement 5.21: State-wise cases and deaths - Enteric Fever (Typhoid)

Sl. No.	State/UT	2010		2011		2012		2013		2014		2015		2016(P)	
		Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
1	Andhra Pradesh**	170763	5	180297	6	279816	37	256458	6	186446	5	146385	0	170249	0
2	Arunachal Pradesh*	5715	10	7885	9	11821	10	7359	4	4512	3	4476	10	4574	1
3	Assam	4140	0	4541	5	12016	10	6521	0	5328	29	11333	9	19328	0
4	Bihar*	-	-	14787	0	142341	3	261791	2	283679	4	265469	1	204366	2
5	Chhattisgarh*	38532	0	42115	1	54417	6	27457	2	32617	1	47970	1	74632	8
6	Delhi	32542	60	42976	55	47957	71	32691	29	27339	14	30698	16	30015	55
7	Goa	431	0	285	0	290	0	355	0	573	0	1603	1	724	0
8	Gujarat	9778	0	14371	0	24325	0	22962	1	29505	0	35362	1	45970	0
9	Haryana	22361	2	25469	1	34427	1	27115	0	29990	1	31965	0	36442	0
10	Himachal Pradesh	24417	3	28074	2	40041	3	37128	2	48786	6	40639	6	38093	7
11	Jammu Division	69713	1	59465	0	68157	0	47563	0	36269	1	32182	0	29531	0
	Kashmir Division	21134	0	22882	0			23296	0	21268	0	20177	0	17373	0
12	Jharkhand	35872	0	27009	3	19624	39	24806	7	36663	7	28330	4	41731	0
13	Karnataka	34296	6	38727	2	55163	1	61485	9	92959	1	85837	1	97493	1
14	Kerala	4621	1	3322	0	4670	1	4325	3	2269	0	2862	0	2038	0
15	Madhya Pradesh	33792	25	32490	20	68280	29	114578	28	155190	25	125737	8	129998	21
16	Maharashtra	94363	0	50095	1	71094	2	81458	1	102299	0	130809	0	137617	0
17	Manipur	3859	0	5498	7	13731	5	10927	17	10636	10	5422	0	4942	2
18	Meghalaya	8169	1	9235	2	6916	10	9134	1	10395	8	13459	0	14128	0
19	Mizoram	1115	0	2270	1	2062	1	2765	3	2758	4	2804	0	3085	3
20	Nagaland	19014	0	14962	2	10437	0	12736	0	11604	0	7977	0	8267	0

Contd.

Statement 5.21: State-wise cases and deaths - Enteric Fever (Typhoid)

Sl. No.	State/UT	2010		2011		2012		2013		2014		2015		2016(P)	
		Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
21	Odisha	45692	29	59903	104	73087	89	60337	56	90363	39	90895	45	73330	18
22	Punjab	28248	6	36263	9	42536	4	35136	5	34651	1	34867	3	37896	3
23	Puducherry	11001	0	11077	0	2678	0	2591	1	1477	3	2049	0	1943	0
24	Rajasthan	10575	0	7902	0	27018	4	65331	5	83540	4	79244	0	116470	0
25	Sikkim	689	0	551	0	401	0	186	0	716	0	453	2	474	0
26	Tamil Nadu	112879	51	50185	0	34611	0	31440	1	29937	0	40579	0	33853	0
27	Telangana											163747	0	133838	2
28	Tripura	2068	5	3553	0	6198	3	12849	1	10553	0	4596	1	5398	0
29	Uttarakhand	71037	158	117537	80	143516	65	25956	0	28939	14	34120	10	33904	4
30	Uttar Pradesh	16489	2	13760	1	28698	4	224748	161	225829	203	288140	221	495698	313
31	West Bengal	146428	74	127180	34	143179	29	108695	39	90086	42	112262	24	161264	22
32	A& N Island	1266	1	1343	1	1340	1	1501	3	881	0	870	0	1127	1
33	Chandigarh	-	-	3190	0	3023	0	3251	0	6021	0	12447	88	12237	48
34	D&N Haveli	2221	0	2269	0	2559	0	4323	0	2439	0	1406	0	4420	1
35	Daman & Diu	1652	0	964	0	1265	0	888	0	167	0	165	0	197	0
36	Lakshadweep	13	0	14	0	5	0	3	0	3	0	77	0	50	0
	Total	**1084885**	**440**	**1062446**	**346**	**1477699**	**428**	**1650145**	**387**	**1736687**	**425**	**1937413**	**452**	**2222695**	**512**

Source: National Health Profile of India,Central Bureau of Health Intelligence, MOHFW.
* : Data of only small number of districts
**Excludes data of 10 districts of Telangana from July 2014 Onwards
P: Provisional
Note: 10 districts of Telangana is included in Andhra Pradesh till July 2014

Stateament 5.22: State-wise Cases and Deaths - Viral Hepatitis

Sl. No.	State/UT	2010		2011		2012		2013		2014		2015		2016 (P)	
		Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
1	Andhra Pradesh	9949	60	11050	61	7955	84	8739	34	3716	1	3358	12	2662	1
2	Arunachal Pradesh	219	6	636	4	1520	4	588	0	378	6	292	1	271	4
3	Assam	312	0	2557	25	419	0	466	0	1994	13	809	9	2688	14
4	Bihar	NR	NR	202	0	3094	2	6736	2	20670	3	26729	2	28578	0
5	Chhattisgarh	287	4	139	1	914	5	670	5	533	4	532	6	547	15
6	Delhi	6510	61	8347	68	8184	66	8290	131	6425	95	9145	87	10281	100
7	Goa*	71	0	118	0	92	0	173	0	182	0	162	0	121	0
8	Gujarat	3190	0	4328	0	4763	6	3676	6	4808	7	3736	0	3573	2
9	Haryana	1583	4	2557	2	2686	1	1307	1	2717	4	5184	3	2274	0
10	Himachal Pradesh	2566	13	1248	10	1310	17	2023	14	2808	9	1739	1	2716	18
11	Jammu Division	3024	0	2177	0	3080	0	3557	0	2628	0	1528	0	1704	0
	Kashmir Division	966	0	2952	2	2887	0	2750	0	2482	0	2500	0	1877	0
12	Jharkhand	358	0	384	2	983	0	1444	65	972	20	1258	1	1406	0
13	Karnataka	8872	16	6049	8	10789	26	5415	16	6613	9	6026	21	6013	17
14	Kerala	5353	6	5336	7	8212	18	7034	8	5567	4	3965	7	5327	18
15	Madhya Pradesh	5168	15	3851	12	12325	4	14055	11	16141	18	14030	25	12158	22
16	Maharashtra	5446	36	5994	30	6175	21	5851	13	5985	13	9738	10	12156	6
17	Manipur	320	0	229	0	229	4	258	0	443	0	88	0	182	1
18	Meghalaya	438	1	87	3	221	1	518	0	609	0	299	0	236	2
19	Mizoram	571	12	812	14	914	15	419	10	194	0	209	4	276	1

Contd.

Stateament 5.22: State-wise Cases and Deaths - Viral Hepatitis

Sl. No.	State/UT	2010		2011		2012		2013		2014		2015		2016 (P)	
		Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
20	Nagaland	119	0	64	0	284	0	119	0	88	0	76	0	86	0
21	Odisha	3328	62	3272	89	5372	100	3743	90	4910	38	5146	24	3481	19
22	Punjab	6546	21	5041	12	3323	0	3099	6	4525	4	9330	8	8833	7
23	Puducherry	650	2	520	12	755	19	447	10	299	3	520	4	416	7
24	Rajasthan	1356	1	967	0	1595	7	2384	10	9719	3	3247	0	2471	1
25	Sikkim	1180	2	484	0	667	6	692	1	554	0	1344	0	800	0
26	Tamil Nadu	5732	3	5940	0	10628	0	1868	0	2671	0	1066	1	715	0
27	Telangana											1735	1	2175	0
28	Tripura	717	8	404	0	272	2	205	1	177	1	183	1	363	4
29	Uttarakhand	6645	12	3143	19	6499	16	8619	11	9243	9	10242	15	10930	16
30	Uttar Pradesh	2203	9	7749	28	6345	12	9079	17	16026	50	11188	73	12530	47
31	West Bengal	4779	68	5480	105	4097	102	4967	91	4444	63	3948	83	2898	115
32	A& N Island	255	6	208	5	172	9	231	11	262	9	123	1	177	0
33	Chandigarh	...	...	1309	0	1751	0	424	1	766	21	1249	27	1179	7
34	D&N Haveli	314	2	269	0	159	0	90	2	32	0	48	6	7	2
35	Daman & Diu	103	0	484	0	192	4	184	7	65	0	77	2	31	0
36	Lakshadweep	20	0	15	1	17	0	5	0	16	0	12	0	10	0
	Total	**89150**	**430**	**94402**	**520**	**118880**	**551**	**110125**	**574**	**139662**	**407**	**140861**	**435**	**142148**	**446**

Source: National Health Profile of India,Central Bureau of Health Intelligence, MOHFW.
* Goa figures are till December 2016 excluding Sept 2016 P : Provisional
Note: 10 districts of Telangana is included in Andhra Pradesh till July 2014

Statement 5.23: State- wise Cases and Deaths - Acute Respiratory Infection

Sl. No.	State/ UT	2010		2011		2012		2013		2014		2015		2016 (P)	
		Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
1	Andhra Pradesh	3117568	275	3089290	236	3077530	501	3110536	372	2413509	144	2311538	133	3049810	95
2	Arunachal Pradesh	35804	4	48602	9	57088	7	46643	4	17887	3	15840	7	19537	3
3	Assam	56547	0	314824	0	217805	481	145047	232	68334	72	20456	81	20667	200
4	Bihar	...	...	87486	0	1558212	10	1758655	20	1488744	53	1223078	40	1073140	17
5	Chhattisgarh	107827	7	155743	18	279103	39	287771	30	363570	73	376493	62	452269	19
6	Delhi	249463	182	198541	102	290841	232	390170	175	369406	106	330643	133	351072	207
7	Goa	71344	8	61029	6	53843	1	59590	0	67720	1	60998	0	57638	4
8	Gujarat	603281	0	604076	0	832190	8	1041042	40	1249351	0	1578815	27	1841945	16
9	Haryana	1043021	65	1275035	48	1212678	36	1003454	35	1123370	18	1173106	36	1162451	35
10	Himachal Pradesh	1364166	188	1484149	154	1484315	136	1631779	164	1523572	226	1591505	205	1649023	166
11	Jammu Division	162290	1	185551	6	208813	3	236452	0	222649	0	225817	5	275525	3
	Kashmir Division	315383	0	342858	0	425565	0	553262	0	523573	0	536208	0	487651	0
12	Jharkhand	96775	0	205496	5	235447	63	238206	113	224576	3	206843	1	271492	0
13	Karnataka	1593903	200	1629997	182	1501726	329	1577354	256	2213159	39	2128318	16	2072421	99
14	Kerala	6035129	122	5034506	128	5685603	47	6233391	62	6042825	27	5879901	38	5600975	14
15	Madhya Pradesh	578177	238	578783	182	902708	313	1276515	213	1529711	195	1733489	161	1668782	185
16	Maharashtra	796617	88	571947	28	690695	5	896949	1	1146185	1	1568270	18	1959700	20
17	Manipur	19172	15	25441	55	39479	51	31468	36	33470	24	37477	22	46272	21
18	Meghalaya	318124	0	295146	5	310278	4	329019	2	375220	5	408938	7	430119	2
19	Mizoram	25665	18	26817	33	26789	40	33807	23	28790	43	33169	59	40346	52
20	Nagaland	64220	0	48566	0	36344	7	37664	3	38312	0	29289	1	29996	0

Contd.

Statement 5.23: State- wise Cases and Deaths - Acute Respiratory Infection

Sl. No.	State/ UT	2010		2011		2012		2013		2014		2015		2016 (P)	
		Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
21	Odisha	1354442	188	1372208	269	1598711	293	1599506	235	2125240	131	2384544	127	2498828	88
22	Punjab	642862	15	656544	10	645612	11	692618	9	638908	35	612122	71	639631	24
23	Puducherry	628586	0	654884	2	703476	87	731148	11	772188	2	895610	26	900460	15
24	Rajasthan	823014	32	1089640	62	2001465	208	2515972	77	3038583	108	3153098	96	3797814	63
25	Sikkim	106815	9	92736	12	111771	7	93726	14	83893	7	104346	36	111044	36
26	Tamil Nadu	2430169	242	2410214	22	2737294	21	1944280	4	1904592	14	1956864	2	2135806	1
27	Telangana											1137894	123	965642	77
28	Tripura	177411	188	160438	135	159949	131	158988	131	154227	51	167058	4	170115	7
29	Uttarakhand	132998	92	130283	56	205681	94	185034	113	211385	89	253292	77	261603	73
30	Uttar Pradesh	963261	166	1183992	196	1552436	226	1720714	377	1627509	619	1811808	665	2302147	822
31	West Bengal	1980448	451	1991660	528	2550319	755	2514606	753	2831623	625	3193209	554	3537353	635
32	A& N Island	66991	3	69151	3	77320	5	58307	0	61716	0	48254	4	57220	4
33	Chandigarh	...	...	49649	0	35346	0	100541	0	109081	8	127479	36	171977	27
34	D&N Haveli	112471	0	104447	0	92668	0	96346	0	102487	3	61639	12	84301	13
35	Daman & Diu	48839	0	42350	0	39872	4	48603	8	60571	4	66031	8	73171	0
36	Lakshadweep	17263	0	28129	0	45656	0	43944	0	49807	0	42274	0	35198	0
	Total	**26140046**	**2797**	**26300208**	**2492**	**31684628**	**4155**	**33423107**	**3513**	**34835743**	**2729**	**37485713**	**2893**	**40303141**	**3043**

P Provisional
Source: National Health Profile of India,Central Bureau of Health Intelligence, MOHFW.
Note: 10 districts of Telangana is included in Andhra Pradesh till July 2014

Statement 5.24: State-wise cases and deaths - Malaria

STATE/UTs.	2010			2011			2012			2013		
	Malaria cases	Pf cases	Deaths	Malaria cases	Pf cases	Deaths	Malaria cases	Pf cases	Deaths	Malaria cases	Pf cases	Deaths
Andhra Pradesh	33393	23259	20	34949	24089	5	24699	15695	2	19787	13385	0
Arunachal Pradesh	17944	5412	103	13950	4856	17	8368	2789	15	6398	2181	21
Assam	68353	48330	36	47397	34707	45	29999	20579	13	19542	14969	7
Bihar	1908	933	1	2643	1273	0	2605	838	0	2693	715	1
Chhattisgarh	152209	120080	47	136899	107472	42	124006	96924	90	110145	89418	43
Delhi	251	1	0	413	1	0	382	1	0	353	8	0
Goa	2368	275	1	1187	135	3	1714	170	0	1530	131	0
Gujarat	66501	13729	71	89764	16112	127	76246	10483	29	58513	9122	38
Haryana	18921	764	0	33401	1133	1	26819	569	1	14471	247	3
Himachal Pradesh	210	2	0	247	2	0	216	3	0	141	0	0
Jammu & Kashmir	802	43	0	1091	45	0	864	34	0	698	24	0
Jharkhand	199842	89357	16	160653	70302	17	131476	48188	10	97786	38263	8
Karnataka	44319	7936	11	24237	2648	0	16466	1278	0	13302	967	0
Kerala	2299	271	7	1993	271	2	2036	236	3	1634	243	0
Madhya Pradesh	87165	31092	31	91851	31940	109	76538	24039	43	78260	28775	49
Maharashtra	139198	32387	200	96577	21401	118	58517	11875	96	43677	9198	80
Manipur	947	487	4	714	314	1	255	83	0	120	42	0
Meghalaya	41642	39374	87	25143	24018	53	20834	19805	52	24727	22885	62
Mizoram	15594	14664	31	8861	8373	30	9883	9437	25	11747	10340	21
Nagaland	4959	1877	14	3363	950	4	2891	821	1	2285	519	1
Odisha	395651	350428	247	308968	281577	99	262842	244503	79	228858	208488	67
Punjab	3477	71	0	2693	64	3	1689	43	0	1760	31	0
Puducherry	175	0	0	196	6	1	143	2	0	127	2	0
Rajasthan	50963	2331	26	54294	2973	45	45809	1394	22	33139	1086	15
Sikkim	49	14	0	51	14	0	77	14	0	39	13	0
Tamil Nadu	17086	623	3	22171	925	0	18869	576	0	15081	539	0
Telangana												
Tripura	23939	21254	15	14417	13812	12	11565	10915	7	7396	6998	7
Uttarakhand	1672	183	0	1277	123	1	1948	111	0	1426	108	0
Uttar Pradesh	64606	1382	0	56968	1857	0	47400	740	0	48346	590	0
West Bengal	134795	24693	47	66368	10858	19	55793	8669	30	34717	3705	17
Andaman & Nicobar Islands	2484	803	0	1918	607	0	1539	696	0	1005	334	0
Chandigarh	351	6	0	582	9	0	201	3	0	150	2	0
Dadra & Nagar Haveli	5703	2243	0	5150	2082	0	4940	2149	1	1778	513	0
Daman & Diu	204	60	0	262	55	0	186	33	0	91	5	0
Lakshadweep	6	0	0	8	0	0	9	0	0	8	0	0
All India Total	**1599986**	**834364**	**1018**	**1310656**	**665004**	**754**	**1067824**	**533695**	**519**	**881730**	**463846**	**440**

Contd.

Statement 5.24: State-wise cases and deaths - Malaria

2014			2015			2016			2017*		
Malaria cases	Pf cases	Deaths	Malaria cases	Pf cases	Deaths	Malaria cases	Pf cases	Deaths	Malaria cases	Pf cases	Deaths
21077	15511	0	25042	18709	0	23613	17443	0	16913	11944	0
6082	2338	9	5088	1714	7	3144	911	2	1538	487	0
14540	11210	11	15557	11675	4	7826	5686	6	5473	4131	0
2043	699	0	4006	1286	1	5205	895	0	3175	356	2
128993	108874	53	144886	123839	21	148220	121503	61	141310	115153	0
98	0	0	54	0	0	31	0	0	577	2	0
824	42	0	651	75	1	742	130	0	653	75	2
41608	6253	16	41566	7232	7	44783	6298	6	37801	3502	2
4485	45	1	9308	726	3	7866	552	0	6887	904	0
102	1	0	60	1	0	121	19	0	95	9	0
291	21	0	216	8	0	242	11	0	226	0	0
103735	46448	8	104800	54993	6	141414	83232	15	92770	42047	1
14794	1329	2	12445	1598	0	11078	1746	0	6529	1118	0
1751	305	6	1549	400	4	1547	419	2	1194	317	2
96879	41638	26	100597	39125	24	69106	22304	3	46176	15554	3
53385	25770	68	56603	31139	59	23983	7815	26	18133	5929	19
145	72	0	216	119	0	122	58	0	80	22	0
39168	37149	73	48603	43828	79	35147	31867	45	16433	14974	11
23145	21083	31	28593	24602	21	7583	5907	9	5710	4978	0
1936	647	2	1527	532	3	828	316	0	394	188	1
395035	342280	89	436850	369533	80	449697	389332	77	352140	297554	25
1036	14	0	596	13	0	693	8	0	808	12	0
79	3	0	54	5	1	76	11	0	59	13	0
15118	603	4	11796	662	3	12741	1031	5	6837	377	0
35	18	0	27	11	0	15	5	0	12	3	0
8729	339	0	5587	355	0	4341	242	0	5449	197	0
5189	4602	0	10951	10206	4	3512	2617	1	2688	2170	0
51240	49653	96	32525	30074	21	10546	9545	14	7040	6572	6
1171	89	0	1466	73	0	961	47	0	532	14	0
41612	326	0	42767	371	0	39238	158	0	32345	159	0
26484	4981	66	24208	5775	34	35236	5928	59	30008	4632	29
557	109	0	409	77	0	485	140	0	404	67	0
114	0	0	152	1	1	157	0	0	114	1	0
669	90	1	418	46	0	375	30	0	297	16	0
56	4	0	84	18	0	48	7	0	37	4	0
0	0	0	4	0	0	2	0	0	1	0	0
1102205	**722546**	**562**	**1169261**	**778821**	**384**	**1090724**	**716213**	**331**	**840838**	**533481**	**103**

Source: National Vector Borne Disease Control Programme (NVBDCP),Directorate General of Health Services, MoH&FW (as retrieved on 08.03.2018)

** Upto December 2017*

Pf: Plasmodium falsiparum : Malaria caused by Pf is the most dengerous form of malaria.

Note: 10 districts of Telangana is included in Andhra Pradesh till July 2014

Statement 5.25: State-wise cases and death - Dengue

Sl. No.	Affected States/UTs	2010		2011		2012		2013		2014		2015		2016		2017 (P)	
		Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
1	Andhra Pradesh	776	3	1209	6	2299	2	910	1	1262	5	3159	2	3417	2	4776	0
2	Arunachal Pradesh	0	0	0	0	346	0	0	0	27	0	1933	1	13	0	15	0
3	Assam	237	2	0	0	1058	5	4526	2	85	0	1076	1	6157	4	5016	2
4	Bihar	510	0	21	0	872	3	1246	5	297	0	1771	0	1912	0	1875	0
5	Chhattisgarh	4	0	313	11	45	0	83	2	440	9	384	1	356	0	433	0
6	Delhi	6259	8	1131	8	2093	4	5574	6	995	3	15867	60	4431	10	9232	9
7	Goa	242	0	26	0	39	0	198	2	168	1	293	0	150	0	257	0
8	Gujarat	2568	1	1693	9	3067	6	6272	15	2320	3	5590	9	8028	14	4564	4
9	Haryana	866	20	267	3	768	2	1784	5	214	2	9921	13	2493	0	4411	1
10	Himachal Pradesh	3	0	0	0	73	0	89	2	2	0	19	1	322	0	453	0
11	Jammu & Kashmir	0	0	3	0	17	1	1837	3	1	0	153	0	79	1	485	0
12	Jharkhand	27	0	36	0	42	0	161	0	36	0	102	0	414	1	703	5
13	Karnataka	2285	7	405	5	3924	21	6408	12	3358	2	5077	9	6083	8	17018	5
14	Kerala	2597	17	1304	10	4172	15	7938	29	2575	11	4075	25	7439	13	19912	37
15	Madhya Pradesh	175	1	50	0	239	6	1255	9	2131	13	2108	8	3150	12	2585	6
16	Meghalaya	1	0	0	0	27	2	43	0	0	0	13	0	172	0	42	0
17	Maharashtra	1489	5	1138	25	2931	59	5610	48	8573	54	4936	23	6792	33	7442	41
18	Manipur	7	0	220	0	6	0	9	0	0	0	52	0	51	1	187	1
19	Mizoram	0	0	0	0	6	0	7	0	19	0	43	0	580	0	107	0
20	Nagaland	0	0	3	0	0	0	0	0	0	0	21	1	142	0	357	0
21	Odisha	29	5	1816	33	2255	6	7132	6	6433	9	2450	2	8380	11	4155	6
22	Punjab	4012	15	3921	33	770	9	4117	25	472	8	14128	18	10439	15	15318	0
23	Puducherry	96	0	463	3	3506	5	2215	0	1322	1	771	0	490	2	4746	7
24	Rajasthan	1823	9	1072	4	1295	10	4413	10	1243	7	4043	7	5292	16	8387	16
25	Sikkim	0	0	2	0	2	0	38	0	5	0	21	0	82	0	659	0
26	Tamil Nadu	2051	8	2501	9	12826	66	6122	0	2804	3	4535	12	2531	5	23035	63
27	Tripura	0	0	0	0	9	0	8	0	6	0	40	0	102	0	123	0
28	Telangana							0	0	704	1	1831	2	4037	4	3061	0
29	Uttar Pradesh	960	8	155	5	342	4	1414	5	200	0	2892	9	15033	42	3032	28
30	Uttarakhand	178	0	454	5	110	2	54	0	106	0	1655	1	2146	4	971	0
31	West Bengal	805	1	510	0	6456	11	5920	6	3934	4	8516	14	22865#	45#	10697*	19*
32	Andaman & Nicobar Islands	25	0	6	0	24	0	67	0	139	0	153	0	92	0	17	0
33	Chandigarh	221	0	73	0	351	2	107	0	13	0	966	1	1246	0	1094	0
34	Dadra & Nagar Haveli	46	0	68	0	156	1	190	0	641	1	1154	0	4161	2	1996	0
35	Daman & Diu	0	0	0	0	96	0	61	0	46	0	165	0	89	0	59	0
	Total	**28292**	**110**	**18860**	**169**	**50222**	**242**	**75808**	**193**	**40571**	**137**	**99913**	**220**	**129166**	**234**	**157220**	**250**

Source: National Vector Borne Disease Control Programme (NVBDCP),Directorate general of Health Services, Ministry of Health & Family Welfare. (as retrieved on 08.03.2018)

P: Provisional (till 24 December 2017) * Reported upto 4 October 2017 # Report upto 9 November 2016

Note: 10 districts of Telangana is included in Andhra Pradesh till July 2014

Statement 5.26: State-wise cases - Chikungunya fever

Sl. No.	Affected States/UTs	2010	2011	2012	2013	2014	2015	2016	2017*
1	Andhra Pradesh	116	99	2827	4827	1359	817	960	1140
2	Arunachal Pradesh	0	0	0	0	0	35	239	15
3	Assam	0	0	0	742	0	0	40	41
4	Bihar	0	91	34	0	0	3	566	1244
5	Delhi	120	110	6	18	8	64	12279	934
6	Goa	1429	664	571	1049	1205	561	337	489
7	Gujarat	1709	1042	1317	2890	574	406	3285	7670
8	Haryana	26	215	9	1	3	1	5394	240
9	Jammu & Kashmir	-	-	-	-	-	-	1	0
10	Jharkhand	0	816	86	61	11	21	47	268
11	Karnataka	8740	1941	2382	5295	6962	20763	15666	31644
12	Kerala	1708	183	66	273	272	175	129	78
13	Madhya Pradesh	113	280	20	139	161	67	2280	2257
14	Meghalaya	16	168	0	0	0	78	360	200
15	Maharashtra	7431	5113	1544	1578	1572	391	7570	7639
16	Odisha	544	236	129	35	10	81	51	0
17	Punjab	1	0	1	0	2	180	4407	2472
18	Puducherry	11	42	45	146	399	245	463	115
19	Rajasthan	1326	608	172	76	50	7	2506	1593
20	Sikkim							30	83
21	Tamil Nadu	4319	4194	5018	859	543	329	86	113
22	Telangana	0	0	0	0	1687	2067	611	663
23	Tripura	0	0	0	0	34	180	311	468
24	Uttar Pradesh	5	3	13	0	4	0	2458	94
25	Uttarakhand	0	18	0	0	0	0	35	0
26	West Bengal	20503	4482	1381	646	1032	1013	1071	1024
27	Andaman & Nicobar Islands	59	96	256	202	161	68	18	132
28	Chandigarh	0	1	0	1	0	1	2857	1652
29	Dadra & Nagar Haveli	0	0	100	2	0	0	0	0
30	Lakshadweep	0	0	0	0	0	0	0	0
	Total	**48176**	**20402**	**15977**	**18840**	**16049**	**27553**	**64057**	**62268**

Source: National Vector Borne Disease Control Programme (NVBDCP),Directorate General of Health Services, Ministry of Health & Family Welfare. (as retrieved on 08.03.2018)

* *Provisional till 24 December 2017*

Note: 1.Figure for West Bengal for 2017 is reported upto 18 October 2017

2. 10 districts of Telangana is included in Andhra Pradesh till July 2014

Statement 5.27: State-wise cases and deaths - Acute Encephalitis Syndrome/ Japanese encephalitis

Sl. No.	Affected States/ UTs	2010				2011				2012				2013			
		AES Cases	Deaths	JE Cases	Deaths	AES Cases	Deaths	JE Cases	Deaths	AES Cases	Deaths	JE Cases	Deaths	AES Cases	Deaths	JE Cases	Deaths
1	Andhra Pradesh	139	7	7	5	73	1	4	1	64	0	3	0	345	3	7	3
2	Arunachal Pradesh	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0
3	Assam	469	117	142	40	1319	250	489	113	1343	229	463	100	1388	272	495	134
4	Bihar	50	7	0	0	821	197	145	18	745	275	8	0	417	143	14	0
5	Delhi	0	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0
6	Goa	80	0	9	0	91	1	1	0	84	0	9	0	48	1	3	1
7	Haryana	1	1	1	0	90	14	12	3	5	0	3	0	2	0	2	0
8	Jharkhand	18	2	2	2	303	19	101	5	16	0	1	0	270	5	89	5
9	Karnataka	143	1	3	0	397	0	23	0	189	1	1	0	162	0	2	0
10	Kerala	19	5	0	0	88	6	37	3	29	6	2	0	53	6	2	0
11	Maharashtra	34	17	0	0	35	9	6	0	37	20	3	0	0	0	0	0
12	Manipur	118	15	45	5	11	0	9	0	2	0	0	0	1	0	0	0
13	Meghalaya	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Nagaland	11	6	2	0	44	6	29	5	21	2	0	0	20	0	4	0
15	Odisha	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Punjab	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	Tamil Nadu	466	7	11	1	762	29	24	3	935	64	25	4	77	8	33	0
18	Telangana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	Tripura	0	0	0	0	0	0	0	0	0	0	0	0	211	0	14	0
20	Uttar Pradesh	3540	494	325	59	3492	579	224	27	3484	557	139	23	3096	609	281	47
21	Uttarakhand	7	0	7	0	0	0	0	0	174	2	1	0	0	0	0	0
22	West Bengal	70	0	1	0	714	58	101	3	1216	100	87	13	1735	226	140	12
	Total	**5167**	**679**	**555**	**112**	**8249**	**1169**	**1214**	**181**	**8344**	**1256**	**745**	**140**	**7825**	**1273**	**1086**	**202**

Source: National Vector Borne Disease Control Programme (NVBDCP),Directorate General of Health Services, Ministry of Health & Family Welfare. (as retrieved on 08.03.2018)
Note: 10 districts of Telangana is included in Andhra Pradesh till July 2014

Contd.

Statement 5.27: State-wise cases and deaths - Acute Encephalitis Syndrome/ Japanese encephalitis

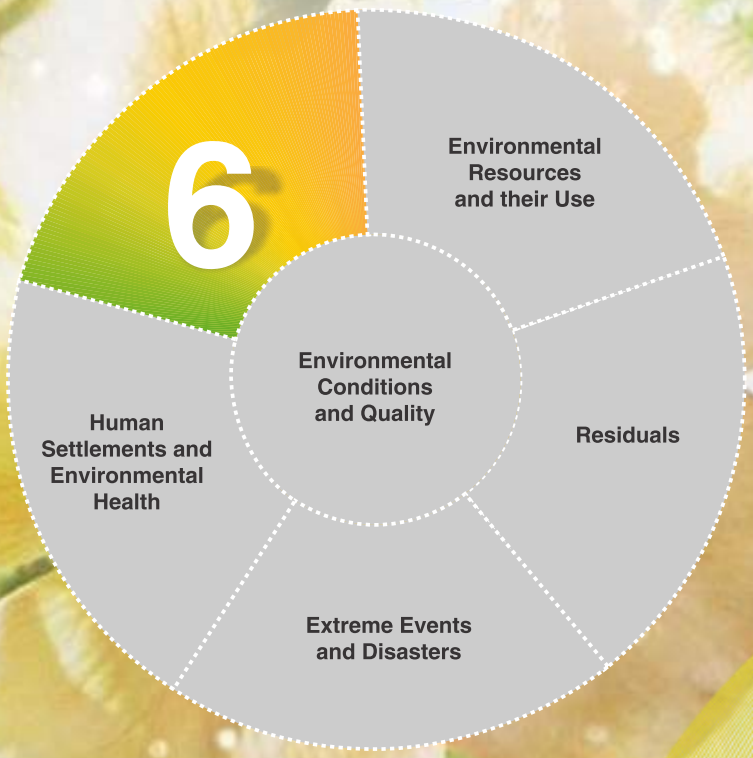
Sl. No.	Affected States/ UTs	2014				2015				2016				2017 (P) Till 24.12.2017			
		AES Cases	Deaths	JE Cases	Deaths	AES Cases	Deaths	JE Cases	Deaths	AES Cases	Deaths	JE Cases	Deaths	AES Cases	Deaths	JE Cases	Deaths
1	Andhra Pradesh	31	0	0	0	50	0	0	0	4	0	0	0	34	0	0	0
2	Arunachal Pradesh	102	11	32	3	73	2	32	2	1	0	0	0	0	0	0	0
3	Assam	2194	360	761	165	1409	260	614	135	1713	187	427	92	2077	178	612	88
4	Bihar	1358	355	20	2	285	90	66	12	324	102	100	25	170	47	69	10
5	Delhi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Goa	17	0	0	0	0	0	0	0	12	0	1	0	1	0	0	0
7	Haryana	6	1	5	1	2	0	2	0	2	0	2	0	0	0	0	0
8	Jharkhand	288	2	90	2	217	8	116	8	296	5	47	5	260	1	27	1
9	Karnataka	75	0	13	0	335	1	27	1	406	0	11	0	263	0	11	0
10	Kerala	6	2	3	2	29	3	2	1	18	5	2	0	5	3	0	0
11	Maharashtra	0	0	0	0	51	0	7	0	70	1	12	1	143	0	27	0
12	Manipur	16	0	1	0	34	0	6	0	475	1	47	1	1148	11	192	11
13	Meghalaya	212	3	72	3	174	8	41	8	164	4	47	4	102	4	35	4
14	Nagaland	20	1	6	0	10	1	0	0	0	0	0	0	36	2	10	2
15	Odisha	0	0	0	0	660	2	33	2	1096	115	242	42	1051	12	65	0
16	Punjab	2	0	0	0	1	0	0	0	1	0	1	0	1	0	1	0
17	Tamil Nadu	346	4	36	3	847	0	53	0	859	3	51	0	1198	0	99	0
18	Telengana	155	5	0	0	157	1	8	1	72	0	4	0	81	0	6	0
19	Tripura	323	0	14	0	459	4	28	4	380	1	98	1	284	0	85	0
20	Uttar Pradesh	3329	627	191	34	2894	479	351	42	3919	621	410	73	4693	590	675	80
21	Uttarakhand	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	0
22	West Bengal	2385	348	415	78	2165	351	342	75	1839	256	174	39	1396	153	129	34
	Total	**10867**	**1719**	**1661**	**293**	**9854**	**1210**	**1730**	**291**	**11651**	**1301**	**1676**	**283**	**12943**	**1001**	**2043**	**230**

Source: National Vector Borne Disease Control Programme (NVBDCP),DG Health Services, Ministry of Health & Family Welfare. (as retrieved on 08.03.2018)
Note: 10 districts of Telangana is included in Andhra Pradesh till July 2014

Statement 5.28: State-wise cases and deaths - Kala-azar (Visceral leishmaniasis)

Sl. No	Affected States/ UTs	2010		2011		2012		2013		2014		2015		2016(P)		2017(P)	
		Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
1	Assam	12	0	5	0	6	0	4	0	1	0	1	0	0	0	0	0
2	Bihar	23084	95	25222	76	16036	27	10730	17	7615	10	6517	5	4773	0	4127	0
3	Delhi#	92	0	19	0	11	0	6	0	0	0	0	0	0	0	0	0
4	Gujarat#	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Himachal Pradesh	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Jharkhand	4305	5	5960	3	3535	1	2515	0	937	0	1262	0	1185	0	1358	0
7	Kerala	0	0	0	0	0	0	0	0	0	0	4	0	2	0	0	0
8	Madhya Pradesh	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
9	Punjab#	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
10	Sikkim	3	0	7	0	5	0	8	0	5	0	5	0	1	0	0	0
11	Uttrakhand	1	0	0	0	7	1	0	0	4	0	3	0	2	0	2	0
12	Uttar Pradesh	14	0	11	1	5	0	11	1	11	0	131	0	107	0	115	0
13	West Bengal	1482	4	1962	0	995	0	595	2	668	1	576	0	179	0	156	0
	Total	**29000**	**105**	**33187**	**80**	**20600**	**29**	**13869**	**20**	**9241**	**11**	**8500**	**5**	**6249**	**0**	**5758**	**0**

Source: National Vector Borne Disease Control Programme (NVBDCP),Directorate General of Health Services, Ministry of Health & Family Welfare. (as retrieved on 08.03.2018)
P = Provisional #:Imported
As per the reports received from states **Upto December 2017**



Environmental Protection, Management and Engagement

- ★ Environmental Governance
- ★ Instruments for Environment Protection and Management

Statement 6.01 : Centrally Sponsored Schemes for Protection of Environment

(Rs. In crore)

S. No.	Scheme	2015-16	2016-17	2017-18 (RE)	2018-19 (BE)
1	National Mission for a Green India	209.47	145..65	173.05	210.00
2	Integrated Development of Wildlife Habitats	227.94	452.96	532.50	555.00
3	Conservation of Natural Resources and Ecosystems	62.25	97.26	96.00	80.50
4	National River Conservation Programme	66.72	98.99	173.50	173.50

Source: Expenditure Profile, Union Budget, M/o Finance
RE: Revised Estimate BE :Budget Estimate
Note: Details of the schemes

S. No.	Scheme	Components
1	National Mission for a Green India	Green India Mission-National Afforestation Programme
		Forest Fire Prevention and Management
2	Integrated Development of Wildlife Habitats	Project Tiger
		Project Elephant
		Development of Wildlife Habitats
3	Conservation of Natural Resources and Ecosystems	Conservation of Corals and Mangroves
		Conservation of Aquatic Ecosystems
		Biodiversity Conservation

Statement 6.02: Afforestation under different Schemes

Area Covered under Plantation (Public and Forest Lands) - reported under Twenty Point Programme

(Unit: Hectares)

Sl. No.	State/UT Name	April,2012-March,2013	April 2013-March 2014	April 2014-March 2015	April 2015-March 2016	April 2016-March 2017
1	Andhra Pradesh	4,07,252	3,72,962	2,08,591	1,33,618	2,74,635
2	Arunachal Pradesh	378	213 #	42 #	8	0
3	Assam	8,642	0	0	0	0
4	Bihar	30,330	69,224	92,956	41,419	43,279
5	Chhattisgarh	83,789	60581 #	86,211	1,33,531	98,697
6	Delhi	1,409	848	1,468	1,498	1,299
7	Goa	471	154	346	21	38
8	Gujarat	1,68,470	1,39,283	1,91,118	1,50,822	1,68,733
9	Haryana	68,026	57,197	35,798	30,643	25,474
10	Himachal Pradesh	28,902	25,595	20,728	11,449	10,052
11	Jammu & Kashmir	13,988	8,704	8,454	10,863	7,307
12	Jharkhand	10,746	3450 #	7,296	NR	21,005
13	Karnataka	80,385	82,925	52,805	69,093	61,686
14	Kerala	10,154	3,891	3,700	1,117	46,695
15	Madhya Pradesh	1,19,580	1,35,199 #	7,499	7994 #	99,197
16	Maharashtra	1,88,968	2,13,750	91,413	55,793	42,100
17	Manipur	14,595	17,916	11547 #	2855 #	12,247
18	Meghalaya	4,852	16,330	1,991	3,186	0
19	Mizoram	4,071	5253 #	0	NR	4,050
20	Nagaland	# 5681	10140 #	0 #	NR	0
21	Odisha	1,07,287	1,17,535	1,98,891	1,70,808 #	4,01,452
22	Puducherry	96	41	75	86	250
23	Punjab	9,569	13,816	2769 $	2,934	5,469
24	Rajasthan	57,103	67,722	70,423	70,893	66,815
25	Sikkim	9,019	4,805	4,095	1,325	3,376
26	Tamil Nadu	74,844	70,235	70,235	45,129	39,790
27	Telangana			80,446	2,36,598	4,38,059
28	Tripura	20,451	16,280	16,403	2339 #	4,070
29	Uttarakhand	22,024	21,242	17,268	17,846	18,251
30	Uttar Pradesh	67,057	78,339	57,907	1,65,867	92,128
31	West Bengal	9,362	3,910	6,396	12,169	2722 ^
32	Andaman & Nicobar Island	1,116	1,128	1,184	1,300	1,125
33	Chandigarh	219	175	126 $	167	178
34	Dadra & Nagar Haveli	200	200	220	225	220
35	Daman & Diu	8	0 $	11	0	10
36	Lakshadweep	22	28	0	0	0
Grand Total		**16,29,066**	**16,19,071**	**13,48,412**	**1,381,596**	**19,90,409**

Source: Ministry of Statistics & Programme Implementation

Note: # Figures reported earlier have been repeated

$ State has downward revised the figure

NR: Not reported

^ Figures reported upto December 2016 have been repeated

Statement 6.03: Afforestation in Metalliferous Mines

By Principal Minerals during 2014-15

Sl. No.	Minerals	Mines Covered	Area Covered (in Hects.)	Trees Planted (Nos.)	Trees Survived (Nos.)	Survival	
						(%)	('000 trees per hectare)
1	Bauxite	78	65	166084	127070	76.51	1.95
2	Chromite	4	5	10630	8588	80.79	1.72
3	Copper	6	15	20600	17240	83.69	1.15
4	Dolomite	4	14	11100	9650	86.94	0.69
5	Iron Ore	166	145	386799	296109	76.55	2.04
6	Iron & Manganese	21	16	123868	107021	86.40	6.69
7	Lead & Zinc	2	10	12300	11800	95.93	1.18
8	Limestone	497	1481	1699396	1408963	82.91	0.95
9	Manganese Ore	28	45	41600	36640	88.08	0.81
10	Magnesite	5	1	770	534	69.35	0.53
11	Others	71	96	75580	59584	78.84	0.62
Total		**882**	**1893**	**2548727**	**2083199**	**81.73**	**1.10**

Source: Indian Minerals Industry at a Glance 2014-15, Indian Bureau of Mines

Statement 6.04: Progress of afforestation through successive plans

(one sq. km = 100 hectares)

Plan Period	Area Afforested In Plan Period ('000 hectares.)	Cumulative ('000 hectares.)	Afforestation Expenditure In Plan Period (Rs Crores)	Cumulative (Rs Crores)
1951-56	52	52	1.28	1.28
1956-61	311	363	6.86	8.14
1961-66	583	946	21.13	29.27
1966-69	453	1399	23.02	52.29
1969-74	714	2113	44.34	96.63
1974-79	1221	3334	107.28	203.91
1979-80	222	3556	37.10	241.01
1980-85	4650	8206	926.01	1167.02
1985-90	8863	17069	2426.63	3593.65
1990-91	1387	18456	627.79	4221.44
1991-92	1725	20181	705.72	4927.16
1992-97	7950	28131	3686.40	8613.56
1997-02	8050	36181	7350.5*	15964.06
2002-03	405	36586	151.26	16115.32
2003-04	283	36869	207.98	16323.30
2004-05	107	36976	233.00	16556.30
2005-06	54	37030	248.12	16804.42
2006-07	0	37030	292.75	17097.17
2007-08	493	37523	392.95	17490.12
2008-09	173	37696	345.62	17835.74
2009-10	104	37800	318.17	18153.91
2010-11	57	37857	309.99	18463.90
2011-12	141	37998	303.00	18766.90
2012-13	56	38054	193.37	18960.27
2013-14	81	38135	257.62	19217.89
2014-15	74	38209	243.78	19461.67
2015-16	36	38245	94.16	19555.83

Source : Ministry of Environment,Forests and Climate Change

* Figures of Allocation

Statement 6.05: National Interventions for Sustainable Development and Mitigation of Climate Change

Measures		Energy	Renew-able Energy	Alter-nate Fuels	Energy Conser-vation	Industry	Forestry	Trans-port	Agricul-ture	Cross Sectoral	Waste	Total
Regulatory Measures	Acts	1					1					**2**
	Regulations/ Notifications/ Rules	8	7	3	1		1	6			4	**30**
	Standards & Levels	2			1							**3**
	System Efficiency Measures	4				6		3	5	2	3	**23**
Economic and Fiscal	Tax	1										**1**
	Price	4	2	2								**8**
	Directed Financial Incentives/ Subsidy	5	3			1		3		2		**14**
	Emission Trading	2				1						**3**
	Certificates	2										**2**
Green Cover & Land Use	Afforestation/ Reforestation						2					**2**
	Avoiding deforestation/ land reclamation						1					**1**
	Others						2					**2**
Supportive Measures	Market Development	1	2			4			1			**8**
	Co-operative Measures					1						**1**
	Capacity Building	1				1			1			**3**
	Research Development & Demonstration	3	1	1	3	4		3	2		1	**18**
	Green Procurement	1								3		**4**
	Information, education and Publication	1	2	1	2	1	1	1	1	2		**12**
Total		**36**	**17**	**7**	**7**	**19**	**8**	**16**	**10**	**9**	**8**	**137**

Source: India First Biennial Update Report to the United Nations Framework Convention on Climate Change, Ministry of Environment, Forest and Climate Change- December 2015

Statement 6.06: State-level Interventions for Sustainable Development and Mitigation of Climate Change

Measures		Energy	Renewable Energy	Alternate Fuels	Energy Conservation	Industry	Forestry	Transport	Agriculture	Waste	Total
Regulatory Measures	Acts										**0**
	Regulations/ Notifications/ Rules	14			2	28	3	3	10	12	**72**
	Standards & Levels										**0**
	System Efficiency Measures	21			4	23		1	12	18	**79**
Economic and Fiscal	Tax										**0**
	Price	28									**28**
	Directed Financial Incentives/ Subsidy	2				6					**8**
	Emission Trading										**0**
	Certificates	1									**1**
Green Cover & Land Use	Afforestation/ Reforestation						7				**7**
	Avoiding deforestation/ land reclamation						3				**3**
	Others					1	1		1		**3**
Supportive Measures	Market Development	6	4		3	15			4	8	**40**
	Co-operative Measures					3					**3**
	Capacity Building	2			1	2			3		**8**
	Research Development & Demonstration	6	2	1	3	5			4		**21**
	Green Procurement	1									**1**
	Information, education and Publication	1	2	1	2	1	1	1	3		**12**
Total		**82**	**8**	**2**	**15**	**84**	**15**	**5**	**37**	**38**	**286**

Source:India First Biennial Update Report to the United Nations Framework Convention on Climate Change, Ministry of Environment, Forest and Climate Change- December 2015

Statement 6.07: MEAs and other global environmental conventions endorsed by India

S. No.	Cluster Name	Major Global Multilateral Environment Agreements (MEAs)
I	Nature Conservation	Convention on international Trade in Endangered Species of Fauna and Flora (CITES)
		The Wildlife Trade Monitoring Network (TRAFFIC)
		Convention on the Conservation of Migratory Species of Wild Animals
		Coalition Against Wildlife Trafficking (CAWT)
		Convention on Biological Diversity (CBD)
		International Tropical Timber Organisation (ITTC)
		United Nation Forum on Forests (UNFF)
		The International Treaty on Plant Genetic Resources for Food and Agriculture
		Convention on Wetlands (popularly known as the Ramsar Convention)
		World Heritage Convention (WHC)
		International Plant Protection Convention (IPCC)
		International Whaling Commission (IWC)
		The Nagoya Protocol on Access to Genetic Resource and the Fair and Equitable Sharing on Benefit Arising from their Utilization to the Convention on Biological Diversity.
		The Cartagena Protocol on Biosafety
		International Union for Conservation of Nature and Natural Resources (IUCN)
		Global Tiger Forum (GTF)
		International Whaling Commission (IWC)
II	Hazardous Material	Cartagena Protocol on Biosafety
		Strategic Approach to International Chemicals Management (SAICM)
		Stockholm Convention on Persistent Organic Pollutants (POPs)
		Basel Convention on the Control of Trans- boundary Movement of Hazardous Waste and Their Disposal
		Rotterdam Convention on Prioir Informed Consent (PIC) for certain Hazardous Chemical and Pesticides in International Trade
III	Atmospheric Emissions	United Nations Framwork Convention on Climate Change (UNFCCC)
		Kyoto Protocol under UNFCCC
		United Nations Convention to Combat Desertification (UNCCD)
		Montreal Protocol (on Ozone Depleting Substances)
		Paris Agreement under UNFCCC

Source:India First Biennial Update Report to the United Nations Framework Convention on Climate Change, Ministry of Environment, Forest and Climate Change- December 2015

Statement 6.08: Regulated Pollutants in India.

Year of Notification			1994			2009		Method of measurement
S. No.	Pollutant	Time Weighted Average	Concentration in ambient air			Concentration in ambient air		
			Industrial Area	Residential, Rural & other Area	Sensitive areas	Industrial, Residential, Rural & Other Areas	Notified Ecologically Sensitive areas	
1.	Sulphur Dioxide (SO_2), µg/m³	Annual*	80	60	15	50	20	-Improved West and Gaeke
		24 hours**	120	80	30	80	80	-Ultraviolet fluorescence
2.	Nitrogen Dioxide (NO_2) , µg/m³	Annual*	80	60	15	40	30	-Modified Jacob & Hochheiser (Na-Arsenite)
		24 hours**	120	80	30	80	80	-Chemiluminescence
3.	Suspended Particulate Matter (SPM), µg/m³	Annual*	360	140	70			-Average flow rate not less than 1.1 m³/minute
		24 hours**	500	200	100			
4.	Particulate matter (size less than 10 µm) or PM_{10}, µg/m³	Annual*	120	60	50	60	60	-Gravimetric
								-TOEM
		24 hours**	150	100	75	100	100	-Beta attenuation
5.	Particulate matter (size less than 2.5 µm) or $PM_{2.5}$, µg/m³	Annual*	120	60	50	40	40	-Gravimetric
								-TOEM
		24 hours**	150	100	75	60	60	-Beta attenuation
6.	Ozone (O3), µg/m³	8 hours**				100	100	-UV photometric
								-Chemilminescence
		1 hour**				180	180	-Chemical Method
7.	Lead (Pb), µg/m³	Annual*	1	0.75	0.5	0.50	0.50	--AAS Method after sampling using EPM 2000 or equivalent filter paper
		24 hours**	1.5	1	0.75	1.0	1.0	-ED-XRF using Teflon filter

Contd.

Statement 6.08: Regulated Pollutants in India.

Year of Notification			1994			2009		Method of measurement
S. No.	Pollutant	Time Weighted Average	Concentration in ambient air			Concentration in ambient air		
			Industrial Area	Residential, Rural & other Area	Sensitive areas	Industrial, Residential, Rural & Other Areas	Notified Ecologically Sensitive areas	
8.	Carbon Monoxide (CO), mg/m^3	8 hours**	5	2	1	02	02	-Non dispersive infrared (NDIR) spectroscopy
		1 hour**	10	4	2	04	04	
9.	Ammonia, µg/m^3	Annual*				100	100	-Chemiluminescence
		24 hours**				400	400	-Indophenol blue Method
10.	Benzene (C_6H_6), µg/m^3	Annual*				05	05	-Gas chromatography based continuous analyzer
								-Adsorption and Desorption followed by GC analysis
11	Benzo(a)Pyrene (BaP) - particulate phase only, ng/m^3	Annual*				01	01	-Solvent extraction followed by HPLC/GC analysis
12.	Arsenic (As), ng/m^3	Annual*				06	06	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper
13.	Nickel(Ni), ng/m^3	Annual*				20	20	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper

Source: National Ambient Air Quality Standards, first notified in 1994 and last revised in 2009

* : Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

**: 24 hourly or 8 hourly or 1 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

Note: Whenever and wherever monitoring results on two consecutive days of monitoring exceed the limits specified above for the respective category, it shall be considered adequate reason to institute regular or continuous monitoring and further investigation.

Statement 6.9: State-wise soil-testing facilities

Year-2013-14

Name of State	No of Soil testing laboratories				Total			Annual Analyzing capacity in '000'	Sample Analyzed in '000'	Capacity Utilization (%)
	State Govt.		Fert. Industry							
	Static	Mobile	Static	Mobile	Static	Mobile	Total			
South Zone										
Andhra Pradesh	55	5	27	1	82	6	88	413.00	345.79	83.73
Karnataka	56	-	6	2	62	2	64	295.66	194.81	65.89
Kerala	14	11	1	-	15	11	26	218.00	134.68	61.78
Tamil Nadu	30	16	1	1	31	17	48	5796.72	4823.54	83.21
Puducherry	2	-	-	-	2	-	2	4.00	4.41	110.25
Total	**157**	**32**	**35**	**4**	**192**	**36**	**228**	**6727.38**	**5503.23**	**81.80**
West Zone										
Gujarat	132	2	4	1	136	3	139	1412.00	1199.13	84.92
Madhya Pradesh	50	7	2	4	52	11	63	378.00	346.52	91.67
Maharashtra	123	23	8	4	131	27	158	2241.35	967.27	43.16
Rajasthan	34	22	1	2	35	24	59	536.00	402.69	75.13
Chhattisgarh	7	5	1	-	8	5	13	105.00	116.02	110.50
Goa	2	-	-	-	2	-	2	23.00	14.96	65.04
Total	**348**	**59**	**16**	**11**	**364**	**70**	**434**	**4695.35**	**3046.59**	**64.89**
North Zone										
Haryana	35	3	2	-	37	3	40	365.00	247.89	67.92
Punjab	54	12	2	3	56	15	71	631.50	282.11	44.67
Uttarakhand	13	3	-	-	13	3	16	106.54	95.23	89.38
Uttar Pradesh	255	18	5	3	260	21	281	4159.50	3404.58	81.85
Himachal Pradesh	11	4	-	-	11	4	15	125.00	124.38	99.50
J & K	8	5	-	-	8	5	13	52.00	43.61	83.87
Delhi	1	-	-	-	1	-	1	5.00	0.46	9.20
Total	**377**	**45**	**9**	**6**	**386**	**51**	**437**	**5444.54**	**4198.26**	**77.11**
East Zone										
Bihar	39	-	-	-	39	-	39	230.00	248.71	108.13
Jharkhand	8	-	-	-	8	-	8	40.00	10.67	26.68
Odisha	17	6	1	-	18	6	24	270.00	255.06	94.47
West Bengal	10	8	-	2	10	10	20	112.40	60.43	53.76
Total	**74**	**14**	**1**	**2**	**75**	**16**	**91**	**652.40**	**574.87**	**88.12**
NE Zone										
Assam	7	4	-	-	7	4	11	84.00	60.76	72.33
Tripura	2	4	-	-	2	4	6	35.00	17.54	50.11
Manipur	4	4	-	-	4	4	8	40.00	1.37	3.43
Meghalaya	3	3	-	-	3	3	6	30.00	27.65	92.17
Nagaland	3	0	-	-	3	0	3	45.00	14.30	31.78
Arunachal Pradesh	5	3	-	-	5	3	8	9.00	7.86	87.33
Sikkim	4	2	-	-	4	2	6	37.00	39.87	107.76
Mizoram	3	3	-	-	3	3	6	27.00	25.00	92.59
Total	**31**	**23**	**0**	**0**	**31**	**23**	**54**	**307.00**	**194.35**	**63.31**
Grand Total	**987**	**173**	**61**	**23**	**1048**	**196**	**1244**	**17826.67**	**13517.30**	**75.83**

Source: Compendium of Soil Health - 2013-14, Department of Agriculture Cooperation & Farmers Welfare (Integrated Nutrient Management Division)

Statement 6.10: State-wise Status of Soil Health Card Scheme

(as on 13.03.2018)

Sl. No.	States/UT	Cycle - I (2015-16 & 2016-17)			Cycle - II (2017-18)		
		No. of Samples Collected	No. of Samples Tested	No. of SHCs Printed	No. of Samples Collected	No. of Samples Tested	No. of SHCs Printed
1	Andaman & Nicobar	1405	1405	10000	570	333	0
2	Andhra Pradesh	1348382	1348382	7455204	612131	395013	1011863
3	Arunachal Pradesh	20532	20532	20532	0	0	0
4	Assam	278707	278707	788432	0	0	0
5	Bihar	1308778	1308778	6469650	600191	300419	1085456
6	Chhattisgarh	703691	703691	3890709	474413	434749	1640830
7	Dadar Nagar & Haveli	2162	2162	2162	0	0	0
8	Goa	25000	25000	25000	6757	4453	4223
9	Gujarat	1589236	1589236	5108923	843576	814045	0
10	Haryana	788670	788670	4227238	622550	191647	51230
11	Himachal Pradesh	69635	69635	385011	59065	55937	333657
12	Jammu & Kashmir	160687	160687	692062	38361	17175	71281
13	Jharkhand	115302	115302	637507	47386	42390	96367
14	Karnataka	1665765	1665765	7832204	770932	602900	1523139
15	Kerala	127585	127585	705420	0	0	0
16	Madhya Pradesh	2313977	2313977	8872377	1122016	934404	2463500
17	Maharashtra	2347121	2347121	12977232	1528775	1354984	2922773
18	Manipur	20713	20713	114522	3542	1465	0
19	Meghalaya	39372	39372	209561	12972	9755	35904
20	Mizoram	11986	11986	11986	490	349	332
21	Nagaland	33423	33423	184797	600	500	0
22	Odisha	668635	668635	2374233	251680	195731	421369
23	Puducherry	3530	3530	19594	3584	2373	0
24	Punjab	835526	493968	950431	339907	0	0
25	Rajasthan	2308013	2308013	6886000	680000	475000	1299000
26	Sikkim	13217	13217	46000	0	0	0
27	Tamil Nadu	1274536	1274536	7000000	654464	644624	1220891
28	Telangana	1034678	1034678	5720737	487627	423683	579449
29	Tripura	32736	32736	117723	11668	7795	12343
30	Uttar Pradesh	4770399	4770399	16657278	2207249	1798306	564122
31	Uttarakhand	135738	135738	750494	67995	66177	269146
32	West Bengal	1300349	1300349	5040510	400000	198000	861000
Total		**25349486**	**25007928**	**106183529**	**11848501**	**8972207**	**16467875**

Source: http://soilhealth.dac.gov.in, Ministry of Agriculture and Farmers Welfare (as retrieved on 15.03.2018)
SHC: Soil Health Card

Statement 6.11: State- wise break-up of the energy parks and energy clubs

(as on 31.12.2015)

No.	State/UT	Energy Parks (No.)		Renewable Energy Clubs (No.)*
		District Level*	State Level	
1	Andhra Pradesh	27	-	40
2	Arunachal Pradesh	6	1	-
3	Assam	22	1	-
4	Bihar	11	-	6
5	Chhattisgarh	15	2	8
6	Delhi	8	1	-
7	Goa	2	-	1
8	Gujarat	14	1	27
9	Haryana	21	1	14
10	Himachal Pradesh	9	2	2
11	Jammu & Kashmir	15	2	3
12	Jharkhand	7	1	-
13	Karnataka	34	1	89
14	Kerala	16	1	-
15	Madhya Pradesh	27	-	31
16	Maharashtra	52	1	66
17	Manipur	10	-	-
18	Meghalaya	7	1	
19	Mizoram	7	1	
20	Nagaland	6	1	
21	Odisha	11	1	13
22	Punjab	20	1	15
23	Rajasthan	12	-	10
24	Sikkim	7	1	
25	Tamil Nadu	21	1	124
26	Tripura	9	1	8
27	Uttar Pradesh	56	1	64
28	Uttarakhand	11	1	
29	West Bengal	11	1	24
30	A&N Islands	5	1	
31	Chandigarh	3	1	4
32	Puducherry	2	1	5
	Total	**484**	**29**	**554**

Source : Annual Report , Ministry of New and Renewable Energy

* data up to 2012

Statement 6.12: State-wise Family- Type biogas plants installated

Sl. No.	State/UT	Estimated potential	Cumulative physical achievement as on (31-03-2017)	Achievements during (2017-18)	
				Target	Achs. (upto 31.12.2017)
1	Andhra Pradesh	1065000	549235	6030	2250
2	Arunachal Pradesh	7500	3555	100	0
3	Assam	307000	130375	9000	4200
4	Bihar	733000	129844	0	NA
5	Chhattisgarh	400000	54825	2000	565
6	Delhi	12900	681	0	NA
7	Goa	8000	4230	0	NA
8	Gujarat	554000	433317	1600	641
9	Haryana	300000	62085	0	NA
10	Himachal Pradesh	125000	47650	100	25
11	Jammu & Kashmir	128000	3163	0	NA
12	Jharkhand	100000	7579	350	43
13	Karnataka	680000	491764	8000	1987
14	Kerala	150000	149568	2300	962
15	Madhya Pradesh	1491000	365689	8500	1910
16	Maharashtra	897000	899472	9200	3414
17	Manipur	38000	2128	0	NA
18	Meghalaya	24000	10196	800	0
19	Mizoram	5000	5412	300	146
20	Nagaland	6700	7953	400	0
21	Odisha	605000	270880	2400	542
22	Punjab	411000	177445	3650	1310
23	Puducherry	4300	578	0	0
24	Rajasthan	915000	71231	800	41
25	Sikkim	7300	9044	400	0
26	Tamil Nadu	615000	222870	250	0
27	Telangana	-	22591	4100	0
28	Tripura	28000	3620	200	33
29	Uttar Pradesh	1938000	440713	700	0
30	Uttarakhand	83000	21558	1000	789
31	West Bengal	695000	366974	0	NA
	Union Territory				
1	Andaman and Nicobar Islands	1400	137	0	NA
2	Chandigarh	2200	97	0	NA
3	Dadra and Nagar Haveli	2000	169	0	NA
4	KVIC	-	-	3000	1267
	Total	**12339300**	**4966628**	**65180**	**20125**

Source : Annual Report 2016-17, Ministry of New and Renewable Energy

Statements 6.13 : Status of germplasm holding in the base collection at National Genebank

Crop/Crop group	No. of accessions conserved during the year									Present status of total accessions conserved		
	Regenerated			New accession			No. of Species					
	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
Cereals	4933	559	2272	3559	2412	2068	106	110	112	156266	158714	160775
Millets	26	258	2814	948	486	5743	17	18	22	52003	52471	58212
Forages	119	0	21	253	401	123	169	175	174	6287	6688	6811
Pseudocereals	0	0	21	147	187	110	39	40	42	6927	7116	7226
Legumes	2266	390	2073	1673	758	456	79	82	87	63983	64771	65227
Oilseeds	272	3139	2675	1546	945	288	71	71	71	56714	57685	57973
Fibre corps	0	373	79	280	345	1278	59	59	69	12724	13099	14378
Vegetables	83	103	1305	614	407	531	175	182	191	24615	25047	25578
Fruits & Nuts	0	0	0	1	0	0	63	63	63	272	272	272
Medicinal, Aromatic plants & Narcotics	0	139	391	476	354	550	649	650	661	6902	7274	7822
Ornamentals	0	0	2	6	22	14	116	116	117	610	632	646
Spices and Condiments	158	69	325	123	224	121	26	26	26	2658	2896	3005
Agro-forestry	0	0	0	3	10	1	186	186	184	1649	1641	1642
Duplicate safety samples (Lentil, Pigeonpea)	0	0	0	0	0	0	0	0	0	10235	10235	10235
Trial Material (Wheat, Barley)	0	0	0	0	0	0	0	0	0	10771	10771	10771
Total	**7857**	**5030**	**11978**	**9629****	**6551**	**11283***	**1755**	**1778**	**1820**	**412616**	**419312**	**430573**

Source : National Bureau of Plant Genetic Resources, Annual Report 2016-17

Note: Accessions of various horticultural crops received for long term conservation at -18 ± 2° C as base collections.

* The figure includes germplasm of varieties received to be released and notification and genetic stocks.

** The figure includes 172 released varieties and 89 genetic stocks.

Statement 6.14: Status of in-vitro conserved germplasm

Crop group	2012				2013				2014				2015				2016			
	Genera	Species	Cultures	Accessions	Genera (no.)	Species (no.)	Cultures (no.)	Accessions (no.)	Genera (no.)	Species (no.)	Cultures (no.)	Accessions (no.)	Genera (no.)	Species (no.)	Cultures (no.)	Accessions (no.)	Genera (no.)	Species (no.)	Cultures (no.)	Accessions (no.)
Tropical Fruits (banana, grape)	2	14	10000	416	1	14	11000	420	1	14	10000	420	1	14	10,000	420	1	14	10000	420
Temperate and Minor Fruits (mulberry, strawberry, apple,pear,blackberry)	9	41	6700	327	9	41	7000	305	9	41	7000	310	10	42	7,500	315	10	42	7500	322
Tuber crops (sweet potato, yam, taro)	5	12	9800	618	5	12	10000	619	5	12	10000	620	5	12	10,000	604	5	12	10000	588
Bulbous and other crops (garlic, gladiolus)	4	12	3300	171	4	12	3300	171	4	12	3300	171	4	12	3,300	171	4	12	3300	171
Medicinal and Aromatic Plants (species of bacopa, mentha, rauvolfia, tylophora)	21	28	5000	174	21	28	4500	153	21	28	4000	153	21	28	4,000	155	21	28-Jan	4000	155
Spices and Industrial crops (ginger, turmeric, pepper, cardamom, hops, jojoba)	7	27	5800	380	NA	NA	NA	NA	7	19	5000	235	NA	NA	NA	NA	7	27	5000	226
Total	**48**	**134**	**40680**	**2086**	**40**	**107**	**35800**	**1668**	**47**	**126**	**39300**	**1909**	**41**	**108**	**34800**	**1665**	**48**	**135**	**39800**	**1882**

Source : Annual Report 2016-17, National Bureau of Plant Genetic Resources NA: Not Available
Note: Accessions conserved under room conditions (25 ± 2° C; 16/8h) and/or at low temprature (4° c) for -24 months.

Statement 6.15: Status of cryopreserved germplasm at national cryobank

Category	No. of Accessions				
	2012	2013	2014	2015	2016
	(As on 31st December)				
Recaictrant & Intermediate					
Fruits & Nuts	2876	2923	3037	3139	3309
Spices & Condiments	151	151	151	152	152
Plantation Crops	22	22	22	22	22
Agroforestry & Forestry species	1640	1644	1644	1644	1644
Industrial crops	1325	1325	1325	1328	1338
Medicinal & Aromatic Plants	6	6	10	11	11
Total	6020	6071	6189	6296	6476
Orthodox					
Cereals	248	248	248	253	253
Millets and Forages	287	287	287	289	293
Pseudocereals	76	76	76	76	76
Grain Legumes	636	636	808	812	813
Oilseeds	471	500	668	668	668
Fibres	66	66	66	67	68
Vegetables	433	433	475	499	502
Medicinal & Aromatic Plants	941	946	946	964	976
Narcotics & dyes	34	34	34	34	35
Miscellaneous	16	16	16	16	16
Total	3208	3242	3624	3678	3700
Dormant Buds	373	387	387	387	387
Pollen grains	345	446	484	484	537
Genomic resources			398	779	1052
Total	9946	10146	11082	11624	12152
Wild Relatives*	1018	1024	1024	1073	1087
Rare & Endangered plants	80	99	99	99	99
Varieties*	655	732	770	770	776
Elite*	4	4	4	4	4
Registered germplasm*	23	26	23	23	23
Number of Species	729	732	787	794	795
Grand Total	12455	12763	13789	14387	14936

Source : National Bureau of Plant Genetic Resources, Annual Report -2016-17

*included in respective Categories stored as orthodox seeds.

Note : - Accessions cryostored as seed, embryonic axes, pallen and genomic resources for 4 - 27 years for retention of original viabilities.

Appendix

CONCORDANCE OF FDES 2013 WITH DPSIR FRAMEWORK

Climate Process Drivers	
Sub-component 1.3: Environmental Quality	
Topic 1.3.1: Air quality	b: Global atmospheric concentrations of greenhouse gases
Sub-component 3.1: Emissions to Air	
Topic 3.1.1: Emissions of greenhouse gases	
Topic 3.1.2: Consumption of ozone depleting substances	b: Total emissions of indirect greenhouse gases (GHGs) a: Consumption of ozone depleting substances (ODSs)
Climate Change Evidence	
Sub-component 1.1: Physical Conditions	
Topic 1.1.1: Atmosphere, climate and weather Topic 1.1.2: Hydrographical characteristics	a: Temperature b: Precipitation e: Seas – sea level
Sub-component 4.1: Natural Extreme Events and Disasters	
Topic 4.1.1: Occurrence of natural extreme events and disasters	a: Occurrence of natural extreme events and disasters
Climate Change Impacts and Vulnerability	
Sub-component 1.1: Physical Conditions	
Topic 1.1.2: Hydrographical characteristics	a: Lakes b: Rivers and streams c: Artificial reservoirs e: Seas g: Glaciers
Topic 1.1.4: Soil characteristics	b: Soil degradation
Sub-component 1.2: Land Cover, Ecosystems and Biodiversity	
Topic 1.2.1: Land cover	**a: Area under land cover categories**
Topic 1.2.2: Ecosystems and biodiversity	a: General ecosystem characteristics, extent and pattern b: Ecosystems' chemical and physical characteristics c: Biodiversity
Topic 1.2.3: Forests	a: Forest area b: Forest biomass
Sub-component 1.3: Environmental Quality	
Topic 1.3.3: Marine water quality	b: Organic matter f: Physical and chemical characteristics [of marine water bodies] g: Coral bleaching
Sub-component 2.3: Land	
Topic 2.3.1: Land use	**a: Area under land use categories**
Topic 2.3.2: Use of forest land	a: Use of forest land

CONCORDANCE OF FDES 2013 WITH DPSIR FRAMEWORK	
Sub-component 4.1: Natural Extreme Events and Disasters	
Topic 4.1.2: Impact of natural extreme events and disasters	a: People affected by natural extreme events and disasters **b: Economic losses due to natural extreme events and disasters** c: Physical losses/damages due to natural extreme events and disasters d: Effects of natural extreme events and disasters on integrity of ecosystems
Sub-component 5.1: Human Settlements	
Topic 5.1.3: Housing conditions	c: Population living in hazard-prone areas d: Hazard-prone areas
Sub-component 5.2: Environmental Health	
Topic 5.2.3: Vector-borne diseases	a: Vector-borne diseases
Topic 5.2.4: Health problems associated with excessive UV radiation exposure	a: Problems associated with excessive UV radiation exposure
Mitigation and Adaptation	
Sub-component 2.2: Energy Resources	
Topic 2.2.2: Production, trade and consumption of energy	a: Production of energy
Sub-component 6.1: Environmental Protection and Resource Management Expenditure	
Topic 6.1.1: Government environmental protection and resource management expenditure	a: Government environmental protection and resource management expenditure [on climate change mitigation activities]
Topic 6.1.2: Corporate, non-profit institution and household environmental protection and resource management expenditure	a: Private sector environmental protection and resource management expenditure [on climate change mitigation activities]
Sub-component 6.2: Environmental Governance and Regulation	
Topic 6.2.2: Environmental regulation and instruments	a: Direct regulation b: Economic instruments [related to climate change]
Topic 6.2.3: Participation in MEAs and other global environmental conventions	a: Participation in MEAs and other global environmental conventions
Sub-component 6.3: Extreme Event Preparedness and Disaster Management	
Topic 6.3.1: Preparedness for natural extreme events and disasters	a: National natural extreme event and disaster preparedness and management systems

BASIC SET OF ENVIRONMENT STATISTICS (FDES 2013)

Topic	Statistics and Related Information	Category of Measurement	Tier
(**Bold Text - Core Set/Tier 1**; Regular Text - Tier 2; *Italicized Text - Tier 3*)			
COMPONENT 1: ENVIRONMENTAL CONDITIONS AND QUALITY			
Sub-Component 1: Physical Conditions			
Topic 1.1.1:Atmosphere,climate and weather			
1.1.1.a.	1. **Monthly average temperature**	Degrees	I
1.1.1.a.	2. **Minimum monthly average temperature**	Degrees	I
1.1.1.a.	3. **Maximum monthly average temperature**	Degrees	I
1.1.1.b.	1. **Annual average precipitation**	Height	I
1.1.1.b.	2. **Long-term annual average precipitation**	Height	I
1.1.1.b.	3. Monthly average precipitation	Height	II
1.1.1.b.	4. Minimum monthly value precipitation	Height	II
1.1.1.b.	5. Maximum monthly value precipitation	Height	II
1.1.1.c.	1. Minimum monthly value humidity	Number	II
1.1.1.c.	2. Maximum monthly value humidity	Number	II
1.1.1.d.	1. *Minimum monthly value pressure*	Pressure unit	III
1.1.1.d.	2. *Maximum monthly value pressure*	Pressure unit	III
1.1.1.e.	1. *Minimum monthly value wind speed*	Speed	III
1.1.1.e.	2. *Maximum monthly value wind speed*	Speed	III
1.1.1.f.	1. *Average daily value solar radiation*	Area, Energy unit	III
1.1.1.f.	2. *Average monthly value solar radiation*	Area, Energy unit	III
1.1.1.f.	3. *Number of hours of sunshine*	Number	III
1.1.1.g.	1. *UV radiation - Maximum daily value*	Area, Energy unit	III
1.1.1.g.	2. *UV radiation -Average daily value*	Area, Energy unit	III
1.1.1.g.	3. *UV radiation -Maximum monthly value*	Area, Energy unit	III
1.1.1.g.	4. *UV radiation -Average monthly value*	Area, Energy unit	III
1.1.1.h.	1. *Occurrence of El Niño/La Niña events - Occurrence*	Number	III
1.1.1.h.	2. *Occurrence of El Niño/La Niña events - Time period*	Time period	III
Topic 1.1.2: Hydrographical characteristics			
1.1.2.a.	1. Lakes - Surface area	Area	II
1.1.2.a.	2. *Lakes - Maximum depth*	Depth	III
1.1.2.b.	1. Rivers and streams - Length	Length	II
1.1.2.c.	*1. Artificial reservoirs - Surface area*	Area	III
1.1.2.c.	2. *Artificial reservoirs - Maximum depth*	Depth	III
1.1.2.d.	1. **Description of main watersheds**	Area, Description	I
1.1.2.e.	1. Coastal waters	Area	II
1.1.2.e.	2. Territorial sea	Area	II
1.1.2.e.	3. Seas - Exclusive Economic Zone (EEZ)	Area	II
1.1.2.e.	4. *Sea level*	Depth	III
1.1.2.e.	5. *Area of sea ice*	Area	III
1.1.2.f.	*Aquifers*	Depth, Description	III
1.1.2.g.	Glaciers	Area	II
Topic 1.1.3: Geological and geographical information			
1.1.3.a.	1. Length of border	Length	II
1.1.3.a.	2. **Area of country or region**	Area, Location	I

BASIC SET OF ENVIRONMENT STATISTICS (FDES 2013)

Topic	Statistics and Related Information	Category of Measurement	Tier
1.1.3.a.	3. Number of islands	Number	II
1.1.3.a.	4. Area of islands	Area	II
1.1.3.a.	5. *Main geomorphological characteristics of islands*	Description	III
1.1.3.a.	6. *Spatial distribution of land relief*	Description, Location	III
1.1.3.a.	7. *Characteristics of landforms* (e.g., plains, hills, plateaus, dunes, volcanoes, mountains, seamounts)	Description, Area, Height	III
1.1.3.a.	8. *Area by rock types*	Area	III
1.1.3.a.	9. *Length of fault lines*	Length	III
1.1.3.b.	**Coastal waters** (including area of coral reefs and mangroves)	Area, Description	I
1.1.3.c.	**Length of marine coastline**	Length	I
1.1.3.d.	**Coastal area**	Area	I
Topic 1.1.4: Soil characteristics			
1.1.4.a.	1. **Area by soil types**	Area	I
1.1.4.b.	1. **Soil degradation - Area affected by soil erosion**	Area	I
1.1.4.b.	2. **Soil degradation - Area affected by desertification**	Area	I
1.1.4.b.	3. Soil degradation - Area affected by salinization	Area	II
1.1.4.b.	4. Soil degradation - Area affected by waterlogging	Area	II
1.1.4.b.	5. Soil degradation - Area affected by acidification	Area	II
1.1.4.b.	6.Soil degradation - *Area affected by compaction*	Area	III
1.1.4.c.	1. Nutrient content of soil - Nitrogen (N)	Concentration	II
1.1.4.c.	2. Nutrient content of soil - Phosphorous (P)	Concentration	II
1.1.4.c.	3. *Nutrient content of soil - Calcium (Ca)*	Concentration	III
1.1.4.c.	4. *Nutrient content of soil - Magnesium (Mg)*	Concentration	III
1.1.4.c.	5. *Nutrient content of soil - Potassium (K)*	Concentration	III
1.1.4.c.	6. *Nutrient content of soil - Zinc (Zn)*	Concentration	III
1.1.4.c.	7. Nutrient content of soil - *Other*	Concentration	III
Sub-component 1.2: Land Cover, Ecosystems and Biodiversity			
Topic 1.2.1: Land Cover			
1.2.1.a.	**Area under land cover categories**	Area	I
Topic 1.2.2: Ecosystems and biodiversity			
1.2.2.a.	1. **Area of ecosystems**	Area	I
1.2.2.a.	2. *Proximity of ecosystem to urban areas and cropland*	Distance	III
1.2.2.b.	1. *Ecosystems' chemical and physical characteristics - Nutrients*	Concentration	III
1.2.2.b.	2. Ecosystems' chemical and physical characteristics - *Carbon*	Concentration	III
1.2.2.b.	3. *Ecosystems' chemical and physical characteristics - Pollutants*	Concentration	III
1.2.2.c.	1. **Known flora and fauna species**	Number	I
1.2.2.c.	2. Endemic flora and fauna species	Number	II
1.2.2.c.	3. Invasive alien flora and fauna species	Number	II
1.2.2.c.	4. Species population	Number	II
1.2.2.c.	5. *Habitat fragmentation*	Area, Description, Location, Number	III
1.2.2.d.	1. **Protected terrestrial and marine area** (also in 1.2.3.a)	Number, Area	I
1.2.2.d.	2. Protected flora and fauna species	Number	II
Topic 1.2.3: Forests			
1.2.3.a.	1. **Forest area - Total**	Area	I

BASIC SET OF ENVIRONMENT STATISTICS (FDES 2013)

Topic	Statistics and Related Information	Category of Measurement	Tier
1.2.3.a.	2. Forest area - Natural	Area	II
1.2.3.a.	3. Forest area - Planted	Area	II
1.2.3.a.	4. Protected forest area (also in 1.2.2.d)	Area	II
1.2.3.a.	5. Forest area affected by fire	Area	II
1.2.3.b.	1. Forest biomass - Total	Volume	II
1.2.3.b.	2. *Carbon storage in living forest biomass*	Mass	III
Sub-component 1.3: Environmental Quality			
Topic 1.3.1: Air Quality			
1.3.1.a.	1. **Local air quality - Concentration level of particulate matter (PM_{10})**	Concentration	I
1.3.1.a.	2. **Local air quality - Concentration level of particulate matter ($PM_{2.5}$)**	Concentration	I
1.3.1.a.	3. **Local air quality - Concentration level of tropospheric ozone (O_3)**	Concentration	I
1.3.1.a.	4. **Local air quality - Concentration level of carbon monoxide (CO)**	Concentration	I
1.3.1.a.	5. **Local air quality - Concentration level of sulphur dioxide (SO_2)**	Concentration	I
1.3.1.a.	**6. Local air quality - Concentration levels of nitrogen oxides (NO_2)**	Concentration	I
1.3.1.a.	7.Local air quality - Concentration levels of heavy metals	Concentration	II
1.3.1.a.	8. Local air quality -Concentration levels of non-methane volatile organic compounds (NMVOCs)	Concentration	II
1.3.1.a.	9. *Local air quality - Concentration levels of dioxins*	Concentration	III
1.3.1.a.	10. *Local air quality - Concentration levels of furans*	Concentration	III
1.3.1.a.	11. Local air quality - Concentration levels of other pollutants	Concentration	II
1.3.1.a.	12. Number of days when maximum allowable levels were exceeded per year	Number	II
1.3.1.b.	1. Global atmospheric concentration level of carbon dioxide (CO_2)	Concentration	II
1.3.1.b.	2. Global atmospheric concentration level of methane (CH_4)	Concentration	II
Topic 1.3.2: Freshwater quality			
1.3.2.a.	1. **Freshwater quality -Concentration level of nitrogen**	Concentration	I
1.3.2.a.	2. **Freshwater quality - Concentration level of phosphorous**	Concentration	I
1.3.2.a.	3. Freshwater quality -Concentration level of chlorophyll A	Concentration	II
1.3.2.b.	1. **Freshwater quality - Biochemical oxygen demand (BOD)**	Concentration	I
1.3.2.b.	2. Freshwater quality - Chemical oxygen demand (COD)	Concentration	II
1.3.2.c.	1. **Freshwater quality - Concentration levels of faecal coliforms**	Concentration	I
1.3.2.d.	1. Concentration levels of metals in sediment and freshwater	Concentration	II
1.3.2.d.	2.Concentration levels of metals in freshwater organisms	Concentration	II
1.3.2.e.	1. Concentration levels of Organic contaminants in sediment and freshwater	Concentration	II
1.3.2.e.	2. Concentration levels of Organic contaminants in freshwater organisms	Concentration	II
1.3.2.f.	1. Freshwater quality - pH/Acidity/Alkalinity	Level	II
1.3.2.f.	2. Freshwater quality - Temperature	Degrees	II
1.3.2.f.	3. *Freshwater quality - Total suspended solids (TSS)*	Concentration	III
1.3.2.f.	4. Freshwater quality - Salinity	Concentration	II
1.3.2.f.	5. Freshwater quality - Dissolved oxygen (DO)	Concentration	II
1.3.2.g.	1.Freshwater quality - Amount of plastic waste and other debris	Area, Mass	II
Topic 1.3.3: Marine water Quality			
1.3.3.a.	1. **Marine water quality - Concentration level of nitrogen**	Concentration	I
1.3.3.a.	2. **Marine water quality - Concentration level of phosphorous**	Concentration	I
1.3.3.a.	3. Marine water quality - Concentration level of chlorophyll A	Concentration	II
1.3.3.b.	1.Marine water quality - **Biochemical oxygen demand (BOD)**	Concentration	I

BASIC SET OF ENVIRONMENT STATISTICS (FDES 2013)

Topic	Statistics and Related Information	Category of Measurement	Tier
1.3.3.b.	2. Marine water quality -Chemical oxygen demand (COD)	Concentration	II
1.3.3.c.	1. Concentration levels of faecal coliforms in recreational marine waters	Concentration	II
1.3.3.d.	1. Concentration levels of metals in sediment and marine water	Concentration	II
1.3.3.d.	2. Concentration levels of metals in marine organisms	Concentration	II
1.3.3.e.	1. *Concentration levels of Organic contaminants in sediment and marine water*	Concentration	III
1.3.3.e.	2. *Concentration levels of Organic contaminants in marine organisms*	Concentration	III
1.3.3.f.	1. *Marine water quality - pH/Acidity/Alkalinity*	Level	III
1.3.3.f.	2. Marine water quality - Temperature	Degrees	II
1.3.3.f.	3. *Marine water quality - Total suspended solids (TSS)*	Concentration	III
1.3.3.f.	4. *Marine water quality - Salinity*	Concentration	III
1.3.3.f.	5.Marine water quality - Dissolved oxygen (DO)	Concentration	II
1.3.3.f.	6. *Marine water quality - Density*	Density	III
1.3.3.g.	1. **Area affected by coral bleaching**	Area	I
1.3.3.h.	1. *Amount of plastic waste and other debris in marine waters*	Area, Mass	III
1.3.3.i.	1. *Red tide - Occurrence*	Number	III
1.3.3.i.	2. *Red tide - Impacted area*	Area	III
1.3.3.i.	3. *Red tide - Duration*	Duration	III
1.3.3.j.	1. *Area of oil slicks in marine waters*	Area	III
1.3.3.j.	2. *Amount of tar balls in marine water*	Area, Diameter, Number	III
Topic 1.3.4: Soil pollution			
1.3.4.a.	1.Soil pollution - Contaminated sites	Area, Number	II
1.3.4.a.	2. Soil pollution - Potentially contaminated sites	Area, Number	II
1.3.4.a.	3. Soil pollution - Remediated sites	Area, Number	II
1.3.4.a.	4. Soil pollution - Other sites	Area, Number	II
Topic 1.3.5: Noise			
1.3.5.a.	Noise levels from specific sources	Level	II
1.3.5.b.	Noise levels in specific locations	Level	II
Component 2: Environmental Resources and their Use			
Sub-component 2.1: Mineral Resources			
Topic 2.1.1: Stocks and changes of mineral resources			
2.1.1.a.	1. **Stocks of commercially recoverable mineral resources**	Mass, Volume	I
2.1.1.a.	2. New discoveries of Mineral resources	Mass, Volume	II
2.1.1.a.	3. *Mineral resources - Upward reappraisals*	Mass, Volume	III
2.1.1.a.	4. *Mineral resources - Upward reclassifications*	Mass, Volume	III
2.1.1.a.	**5. Mineral resources - Extraction**	Mass, Volume	I
2.1.1.a.	6. *Mineral resources - Catastrophic losses*	Mass, Volume	III
2.1.1.a.	7. *Mineral resources - Downward reappraisals*	Mass, Volume	III
2.1.1.a.	8. *Mineral resources - Downward reclassifications*	Mass, Volume	III
2.1.1.a.	9. Stocks of potentially commercially recoverable mineral resources	Mass, Volume	II
2.1.1.a.	10. *Stocks of non-commercial and other known mineral resources*	Mass, Volume	III
Topic 2.1.2: Production and trade of minerals			
2.1.2.a.	Production of minerals	Mass, Volume	II
2.1.2.b.	Imports of minerals	Currency, Mass, Volume	II

BASIC SET OF ENVIRONMENT STATISTICS (FDES 2013)

Topic	Statistics and Related Information	Category of Measurement	Tier
2.1.2.c.	Exports of minerals	Currency, Mass, Volume	II
Sub-component 2.2: Energy Resources			
Topic 2.2.1: Stocks and changes of energy resources			
2.2.1.a.	1. **Stocks of commercially recoverable energy resources**	Mass, Volume	I
2.2.1.a.	2. Energy resources - New discoveries	Mass, Volume	II
2.2.1.a.	3. *Upward reappraisals of energy resources*	Mass, Volume	III
2.2.1.a.	4. *Upward reclassifications of energy resources*	Mass, Volume	III
2.2.1.a.	5. **Extraction of energy resources**	Mass, Volume	I
2.2.1.a.	6. *Catastrophic losses of energy resources*	Mass, Volume	III
2.2.1.a.	7. *Downward reappraisals of energy resources*	Mass, Volume	III
2.2.1.a.	8. *Downward reclassifications of energy resources*	Mass, Volume	III
2.2.1.a.	9. Stocks of potentially commercially recoverable energy resources	Mass, Volume	II
2.2.1.a.	10. *Stocks of non-commercial and other known energy resources*	Mass, Volume	III
Topic 2.2.2: Production, trade and consumption of energy			
2.2.2.a.	1. **Total production of energy**	Energy unit, Mass, Volume	I
2.2.2.a.	2. **Production of energy from non-renewable sources**	Energy unit, Mass, Volume	I
2.2.2.a.	3. **Production of energy from renewable sources**	Energy unit, Mass, Volume	I
2.2.2.a.	4. **Primary energy production**	Energy unit, Mass, Volume	I
2.2.2.a.	5. Imports of energy	Energy unit, Mass, Volume	II
2.2.2.a.	6. Exports of energy	Energy unit, Mass, Volume	II
2.2.2.a.	7. **Secondary energy production**	Energy unit, Mass, Volume	I
2.2.2.b.	**Total energy supply**	Energy unit, Mass, Volume	I
2.2.2.c.	**Final consumption of energy**	Energy unit, Mass, Volume	I
Sub-component 2.3: Land			
Topic 2.3.1: Land use			
2.3.1.a.	**Area under land use categories**	Area	I
2.3.1.b.	1. *Area of land under organic farming*	Area	III
2.3.1.b.	2. Area of land under irrigation	Area	II
2.3.1.b.	3. Area of land under sustainable forest management	Area	II
2.3.1.b.	4. *Area of land under agroforestry*	Area	III
2.3.1.c.	Land ownership	Area	II
Topic 2.3.2: Use of forest land			
2.3.2.a.	1. **Area deforested**	Area	I
2.3.2.a.	2. Area reforested	Area	II
2.3.2.a.	3. Area afforested	Area	II
2.3.2.a.	4. *Natural growth*	Area	III

BASIC SET OF ENVIRONMENT STATISTICS (FDES 2013)

Topic	Statistics and Related Information	Category of Measurement	Tier
2.3.2.b.	Forest area by primary designated function	Area	II
Sub-component 2.4: Soil Resources			
Sub-component 2.5: Biological Resources			
Topic 2.5.1: Timber resources			
2.5.1.a.	1. **Stocks of timber resources**	Volume	I
2.5.1.a.	2. Timber resources - Natural growth	Volume	II
2.5.1.a.	3. Timber resources - Fellings	Volume	II
2.5.1.a.	4. Timber resources - Removals	Volume	II
2.5.1.a.	5. *Felling residues*	Volume	III
2.5.1.a.	6. *Timber resources - Natural losses*	Volume	III
2.5.1.a.	7. *Catastrophic losses of timber resources*	Volume	III
2.5.1.a.	8. Timber resources - *Reclassifications*	Volume	III
2.5.1.b.	1. Amount of Fertilizers used (also in 3.4.1.a)	Area, Mass, Volume	II
2.5.1.b.	2. Amount of Pesticides used (also in 3.4.1.b)	Area, Mass, Volume	II
2.5.1.c.	Forest production	Volume	II
2.5.1.d.	Fuelwood production	Volume	II
2.5.1.e.	Imports of forest products	Currency, Mass, Volume	II
2.5.1.f.	Exports of forest products	Currency, Mass, Volume	II
Topic 2.5.2: Aquatic resources			
2.5.2.a.	**Fish capture production**	Mass	I
2.5.2.b.	**Aquaculture production**	Mass	I
2.5.2.c.	Imports of fish and fishery products	Currency, Mass, Volume	II
2.5.2.d.	Exports of fish and fishery products	Currency, Mass, Volume	II
2.5.2.e.	1. *Amount used of Pellets* (also in 3.4.1.c)	Mass, Volume	III
2.5.2.e.	2. *Amount used of Hormones* (also in 3.4.1.d)	Mass, Volume	III
2.5.2.e.	3. *Amount used of Colourants* (also in 3.4.1.e)	Mass, Volume	III
2.5.2.e.	4. *Amount used of Antibiotics* (also in 3.4.1.f)	Mass, Volume	III
2.5.2.e.	5. *Amount used of Fungicides*	Mass, Volume	III
2.5.2.f.	1. Stocks of aquatic resources	Mass	II
2.5.2.f.	2. *Additions to aquatic resources*	Mass	III
2.5.2.f.	3. *Reductions in aquatic resources*	Mass	III
Topic 2.5.3: Crops			
2.5.3.a.	**1. Main annual and perennial crops - Area planted**	Area	I
2.5.3.a.	**2. Main annual and perennial crops - Area harvested**	Area	I
2.5.3.a.	**3. Main annual and perennial crops - Amount produced**	Mass	I
2.5.3.a.	*4. Main annual and perennial crops -Amount of organic production*	Mass	III
2.5.3.a.	*5. Main annual and perennial crops - Amount of genetically modified crops produced*	Mass	III
2.5.3.b.	**1. Amount used of Natural fertilizers (e.g., manure, compost, lime) (also in 3.4.1.a)**	Area, Mass, Volume	I
2.5.3.b.	**2. Amount used of Chemical fertilizers (also in 3.4.1.a)**	Area, Mass, Volume	I

BASIC SET OF ENVIRONMENT STATISTICS (FDES 2013)

Topic	Statistics and Related Information	Category of Measurement	Tier
2.5.3.b.	**3. Amount used of Pesticides (also in 3.4.1.b)**	Area, Mass, Volume	I
2.5.3.b.	4. Amount used of Genetically modified seeds	Mass	II
2.5.3.c.	1. Monoculture/resource-intensive farming systems - Area being used for production	Area	II
2.5.3.c.	2. Monoculture/resource-intensive farming systems -Amount produced	Mass	II
2.5.3.c.	3. *Amount of genetically modified crops produced*	Mass	III
2.5.3.d.	Imports of crops	Currency, Mass	II
2.5.3.e.	Exports of crops	Currency, Mass	II
Topic 2.5.4: Livestock			
2.5.4.a.	1. **Number of live animals**	Number	I
2.5.4.a.	2. Number of animals slaughtered	Number	II
2.5.4.b.	1. *Amount used of Antibiotics* (also in 3.4.1.f)	Mass	III
2.5.4.b.	2. *Amount used of Hormones* (also in 3.4.1.d)	Mass	III
2.5.4.c.	Imports of livestock	Currency, Number	II
2.5.4.d.	Exports of livestock	Currency, Number	II
Topic 2.5.5: Other non-cultivated biological resources			
2.5.5.a.	1. Number of permits issued for regulated hunting and trapping of wild animals per year	Number	II
2.5.5.a.	2. Number of animal kills allowed by permits for regulated hunting and trapping of wild animals	Number	II
2.5.5.b.	Imports of endangered species	Currency, Number	II
2.5.5.c.	Exports of endangered species	Currency, Number	II
2.5.5.d.	*Reported wild animals killed or trapped for food or sale*	Number	III
2.5.5.e.	*Trade in wildlife and captive-bred species*	Description, Mass, Number	III
2.5.5.f.	*Non-wood forest products and other plants*	Mass, Volume	III
Sub-component 2.6: Water Resources			
Topic 2.6.1: Water resources			
2.6.1.a.	**1. Inflow of water to inland water resources - Precipitation (also in 1.1.1.b)**	Volume	I
2.6.1.a.	**2. Inflow of water from neighbouring territories to inland water resources**	Volume	I
2.6.1.a.	3. *Inflow of water from neighbouring countries subject to treaties*	Volume	III
2.6.1.b.	**1. Outflow of water from inland water resources - Evapotranspiration**	Volume	I
2.6.1.b.	2. Outflow of water from inland water resources to neighbouring territories	Volume	II
2.6.1.b.	3. Outflow of water from inland water resources subject to treaties	Volume	II
2.6.1.b.	4. Outflow of water from inland water resources to the sea	Volume	II
2.6.1.c.	1. Surface water stocks in artificial reservoirs	Volume	II
2.6.1.c.	2. Surface water stocks in lakes	Volume	II
2.6.1.c.	3. *Surface water stocks in rivers and streams*	Volume	III
2.6.1.c.	4. *Surface water stocks in wetlands*	Volume	III
2.6.1.c.	5. *Surface water stocks in snow, ice and glaciers*	Volume	III
2.6.1.c.	6. Groundwater stocks	Volume	II
Topic 2.6.2: Abstraction, use and returns of water			
2.6.2.a.	**Total water abstraction**	Volume	I
2.6.2.b.	**Water abstraction from surface water**	Volume	I

BASIC SET OF ENVIRONMENT STATISTICS (FDES 2013)

Topic	Statistics and Related Information	Category of Measurement	Tier
2.6.2.c.	**1. Water abstraction from groundwater - from renewable groundwater resources**	Volume	I
2.6.2.c.	**2. Water abstraction from groundwater from non-renewable groundwater resources**	Volume	I
2.6.2.d.	Water abstracted for own use	Volume	II
2.6.2.e.	Water abstracted for distribution	Volume	II
2.6.2.f.	Desalinated water	Volume	II
2.6.2.g.	Reused water	Volume	II
2.6.2.h.	Water use	Volume	II
2.6.2.i.	*Rainwater collection*	Volume	III
2.6.2.j.	*Water abstraction from the sea*	Volume	III
2.6.2.k.	Losses during transport	Volume	II
2.6.2.l.	*Exports of water*	Volume	III
2.6.2.m.	*Imports of water*	Volume	III
2.6.2.n.	*Returns of water*	Volume	III
Component 3: Residuals			
Sub-component 3.1: Emissions to Air			
Topic 3.1.1: Emissions of greenhouse gases			
3.1.1.a.	1. **Total emissions of direct greenhouse gases (GHGs) - Carbon dioxide (CO_2)**	Mass	I
3.1.1.a.	2. **Total emissions of direct greenhouse gases (GHGs) - Methane (CH_4)**	Mass	I
3.1.1.a.	**3.Total emissions of direct greenhouse gases (GHGs) - Nitrous oxide (N_2O)**	Mass	I
3.1.1.a.	4.Total emissions of direct greenhouse gases (GHGs) - Perfluorocarbons (PFCs)	Mass	II
3.1.1.a.	5. Total emissions of direct greenhouse gases (GHGs) - Hydrofluorocarbons (HFCs)	Mass	II
3.1.1.a.	6.Total emissions of direct greenhouse gases (GHGs) - Sulphur hexafluoride (SF_6)	Mass	II
3.1.1.b.	1. **Total emissions of indirect greenhouse gases (GHGs) - Sulphur dioxide (SO_2)**	Mass	I
3.1.1.b.	2. **Total emissions of indirect greenhouse gases (GHGs) - Nitrogen oxides (NO_x)**	Mass	I
3.1.1.b.	3.Total emissions of indirect greenhouse gases (GHGs) - Non-methane volatile organic compounds (NM-VOCs)	Mass	II
3.1.1.b.	4. Total emissions of indirect greenhouse gases (GHGs) - Other	Mass	II
Topic 3.1.2: Consumption of ozone depleting substances			
3.1.2.a.	1. Consumption of ozone depleting substances (ODSs) - Chlorofluorocarbons (CFCs)	Mass	II
3.1.2.a.	2. Consumption of ozone depleting substances (ODSs) - Hydrochlorofluorocarbons (HCFCs)	Mass	II
3.1.2.a.	3. Consumption of ozone depleting substances (ODSs) - Halons	Mass	II
3.1.2.a.	4. Consumption of ozone depleting substances (ODSs) - Methyl chloroform	Mass	II
3.1.2.a.	5. Consumption of ozone depleting substances (ODSs) - Carbon tetrachloride	Mass	II
3.1.2.a.	6. Consumption of ozone depleting substances (ODSs) - Methyl bromide	Mass	II
3.1.2.a.	7. Consumption of ozone depleting substances (ODSs) - Other	Mass	II
Topic 3.1.3: Emissions of other substances			
3.1.3.a.	1. Emissions of Particulate matter (PM)	Mass	II
3.1.3.a.	2. Emissions of Heavy metals	Mass	II

BASIC SET OF ENVIRONMENT STATISTICS (FDES 2013)

Topic	Statistics and Related Information	Category of Measurement	Tier
3.1.3.a.	3. *Emissions of Other substances*	Mass	III
Sub-component 3.2: Generation and Management of Wastewater			
Topic 3.2.1: Generation and pollutant content of wastewater			
3.2.1.a.	**Volume of wastewater generated**	Volume	I
3.2.1.b.	Pollutant content of wastewater	Mass	II
Topic 3.2.2: Collection and treatment of wastewater			
3.2.2.a.	**Volume of wastewater collected**	Volume	I
3.2.2.b.	**Volume of wastewater treated**	Volume	I
3.2.2.c.	1. Total urban wastewater treatment capacity - Number of plants	Number	II
3.2.2.c.	2. Total urban wastewater treatment capacity -Capacity of plants	Volume	II
3.2.2.d.	1.Total industrial wastewater treatment capacity - Number of plants	Number	II
3.2.2.d.	2. Total industrial wastewater treatment capacity -Capacity of plants	Volume	II
Topic 3.2.3: Discharge of wastewater to the environment			
3.2.3.a.	1. **Total volume of wastewater discharged to the environment after treatment**	Volume	I
3.2.3.a.	2. **Total volume of wastewater discharged to the environment without treatment**	Volume	I
3.2.3.b.	Pollutant content of discharged wastewater	Mass	II
Sub-component 3.3: Generation and Management of Waste			
Topic 3.3.1: Generation of waste			
3.3.1.a.	**Amount of waste generated by source**	Mass	I
3.3.1.b.	Amount of waste generated by waste category	Mass	II
3.3.1.c.	**Amount of hazardous waste generated**	Mass	I
Topic 3.3.2: Management of waste			
3.3.2.a.	1. **Total municipal waste collected**	Mass	I
3.3.2.a.	2. **Amount of municipal waste treated by type of treatment and disposal**	Mass	I
3.3.2.a.	3. **Number of municipal waste treatment and disposal facilities**	Number	I
3.3.2.a.	4. Capacity of municipal waste treatment and disposal facilities	Volume	II
3.3.2.b.	1. **Total hazardous waste collected**	Mass	I
3.3.2.b.	2. **Amount of hazardous waste treated by type of treatment and disposal**	Mass	I
3.3.2.b.	3. **Number of hazardous waste treatment and disposal facilities**	Number	I
3.3.2.b.	4. Capacity of hazardous waste treatment and disposal facilities	Volume	II
3.3.2.c.	1. Total other/industrial waste collected	Mass	II
3.3.2.c.	2. Amount of other/industrial waste treated by type of treatment and disposal	Mass	II
3.3.2.c.	3. Number of other/industrial treatment and disposal facilities	Number	II
3.3.2.c.	4. Capacity of other/industrial waste treatment and disposal facilities	Volume	II
3.3.2.d.	**Amount of recycled waste**	Mass	I
3.3.2.e.	Imports of waste	Mass	II
3.3.2.f.	Exports of waste	Mass	II
3.3.2.g.	Imports of hazardous waste	Mass	II
3.3.2.h.	Exports of hazardous waste	Mass	II
Sub-component 3.4: Release of Chemical Substances			
Topic 3.4.1: Release of chemical substances			
3.4.1.a.	1.Total amount of fertilizers used - Natural fertilizers (also in 2.5.1.b and 2.5.3.b)	Area, Mass, Volume	II

BASIC SET OF ENVIRONMENT STATISTICS (FDES 2013)

Topic	Statistics and Related Information	Category of Measurement	Tier
3.4.1.a.	2. Total amount of fertilizers used - Chemical fertilizers (also in 2.5.1.b and 2.5.3.b)	Area, Mass, Volume	II
3.4.1.b.	Total amount of pesticides used (also in 2.5.1.b and 2.5.3.b)	Area, Mass, Volume	II
3.4.1.c.	*Total amount of pellets used* (also in 2.5.2.e)	Mass, Volume	III
3.4.1.d.	*Total amount of hormones used* (also in 2.5.2.e and 2.5.4.b)	Mass, Volume	III
3.4.1.e.	*Total amount of colourants used* (also in 2.5.2.e)	Mass, Volume	III
3.4.1.f.	*Total amount of antibiotics used* (also in 2.5.2.e and 2.5.4.b)	Mass, Volume	III
Component 4: Extreme Events and Disasters			
Sub-component 4.1: Natural Extreme Events and Disasters			
Topic 4.1.1: Occurrence of natural extreme events and disasters			
4.1.1.a.	**1. Type of natural extreme event and disaster (geophysical, meteorological, hydrological, climatological, biological)**	Description	I
4.1.1.a.	**2. Occurrence of natural extreme events and disasters - Location**	Location	I
4.1.1.a.	3. Occurrence of natural extreme events and disasters - Magnitude (where applicable)	Intensity	II
4.1.1.a.	4. Occurrence of natural extreme events and disasters - Date of occurrence	Date	II
4.1.1.a.	5. Occurrence of natural extreme events and disasters - Duration	Time period	II
Topic 4.1.2: Impact of natural extreme events and disasters			
4.1.2.a.	**1.People affected by natural extreme events and disasters - Number of people killed**	Number	I
4.1.2.a.	2.People affected by natural extreme events and disasters - Number of people injured	Number	II
4.1.2.a.	3. People affected by natural extreme events and disasters -Number of people homeless	Number	II
4.1.2.a.	4. People affected by natural extreme events and disasters -Number of people affected	Number	II
4.1.2.b.	**Economic losses due to natural extreme events and disasters (e.g., damage to buildings, transportation networks, loss of revenue for businesses, utility disruption)**	Currency	I
4.1.2.c.	Physical losses/damages due to natural extreme events and disasters (e.g., area and amount of crops, livestock, aquaculture, biomass)	Area, Description, Number	II
4.1.2.d.	1. *Area affected by natural disasters*	Area	III
4.1.2.d.	2. *Loss of vegetation cover due to natural disasters*	Area	III
4.1.2.d.	3. *Area of watershed affected due to natural disasters*	Area	III
4.1.2.d.	4. *Other effects due to natural disasters*	Description	III
4.1.2.e.	*External assistance received for due to natural disasters*	Currency	III
Sub-component 4.2: Technological Disasters			
Topic 4.2.1: Occurrence of technological disasters			
4.2.1.a.	1. Type of technological disaster (industrial, transportation, miscellaneous)	Description	II
4.2.1.a.	2. Occurrence of technological disasters - *Location*	Location	III
4.2.1.a.	3. Occurrence of technological disasters - *Date of occurrence*	Date	III
4.2.1.a.	4. Occurrence of technological disasters -*Duration*	Time period	III
Topic 4.2.2: Impact of technological disasters			
4.2.2.a.	1. People affected by technological disasters -Number of people killed	Number	II
4.2.2.a.	2. People affected by technological disasters -*Number of people injured*	Number	III
4.2.2.a.	3. People affected by technological disasters -*Number of people homeless*	Number	III

BASIC SET OF ENVIRONMENT STATISTICS (FDES 2013)

Topic	Statistics and Related Information	Category of Measurement	Tier
4.2.2.a.	4. People affected by technological disasters -*Number of people affected*	Number	III
4.2.2.b.	Economic losses due to technological disasters (e.g., damage to buildings, transportation networks, loss of revenue for businesses, utility disruption)	Currency	II
4.2.2.c.	Physical losses/damages due to technological disasters (e.g., area and amount of crops, livestock, aquaculture, biomass)	Area, Description, Number	II
4.2.2.d.	1. *Area affected by technological disasters*	Area	III
4.2.2.d.	2. *Loss of vegetation cover due to technological disasters*	Area	III
4.2.2.d.	3. *Area of watershed affected due to technological disasters*	Area	III
4.2.2.d.	4. *Other* (e.g., for oil spills: volume of oil released into the environment, impact on ecosystem) due to technological disasters	Description	III
4.2.2.e.	*External assistance received due to technological disasters*	Currency	III
Component 5: Human Settlements and Environmental Health			
Sub-component 5.1: Human Settlements			
Topic 5.1.1: Urban and rural population			
5.1.1.a.	Population living in urban areas	Number	II
5.1.1.b.	Population living in rural areas	Number	II
5.1.1.c.	Total urban area	Area	II
5.1.1.d.	Total rural area	Area	II
5.1.1.e.	Population living in coastal areas	Number	II
Topic 5.1.2: Access to selected basic services			
5.1.2.a.	**Population using an improved drinking water source**	Number	I
5.1.2.b.	**Population using an improved sanitation facility**	Number	I
5.1.2.c.	**Population served by municipal waste collection**	Number	I
5.1.2.d.	*Population connected to wastewater collecting system*	Number	III
5.1.2.e.	**Population connected to wastewater treatment**	Number	I
5.1.2.f.	**Population supplied by water supply industry**	Number	I
5.1.2.g.	Price of water	Currency	II
5.1.2.h.	Population with access to electricity	Number	II
5.1.2.i.	Price of electricity	Currency	II
Topic 5.1.3: Housing conditions			
5.1.3.a.	Urban population living in slums	Number	II
5.1.3.b.	Area of slums	Area	II
5.1.3.c.	Population living in hazard-prone areas	Number	II
5.1.3.d.	Hazard-prone areas	Area	II
5.1.3.e.	*Population living in informal settlements*	Number	III
5.1.3.f.	*Homeless population*	Number	III
5.1.3.g.	*Number of dwellings with adequacy of building materials defined by national or local standards*	Number	III
Topic 5.1.4: Exposure to ambient pollution			
5.1.4.a.	Population exposed to air pollution in main cities	Number	II
5.1.4.b.	*Population exposed to noise pollution in main cities*	Number	III
Topic 5.1.5: Environmental concerns specific to urban settlements			
5.1.5.a.	Extent of urban sprawl	Area	II
5.1.5.b.	Available green spaces	Area	II
5.1.5.c.	**Number of private and public vehicles**	Number	I

BASIC SET OF ENVIRONMENT STATISTICS (FDES 2013)

Topic	Statistics and Related Information	Category of Measurement	Tier
5.1.5.d.	Population using public modes of transportation	Number	II
5.1.5.e.	*Population using hybrid and electric modes of transportation*	Number	III
5.1.5.f.	Extent of roadways	Length	II
5.1.5.g.	*Existence of urban planning and zoning regulations and instruments in main cities*	Description	III
5.1.5.h.	*Effectiveness of urban planning and zoning regulations and instruments in main cities*	Description	III
Sub-component 5.2: Environmental Health			
Topic 5.2.1: Airborne diseases and conditions			
5.2.1.a.	1.Airborne diseases and conditions - Incidence	Number	II
5.2.1.a.	2. Airborne diseases and conditions - Prevalence	Number	II
5.2.1.a.	3. Airborne diseases and conditions - Mortality	Number	II
5.2.1.a.	4. Airborne diseases and conditions - *Loss of work days*	Number	III
5.2.1.a.	5. Airborne diseases and conditions - *Estimates of economic cost in monetary terms*	Currency	III
Topic 5.2.2: Water-related diseases and conditions			
5.2.2.a.	**1.Water-related diseases - Incidence**	Number	I
5.2.2.a.	**2.Water-related diseases - Prevalence**	Number	I
5.2.2.a.	**3.Water-related diseases - Mortality**	Number	I
5.2.2.a.	4. Water-related diseases -*Loss of work days*	Number	III
5.2.2.a.	5. Water-related diseases -*Estimates of economic cost in monetary terms*	Currency	III
Topic 5.2.3: Vector-borne diseases			
5.2.3.a.	**1.Vector-borne diseases - Incidence**	Number	I
5.2.3.a.	**2. Vector-borne diseases -Prevalence**	Number	I
5.2.3.a.	**3. Vector-borne diseases -Mortality**	Number	I
5.2.3.a.	4. Vector-borne diseases -*Loss of work days*	Number	III
5.2.3.a.	5. Vector-borne diseases -*Estimates of economic cost in monetary terms*	Currency	III
Topic 5.2.4: Health problems associated with excessive UV radiation exposure			
5.2.4.a.	1. Health problems related to excessive UV radiation exposure - *Incidence*	Number	III
5.2.4.a.	2. Health problems related to excessive UV radiation exposure - *Prevalence*	Number	III
5.2.4.a.	3. Health problems related to excessive UV radiation exposure - *Loss of work days*	Number	III
5.2.4.a.	4. Health problems related to excessive UV radiation exposure - *Estimates of economic cost in monetary terms*	Currency	III
Topic 5.2.5: Toxic substance- and nuclear radiation-related diseases and conditions			
5.2.5.a.	1.Toxic substance-and nuclear radiation-related diseases - Incidence	Number	II
5.2.5.a.	2.Toxic substance-and nuclear radiation-related diseases - Prevalence	Number	II
5.2.5.a.	3. Toxic substance-and nuclear radiation-related diseases - *Loss of work days*	Number	III
5.2.5.a.	4.Toxic substance-and nuclear radiation-related diseases - *Estimates of economic cost in monetary terms*	Currency	III
Component 6: Environmental Protection, Management and Engagement			
Sub-component 6.1: Environmental Protection and Resource Management Expenditure			
Topic 6.1.1: Government environmental protection and resource management expenditure			
6.1.1.a.	1. **Annual government environmental protection expenditure**	Currency	I
6.1.1.a.	2. Annual government resource management expenditure	Currency	II

BASIC SET OF ENVIRONMENT STATISTICS (FDES 2013)

Topic	Statistics and Related Information	Category of Measurement	Tier
Topic 6.1.2: Corporate, non-profit institution and household environmental protection and resource management expenditure			
6.1.2.a.	1. Annual corporate environmental protection expenditure	Currency	II
6.1.2.a.	2. *Annual corporate resource management expenditure*	Currency	III
6.1.2.a.	3. *Annual non-profit institution environmental protection expenditure*	Currency	III
6.1.2.a.	4. *Annual non-profit institution resource management expenditure*	Currency	III
6.1.2.a.	5. *Annual household environmental protection expenditure*	Currency	III
6.1.2.a.	6. *Annual household resource management expenditure*	Currency	III
Sub-component 6.2: Environmental Governance and Regulation			
Topic 6.2.1: Institutional strength			
6.2.1.a.	1. Name of main environmental authority and year of establishment	Description	II
6.2.1.a.	2. Annual budget of the main environmental authority	Currency	II
6.2.1.a.	3. Number of staff in the main environmental authority	Number	II
6.2.1.a.	4. List of environmental departments in other authorities and year of establishment	Description	II
6.2.1.a.	5. Annual budget of environmental departments in other authorities	Currency	II
6.2.1.a.	6. Number of staff of environmental departments in other authorities	Number	II
6.2.1.b.	1. Name of institution and year of establishment	Description	II
6.2.1.b.	2. Annual budget of the institution	Currency	II
6.2.1.b.	3. Number of staff in the institution	Number	II
Topic 6.2.2: Environmental regulation and instruments			
6.2.2.a.	**1. List of regulated pollutants and description (e.g., by year of adoption and maximum allowable levels)**	Description, Number	I
6.2.2.a.	2. Description (e.g., name, year established) of licensing system to ensure compliance with environmental standards for businesses or other new facilities	Description	II
6.2.2.a.	3. Number of applications for licences received and approved per year	Number	II
6.2.2.a.	4. List of quotas for biological resource extraction	Number	II
6.2.2.a.	5. Budget and number of staff dedicated to enforcement of environmental regulations	Currency, Number	II
6.2.2.b.	1. *List and description* (e.g., year of establishment) *of green/environmental taxes*	Description, Currency	III
6.2.2.b.	2. *List and description* (e.g., year of establishment) *of environmentally relevant subsidies*	Description, Currency	III
6.2.2.b.	3. *List of eco-labelling and environmental certification programmes*	Description	III
6.2.2.b.	4. Emission permits traded	Number, Currency	III
Topic 6.2.3: Participation in MEAs and environmental conventions			
6.2.3.a.	**1. List and description (e.g., country's year of participation) of MEAs and other global environmental conventions**	Description, Number	I
Sub-component 6.3: Extreme Event Preparedness and Disaster Management			
Topic 6.3.1: Preparedness for natural extreme events and disasters			
6.3.1.a.	1. Existence of national disaster plans/programmes	Description	II
6.3.1.a.	2. Description (e.g., number of staff) of national disaster plans/programmes	Description	II
6.3.1.a.	3. Number and type of shelters in place or able to be deployed	Description, Number	II
6.3.1.a.	4. *Number and type of internationally certified emergency and recovery management specialists*	Description, Number	III

BASIC SET OF ENVIRONMENT STATISTICS (FDES 2013)

Topic	Statistics and Related Information	Category of Measurement	Tier
6.3.1.a.	5. *Number of volunteers*	Number	III
6.3.1.a.	6. *Quantity of first aid, emergency supplies and equipment stockpiles*	Number	III
6.3.1.a.	7. *Existence of early warning systems for all major hazards*	Description	III
6.3.1.a.	8. *Expenditure on disaster prevention, preparedness, clean-up and rehabilitation*	Currency	III
Topic 6.3.2: Preparedness for technological disasters			
6.3.2.a.	1. *Existence and description* (e.g., number of staff) *of public disaster management plans/programmes (and private when available)*	Description	III
6.3.2.a.	2. *Expenditure on disaster prevention, preparedness, clean-up and rehabilitation*	Currency	III
Sub-component 6.4: Environmental Information and Awareness			
Topic 6.4.1: Environmental information			
6.4.1.a.	1. Existence of publicly accessible environmental information system	Description	II
6.4.1.a.	2. Annual number of visits/users of specific environmental information programmes or environmental information systems	Number	II
6.4.1.b.	1. Description of national environment statistics programmes (e.g., existence, year of establishment, lead agency, human and financial resources)	Description	II
6.4.1.b.	2. *Number and type of environment statistics products and periodicity of updates*	Description, Number	III
6.4.1.b.	3. Existence and number of participant institutions in inter-agency environment statistics platforms or committees	Number	II
Topic 6.4.2: Environmental education			
6.4.2.a.	1. *Allocation of resources by central and local authorities for environmental education*	Currency	III
6.4.2.a.	2. *Number and description of environmental education programmes in schools*	Description, Number	III
6.4.2.a.	3. *Number of students pursuing environment-related higher education* (e.g., science, management, education, engineering)	Number	III
6.4.3.a.	1. *Knowledge and attitudes about environmental issues or concerns*	Description	III
6.4.3.a.	2. *Knowledge and attitudes about environmental policies*	Description	III
6.4.4.a.	1. Existence of pro-environmental NGOs (number of NGOs and their respective human and financial resources)	Currency, Number	II
6.4.4.a.	2. *Number of pro-environmental activities*	Number	III
6.4.4.a.	3. *Number of pro-environmental programmes*	Number	III

Glossary

GLOSSARY

A

Adaptation
Adjustment or preparation of natural or human systems to a new or changing environment which moderates harm or exploits beneficial opportunities.

Adaptive Capacity
Ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences.

Aerosols
Small particles or liquid droplets in the atmosphere that can absorb or reflect sunlight depending on their composition.

Afforestation
Planting of new forests on lands that historically have not contained forests.

Airborne diseases and conditions
Diseases and conditions associated with the environment are caused or worsened by exposure to unhealthy levels of pollutants (such as PM, SO2 or O3), usually found in urban settlements and, in particular, in cities with weaker air quality regulations and/or enforcement capabilities.

Alternative Energy
Energy derived from non-traditional sources (e.g., compressed natural gas, solar, hydroelectric, wind).

Annex I Countries/Parties
Group of countries included in Annex I (as amended in 1998) to the United Nations Framework Convention on Climate Change comprising of all the developed countries in the Organization of Economic Co-operation and Development (OECD) and economies in transition. By default, the other countries are referred to as Non-Annex I countries.

Angiosperms
Seed-bearing vascular plants.

Annex II Countries
Subset of the Annex I Countries which have a special obligation to help developing countries with financial and technological resources. They include the 24 original OECD members and the European Union.

Anthropogenic
Made by people or resulting from human activities. Usually used in the context of emissions that are produced as a result of human activities.

Aquaculture
Farming of aquatic organisms, including fish, molluscs, crustaceans and aquatic plants. Farming implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators, etc.

Aquaculture ponds
Water bodies used for aquaculture.

Aquatic Vegetation
Plants that grow partly or wholly in water whether rooted in the mud, as a lotus, or floating without anchorage, as the water hyacinth.

Aquatic resources
Comprise fish, crustaceans, molluscs, shellfish, aquatic mammals and other aquatic organisms that are considered to live within the boundaries of the Exclusive Economic Zone (EEZ) of a country throughout their lifecycles, including both coastal and inland fisheries.

Area under miscellaneous tree crops, groves, etc.
All culturable land not included under 'net area sown' but is put to some other agricultural use, such as land under casuarina trees, thatching grasses, bamboo bushes and other groves for fuel, etc.

Atmosphere
The gaseous envelope surrounding the Earth. The dry atmosphere consists almost entirely of nitrogen (78.1% volume mixing ratio) and oxygen (20.9% volume mixing ratio), together with a number of trace gases, such as argon (0.93%

volume mixing ratio), helium, radiatively active greenhouse gases such as carbon dioxide (0.035% volume mixing ratio) and ozone. In addition the atmosphere contains water vapour, whose amount is highly variable but typically 1% volume mixing ratio. The atmosphere also contains clouds and aerosols.

Atmospheric Lifetime

Average time that a molecule resides in the atmosphere before it is removed by chemical reaction or deposition. This can also be thought of as the time that it takes after the human-caused emission of a gas for the concentrations of that gas in the atmosphere to return to natural levels. Greenhouse gas lifetimes can range from a few years to a few thousand years.

B

Barren and unculturable land

Land which cannot be brought under cultivation unless at high cost, irrespective of whether such land is in isolated blocks or within cultivated holdings.

Biodiversity

Variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part, including diversity within species, between species and of ecosystems. It is also a measure of ecosystem health.

Biofuels

Gas or liquid fuel made from plant material (biomass). Includes wood, wood waste, wood liquors, peat, railroad ties, wood sludge, agricultural waste, straw, tires, fish oils, tall oil, sludge waste, waste alcohol, municipal solid waste, landfill gases, other waste and ethanol blended into motor gasoline.

Biological resources

Renewable resources that are capable of regeneration through natural (non-managed or managed) processes. Include timber and aquatic resources and a range of other animal and plant resources (such as livestock, orchards, crops and wild animals), fungi and bacteria.

Biomass

Materials that are biological in origin, including organic material (both living and dead) from above and below ground, for example, trees, crops, grasses, tree litter, roots and animals and animal waste.

Biome

A distinct community of plants, animals or fungi that occupy a distinct region. It is often referred to as an ecosystem.

Biosphere

Part of the Earth system comprising all ecosystems and living organisms, in the atmosphere, on land (terrestrial biosphere) or in the oceans (marine biosphere), including derived dead organic matter, such as litter, soil organic matter and oceanic detritus.

Biota

All animal and plant life of a particular region or time. Biotic (living) factors function with the abiotic (non-living) factors to form a complex unit such as an ecosystem.

BOD

Biochemical oxygen demand (BOD, also called biological oxygen demand) is the amount of dissolved oxygen needed (i.e. demanded) by aerobic biological organisms to break down organic material present in a given water sample at certain temperature over a specific time period. The BOD value is most commonly expressed in milligrams of oxygen consumed per litre of sample during 5 days of incubation at 20 °C and is often used as a surrogate of the degree of organic pollution of water.

BPL families

BPL or Below Poverty Line is an economic benchmark used by the Government in India to indicate economic disadvantage and to identify individuals and households in need of government assistance and aid. It is determined using various parameters which vary from state to state and within states.

C

Carbon Capture and Sequestration

Set of technologies that can greatly reduce carbon dioxide emissions from new and existing coal and gas-fired power plants, industrial processes and other stationary sources of carbon dioxide. It is a three-step process that includes

capture of carbon dioxide from power plants or industrial sources; transport of the captured and compressed carbon dioxide (usually in pipelines); and underground injection and geologic sequestration, or permanent storage, of that carbon dioxide in rock formations that contain tiny openings or pores that trap and hold the carbon dioxide.

Carbon Cycle

All parts (reservoirs) and fluxes of carbon. The cycle is usually thought of as four main reservoirs of carbon interconnected by pathways of exchange. The reservoirs are the atmosphere, terrestrial biosphere (usually includes freshwater systems), oceans and sediments (includes fossil fuels). The annual movements of carbon, the carbon exchanges between reservoirs, occur because of various chemical, physical, geological and biological processes. The ocean contains the largest pool of carbon near the surface of the Earth, but most of that pool is not involved with rapid exchange with the atmosphere.

Carbon Dioxide

A naturally occurring gas and also a by-product of burning fossil fuels and biomass, as well as land-use changes and other industrial processes. It is the principal human caused greenhouse gas that affects the Earth's radiative balance. It is the reference gas against which other greenhouse gases are measured.

Carbon Dioxide Equivalent

A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP). Carbon dioxide equivalents are commonly expressed as "million metric tons of carbon dioxide equivalents ($MMTCO_2Eq$)." The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by the associated GWP.

$MMTCO_2Eq$ = (million metric tons of a gas) * (GWP of the gas)

Carbon Dioxide Fertilization

The enhancement of the growth of plants as a result of increased atmospheric CO_2 concentration. Depending on their mechanism of photosynthesis, certain types of plants are more sensitive to changes in atmospheric CO_2 concentration.

Carbon Footprint

The total amount of greenhouse gases that are emitted into the atmosphere each year by a person, family, building, organization, or company. A persons carbon footprint includes greenhouse gas emissions from fuel that an individual burns directly, such as by heating a home or riding in a car. It also includes greenhouse gases that come from producing the goods or services that the individual uses, including emissions from power plants that make electricity, factories that make products and landfills where trash gets sent.

Carbon Sequestration

Terrestrial, or biologic, carbon sequestration is the process by which trees and plants absorb carbon dioxide, release the oxygen and store the carbon. Geologic sequestration is one step in the process of carbon capture and sequestration (CCS) and involves injecting carbon dioxide deep underground where it stays permanently.

Census houses

A building or part of a building having a separate main entrance from the road or common courtyard or staircase etc., used or recognised as a separate unit, it may be inhabited or vacant and may be used for residential or non-residential purposes.

Census household

A group of persons who commonly live together and would like to take their meals from a common kitchen unless some exigencies prevent any of them from doing so. These may be one member households or two member or multi-member households - for census purposes each of one of these types is regarded as a household.

Chlorofluorocarbons

Gases covered under the 1987 Montreal Protocol and used for refrigeration, air conditioning, packaging, insulation, solvents, or aerosol propellants. Since they are not destroyed in the lower atmosphere, CFCs drift into the upper atmosphere where, given suitable conditions, they break down ozone. These gases are being replaced by other compounds: hydro-chlorofluorocarbons, an interim replacement for CFCs that are also covered under the Montreal Protocol and hydro-fluorocarbons, which are covered under the Kyoto Protocol. All these substances are also greenhouse gases.

Class-I cities

Towns with a population of 1,00,000 or more.

Class-II towns
Towns with population greater than 50,000 but less than 99,999.

Climate
Climate in a narrow sense is usually defined as the "average weather," or more rigorously, as the statistical description in terms of the mean and variability of relevant quantities over a period of time ranging from months to thousands of years. The classical period is 3 decades, as defined by the World Meteorological Organization (WMO). These quantities are most often surface variables such as temperature, precipitation and wind. Climate in a wider sense is the state, including a statistical description, of the climate system.

Climate Change
Climate change refers to any significant change in the measures of climate lasting for an extended period of time. In other words, climate change includes major changes in temperature, precipitation, or wind patterns, among others, that occur over several decades or longer.

Climate change adaptation
Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

Climate change evidence
Different processes that substantiate the occurrence of changing climate patterns at the global, regional and local levels. The evidence of global warming and climate change is unequivocal, including global temperature rise, extreme events, sea level rise, shrinking ice sheets and glacial retreat.

Climate change mitigation
Efforts to reduce or prevent greenhouse gas emissions and may involve using new technologies, incorporating and increasing renewable energies, making older equipment more energy efficient and changing management practices or consumer behaviour. Protecting natural carbon sinks like forests and oceans, or creating new sinks through silviculture or green agriculture, are also elements of mitigation.

Climate change-related statistics
According to UNECE, refer to environmental, social and economic data that measure the human causes of climate change, the impacts of climate change on human and natural systems and the efforts by humans to avoid and adapt to these consequences.

Climate Feedback
A process that acts to amplify or reduce direct warming or cooling effects.

Climate Lag
The delay that occurs in climate change as a result of some factor that changes only very slowly. For example, the effects of releasing more carbon dioxide into the atmosphere occur gradually over time because the ocean takes a long time to warm up in response to a change in radiation.

Climate Model
A quantitative way of representing the interactions of the atmosphere, oceans, land surface and ice.

Climate Sensitivity
In Intergovernmental Panel on Climate Change (IPCC) reports, equilibrium climate sensitivity refers to the equilibrium change in global mean surface temperature following a doubling of the atmospheric (equivalent) CO_2 concentration. More generally, equilibrium climate sensitivity refers to the equilibrium change in surface air temperature following a unit change in radiative forcing (degrees Celsius, per watts per square meter). One method of evaluating the equilibrium climate sensitivity requires very long simulations with Coupled General Circulation Models (Climate model). The effective climate sensitivity is a related measure that circumvents this requirement. It is evaluated from model output for evolving non-equilibrium conditions. It is a measure of the strengths of the feedbacks at a particular time and may vary with forcing history and climate state.

Climate System (or Earth System)
The five physical components (atmosphere, hydrosphere, cryosphere, lithosphere and biosphere) that are responsible for the climate and its variations.

Co-Benefit
The benefits of policies that are implemented for various reasons at the same time including climate change mitigation acknowledging that most policies designed to address greenhouse gas mitigation also have other, often at least equally important, rationales (e.g., related to objectives of development, sustainability and equity).

Coliform
Group of bacteria (most common being the Escherichia coli or E. coli which can grow at elevated temperatures) found in the intestinal tract (therefore in the faeces) of humans and other animals. These rod-shaped microorganisms aid in digestion and are largely harmless. If ingested through contaminated food or water, however, they may cause bacterial or viral gastroenteritis, Hepatitis A, typhoid fever and associated problems. Total coliform includes Faecal Coliform bacteria as well as other types of Coliform bacteria that are naturally found in the soil.

Concentration
Amount of a chemical in a particular volume or weight of air, water, soil or other medium.

Conductivity
Measure of water's capability to pass electrical flow. This ability is directly related to the concentration of ions in the water. These conductive ions come from dissolved salts and inorganic materials such as alkalis, chlorides, sulphides and carbonate compounds.

Conference of the Parties (COP)
The supreme body of the United Nations Framework Convention on Climate Change (UNFCCC). It comprises more than 180 nations that have ratified the Convention. Its first session was held in Berlin, Germany, in 1995 and it is expected to continue meeting on a yearly basis. The COP's role is to promote and review the implementation of the Convention. It will periodically review existing commitments in light of the Convention's objective, new scientific findings and the effectiveness of national climate change programs.

Coral Bleaching
The process in which a coral colony, under environmental stress, expels the microscopic algae (zooxanthellae) that live in symbiosis with their host organisms (polyps). The affected coral colony appears whitened.

Coral reefs
Consolidated living colonies of microscopic organisms found in warm tropical waters. The term coral reef or organic reef is applied to the rock-like reefs built-up of living things, principally corals. They consist of accumulations of calcareous deposits of corals and coralline algae with the intervening space connected with sand, which consists largely of shells of foraminifera. Present reefs are living associations growing on this accumulation of past.

Creek
A notable physiographic feature of salt marshes, especially low marshes, these creeks develop, like rivers, into definite channels.

Critical or Critically Endangered
A taxon is critical when it is facing an extremely high probability of extinction in the wild in immediate future.

Crops
Plants or agricultural produce grown for food or other economic purposes, such as for textiles or livestock fodder

Crown cover
The canopy formed by the crowns of all the trees in a forest or in an uneven aged forest by the crowns of all trees in a specified crowns class.

Cryosphere
One of the interrelated components of the Earth's system, the cryosphere is frozen water in the form of snow, permanently frozen ground (permafrost), floating ice and glaciers. Fluctuations in the volume of the cryosphere cause changes in ocean sea level, which directly impact the atmosphere and biosphere.

Cultivable waste
Land available for cultivation but not taken for cultivation or abandoned after a few years for one reason or the other. Such lands may be either fallow or covered with shrubs and jungles not put to any use. These may be assessed or unassessed and may lie in isolated blocks or within cultivated during the year and the last five or more consecutive years in succession, will be included in this category.

Cultivated biological resources
Animal and tree, crop and plant resources yielding repeat products whose natural growth and regeneration are under the direct control, responsibility and management of an institutional unit.

Current fallow
Cultivable area kept fallow during the current agricultural year. Any seedling area in the current agricultural year not cropped in the same year is also treated as current fallow.

D

Deforestation
Practices or processes that result in the conversion of forested lands for non-forest uses. The term specifically excludes areas where the trees have been removed as a result of harvesting or logging and where the forest is expected to regenerate naturally or with the aid of silvicultural measures.

Dense Forest
Forests whose crown density is 40 percent or above.

Depletion
In physical terms, it is the decrease in the quantity of the stock of a natural resource over an accounting period that is due to the extraction of the natural resource by economic units occurring at a level greater than that of regeneration.

Derelict water
Water which is abundant or unused. Such water may be useful in aquaculture practices after treatment and settlement. Usually the stagnant waters of fresh water ponds and lakes which are inhabituated with weeds come under this category.

Desertification
Land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors, including climatic variations and human activities. Further, the UNCCD (The United Nations Convention to Combat Desertification) defines land degradation as a reduction or loss, in arid, semi-arid and dry sub-humid areas, of the biological or economic productivity and complexity of rain-fed cropland, irrigated cropland, or range, pasture, forest and woodlands resulting from land uses or from a process or combination of processes, including processes arising from human activities and habitation patterns, such as: (i) soil erosion caused by wind and/or water; (ii) deterioration of the physical, chemical and biological or economic properties of soil; and (iii) long-term loss of natural vegetation. Conversion of forest to non-forest.

Disasters
Unforeseen and often sudden events that cause great damage, destruction and human suffering. They often exceed local response capacities and require external assistance at the national or international level. Depending on their cause, disasters can be both natural and technological.

Dissipative losses
Material residues that are an indirect result of production and consumption activity.

Dissipative uses of products
Products that are deliberately released to the environment as part of production processes.

DO or Dissolved Oxygen
Amount of oxygen dissolved (and hence available to sustain marine life) in a body of water such as a lake, river, or stream. DO is the most important indicator of the health of a water body and its capacity to support a balanced aquatic ecosystem of plants and animals. Wastewater containing organic (oxygen consuming) pollutants depletes the dissolved oxygen and may lead to the death of marine organisms.

Driving Force-Pressure-State-Impact-Response (DPSIR) framework
An analytical framework that is based on the causal relationship between its D-P-S-I-R components. **D**riving forces are the socio-economic and socio-cultural forces driving human activities, which increase or mitigate pressures on the environment. **P**ressures are the stresses that human activities place on the environment. **S**tate, or state of the environment, is the condition of the environment. **I**mpacts are the effects of environmental degradation. **R**esponses refer to the responses by society to the environmental situation.

Dryland Farming
A technique that uses soil moisture conservation and seed selection to optimize production under dry conditions.

E

Eccentricity
Extent to which the Earth's orbit around the Sun departs from a perfect circle.

Economic territory
Area under the effective control of a single government. It includes the land area of a country, including islands, airspace, territorial waters and territorial enclaves in the rest of the world. Economic territory excludes territorial enclaves of other countries and international organizations located in the reference country.

Ecosystem
A dynamic complex of plant, animal and microorganism communities and their non-living environment interacting as a functional unit.

Ecosystem services
Benefits supplied by the functions of ecosystems and received by humanity.

Emissions
Substances released to the environment by establishments and households as a result of production, consumption and accumulation processes. Emissions to air are those released to atmosphere, while those to water are released to water resources.

Emissions Factor
A unique value for scaling emissions to activity data in terms of a standard rate of emissions per unit of activity (e.g., grams of carbon dioxide emitted per barrel of fossil fuel consumed, or per pound of product produced)

Endangered
Species in danger of extinction and whose survival is unlikely if the casual factors continue operating. Included are species whose numbers have been reduced to a critical level or whose habitats have been so drastically reduced that they are deemed to be in immediate danger of extinction.

Energy Efficiency
Using less energy to provide the same service.

Energy production
Capture, extraction or manufacture of fuels or other energy products in forms which are ready for general consumption. Energy production includes the production of primary and secondary energy. Primary energy refers to energy sources as found in their natural state, as opposed to derived or secondary energy, which is the result of the transformation of primary sources.

Enhanced Greenhouse Effect
The concept that the natural greenhouse effect has been enhanced by increased atmospheric concentrations of greenhouse gases (such as CO_2 and methane) emitted as a result of human activities. These added greenhouse gases cause the earth to warm.

Enteric Fermentation
Livestock, especially cattle, produce methane as part of their digestion. This process is called enteric fermentation and it represents one third of the emissions from the agriculture sector.

Environmental awareness
The gradual understanding of environmental issues and the recognition of the connections among human actions, development, sustainability and human responsibility in these processes. Environmental awareness involves the realization that humans and ecosystems co-exist in a shared environment, which is ultimately the biosphere. Awareness fosters pro-environmental attitudes and predispositions for action and changed behaviour.

Environmental data
Large amounts of unprocessed observations and measurements about the environment and related processes.

Environmental education
The process of sharing and constructing environmental information and knowledge, as well as information on how humans interact with the environment. Environmental education may be curriculum- and classroom-based or experiential and may be provided on-site or in community settings by government agencies or NGOs.

Environmental engagement
The transformation of perceptions and attitudes into concrete, pro-environmental actions. Individual and social participation and engagement in environmental processes intended to improve and protect the local and global environment are a concrete manifestation of understanding, motivation and commitment to protecting and improving the environment, expressed through behaviour.

Environmental Goods and Services Sector (EGSS)
A heterogeneous set of producers of technologies, goods and services that: (i) measure, control, restore, prevent, treat, minimise, research and sensitise environmental damages to air, water and soil as well as problems related to waste, noise, biodiversity and landscapes. This includes “cleaner” technologies, goods and services that prevent or minimise pollution; and (ii) measure, control, restore, prevent, minimise, research and sensitise resource depletion. This results mainly in resource-efficient technologies, goods and services that minimise the use of natural resources.

Environmental health
Depiction of how environmental factors and processes impact and change human health. It can be defined as an interdisciplinary field that focuses on analysing the relationship between public health and the environment. From the health perspective, WHO states that "environmental health addresses all the physical, chemical and biological factors external to a person and all the related factors impacting behaviours. It encompasses the assessment and control of those environmental factors that can potentially affect health. It is targeted towards preventing disease and creating health-supportive environments […]".

Environmental indicators
Environment statistics that have been selected for their ability to depict important phenomena or dynamics. Environmental indicators are used to synthesize and present complex environment and other statistics in a simple, direct, clear and relevant way.

Environmental indices
Composite or more complex measures that combine and synthesize more than one environmental indicator or statistic and are weighted according to different methods.

Environmental information
Quantitative and qualitative facts describing the state of the environment and its changes as described in the different components of the FDES.

Environmental perception
Individuals' and groups' notions of, attitudes towards and evaluations of the environment, both as a whole or with respect to specific environmental issues. Individuals and communities make decisions and judgments and take actions based on subjective perceptions of environmental information and experiences. Values and attitudes thus "filter" information and transform it into perception in a culturally specific manner.

Environmental protection activities
Those activities whose primary purpose is the prevention, reduction and elimination of pollution and other forms of degradation of the environment. These activities include the protection of ambient air and climate, wastewater management, waste management, protection and remediation of soil, groundwater and surface water, noise and vibration abatement, protection of biodiversity and landscapes, protection against radiation, research and development for environmental protection and other environmental protection activities.

Environmental regulation and instruments
Policy responses to regulate and establish acceptable limits for protecting the environment and human health.

Environmental resources
Naturally occurring living and non-living components of the Earth, together constituting the biophysical environment, which may provide benefits to humanity. Environmental resources include natural resources (such as sub-soil resources (mineral and energy), soil resources, biological resources and water resources) and land. They may be naturally renewable (e.g., fish, timber or water) or non-renewable (e.g., minerals).

Environment statistics
Environmental data that have been structured, synthesized and aggregated according to statistical methods, standards and procedures. The scope of environment statistics covers biophysical aspects of the environment and those aspects of the socio-economic system that directly influence and interact with the environment.

Extinct
Species that are no longer known to exist in the wild after repeated searches of the type in localities and other known or likely places.

Extreme events
Events that are rare within their statistical reference distribution at a particular location. An extreme event is normally as rare as or rarer than the 10th or 90th percentile.

Evapotranspiration
The combined process of evaporation from the Earth's surface and transpiration from vegetation.

F

Fauna
The animal life of a particular region or time

Flared (Natural Gas)
Excess gas combusted during the production of natural gas from oil and natural gas wells. Natural gas consists primarily of methane, but also contains other gases and some volatile organic compounds (VOCs). VOCs can combine

with Nitrogen Oxides (NOx) under the right weather conditions to form ozone. For various operational, safety and environmental reasons, methane and VOCs, are combusted or flared.

Flora
The plant life of a particular region or time

Fluorinated Gases
Powerful synthetic greenhouse gases such as hydro-fluorocarbons, perfluorocarbons and sulphur hexafluoride that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for stratospheric ozone-depleting substances (e.g., chlorofluorocarbons, hydro-chlorofluorocarbons and halons) and are often used in coolants, foaming agents, fire extinguishers, solvents, pesticides and aerosol propellants.

Fluorocarbons
Carbon-fluorine compounds that often contain other elements such as hydrogen, chlorine, or bromine. Common fluorocarbons include chlorofluorocarbons (CFCs), hydro-chlorofluorocarbons (HCFCs), hydro-fluorocarbons (HFCs) and perfluorocarbons (PFCs).

Flush system latrine3
The type of latrine which is connected to underground sewerage system, from which human excreta and wastes are flushed out by water.

Forcing Mechanism
A process that alters the energy balance of the climate system, i.e. changes the relative balance between incoming solar radiation and outgoing infrared radiation from Earth. Such mechanisms include changes in solar irradiance, volcanic eruptions and enhancement of the natural greenhouse effect by emissions of greenhouse gases.

Forest
Includes all actually forested area on the lands so classed or administered as forests under any legal enactment dealing with forests, whether state-owned or private. It does not include land that is predominantly under agricultural or urban land use.

Forest Cover
Forest Cover refers to all lands more than one hectare in area, with a tree canopy density of more than 10 percent irrespective of ownership and legal status. Such lands may not necessarily be a recorded forest area. It also includes orchards, bamboo and palm. Tree cover comprises of tree patches outside the recorded forest area exclusive of forest cover and less than the minimum mappable area (1 ha).

Fossil Fuel
A general term for organic materials formed from decayed plants and animals that have been converted to crude oil, coal, natural gas, or heavy oils by exposure to heat and pressure in the earth's crust over hundreds of millions of years.

Frost shattering
A type of land degradation/desertification typically seen in cold mountainous arid areas. In this, water enters cracks in rocks during the day and during the cold night it freezes. This exerts pressure on the rocks causing the cracks to widen and shattering the rocks into pieces. Frost shattering is a common occurrence in the mountainous regions of Uttarakhand, Jammu and Kashmir, Arunachal Pradesh and Himachal Pradesh.

Fuel Switching
Substituting one type of fuel for another. In the climate-change discussion, it is implicit that the substituted fuel produces lower carbon emissions per unit energy produced than the original fuel, e.g., natural gas for coal.

G

Genetic resources
Genetic material of plants, animals or microorganisms containing functional units of heredity that are of actual or potential value as a resource for future generations of humanity.

General Circulation Model (GCM)
A global, three-dimensional computer model of the climate system which can be used to simulate human-induced climate change. GCMs represent the effects of such factors as reflective and absorptive properties of atmospheric water vapour, greenhouse gas concentrations, clouds, annual and daily solar heating, ocean temperatures and ice boundaries.

Geographic Information System (GIS)
An integrating technology that helps to capture, manage, analyse, visualize and model a wide range of data with a spatial or locational component.

Geological map
Maps representing the distribution of different types of rock and surficial deposits, as well as locations of geologic structures such as faults and folds.

Geomorphological map
Maps depicting the features of the Earth´s physical surface.

Geospatial Information
The location and characteristics of different attributes of the atmosphere, surface and sub-surface. It is used to describe, display and analyse data with discernible spatial aspects, such as land use, water resources and natural disasters. Geospatial information allows for the visual display of different statistics in a map-based layout, which can make it easier for users to work with and understand the data.

Geosphere
The soils, sediments and rock layers of the Earth's crust, both continental and beneath the ocean floors.

Glacier
A multi-year surplus accumulation of snowfall in excess of snowmelt on land and resulting in a mass of ice at least 0.1 km2 in area that shows some evidence of movement in response to gravity. A glacier may terminate on land or in water. Glacier ice is the largest reservoir of fresh water on Earth and second only to the oceans as the largest reservoir of total water.

Global Average Temperature
An estimate of Earth’s mean surface air temperature averaged over the entire planet.

Global Warming
The recent and ongoing phenomenon of global average increase in temperature near the Earth’s surface.

Global Warming Potential
Measure of the total energy that a gas absorbs over a particular period of time (usually 100 years), compared to carbon dioxide.

Government environmental protection and resource management expenditure
Includes government expenditure whose primary aim is to protect the environment and manage its resources

Greenhouse Effect
Trapping and build-up of heat in the atmosphere (troposphere) near the Earth’s surface. Some of the heat flowing back toward space from the Earth's surface is absorbed by water vapour, carbon dioxide, ozone and several other gases in the atmosphere and then reradiated back toward the Earth’s surface. If the atmospheric concentrations of these greenhouse gases rise, the average temperature of the lower atmosphere will gradually increase.

Greenhouse Gas (GHG)
Any gas that absorbs infrared radiation in the atmosphere. Greenhouse gases include, carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons, hydro-chlorofluorocarbons, hydro-fluorocarbons, perfluorocarbons, sulphur hexafluoride.

Gross area irrigated
An irrigated plot growing crop in more than one season, is counted as many times as it is cropped to arrive at gross area irrigated. In case of mixed crops, the area under component crops as reported by household is taken into account.

Grossly polluting industries
As defined by CPCB, MOEF&CC, industries discharging effluents into a water course and (a) Handling hazardous substances, or (b) Effluent having BOD Load of 100 Kg per day or more, or (c) A combination of (a) and (b).

Groundwater
Water that collects in porous layers of underground formations known as aquifers.

H

Habitat
Site or environment which a plant or animal lives, such as forest.

Habitat Fragmentation
Process during which larger areas of habitat are broken into a number of smaller patches of smaller total area, isolated from each other by a matrix of habitats unlike the original habitat. Halocarbons Compounds containing either chlorine, bromine or fluorine and carbon. Such compounds can act as powerful greenhouse gases in the atmosphere. The chlorine and bromine containing halocarbons are also involved in the depletion of the ozone layer.

Halophyte
A plant adapted to living in salty soil, as along the seashore.

Hazardous waste
Any waste which by reason of characteristics such as physical, chemical, biological, reactive, toxic, flammable, explosive or corrosive, causes danger or is likely to cause danger to health or environment, whether alone or in contact with other wastes or substances.

Heat Waves
A prolonged period of excessive heat, often combined with excessive humidity.

Hermatypic corals
Those corals which build reefs by depositing hard calcareous material for their skeletons, forming the stony framework of the reef. Corals that do not contribute to coral reef development are referred to as ahermatypic (non-reef-building) species.

High Altitude lakes
Lakes occurring in the Himalayan region. All lakes above the contour line of 3000 m above mean sea level have been classified as high altitude lakes.

Household
A household is a group of persons who commonly live together and would take their meal from common kitchen unless the exigencies of work prevented any of them from doing so. There may be a household of persons related by blood or a household of unrelated persons or having a mix of both. Examples of unrelated households are boarding houses, messes, hostels, residential hotels, rescue homes, jails, ashrams, etc. These are called “Institutional Households”.

Human settlements
Refer to the totality of the human community, whether people live in large cities, towns or villages. They encompass the human population that resides in a settlement, the physical elements (e.g., shelter and infrastructure), services (e.g., water, sanitation, waste removal, energy and transport) and the exposure of humans to potentially deleterious environmental conditions.

Hydrocarbons
Substances containing only hydrogen and carbon. Fossil fuels are made up of hydrocarbons.

Hydro-chlorofluorocarbons (HCFCs)
Compounds containing hydrogen, fluorine, chlorine and carbon atoms. Although ozone depleting substances, they are less potent at destroying stratospheric ozone than chlorofluorocarbons (CFCs). They have been introduced as temporary replacements for CFCs and are also greenhouse gases.

Hydro-fluorocarbons (HFCs)
Compounds containing only hydrogen, fluorine and carbon atoms. They were introduced as alternatives to ozone depleting substances in serving many industrial, commercial and personal needs. HFCs are emitted as by-products of industrial processes and are also used in manufacturing. They do not significantly deplete the stratospheric ozone layer, but they are powerful greenhouse gases with global warming potentials.

Hydrologic Cycle
The process of evaporation, vertical and horizontal transport of vapour, condensation, precipitation and the flow of water from continents to oceans. It is a major factor in determining climate through its influence on surface vegetation, the clouds, snow and ice and soil moisture. The hydrologic cycle is responsible for 25 to 30 percent of the mid-latitudes' heat transport from the equatorial to Polar Regions.

Hydrosphere
The component of the climate system comprising liquid surface and subterranean water, such as: oceans, seas, rivers, fresh water lakes, underground water etc.

I

Improved drinking water source
Includes the use of – piped water into dwelling, plot or yard; public tap or standpipe; borehole or tube well; protected dug well; protected spring; rainwater collection and bottled water (if a secondary available source is also improved).

Improved sanitation facility
Defined as one that hygienically separates human excreta from human contact. Improved facilities include flush/ pour flush toilets connected to a sewer, septic tank, or pit, ventilated improved pit latrines, pit latrines with slab and composting toilets.

Incinerable (Waste)
Waste which can be incinerated without causing pollution to the environment or damage to the incineration plant.

Institutional dimension of environment statistics
Refers to the institutional factors necessary to develop and strengthen the sustained production, dissemination and use of environment statistics. It comprises the legal framework that establishes the mandates and roles of the main partners, the institutional setting and institutional development level of environment statistics units and the existence and effectiveness of inter-institutional cooperation and coordination mechanisms at the national level and with specialized international agencies.

In-stream water use
Refers to the use of water without moving it from its source or when water is immediately returned with little or no alteration.

Insufficiently Known
A taxon is insufficiently known when an evaluation has been made but the available data are inadequate to assign a category.

Intertidal mudflats
The unvegetated areas that are alternately exposed and inundated by the falling and rising of the tide. They may be mudflats or sand flats depending on the coarseness of the material of which they are made.

Indirect Emissions
Indirect emissions from a building, home or business are those emissions of greenhouse gases that occur as a result of the generation of electricity used in that building. These emissions are called 'indirect' because the actual emissions occur at the power plant which generates the electricity, not at the building using the electricity.

Industrial Revolution
A period of rapid industrial growth with far-reaching social and economic consequences, beginning in England during the second half of the 18th century and spreading to Europe and later to other countries including the United States. The industrial revolution marks the beginning of a strong increase in combustion of fossil fuels and related emissions of carbon dioxide.

Infrared Radiation
Infrared radiation consists of light whose wavelength is longer than the red color in the visible part of the spectrum, but shorter than microwave radiation. Infrared radiation can be perceived as heat. The Earth's surface, the atmosphere and clouds all emit infrared radiation, which is also known as terrestrial or long-wave radiation. In contrast, solar radiation is mainly short-wave radiation because of the temperature of the Sun.

Intergovernmental Panel on Climate Change (IPCC)
The IPCC was established jointly by the United Nations Environment Programme and the World Meteorological Organization in 1988. The purpose of the IPCC is to assess information in the scientific and technical literature related to all significant components of the issue of climate change. The IPCC draws upon hundreds of the world's expert scientists as authors and thousands as expert reviewers. Leading experts on climate change and environmental, social and economic sciences from some 60 nations have helped the IPCC to prepare periodic assessments of the scientific underpinnings for understanding global climate change and its consequences. With its capacity for reporting on climate change, its consequences and the viability of adaptation and mitigation measures, the IPCC is also looked to as the official advisory body to the world's governments on the state of the science of the climate change issue. For example, the IPCC organized the development of internationally accepted methods for conducting national greenhouse gas emission inventories.

Inundation
Submergence of land by water, particularly in a coastal setting.

Irrigation
Process of purposely providing land with water other than rain water by artificial means.

IUCN Red list (of Threatened Species)
The IUCN Red List of Threatened Species is the world's most comprehensive inventory of the global conservation status of plant and animal species. It uses a set of criteria to evaluate the extinction risk of thousands of species and subspecies. These criteria are relevant to all species and all regions of the world.

K

Known mineral deposits
Commercially recoverable deposits, potential commercially recoverable deposits and non-commercial and other known deposits.

L

Lagoons/Backwaters
Such coastal bodies of water, partly separated from the sea by barrier beaches or bass of marine origin, are more properly termed lagoons. As a rule, lagoons are elongate and lie parallel to the shoreline. A creek, arm of the sea or series of connected lagoons, usually parallel to the coast, separated from the sea by a narrow strip of land but communicating with it through barred outlets are referred to as 'backwaters'.

Lakes
Larger bodies of standing water occupying distinct basins. These wetlands occur in natural depressions and normally fed by streams/rivers.

Land
Space provided for natural ecosystems, human habitats and human activities. As this space is finite, the expansion of human activities can reduce the space occupied by natural ecosystems, thus reducing ecosystems' capacity to yield ecosystem goods and services for all living beings. From the resource perspective, land is a unique environmental resource that delineates the space in which economic activities and environmental processes take place and within which environmental resources and economic assets are located.

Land cover
Observed (bio) physical cover on the earth's surface.

Landfill
Land waste disposal site in which waste is generally spread in thin layers, compacted and covered with a fresh layer of soil each day.

Landfillable (Waste)
Hazardous waste which cannot be recycled or incinerated safely, is deposited in specially created sites where the waste is deposited for final disposal and covered. These landfills are designed to minimize the chance of release of hazardous waste into the environment.

Land put to non-agricultural uses
Land occupied by buildings, paths, etc. or under water (e.g. tank, canals, etc.) and land put to uses other than agricultural production.

Land use
Reflects both the activities undertaken and the institutional arrangements put in place for a given area for the purposes of economic production, or the maintenance and restoration of environmental functions. Land being "used" means the existence of some kind of human activity or management. Consequently, there are areas of land that are "not in use" by human activities.

Least Developed Country
A country with low indicators of socio-economic development and human resources, as well as economic vulnerability, as determined by the United Nations.

Lithological map
Map differentiating the regions based on the rocks found in the region.

Livestock
Animal species that are raised by humans for commercial purposes, consumption or labour.

Long-Period Average (Monsoon)
Calculated on the basis of an average annual rainfall received during a significantly long period. In India, reference period used by IMD is 1951-2000.

Longwave Radiation
Radiation emitted in the spectral wavelength greater than about 4 micrometers, corresponding to the radiation emitted from the Earth and atmosphere. It is sometimes referred to as 'terrestrial radiation' or 'infrared radiation,' although somewhat imprecisely.

M

Mangroves
The mangrove swamp is an association of halophytic trees, shrubs and other plants growing in brackish to saline tidal waters of tropical and sub-tropical coastlines.

Methane (CH4)
A hydrocarbon that is a greenhouse gas with a global warming potential most recently estimated at 25 times that of carbon dioxide (CO_2). Methane is produced through anaerobic (without oxygen) decomposition of waste in landfills, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production and incomplete fossil fuel combustion.

Metric Ton
Common international measurement for the quantity of greenhouse gas emissions. A metric ton is equal to 1000 kilograms.

Metropolitan cities
Cities with a population of more than 4 million (or 40 lakh).

Mitigation
A human intervention to reduce the human impact on the climate system; it includes strategies to reduce greenhouse gas sources and emissions and enhancing greenhouse gas sinks.

Multilateral Environmental Agreements
Agreements that address, via international cooperation, environmental problems, especially those which have a trans-boundary nature or are global in scope. For the most relevant MEAs, participant or signatory countries are usually expected to report on progress periodically, either on a mandatory or voluntary basis.

Municipal Solid Waste (MSW)
Includes commercial and residential wastes generated in municipal or notified areas in either solid or semi-solid form excluding industrial hazardous wastes but including treated bio-medical wastes. It consists of household waste, wastes from hotels and restaurants, construction and demolition debris, sanitation residue and waste from streets.

N

Natural biological resources
Consist of animals, birds, fish and plants that yield both once-only and repeat products for which natural growth and/or regeneration is not under the direct control, responsibility and management of institutional units.

Natural Gas
Underground deposits of gases consisting of 50 to 90 percent methane (CH_4) and small amounts of heavier gaseous hydrocarbon compounds such as propane (C3H8) and butane (C4H10).

Natural Variability
Variations in the mean state and other statistics (such as standard deviations or statistics of extremes) of the climate on all time and space scales beyond that of individual weather events. Natural variations in climate over time are caused by internal processes of the climate system, as well as changes in external influences, such as volcanic activity and variations in the output of the sun.

Net area irrigated
Total of all the areas irrigated from different sources, counting each area irrigated only once even though it was irrigated more than once in the same year.

Net sown area
Sown area with crops and orchards, counting in the area sown more than once in the same year, only once. The net

area sown was defined as the difference between the total geographical area of all plots of land of the holding and the sum of the areas of land under (1) forest, (2) barren & uncultivable wastes, (3) put to non-agricultural uses, (4) culturable wastes, (5) permanent pastures & other grazing land, (6) miscellaneous tree crops excluding orchards and (7) all type of fallow lands.

Nitrogen Cycle

The natural circulation of nitrogen among the atmosphere, plants, animals and microorganisms that live in soil and water. Nitrogen takes on a variety of chemical forms throughout the nitrogen cycle, including nitrous oxide (N_2O) and nitrogen oxides (NOx).

Nitrogen Oxides (NOx)

Gases consisting of one molecule of nitrogen and varying numbers of oxygen molecules. Nitrogen oxides are produced in the emissions of vehicle exhausts and from power stations. In the atmosphere, nitrogen oxides can contribute to formation of photochemical ozone (smog), can impair visibility and have health consequences; they are thus considered pollutants

Nitrous Oxide (N2O)

A powerful greenhouse gas with a global warming potential of 298 times that of carbon dioxide (CO_2). Major sources of nitrous oxide include soil cultivation practices, especially the use of commercial and organic fertilizers, fossil fuel combustion, nitric acid production and biomass burning. Natural emissions of N_2O are mainly from bacteria breaking down nitrogen in soils and the oceans. Nitrous oxide is mainly removed from the atmosphere through destruction in the stratosphere by ultraviolet radiation and associated chemical reactions, but it can also be consumed by certain types of bacteria in soils.

Non-Methane Volatile Organic Compounds (NMVOCs)

Organic compounds, other than methane, that participate in atmospheric photochemical reactions.

Nuclear radiation-related diseases and conditions

Include, but are not limited to, thermal burns from infrared heat radiation, beta and gamma burns from beta and gamma radiation, radiation sickness or “atomic disease”, leukaemia, lung cancer, thyroid cancer and cancer of other organs, sterility and congenital anomalies or malformations, premature aging, cataracts and increased vulnerability to disease and emotional disorders. Exposure to nuclear radiation could occur from a nuclear explosion or an accident involving a nuclear reactor.

O

Ocean Acidification

Increased concentrations of carbon dioxide in sea water causing a measurable increase in acidity (i.e., a reduction in ocean pH). This may lead to reduced calcification rates of calcifying organisms such as corals, molluscs, algae and crustaceans.

Open Forest

Forest whose crown density is more than 10 percent but less than 40 percent.

Other fallow land

All lands which are taken up for cultivation in the past, but are temporarily out of cultivation for a period of not less than one year and not more than five years including the current agricultural year are classified under ‘other fallow’.

Other non-cultivated biological resources

Include wild berries, fungi, bacteria, fruits, sap and other plant resources that are harvested, as well as wild animals that are trapped or killed for production, consumption and trade.

Other wooded land

Land not classified as “Forest”, spanning more than 0.5 hectares; with trees higher than 5 metres and a canopy cover of 5-10 per cent, or trees able to reach these thresholds in situ; or with a combined cover of shrubs, bushes and trees above 10 per cent. It does not include land that is predominantly under agricultural or urban land use.

Ox-bow lakes/ Cut off meanders

A meandering stream may erode the outside shores of its broad bends and in time, the loops may become cut-off, leaving basins. The resulting shallow crescent-shaped lakes are called oxbow lakes.

Oxidize

To chemically transform a substance by combining it with oxygen.

Ozone
Ozone, the triatomic form of oxygen (O_3), is a gaseous atmospheric constituent. In the troposphere, it is created by photochemical reactions involving gases resulting both from natural sources and from human activities (photochemical smog). In high concentrations, tropospheric ozone can be harmful to a wide range of living organisms. Tropospheric ozone acts as a greenhouse gas. In the stratosphere, ozone is created by the interaction between solar ultraviolet radiation and molecular oxygen (O2). Stratospheric ozone plays a decisive role in the stratospheric radiative balance. Depletion of stratospheric ozone, due to chemical reactions that may be enhanced by climate change, results in an increased ground-level flux of ultraviolet (UV-) B radiation

Ozone Depleting Substance (ODS)
A family of man-made compounds that includes, but are not limited to, chlorofluorocarbons (CFCs), bromofluorocarbons (halons), methyl chloroform, carbon tetrachloride, methyl bromide and hydro-chlorofluorocarbons (HCFCs). These compounds have been shown to deplete stratospheric ozone and therefore are typically referred to as ODSs.

Ozone Layer
The layer of ozone that begins approximately 15 km above Earth and thins to an almost negligible amount at about 50 km, shields the Earth from harmful ultraviolet radiation from the sun. The highest natural concentration of ozone (approximately 10 parts per million by volume) occurs in the stratosphere at approximately 25 km above Earth. The stratospheric ozone concentration changes throughout the year as stratospheric circulation changes with the seasons. Natural events such as volcanoes and solar flares can produce changes in ozone concentration, but man-made changes are of the greatest concern.

Ozone Precursors
Chemical compounds, such as carbon monoxide, methane, non-methane hydrocarbons and nitrogen oxides, which in the presence of solar radiation react with other chemical compounds to form ozone, mainly in the troposphere.

P

Pastures and grazing land
Include all grazing lands irrespective of whether they are permanent pastures and meadows or not. Grazing lands within forest area shall be included under this category.

Particulate Matter (PM)
Very small pieces of solid or liquid matter such as particles of soot, dust, fumes, mists or aerosols. PM10 is particulate matter 10 micrometers or less in diameter, PM2.5 is particulate matter 2.5 micrometers or less in diameter.

Parts per Billion (ppb)
Number of parts of a chemical found in one billion parts of a particular gas, liquid, or solid mixture.

Parts per Million by Volume (ppmv)
Number of parts of a chemical found in one million parts of a particular gas, liquid, or solid.

Parts per Trillion (ppt)
Number of parts of a chemical found in one trillion parts of a particular gas, liquid or solid.

Perfluorocarbons (PFCs)
A group of chemicals composed of carbon and fluorine only. These chemicals (predominantly CF4 and C2F6) were introduced as alternatives, along with hydrofluorocarbons, to the ozone depleting substances. In addition, PFCs are emitted as by-products of industrial processes and are also used in manufacturing. PFCs do not harm the stratospheric ozone layer, but they are powerful greenhouse gases: These chemicals are predominantly human-made, though there is a small natural source of CF4.

pH
The logarithm to the base 10 of the reciprocal of Hydrogen ion concentration.

Phenology
The timing of natural events, such as flower blooms and animal migration, which is influenced by changes in climate. Phenology is the study of such important seasonal events. Phenological events are influenced by a combination of climate factors, including light, temperature, rainfall and humidity.

Photosynthesis
Process by which plants take CO_2 from the air (or bicarbonate in water) to build carbohydrates, releasing O2 in the process. There are several pathways of photosynthesis with different responses to atmospheric CO_2 concentrations.

Precession
The wobble over thousands of years of the tilt of the Earth's axis with respect to the plane of the solar system.

Protected Area Management Categories
Depending on the strictness of protection and serve as the classification for protected areas, the main categories are strict nature reserve; wilderness area; national park; natural monument or feature; habitat/species management area; protected landscape/seascape; and protected area with sustainable use of natural resources.

R

Radiation
Energy transfer in the form of electromagnetic waves or particles that release energy when absorbed by an object.

Radiative Forcing
A measure of the influence of a particular factor (e.g. greenhouse gas (GHG), aerosol, or land use change) on the net change in the Earth's energy balance.

Rare
The species with small world populations that are not at present endangered or vulnerable but are at risk. These species are usually localised within restricted geographic areas or habitats or are thinly scattered over a more extensive range.

Recyclable (Hazardous Waste)
A hazardous waste is said to be recyclable, if it can be used, reused, or reclaimed.

Recycling
Collecting and reprocessing a resource so it can be used again.

Reflectivity
Ability of a surface material to reflect sunlight including the visible, infrared and ultraviolet wavelengths.

Reforestation
Planting of forests on lands that have previously contained forests but that have been converted to some other use.

Re-injected (Natural gas)
Gas which is re-injected into an underground reservoir, typically one already containing both natural gas and crude oil, in order to increase the pressure within the reservoir and thus induce the flow of crude oil.

Relative Sea Level Rise
The increase in ocean water levels at a specific location, taking into account both global sea level rise and local factors, such as local subsidence and uplift. Relative sea level rise is measured with respect to a specified vertical datum relative to the land, which may also be changing elevation over time.

Remaining resources
Mineral resources that have not yet been declared as economically viable, but are potentially valuable and for which reasonable prospects exist for eventual economic extraction.

Remote sensing
Science of obtaining information about objects or areas from a distance, typically from aircraft or satellites.

Renewable Energy
Energy captured from resources that are naturally replenishing such as biomass, hydro, geothermal, solar, wind, ocean thermal, wave action and tidal action.

Renewable water resources
Resources are generated by precipitation and inflows of water from neighbouring territories and reduced by evapotranspiration.

Reserves
Estimates of deposits, that are valuable and legally and economically and technically feasible

Reservoir/Barrage
A pond or lake built for the storage of water, usually by the construction of a dam across a river or by dykes constructed for irrigation/water facilities.

Resources - Proved, Indicated, Inferred

Based on the depth of the resource and the scope of exploration, resources are classified into proved, indicated and inferred resources. While proved resources (also referred to as reserves) are those which have been reliably estimated and can be recovered economically, Indicated resources are identified based on combination of direct measurement and reasonable geological assumptions. Inferred resources are based on geological evidence and assumed but have not yet been verified. In respect of coal resources in India, Proved Resources are coal resources falling within 200 m radius from a borehole point (or observation point). Indicated resources occur in the area falling between radii of 200m and 1km from a borehole point and Inferred resources occur in the area falling between radii of 1km and 2km from a borehole point.

Residuals

Flows of solid, liquid and gaseous materials and energy, that are discarded, discharged or emitted by establishments and households through processes of production, consumption or accumulation.

Resilience

A capability to anticipate, prepare for, respond to and recover from significant multi-hazard threats with minimum damage to social well-being, the economy and the environment.

Resource management activities

Activities whose primary purpose is preserving and maintaining the stock of natural resources and hence safeguarding against depletion. These activities include, but are not limited to, reducing the withdrawals of natural resources; restoring natural resource stocks; the general management of natural resources (including monitoring, control, surveillance and data collection); and the production of goods and services used to manage or conserve natural resources. They cover the management of mineral and energy resources; timber resources; aquatic resources; other biological resources; water resources; research and development activities for resource management; and other resource management activities.

Reused water

Wastewater supplied to a user for further use with or without prior treatment.

River/stream

These are linear water features of the landscape.

Riverine Wetlands

Classified as marshes or swamp, these are formed when water accumulates along the rivers. Swamps are wetlands dominated by mosses, grass, trees or shrubs while marshes are frequently or continually inundated wetland characterised by emergent herbaceous vegetation adapted to saturated soil conditions.

S

Salt pans

Shallow rectangular man-made depressions in which saline water is accumulated for drying in the sun for making salt.

Salt Marsh

Natural or semi-natural halophytic grassland and dwarf brushwood on the alluvial sediments bordering saline water bodies whose water level fluctuates either tidally or non- tidally.

Salt Water Intrusion

Displacement of fresh or ground water by the advance of salt water due to its greater density, usually in coastal and estuarine areas.

Sand/Beach

Beach is an un-vegetated part of the shoreline formed of loose material, usually sand that extends from the upper berm (a ridge or ridges on the backshore of the beach, formed by the deposit of material by wave action, that marks the upper limit of ordinary high tides and wave wash) to low water mark. Beach comprising rocky material is called rocky beach.

Sea Surface Temperature

The temperature in the top several feet of the ocean, measured by ships, buoys and drifters.

Sensitivity

The degree to which a system is affected, either adversely or beneficially, by climate variability or change. The effect

may be direct (e.g., a change in crop yield in response to a change in the mean, range or variability of temperature) or indirect (e.g., damages caused by an increase in the frequency of coastal flooding due to sea level rise).

Sink
Any process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas or aerosol from the atmosphere.

Slums
Residential areas where dwellings are unfit for human habitation by reasons of dilapidation, overcrowding, faulty arrangements and design of such buildings, narrowness or faulty arrangement of street, lack of ventilation, light, or sanitation facilities or any combination of these factors which are detrimental to the safety and health.

Soil Carbon
A major component of the terrestrial biosphere pool in the carbon cycle. The amount of carbon in the soil is a function of the historical vegetative cover and productivity, which in turn is dependent in part upon climatic variables.

Soil resources
Comprise the top layers (horizons) of soil that form a biological system.

Solar Radiation
Radiation emitted by the Sun. It is also referred to as short-wave radiation. Solar radiation has a distinctive range of wavelengths (spectrum) determined by the temperature of the Sun.

Species
Group of individual specimens having close resemblance but differing from others and belonging to the same genus.

Stocks of non-renewable energy resources
Defined as the amount of known deposits of mineral energy resources.

Stocks of mineral resources
Defined as the amount of known deposits of non-metallic and metallic mineral resources

Stratosphere
Region of the atmosphere between the troposphere and mesosphere, having a lower boundary of approximately 8 km at the poles to 15 km at the equator and an upper boundary of approximately 50 km. Depending upon latitude and season, the temperature in the lower stratosphere can increase, be isothermal, or even decrease with altitude, but the temperature in the upper stratosphere generally increases with height due to absorption of solar radiation by ozone.

Stratospheric Ozone
See ozone layer.

Stream flow
Volume of water that moves over a designated point over a fixed period of time. It is often expressed as cubic feet per second.

Sub-soil resources
Underground deposits of various minerals that provide raw materials and energy sources for humans. When considered as resources for human use, these sub-soil elements differ fundamentally from ecosystems in that they are non-renewable. Their use thus results in permanent depletion.

Sulphate Aerosols
Particulate matter that consists of compounds of sulphur formed by the interaction of sulphur dioxide and sulphur trioxide with other compounds in the atmosphere. Sulphate aerosols are injected into the atmosphere from the combustion of fossil fuels and the eruption of volcanoes. Sulphate aerosols can lower the Earth's temperature by reflecting away solar radiation (negative radiative forcing).

Sulphur Hexafluoride (SF6)
A colourless gas soluble in alcohol and ether, slightly soluble in water. A very powerful greenhouse gas used primarily in electrical transmission and distribution systems and as a dielectric in electronics.

Surface water
Comprises all water that flows over or is stored on the ground's surface, regardless of its salinity levels. Surface water includes water in artificial reservoirs, lakes, rivers and streams, snow, ice and glaciers

T

Tanks/Ponds
An artificial pond, pool or lake formed by building a mud wall across the valley of a small stream to retain the monsoon or to store water, including those constructed for industrial purposes.

Technological disasters
Disasters arising as a result of human intent, negligence or error, or from faulty or failed technological applications. The three types of technological disasters are: industrial accidents which cover accidents associated with chemical spill, collapse, explosion, fire, gas leak, poisoning, radiation and other; transport accidents which cover accidents associated with air, road, rail and water; and miscellaneous accidents which cover accidents associated with collapse, explosion, fire and other disasters of varied origin.

Thermal Expansion
The increase in volume (and decrease in density) that results from warming water. A warming of the ocean leads to an expansion of the ocean volume, which leads to an increase in sea level.

Timber resources
Defined by the volume of trees, living and dead, which can still be used for timber or fuel.

Toxic substances
Include toxic pesticides (e.g., pesticides that have teratogenic, carcinogenic, tumorigenic and/or mutagenic effects) and toxic industrial chemicals (e.g., lead, arsenic, mercury and nickel, among others)

Toxic substance-related diseases and health problems
Include, but are not limited to, chronic illnesses of the respiratory system (such as pneumonia, upper and lower respiratory diseases, asthma and chronic obstructive pulmonary diseases), cancer, infertility and congenital anomalies or malformations.

Trace Gas
Any one of the less common gases found in the Earth's atmosphere. Nitrogen, oxygen and argon make up more than 99 percent of the Earth's atmosphere. Other gases, such as carbon dioxide, water vapour, methane, oxides of nitrogen, ozone and ammonia, are considered trace gases. Although relatively unimportant in terms of their absolute volume, they have significant effects on the Earth's weather and climate.

Troposphere
The lowest part of the atmosphere from the surface to about 10 km in altitude in mid-latitudes (ranging from 9 km in high latitudes to 16 km in the tropics on average) where clouds and "weather" phenomena occur. In the troposphere temperatures generally decrease with height.

Tropospheric Ozone (O3)
See ozone.

Tropospheric Ozone Precursors
See ozone precursors.

Turbidity
Measure of the degree to which the water loses its transparency due to the presence of suspended particulates. The more total suspended solids in the water, the murkier it seems and the higher the turbidity. Turbidity is considered as a good measure of the quality of water.

Type of dwelling
Dwellings, have been classified under three categories, namely, chawl/bustee, independent house and flat.

(a) Chawl/Bustee: A collection of poorly built kutcha or semi-pucca huts or tenements.

(b) Independent house: A separate structure with a room or rooms and having all its accessories and a separate entrance to it. In other words, if the dwelling unit and the entire structure of the building are physically coterminous, it should be considered an independent house.

(c) Flat: All housing arrangements other than chawl/bustee and independent house are to be taken as flats. Flat thus includes any self-contained dwelling unit with a room or rooms provided with normal housing facilities for water supply and sanitation used exclusively by the family residing there or jointly with other families. It also includes detached room or rooms with or without other housing facilities.

Type of structure

The structures have been classified into three categories, namely pucca, semi-pucca and kutcha on the basis of the materials used for construction.

(a) Pucca Structure: A structure whose walls and roof at least are made of pucca materials.

(b) Kutcha Structure: A structure which has walls and roof made of non-pucca materials.

(c) Semi-Pucca Structure: A structure which has either the walls or the roof, but not both, made of pucca materials.

Materials such as oven-burnt bricks, stone, stone-blocks, cement, concrete, jack-board (cement plastered reed), tiles and timber are pucca materials. Corrugated iron or asbestos sheets used in the construction of roof will also be treated as pucca materials.

U

Ultraviolet Radiation (UV)

The energy range just beyond the violet end of the visible spectrum. Although ultraviolet radiation constitutes only about 5 percent of the total energy emitted from the sun, it is the major energy source for the stratosphere and mesosphere, playing a dominant role in both energy balance and chemical composition. Most ultraviolet radiation is blocked by Earth's atmosphere, but some solar ultraviolet penetrates and aids in plant photosynthesis and helps produce vitamin D in humans. Too much ultraviolet radiation can burn the skin, cause skin cancer and cataracts and damage vegetation.

United Nations Framework Convention on Climate Change (UNFCCC)

The Convention on Climate Change, which entered into force on 21 March 1994, sets an overall framework for intergovernmental efforts to tackle the challenge posed by climate change. It recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases. The Convention enjoys near universal membership, with 189 countries having ratified. Under the Convention, governments:

- gather and share information on greenhouse gas emissions, national policies and best practices
- launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries
- cooperate in preparing for adaptation to the impacts of climate change

Urban Agglomeration

(i) A city or a town with a continuous outgrowth, the outgrowth being outside the statutory limits but falling within the boundaries of the adjoining villages; or

(ii) Two or more adjoining towns with their outgrowths, if any, as in (i) above; or

(iii) A city and one or more adjoining towns with or without outgrowths all of which form a continuous spread.

V

Vascular plants

Land plants that use specialized lignified tissues (the xylem) for conducting water and minerals throughout the plant. They also have a specialized non-lignified tissue (the phloem) to conduct products of photosynthesis. Examples of vascular plants include trees, flowers, grasses and vines.

Vector-borne diseases

Diseases transmitted by organisms (e.g., insects and arachnids) that carry viruses, bacteria, protozoa and other pathogens. Common vector-borne diseases include, but are not limited to, malaria, dengue fever, chikungunya fever, Acute Encephalitis Syndrome/Japanese Encephalitis and Kala-azar (Visceral leishmaniasis).

Vulnerable

Species believed likely to move into the endangered category in the near future if the causal factors continue operating. Included are species of which most or all the populations are decreasing because of overexploitation, extensive destruction of habitat or other environmental disturbance; species with populations that have been seriously depleted and whose ultimate security is not yet assured; and species with populations that are still abundant but are under threat from serious adverse factors throughout their range.

Vulnerability
Degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude and rate of climate variation to which a system is exposed; its sensitivity; and its adaptive capacity.

W

Waste
Covers discarded materials that are no longer required by the owner or user.

Wastewater
Discarded water that is no longer required by the owner or user and contains dissolved or suspended waste materials

Water abstraction
The amount of water that is removed from any source, either permanently or temporarily, in a given period of time by economic activities and households.

Waterlogged areas
Said of an area in which water stands near, at, or above the land surface, so that the roots of all plants except hydrophytes are drowned and the plants die. Spectrally, during the period when surface water exists, waterlogged areas appear more or less similar to lakes/ponds. However, during dry season large or all parts of such areas dry up and give the appearance of mud/salt flats.

Man-made activities like canals can also cause waterlogging in adjacent areas due to seepage especially when canals are unlined. Such areas can be identified along the canal network.

Water-related diseases and conditions
Diseases and conditions resulting from micro-organisms and chemicals in the water that humans drink. They include, but are not limited to, diseases caused by biological contamination, such as gastroenteritis infections caused by bacteria, viruses and protozoa and water-borne parasite infections.

Water resources
Consist of freshwater and brackish water, regardless of their quality, in inland water bodies, including surface water, groundwater and soil water

Watershed
The geographic area through which water flows across the land and drains into a common body of water, whether a stream, river, lake, or ocean.

Water Vapour

The most abundant greenhouse gas, it is the water present in the atmosphere in gaseous form. Water vapour is an important part of the natural greenhouse effect. In addition to its role as a natural greenhouse gas, water vapour also affects the temperature of the planet because clouds form when excess water vapour in the atmosphere condenses to form ice and water droplets and precipitation.

Weather
Atmospheric condition at any given time or place. It is measured in terms of such things as wind, temperature, humidity, atmospheric pressure, cloudiness and precipitation. In most places, weather can change from hour-to-hour, day-to-day and season-to-season. Climate in a narrow sense is usually defined as the "average weather". A simple way of remembering the difference is that climate is what you expect (e.g. cold winters) and 'weather' is what you get (e.g. a blizzard).

Wetlands
Areas of land that are either temporarily or permanently covered by water. These are neither truly aquatic nor terrestrial; it is possible that wetlands can be both at the same time depending on seasonal variability. These could be natural or man-made and found both in the inland and coastal areas.

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