# जल एँव संबन्धित सांख्यिकी

# WATER AND RELATED STATISTICS


जल संसाधन सूचना प्रणाली निदेशालय
सूचना प्रणाली संगठन
जल आयोजन एंव परियोजना स्कंध
केन्द्रीय जल आयोग

**WATER RESOURCES INFORMATION SYSTEM DIRECTORATE**
**INFORMATION SYSTEM ORGANISATION**
**WATER PLANNING & PROJECTS WING**
**CENTRAL WATER COMMISSION**



**दिसम्बर 2013**

**DECEMBER 2013**

# WATER AND RELATED STATISTICS

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# FOREWORD

A number of water resources development projects aimed at ensuring rational and balanced allocation of water have been undertaken since independence in the country. The development, planning, execution and management of these projects requires sound and broad database on water resources and related aspects. Availability and easy accessibility of information is the basic requirement for development and management of the water resources of the country and for implementation and monitoring of policies. Lack of information tends to cause difficulties in formulating realistic plans and for taking timely corrective remedial measures.

Central Water Commission being the lead nodal agency in the water resources sector with overall responsibility for its balanced development has been taking care of this aspect by documenting water and related data in the form of various publications. The publication "Water Resources and Related Statistics" is intended to cater to the ever growing detailed data requirement of water resources planners, managers, administrators and researchers in a comprehensive manner. The publication has also been uploaded on the website of Central Water Commission for all those having concern for balanced water resources development.

I hope the publication would be of interest and use to all those involved in and having concern for balanced optimal water resources development.

New Delhi
December, 2013

(A.B. Pandya)
Chairman, CWC

# PREFACE

The notable aspects of the data included in the publication inter alia relate to water availability and requirement, irrigation development including Command Area Development, Agricultural Production, Land degradation, Resource utilisation, hydrological data on rainfall and flood management. A summary table at the beginning and number of graphs and charts have also been included in the publication reflecting the essence of information presented in different sections.

Collection, compilation, finalisation and computerisation of data for the publication were done by the Water Resources Information System Directorate of Information System Organisation in WP&P Wing of CWC. The officers and staff of the directorate have done an excellent job in giving the publication a presentable shape. I am grateful to Shri A. B. Pandya, Chairman, CWC for his valuable guidance in shaping this publication. I am also thankful to Shri V. K. Chawla, Chief Engineer (IMO), CWC for his review and valuable suggestions for bringing out this publication. Thanks are due to various Central and State Government Organisations for supplying the requisite data.

While due care has been taken to ensure accuracy of data, the possibility of some errors and omissions in such a voluminous publication cannot altogether be ruled out. The data pertaining to other ministries in this publication is only reproduced from their sources and CWC does not endorse the authenticity of that data.

Suggestions, if any, are welcome for improvement of the publication.

(D. P. Mondal)
Advisor (ISO)

New Delhi
December, 2013

## *Officials associated with the Publication*

1. *Shri D.P. Mondal*
   *Advisor*

2. *Shri S.K. Madaan*
   *Director*

3. *Shri Mohd. Islam Elahi*
   *Dy. Director*

5. *Shri Ashwani Kumar*
   *Assistant Director*

6. *Shri Ashwani Kumar*
   *Senior Statistical Officer.*

7. *Shri Anil Kumar Raisinghani*
   *Jr. Computor*

## Acronyms

| | |
|---|---|
| BCM | : Billion Cubic Metre |
| CAD | : Command Area Development |
| CCA | : Cultural Command Area |
| cm | : Centimeter |
| cu m | : Cubic Metre |
| CWC | : Central Water Commission |
| CUI | : Coverage under Irrigation |
| ERM | : Extension, Renovation & Modernization Project |
| FF | : Flood Forecasting |
| FRL | : Full Reservoir Level |
| GDP | : Gross Domestic Product |
| GIA | : Gross Irrigated Area |
| GSA | : Gross Sown Area |
| GWH | : Giga Watt Hours |
| HFL | : Highest Flood Level |
| IPC | : Irrigation Potential Created |
| IPU | : Irrigation Potential Utilised |
| IWDP | : Integrated Watershed Development Project |
| KM | : Kilometre |
| KWH | : Kilo Watt Hours |
| Lakh Ha | : Lakh Hectare |
| M | : Metre |
| MCM | : Million Cubic Metre |
| mm | : Millimeter |
| Mha | : Million Hectare |
| MW | : Mega Watt |
| NCIWRD | : National Commission on Integrated Water Resources Development |
| NDP | : Net Domestic Product |
| NIA | : Net Irrigated Area |
| NRDWP | : National Rural Drinking Water Programme |
| NSA | : Net Sown Area |
| PL | : Pond Level |
| sq km | : Square Kilometre |
| TCA | : Total Cultivable Area |
| TMcum | : Thousand Million Cubic Metre |
| UIP | : Ultimate Irrigation Potential |
| UT | : Union Territory |
| % | : Percentage |

# CONTENTS

# Water Sector at a Glance

| | Item | | |
|---|---|---|---|
| 1. | Average Annual Precipitation (including snowfall) | 4000 | BCM |
| 2. | *Geographical Area* | 328.7 | Million Hectare |
| 3. | i) Census Population – 2001 | 1028.74 | Million |
| | ii) Census Population – 2011 | 1210.19 | Million |
| 4. | Estimated Annual Rainfall 2011 | 3669.35 | BCM |
| 5. | Average Annual Water Resources Potential | 1869 | BCM |
| 6. | i) Per Capita Water Availability (2001) | 1816 | Cubic Meter |
| | ii) Per Capita Water Availability (2011) | 1544 | Cubic Meter |
| 7. | Estimated Utilisable Water | | |
| | i) Surface | 690 | BCM |
| | ii) Ground | 431 | BCM |
| | iii) Total | 1121 | BCM |
| 8. | | | |
| a) | Live Storage Capacity | | |
| | i) Completed Projects | 253.388 | BCM |
| | ii) Projects Under Construction | 50.959 | BCM |

b) Storage Position of 81 Important Reservoirs (BCM)
(June 2009 to May 2011)

| Sl. No. | Month | Total Live Storage | Actual Storage | Percentage of actual Storage |
|---|---|---|---|---|
| 1. | June-09 | 151.768 | 13.719 | 9 |
| 2. | July-09 | 151.768 | 54.403 | 36 |
| 3. | Aug-09 | 151.768 | 67.775 | 45 |
| 4. | Sept-09 | 151.768 | 89.835 | 59 |
| 5. | Oct-09 | 151.768 | 92.592 | 61 |
| 6. | Nov-09 | 151.768 | 87.782 | 58 |
| 7. | Dec-09 | 151.768 | 78.033 | 51 |
| 8. | Jan-10 | 151.768 | 64.709 | 43 |
| 9. | Feb-10 | 151.768 | 52.701 | 35 |
| 10. | Mar-10 | 151.768 | 39.097 | 26 |
| 11. | Apr-10 | 151.768 | 28.613 | 19 |
| 12. | May-10 | 151.768 | 21.328 | 14 |
| (June 2010 to May 2011) | | | | |
| 1. | June-10 | 151.768 | 20.312 | 13 |
| 2. | July-10 | 151.768 | 46.224 | 30 |
| 3. | Aug-10 | 151.768 | 92.351 | 61 |
| 4. | Sept-10 | 151.768 | 114.601 | 76 |
| 5. | Oct-10 | 151.768 | 112.921 | 74 |
| 6. | Nov-10 | 151.768 | 113.473 | 75 |
| 7. | Dec-10 | 151.768 | 104.214 | 69 |
| 8. | Jan-11 | 151.768 | 89.403 | 59 |

| | | | | |
|---|---|---|---|---|
| 9. | Feb-11 | 151.768 | 73.779 | 49 |
| 10. | Mar-11 | 151.768 | 58.256 | 38 |
| 11. | Apr-11 | 151.768 | 47.322 | 31 |
| 12. | May-11 | 151.768 | 36.441 | 24 |

9. Irrigation Potential

9.1 At the time of Independence (Pre-Plan)

22.6 Million Hectare

*Created & Utilised*

i) Major & Medium 9.7 Million Hectare
ii) Minor Irrigation 12.9 Million Hectare
a) Surface Water 6.4 Million Hectare
b) Ground Water 6.5 Million Hectare

9.2 *Potential Created*

*(Million Hectare)*

| Period | Major. & Med | Minor | | | *Total* Major, Med & Minor |
|---|---|---|---|---|---|
| | | Surface Water | Ground Water | Total | |
| VI Plan (1980-85) | 1.09 | 1.70 | 5.82 | 7.52 | 8.61 |
| VII Plan (1985-90) | 2.22 | 1.29 | 7.80 | 9.09 | 11.31 |
| Annual Plan (1990-92) | 0.82 | 0.47 | 3.27 | 3.74 | 4.56 |
| VIII Plan (1992-97) | 2.21 | 1.05 | 1.91 | 2.96 | 5.17 |
| IX Plan (1997-2002) | 4.10 | 1.09 | 2.50 | 3.59 | 7.69 |
| X Plan (2002-07) | 4.59 | N.A | N.A | 3.20 | 7.79 |

9.3 Major & Medium (Surface Water)

i) Ultimate 58.5 Million Hectare
ii) Created (Upto 2009-10) 44.4 Million Hectare
iii) Utilised (Upto 2009-10) 34.4 Million Hectare

9.4 Minor Irrigation

i) Ultimate 81.4 Million Hectare
ii) Created (Upto 2009-10) 62.8 Million Hectare
iii) Utilised (Upto 2009-10) 52.5 Million Hectare

9.5 Total (Major & Medium + Minor)

i) Ultimate 139.9 Million Hectare
ii) Created (Upto 2009-10) 107.2 Million Hectare
iii) Utilised (Upto 2009-10) 86.9 Million Hectare

10. Number of Major, Medium & ERM Irrigation Projects (Tentative / Under finalisation)

| | Major Projects | Medium Projects | ERM |
|---|---|---|---|
| i) Completed in Pre Plan | 74 | 143 | - |
| ii) Completed in Plan Period upto IX Plan | 154 | 773 | 91 |
| iii) Completed in X Plan | 32 | 40 | 30 |
| iv) Completed in XI Plan* | 35 | 62 | 19 |
| iv) Spilled over Projects in XII Plan* | 149 | 138 | 39 |
| iv) New Projects in XII Plan * | 27 | 32 | 27 |

* Figures are likely to be changed after receiving final data.

| | | | |
|---|---|---|---|
| 11. | CAD Programme | | |
| 11.1 | Year of Commencement | 1974-75 | |
| 11.2 | Cumulative Physical Achievement of Field Channels (Upto March 2012) | 20148.2 | '000 Hectare |

| | | |
|---|---|---|
| 12. | Land Use Classification (2009-10) (Million Hectare) | |
| | Geographical Area | 328.73 |
| | Forest Area | 70.04 |
| | Total Cultivable Land | 182.47 |
| | Net Sown Area | 140.02 |
| | Gross Sown Area (Total Cropped Area) | 192.20 |

13. Expenditure on Irrigation Sector

(Rs. Million)

| Period | Major & Medium | Minor | CAD | Total | % of Expenditure on Irrigation to Total plan expenditure |
|---|---|---|---|---|---|
| First Plan (1951-56) | 3762 | 656 | *Nil* | 4418 | 23 |
| Seventh Plan (1985-90) | 111073 | 61929 | 14475 | 187477 | 9 |
| Annual Plan (1990-91) | 26348 | 14878 | 2856 | 44082 | 8 |
| Annual Plan (1991-92) | 28240 | 15181 | 3338 | 46759 | 7 |
| Eighth Plan (1992-97) | 216692 | 104724 | 19379 | 340795 | 7 |
| Ninth Plan (1997-02) | 492896 | 112967 | 22228 | 628091 | 7 |
| *Tenth Plan (2002-07)* | 836471 | 171818 | 25348 | 1033637 | 7 |
| Annual Plan (2007-08) (Actual Expenses) | 293906 | 48851 | 10703 | 353460 | 10 |
| Annual Plan (2008-09) (Actual Expenses) | 323418 | 63167 | 5724 | 392308 | 8 |
| Annual Plan (2009-10) (Actual Expenses) | 331688 | 75349 | 7029 | 414065 | 8 |
| Annual Plan (2010-11) (Revised Approved Outlay) | 343101 | 91613 | 9705 | 444419 | 6 |
| Annual Plan (2011-12) (Approved Outlay) | 452620 | 127671 | 16057 | 596348 | 7 |

14. Flood Damages during 2011(Tentative)

| | | | |
|---|---|---|---|
| i) | Area Affected | 1.81 | Million Hectare |
| ii) | Cropped Area Affected | 2.69 | Million Hectare |
| iii) | Value of Damages to Crops | 1386.10 | Rs. Crore |
| iv) | Population Affected | 15.91 | Million |
| v) | Human Lives Lost | 1761 | No. |
| vi) | Cattle lost | 36 | Th. Nos. |
| vii) | No. of Houses Damage | 1153 | Th. Nos. |
| viii) | Value of Damaged Houses | 410.48 | Rs. Crore |
| ix) | Damage to Public Utility | 6047.67 | Rs. Crore |
| x) | Total Loss to Crop, House and Public Utility | 7844.24 | Rs. Crore |

15. Flood Management

| | | |
|---|---|---|
| Area Benefited up to March 2011 | 18.78 | Million Hectare |

16. Flood Forecasting Performance (Between 1.5.2010 and 31.10.2010)

| | |
|---|---|
| i) No. of Flood Forecasting Stations Operated | 175 |
| ii) No. of Flood Forecasting Stations which issued Forecast | 113 |
| iii)Total No. of Forecasts issued | 7519 |
| iv) Total No. Correct Forecasts within limits | 7378 |
| v) Percentage of accuracy | 98.12 |

17. Projected water demand (BCM)

| Year | NCIWRD | | | | |
|---|---|---|---|---|---|
| | 1997-98 | 2010 | | 2025 | |
| | | Low | High | Low | High |
| i) Irrigation | 524 | 543 | 557 | 561 | 611 |
| ii) Domestic | 30 | 42 | 43 | 55 | 62 |
| iii) Industries | 30 | 37 | 37 | 67 | 67 |
| iv) Power | 9 | 18 | 19 | 31 | 33 |
| v) Inland Navigation | 0 | 7 | 7 | 10 | 10 |
| vi) Flood Control | 0 | 0 | 0 | 0 | 0 |
| vii) Environments (1) Afforestation | 0 | 0 | 0 | 0 | 0 |
| viii)Environments (2) Ecology | 0 | 5 | 5 | 10 | 10 |
| Ix) Evaporation losses | 36 | 42 | 42 | 50 | 50 |
| Total | 629 | 694 | 710 | 784 | 843 |

# Chapter 1

# Introduction

Growing population coupled with sustainable developmental efforts has an increasing stress on water resources. The uneven distribution over time and space of water resources and their modification through human use and abuse are sources of water crises in many parts of the world. All these result in intensifying the pressure on water resources leading to tensions, conflict among users and excessive pressure on the environment. These demand the planners and policy makers for a proper management of water resources. This, in turn, calls for a reliable and adequate statistics on water and related aspects.

According to the United Nations Educational, Scientific and Cultural Organisation (UNESCO)[1] estimates, the total volume of water on earth is about 1.4 billion $km^3$, which is enough to cover the earth with a layer of 3 km depth. However, World's oceans cover about three-fourths of earth's surface while the fresh water constitutes a very small proportion of this enormous quantity available on the earth. It is only about 35 million $km^3$ or 2.5% of the total volume. Of these, 24 million $km^3$ or 68.9% is in the form of ice and permanent snow cover in mountainous regions, the Antarctic and Arctic regions and another 29.9% is present as ground water (shallow and deep groundwater basins up to 2,000 metres). The rest 0.3% is available in lakes, rivers and 0.9% in soil moisture, swamp water and permafrost atmosphere. Some useful facts and figures on world's water is presented in Box 1.

The present publication is being brought out once in every two years and covers a wide range of data on water resources and its related resources in the country. The last edition of this publication was brought out in 2010. It comprises six chapters & two appendixes. Summary tables and charts have been included within the chapters to facilitate overview and better understanding. Chapter 1 presents introduction while Chapter 2 deals with key indicators of water resources including, inter-alia, water availability, creation of storages and ultimate irrigation potential. Chapter 3 deals with data on utilisation of water resources. Chapter 4 relates to agricultural production, production/output data on other water related sectors viz. Fisheries, Hydro-electric Power etc. Chapter 5 gives a brief account of financial resources used in irrigation projects. Social and environmental aspects of water resources development activities as well as data on flood damages and flood protection works are dealt with in Chapter 6. Detailed tables have been provided in Appendix-I and Glossary of terms in Appendix-II.

[1] Source: Igor A. Shiklomanov, State Hydrological Institute (SHL. St. Petersburg) and United Nations Educational, Scientific and Cultural Organisation (UNESCO, Paris), 1999.

Box 1: Some Facts and Figures on Water

## Food and Agriculture Organization of the United Nations (FAO)

- The daily drinking water requirement per person is 2-4 litres, but it takes 2000 to 5000 litres of water to produce one person's daily food.
- It takes 1000-3000 litres of water to produce just one kilo of rice.
- In 2010, the estimated number of undernourished people worldwide was 925 million.
- Over the period to 2050 the world's water will have to support the agricultural systems that will feed and create livelihoods for an additional 2.7 billion people.
- The extent of land under irrigation in the world is 277 million hectares, about 20 percent of all cropland. Rainfed agriculture is practiced on the remaining 80 percent of the arable land.
- The Intergovernmental Panel on Climate Change predicts yields from rain-dependent agriculture could be down by 50 percent by 2020.
- Due to climate change, Himalayan snow and ice, which provide vast amounts of water for agriculture in Asia, are expected to decline by 20 percent by 2030.
- Irrigation increases yields of most crops by 100 to 400 percent, and irrigated agriculture currently contributes to 40 percent of the world's food production.
- Water use has been growing at more than the rate twice of population increase in the last century.
- By 2025, 1800 million people will be living in countries or regions with absolute water scarcity, and two-thirds of the world population could be under stress conditions.

## World Water Assessment Programme (WWAP)

- Poor drainage and irrigation practices have led to waterlogging and salinization of approximately 10 percent of the world's irrigated lands.
- How the world uses freshwater:
  Irrigation- about 70%, Industry - about 22%, Domestic use - about 8%

## Global Environment Outlook: environment for development (GEO-4)

- Water withdrawals are predicted to increase by 50 percent by 2025 in developing countries, and 18 per cent in developed countries.

## Human Development Report 2006

- Over 1.4 billion people currently live in river basins where the use of water exceeds minimum recharge levels, leading to the desiccation of rivers and depletion of groundwater.

## **UN Water**

1. The useable fresh water for ecosystem and humans is about 200000 $Km^3$ of water (which is less than 1% of all fresh water resources).
2. The Earth`s atmosphere contain approximately 13000 $Km^3$ of water.
3. Each person needs 20-50 litres of water a day to ensure their basic needs for drinking, cooking and cleaning.
4. More than one-sixth of the people worldwide does not have access to improved water sources.

# Chapter 2

# Water and Related Resources

Water resources have two facets – dynamic and static. The dynamic and renewable nature of the water resources and the recurrent need for its utilisation requires that water resources are measured in terms of its flow rates. The dynamic resource measured as flow is more relevant for most of developmental needs. The static or fixed nature of the resource, involving the quantity of water, the length or area of the water bodies is also relevant for some activities like pisciculture, navigation etc. Both these aspects are discussed below.

**Table T1: Inland Water Resources of India**

| (1) | (2) |
|---|---|
| Rivers & Canals (length in km) | 195210 |
| Other Water Bodies (area in Mha) | |
| Reservoirs | 2.91 |
| Tanks & Ponds | 2.41 |
| Flood Plain Lakes & Derelict Water bodies | 0.80 |
| Brackish Water | 1.24 |
| Total | 7.36 |

Source : Department of Animal Husbandry, Dairying & Fisheries, M/o Agriculture

***Water Bodies*:** Inland Water resources of the country are classified as: rivers and canals; reservoirs; tanks, lakes & ponds; lakes and derelict water bodies; and brackish water. The area of water bodies at all-India level has been presented in Table T1. Total water bodies other than rivers and canals cover an area of about 7.4 Mha. Among these water bodies, 'reservoirs' have maximum area (2.9 Mha) followed by 'tanks, lakes and ponds' (2.4 Mha).

The total area of inland water resources (other than rivers and canals) is unevenly distributed over the States. These areas[2] are mainly distributed over twelve States as shown in Table T2.

**Table T2: Inland Water resources in the country**

| Name of the State | Rivers &Canals (Length in km) | Water Bodies (Lakh ha) | | | | |
|---|---|---|---|---|---|---|
| | | Reservoirs | Tanks, & Ponds | Floodplain Lakes &Derelict Water | Brackish Water | Total (3 to 6) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Orissa | 4500 | 2.56 | 1.14 | 1.8 | 4.3 | 9.80 |
| Andhra Pradesh | 11514 | 2.34 | 5.17 | - | 0.6 | 8.11 |
| Karnataka | 9000 | 4.4 | 2.9 | - | 0.1 | 7.40 |
| Tamil Nadu | 7420 | 5.7 | 0.56 | 0.07 | 0.6 | 6.93 |
| West Bengal | 2526 | 0.17 | 2.76 | 0.42 | 2.1 | 5.45 |
| Kerala | 3092 | 0.3 | 0.3 | 2.43 | 2.4 | 5.43 |
| Uttar Pradesh | 28500 | 1.38 | 1.61 | 1.33 | - | 4.32 |

[2] Further details are available with Fisheries Division, Department of Animal Husbandry, Dairying & Fisheries, M/o Agriculture

| | | | | | | |
|---|---|---|---|---|---|---|
| **Gujarat** | 3865 | 2.43 | 0.71 | 0.12 | 1 | 4.26 |
| **Maharashtra** | 16000 | 2.79 | 0.59 | - | 0.1 | 3.48 |
| **Arunachal Pradesh** | 2000 | - | 2.76 | 0.42 | - | 3.18 |
| **Rajasthan** | 5290 | 1.2 | 1.8 | - | - | 3.00 |
| **Madhya Pradesh** | 17088 | 2.27 | 0.6 | - | - | 2.87 |
| **Others incl UTs** | 84415 | 3.53 | 3.24 | 1.39 | 1.2 | 9.36 |
| **TOTAL** | 195210 | 29.07 | 24.14 | 7.98 | 12.4 | 73.59 |

**Source : Department of Animal Husbandry, Dairying & Fisheries, M/o Agriculture**

**Rivers:** India is blessed with many rivers with varying catchment area and water resources potential. The estimate of area of rivers and canals in the country is not available. However, their total length in the country is about 2 lakh km. According to the total length of rivers and canals the States and UTs have been classified and presented in Table T3. It shows Uttar Pradesh and Jammu & Kashmir are having the highest total length of rivers and canals.

**Table T3: States by total length of rivers and canals**

| **Length (km)** (1) | Name of States/UT (2) |
|---|---|
| **<500** | Andaman & Nicobar Is, Chandigarh, Dadra & Nagar Haveli, Daman & Diu, Delhi, Goa, Lakshadweep, Puducherry |
| **500-999** | Sikkim |
| **1000-1999** | Mizoram, Nagaland, Tripura |
| **2000-4999** | Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Kerala, Manipur, Orissa, Uttarakhand, West Bengal |
| **5000-9999** | Haryana, Karnataka, Meghalaya, Rajasthan, Tamil Nadu, |
| **10000-14999** | Andhra Pradesh |
| **15000-19999** | Madhya Pradesh, Maharashtra, Punjab, |
| **20000-24999** | - |
| **25000 & above** | Jammu & Kashmir, Uttar Pradesh |

**Source: Department of Animal Husbandry, Dairying & Fisheries, M/o Agriculture**

*Rainfall*[3]*:* The annual precipitation including snowfall, which is the main source of water in the country, is estimated to be of the order of 4000 BCM. A summary of rainfall in the country has been given in Table T4. Accordingly there is no specific trend of rainfall. In 2011, the total volume of rainfall was 3669 BCM as against 3989 BCM recorded during the previous calendar year registering a decrease of about 8%.

**Table T4: Volume of Rainfall in the country**

| **Year** | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **(1)** | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| **Total Rainfall (mm)** | 1110 | 930 | 1234 | 1086 | 1215 | 1161 | 1181 | 1117 | 954 | 1213 | 1116 |
| **Total Volume of Rainfall (BCM)** | 3648 | 3200 | 4057 | 3570 | 3996 | 3819 | 3882 | 3674 | 3136 | 3989 | 3669 |

[3] For further details please see website of IMD

**Water Resources Potential**: The water resources potential of the country which occurs as natural run off in the rivers is about 1869 BCM as per the estimates of Central Water Commission (CWC), considering both surface and ground water into account. Table T5 presents river basin-wise catchment area, average water resources potential and utilisable water resources potential.

Of the major rivers, the river basin Ganga-Brahmaputra-Meghna is the largest in respect of catchment area of about 11 lakh sq km. The other major rivers with catchment area about one lakh sq km or more are: Indus, Godavari, Krishna, Mahanadi and Narmada.

The table shows total water resources potential on an average during a year is 1869 BCM out of which only 690 BCM is utilisable. The River Basin Ganga-Brahmaputra-Meghna has annual water resources potential of 1111 BCM out of total 1869 BCM in the country. So far as utilisable surface water is concerned, the proportion of utilisable surface water resources to water resources potential is very high in smaller basins. In Pennar and some other river basins the total utilization exceeds annual availability of natural flows. This is mainly because of: (i) the utilisation can approach or even exceed the average annual availability of natural flow as the total withdrawal (and not the consumptive use) is considered as utilisation (ii) the estimates of utilisable ground and surface water have been made independently by two organisations. The proportion of utilisable surface water to average water resources potential is found minimum in Brahmaputra sub-basin. The distribution of estimated utilisable surface water in the country has been presented in Figure 2. It shows the spread of

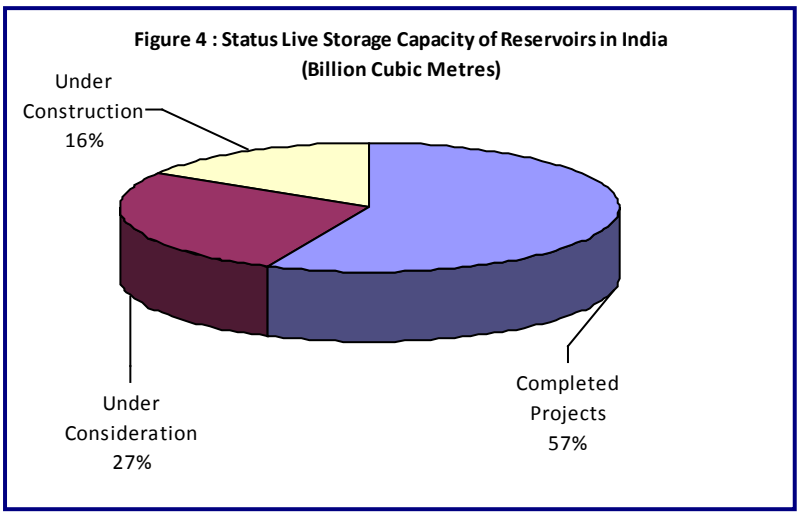
**Table T5: Major River Basins**

**( BCM)**

| Sl. No. | River Basin | Catchment Area (Sq. Km.) | Average Water Resources Potential | Utilisable Surface Water Resources |
|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) |
| 1 | Indus (up to Border) | 321289 | 73.31 | 46.0 |
| 2 | Ganga- Brahmaputra-Meghna | | | |
| | a) Ganga | 861452 | 525.02 | 250.0 |
| | b) Brahmaputra | 194413 | 537.24 | 24.0 |
| | c) Barak & Others | 41723 | 48.36 | |
| 3 | Godavari | 312812 | 110.54 | 76.3 |
| 4 | Krishna | 258948 | 78.12 | 58.0 |
| 5 | Cauvery | 81155 | 21.36 | 19.0 |
| 6 | Subernarekha* | 29196 | 12.37 | 6.8 |
| 7 | Brahamani & Baitarni | 51822 | 28.48 | 18.3 |
| 8 | Mahanadi | 141589 | 66.88 | 50.0 |
| 9 | Pennar | 55213 | 6.32 | 6.9 |
| 10 | Mahi | 34842 | 11.02 | 3.1 |
| 11 | Sabarmati | 21674 | 3.81 | 1.9 |
| 12 | Narmada | 98796 | 45.64 | 34.5 |
| 13 | Tapi | 65145 | 14.88 | 14.5 |
| 14 | West Flowing Rivers From Tapi to Tadri | 55940 | 87.41 | 11.9 |
| 15 | West Flowing Rivers From Tadri to Kanyakumari | 56177 | 113.53 | 24.3 |
| 16 | East Flowing Rivers Between Mahanadi & Pennar | 86643 | 22.52 | 13.1 |
| 17 | East Flowing Rivers Between Pennar And Kanyakumari | 100139 | 16.46 | 16.5 |
| 18 | West Flowing Rivers Of Kutch and Saurashtra including Luni | 321851 | 15.10 | 15.0 |
| 19 | Area of Inland drainage in Rajasthan | - | Negl. | - |
| 20 | Minor River Draining into Myanmar( Burma) &Bangladesh | 36302 | 31.00 | - |
| | Total | | **1869.37** | **690.1** |

**Source: B.P. Directorate, CWC.**
**$: Reassessment of Water Resources Potential of India March 1993 and December 1999, CWC**
**# : Report of the Standing Sub-Committee for assessment of availability and requirement of water for diverse uses in the country, August 2000**
**Note: * : Combining Subernarekha and other small rivers between Subernarekha and Batarni**

utilisable surface water resources in the country.




Ganga-Brahmaputra-Meghna system is the major contributor to total water resources potential of the country. Its share is 59% in total water resources potential of the various rivers. Due to various constraints of topography, uneven distribution of resource over space and time, it has been estimated that only about 1121 BCM of total potential of 1869 BCM can be put to beneficial use, 690 BCM being due to surface water resources. Again about 40% of utilisable surface water resources are presently in basin Ganga-Brahmaputra-Meghna.

**Table T6: Percentage of Water Resources Potential in major basins**

| River Basin | Water resources Potential (% to total 1869 BCM) | Utilisable surface Water (% to total 690 BCM) |
|---|---|---|
| (1) | (2) | (3) |
| Ganga-Brahmaputra-Meghna | 59.4 | 39.7 |
| Indus (up to Border) | 3.9 | 6.7 |
| Godavari | 5.9 | 11.1 |
| Krishna | 4.2 | 8.4 |
| Mahanadi | 3.6 | 7.2 |
| Narmada | 2.4 | 5.0 |
| Others | 20.6 | 21.9 |

The distribution of water resources potential in the country shows that the national per capita annual availability of water was 1816 cu m in 2001 while it was 1544 cu m in 2011. The estimated per capita average availability during the year 2010 in Ganga-Brahmaputra-Meghna system was 2045 cu m while it was as low as 263 cu m in Sabarmati basin. The per capita availability in the country will be 1140 cu m in the year 2050 against 1608 cu m during 2010. Any situation of availability of less than 1000 cu m per capita is considered by international agencies as scarcity conditions. Krishna, Cauvery, Subernarekha, Pennar, Mahi, Sabarmati, Tapi, East Flowing Rivers and West Flowing Rivers of Kutch and Saurashtra including Luni are some of the basins, which fall into this category- out of which Cauvery, Pennar, Sabarmati and East Flowing rivers and West Flowing Rivers of Kutch and Saurashtra including Luni facing more acute water scarcity with per capita availability of water less than or around 500 cu m.

**Surface Storage:** A total storage capacity of about 253.4 BCM has been created in the country due to the major & medium irrigation projects since completed. The projects under construction will contribute to additional 51 BCM. Thus likely storage available will be 304.3 BCM once the projects under construction are completed against the total water availability of 1869 BCM in the river basins of the country.

Maximum storage (taking into consideration of projects under construction) lies in the Ganga Basin followed by Krishna, Godavari and Narmada. Pennar is the leading basin in terms of storage capacities as percentage of average annual flow. The storage capacities as percentage

of average annual flow exceed 50% for Tapi, Krishna and Narmada while for Ganga and Brahmaputra sub-basins the corresponding figures are 11 % and 0.5 % respectively.

**Figure 3: Estimated Per Capita Availability of Water in Different River Basins during 2010**

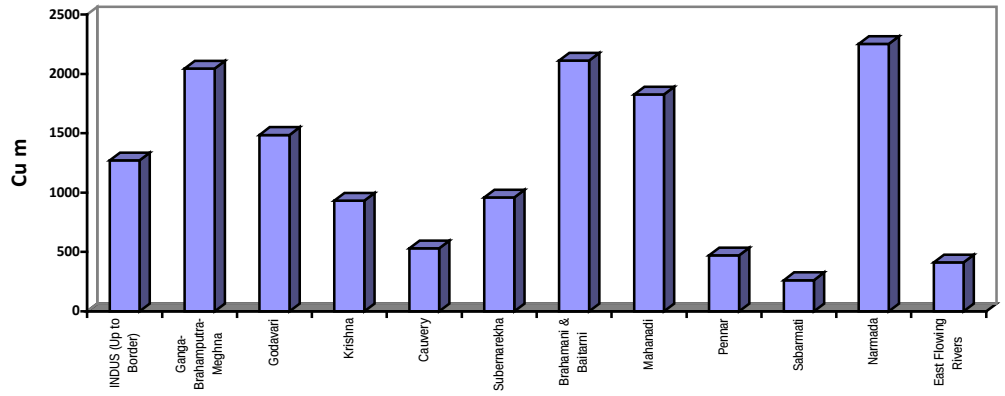
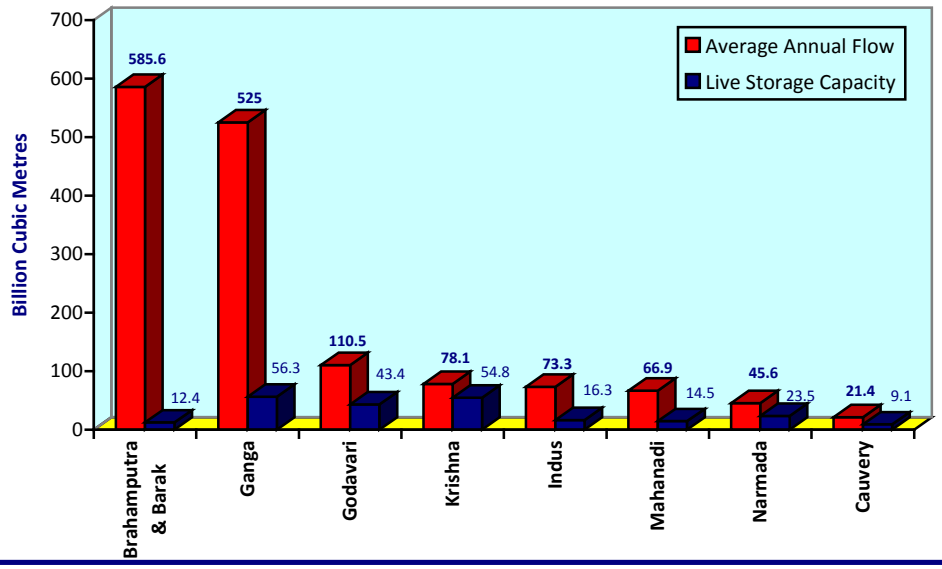



**Figure 4: Basinwise Flow & Storage Potential in India**




The States of Andhra Pradesh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Orissa and Uttar Pradesh together account for about 72 % of total live storage capacity in the country.

Month-wise storage position of important reservoirs for the years 2009-10 and 2010-11 are presented in the Appendix.

**Hydrological Network of CWC**

CWC maintains 902 Hydrological and Hydro-meteorological stations across the country for collection of hydrological data on water level and discharge observations including silt measurements and snow-melt runoff for assessment of the water resources for planning and its optimal utilisation for

comprehensive and sustainable development. The basin-wise distribution of various types of hydrological stations is given in appendix tables.

## Ground water

Total annual replenishable ground water potential of the country has been estimated as 431 BCM. The break-up of annual replenishable ground water resources by State with share 2.5% or more have been presented in Table T7. It shows 14 States comprise 91% of ground water potential. Among the States, Uttar Pradesh ranks first (17.5%) in terms of share of replenishable ground water resources followed by Maharashtra (8.3%), Madhya Pradesh (7.9%), Andhra Pradesh (7.8%), West Bengal (7.1%) and Assam (7.0%).

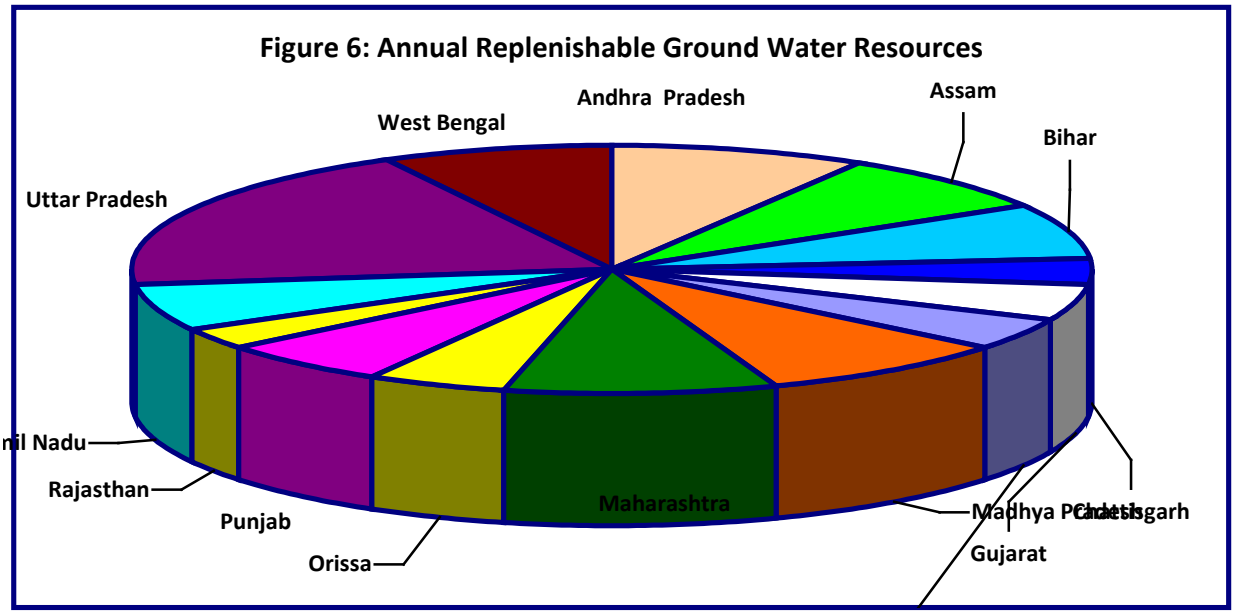
**Table T7: Annual Replenishable Ground Water Resources**

| State | Annual Replenishable Ground Water Resources | |
|---|---|---|
| | (BCM / Year) | % |
| (1) | (2) | |
| Andhra Pradesh | 33.83 | 7.8 |
| Assam | 30.35 | 7.0 |
| Bihar | 28.63 | 6.6 |
| Chhattisgarh | 12.22 | 2.8 |
| Gujarat | 18.43 | 4.3 |
| Karnataka | 16.81 | 3.9 |
| Madhya Pradesh | 33.95 | 7.9 |
| Maharashtra | 35.73 | 8.3 |
| Orissa | 17.78 | 4.1 |
| Punjab | 22.56 | 5.2 |
| Rajasthan | 11.86 | 2.8 |
| Tamil Nadu | 22.94 | 5.3 |
| Uttar Pradesh | 75.25 | 17.5 |
| West Bengal | 30.50 | 7.1 |
| Others | 40.19 | 9.3 |
| Total | 431.02 | 100.0 |

**Sources : Central Ground Water Board, Min. of Water Resources**

CGWB classified the country into safe, semi critical and over exploited ground water resources. However, the units used were not uniform over the States. Units were blocks, talukas, water-sheds, mandals, island, district, and region. The summary of the classification with reference period March 2009[4] is presented in Table 8. It is seen that proportion of over-exploited area is highest in Delhi followed by Haryana and Daman & Diu. The number of States/UTs affected due to salinity is only 6; but among these States/UT, the problem of salinity is somewhat significant in Puducherry and Gujarat.

[4] For further details please refer CGWB




## Assessment of ground water

For assessment of ground water, Central Ground Water Board (CGWB) has drilled various types of bore holes in the country. The types of bore holes are Exploratory Well (EW), Observation Well (OW), Slim Hole (SH), Pizo Metre (PZ) and Deposit Well (DW). The cumulative total of these structures shows that there were 30202 structures as on 31.03.2011 in the country. Out of which DW constitutes about 12.0% while the remaining 88.0% are other

**Table T8: Classification of area units by usage of ground water**

| % of units | Safe | Semi-critical | Critical | Over-exploited | Salinity affected |
|---|---|---|---|---|---|
| 90+ | Arunachal Pr. Assam, Bihar, Chhattisgarh, Goa, J&K, Jharkhand, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Sikkim, Tripura, A&N Islands, Chandigarh, D& N Haveli | | | | |
| 75-90 | AP, HP, Kerala, WB | | | Delhi | |
| 40-75 | Gujarat, Karnataka, MP, UP, Uttarakhnad, Lakshadweep, Puducherry | Daman &Diu, Lakshadweep | | Haryana, Daman &Diu | |
| 20-40 | TN | Uttarakhnad | | Karnataka, TN, Puducherry | Puducherry |
| 5-20 | Delhi, Haryana | AP, Delhi, Gujarat, Haryana, Karnataka, Kerala, MP, Maharashtra, TN, UP, Uttarakhnad, WB | Haryana, HP, TN | Gujarat, HP, MP, UP | Gujarat, |
| <5 | | Bihar, Chhattisgarh, Jharkhand | AP, Gujarat, Jharkhand, Karnataka, Kerala, MP, Maharashtra, UP | AP, Jharkhand, Kerala, Maharashtra | AP, Rajasthan, Orissa, TN |

**Sources : Central Ground Water Board, Min. of Water Resources**

types of bore holes. Rajasthan, Andhra Pradesh, Orissa, Karnataka, Gujarat, Uttar Pradesh and

Madhya Pradesh account for 57% of the total bore holes in the country. Out of total DW schemes in the country, Rajasthan, Bihar and Uttar Pradesh account for 44% of total DW Schemes in the country.

**Table T9: Bore Holes Drilled by Central Ground Water Board by State (as on 31.03.2011)**

| State | Exploratory Well | Pizo Metre | Observation Well | Slim Hole | Deposit Well | Total |
|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| **Rajasthan** | 1333 | 462 | 1108 | 93 | 591 | 2881 |
| **Andhra Pradesh** | 1341 | 629 | 1251 | 14 | 31 | 2802 |
| **Orissa** | 1760 | 177 | 1321 | 21 | 191 | 2452 |
| **Karnataka** | 1347 | 346 | 1227 | 7 | 5 | 2313 |
| **Gujarat** | 1083 | 485 | 918 | 25 | 255 | 2291 |
| **Uttar Pradesh** | 1018 | 165 | 821 | 39 | 501 | 2279 |
| **Madhya Pradesh** | 1261 | 149 | 929 | 8 | 149 | 2177 |
| **Maharashtra** | 1220 | 154 | 1140 | 2 | 166 | 1972 |
| **Tamil Nadu** | 1029 | 385 | 919 | 13 | 93 | 1878 |
| **Chhattisgarh** | 889 | 120 | 589 | 0 | 28 | 1218 |
| **Bihar** | 276 | 67 | 276 | 10 | 514 | 1033 |
| **Haryana** | 373 | 212 | 366 | 23 | 170 | 1021 |
| **Other States/UTs** | 2872 | 811 | 2791 | 106 | 941 | 5885 |
| **All States &UTs** | 15802 | 4162 | 13656 | 361 | 3635 | 30202 |

**Sources : Central Ground Water Board, Min. of Water Resources**

## Irrigation potential

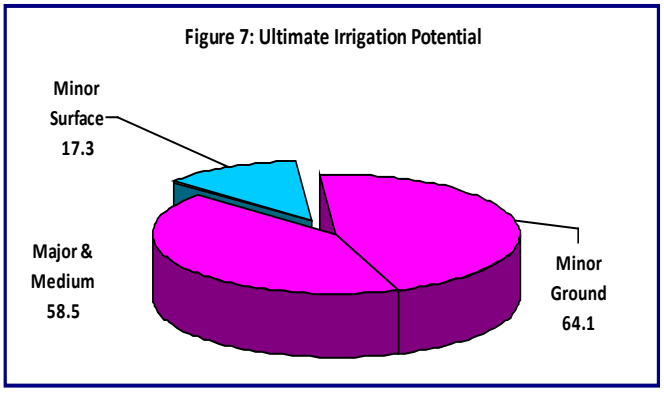
The total ultimate irrigation potential (UIP) of the country stands at about 140 Mha. The share of Minor Irrigation is higher by 22.96 Mha as compared to that of Major & Medium Irrigation.

**Table T10: Ultimate Irrigation Potential ('000 ha)**

| State | Major & Medium | Minor | | | Total |
|---|---|---|---|---|---|
| | | Surface | Ground | Sub-total | |
| (1) | (2) | (3) | (4) | (5) | (6) |
| **Andhra Pradesh** | 5000 | 2300 | 3960 | 6260 | 11260 |
| **Arunachal Pradesh** | 0 | 150 | 18 | 168 | 168 |
| **Assam** | 970 | 1000 | 900 | 1900 | 2870 |
| **Bihar** | 5224 | 1544 | 4120 | 5664 | 10888 |
| **Chhattisgarh** | 1147 | 81 | 490 | 571 | 1718 |
| **Goa** | 62 | 25 | - | 25 | 87 |
| **Gujarat** | 3000 | 347 | 2756 | 3103 | 6103 |
| **Haryana** | 3000 | 50 | 1462 | 1512 | 4512 |
| **Himachal Pradesh** | 50 | 235 | 68 | 303 | 353 |
| **Jammu & Kashmir** | 250 | 400 | 708 | 1108 | 1358 |
| **Jharkhand** | 1276 | 354 | 830 | 1184 | 2460 |
| **Karnataka** | 2500 | 900 | 2574 | 3474 | 5974 |
| **Kerala** | 1000 | 800 | 879 | 1679 | 2679 |
| **Madhya Pradesh** | 4853 | 2111 | 9250 | 11361 | 16214 |
| **Maharashtra** | 4100 | 1200 | 3652 | 4852 | 8952 |

| | | | | | |
|---|---|---|---|---|---|
| **Manipur** | 135 | 100 | 369 | 469 | 604 |
| **Meghalaya** | 20 | 85 | 63 | 148 | 168 |
| **Mizoram** | 0 | 65 | 5 | 70 | 70 |
| **Nagaland** | 10 | 70 | 5 | 75 | 85 |
| **Orissa** | 3600 | 1000 | 4203 | 5203 | 8803 |
| **Punjab** | 3000 | 50 | 2917 | 2967 | 5967 |
| **Rajasthan** | 2750 | 600 | 1778 | 2378 | 5128 |
| **Sikkim** | 20 | 50 | 0 | 50 | 70 |
| **Tamil Nadu** | 1500 | 1200 | 2832 | 4032 | 5532 |
| **Tripura** | 100 | 100 | 81 | 181 | 281 |
| **Uttar Pradesh** | 12154 | 1186 | 16295 | 17481 | 29635 |
| **Uttarakhand** | 346 | 14 | 504 | 518 | 864 |
| **West Bengal** | 2300 | 1300 | 3318 | 4618 | 6918 |
| **All States** | 58367 | 17317 | 64066 | 81383 | 139750 |
| **All UTs** | 98 | 20 | 26 | 46 | 144 |
| **All-India** | 58465 | 17337 | 64092 | 81429 | 139894 |

Ground Water contributes more than 79% of the total ultimate potential through minor irrigation. Uttar Pradesh and Bihar are two largest states in term of potential due to Major & Medium Irrigation Projects. These two states along with Madhya Pradesh, Andhra Pradesh and Maharashtra account for about 54% of the total ultimate potential of Major & Medium Irrigation in the country. The largest UIP for Minor Irrigation (Ground Water) exists in Uttar Pradesh. Andhra Pradesh and Madhya Pradesh are two major states in which potential of Minor Irrigation (Surface Water) is much higher than the remaining states. Uttar Pradesh occupies the first place among the states having maximum potential due to all types of schemes.




## Dams Scenario

Central Water Commission maintains the National Register of Large Dams. The State-wise

**Table T11: Number of Dams by State (as on 30.11.2012)**

| State/UT | Completed | Under Construction | Total | State/UT | Completed | Under Construction | Total |
|---|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | | | | |
| **A&N Islands** | 2 | 0 | 2 | Maharashtra | 1693 | 152 | 1845 |
| **Andhra Pradesh** | 290 | 44 | 334 | Manipur | 3 | 2 | 5 |
| **Arunachal Pr.** | 1 | 0 | 1 | Meghalaya | 5 | 1 | 6 |
| **Assam** | 3 | 2 | 5 | Mizoram | 0 | 0 | 0 |
| **Bihar** | 24 | 4 | 28 | Nagaland | 0 | 0 | 0 |
| **Chhattisgarh** | 243 | 14 | 257 | Orissa | 198 | 6 | 204 |
| **Goa** | 5 | 0 | 5 | Punjab | 14 | 1 | 15 |
| **Gujarat** | 621 | 45 | 666 | Rajasthan | 201 | 10 | 211 |
| **Haryana** | 1 | 0 | 1 | Sikkim | 2 | 0 | 2 |
| **Himachal Pr.** | 13 | 6 | 19 | Tamil Nadu | 116 | 0 | 116 |
| **J& K** | 12 | 2 | 14 | Tripura | 1 | 0 | 1 |
| **Jharkhand** | 49 | 28 | 77 | Uttar Pradesh | 114 | 16 | 130 |
| **Karnataka** | 230 | 1 | 231 | Uttarakhand | 13 | 6 | 19 |
| **Kerala** | 58 | 1 | 59 | West Bengal | 28 | 0 | 28 |
| **Madhya Pradesh** | 899 | 7 | 906 | | | | |
| | | | | Total | 4839 | 348 | 5187 |

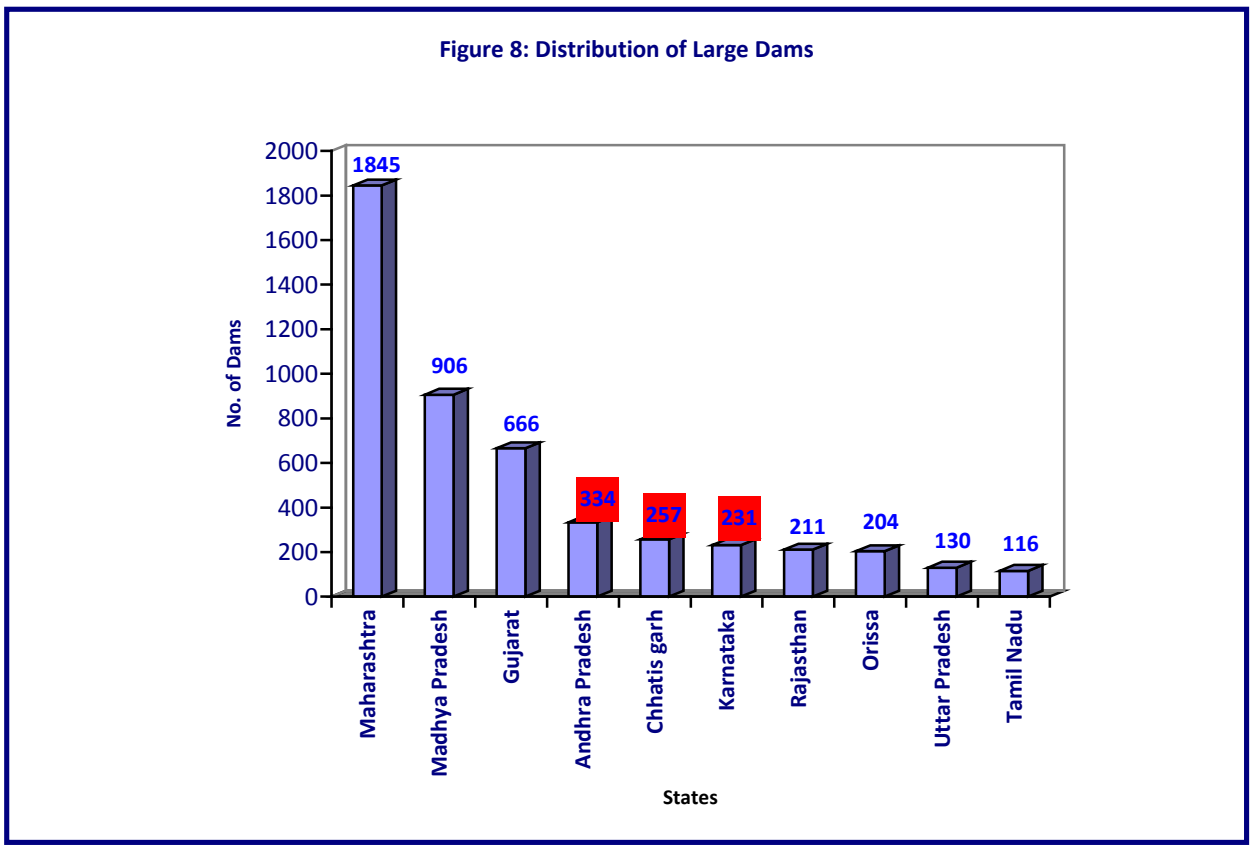
**Source: Central Water Commission, (Dam Safety Monitoring Directorate) National Register of Large Dam**

distribution of number of dams is presented in Table T11. It reveals that there are 5187 Dams in the country out of which 4839 are completed. The maximum number of dams completed in the country is in Maharashtra (1693) followed by Madhya Pradesh (899), Gujarat (621), Andhra Pradesh (290), Chhattisgarh (243), Karnataka (230) and Rajasthan (201). The number of dams under construction is the highest in Maharashtra (152) followed by Gujarat (45), Andhra Pradesh (44) and Jharkhand (28).

The distribution of dams by time period is given in Table T12. It indicates that the maximum numbers of dams in India were completed during the decades 1971-80 (1294) and 1981-90 (1255).

**Table T12: Break-up of number of completed Dams by time period**

| Upto 1900 | 1901-1950 | 1951-1960 | 1961-1970 | 1971-1980 | 1981-1990 | 1991-2000 | 2001& above | Not available | Total |
|---|---|---|---|---|---|---|---|---|---|
| 81 | 300 | 233 | 499 | 1295 | 1256 | 625 | 333 | 194 | 4839 |



**India-WRIS: Generation of Database & Implementation of Web enabled Water Resources Information System in the country**

The national Water Policy (2002) recognizes that development and management of water resources need to be governed by national perspectives and aims to develop and conserve the scarce water resources in an integrated and environmentally sound basis. The policy emphasizes the need for effective and economical management of our water resources by intensifying research efforts in use of remote sensing technology and developing an information system.

With uneven distribution of water with space and time, the management of water resources is a highly complex and tedious task. Moreover, over-exploitation and pollution hinders the availability and creates the scarcity and depletion of the resource. Hence, it calls for sustainable development of water resources across the regions in the country. Pre-requirement for optimal management of water resources are data acquisition and organization across the multidisciplinary domains including socio-economic, environmental issues including water quality aspects besides others. For this, the need is to develop Water Resources Information System dedicated for the management of water resources and to provide foundation for modeling and Spatial Decision Support System (SDSS).

Central Water Commission (CWC), MoWR, initiated the project 'Generation of Database and Implementation of Web enabled Water Resources Information System named as India –WRIS in 11th plan. The work of web enabled water resources information system (WRIS) amounting to Rs. 78.3164 Crore has been given to ISRO in Oct' 2008. Central Water Commission & ISRO has signed an MOU on 3rd December 2008 to develop web enabled GIS based Water Resources Information System for the entire country during XI plan to be completed in 4 years. The information system will be on 1:50000 scale. WRIS has been jointly formulated by CWC and ISRO to generate nationally consistent water resources database to be completed by December 2012.

*India-WRIS will have 30 layers (appendix table) of information both spatial and non-spatial having 108 sub layers. Main group of database are as under:*

i. Watershed Atlas (Basin, River network & Digital Elevation Model)
ii. Administrative layer (State Boundary, District boundary, Village boundary, Roads etc)
iii. Water Resources project (Major, Medium project location & command boundaries, Canal system)
iv. Thematic layer (Land use land cover, waste land, Water bodies, Ground water well maps, Litholog)
v. Environment data (CWC Hydro-meteorological station, IMD stations & Water quality stations)
vi. Basin wise Report

This results in the development of decision support system as per the requirement of various departments of different states of the country. This would also establish mechanisms for the exchange of knowledge among different agencies/ stakeholders for sustainable water resources in India.

The VISION OF INDIA-WRIS is to provide a comprehensive, credible and contextual view of India's water resources data along with allied natural resources data and information. The goal of the project is a 'Single Window solution' for all water resources and related data in a

standardized GIS format in national framework for water resources assessment and monitoring, planning and development, integrated water resources management (IWRM) and provide foundation for advanced modeling purposes to all departments, organizations, professionals and other stakeholders. It will allow users to Search, Access, Visualize, Understand and Analyze water resources data for planning, development and finally IWRM.

1) **Status of Project**:

- The First version of website of INDIA WARIS has been launched on 07 Dec, 2010 in New Delhi by Hon'ble Minister Water Resources. The URL of the website is *www.india-wris.nrsc.gov.in/webgis.php#.* Further, the development of Information System is under progress and the 2nd version INDIA WRIS was launched by Chairman, CWC on world water day i.e. 22nd Mar' 2012. The full version with complete database of the project is anticipated to be launched by June' 2014. Further, the development of Information System is under progress and in continuation of above, following achievements are made during 2012.

  (i) River Basin Atlas of India was released by Hon'ble Union Minister (MoWR) on 1st November 2012.

  (ii) The updated version i.e. 3rd version (that includes Live telemetry data in respect of CWC hydrological stations, Mobile Application version 1.0 for Android platform, Climate Trend analysis, 2D-3D linked view) is launched by Hon'ble Union Minister (MoWR) on 4th December 2012.

  All unclassified data of CWC G&D stations has been uploaded at WRIS website recently in July 2013 as per Hydro-meterological data dissemination policy 2013.

  The URL of the website is **www.india-wris.nrsc.gov.in** can be seen for more details.

- **Financial Achievement** – An amount of Rs. 53.11 crores has been incurred/ released to ISRO during 11th plan.

To maintain and update such a large volume of water resources data at national level it has been proposed during 12th plan to establish a new organization as NATIONAL WATER RESOURCES INFORMATION CENTRE (NWR-IC).

## NATIONAL PROJECTS

Government of India has approved a scheme of National Projects with a view to expedite completion of identified National Projects for the benefit of people. Such projects are provided financial assistance by the Government of India in the form of Central grant which is 90% of the cost of the irrigation& drinking water component of such projects for their completion in the time bound manner. The criterion for selection of National Projects is as under:

(i) International projects where usage of water in India is required by a treaty or where planning and early completion of the project is necessary in the interest of the country.

(ii) Inter-State Projects which are dragging on due to non-resolution of Inter -State issues relating to sharing of costs, rehabilitation, aspects of power production etc., including river interlinking projects.

(iii) Intra-State Projects with additional potential of more than 2 lac hectare and with no dispute regarding sharing of water and where hydrology is established.

(iv) Extension, Renovation and Modernization (ERM) Projects envisaging restoration of lost potential of 2lakh or more under the category of National Project subject to conditions.

Recently it has been decided that central assistance in XII Plan for ongoing National Projects and new National Projects of special category states would be 90% and for new National Projects of non special category states/areas it would be 75%

Out of 15 Projects included in the scheme of National Projects, four projects namely Gosikhurd irrigation project (Maharashtra), Teesta Barrage Project (West Bengal), ShahpurKandi Project (Punjab) and SaryuNaharPariyojna (Uttar Pradesh) are under execution. Lakhwar Multipurpose Project has been accepted by Advisory Committee of MoWR. Three projects namelyKishau Multipurpose Project, Renuka Project and Ken-Betwa Link Project are under appraisal. Remaining seven projects are at various stages of investigation /DPR preparation. During XI Plan central assistance of Rs 2787.176 crore was released and during XII Plan central assistance of Rs 472098 crore has been released upto October 2013.

New projects could be considered for inclusion under the scheme of National Projects on receipt of proposals from the in the prescribed format from the state Governments after investment clearance from Planning Commission, clearance from Expenditure Finance Committee /Project Investment Board and on the recommendation there upon of high powered Steering Committee constituted for the purpose of overseeing the entire process of selection and implementation of National Projects and the approval by the Union Cabinet.

# Chapter 3

# Resources Utilisation

This section deals with data on resources utilisation such as land use, irrigated area, irrigation potential created and utilised, physical achievements under different Command Area Development (CAD) Programmes etc.

**Land Use Statistics**

As irrigation accounts the maximum utilisation of water, it is pertinent to look at the irrigation statistics vis-à-vis availability of land in the country and its use especially in relation to water use. The relevant data available from Ministry of Agriculture at National level has been presented in Table T13[5] and Figure 9 for the period 2000-2010. Over the decade the table shows that Net Sown Area is undulating while Total Cultivable Area has a declined trend but Forest Area, Gross Sown Area, Gross Irrigated Area, Net Irrigated Area have a slow increasing trend. However, it indicates only about 45% of area cropped in the country is irrigated during the period 2006-07 to 2009-10 thereby indicating that 55% of the sown area – gross or net – doesn't have irrigation facility.

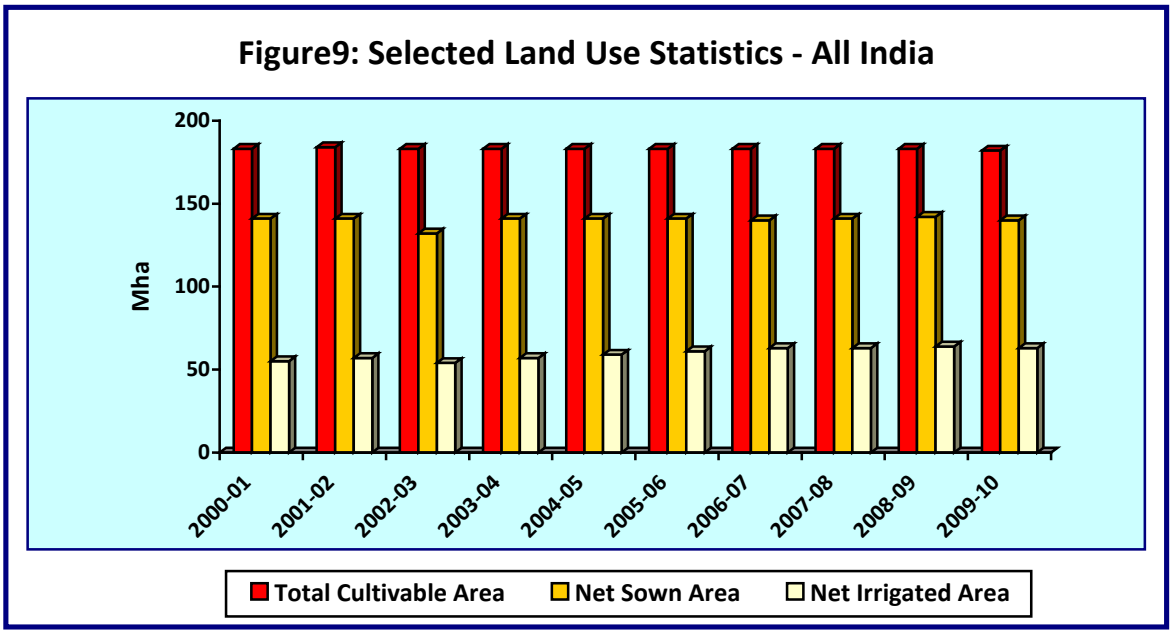
**Table T13: Land Use and Irrigation Statistics – All India**

**('000 ha)**

| YEAR | Population ('000) | Geographical Area | Forest Area | Net Sown Area (NSA) | Total Cultivable Area (TCA) | Gross Sown Area (GSA) | Gross Irrigated Area (GIA) | Net Irrigated Area (NIA) |
|---|---|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| 2000-01 | 1028610 | 328726 | 69843 | 141336 | 183455 | 185340 | 76187 | 55205 |
| 2001-02 | 1045547 | 328726 | 69720 | 140700 | 183551 | 188286 | 78420 | 56920 |
| 2002-03 | 1062388 | 328726 | 69821 | 132051 | 183449 | 174108 | 73094 | 53884 |
| 2003-04 | 1079117 | 328726 | 69968 | 140708 | 183132 | 189669 | 78038 | 57046 |
| 2004-05 | 1095722 | 328726 | 69960 | 140642 | 182946 | 191119 | 81076 | 59218 |
| 2005-06 | 1112186 | 328726 | 69994 | 141162 | 182685 | 192756 | 84280 | 60831 |
| 2006-07 | 1128521 | 328726 | 70002 | 139848 | 182508 | 192408 | 86756 | 62744 |
| 2007-08 | 1144734 | 328726 | 70020 | 141377 | 182691 | 195138 | 87980 | 63291 |
| 2008-09 | 1160813 | 328726 | 70034 | 141929 | 182514 | 195357 | 88867 | 63740 |
| 2009-10 | 1176742 | 328726 | 70042 | 140022 | 182466 | 192197 | 86423 | 63256 |

Source : Ministry of Agriculture, Directorate of Economics & Statistics; Office of the Registrar General of India

[5] For further details at State or district level one may visit website of Ministry of Agriculture.




## Irrigated Area under Principal Crops

For having an idea about the quantum of water used for irrigation it is important to know irrigated area under different crops as requirement of water varies from crop to crop. From the published data of Ministry of Agriculture Table T14 giving gross irrigated area for a few selected crops has been presented. It shows that gross irrigated area during 2009-10 was 86.4 Mha of which foodgrain crops contributed about 67.9%.

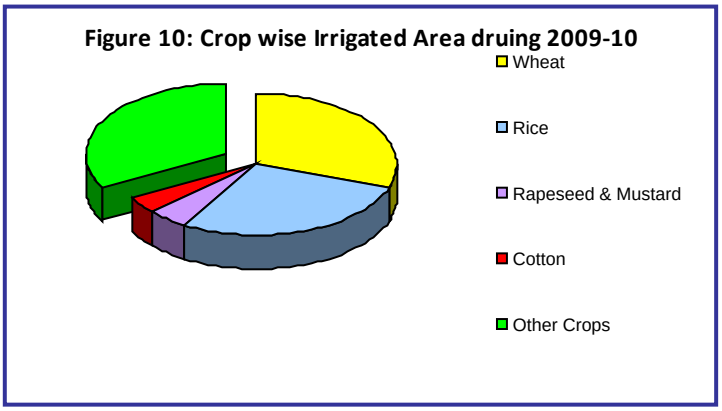
**Table T14: Gross Irrigated Area for a Few Selected Crops – All India**

**('000 ha)**

| Crop / Year | 1950-51 | 1960-61 | 1970-71 | 1980-81 | 1990-91 | 2000-01 | 2007-08 | 2008-09 | 2009-10 |
|---|---|---|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| Wheat | 3402 | 4233 | 9924 | 15553 | 19511 | 22798 | 26101 | 25681 | 26209 |
| Rice | 9844 | 12523 | 14339 | 16364 | 19469 | 24337 | 25199 | 26597 | 24545 |
| Rapeseed & Mustard | N.A. | 138 | 356 | 990 | 3076 | 2759 | 4203 | 4449 | 3866 |
| Foodgrains | 18317 | 22065 | 30117 | 37851 | 44866 | 53609 | 59450 | 60372 | 58641 |
| Cotton | 465 | 967 | 1358 | 2115 | 2487 | 2766 | 3487 | 3313 | 3542 |
| **Total Gross Irrigated Area** | **22563** | **27980** | **38195** | **49775** | **63204** | **76187** | **87980** | **88867** | **86423** |

Source : Ministry of Agriculture, Directorate of Economics & Statistics; Office of the Registrar General of India

Among the cereals, it is observed that irrigated area under rice varied between 24.3 and 26.6 Mha during the period 2000-01 to 2009-10. The irrigated area under wheat remained between 22.8 to 26.2 Mha during the same period.



## Sources of Irrigation and Area Irrigated

The main sources of irrigation in the country are canals, tanks and wells including tubewells. These data are available from two sources. Ministry of Agriculture collects data on irrigation by its source and compiles irrigated area by source at various levels – district / State / Country. However, Planning Commission collects data on Irrigation Potential Area Created (IPC) and Utilised (IPU) for major and medium irrigation projects[6]. For minor irrigation schemes, Ministry of Water Resources conducts a census once in 5-6 years. These censuses provide IPC and IPU by source of irrigation. The last census was conducted in 2006-07. However, the last published data of Minor irrigation census pertains to 2000-01.

Analysing the data relating to net area irrigated by source for the year 2009-10[7], it is observed that the major source of irrigation is ground water. Wells (considering all types of wells viz. dug well, shallow tubewell, deep tubewell) provided about 62% irrigation followed by canals with 26% at all- India level.

**Table T15: Source-wise Net Irrigated Area in India**

**('000 ha.)**

| Year | Canal | Tank | Wells | Other Sources | Total (All Sources) |
|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) |
| 2000-01 | 16012 | 2466 | 33818 | 2909 | 55205 |
| 2001-02 | 15200 | 2186 | 35183 | 4350 | 56920 |
| 2002-03 | 14071 | 1803 | 34348 | 3662 | 53884 |
| 2003-04 | 14455 | 1916 | 36383 | 4292 | 57046 |
| 2004-05 | 14763 | 1734 | 35189 | 7531 | 59218 |
| 2005-06 | 16716 | 2083 | 36070 | 5962 | 60831 |
| 2006-07 | 17026 | 2078 | 37641 | 5998 | 62744 |
| 2007-08 | 16812 | 1978 | 38400 | 6103 | 63291 |
| 2008-09 | 16945 | 1985 | 38795 | 6015 | 63740 |
| 2009-10 | 16697 | 1638 | 39042 | 5880 | 63256 |

Source : Ministry of Agriculture, Directorate of Economics & Statistics; Office of the Registrar General of India

## Irrigation development in the country

As indicated earlier irrigation projects are classified as major, medium or minor irrigation projects[8]. The minor irrigation projects (schemes) are further divided into two categories viz. Surface Water Schemes and Ground Water Schemes. Major and medium irrigation projects are generally surface water projects.

[6] Irrigation projects are classified on the basis of culturable command area (CCA) of the project. A project having CCA of more than 10,000 ha is termed as major irrigation project while CCA more than 2,000 ha and upto 20,000 ha is medium irrigation project. A project/scheme having CCA upto 2,000 ha is termed as minor irrigation scheme.

[7] For further detailed data, please look at the website of Ministry of Agriculture.

[8] The minor irrigation projects are often called minor irrigation schemes.

Analysing the data on potential created and utilised over different Plan periods, it is observed that irrigation potential created has increased from 22.6 Mha in pre-plan era to 101.7 Mha by the end of X Plan (2002-07). It is likely that irrigation potential created achieved as 108.91 Mha up to 2010-11 of XI Plan, out of this 45.3 Mha is from major & medium schemes and the remaining 63.6 Mha from minor schemes.

As regards irrigation potential utilised it is observed that the utilisation of total potential created was 22.6 Mha in pre-plan period which increased to 87.4 Mha by the end of 2010-11. The percentage of IPU to IPC upto VIII Plan remained 90% or more. However, the percentage started declining in subsequent plans. In XI Plan (upto 2010-11) it was around 80%.

**Figure 11: Irrigation Potential Created & Utilised**

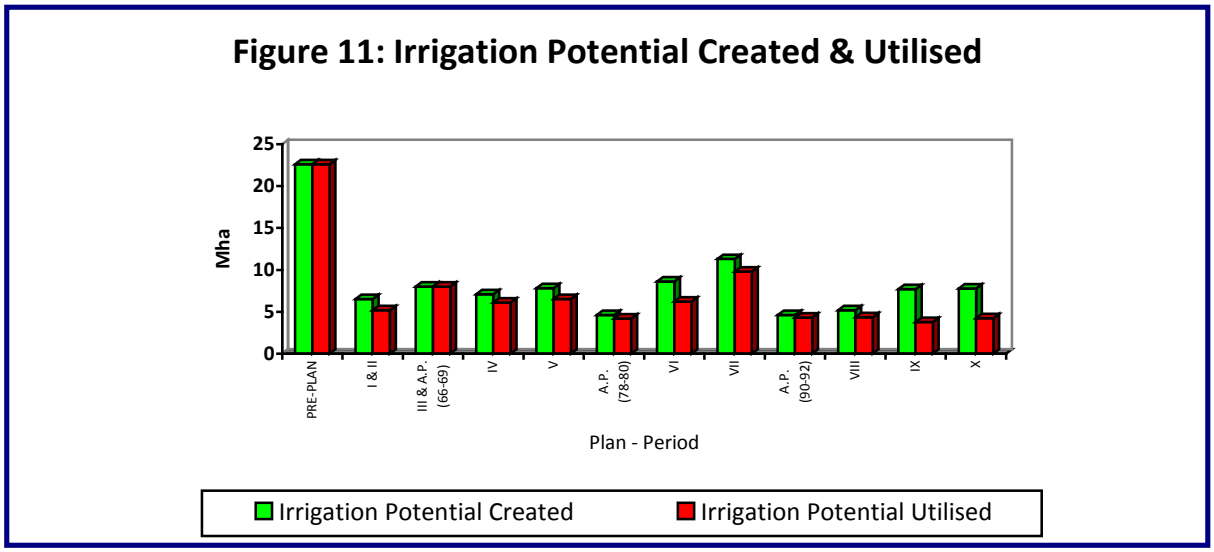
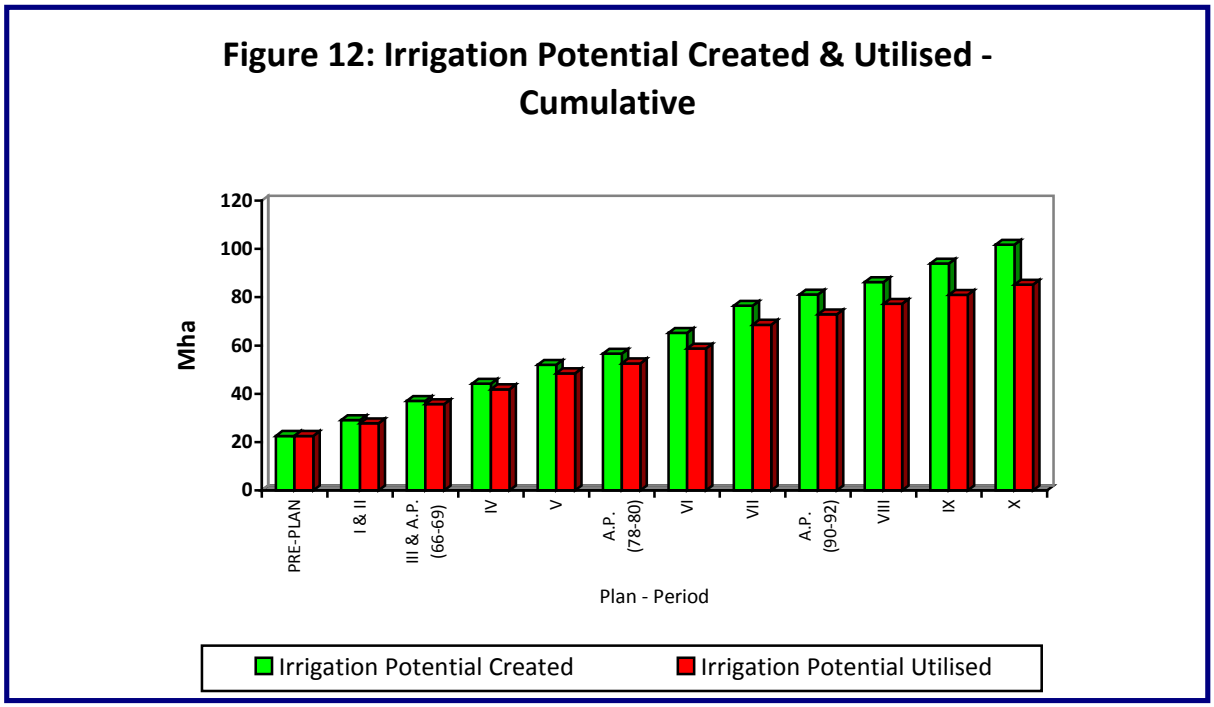



**Figure 12: Irrigation Potential Created & Utilised - Cumulative**




Among the States, for major & medium, projects, the potential created at the end of X Plan (2002-07) is highest for Uttar Pradesh with 8.8 Mha followed by Andhra Pradesh and

Maharashtra with 3.6 and 3.5 Mha respectively. The total share of these three States was about 38% in creation of total irrigation potential. The percentage of potential created upto the end of X Plan to ultimate potential through Major & Medium Irrigation projects is 71% at national level.

Table 16 gives ultimate irrigation potential (UIP), IPC and IPU of the States having percentage of IPU to IPC at least 80%.

**Table T16: Achievements of Irrigation Potential Created / Utilised for Major & Medium Irrigation**

**('000 ha.)**

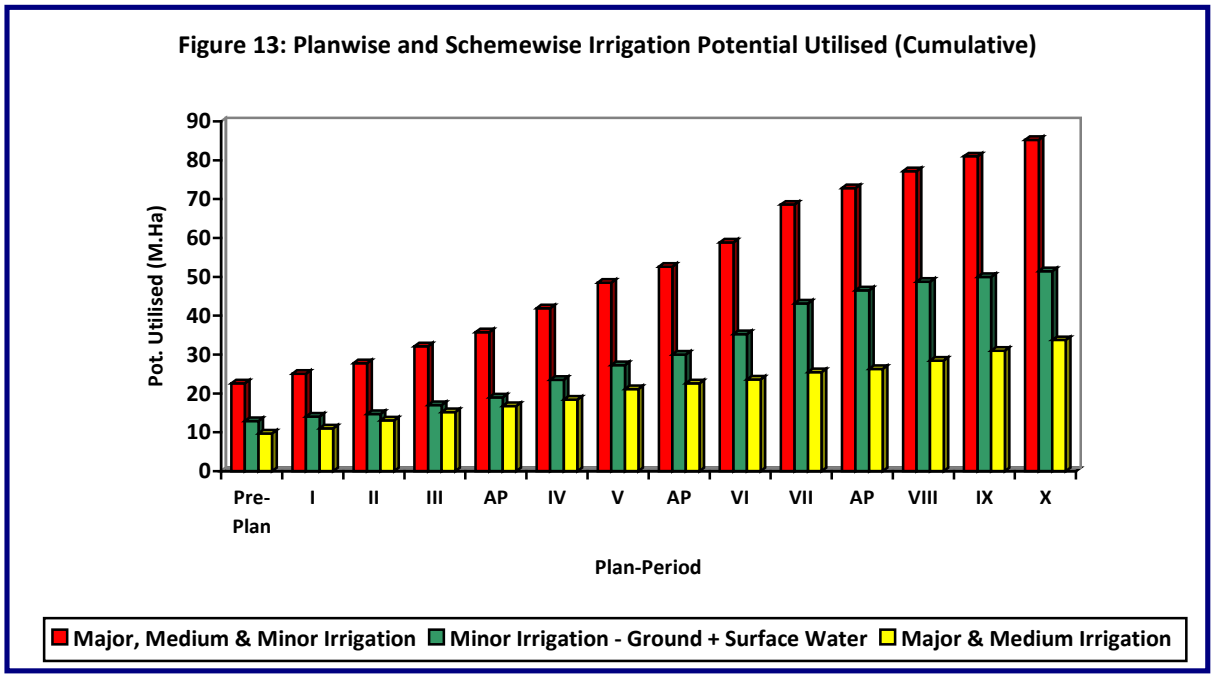
| States | Ultimate Irrigation Potential (UIP) | Potential Created upto X Plan (IPC) | Potential Utilised upto X Plan (IPU) | % of IPC to UIP | % of IPU to IPC |
|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) |
| Andhra Pradesh | 5000 | 3600.2 | 3244.6 | 72.0 | 90.1 |
| Haryana | 3000 | 2193.7 | 1893.3 | 73.1 | 86.3 |
| Jammu & Kashmir | 250 | 187.3 | 174.6 | 74.9 | 93.2 |
| Karnataka | 2500 | 2637.7 | 2119.7 | 105.5 | 80.4 |
| Orissa | 3600 | 1974.4 | 1878.7 | 54.8 | 95.2 |
| Punjab | 3000 | 2574.7 | 2510.5 | 85.8 | 97.5 |
| Rajasthan | 2750 | 2861.6 | 2526.1 | 104.1 | 88.3 |
| Tamil Nadu | 1500 | 1562.6 | 1556.9 | 104.2 | 99.6 |
| West Bengal | 2300 | 1754.8 | 1573.6 | 76.3 | 89.7 |
| All India | **58465** | **41637.9** | **33739.6** | **71.2** | **81.0** |

Analysing the data on potential utilisation at the end of X Plan, it is found that about 81% of the potential created was utilised under major & medium irrigation projects at All-India level. Among the States, Tamil Nadu was at top with 99.6% utilisation whereas Punjab, Orissa, and Jammu & Kashmir and Andhra Pradesh were having 90% or more utilisation.

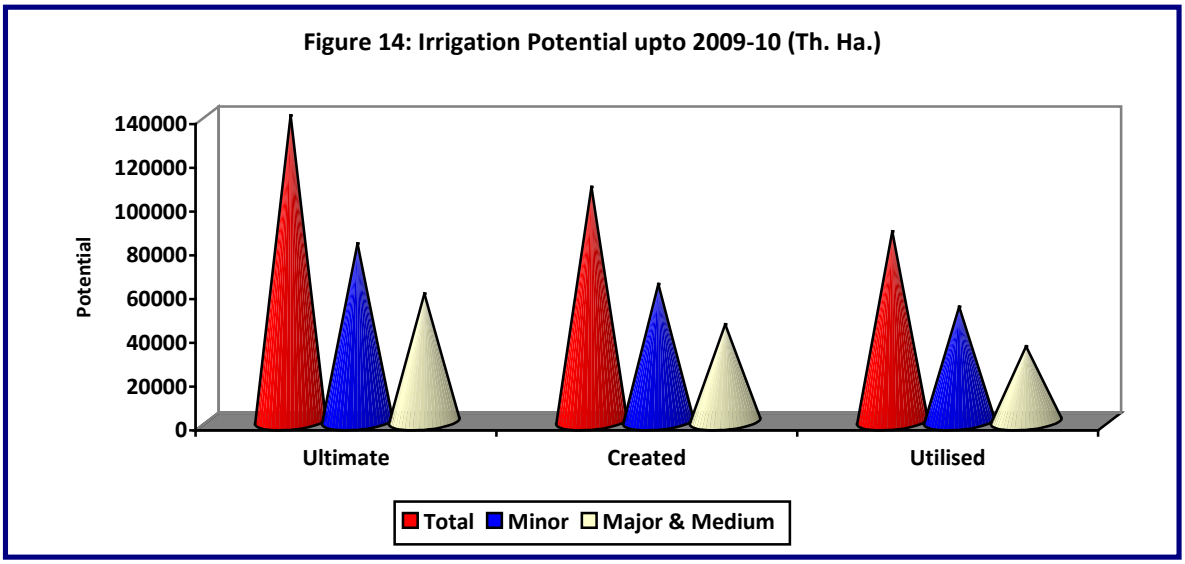
For Minor Irrigation, the total ultimate potential for the country as whole is 81.4 Mha, while Potential Created and Utilised till the end of X Plan were 60.1 and 51.5 Mha respectively at All-India level. The percentage of potential created upto X Plan to ultimate potential is 73.8 at national level.

The percentage of potential utilised for minor irrigation till 2006-07 corresponding to potential created was 86% at All-India level. Among the States it is the highest for Tamil Nadu with 99.6% potential utilisation followed by Punjab at 98.2%.

In a nutshell, at the end of X Plan, if all the major, medium and minor schemes are considered cumulatively, out of 140 Mha of ultimate potential 72.7% has been created of which 83.8% has been utilised at the national level.




State-wise data on irrigation potential created and utilised upto 2009-10 as per Planning Commission along with the Gross Irrigated Area from the Ministry of Agriculture are presented. It is observed that if all the Major, Medium and Minor schemes are considered cumulatively, a total of 107.2 Mha of irrigation potential has been created at the All-India level upto 2009-10 out of which 81% has been utilised. The gross irrigated area for 2009-10 is 86.4 Mha. Among the states the potential created upto 2009-10 is the highest for Uttar Pradesh at 33.8 Mha followed by Bihar and Andhra Pradesh at 8.0 and 7.2 Mha respectively. In terms of the GIA for the year 2009-01, Uttar Pradesh ranks first at 18.9 Mha followed by Punjab and Rajasthan at 7.7 and 7.3 Mha respectively.




## Number of Major & Medium Irrigation Projects

Up to X Plan (1902-2007), there were 260 completed major projects and another 35 have been completed in XI Plan (2007-2012). The number of spilled over major projects in XII Plan is 149 out of which 49 are in Maharashtra and 30 in Andhra Pradesh. Among the States the

largest numbers of major projects completed up to the end of X Plan were in Uttar Pradesh (57) followed by Maharashtra (26) and Gujarat (19). The largest number of new Major Projects, 16, was identified in Madhya Pradesh while the maximum number of 49 ongoing major projects is in Maharashtra.

A total of 956 medium projects were completed up to the X Plan and another 62 are completed in XI Plan period. 138 new medium projects have been included in XII Plan. The largest number of new projects (13) was identified in Madhya Pradesh. For ongoing medium projects, the maximum number is in Maharashtra (71) followed by Madhya Pradesh (13).

Besides major & medium projects there are Extension, Renovation and Modernisation (ERM) Projects also. 121 such projects were completed up to X Plan and 19 projects have been completed in XI Plan. Whereas, there are 39 ongoing ERM projects in XII Plan and 27 ERM new projects have been identified in XII Plan.

**AIBP Programme:**

Accelerated Irrigation Benefits Programme (AIBP) was launched during 1996-97 to provide Central Loan Assistance (CLA) to major/medium irrigation projects in the country with the objective to accelerate the implementation of those projects which were in advanced stage of completion. While selecting the projects, special emphasis was given to Pre-fifth and Fifth Plan projects. Priorities were also given to those projects which were benefiting Tribal and Drought Prone Areas. However, under the revised AIBP Guidelines from the year 1999-2000 onwards, CLA under AIBP could also be extended to minor surface irrigation projects of special category states (N.E. States & Hilly States of H. P., Sikkim, J&K, Uttaranchal and projects benefiting KBK districts of Orissa).

Total Central Assistance of Rs. 48562.329 Crores for Major and Medium irrigation (MMI) Projects to various States has been released till March 2013. 293 MMI projects have been benefitted by AIBP out of which 142 projects have been completed by various States up to March, 2013, 5 have been deferred and the remaining 146 are ongoing. The annual potential creation rate during the VII Plan and VIII Plan was 440 Th. ha. per year which increased to 820 Th. ha per year during the IX Plan and 1060 Th. ha. per year during X Plan after the introduction of AIBP. Further details have been provided in appendix table.

The Command Area Development (CAD) programme was started in 1974-75, as a centrally sponsored scheme to achieve speedy utilisation of irrigation potential created and also to improve productivity in selected irrigated commands. The important activities of this programme are development of field channels, land levelling, warabandi, and field drains etc. Land levelling has been discontinued since March 2004.

The cumulative achievement since inception of the programme shows 20.8 Mha field channels (till the end of March 2012) and 2.12 Mha field drains (upto March 2011) have been created. Analysing cumulative data for all the states, it is observed that the development of field channels up to March 2012 is the highest for Uttar Pradesh followed by Karnataka and Rajasthan. These States accounted for 50.4% of the total achievement under the programme. As regards Field drains under the programme, cumulative physical achievement upto March 2011 was 2.1 million hectare. Further details are available in appendix table.

At present, new AIBP guidelines for 12th Plan effective from October, 2013. More emphasis were given on the pari-passu implementation of Command Area Development (CAD) works for the potential utilization. The eligibility criteria for advanced stage of construction of new projects has been defined in terms of at least 50% of physical and financial progress on essential works like Head-Works, Earth Works, Land Acquisition, R&R etc.The central assistance in the form of central grant for new and ongoing projects which is;

(i) 90% central assistance(CA) of project cost(works Component) in case of special category States, and KBK region of Odissa

(ii) 75 % CA of project cost in Special Area i.e. Major/medium projects benefiting drought prone area, desert prone area, tribal area and flood prone area in non special category states and

(iii) 25% CA of project cost in case of Non-special category States except for (ii) above. Could be enhanced upto 50% for new projects subject to condition that the States actually carry out water sector reforms

The balance funds are to be arranged by the State Government from its own resources.

During a financial year, the sanctioned grant is released in two instalments.

(i) For projects receiving 25% CA: - 90 %(as Ist Install) after release of at least of 50% of State Share and balance 10% (IInd Install) after obtaining the UC of minimum of 50% of CA released earlier and

(ii) For projects receiving higher than 50 % CA: - 50% (Ist Install) after the State Releases its full Share and 50% (IInd Install) same as above.

**Table T17: Number of Major, Medium & ERM Irrigation Projects in India**

| Type of Project | Completed upto XI Plan | Spilled over Project in XII Plan | New Project in XII Plan |
|---|---|---|---|
| (1) | (2) | (3) | (4) |
| Major Projects | 295 | 149 | 27 |
| Medium Projects | 1018 | 138 | 32 |
| ERM Projects | 140 | 39 | 27 |
| Total | 1453 | 326 | 86 |

# Chapter 4

# Financial Performance

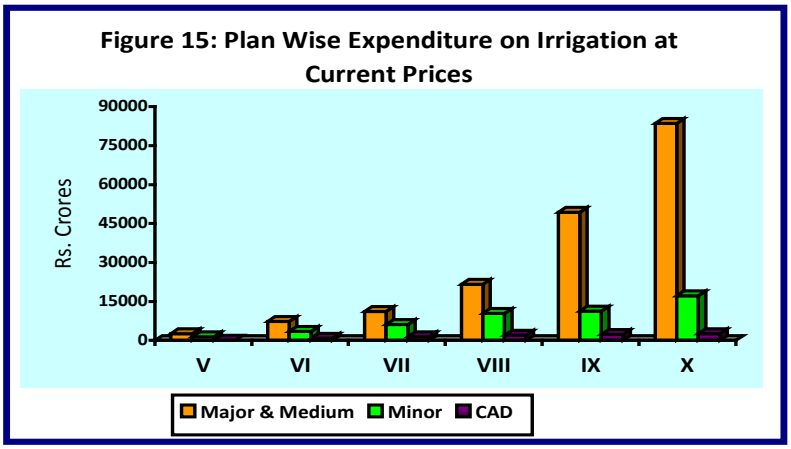
This chapter deals with the financial aspect of water and related sectors in the country.

**Financial Expenditure on Irrigation**

There has been a consistent increase in the annual average financial expenditure on irrigation sector over plan periods. But the expenditure has not matched with the growth of total plan expenditure on all sectors as is evident from the share of expenditure on irrigation to the total which declined from 23% in I Plan to about 7% in XI Plan.

**Table T19: Expenditure on Irrigation** **(Rs. Crores)**

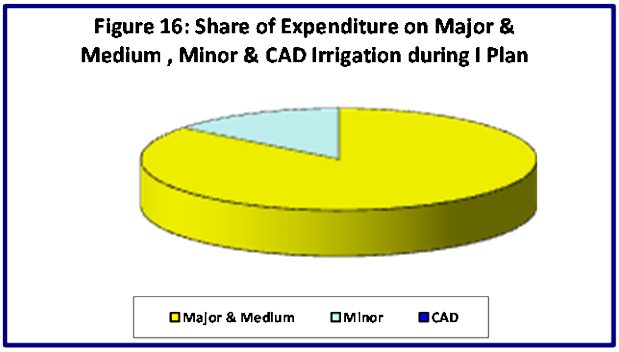
| Plan | Major & Medium | Minor | CAD | Total Expenditure on Irrigation | Total Plan Expenditure in All Sector | % of Expenditure on Irrigation to Total Plan Expenditure |
|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| I Plan | 376.2 | 65.6 | - | 441.8 | 1960 | 23 |
| X Plan | 83647.1 | 17181.8 | 2534.8 | 103363.7 | 1525639 | 7 |
| XI Plan | 174473.3 | 40665.1 | 4921.8 | 220060.2 | 2888654 | 7.6 |




At constant prices[9] (1993 - 94 = 100), the expenditure on irrigation sector is estimated to have increased from Rs. 6839.9 crores in 1st Plan to Rs. 55464.5 crores in the X Plan. It may be noted that the share of major & medium schemes is estimated to have declined from as high as 85% of the total expenditure in the irrigation sector in the I Plan to nearly 81% in the X Plan. This is apparently due to progressive emphasis on Minor Irrigation and Command Area Development Programmes in the subsequent years. Institutional assistance has also contributed

[9] All-India Wholesale Price Index Number (Base 1993-94=100) has been used as deflator.

quite significantly in the development of minor irrigation in the country as is evident from the increasing institutional support to minor irrigation schemes in terms of total financial expenditure over different Plans. However, the total institutional expenditure also decreased in X Plan as compared to that in the IX Plan.



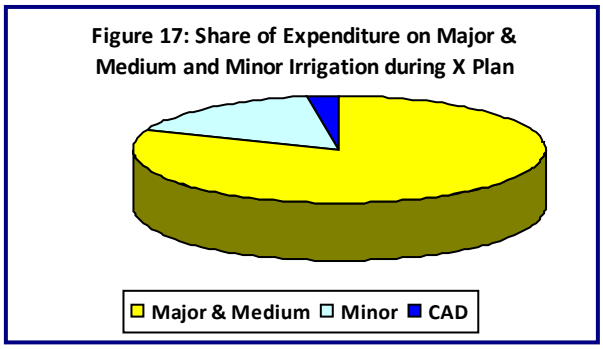




**Table T20: Share of Expenditure on Major & Medium, Minor and CAD at constant Prices**

| Plan | Major & Medium | Minor | CAD |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| I Plan | 85.15% | 14.85% | - |
| X Plan | 80.93% | 16.62% | 2.45% |

Of the total expenditure (estimated) on major & medium irrigation schemes, a large share of above 81% is estimated to be contributed by the states of Andhra Pradesh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, and Uttar Pradesh during X Plan. Of the total expenditure on minor irrigation under State Expenditure during X Plan, about 66% was incurred by the States of Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Karnataka, Madhya Pradesh and Maharashtra. Under institutional minor irrigation schemes a large share (83%) of the total expenditure during X Plan was contributed by states Andhra Pradesh, Bihar, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan and Uttar Pradesh.

**Table T21: Expenditure on Major, Medium and Minor Irrigation – Contribution of Selected States during X Plan**

**(Rs. Crores)**

| States | Major & medium | Minor State Sector | Minor Institutional |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| Andhra Pradesh | 20434.2 | 1742.2 | 277.8 |
| Gujarat | 10496.2 | 1638.6 | 148.7 |
| Karnataka | 16505.4 | 987.9 | 235.7 |
| Madhya Pradesh | 5429.3 | 1222.5 | 368.5 |
| Maharashtra | 10313.3 | 1560.3 | 277.6 |
| Uttar Pradesh | 4876.1 | 618.6 | 754.7 |

## Command Area Development Programme

Command Area Development (CAD) programme primarily aims at the speedy utilisation of irrigation potential created. It is a centrally sponsored scheme started during 1974-75. Central

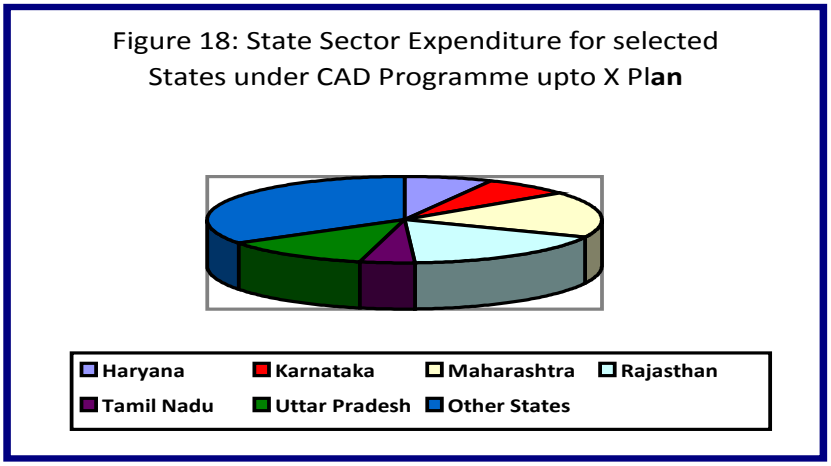
Government offers assistance to the State Governments for implementation of various activities like land leveling, field channel, warabandi etc. Beginning with the CAD share of 3.6% in V Plan of the combined expenditure on major & medium, minor and CAD programmes it decreased to 2.45% during X Plan.

As regards, expenditure under State sector of CAD programmes Haryana, Karnataka, Maharashtra, Rajasthan and Uttar Pradesh Constituted about 61% of the total State sector expenditure upto X Plan.

**Table T22: Expenditure for Selected States under Command Area Development Programme up to X Plan**

**(Rs. Crores)**

| State | Haryana | Karnataka | Maharashtra | Rajasthan | Tamil Nadu | Uttar Pradesh |
|---|---|---|---|---|---|---|
| **Expenditure: State Sector** | 452.51 | 451.85 | 1087.90 | 1092.45 | 276.20 | 767.55 |

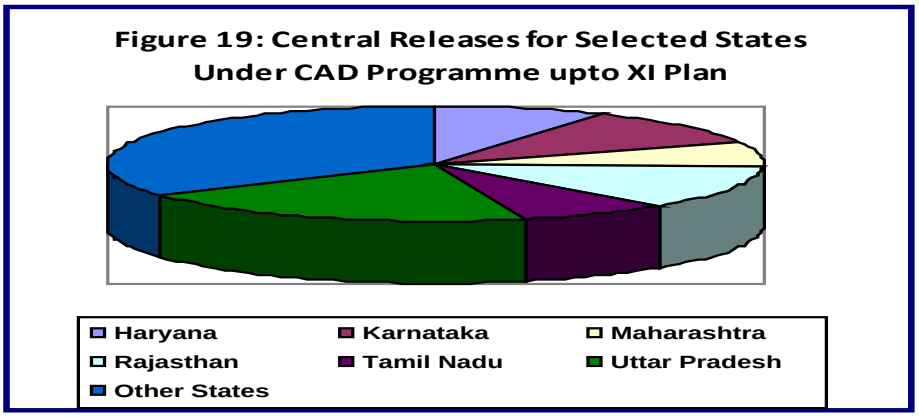



Haryana, Karnataka, Maharashtra, Rajasthan, Tamil Nadu & Uttar Pradesh are the major States accounting for about 66% of releases till XI Plan as under Central assistance to CAD programme.

**Table T23: Expenditure for Selected States under Command Area Development Programme up to X Plan**

**(Rs. Crores)**

| | Haryana | Karnataka | Maharashtra | Rajasthan | Tamil Nadu | Uttar Pradesh |
|---|---|---|---|---|---|---|
| **Central Releases** | 452.71 | 525.42 | 346.72 | 663.76 | 378.60 | 1056.25 |



Chapter 5

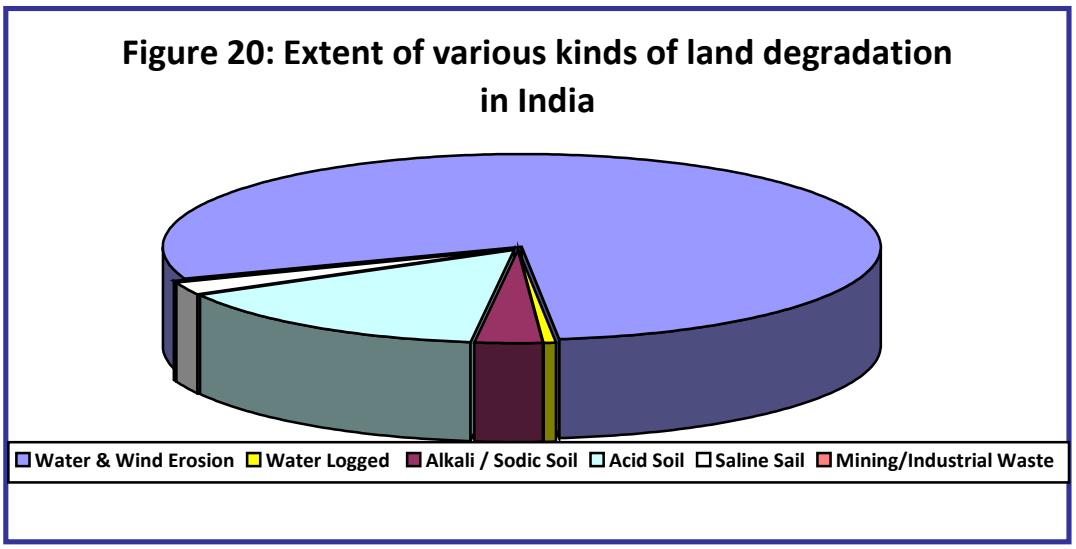
# Environmental Performance

This chapter presents information regarding environmental aspects of water resources development activities. It includes data on degraded land and their distribution according to various problems, flood damages, financial expenditure on flood protection works and physical benefit thereof, performance of flood forecasting network, financial and physical progress of drinking water supply schemes in rural areas.

**Table T24: Extent of various kinds of Land Degradation in India**

(Lakh ha)

| Water & Wind Erosion | Water Logged | Alkali / Sodic Soil | Acid Soil | Saline Soil | Mining / Industrial Waste | Total Degraded Area |
|---|---|---|---|---|---|---|
| 948.68 | 9.15 | 37.08 | 179.26 | 27.29 | 2.58 | 1204.04 |




## Land Resources and its Degradation[10]

As per the data available from the Ministry of Agriculture, a total of 120.40 Mha of land was estimated to be degraded in the country. Out of this, Madhya Pradesh and Chhattisgarh together accounted for 18.88 Mha while Uttar Pradesh and Uttarakhand together accounted for 15.84 Mha of degraded land. The extent of degraded land in Rajasthan, Maharashtra, Andhra Pradesh, and Karnataka was 20.43 Mha, 9.73 Mha, 9.19 Mha and 8.09Mha respectively. These eight States together accounted for about 68% of the total degraded land in the country. Cause-wise, water and wind erosion accounted for the major part (78.8%) of the total degraded land in the country, followed by soil acidity (14.9%) and alkali soil (3.1%). Thus, at all-India level the Water and Wind Erosion is the predominant cause for land degradation in the country.

[10] For further details please see website of Ministry of Agriculture (NRMD, DAC)

At State level also, except for Chhattisgarh, Kerala, Rajasthan and a few north-eastern states water erosion is the predominant cause for land degradation. Wind erosion is the main cause behind land degradation in Rajasthan and Gujarat whereas soil acidity is the main cause for land degradation in Kerala, Chhattisgarh, Assam, Arunachal Pradesh, Manipur, and Nagaland.

Land degradation affects availability of land for agricultural use and fertility of soil and has ultimate bearing on productivity and consequently on production. Land affected by special problems, erosion and other problems, therefore, needs immediate treatment in the light of rapid population growth and increasing demand for food grain production which is important for food security. In view of importance and gravity of the problem, the Ministries of Agriculture and Rural Development have taken up a number of programmes for treatment of degraded lands through various Watershed Development Programmes. A total of 219.73 lakh ha of land is reported to have been treated up to March 2012 in the country involving an expenditure of Rs.12244.98 crores through the schemes under M/o Agriculture while 356.40 lakh ha of area in the country is reported to have been treated up to March 2012 with an investment of Rs 15723.02 crores through the schemes under Ministry of Rural Development.

**Table T25: Progress of Watershed Development Programme upto XI Plan**

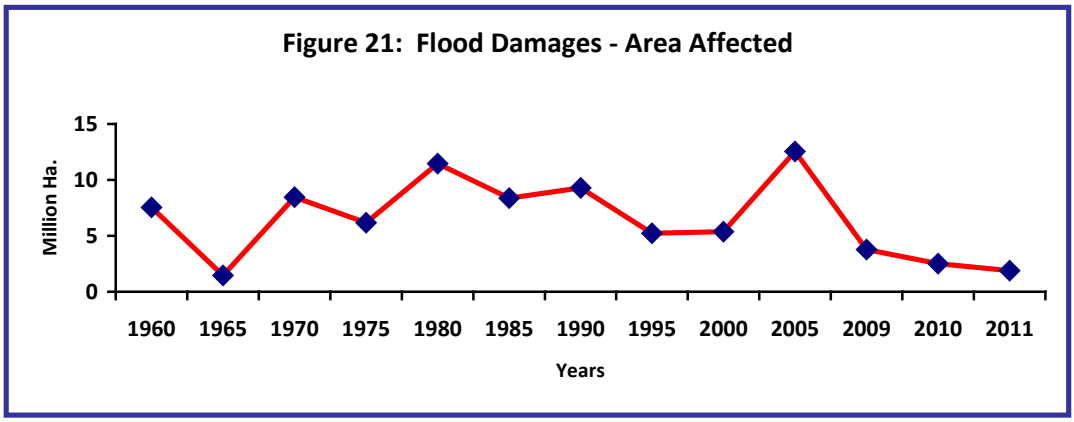
| | Area Developed (Lakh ha) | Expenditure (Rs. Crores) |
|---|---|---|
| **(A) Ministry of Agriculture** | 219.73 | 12244.98 |
| **(B) Ministry of Rural Development** | 356.40 | 15723.02 |
| **Total (A+B)** | 576.13 | 27968.00 |

## Flood

Flood is one of the most devastating natural calamities, which has been causing extensive damage to life and property besides perpetrating tremendous sufferings. Since flood is a natural phenomenon, it is usually difficult to predict a definite trend especially with regard to the time and place of its occurrence. As such, the effort usually is to take appropriate advance flood protection measures. The area affected by floods was 2.29 Mha in 1953 and 1.90 Mha in 2011 with a peak of 17.5 Mha during 1978. At current prices, the damage to crops was in the wide range of Rs. 5.87 crore in 1965 and Rs. 5880.7 crore in 2010. The floods also caused damage to crops worth Rs 1393.85 crore in 2011. In addition, there was a great loss of human lives and livestock often affecting the poor strata of the population. Taking into consideration the other factors such as serious disruption and massive health rehabilitation measures needed, the loss could indeed be tremendous. The total damage caused by floods is estimated to the tune of Rs.19490 crore during 2010. Orissa and Uttar Pradesh were worst effected in terms of public utilities, as per the information available for the States for 2011 (up to 31.12.11).

**Table T26: Flood Damages in India**

| Year | Area affected (Mha) | Population affected (Millions) | Damage to crops (Rs. Crores | Damage to houses (Rs. crores) | Damage to public utilities (Rs. crores) | Cattle lost Nos. ('000) | Human Life Lost (No.) | Total damages to crops, houses and public utilities (Rs. crores) |
|---|---|---|---|---|---|---|---|---|
| **2011** | 1.90 | 15.97 | 1393.85 | 410.48 | 6053.57 | 36 | 1761 | 7857.89 |
| **Maximum (Year)** | 17.50 (1978) | 70.45 (1978) | 7307.23 (2003) | 10809.80 (2009) | 17509.35 (2009) | 618 (1979) | 11316 (1977) | 32554.78 (2009) |




There has been a considerable increase in the governmental expenditure on flood management over the past years. It has gone up from Rs.13 crore during I Plan to Rs.4344 crore during X Plan and Rs 17,130 in XI plan. The central assistance in flood control work has risen from Rs. 453.7 crore in the IX plan to Rs.742.8 crore in X Plan and Rs 1194 crore in XI Plan.

**Table T27: Expenditure under Flood Management Work (Rs. crores)**

| | States & UT's | Centre | Total |
|---|---|---|---|
| **I Plan** | 13.2 | - | 13.2 |
| **V Plan** | 242.5 | 56.1 | 298.6 |
| **X Plan** | 3601.4 | 742.8 | 4344.2 |
| **XI Plan** | 15936.7 | 1193.5 | 17130.2 |

Among the states the maximum expenditure for flood management during X Plan is for Uttar Pradesh followed by Bihar and West Bengal. As far as the area benefited upto 2011 due to flood management work is concerned, Punjab ranks first followed by Bihar and West Bengal.

**Table T28: Expenditure on Flood Management Work for Selected States**

**(Rs. crores)**

| State | Expenditure (upto X Plan) |
|---|---|
| **West Bengal** | 1639.5 |
| **Bihar** | 1518.9 |
| **Uttar Pradesh** | 1404.6 |
| **Andhra Pradesh** | 932.0 |
| **Punjab** | 829.4 |
| **Haryana** | 643.1 |

Figure 22 : Expenditure on Flood Managment Work upto X Plan

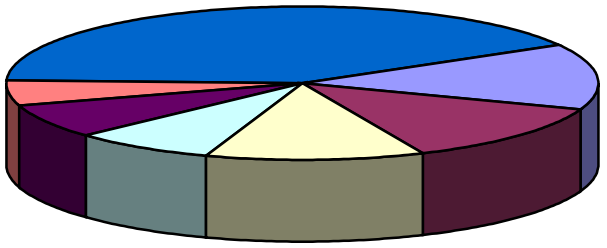


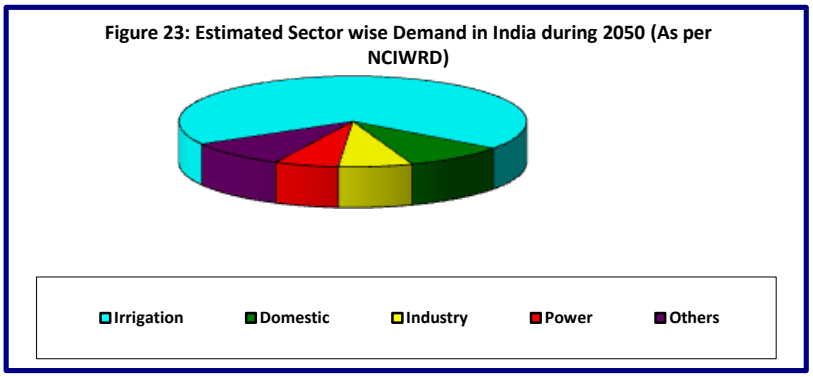

**Table : T29 Flood Forecasting Performance**

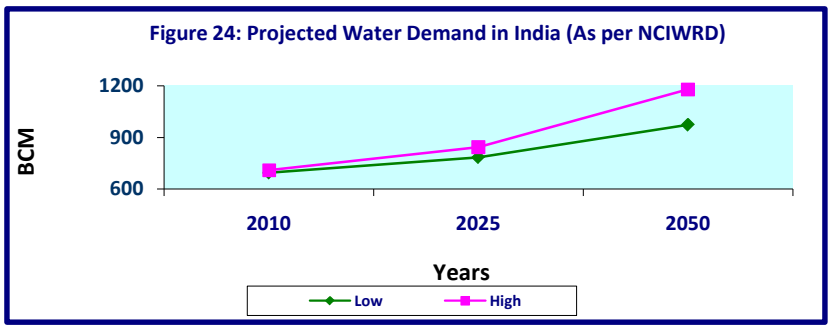
| Year | Total No. of Forecasts issued | Within +/-15 cm or +/-20% cumec of deviation from actual | Percentage of accuracy |
|---|---|---|---|
| 2000 | 6443 | 6251 | 97.02 |
| 2001 | 5463 | 5342 | 97.79 |
| 2002 | 4241 | 4151 | 97.88 |
| 2003 | 6600 | 6375 | 96.59 |
| 2004 | 4889 | 4696 | 96.05 |
| 2005 | 5618 | 5423 | 96.53 |
| 2006 | 6663 | 6377 | 95.71 |
| 2007 | 8223 | 7990 | 97.17 |
| 2008 | 6691 | 6554 | 97.95 |
| 2009 | 4010 | 3927 | 97.93 |
| 2010 | 7519 | 7378 | 98.12 |

Flood forecasting is one of the most important non-structural methods of flood control in which there has been significant contribution by CWC. Network performance for the flood season 2010 (7378 accurate forecasts out of 7519 issued) has been very successful 98.12% of forecasts were correct within +/-15 cms or +/- 20% cumecs. Over the years, the percentage of forecasts accuracy has been maintained at 96 to 97% and above apparently due to improvement in methodology and acquisition of latest technology.

## Water Requirement

The requirement of fresh water both for irrigation and other uses is growing continuously. The requirement of water for various sectors has been assessed by the National Commission on Integrated Water Resources Development(NCIWRD) in the year 2000.This requirement is based on the assumption that irrigation efficiency will increase to 60 % from the current level of 35 -40 %. The Standing Committee of MOWR also assesses it periodically. The total water demand for all the uses is likely to be 1180 BCM by 2050 as per NCIWRD. Though major share of this would be consumed for irrigation purposes, this in no way undermines importance of providing potable drinking water. In fact, it may be presumed that drinking water provision would have to be given an added thrust since the lack of such facility is likely to entail serious social, economic and health impact.




Different schemes and programmes are being implemented with the objective of providing access to safe drinking water in rural areas of the whole country. Data on status of coverage of rural habitations under the Rural Water Supply scheme as on April 2012 has been provided in Appendix.

Expenditure under Accelerated Rural Water Supply Programme[11] for supply of drinking water to rural areas during XI Plan was Rs.34636 crore out of which the maximum expenditure was by Rajasthan (Rs.4541 crore) followed by Uttar Pradesh (Rs 3587 crore) and Maharashtra (Rs.2869 crore).

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[11] For further details see website of Ministry of Drinking Water and Sanitation

**Table 1: Per Capita Average Annual Availability of Water in India during 2010, 2025 & 2050**

| Sl No. | River Basin | Average Annual Water Resources Potential (BCM)$ | Estimated Population (Million) # | | | Estimated per capita Average Annual Water Avaialability($M^3$) | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2010 | 2025 | 2050 | 2010 | 2025 | 2050 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | Indus (up to Border) | 73.3 | 57.69 | 69.2 | 81.41 | 1270.58 | 1059.25 | 900.38 |
| 2 | Ganga-Brahmputra-Meghna | | | | | | | |
| | a) Ganga | 525 | 494.47 | 593.04 | 697.69 | 1061.74 | 885.27 | 752.48 |
| | b) Brahmaputra | 537.2 | 40.07 | 48.06 | 56.54 | 13406.54 | 11177.69 | 9501.24 |
| | c)Barak & Others | 48.4 | 8.54 | 10.24 | 12.05 | 5667.45 | 4726.56 | 4016.59 |
| 3 | Godavari | 110.5 | 74.36 | 89.18 | 104.92 | 1486.01 | 1239.07 | 1053.18 |
| 4 | Krishna | 78.1 | 83.72 | 100.41 | 118.13 | 932.87 | 777.81 | 661.14 |
| 5 | Cauvery | 21.4 | 40.34 | 48.39 | 56.93 | 530.49 | 442.24 | 375.90 |
| 6 | Subernarekha | 12.4 | 12.94 | 15.52 | 18.26 | 958.27 | 798.97 | 679.08 |
| 7 | Brahamani & Baitarni | 28.5 | 13.49 | 16.18 | 19.04 | 2112.68 | 1761.43 | 1496.85 |
| 8 | Mahanadi | 66.9 | 36.63 | 43.93 | 51.68 | 1826.37 | 1522.88 | 1294.51 |
| 9 | Pennar | 6.3 | 13.36 | 16.02 | 18.85 | 471.56 | 393.26 | 334.22 |
| 10 | Mahi | 11 | 14.46 | 17.34 | 20.40 | 760.72 | 634.37 | 539.22 |
| 11 | Sabarmati | 3.8 | 14.46 | 17.34 | 20.40 | 262.79 | 219.15 | 186.27 |
| 12 | Narmada | 45.6 | 20.24 | 24.28 | 28.56 | 2252.96 | 1878.09 | 1596.64 |
| 13 | Tapi | 14.9 | 20.38 | 24.44 | 28.75 | 731.11 | 609.66 | 518.26 |
| 14 | West Flowing Rivers From Tapi to Tadri | 87.4 | 35.53 | 42.61 | 50.13 | 2459.89 | 2051.16 | 1743.47 |
| 15 | West Flowing Rivers From Tadri to Kanyakumari | 113.5 | 44.89 | 53.84 | 63.34 | 2528.40 | 2108.09 | 1791.92 |
| 16 | East Flowing Rivers Between Mahanadi & Pennar | 22.5 | 32.5 | 38.97 | 45.85 | 692.31 | 577.37 | 490.73 |
| 17 | East Flowing Rivers Between Pennar And Kanyakumari | 16.5 | 61.96 | 74.32 | 87.43 | 266.30 | 222.01 | 188.72 |
| 18 | West Flowing Rivers Of Kutch and Saurashtra including Luni | 15.1 | 30.43 | 36.5 | 42.94 | 496.22 | 413.69 | 351.65 |
| 19 | Area of Inland drainage in Rajasthan | Negl. | 9.78 | 11.73 | 13.79 | - | - | - |
| 20 | Minor River Draining into Myanmar( Burma) & Bangladesh | 31 | 2.07 | 2.48 | 2.91 | 14975.85 | 12500.00 | 10652.92 |
| | **TOTAL** | **1869.3** | **1162.31** | **1394.02** | **1640.00** | **1608.26** | **1340.94** | **1139.82** |

Source: B.P. Directorate, CWC.

$: Reassessment of Water Resources Potential of India March 1993, CWC.

#: Report of the Standing Sub-Committee for assesment of availability and requirement of water for diverse uses in the country, August 2000

**Table 2: Basin Wise Storage in India as on 31.03.2013**

| Basin Code as per WRIS | Basin Name | Average annual flow (BCM) | TOTAL LIVE STORAGE CAPACITY ( BCM) | | | |
|---|---|---|---|---|---|---|
| | | | Completed Projects | Under Construction Projects | Total | % of aveargae annual flow |
| 1 | 2 | | 3 | 4 | 5 | |
| 1 | Indus | 73.3 | 16.223 | 0.1002 | 16.323 | 22.3 |
| 2a | Ganga | 525.0 | 48.677 | 7.649 | 56.326 | 10.7 |
| 2b | Brahmaputra | 537.2 | 1.718 | 0.795 | 2.513 | 0.5 |
| 2c | Barak & Others | 48.4 | 0.719 | 9.172 | 9.891 | 20.4 |
| 3 | Godavari | 110.5 | 35.033 | 8.412 | 43.444 | 39.3 |
| 4 | Krishna | 78.1 | 50.651 | 4.156 | 54.807 | 70.2 |
| 5 | Cauvery | 21.4 | 9.083 | 0.015 | 9.098 | 42.5 |
| 6 | Subernarekha | 12.4 | 0.309 | 2.150 | 2.459 | 19.8 |
| 7 | Brahmani & Baitarni | 28.5 | 5.515 | 0.703 | 6.218 | 21.8 |
| 8 | Mahanadi | 66.9 | 13.006 | 1.461 | 14.467 | 21.6 |
| 9 | Pennar | 6.3 | 2.938 | 2.141 | 5.079 | 80.6 |
| 10 | Mahi | 11.0 | 5.017 | 0.150 | 5.167 | 47.0 |
| 11 | Sabarmati | 3.8 | 1.577 | 0.109 | 1.686 | 44.4 |
| 12 | Narmada | 45.6 | 17.622 | 6.835 | 24.457 | 53.6 |
| 13 | Tapi | 14.9 | 9.137 | 1.558 | 10.695 | 71.8 |
| 14 | WFR from Tapi to Tadri | 87.4 | 14.668 | 2.430 | 17.098 | 19.6 |
| 15 | WFR fom Tadri to Kanyakumari | 113.5 | 11.023 | 1.416 | 12.439 | 11.0 |
| 16 | EFR between Mahanandi and Pennar | 22.5 | 2.676 | 1.181 | 3.857 | 17.1 |
| 17 | EFR between Pennar and Kanyakumari | 16.5 | 1.441 | 0.015 | 1.456 | 8.8 |
| 18 | WFR of Saurashtra and Kutchh including Luni | 15.1 | 6.336 | 0.511 | 6.847 | 45.3 |
| 19 | Area of Inland Drainage of Rajasthan | - | 0.000 | 0.000 | 0.000 | |
| 20 | Minor River Draining into Myanmar and Bengladesh | 31.0 | 0.019 | 0.000 | 0.019 | 0.1 |
| 20a | Area of North Ladakh not draining into Indus | 0.00 | 0.000 | 0.000 | 0.000 | |
| | **TOTAL in BCM** | **1869.4** | **253.388** | **50.959** | **304.348** | **16.3** |

Source : Central Water Commission (WM Directorate)

**Table 3: Live Storage Capacity of Reservoirs in India as on 31.03.2013**

| Sl.No. | Name of State | TOTAL LIVE STORAGE CAPACITY ( BCM) | | |
|---|---|---|---|---|
| | | Completed Projects | Under Construction Projects | Total |
| 1 | 2 | 3 | 4 | 5 |
| 1 | ANDHRA PRADESH | 28.716 | 7.062 | 35.778 |
| 2 | ASSAM | 0.012 | 0.547 | 0.559 |
| 3 | ARUNACHAL PRADESH | 0.000 | 0.241 | 0.241 |
| 4 | BIHAR | 2.613 | 0.436 | 3.049 |
| 5 | CHHATTISGARH | 6.736 | 0.877 | 7.613 |
| 6 | GOA | 0.290 | 0.000 | 0.290 |
| 7 | GUJARAT | 18.359 | 8.175 | 26.534 |
| 8 | HIMACHAL PRADESH | 13.792 | 0.100 | 13.891 |
| 9 | JAMMU AND KASHMIR | 0.029 | .000 | 0.029 |
| 10 | JHARKHAND | 2.436 | 6.039 | 8.475 |
| 11 | KARNATAKA | 31.896 | 0.736 | 32.632 |
| 12 | KERALA | 9.768 | 1.264 | 11.032 |
| 13 | MADHYA PRADESH | 33.075 | 1.695 | 34.770 |
| 14 | MAHARASHTRA | 37.358 | 10.736 | 48.094 |
| 15 | MANIPUR | 0.407 | 8.509 | 8.916 |
| 16 | MEGHALAYA | 0.479 | 0.007 | 0.486 |
| 17 | MIZORAM | 0.000 | 0.663 | 0.663 |
| 18 | NAGALAND | 1.220 | 0.000 | 1.220 |
| 19 | ORISSA | 23.934 | 0.896 | 24.830 |
| 20 | PUNJAB | 2.402 | 0.00002 | 2.402 |
| 21 | RAJASTHAN | 9.708 | 0.443 | 10.152 |
| 22 | SIKKIM | 0.007 | 0.000 | 0.007 |
| 23 | TAMILNADU | 7.859 | 0.013 | 7.872 |
| 24 | TRIPURA | 0.312 | 0.000 | 0.312 |
| 25 | UTTARAKHAND | 5.670 | 1.613 | 7.283 |
| 26 | UTTAR PARDESH | 14.263 | 0.724 | 14.987 |
| 27 | WEST BENGAL | 2.027 | 0.184 | 2.212 |
| 28 | ANDAMAN & NICOBAR ISLAND | 0.019 | 0.000 | 0.019 |
| | **TOTAL in BCM** | **253.388** | **50.959** | **304.348** |

Source : 1. Central Water Commission (WM Directorate)

Note : BCM: BILLION CUBIC METRE

# Table 4(A): Storage Position of Important Reservoirs of India at the end of each month during June 2010 to May 2011

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | June 2010 | | | July 2010 | | | August 2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1* | SRISAILAM | (AP ) | 8.288 | 246.28 | 1.34 | 89 | 256.73 | 3.085 | 106 | 269.7 | 8.262 | 144 |
| 2* | NAGARJUNA SAGAR | (AP ) | 6.841 | 158.8 | 1.75 | 117 | 158.56 | 1.701 | 92 | 175.69 | 5.667 | 166 |
| 3 | SRIRAMSAGAR | (AP ) | 2.3 | 318.94 | 0.129 | 33 | 327.69 | 1.131 | 549 | 332.35 | 1.591 | 164 |
| 4 | SOMASILA | (AP ) | 1.994 | 90.61 | 0.543 | 253 | 92.15 | 0.694 | 371 | 95.06 | 1.031 | 358 |
| 5 | LOWER MANAIR | (AP ) | 0.621 | 266.84 | 0.062 | 43 | 267 | 0.064 | 44 | 278.71 | 0.551 | 233 |
| 6 | TENUGHAT | (JHA) | 0.821 | 257.01 | 0.225 | 90 | 258.62 | 0.285 | 96 | 259.95 | 0.339 | 106 |
| 7 | MAITHON | (JHA) | 0.471 | 136.54 | 0.062 | 38 | 138.31 | 0.134 | 49 | 143.42 | 0.291 | 74 |
| 8* | PANCHET HILL | (JHA) | 0.184 | 120.8 | 0.03 | 47 | 122.81 | 0.09 | 76 | 122.62 | 0.083 | 49 |
| 9 | KONAR | (JHA) | 0.176 | 417.91 | 0.058 | 322 | 417.91 | 0.058 | 66 | 419.28 | 0.074 | 60 |
| 10 | TILAIYA | (JHA) | 0.142 | 364.11 | 0.012 | 50 | 364.33 | 0.016 | 28 | 364.62 | 0.021 | 26 |
| 11* | UKAI | (GUJ) | 6.615 | 87.27 | 0.616 | 49 | 93.1 | 1.688 | 66 | 102.17 | 5.061 | 118 |
| 12 | SABARMATI(DHAROI) | (GUJ) | 0.735 | 176.59 | 0.013 | 14 | 179.3 | 0.079 | 42 | 184 | 0.281 | 97 |
| 13* | KADANA | (GUJ) | 1.472 | 120.32 | 0.552 | 120 | 119.71 | 0.512 | 83 | 121.72 | 0.651 | 92 |
| 14 | SHETRUNJI | (GUJ) | 0.3 | 47.42 | 0.016 | 22 | 52.87 | 0.133 | 88 | 54.62 | 0.232 | 132 |
| 15 | BHADAR | (GUJ) | 0.188 | 100.22 | 0.01 | 25 | 105.12 | 0.09 | 107 | 107.81 | 0.185 | 175 |
| 16 | DAMANGANGA | (GUJ) | 0.502 | 66.45 | 0.086 | 75 | 70.1 | 0.166 | 97 | 75.2 | 0.315 | 96 |
| 17 | DANTIWADA | (GUJ) | 0.399 | 162.06 | 0 | 0 | 164.21 | 0.007 | 17 | 171.3 | 0.063 | 64 |
| 18 | PANAM | (GUJ) | 0.697 | 107.45 | 0.014 | 8 | 110.15 | 0.05 | 18 | 118.35 | 0.226 | 59 |
| 19* | GOBIND SAGAR(BHAKRA) | (HP ) | 6.229 | 464.09 | 0.805 | 48 | 491.35 | 3.069 | 99 | 511.06 | 5.799 | 124 |
| 20* | PONG DAM(BEAS) | (HP ) | 6.157 | 390.38 | 0.417 | 47 | 401.1 | 1.588 | 73 | 421.55 | 5.416 | 141 |
| 21 | KRISHNARAJA SAGARA | (KAR) | 1.163 | 739.92 | 0.115 | 57 | 744.63 | 0.387 | 56 | 748.83 | 0.742 | 78 |
| 22* | TUNGABHADRA | (KAR) | 3.276 | 484.97 | 0.317 | 72 | 493.15 | 1.51 | 71 | 497.7 | 2.94 | 103 |

Contd...

# Table 4(A): Storage Position of Important Reservoirs of India at the end of each month during June 2010 to May 2011

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | June 2010 | | | July 2010 | | | August 2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 23 | GHATAPRABHA(HIDKAL) | (KAR) | 1.391 | 638.61 | 0.174 | 84 | 653.96 | 0.8 | 88 | 661.49 | 1.282 | 102 |
| 24 | BHADRA | (KAR) | 1.785 | 647.26 | 0.767 | 168 | 650.44 | 1.025 | 94 | 654.53 | 1.426 | 95 |
| 25 | LINGANAMAKKI | (KAR) | 4.294 | 535.51 | 0.595 | 74 | 543.77 | 1.775 | 80 | 547.49 | 2.682 | 81 |
| 26 | NARAYANPUR | (KAR) | 0.863 | 488 | 0.391 | 86 | 489.04 | 0.491 | 74 | 491.35 | 0.748 | 96 |
| 27 | MALAPRABHA(RENUKA) | (KAR) | 0.972 | 624.62 | 0.174 | 249 | 627.82 | 0.386 | 110 | 630.36 | 0.581 | 99 |
| 28 | KABINI | (KAR) | 0.275 | 691.47 | 0.034 | 31 | 695.43 | 0.232 | 103 | 695.08 | 0.214 | 94 |
| 29 | HEMAVATHY | (KAR) | 0.927 | 876.22 | 0.094 | 52 | 883.71 | 0.422 | 67 | 886.83 | 0.622 | 82 |
| 30 | HARANGI | (KAR) | 0.22 | 858.91 | 0.049 | 77 | 870.15 | 0.18 | 90 | 871.32 | 0.216 | 100 |
| 31 | SUPA | (KAR) | 4.12 | 520.74 | 0.626 | 88 | 533 | 1.307 | 86 | 542.19 | 1.923 | 79 |
| 32 | VANI VILAS SAGAR | (KAR) | 0.802 | 636.94 | 0.093 | 60 | 636.2 | 0.089 | 59 | 637.53 | 0.106 | 70 |
| 33* | ALMATTI | (KAR) | 3.105 | 514 | 1.079 | 179 | 518.93 | 2.728 | 119 | 519.56 | 3.071 | 107 |
| 34* | GERUSOPPA | (KAR) | 0.13 | 49.6 | 0.1 | 91 | 53.22 | 0.119 | 106 | 54.29 | 0.126 | 113 |
| 35 | KALLADA(PARAPPAR) | (KRL) | 0.507 | 98.42 | 0.17 | 108 | 107.75 | 0.318 | 128 | 111.02 | 0.403 | 124 |
| 36* | IDAMALAYAR | (KRL) | 1.018 | 132.3 | 0.18 | 77 | 144.75 | 0.402 | 80 | 152.2 | 0.59 | 84 |
| 37* | IDUKKI | (KRL) | 1.46 | 708.2 | 0.37 | 132 | 714.57 | 0.64 | 111 | 720.91 | 0.866 | 105 |
| 38* | KAKKI | (KRL) | 0.447 | 951.3 | 0.118 | 110 | 965.89 | 0.234 | 109 | 972.05 | 0.305 | 102 |
| 39* | PERIYAR | (KRL) | 0.173 | 860.76 | 0.051 | 78 | 862.81 | 0.087 | 93 | 961.83 | 0.069 | 77 |
| 40* | GANDHI SAGAR | (MP ) | 6.827 | 381.18 | 0.023 | 9 | 381.02 | 0 | 0 | 384.51 | 0.535 | 26 |
| 41 | TAWA | (MP ) | 1.944 | 346.83 | 0.804 | 181 | 350.89 | 1.279 | 118 | 355.18 | 1.944 | 111 |
| 42* | BARGI | (MP ) | 3.18 | 404.25 | 0.134 | 56 | 410.45 | 0.729 | 64 | 418.75 | 2.115 | 91 |
| 43* | BANSAGAR | (MP ) | 5.166 | 324.35 | 0.148 | 166 | 327.59 | 0.653 | 165 | 330.75 | 1.345 | 126 |
| 44* | INDIRA SAGAR | (MP ) | 9.745 | 244.17 | 0.276 | 484 | 245.28 | 0.539 | 42 | 254.48 | 4.09 | 128 |

Contd...

## Table 4(A): Storage Position of Important Reservoirs of India at the end of each month during June 2010 to May 2011

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | June 2010 | | | July 2010 | | | August 2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 45* | MINIMATA BANGO | (CHH) | 3.046 | 343.9 | 0.832 | 80 | 348.25 | 1.314 | 88 | 349.04 | 1.411 | 69 |
| 46 | MAHANADI | (CHH) | 0.767 | 339.94 | 0.15 | 41 | 342.22 | 0.272 | 53 | 347.92 | 0.693 | 114 |
| 47 | JAYAKWADI(PAITHAN) | (MAH) | 2.171 | 455.63 | 0.011 | 3 | 456.76 | 0.201 | 31 | 459.13 | 0.681 | 60 |
| 48* | KOYANA | (MAH) | 2.652 | 634.95 | 0.808 | 95 | 649.53 | 1.865 | 96 | 657.07 | 2.553 | 101 |
| 49 | BHIMA(UJJANI) | (MAH) | 1.517 | 492.73 | 0.363 | 141 | 493.89 | 0.647 | 200 | 495.7 | 1.156 | 128 |
| 50 | ISAPUR | (MAH) | 0.965 | 424.51 | -0.05 | -20 | 435.05 | 0.454 | 129 | 440.61 | 0.927 | 172 |
| 51 | MULA | (MAH) | 0.609 | 536.14 | 0.04 | 73 | 541.93 | 0.182 | 66 | 547.3 | 0.371 | 85 |
| 52 | YELDARI | (MAH) | 0.809 | 445.57 | -0.031 | -41 | 452.68 | 0.16 | 129 | 461.61 | 0.793 | 274 |
| 53 | GIRNA | (MAH) | 0.524 | 383.74 | 0.035 | 70 | 384 | 0.04 | 30 | 387.3 | 0.119 | 47 |
| 54 | KHADAKVASLA | (MAH) | 0.056 | 578.51 | 0.011 | 73 | 582.47 | 0.056 | 193 | 581 | 0.037 | 95 |
| 55* | UPPER VAITARNA | (MAH) | 0.331 | 593.57 | 0.069 | 64 | 597.93 | 0.163 | 75 | 601.58 | 0.269 | 91 |
| 56 | UPPER TAPI | (MAH) | 0.255 | 210.94 | 0.099 | 413 | 211.55 | 0.127 | 235 | 212.3 | 0.162 | 91 |
| 57* | PENCH(TOTLADOH) | (MAH) | 1.091 | 467.5 | 0.054 | 68 | 473.3 | 0.193 | 60 | 484.7 | 0.879 | 150 |
| 58* | HIRAKUD | (ORI) | 5.378 | 181.55 | 0.462 | 75 | 185.38 | 1.782 | 105 | 187.46 | 2.811 | 70 |
| 59* | BALIMELA | (ORI) | 2.676 | 440.65 | 0.122 | 145 | 444.06 | 0.382 | 127 | 450.43 | 0.994 | 115 |
| 60 | SALANADI | (ORI) | 0.558 | 63.25 | 0.089 | 54 | 60.3 | 0.063 | 30 | 57.7 | 0.036 | 12 |
| 61* | RENGALI | (ORI) | 3.432 | 109.81 | 0.016 | 6 | 111.01 | 0.201 | 18 | 113.98 | 0.74 | 32 |
| 62* | MACHKUND(JALAPUT) | (ORI) | 0.893 | 817.96 | -0.006 | -2 | 825.85 | 0.175 | 48 | 831.89 | 0.442 | 79 |
| 63* | UPPER KOLAB | (ORI) | 0.935 | 844.68 | 0.022 | 17 | 848.75 | 0.216 | 79 | 852.21 | 0.442 | 95 |
| 64* | UPPER INDRAVATI | (ORI) | 1.456 | 625.43 | 0.029 | 11 | 629.2 | 0.281 | 47 | 633.78 | 0.646 | 59 |
| 65* | THEIN DAM | (PUN) | 2.344 | 500.91 | 0.666 | 86 | 510.91 | 1.166 | 122 | 522.24 | 1.899 | 159 |
| 66* | MAHI BAJAJ SAGAR | (RAJ) | 1.711 | 261 | 0.077 | 37 | 261.5 | 0.098 | 15 | 269.6 | 0.563 | 55 |

Contd...

## Table 4(A): Storage Position of Important Reservoirs of India at the end of each month during June 2010 to May 2011

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | June 2010 | | | July 2010 | | | August 2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 67 | JHAKAM | (RAJ) | 0.132 | 336.65 | 0.008 | 50 | 336.65 | 0.008 | 17 | 345.7 | 0.033 | 41 |
| 68* | RANA PRATAP SAGAR | (RAJ) | 1.436 | 345.76 | 0.26 | 50 | 346.97 | 0.392 | 59 | 348.42 | 0.644 | 67 |
| 69 | LOWER BHAWANI | (TN ) | 0.792 | 269.65 | 0.306 | 97 | 270.43 | 0.3 | 68 | 272.01 | 0.407 | 82 |
| 70* | METTUR(STANLEY) | (TN ) | 2.647 | 228.7 | 1.197 | 127 | 229.02 | 1.227 | 107 | 230.72 | 1.393 | 92 |
| 71 | VAIGAI | (TN ) | 0.172 | 264.51 | 0.004 | 9 | 269.84 | 0.027 | 50 | 273.99 | 0.072 | 104 |
| 72 | PARAMBIKULAM | (TN ) | 0.38 | 539.97 | 0.078 | 79 | 545.35 | 0.167 | 80 | 549.63 | 0.246 | 88 |
| 73 | ALIYAR | (TN ) | 0.095 | 312.95 | 0.052 | 226 | 315.56 | 0.067 | 146 | 319.16 | 0.09 | 132 |
| 74* | SHOLAYAR | (TN ) | 0.143 | 972.85 | 0.03 | 63 | 990.33 | 0.086 | 83 | 994.62 | 0.104 | 85 |
| 75 | GUMTI | (TRP) | 0.312 | 88.6 | 0.111 | 88 | 89 | 0.117 | 69 | 90.1 | 0.162 | 81 |
| 76 | MATATILA | (UP ) | 0.707 | 305.38 | 0.409 | 254 | 306.45 | 0.502 | 170 | 307.45 | 0.604 | 111 |
| 77* | RIHAND | (UP ) | 5.649 | 253.69 | 0.184 | 43 | 255.82 | 0.794 | 62 | 256.86 | 1.106 | 46 |
| 78* | RAMGANGA | (UKH) | 2.196 | 319.4 | 0.053 | 23 | 332.56 | 0.431 | 88 | 352.99 | 1.343 | 148 |
| 79* | TEHRI | (UKH) | 2.615 | 742.8 | 0.043 | 21 | 782.7 | 0.966 | 121 | 821.2 | 2.254 | 153 |
| 80 | MAYURAKSHI | (WB ) | 0.48 | 111.12 | 0.074 | 68 | 112.59 | 0.108 | 45 | 112.53 | 0.107 | 44 |
| 81 | KANGSABATI | (WB ) | 0.914 | 121.92 | 0.013 | 10 | 122.16 | 0.022 | 7 | 123.78 | 0.082 | 19 |
| | Total Storage | | 151.768 | | 20.312 | | | 46.224 | | | 92.351 | |
| | Percentage | | | | 13 | | | 30 | | | 61 | |

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## Table 4(A): Storage Position of Important Reservoirs of India at the end of each month During June 2010 to May 2011

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Sept-2010 | | | Oct-2010 | | | Nov-2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent - age of normal storage | Level (m) | Live Storage BCM | Percent - age of normal storage | Level (m) | Live Storage BCM | Percent - age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1* | SRISAILAM | (AP ) | 8.288 | 269.65 | 8.239 | 126 | 269.6 | 8.204 | 122 | 269.55 | 8.175 | 134 |
| 2* | NAGARJUNA SAGAR | (AP ) | 6.841 | 178.73 | 6.524 | 174 | 179.56 | 6.763 | 147 | 179.19 | 6.841 | 188 |
| 3 | SRIRAMSAGAR | (AP ) | 2.3 | 332.54 | 1.684 | 119 | 332.54 | 2.3 | 175 | 332.54 | 2.3 | 265 |
| 4 | SOMASILA | (AP ) | 1.994 | 97.26 | 1.352 | 257 | 97.48 | 1.387 | 150 | 99.9 | 1.854 | 190 |
| 5 | LOWER MANAIR | (AP ) | 0.621 | 280.42 | 0.621 | 209 | 280.42 | 0.621 | 188 | 280.42 | 0.621 | 176 |
| 6 | TENUGHAT | (JHA) | 0.821 | 259.89 | 0.337 | 103 | 260.24 | 0.354 | 108 | 259.7 | 0.329 | 101 |
| 7 | MAITHON | (JHA) | 0.471 | 146.64 | 0.459 | 99 | 145.67 | 0.404 | 88 | 145.08 | 0.373 | 81 |
| 8* | PANCHET HILL | (JHA) | 0.184 | 125.83 | 0.184 | 105 | 122.98 | 0.097 | 56 | 123.26 | 0.107 | 60 |
| 9 | KONAR | (JHA) | 0.176 | 420.35 | 0.088 | 56 | 420.02 | 0.084 | 54 | 419.65 | 0.078 | 55 |
| 10 | TILAIYA | (JHA) | 0.142 | 364.83 | 0.026 | 23 | 364.97 | 0.028 | 25 | 364.88 | 0.027 | 28 |
| 11* | UKAI | (GUJ) | 6.615 | 103.59 | 5.814 | 114 | 103.05 | 5.529 | 115 | 102.88 | 5.438 | 124 |
| 12 | SABARMATI(DHAROI) | (GUJ) | 0.735 | 186.68 | 0.467 | 136 | 186.49 | 0.452 | 137 | 186.08 | 0.421 | 149 |
| 13* | KADANA | (GUJ) | 1.472 | 125.71 | 0.989 | 115 | 123.01 | 0.755 | 93 | 123.14 | 0.765 | 96 |
| 14 | SHETRUNJI | (GUJ) | 0.3 | 55.53 | 0.3 | 162 | 55.53 | 0.3 | 169 | 57.42 | 0.291 | 181 |
| 15 | BHADAR | (GUJ) | 0.188 | 107.9 | 0.188 | 158 | 107.77 | 0.184 | 161 | 107.59 | 0.175 | 184 |
| 16 | DAMANGANGA | (GUJ) | 0.502 | 79.65 | 0.493 | 109 | 79.9 | 0.502 | 105 | 79.9 | 0.502 | 111 |
| 17 | DANTIWADA | (GUJ) | 0.399 | 173.23 | 0.093 | 84 | 172.44 | 0.08 | 79 | 170.81 | 0.057 | 73 |
| 18 | PANAM | (GUJ) | 0.697 | 123.6 | 0.448 | 109 | 123.05 | 0.42 | 107 | 122.8 | 0.407 | 110 |
| 19* | GOBIND SAGAR(BHAKRA) | (HP ) | 6.229 | 512.27 | 5.992 | 119 | 511.78 | 5.913 | 127 | 509.29 | 5.524 | 136 |
| 20* | PONG DAM(BEAS) | (HP ) | 6.157 | 424.59 | 6.15 | 145 | 423.1 | 5.78 | 154 | 420.23 | 5.102 | 163 |
| 21 | KRISHNARAJA SAGARA | (KAR) | 1.163 | 751.14 | 0.994 | 110 | 752.44 | 1.155 | 124 | 752.5 | 1.163 | 146 |
| 22* | TUNGABHADRA | (KAR) | 3.276 | 497.74 | 2.955 | 107 | 797.57 | 2.893 | 111 | 497.74 | 2.955 | 142 |

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## Table 4(A): Storage Position of Important Reservoirs of India at the end of each month During June 2010 to May 2011

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Sept-2010 | | | Oct-2010 | | | Nov-2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent - age of normal storage | Level (m) | Live Storage BCM | Percent - age of normal storage | Level (m) | Live Storage BCM | Percent - age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 23 | GHATAPRABHA(HIDKAL) | (KAR) | 1.391 | 662.95 | 1.387 | 110 | 662.95 | 1.387 | 116 | 661.87 | 1.316 | 142 |
| 24 | BHADRA | (KAR) | 1.785 | 657.27 | 1.729 | 117 | 657.58 | 1.764 | 124 | 657.58 | 1.77 | 133 |
| 25 | LINGANAMAKKI | (KAR) | 4.294 | 552 | 3.572 | 104 | 552.61 | 3.749 | 113 | 552.96 | 3.846 | 128 |
| 26 | NARAYANPUR | (KAR) | 0.863 | 491.72 | 0.795 | 103 | 491.92 | 0.822 | 109 | 491.55 | 0.773 | 99 |
| 27 | MALAPRABHA(RENUKA) | (KAR) | 0.972 | 631.82 | 0.729 | 117 | 631.9 | 0.738 | 118 | 632.1 | 0.76 | 156 |
| 28 | KABINI | (KAR) | 0.275 | 694.18 | 0.165 | 82 | 693.06 | 0.108 | 53 | 694.3 | 0.171 | 130 |
| 29 | HEMAVATHY | (KAR) | 0.927 | 888.8 | 0.769 | 110 | 888.49 | 0.745 | 118 | 890.47 | 0.913 | 202 |
| 30 | HARANGI | (KAR) | 0.22 | 871.2 | 0.212 | 113 | 869.36 | 0.161 | 119 | 868.91 | 0.151 | 256 |
| 31 | SUPA | (KAR) | 4.12 | 547.86 | 2.305 | 88 | 548.39 | 2.442 | 95 | 548.28 | 2.431 | 103 |
| 32 | VANI VILAS SAGAR | (KAR) | 0.802 | 639.15 | 0.145 | 83 | 641.79 | 0.221 | 97 | 647.77 | 0.427 | 187 |
| 33* | ALMATTI | (KAR) | 3.105 | 519.6 | 3.051 | 102 | 519.6 | 3.051 | 106 | 519.6 | 3.051 | 129 |
| 34* | GERUSOPPA | (KAR) | 0.13 | 51.04 | 0.107 | 92 | 51 | 0.107 | 90 | 50.69 | 0.106 | 91 |
| 35 | KALLADA(PARAPPAR) | (KRL) | 0.507 | 112.63 | 0.415 | 113 | 115.81 | 0.488 | 118 | 116.08 | 0.493 | 118 |
| 36* | IDAMALAYAR | (KRL) | 1.018 | 157.56 | 0.694 | 92 | 161.64 | 0.807 | 106 | 162.76 | 0.838 | 116 |
| 37* | IDUKKI | (KRL) | 1.46 | 724.44 | 1.03 | 111 | 727.87 | 1.209 | 123 | 729.62 | 1.304 | 133 |
| 38* | KAKKI | (KRL) | 0.447 | 974.22 | 0.333 | 102 | 976.35 | 0.362 | 103 | 978.63 | 0.397 | 111 |
| 39* | PERIYAR | (KRL) | 0.173 | 861.31 | 0.061 | 73 | 861.47 | 0.063 | 62 | 865.52 | 0.14 | 124 |
| 40* | GANDHI SAGAR | (MP ) | 6.827 | 386.8 | 1.032 | 47 | 386.51 | 0.959 | 47 | 384.37 | 0.509 | 32 |
| 41 | TAWA | (MP ) | 1.944 | 355.4 | 1.944 | 108 | 355.09 | 1.944 | 109 | 353.84 | 1.746 | 117 |
| 42* | BARGI | (MP ) | 3.18 | 422.7 | 3.175 | 115 | 422.15 | 3.045 | 118 | 421.5 | 2.87 | 133 |
| 43* | BANSAGAR | (MP ) | 5.166 | 334.02 | 2.217 | 177 | 332.8 | 1.861 | 186 | 332.28 | 1.709 | 213 |
| 44* | INDIRA SAGAR | (MP ) | 9.745 | 259.65 | 7.548 | 177 | 259.11 | 7.118 | 182 | 258.46 | 6.624 | 213 |

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## Table 4(A): Storage Position of Important Reservoirs of India at the end of each month During June 2010 to May 2011

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Sept-2010 | | | Oct-2010 | | | Nov-2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 45* | MINIMATA BANGO | (CHH) | 3.046 | 351.68 | 1.73 | 79 | 348.88 | 1.393 | 66 | 348.54 | 1.352 | 72 |
| 46 | MAHANADI | (CHH) | 0.767 | 348.49 | 0.747 | 131 | 348.7 | 0.767 | 157 | 348.71 | 0.767 | 155 |
| 47 | JAYAKWADI(PAITHAN) | (MAH) | 2.171 | 461.2 | 1.238 | 92 | 461.39 | 1.295 | 95 | 461.89 | 1.448 | 118 |
| 48* | KOYANA | (MAH) | 2.652 | 659.44 | 2.652 | 103 | 659.33 | 2.652 | 107 | 659.18 | 2.652 | 117 |
| 49 | BHIMA(UJJANI) | (MAH) | 1.517 | 496.83 | 1.517 | 152 | 496.83 | 1.517 | 142 | 496.83 | 1.517 | 153 |
| 50 | ISAPUR | (MAH) | 0.965 | 440.99 | 0.963 | 162 | 441 | 0.964 | 156 | 441 | 0.964 | 168 |
| 51 | MULA | (MAH) | 0.609 | 551.03 | 0.543 | 112 | 551.66 | 0.575 | 115 | 552.3 | 0.609 | 131 |
| 52 | YELDARI | (MAH) | 0.809 | 461.77 | 0.809 | 206 | 461.77 | 0.809 | 184 | 461.77 | 0.809 | 207 |
| 53 | GIRNA | (MAH) | 0.524 | 388.86 | 0.163 | 52 | 389.15 | 0.171 | 54 | 389.4 | 0.178 | 62 |
| 54 | KHADAKVASLA | (MAH) | 0.056 | 581.13 | 0.038 | 97 | 579.52 | 0.02 | 71 | 579.7 | 0.022 | 79 |
| 55* | UPPER VAITARNA | (MAH) | 0.331 | 603.5 | 0.331 | 107 | 603.5 | 0.331 | 107 | 603.5 | 0.331 | 110 |
| 56 | UPPER TAPI | (MAH) | 0.255 | 213.99 | 0.254 | 109 | 214 | 0.255 | 101 | 214 | 0.255 | 105 |
| 57* | PENCH(TOTLADOH) | (MAH) | 1.091 | 489.6 | 1.017 | 151 | 488.13 | 0.911 | 161 | 487.39 | 0.861 | 191 |
| 58* | HIRAKUD | (ORI) | 5.378 | 192.02 | 5.377 | 111 | 191.61 | 5.149 | 109 | 191.87 | 5.292 | 120 |
| 59* | BALIMELA | (ORI) | 2.676 | 458.14 | 1.985 | 169 | 458.73 | 2.066 | 153 | 459.94 | 2.272 | 175 |
| 60 | SALANADI | (ORI) | 0.558 | 65.68 | 0.126 | 33 | 62.39 | 0.078 | 24 | 60.05 | 0.058 | 18 |
| 61* | RENGALI | (ORI) | 3.432 | 118.21 | 1.726 | 59 | 118.57 | 1.832 | 65 | 118.52 | 1.835 | 79 |
| 62* | MACHKUND(JALAPUT) | (ORI) | 0.893 | 836.52 | 0.758 | 110 | 836.8 | 0.769 | 106 | 837.85 | 0.861 | 130 |
| 63* | UPPER KOLAB | (ORI) | 0.935 | 855.61 | 0.709 | 124 | 855.88 | 0.734 | 124 | 856.09 | 0.755 | 137 |
| 64* | UPPER INDRAVATI | (ORI) | 1.456 | 638.45 | 1.082 | 87 | 639.42 | 1.177 | 99 | 639.4 | 1.175 | 108 |
| 65* | THEIN DAM | (PUN) | 2.344 | 524 | 2.039 | 166 | 521.23 | 1.818 | 166 | 518.86 | 1.651 | 171 |
| 66* | MAHI BAJAJ SAGAR | (RAJ) | 1.711 | 274.35 | 0.986 | 84 | 274.15 | 0.965 | 83 | 272.3 | 0.796 | 78 |

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## Table 4(A): Storage Position of Important Reservoirs of India at the end of each month During June 2010 to May 2011

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Sept-2010 | | | Oct-2010 | | | Nov-2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 67 | JHAKAM | (RAJ) | 0.132 | 351.35 | 0.063 | 70 | 351.5 | 0.065 | 72 | 348.45 | 0.046 | 64 |
| 68* | RANA PRATAP SAGAR | (RAJ) | 1.436 | 349.02 | 0.756 | 79 | 349.29 | 0.789 | 87 | 349.12 | 0.762 | 112 |
| 69 | LOWER BHAWANI | (TN ) | 0.792 | 269.99 | 0.32 | 71 | 268.57 | 0.267 | 56 | 274.02 | 0.563 | 104 |
| 70* | METTUR(STANLEY) | (TN ) | 2.647 | 226.93 | 1.039 | 69 | 224.07 | 0.811 | 51 | 240.34 | 2.58 | 159 |
| 71 | VAIGAI | (TN ) | 0.172 | 276.73 | 0.118 | 182 | 273.83 | 0.07 | 67 | 278.86 | 0.164 | 134 |
| 72 | PARAMBIKULAM | (TN ) | 0.38 | 550.34 | 0.259 | 88 | 552.16 | 0.295 | 98 | 555 | 0.353 | 119 |
| 73 | ALIYAR | (TN ) | 0.095 | 319.84 | 0.094 | 157 | 319.95 | 0.095 | 158 | 319.95 | 0.095 | 153 |
| 74* | SHOLAYAR | (TN ) | 0.143 | 1000.18 | 0.13 | 107 | 1000.62 | 0.132 | 120 | 1001.05 | 0.134 | 135 |
| 75 | GUMTI | (TRP) | 0.312 | 90.35 | 0.172 | 79 | 91.2 | 0.207 | 98 | 90.48 | 0.178 | 98 |
| 76 | MATATILA | (UP ) | 0.707 | 308.27 | 0.688 | 103 | 306.64 | 0.521 | 82 | 304.71 | 0.349 | 67 |
| 77* | RIHAND | (UP ) | 5.649 | 258.17 | 1.551 | 48 | 257.92 | 1.468 | 48 | 257.68 | 1.386 | 51 |
| 78* | RAMGANGA | (UKH) | 2.196 | 364.23 | 2.114 | 173 | 365.43 | 2.196 | 169 | 365.39 | 2.196 | 169 |
| 79* | TEHRI | (UKH) | 2.615 | 823.6 | 2.367 | 128 | 819.77 | 2.197 | 119 | 818.3 | 2.152 | 124 |
| 80 | MAYURAKSHI | (WB ) | 0.48 | 114.99 | 0.179 | 51 | 112.64 | 0.109 | 35 | 112.59 | 0.108 | 37 |
| 81 | KANGSABATI | (WB ) | 0.914 | 125.38 | 0.149 | 26 | 124.13 | 0.095 | 21 | 124.16 | 0.097 | 21 |
| | Total Storage | | 151.768 | | 114.601 | | | 112.921 | | | 113.473 | |
| | Percentage | | | | 76 | | | 74 | | | 75 | |

Contd...

## Table 4(A): Storage Position of Important Reservoirs of India at the end of each month During June 2010 to May 2011

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Dec-2010 | | | Jan-2011 | | | Feb-2011 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1* | SRISAILAM | (AP ) | 8.288 | 268.8 | 7.735 | 141 | 267.15 | 6.826 | 144 | 264.45 | 5.57 | 155 |
| 2* | NAGARJUNA SAGAR | (AP ) | 6.841 | 178.25 | 6.386 | 227 | 174.56 | 5.354 | 267 | 170.11 | 4.227 | 250 |
| 3 | SRIRAMSAGAR | (AP ) | 2.300 | 332.08 | 2.3 | 391 | 330.71 | 1.892 | 901 | 329.24 | 1.5 | 1744 |
| 4 | SOMASILA | (AP ) | 1.994 | 99.59 | 1.789 | 193 | 99.55 | 1.781 | 226 | 99.41 | 1.753 | 271 |
| 5 | LOWER MANAIR | (AP ) | 0.621 | 279.94 | 0.621 | 166 | 278.13 | 0.511 | 158 | 275.6 | 0.354 | 136 |
| 6 | TENUGHAT | (JHA) | 0.821 | 259.25 | 0.309 | 98 | 258.58 | 0.283 | 95 | 257.86 | 0.255 | 91 |
| 7 | MAITHON | (JHA) | 0.471 | 144.18 | 0.327 | 72 | 142.52 | 0.253 | 59 | 141.59 | 0.21 | 53 |
| 8* | PANCHET HILL | (JHA) | 0.184 | 123.07 | 0.1 | 55 | 122.48 | 0.078 | 43 | 120.83 | 0.031 | 22 |
| 9 | KONAR | (JHA) | 0.176 | 419.19 | 0.073 | 57 | 418.55 | 0.065 | 57 | 418 | 0.06 | 58 |
| 10 | TILAIYA | (JHA) | 0.142 | 364.87 | 0.026 | 40 | 364.76 | 0.024 | 57 | 364.66 | 0.023 | 82 |
| 11* | UKAI | (GUJ) | 6.615 | 102.14 | 5.045 | 127 | 101.19 | 4.586 | 131 | 100.24 | 4.143 | 138 |
| 12 | SABARMATI(DHAROI) | (GUJ) | 0.735 | 185.13 | 0.353 | 152 | 183.94 | 0.277 | 146 | 182.24 | 0.188 | 125 |
| 13* | KADANA | (GUJ) | 1.472 | 122.53 | 0.715 | 92 | 121.64 | 0.645 | 87 | 119.91 | 0.525 | 75 |
| 14 | SHETRUNJI | (GUJ) | 0.300 | 55.32 | 0.283 | 195 | 54.92 | 0.253 | 222 | 54.27 | 0.208 | 234 |
| 15 | BHADAR | (GUJ) | 0.188 | 106.88 | 0.145 | 216 | 105.96 | 0.115 | 250 | 105 | 0.086 | 269 |
| 16 | DAMANGANGA | (GUJ) | 0.502 | 79.2 | 0.472 | 113 | 77.87 | 0.417 | 114 | 76.15 | 0.349 | 105 |
| 17 | DANTIWADA | (GUJ) | 0.399 | 168.13 | 0.029 | 53 | 163.36 | 0.004 | 11 | 163.25 | 0.004 | 14 |
| 18 | PANAM | (GUJ) | 0.697 | 122.05 | 0.368 | 107 | 121.2 | 0.332 | 107 | 120.25 | 0.293 | 102 |
| 19* | GOBIND SAGAR(BHAKRA) | (HP ) | 6.229 | 503.88 | 4.705 | 145 | 499.26 | 4.051 | 167 | 494.17 | 3.392 | 193 |
| 20* | PONG DAM(BEAS) | (HP ) | 6.157 | 417 | 4.39 | 171 | 414.95 | 3.958 | 182 | 411.77 | 3.337 | 180 |
| 21 | KRISHNARAJA SAGARA | (KAR) | 1.163 | 751.83 | 1.078 | 154 | 750.67 | 0.94 | 170 | 748.9 | 0.747 | 190 |
| 22* | TUNGABHADRA | (KAR) | 3.276 | 497.74 | 2.955 | 194 | 494.3 | 1.804 | 187 | 491.53 | 1.159 | 206 |

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## Table 4(A): Storage Position of Important Reservoirs of India at the end of each month During June 2010 to May 2011

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Dec-2010 | | | Jan-2011 | | | Feb-2011 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 23 | GHATAPRABHA(HIDKAL) | (KAR) | 1.391 | 657.49 | 1.007 | 160 | 652.94 | 0.742 | 202 | 648.29 | 0.519 | 260 |
| 24 | BHADRA | (KAR) | 1.785 | 657.75 | 1.785 | 135 | 656.45 | 1.635 | 140 | 654.24 | 1.395 | 147 |
| 25 | LINGANAMAKKI | (KAR) | 4.294 | 551.82 | 3.52 | 133 | 549.92 | 3.03 | 137 | 547.75 | 2.517 | 139 |
| 26 | NARAYANPUR | (KAR) | 0.863 | 491.34 | 0.747 | 95 | 490.87 | 0.691 | 93 | 491.01 | 0.708 | 109 |
| 27 | MALAPRABHA(RENUKA) | (KAR) | 0.972 | 630.58 | 0.592 | 191 | 628.12 | 0.391 | 209 | 626.7 | 0.291 | 294 |
| 28 | KABINI | (KAR) | 0.275 | 694.38 | 0.175 | 154 | 694.58 | 0.185 | 146 | 693.78 | 0.146 | 166 |
| 29 | HEMAVATHY | (KAR) | 0.927 | 888.85 | 0.774 | 289 | 888.61 | 0.755 | 315 | 887.09 | 0.642 | 310 |
| 30 | HARANGI | (KAR) | 0.220 | 864.35 | 0.084 | 420 | 865.13 | 0.092 | 354 | 865.41 | 0.095 | 380 |
| 31 | SUPA | (KAR) | 4.120 | 545.87 | 2.22 | 107 | 542.8 | 1.97 | 108 | 539.1 | 1.696 | 110 |
| 32 | VANI VILAS SAGAR | (KAR) | 0.802 | 647.03 | 0.442 | 200 | 646.88 | 0.433 | 210 | 646.3 | 0.399 | 218 |
| 33* | ALMATTI | (KAR) | 3.105 | 518.51 | 2.54 | 143 | 517.57 | 2.151 | 178 | 514.15 | 1.114 | 153 |
| 34* | GERUSOPPA | (KAR) | 0.130 | 46.18 | 0.083 | 73 | 50.63 | 0.105 | 98 | 51.3 | 0.109 | 101 |
| 35 | KALLADA(PARAPPAR) | (KRL) | 0.507 | 113.91 | 0.445 | 112 | 113.68 | 0.439 | 124 | 111.08 | 0.373 | 127 |
| 36* | IDAMALAYAR | (KRL) | 1.018 | 157.3 | 0.687 | 107 | 153.8 | 0.604 | 110 | 147.88 | 0.468 | 104 |
| 37* | IDUKKI | (KRL) | 1.460 | 729.16 | 1.279 | 144 | 726.19 | 1.117 | 146 | 722.39 | 0.936 | 150 |
| 38* | KAKKI | (KRL) | 0.447 | 978.02 | 0.387 | 119 | 975.65 | 0.353 | 125 | 973.14 | 0.319 | 130 |
| 39* | PERIYAR | (KRL) | 0.173 | 865.37 | 0.137 | 159 | 863.78 | 0.105 | 194 | 862.07 | 0.073 | 197 |
| 40* | GANDHI SAGAR | (MP ) | 6.827 | 382.76 | 0.243 | 20 | 382.24 | 0.163 | 18 | 381.13 | 0.015 | 2 |
| 41 | TAWA | (MP ) | 1.944 | 351.65 | 1.396 | 122 | 348.63 | 0.997 | 131 | 344.94 | 0.642 | 128 |
| 42* | BARGI | (MP ) | 3.180 | 420.05 | 2.464 | 145 | 418.4 | 2.038 | 154 | 416.15 | 1.57 | 149 |
| 43* | BANSAGAR | (MP ) | 5.166 | 331.65 | 1.557 | 229 | 330.38 | 1.256 | 249 | 329.28 | 0.996 | 242 |
| 44* | INDIRA SAGAR | (MP ) | 9.745 | 256.76 | 5.445 | 227 | 255 | 4.333 | 255 | 253.41 | 3.532 | 257 |

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## Table 4(A): Storage Position of Important Reservoirs of India at the end of each month During June 2010 to May 2011

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Dec-2010 | | | Jan-2011 | | | Feb-2011 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 45* | MINIMATA BANGO | (CHH) | 3.046 | 348.37 | 1.331 | 75 | 347.93 | 1.279 | 77 | 347.62 | 1.245 | 81 |
| 46 | MAHANADI | (CHH) | 0.767 | 348.68 | 0.765 | 153 | 347.62 | 0.664 | 140 | 346.18 | 0.547 | 121 |
| 47 | JAYAKWADI(PAITHAN) | (MAH) | 2.171 | 461.6 | 1.358 | 125 | 461.14 | 1.222 | 132 | 460.55 | 1.047 | 132 |
| 48* | KOYANA | (MAH) | 2.652 | 658.22 | 2.652 | 129 | 655.22 | 2.336 | 127 | 651.33 | 2.014 | 123 |
| 49 | BHIMA(UJJANI) | (MAH) | 1.517 | 496.83 | 1.517 | 178 | 496.5 | 1.407 | 204 | 495.54 | 1.106 | 214 |
| 50 | ISAPUR | (MAH) | 0.965 | 440.32 | 0.9 | 178 | 439.53 | 0.828 | 186 | 438.63 | 0.732 | 193 |
| 51 | MULA | (MAH) | 0.609 | 552.07 | 0.597 | 154 | 550.33 | 0.508 | 162 | 549.68 | 0.476 | 193 |
| 52 | YELDARI | (MAH) | 0.809 | 461.53 | 0.785 | 234 | 460.62 | 0.693 | 259 | 459.54 | 0.592 | 279 |
| 53 | GIRNA | (MAH) | 0.524 | 389.38 | 0.179 | 76 | 388.81 | 0.161 | 86 | 388 | 0.139 | 95 |
| 54 | KHADAKVASLA | (MAH) | 0.056 | 579.33 | 0.018 | 90 | 579.94 | 0.025 | 167 | 578.05 | 0.007 | 47 |
| 55* | UPPER VAITARNA | (MAH) | 0.331 | 602.85 | 0.31 | 108 | 601.98 | 0.283 | 112 | 601.32 | 0.262 | 128 |
| 56 | UPPER TAPI | (MAH) | 0.255 | 213.74 | 0.239 | 112 | 213.26 | 0.212 | 116 | 212.59 | 0.176 | 114 |
| 57* | PENCH(TOTLADOH) | (MAH) | 1.091 | 486.72 | 0.817 | 227 | 484.79 | 0.697 | 197 | 483.64 | 0.63 | 261 |
| 58* | HIRAKUD | (ORI) | 5.378 | 191.69 | 5.186 | 127 | 190.65 | 4.596 | 131 | 189.22 | 3.786 | 123 |
| 59* | BALIMELA | (ORI) | 2.676 | 460.13 | 2.304 | 197 | 458.14 | 1.987 | 204 | 455.8 | 1.666 | 211 |
| 60 | SALANADI | (ORI) | 0.558 | 59.44 | 0.053 | 18 | 57.75 | 0.037 | 15 | 54.48 | 0.016 | 7 |
| 61* | RENGALI | (ORI) | 3.432 | 118.35 | 1.785 | 78 | 117.77 | 1.628 | 86 | 116.7 | 1.363 | 81 |
| 62* | MACHKUND(JALAPUT) | (ORI) | 0.893 | 838.05 | 0.778 | 122 | 837.36 | 0.815 | 148 | 836.89 | 0.773 | 166 |
| 63* | UPPER KOLAB | (ORI) | 0.935 | 856.07 | 0.753 | 147 | 855.41 | 0.69 | 153 | 854.1 | 0.584 | 149 |
| 64* | UPPER INDRAVATI | (ORI) | 1.456 | 638.87 | 1.123 | 113 | 637.65 | 1.004 | 120 | 636.4 | 0.882 | 127 |
| 65* | THEIN DAM | (PUN) | 2.344 | 513.62 | 1.332 | 173 | 506.73 | 0.951 | 175 | 504.39 | 0.836 | 167 |
| 66* | MAHI BAJAJ SAGAR | (RAJ) | 1.711 | 269.2 | 0.531 | 66 | 265.8 | 0.315 | 50 | 263.1 | 0.169 | 36 |

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## Table 4(A): Storage Position of Important Reservoirs of India at the end of each month During June 2010 to May 2011

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Dec-2010 | | | Jan-2011 | | | Feb-2011 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 67 | JHAKAM | (RAJ) | 0.132 | 346 | 0.035 | 65 | 342.65 | 0.022 | 61 | 337.2 | 0.009 | 43 |
| 68* | RANA PRATAP SAGAR | (RAJ) | 1.436 | 348.83 | 0.712 | 108 | 345.86 | 0.274 | 49 | 345.45 | 0.215 | 40 |
| 69 | LOWER BHAWANI | (TN ) | 0.792 | 274.7 | 0.544 | 112 | 273.47 | 0.478 | 124 | 272.09 | 0.41 | 125 |
| 70* | METTUR(STANLEY) | (TN ) | 2.647 | 240.63 | 2.623 | 176 | 237.62 | 2.203 | 212 | 237.27 | 2.158 | 217 |
| 71 | VAIGAI | (TN ) | 0.172 | 278.59 | 0.158 | 186 | 276.47 | 0.113 | 209 | 274.55 | 0.08 | 167 |
| 72 | PARAMBIKULAM | (TN ) | 0.380 | 555.07 | 0.354 | 131 | 554.28 | 0.338 | 153 | 551.42 | 0.281 | 161 |
| 73 | ALIYAR | (TN ) | 0.095 | 319.66 | 0.093 | 190 | 315.7 | 0.068 | 213 | 315.46 | 0.066 | 264 |
| 74* | SHOLAYAR | (TN ) | 0.143 | 993.63 | 0.099 | 162 | 965.71 | 0.016 | 67 | 963.68 | 0.012 | 100 |
| 75 | GUMTI | (TRP) | 0.312 | 89.64 | 0.146 | 96 | 88.55 | 0.109 | 90 | 87.25 | 0.07 | 72 |
| 76 | MATATILA | (UP ) | 0.707 | 303.12 | 0.243 | 63 | 302.97 | 0.235 | 71 | 301.05 | 0.137 | 49 |
| 77* | RIHAND | (UP ) | 5.649 | 257.25 | 1.241 | 54 | 256.61 | 1.025 | 53 | 255.91 | 0.82 | 51 |
| 78* | RAMGANGA | (UKH) | 2.196 | 364.02 | 2.099 | 196 | 359.38 | 1.755 | 189 | 355.44 | 1.484 | 195 |
| 79* | TEHRI | (UKH) | 2.615 | 817.15 | 2.133 | 142 | 819.6 | 2.19 | 194 | 809.15 | 1.82 | 233 |
| 80 | MAYURAKSHI | (WB ) | 0.480 | 112.55 | 0.107 | 36 | 112.4 | 0.103 | 37 | 112.14 | 0.098 | 45 |
| 81 | KANGSABATI | (WB ) | 0.914 | 124.27 | 0.101 | 27 | 124.3 | 0.102 | 37 | 124.3 | 0.102 | 52 |
| | Total Storage | | 151.768 | | 104.214 | | | 89.403 | | | 73.779 | |
| | Percentage | | | | 69 | | | 59 | | | 49 | |

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## Table 4(A): Storage Position of Important Reservoirs of India at the end of each month During June 2010 to May 2011

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | March-2011 | | | April-2011 | | | May-2011 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1* | SRISAILAM | (AP ) | 8.288 | 256.63 | 3.062 | 134 | 247.85 | 1.564 | 107 | 246.75 | 1.427 | 117 |
| 2* | NAGARJUNA SAGAR | (AP ) | 6.841 | 170.20 | 4.248 | 309 | 168.62 | 3.870 | 288 | 168.89 | 3.934 | 278 |
| 3 | SRIRAMSAGAR | (AP ) | 2.300 | 326.59 | 0.928 | 239 | 323.85 | 0.471 | 86 | 323.42 | 0.419 | 73 |
| 4 | SOMASILA | (AP ) | 1.994 | 99.02 | 1.672 | 309 | 98.40 | 1.559 | 346 | 97.21 | 1.345 | 444 |
| 5 | LOWER MANAIR | (AP ) | 0.621 | 273.89 | 0.272 | 154 | 271.59 | 0.181 | 130 | 271.32 | 0.171 | 133 |
| 6 | TENUGHAT | (JHA) | 0.821 | 257.01 | 0.224 | 86 | 256.26 | 0.199 | 86 | 255.36 | 0.171 | 63 |
| 7 | MAITHON | (JHA) | 0.471 | 139.83 | 0.151 | 47 | 138.21 | 0.101 | 54 | 136.58 | 0.063 | 48 |
| 8* | PANCHET HILL | (JHA) | 0.184 | 120.82 | 0.031 | 37 | 120.86 | 0.032 | 145 | 120.98 | 0.035 | 184 |
| 9 | KONAR | (JHA) | 0.176 | 417.15 | 0.050 | 58 | 416.51 | 0.043 | 62 | 415.69 | 0.035 | 76 |
| 10 | TILAIYA | (JHA) | 0.142 | 364.46 | 0.019 | 136 | 364.33 | 0.016 | 145 | 364.13 | 0.012 | 150 |
| 11* | UKAI | (GUJ) | 6.615 | 98.70 | 3.482 | 140 | 96.99 | 2.820 | 154 | 95.05 | 2.137 | 176 |
| 12 | SABARMATI(DHAROI) | (GUJ) | 0.735 | 180.72 | 0.120 | 95 | 180.34 | 0.106 | 102 | 179.87 | 0.090 | 101 |
| 13* | KADANA | (GUJ) | 1.472 | 119.03 | 0.469 | 72 | 118.04 | 0.411 | 69 | 116.38 | 0.324 | 62 |
| 14 | SHETRUNJI | (GUJ) | 0.300 | 52.57 | 0.122 | 230 | 50.27 | 0.056 | 311 | 48.47 | 0.028 | 350 |
| 15 | BHADAR | (GUJ) | 0.188 | 104.33 | 0.070 | 269 | 103.94 | 0.061 | 277 | 103.33 | 0.070 | 368 |
| 16 | DAMANGANGA | (GUJ) | 0.502 | 74.65 | 0.298 | 102 | 71.75 | 0.209 | 86 | 64.15 | 0.043 | 36 |
| 17 | DANTIWADA | (GUJ) | 0.399 | 163.02 | 0.003 | 15 | 162.82 | 0.002 | 20 | 162.40 | 0.001 | 50 |
| 18 | PANAM | (GUJ) | 0.697 | 119.35 | 0.260 | 104 | 119.10 | 0.251 | 129 | 118.85 | 0.242 | 160 |
| 19* | GOBIND SAGAR(BHAKRA) | (HP ) | 6.229 | 487.53 | 2.529 | 220 | 482.98 | 2.174 | 233 | 479.73 | 1.880 | 174 |
| 20* | PONG DAM(BEAS) | (HP ) | 6.157 | 410.10 | 3.034 | 194 | 411.07 | 3.207 | 220 | 411.49 | 3.284 | 322 |
| 21 | KRISHNARAJA SAGARA | (KAR) | 1.163 | 746.77 | 0.552 | 232 | 745.82 | 0.475 | 332 | 742.48 | 0.248 | 359 |
| 22* | TUNGABHADRA | (KAR) | 3.276 | 487.58 | 0.558 | 347 | 481.89 | 0.142 | 182 | 482.25 | 0.158 | 168 |

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## Table 4(A): Storage Position of Important Reservoirs of India at the end of each month During June 2010 to May 2011

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | March-2011 | | | April-2011 | | | May-2011 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 23 | GHATAPRABHA(HIDKAL) | (KAR) | 1.391 | 641.97 | 0.277 | 220 | 640.72 | 0.236 | 315 | 636.92 | 0.131 | 468 |
| 24 | BHADRA | (KAR) | 1.785 | 651.59 | 1.133 | 161 | 648.31 | 0.848 | 186 | 644.58 | 0.576 | 202 |
| 25 | LINGANAMAKKI | (KAR) | 4.294 | 544.59 | 1.890 | 141 | 541.54 | 1.397 | 153 | 536.65 | 0.803 | 146 |
| 26 | NARAYANPUR | (KAR) | 0.863 | 488.53 | 0.440 | 88 | 487.02 | 0.305 | 92 | 486.63 | 0.268 | 85 |
| 27 | MALAPRABHA(RENUKA) | (KAR) | 0.972 | 622.94 | 0.104 | 151 | 622.63 | 0.092 | 170 | 622.37 | 0.083 | 189 |
| 28 | KABINI | (KAR) | 0.275 | 691.72 | 0.045 | 115 | 690.83 | 0.007 | 64 | 689.11 | 0.000 | 0 |
| 29 | HEMAVATHY | (KAR) | 0.927 | 883.05 | 0.388 | 273 | 878.49 | 0.175 | 211 | 874.52 | 0.053 | 126 |
| 30 | HARANGI | (KAR) | 0.220 | 865.37 | 0.094 | 427 | 864.54 | 0.086 | 430 | 864.51 | 0.086 | 453 |
| 31 | SUPA | (KAR) | 4.120 | 534.21 | 1.358 | 112 | 529.05 | 1.039 | 111 | 524.28 | 0.784 | 114 |
| 32 | VANI VILAS SAGAR | (KAR) | 0.802 | 646.12 | 0.389 | 232 | 645.20 | 0.351 | 225 | 644.99 | 0.342 | 239 |
| 33* | ALMATTI | (KAR) | 3.105 | 511.64 | 0.622 | 240 | 509.62 | 0.315 | 254 | 509.24 | 0.268 | 288 |
| 34* | GERUSOPPA | (KAR) | 0.130 | 52.32 | 0.114 | 102 | 52.04 | 0.113 | 95 | 53.93 | 0.123 | 111 |
| 35 | KALLADA(PARAPPAR) | (KRL) | 0.507 | 104.50 | 0.255 | 120 | 98.02 | 0.163 | 107 | 90.60 | 0.085 | 71 |
| 36* | IDAMALAYAR | (KRL) | 1.018 | 140.60 | 0.321 | 96 | 132.94 | 0.189 | 79 | 123.99 | 0.076 | 50 |
| 37* | IDUKKI | (KRL) | 1.460 | 717.18 | 0.706 | 149 | 713.06 | 0.541 | 163 | 706.47 | 0.314 | 145 |
| 38* | KAKKI | (KRL) | 0.447 | 966.52 | 0.240 | 127 | 958.90 | 0.173 | 125 | 946.19 | 0.091 | 100 |
| 39* | PERIYAR | (KRL) | 0.173 | 861.07 | 0.060 | 150 | 861.99 | 0.072 | 147 | 862.05 | 0.073 | 140 |
| 40* | GANDHI SAGAR | (MP ) | 6.827 | 381.15 | 0.018 | 4 | 380.49 | -0.049 | -13 | 380.17 | 0.000 | 0 |
| 41 | TAWA | (MP ) | 1.944 | 342.93 | 0.471 | 116 | 342.81 | 0.461 | 116 | 342.60 | 0.442 | 114 |
| 42* | BARGI | (MP ) | 3.180 | 414.40 | 1.254 | 155 | 411.95 | 0.914 | 169 | 409.10 | 0.583 | 191 |
| 43* | BANSAGAR | (MP ) | 5.166 | 328.54 | 0.843 | 248 | 327.74 | 0.682 | 341 | 326.50 | 0.434 | 368 |
| 44* | INDIRA SAGAR | (MP ) | 9.745 | 251.40 | 2.606 | 242 | 249.88 | 1.998 | 270 | 247.56 | 1.201 | 270 |

Contd...

## Table 4(A): Storage Position of Important Reservoirs of India at the end of each month During June 2010 to May 2011

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | March-2011 | | | April-2011 | | | May-2011 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 45* | MINIMATA BANGO | (CHH) | 3.046 | 347.34 | 1.215 | 87 | 346.94 | 1.173 | 96 | 346.26 | 1.124 | 106 |
| 46 | MAHANADI | (CHH) | 0.767 | 343.00 | 0.320 | 75 | 340.61 | 0.183 | 49 | 339.08 | 0.109 | 33 |
| 47 | JAYAKWADI(PAITHAN) | (MAH) | 2.171 | 459.87 | 0.862 | 132 | 459.08 | 0.668 | 138 | 458.19 | 0.473 | 146 |
| 48* | KOYANA | (MAH) | 2.652 | 647.07 | 1.662 | 122 | 641.38 | 1.198 | 117 | 634.77 | 0.799 | 110 |
| 49 | BHIMA(UJJANI) | (MAH) | 1.517 | 494.84 | 0.902 | 335 | 493.40 | 0.523 | 1687 | 491.96 | 0.192 | 93 |
| 50 | ISAPUR | (MAH) | 0.965 | 437.57 | 0.638 | 197 | 436.55 | 0.559 | 222 | 435.83 | 0.506 | 291 |
| 51 | MULA | (MAH) | 0.609 | 546.63 | 0.345 | 174 | 544.92 | 0.281 | 228 | 541.07 | 0.156 | 390 |
| 52 | YELDARI | (MAH) | 0.809 | 457.96 | 0.460 | 295 | 456.82 | 0.378 | 525 | 455.44 | 0.290 | 853 |
| 53 | GIRNA | (MAH) | 0.524 | 387.69 | 0.130 | 114 | 386.77 | 0.105 | 119 | 385.68 | 0.079 | 127 |
| 54 | KHADAKVASLA | (MAH) | 0.056 | 578.57 | 0.011 | 100 | 578.08 | 0.007 | 88 | 579.21 | 0.017 | 213 |
| 55* | UPPER VAITARNA | (MAH) | 0.331 | 599.50 | 0.207 | 128 | 597.30 | 0.148 | 125 | 597.07 | 0.142 | 173 |
| 56 | UPPER TAPI | (MAH) | 0.255 | 211.69 | 0.132 | 109 | 211.06 | 0.105 | 131 | 209.70 | 0.035 | 106 |
| 57* | PENCH(TOTLADOH) | (MAH) | 1.091 | 482.38 | 0.561 | 319 | 481.37 | 0.510 | 421 | 480.27 | 0.457 | 502 |
| 58* | HIRAKUD | (ORI) | 5.378 | 187.93 | 3.068 | 140 | 185.76 | 1.943 | 134 | 183.34 | 0.990 | 146 |
| 59* | BALIMELA | (ORI) | 2.676 | 453.12 | 1.319 | 271 | 450.13 | 0.961 | 255 | 447.81 | 0.720 | 661 |
| 60 | SALANADI | (ORI) | 0.558 | 53.34 | 0.011 | 7 | 52.86 | 0.009 | 6 | 52.65 | 0.009 | 7 |
| 61* | RENGALI | (ORI) | 3.432 | 115.82 | 1.162 | 93 | 114.42 | 0.843 | 104 | 110.80 | 0.164 | 62 |
| 62* | MACHKUND(JALAPUT) | (ORI) | 0.893 | 836.07 | 0.714 | 192 | 835.33 | 0.661 | 223 | 834.56 | 0.604 | 277 |
| 63* | UPPER KOLAB | (ORI) | 0.935 | 852.80 | 0.486 | 161 | 851.24 | 0.370 | 180 | 849.05 | 0.231 | 188 |
| 64* | UPPER INDRAVATI | (ORI) | 1.456 | 634.57 | 0.711 | 142 | 632.11 | 0.508 | 161 | 630.14 | 0.346 | 206 |
| 65* | THEIN DAM | (PUN) | 2.344 | 504.29 | 0.832 | 140 | 508.96 | 2.344 | 282 | 511.64 | 1.184 | 128 |
| 66* | MAHI BAJAJ SAGAR | (RAJ) | 1.711 | 260.50 | 0.060 | 17 | 260.35 | 0.053 | 19 | 260.15 | 0.043 | 20 |

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## Table 4(A): Storage Position of Important Reservoirs of India at the end of each month During June 2010 to May 2011

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | March-2011 | | | April-2011 | | | May-2011 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 67 | JHAKAM | (RAJ) | 0.132 | 336.95 | 0.008 | 47 | 336.60 | 0.008 | 47 | 336.25 | 0.007 | 47 |
| 68* | RANA PRATAP SAGAR | (RAJ) | 1.436 | 345.22 | 0.180 | 34 | 345.03 | 0.154 | 29 | 345.00 | 0.148 | 30 |
| 69 | LOWER BHAWANI | (TN ) | 0.792 | 271.15 | 0.368 | 126 | 269.67 | 0.307 | 131 | 268.80 | 0.275 | 107 |
| 70* | METTUR(STANLEY) | (TN ) | 2.647 | 237.14 | 2.140 | 220 | 238.36 | 2.288 | 236 | 239.43 | 2.449 | 245 |
| 71 | VAIGAI | (TN ) | 0.172 | 274.43 | 0.079 | 158 | 273.88 | 0.071 | 145 | 273.18 | 0.061 | 136 |
| 72 | PARAMBIKULAM | (TN ) | 0.380 | 551.94 | 0.291 | 233 | 551.62 | 0.284 | 334 | 551.25 | 0.278 | 397 |
| 73 | ALIYAR | (TN ) | 0.095 | 315.88 | 0.069 | 276 | 316.25 | 0.071 | 237 | 313.81 | 0.057 | 204 |
| 74* | SHOLAYAR | (TN ) | 0.143 | 955.12 | 0.001 | 14 | 961.21 | 0.008 | 133 | 964.82 | 0.014 | 127 |
| 75 | GUMTI | (TRP) | 0.312 | 85.55 | 0.028 | 42 | 84.31 | 0.009 | 18 | 84.90 | 0.017 | 31 |
| 76 | MATATILA | (UP ) | 0.707 | 301.52 | 0.266 | 88 | 303.46 | 0.263 | 91 | 301.57 | 0.158 | 89 |
| 77* | RIHAND | (UP ) | 5.649 | 255.30 | 0.643 | 53 | 254.66 | 0.460 | 54 | 254.18 | 0.322 | 63 |
| 78* | RAMGANGA | (UKH) | 2.196 | 349.32 | 1.142 | 202 | 346.72 | 1.010 | 227 | 343.66 | 0.866 | 342 |
| 79* | TEHRI | (UKH) | 2.615 | 793.45 | 1.314 | 324 | 771.75 | 0.677 | 464 | 743.60 | 0.059 | 72 |
| 80 | MAYURAKSHI | (WB ) | 0.480 | 111.77 | 0.088 | 62 | 111.60 | 0.074 | 117 | 111.18 | 0.075 | 136 |
| 81 | KANGSABATI | (WB ) | 0.914 | 122.89 | 0.049 | 48 | 122.92 | 0.050 | 119 | 122.91 | 0.050 | 128 |
| | Total Storage | | 151.768 | | 58.256 | | | 47.322 | | | 36.441 | |
| | Percentage | | | | 38 | | | 31 | | | 24 | |

Source : Central Water Commission (WM Directorate)

**FRL** : Full Reservoir Level, BCM: Billion Cubic Metre, m : Metre * : Hydel Power Project having capcity more than 60 M.Watt.

**Note** : 1. Position at the 'End of the month ' refers to the position as on last Day of the month

2.Col. 7 refers to Percentage of this year's live storage to average of the last ten year's storage

## Table 4(B): Storage Position of Important Reservoirs of India at the end of each month during June 2009 to May 2010

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Jun-09 | | | Jul-09 | | | Aug-09 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1* | SRISAILAM | (AP ) | 8.288 | 245.73 | 1.316 | 88 | 259.33 | 3.753 | 115 | 263.28 | 5.496 | 89 |
| 2* | NAGARJUNA SAGAR | (AP ) | 6.841 | 154.84 | 0.998 | 64 | 153.07 | 0.68 | 34 | 154.38 | 0.915 | 23 |
| 3 | SRIRAMSAGAR | (AP ) | 2.300 | 318.64 | -0.754 | 297 | 318.82 | -0.748 | -187 | 322.75 | -0.521 | -42 |
| 4 | SOMASILA | (AP ) | 1.994 | 88.91 | 0.399 | 189 | 86.18 | 0.207 | 99 | 85.38 | 0.158 | 45 |
| 5 | LOWER MANAIR | (AP ) | 0.621 | 268.30 | 0.089 | 60 | 267.84 | 0.079 | 52 | 267.68 | 0.076 | 27 |
| 6 | TENUGHAT | (JHA) | 0.821 | 254.81 | 0.152 | 58 | 258.07 | 0.265 | 89 | 261.61 | 0.413 | 133 |
| 7 | MAITHON | (JHA) | 0.471 | 134.89 | 0.032 | 18 | 138.02 | 0.096 | 33 | 145.59 | 0.4 | 103 |
| 8* | PANCHET HILL | (JHA) | 0.184 | 120.05 | 0.012 | 16 | 122.76 | 0.088 | 70 | 127.34 | 0.184 | 114 |
| 9 | KONAR | (JHA) | 0.176 | 414.83 | 0.029 | 362 | 415.34 | 0.033 | 35 | 417.81 | 0.057 | 44 |
| 10 | TILAIYA | (JHA) | 0.142 | 364.01 | 0.010 | 40 | 364.3 | 0.015 | 23 | 365.35 | 0.037 | 44 |
| 11* | UKAI | (GUJ) | 6.615 | 88.09 | 0.738 | 56 | 95.08 | 2.148 | 84 | 95.7 | 2.358 | 51 |
| 12 | SABARMATI(DHAROI) | (GUJ) | 0.735 | 177.82 | 0.038 | 48 | 182.16 | 0.182 | 113 | 182.94 | 0.212 | 79 |
| 13* | KADANA | (GUJ) | 1.472 | 121.11 | 0.606 | 121 | 124 | 0.837 | 134 | 123.22 | 0.771 | 112 |
| 14 | SHETRUNJI | (GUJ) | 0.300 | 46.52 | 0.008 | 12 | 53.52 | 0.166 | 120 | 53.42 | 0.16 | 95 |
| 15 | BHADAR | (GUJ) | 0.188 | 100.28 | 0.011 | 30 | 103.4 | 0.049 | 60 | 104.94 | 0.084 | 79 |
| 16 | DAMANGANGA | (GUJ) | 0.502 | 63.27 | 0.027 | 23 | 69.45 | 0.151 | 85 | 74.15 | 0.283 | 86 |
| 17 | DANTIWADA | (GUJ) | 0.399 | 162.23 | 0.001 | 20 | 165.32 | 0.012 | 32 | 165.17 | 0.011 | 12 |
| 18 | PANAM | (GUJ) | 0.697 | 115.70 | 0.151 | 85 | 118.25 | 0.223 | 83 | 118.05 | 0.216 | 56 |
| 19* | GOBIND SAGAR(BHAKRA) | (HP ) | 6.229 | 463.71 | 0.783 | 48 | 478.49 | 1.776 | 55 | 491.84 | 3.12 | 64 |
| 20* | PONG DAM(BEAS) | (HP ) | 6.157 | 388.64 | 0.295 | 34 | 394.88 | 0.845 | 38 | 402.03 | 1.717 | 40 |
| 21 | KRISHNARAJA SAGARA | (KAR) | 1.163 | 736.37 | 0.000 | 0 | 752.47 | 1.159 | 180 | 751.91 | 1.09 | 115 |
| 22* | TUNGABHADRA | (KAR) | 3.276 | 483.58 | 0.226 | 46 | 497.69 | 2.938 | 140 | 497.7 | 2.94 | 102 |

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## Table 4(B): Storage Position of Important Reservoirs of India at the end of each month during June 2009 to May 2010

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Jun-09 | | | Jul-09 | | | Aug-09 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 23 | GHATAPRABHA(HIDKAL) | (KAR) | 1.391 | 630.17 | 0.013 | 5 | 660.77 | 1.228 | 136 | 661.75 | 1.301 | 103 |
| 24 | BHADRA | (KAR) | 1.785 | 641.04 | 0.362 | 69 | 656.06 | 1.591 | 145 | 657.74 | 1.784 | 119 |
| 25 | LINGANAMAKKI | (KAR) | 4.294 | 530.71 | 0.331 | 39 | 550.72 | 3.229 | 150 | 552.15 | 3.615 | 109 |
| 26 | NARAYANPUR | (KAR) | 0.863 | 487.36 | 0.332 | 71 | 491.61 | 0.781 | 127 | 492.06 | 0.838 | 109 |
| 27 | MALAPRABHA(RENUKA) | (KAR) | 0.972 | 620.31 | 0.022 | 26 | 629.87 | 0.536 | 146 | 629.95 | 0.542 | 89 |
| 28 | KABINI | (KAR) | 0.275 | 690.39 | 0.000 | 0 | 696.02 | 0.266 | 121 | 694.06 | 0.161 | 69 |
| 29 | HEMAVATHY | (KAR) | 0.927 | 874.00 | 0.037 | 20 | 890.37 | 0.904 | 151 | 889.3 | 0.811 | 106 |
| 30 | HARANGI | (KAR) | 0.220 | 854.88 | 0.021 | 30 | 871.28 | 0.215 | 109 | 871.37 | 0.218 | 101 |
| 31 | SUPA | (KAR) | 4.120 | 518.53 | 0.536 | 75 | 541.34 | 1.859 | 120 | 545.16 | 2.155 | 87 |
| 32 | VANI VILAS SAGAR | (KAR) | 0.802 | 633.33 | 0.031 | 21 | 633.17 | 0.029 | 20 | 634.18 | 0.043 | 28 |
| 33* | ALMATTI | (KAR) | 3.105 | 507.75 | 0.095 | 13 | 519.31 | 2.907 | 128 | 519.6 | 3.051 | 107 |
| 34* | GERUSOPPA | (KAR) | 0.130 | 49.24 | 0.098 | 88 | 52.53 | 0.116 | 104 | 53.24 | 0.12 | 108 |
| 35 | KALLADA(PARAPPAR) | (KRL) | 0.507 | 94.46 | 0.122 | 66 | 102.22 | 0.221 | 80 | 105.14 | 0.266 | 77 |
| 36* | IDAMALAYAR | (KRL) | 1.018 | 124.28 | 0.079 | 31 | 150.88 | 0.536 | 105 | 156.58 | 0.669 | 92 |
| 37* | IDUKKI | (KRL) | 1.460 | 702.77 | 0.202 | 60 | 714.48 | 0.597 | 97 | 716.78 | 0.689 | 79 |
| 38* | KAKKI | (KRL) | 0.447 | 959.94 | 0.182 | 161 | 972.84 | 0.315 | 146 | 974.18 | 0.332 | 111 |
| 39* | PERIYAR | (KRL) | 0.173 | 858.96 | 0.024 | 33 | 863.36 | 0.097 | 102 | 861.34 | 0.061 | 67 |
| 40* | GANDHI SAGAR | (MP ) | 6.827 | 381.30 | -0.067 | -22 | 385.06 | 0.641 | 93 | 386.12 | 0.874 | 40 |
| 41 | TAWA | (MP ) | 1.944 | 338.57 | 0.194 | 37 | 353.05 | 1.611 | 154 | 354.67 | 1.906 | 110 |
| 42* | BARGI | (MP ) | 3.180 | 404.35 | 0.141 | 51 | 410.6 | 0.747 | 63 | 412.55 | 0.996 | 40 |
| 43* | BANSAGAR | (MP ) | 5.166 | 324.10 | 0.118 | 128 | 326.17 | 0.368 | 87 | 326.54 | 0.443 | 39 |
| 44* | INDIRA SAGAR | (MP ) | 9.745 | 244.24 | 0.291 | 493 | 253.75 | 3.581 | 423 | 254.82 | 4.26 | 141 |

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## Table 4(B): Storage Position of Important Reservoirs of India at the end of each month during June 2009 to May 2010

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Jun-09 | | | Jul-09 | | | Aug-09 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 45* | MINIMATA BANGO | (CHH) | 3.046 | 346.14 | 1.116 | 113 | 348.72 | 1.373 | 94 | 351.6 | 1.719 | 83 |
| 46 | MAHANADI | (CHH) | 0.767 | 341.31 | 0.216 | 66 | 346.62 | 0.583 | 129 | 346.55 | 0.572 | 98 |
| 47 | JAYAKWADI(PAITHAN) | (MAH) | 2.171 | 457.06 | 0.250 | 64 | 457.55 | 0.344 | 50 | 457.67 | 0.367 | 30 |
| 48* | KOYANA | (MAH) | 2.652 | 634.49 | 0.784 | 87 | 654.56 | 2.281 | 117 | 656.89 | 2.529 | 100 |
| 49 | BHIMA(UJJANI) | (MAH) | 1.517 | 490.16 | -0.166 | 108 | 493.75 | 0.611 | 158 | 493.94 | 0.651 | 70 |
| 50 | ISAPUR | (MAH) | 0.965 | 424.00 | -0.066 | -22 | 425.06 | -0.032 | -7 | 425.98 | -0.001 | 0 |
| 51 | MULA | (MAH) | 0.609 | 534.45 | 0.006 | 9 | 543.89 | 0.245 | 88 | 544.74 | 0.274 | 60 |
| 52 | YELDARI | (MAH) | 0.809 | 443.95 | -0.053 | -54 | 445.27 | -0.035 | -22 | 447.59 | -0.002 | -1 |
| 53 | GIRNA | (MAH) | 0.524 | 384.98 | 0.061 | 117 | 386.39 | 0.095 | 73 | 386.31 | 0.093 | 35 |
| 54 | KHADAKVASLA | (MAH) | 0.056 | 578.57 | 0.011 | 73 | 582.41 | 0.055 | 200 | 579.7 | 0.022 | 54 |
| 55* | UPPER VAITARNA | (MAH) | 0.331 | 592.60 | 0.057 | 51 | 598.87 | 0.188 | 86 | 599.82 | 0.216 | 71 |
| 56 | UPPER TAPI | (MAH) | 0.255 | 207.70 | 0.000 | 0 | 210.11 | 0.067 | 122 | 213.3 | 0.214 | 127 |
| 57* | PENCH(TOTLADOH) | (MAH) | 1.091 | 464.97 | 0.010 | 9 | 483.98 | 0.648 | 225 | 483.55 | 0.625 | 104 |
| 58* | HIRAKUD | (ORI) | 5.378 | 181.38 | 0.413 | 70 | 184.94 | 1.327 | 78 | 187.31 | 2.725 | 64 |
| 59* | BALIMELA | (ORI) | 2.676 | 438.21 | -0.042 | -37 | 443.97 | 0.377 | 117 | 444.46 | 0.418 | 44 |
| 60 | SALANADI | (ORI) | 0.558 | 52.45 | 0.008 | 5 | 60.76 | 0.065 | 34 | 67.36 | 0.155 | 49 |
| 61* | RENGALI | (ORI) | 3.432 | 109.72 | -0.002 | -9 | 115.09 | 0.98 | 90 | 117.22 | 1.49 | 61 |
| 62* | MACHKUND(JALAPUT) | (ORI) | 0.893 | 823.67 | 0.110 | 45 | 831.19 | 0.404 | 115 | 831.66 | 0.43 | 73 |
| 63* | UPPER KOLAB | (ORI) | 0.935 | 844.51 | 0.017 | 12 | 848.47 | 0.202 | 72 | 848.9 | 0.223 | 45 |
| 64* | UPPER INDRAVATI | (ORI) | 1.456 | 625.20 | 0.013 | 5 | 635.5 | 0.795 | 144 | 637.2 | 0.96 | 87 |
| 65* | THEIN DAM | (PUN) | 2.344 | 500.12 | 0.627 | 93 | 500.19 | 0.631 | 69 | 498.63 | 0.569 | 48 |
| 66* | MAHI BAJAJ SAGAR | (RAJ) | 1.711 | 258.95 | 0.000 | 0 | 267.6 | 0.429 | 74 | 270.65 | 0.652 | 65 |

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## Table 4(B): Storage Position of Important Reservoirs of India at the end of each month during June 2009 to May 2010

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Jun-09 | | | Jul-09 | | | Aug-09 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 67 | JHAKAM | (RAJ) | 0.132 | 337.55 | 0.009 | 60 | 345.4 | 0.032 | 74 | 348 | 0.044 | 53 |
| 68* | RANA PRATAP SAGAR | (RAJ) | 1.436 | 346.26 | 0.332 | 66 | 347.51 | 0.511 | 78 | 348.31 | 0.625 | 65 |
| 69 | LOWER BHAWANI | (TN ) | 0.792 | 261.64 | 0.086 | 26 | 272.84 | 0.447 | 103 | 272.1 | 0.411 | 81 |
| 70* | METTUR(STANLEY) | (TN ) | 2.647 | 222.77 | 0.717 | 70 | 232.99 | 1.637 | 146 | 233.31 | 1.674 | 115 |
| 71 | VAIGAI | (TN ) | 0.172 | 265.12 | 0.006 | 11 | 270.8 | 0.035 | 59 | 273.2 | 0.061 | 80 |
| 72 | PARAMBIKULAM | (TN ) | 0.380 | 541.22 | 0.098 | 85 | 551.19 | 0.276 | 128 | 552.67 | 0.306 | 107 |
| 73 | ALIYAR | (TN ) | 0.095 | 309.20 | 0.032 | 119 | 319.55 | 0.092 | 209 | 319.34 | 0.091 | 140 |
| 74* | SHOLAYAR | (TN ) | 0.143 | 966.36 | 0.017 | 31 | 1002.38 | 0.141 | 138 | 1000.09 | 0.13 | 106 |
| 75 | GUMTI | (TRP) | 0.312 | 85.80 | 0.015 | 12 | 88 | 0.091 | 53 | 89.18 | 0.13 | 62 |
| 76 | MATATILA | (UP ) | 0.707 | 300.81 | 0.126 | 72 | 301.87 | 0.175 | 54 | 302.64 | 0.217 | 37 |
| 77* | RIHAND | (UP ) | 5.649 | 254.08 | 0.296 | 65 | 256.4 | 0.962 | 72 | 257.74 | 1.406 | 53 |
| 78* | RAMGANGA | (UKH) | 2.196 | 322.52 | 0.129 | 53 | 322.74 | 0.134 | 26 | 329.59 | 0.332 | 34 |
| 79* | TEHRI | (UKH) | 2.615 | 746.30 | 0.111 | 59 | 775 | 0.76 | 90 | 803 | 1.587 | 110 |
| 80 | MAYURAKSHI | (WB ) | 0.480 | 109.68 | 0.046 | 34 | 111.74 | 0.087 | 33 | 113.22 | 0.126 | 45 |
| 81 | KANGSABATI | (WB ) | 0.914 | 121.34 | -0.002 | -1 | 123.21 | 0.061 | 18 | 129.71 | 0.422 | 94 |
| | Total Storage | | 151.768 | | 13.719 | | | 54.403 | | | 67.775 | |
| | Percentage | | | | 9 | | | 36 | | | 45 | |

## Table 4(B): Storage Position of Important Reservoirs of India at the end of each month during June 2009 to May 2010

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Sep-09 | | | Oct-09 | | | Nov-09 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1* | SRISAILAM | (AP ) | 8.288 | 269.55 | 8.175 | 128 | 269.4 | 8.086 | 120 | 269.38 | 8.074 | 134 |
| 2* | NAGARJUNA SAGAR | (AP ) | 6.841 | 163.46 | 2.623 | 66 | 175.9 | 5.727 | 124 | 170.81 | 4.396 | 120 |
| 3 | SRIRAMSAGAR | (AP ) | 2.300 | 325.74 | -0.123 | -7 | 325.77 | -0.118 | -8 | 325.37 | -0.181 | -17 |
| 4 | SOMASILA | (AP ) | 1.994 | 88.17 | 0.42 | 83 | 97.73 | 1.432 | 178 | 98.27 | 1.533 | 181 |
| 5 | LOWER MANAIR | (AP ) | 0.621 | 267.71 | 0.077 | 24 | 267.63 | 0.075 | 21 | 267.46 | 0.072 | 20 |
| 6 | TENUGHAT | (JHA) | 0.821 | 261.12 | 0.39 | 125 | 261.27 | 0.398 | 125 | 261.15 | 0.393 | 124 |
| 7 | MAITHON | (JHA) | 0.471 | 149.01 | 0.471 | 102 | 148.04 | 0.471 | 102 | 147.32 | 0.471 | 103 |
| 8* | PANCHET HILL | (JHA) | 0.184 | 127.39 | 0.184 | 105 | 126.23 | 0.184 | 106 | 125.71 | 0.184 | 103 |
| 9 | KONAR | (JHA) | 0.176 | 425.20 | 0.165 | 104 | 425.44 | 0.17 | 108 | 424.95 | 0.161 | 112 |
| 10 | TILAIYA | (JHA) | 0.142 | 369.90 | 0.142 | 126 | 369.31 | 0.142 | 127 | 368.61 | 0.134 | 140 |
| 11* | UKAI | (GUJ) | 6.615 | 98.96 | 3.59 | 67 | 98.6 | 3.443 | 69 | 98.26 | 3.309 | 72 |
| 12 | SABARMATI(DHAROI) | (GUJ) | 0.735 | 183.09 | 0.23 | 72 | 182.47 | 0.199 | 67 | 181.15 | 0.142 | 53 |
| 13* | KADANA | (GUJ) | 1.472 | 125.45 | 0.966 | 123 | 124.39 | 0.869 | 117 | 124.16 | 0.85 | 117 |
| 14 | SHETRUNJI | (GUJ) | 0.300 | 53.37 | 0.157 | 91 | 53.27 | 0.152 | 92 | 51.67 | 0.091 | 59 |
| 15 | BHADAR | (GUJ) | 0.188 | 105.00 | 0.086 | 77 | 104.59 | 0.075 | 69 | 103.02 | 0.042 | 46 |
| 16 | DAMANGANGA | (GUJ) | 0.502 | 79.15 | 0.47 | 104 | 79.85 | 0.501 | 105 | 79.8 | 0.499 | 111 |
| 17 | DANTIWADA | (GUJ) | 0.399 | 164.90 | 0.01 | 9 | 164.68 | 0.009 | 9 | 164.3 | 0.007 | 9 |
| 18 | PANAM | (GUJ) | 0.697 | 117.95 | 0.213 | 51 | 116.65 | 0.176 | 44 | 115.7 | 0.151 | 40 |
| 19* | GOBIND SAGAR(BHAKRA) | (HP ) | 6.229 | 499.56 | 4.09 | 79 | 499.54 | 4.088 | 85 | 495.76 | 3.598 | 87 |
| 20* | PONG DAM(BEAS) | (HP ) | 6.157 | 407.99 | 2.661 | 58 | 405.21 | 2.188 | 54 | 402.6 | 1.799 | 53 |
| 21 | KRISHNARAJA SAGARA | (KAR) | 1.163 | 751.99 | 1.098 | 124 | 751.86 | 1.081 | 115 | 752.2 | 1.124 | 143 |
| 22* | TUNGABHADRA | (KAR) | 3.276 | 497.72 | 2.947 | 106 | 497.44 | 2.846 | 108 | 496.28 | 2.437 | 116 |

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## Table 4(B): Storage Position of Important Reservoirs of India at the end of each month during June 2009 to May 2010

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Sep-09 | | | Oct-09 | | | Nov-09 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 23 | GHATAPRABHA(HIDKAL) | (KAR) | 1.391 | 662.95 | 1.387 | 111 | 662.7 | 1.373 | 115 | 659.67 | 1.151 | 124 |
| 24 | BHADRA | (KAR) | 1.785 | 657.75 | 1.785 | 122 | 657.39 | 1.742 | 123 | 657.17 | 1.77 | 134 |
| 25 | LINGANAMAKKI | (KAR) | 4.294 | 553.98 | 4.155 | 124 | 553.6 | 4.038 | 124 | 552.58 | 3.74 | 128 |
| 26 | NARAYANPUR | (KAR) | 0.863 | 492.17 | 0.856 | 112 | 491.5 | 0.767 | 101 | 492.02 | 0.834 | 108 |
| 27 | MALAPRABHA(RENUKA) | (KAR) | 0.972 | 630.63 | 0.606 | 98 | 632.84 | 0.848 | 139 | 632.3 | 0.783 | 169 |
| 28 | KABINI | (KAR) | 0.275 | 694.77 | 0.192 | 96 | 694.26 | 0.169 | 80 | 692.39 | 0.076 | 54 |
| 29 | HEMAVATHY | (KAR) | 0.927 | 890.46 | 0.912 | 134 | 889.15 | 0.799 | 126 | 885.65 | 0.543 | 117 |
| 30 | HARANGI | (KAR) | 0.220 | 871.37 | 0.218 | 121 | 868.92 | 0.151 | 111 | 862.25 | 0.072 | 122 |
| 31 | SUPA | (KAR) | 4.120 | 549.13 | 2.509 | 95 | 549.46 | 2.54 | 98 | 547.56 | 2.367 | 99 |
| 32 | VANI VILAS SAGAR | (KAR) | 0.802 | 637.96 | 0.117 | 70 | 639.73 | 0.159 | 66 | 639.93 | 0.164 | 67 |
| 33* | ALMATTI | (KAR) | 3.105 | 519.60 | 3.051 | 102 | 519.59 | 3.046 | 106 | 519.6 | 3.051 | 135 |
| 34* | GERUSOPPA | (KAR) | 0.130 | 54.55 | 0.127 | 111 | 50.24 | 0.103 | 85 | 53.35 | 0.12 | 103 |
| 35 | KALLADA(PARAPPAR) | (KRL) | 0.507 | 109.80 | 0.359 | 97 | 114.7 | 0.46 | 112 | 115.48 | 0.478 | 116 |
| 36* | IDAMALAYAR | (KRL) | 1.018 | 161.90 | 0.813 | 108 | 162.48 | 0.83 | 108 | 161.5 | 0.802 | 111 |
| 37* | IDUKKI | (KRL) | 1.460 | 721.41 | 0.889 | 94 | 723.75 | 0.998 | 100 | 724.8 | 1.047 | 106 |
| 38* | KAKKI | (KRL) | 0.447 | 978.92 | 0.401 | 125 | 980.9 | 0.437 | 127 | 980.6 | 0.43 | 124 |
| 39* | PERIYAR | (KRL) | 0.173 | 862.11 | 0.074 | 93 | 862.2 | 0.076 | 72 | 866.4 | 0.16 | 152 |
| 40* | GANDHI SAGAR | (MP ) | 6.827 | 388.07 | 1.339 | 57 | 387.88 | 1.298 | 58 | 387.1 | 1.098 | 62 |
| 41 | TAWA | (MP ) | 1.944 | 355.37 | 1.944 | 108 | 355.21 | 1.944 | 109 | 354.73 | 1.918 | 131 |
| 42* | BARGI | (MP ) | 3.180 | 416.45 | 1.63 | 56 | 416.4 | 1.62 | 60 | 416.45 | 1.63 | 74 |
| 43* | BANSAGAR | (MP ) | 5.166 | 330.71 | 1.335 | 107 | 330.06 | 1.181 | 121 | 329.95 | 1.155 | 151 |
| 44* | INDIRA SAGAR | (MP ) | 9.745 | 259.38 | 7.331 | 196 | 259.54 | 7.459 | 224 | 258.85 | 6.918 | 279 |

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## Table 4(B): Storage Position of Important Reservoirs of India at the end of each month during June 2009 to May 2010

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Sep-09 | | | Oct-09 | | | Nov-09 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 45* | MINIMATA BANGO | (CHH) | 3.046 | 350.80 | 1.612 | 70 | 348.4 | 1.335 | 60 | 348.2 | 1.311 | 67 |
| 46 | MAHANADI | (CHH) | 0.767 | 345.32 | 0.48 | 83 | 344.73 | 0.433 | 84 | 344.64 | 0.426 | 81 |
| 47 | JAYAKWADI(PAITHAN) | (MAH) | 2.171 | 458.19 | 0.473 | 33 | 458.33 | 0.502 | 33 | 458.4 | 0.516 | 38 |
| 48* | KOYANA | (MAH) | 2.652 | 658.50 | 2.652 | 103 | 658.55 | 2.652 | 108 | 657.07 | 2.553 | 113 |
| 49 | BHIMA(UJJANI) | (MAH) | 1.517 | 495.26 | 1.025 | 101 | 496.85 | 1.517 | 142 | 497.29 | 1.517 | 157 |
| 50 | ISAPUR | (MAH) | 0.965 | 427.37 | 0.053 | 8 | 427.39 | 0.054 | 8 | 427.23 | 0.048 | 7 |
| 51 | MULA | (MAH) | 0.609 | 546.20 | 0.328 | 65 | 546.31 | 0.332 | 63 | 548.88 | 0.439 | 93 |
| 52 | YELDARI | (MAH) | 0.809 | 449.52 | 0.05 | 11 | 449.79 | 0.057 | 11 | 449.86 | 0.059 | 13 |
| 53 | GIRNA | (MAH) | 0.524 | 387.29 | 0.119 | 37 | 387.48 | 0.124 | 37 | 389.77 | 0.188 | 64 |
| 54 | KHADAKVASLA | (MAH) | 0.056 | 580.34 | 0.029 | 69 | 580.46 | 0.03 | 103 | 580.77 | 0.034 | 136 |
| 55* | UPPER VAITARNA | (MAH) | 0.331 | 600.46 | 0.232 | 73 | 600.61 | 0.236 | 74 | 600.5 | 0.234 | 75 |
| 56 | UPPER TAPI | (MAH) | 0.255 | 214.00 | 0.255 | 113 | 214 | 0.255 | 104 | 214 | 0.255 | 105 |
| 57* | PENCH(TOTLADOH) | (MAH) | 1.091 | 486.83 | 0.825 | 118 | 484.4 | 0.673 | 110 | 483.03 | 0.596 | 121 |
| 58* | HIRAKUD | (ORI) | 5.378 | 189.90 | 4.167 | 84 | 191.01 | 4.799 | 101 | 190.65 | 4.595 | 103 |
| 59* | BALIMELA | (ORI) | 2.676 | 446.20 | 0.568 | 45 | 447.26 | 0.667 | 46 | 449.48 | 0.889 | 65 |
| 60 | SALANADI | (ORI) | 0.558 | 70.62 | 0.221 | 57 | 70.86 | 0.226 | 63 | 67.65 | 0.16 | 45 |
| 61* | RENGALI | (ORI) | 3.432 | 119.98 | 2.269 | 74 | 120.52 | 2.452 | 84 | 120.05 | 2.331 | 97 |
| 62* | MACHKUND(JALAPUT) | (ORI) | 0.893 | 833.20 | 0.517 | 71 | 833.78 | 0.561 | 74 | 832.82 | 0.496 | 72 |
| 63* | UPPER KOLAB | (ORI) | 0.935 | 849.78 | 0.266 | 43 | 849.78 | 0.266 | 42 | 849.46 | 0.25 | 43 |
| 64* | UPPER INDRAVATI | (ORI) | 1.456 | 637.90 | 1.029 | 81 | 637.58 | 0.997 | 82 | 637.1 | 0.951 | 87 |
| 65* | THEIN DAM | (PUN) | 2.344 | 499.03 | 0.574 | 47 | 498.91 | 0.58 | 57 | 500.12 | 0.627 | 74 |
| 66* | MAHI BAJAJ SAGAR | (RAJ) | 1.711 | 274.55 | 1.008 | 89 | 275 | 1.047 | 93 | 272.75 | 0.835 | 85 |

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## Table 4(B): Storage Position of Important Reservoirs of India at the end of each month during June 2009 to May 2010

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Sep-09 | | | Oct-09 | | | Nov-09 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage | Level (m) | Live Storage BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 67 | JHAKAM | (RAJ) | 0.132 | 352.20 | 0.07 | 77 | 352.1 | 0.069 | 76 | 348.95 | 0.049 | 67 |
| 68* | RANA PRATAP SAGAR | (RAJ) | 1.436 | 348.38 | 0.637 | 66 | 347.69 | 0.535 | 60 | 346.3 | 0.338 | 48 |
| 69 | LOWER BHAWANI | (TN ) | 0.792 | 270.93 | 0.358 | 81 | 270.12 | 0.325 | 66 | 276.84 | 0.673 | 129 |
| 70* | METTUR(STANLEY) | (TN ) | 2.647 | 234.79 | 1.847 | 138 | 226.45 | 0.998 | 57 | 232.45 | 1.577 | 91 |
| 71 | VAIGAI | (TN ) | 0.172 | 275.02 | 0.088 | 133 | 276.11 | 0.107 | 99 | 276.94 | 0.126 | 106 |
| 72 | PARAMBIKULAM | (TN ) | 0.380 | 556.15 | 0.377 | 129 | 555.96 | 0.373 | 124 | 556.23 | 0.379 | 128 |
| 73 | ALIYAR | (TN ) | 0.095 | 319.58 | 0.092 | 167 | 319.49 | 0.092 | 161 | 319.86 | 0.094 | 152 |
| 74* | SHOLAYAR | (TN ) | 0.143 | 1002.57 | 0.142 | 120 | 1001.65 | 0.137 | 123 | 1000.18 | 0.13 | 131 |
| 75 | GUMTI | (TRP) | 0.312 | 89.35 | 0.135 | 59 | 89.3 | 0.134 | 60 | 88.34 | 0.102 | 53 |
| 76 | MATATILA | (UP ) | 0.707 | 307.76 | 0.638 | 95 | 308.27 | 0.688 | 108 | 307.03 | 0.559 | 106 |
| 77* | RIHAND | (UP ) | 5.649 | 259.24 | 1.948 | 54 | 258.93 | 1.835 | 53 | 258.66 | 1.733 | 57 |
| 78* | RAMGANGA | (UKH) | 2.196 | 337.70 | 0.622 | 48 | 338.66 | 0.66 | 48 | 339.04 | 0.675 | 49 |
| 79* | TEHRI | (UKH) | 2.615 | 820.00 | 2.206 | 127 | 819.8 | 2.198 | 127 | 817.15 | 2.094 | 130 |
| 80 | MAYURAKSHI | (WB ) | 0.480 | 118.51 | 0.327 | 90 | 113.77 | 0.141 | 41 | 113.37 | 0.129 | 39 |
| 81 | KANGSABATI | (WB ) | 0.914 | 131.08 | 0.524 | 87 | 127.65 | 0.273 | 53 | 126.7 | 0.221 | 42 |
| | Total Storage | | 151.768 | | 89.835 | | | 92.592 | | | 87.782 | |
| | Percentage | | | | 59 | | | 61 | | | 58 | |

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## Table 4(B): Storage Position of Important Reservoirs of India at the end of each month During June 2009 to May 2010

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Dec-09 | | | Jan-10 | | | Feb-10 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage in BCM | Percent-age of normal storage | Level (m) | Live Storage in BCM | Percent-age of normal storage | Level (m) | Live Storage in BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1* | SRISAILAM | (AP ) | 8.288 | 268.20 | 7.383 | 136 | 266.28 | 6.4 | 137 | 261.65 | 4.478 | 124 |
| 2* | NAGARJUNA SAGAR | (AP ) | 6.841 | 168.25 | 3.78 | 136 | 162.18 | 2.437 | 125 | 160.23 | 2.001 | 122 |
| 3 | SRIRAMSAGAR | (AP ) | 2.300 | 324.95 | -0.243 | -33 | 324.06 | -0.375 | -136 | 323.27 | -0.47 | 7833 |
| 4 | SOMASILA | (AP ) | 1.994 | 97.91 | 1.474 | 182 | 96.78 | 1.275 | 187 | 95.84 | 1.132 | 206 |
| 5 | LOWER MANAIR | (AP ) | 0.621 | 267.25 | 0.068 | 17 | 267.87 | 0.08 | 23 | 268.47 | 0.092 | 33 |
| 6 | TENUGHAT | (JHA) | 0.821 | 260.79 | 0.377 | 123 | 260.27 | 0.353 | 121 | 259.95 | 0.34 | 125 |
| 7 | MAITHON | (JHA) | 0.471 | 146.61 | 0.458 | 101 | 145.59 | 0.4 | 91 | 143.92 | 0.315 | 77 |
| 8* | PANCHET HILL | (JHA) | 0.184 | 125.5 | 0.184 | 101 | 124.99 | 0.184 | 101 | 123.57 | 0.12 | 81 |
| 9 | KONAR | (JHA) | 0.176 | 424.28 | 0.149 | 114 | 423.44 | 0.135 | 117 | 422.7 | 0.123 | 119 |
| 10 | TILAIYA | (JHA) | 0.142 | 368.2 | 0.121 | 181 | 367.51 | 0.098 | 233 | 366.26 | 0.059 | 211 |
| 11* | UKAI | (GUJ) | 6.615 | 97.33 | 2.943 | 71 | 96.44 | 2.621 | 72 | 95.05 | 2.138 | 67 |
| 12 | SABARMATI(DHAROI) | (GUJ) | 0.735 | 179.74 | 0.091 | 41 | 178.98 | 0.068 | 37 | 178.34 | 0.051 | 35 |
| 13* | KADANA | (GUJ) | 1.472 | 124.13 | 0.848 | 119 | 123.55 | 0.798 | 116 | 123.09 | 0.76 | 117 |
| 14 | SHETRUNJI | (GUJ) | 0.300 | 51.12 | 0.076 | 54 | 50.02 | 0.052 | 47 | 48.77 | 0.032 | 37 |
| 15 | BHADAR | (GUJ) | 0.188 | 102.59 | 0.036 | 56 | 102.14 | 0.03 | 70 | 101.74 | 0.024 | 83 |
| 16 | DAMANGANGA | (GUJ) | 0.502 | 79.35 | 0.478 | 115 | 78.4 | 0.439 | 121 | 77.45 | 0.4 | 121 |
| 17 | DANTIWADA | (GUJ) | 0.399 | 164.07 | 0.006 | 11 | 163.84 | 0.006 | 16 | 163.6 | 0.005 | 18 |
| 18 | PANAM | (GUJ) | 0.697 | 113.95 | 0.109 | 31 | 111.6 | 0.072 | 23 | 108.6 | 0.026 | 9 |
| 19* | GOBIND SAGAR(BHAKRA) | (HP ) | 6.229 | 490.19 | 2.931 | 89 | 482.51 | 2.127 | 86 | 473.31 | 1.38 | 76 |
| 20* | PONG DAM(BEAS) | (HP ) | 6.157 | 398.25 | 1.217 | 43 | 395.53 | 0.912 | 38 | 395.91 | 0.95 | 47 |
| 21 | KRISHNARAJA SAGARA | (KAR) | 1.163 | 751.87 | 1.083 | 159 | 750.83 | 0.957 | 182 | 748.77 | 0.736 | 201 |
| 22* | TUNGABHADRA | (KAR) | 3.276 | 494.81 | 1.954 | 127 | 492.55 | 1.373 | 141 | 489.65 | 0.832 | 144 |

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## Table 4(B): Storage Position of Important Reservoirs of India at the end of each month During June 2009 to May 2010

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Dec-09 | | | Jan-10 | | | Feb-10 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage in BCM | Percent-age of normal storage | Level (m) | Live Storage in BCM | Percent-age of normal storage | Level (m) | Live Storage in BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 23 | GHATAPRABHA(HIDKAL) | (KAR) | 1.391 | 655.67 | 0.876 | 140 | 650.54 | 0.622 | 171 | 646.13 | 0.428 | 224 |
| 24 | BHADRA | (KAR) | 1.785 | 657.66 | 1.773 | 135 | 656.87 | 1.683 | 147 | 654.86 | 1.462 | 159 |
| 25 | LINGANAMAKKI | (KAR) | 4.294 | 550.98 | 3.297 | 129 | 548.91 | 2.778 | 130 | 546.83 | 2.315 | 132 |
| 26 | NARAYANPUR | (KAR) | 0.863 | 491.74 | 0.798 | 104 | 491.84 | 0.812 | 112 | 491.98 | 0.83 | 134 |
| 27 | MALAPRABHA(RENUKA) | (KAR) | 0.972 | 630.35 | 0.58 | 206 | 628.66 | 0.433 | 283 | 626.57 | 0.281 | 380 |
| 28 | KABINI | (KAR) | 0.275 | 692.51 | 0.082 | 69 | 693.2 | 0.116 | 91 | 692.4 | 0.076 | 87 |
| 29 | HEMAVATHY | (KAR) | 0.927 | 880.68 | 0.264 | 93 | 878.17 | 0.163 | 62 | 877.42 | 0.135 | 61 |
| 30 | HARANGI | (KAR) | 0.220 | 856.28 | 0.03 | 158 | 857.87 | 0.04 | 167 | 858.24 | 0.043 | 187 |
| 31 | SUPA | (KAR) | 4.120 | 545.65 | 2.201 | 105 | 543.18 | 2 | 109 | 539.56 | 1.729 | 112 |
| 32 | VANI VILAS SAGAR | (KAR) | 0.802 | 639.13 | 0.16 | 67 | 639.59 | 0.156 | 71 | 638.13 | 0.12 | 61 |
| 33* | ALMATTI | (KAR) | 3.105 | 518.70 | 2.622 | 159 | 517.25 | 2.029 | 185 | 514.82 | 1.276 | 196 |
| 34* | GERUSOPPA | (KAR) | 0.130 | 52.01 | 0.118 | 104 | 51.33 | 0.109 | 103 | 50.3 | 0.103 | 94 |
| 35 | KALLADA(PARAPPAR) | (KRL) | 0.507 | 115.56 | 0.481 | 124 | 112.15 | 0.406 | 116 | 107.85 | 0.32 | 110 |
| 36* | IDAMALAYAR | (KRL) | 1.018 | 159.26 | 0.739 | 116 | 155.56 | 0.646 | 118 | 150.02 | 0.515 | 114 |
| 37* | IDUKKI | (KRL) | 1.460 | 723.38 | 0.981 | 109 | 720.83 | 0.862 | 112 | 717.26 | 0.709 | 113 |
| 38* | KAKKI | (KRL) | 0.447 | 978.05 | 0.388 | 124 | 975.35 | 0.348 | 128 | 972.58 | 0.312 | 133 |
| 39* | PERIYAR | (KRL) | 0.173 | 862.99 | 0.09 | 108 | 860.37 | 0.045 | 85 | 859 | 0.024 | 60 |
| 40* | GANDHI SAGAR | (MP ) | 6.827 | 385.47 | 0.738 | 54 | 383.66 | 0.385 | 39 | 383.25 | 0.315 | 44 |
| 41 | TAWA | (MP ) | 1.944 | 353.51 | 1.692 | 154 | 351.04 | 1.302 | 180 | 348.2 | 0.946 | 201 |
| 42* | BARGI | (MP ) | 3.180 | 416.00 | 1.54 | 91 | 415.15 | 1.379 | 105 | 414.3 | 1.238 | 120 |
| 43* | BANSAGAR | (MP ) | 5.166 | 329.61 | 1.074 | 169 | 328.38 | 0.812 | 173 | 328 | 0.735 | 196 |
| 44* | INDIRA SAGAR | (MP ) | 9.745 | 256.98 | 5.589 | 299 | 254.02 | 3.845 | 286 | 252.12 | 2.925 | 262 |

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## Table 4(B): Storage Position of Important Reservoirs of India at the end of each month During June 2009 to May 2010

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Dec-09 | | | Jan-10 | | | Feb-10 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage in BCM | Percent-age of normal storage | Level (m) | Live Storage in BCM | Percent-age of normal storage | Level (m) | Live Storage in BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 45* | MINIMATA BANGO | (CHH) | 3.046 | 348.10 | 1.299 | 71 | 347.75 | 1.259 | 75 | 347.35 | 1.216 | 79 |
| 46 | MAHANADI | (CHH) | 0.767 | 344.3 | 0.401 | 75 | 343.88 | 0.375 | 75 | 343.55 | 0.355 | 75 |
| 47 | JAYAKWADI(PAITHAN) | (MAH) | 2.171 | 458.13 | 0.462 | 37 | 457.36 | 0.306 | 29 | 456.95 | 0.233 | 25 |
| 48* | KOYANA | (MAH) | 2.652 | 656.08 | 2.435 | 120 | 654.69 | 2.292 | 126 | 653.42 | 2.186 | 138 |
| 49 | BHIMA(UJJANI) | (MAH) | 1.517 | 497.02 | 1.517 | 189 | 496.85 | 1.517 | 246 | 496.16 | 1.302 | 291 |
| 50 | ISAPUR | (MAH) | 0.965 | 427.10 | 0.043 | 7 | 426.96 | 0.037 | 7 | 426.64 | 0.025 | 6 |
| 51 | MULA | (MAH) | 0.609 | 548.90 | 0.44 | 113 | 546.83 | 0.352 | 111 | 545.71 | 0.309 | 126 |
| 52 | YELDARI | (MAH) | 0.809 | 451.38 | 0.111 | 28 | 450.33 | 0.072 | 22 | 449.35 | 0.045 | 17 |
| 53 | GIRNA | (MAH) | 0.524 | 390.06 | 0.196 | 81 | 389.93 | 0.193 | 104 | 389.25 | 0.174 | 123 |
| 54 | KHADAKVASLA | (MAH) | 0.056 | 580.49 | 0.031 | 172 | 580.4 | 0.03 | 214 | 580.49 | 0.031 | 238 |
| 55* | UPPER VAITARNA | (MAH) | 0.331 | 600.35 | 0.231 | 79 | 599.42 | 0.205 | 80 | 598.32 | 0.173 | 83 |
| 56 | UPPER TAPI | (MAH) | 0.255 | 213.91 | 0.249 | 119 | 213.44 | 0.221 | 123 | 212.82 | 0.186 | 123 |
| 57* | PENCH(TOTLADOH) | (MAH) | 1.091 | 482.55 | 0.57 | 144 | 480.54 | 0.47 | 125 | 478.8 | 0.392 | 151 |
| 58* | HIRAKUD | (ORI) | 5.378 | 190.41 | 4.459 | 108 | 189.77 | 4.097 | 117 | 188.63 | 3.457 | 114 |
| 59* | BALIMELA | (ORI) | 2.676 | 449.03 | 0.843 | 69 | 450.34 | 0.984 | 100 | 448.64 | 0.804 | 103 |
| 60 | SALANADI | (ORI) | 0.558 | 67.34 | 0.155 | 46 | 66.08 | 0.133 | 47 | 65.46 | 0.123 | 50 |
| 61* | RENGALI | (ORI) | 3.432 | 119.56 | 2.164 | 92 | 119.39 | 2.108 | 109 | 118.95 | 1.966 | 116 |
| 62* | MACHKUND(JALAPUT) | (ORI) | 0.893 | 831.50 | 0.421 | 63 | 829.5 | 0.321 | 55 | 827.17 | 0.225 | 45 |
| 63* | UPPER KOLAB | (ORI) | 0.935 | 849.44 | 0.249 | 47 | 849.42 | 0.248 | 54 | 848.9 | 0.223 | 56 |
| 64* | UPPER INDRAVATI | (ORI) | 1.456 | 637.22 | 0.962 | 97 | 636.78 | 0.919 | 105 | 635.68 | 0.812 | 110 |
| 65* | THEIN DAM | (PUN) | 2.344 | 499.51 | 0.604 | 92 | 497.77 | 0.536 | 123 | 498.75 | 0.574 | 146 |
| 66* | MAHI BAJAJ SAGAR | (RAJ) | 1.711 | 270.05 | 0.603 | 78 | 267.2 | 0.399 | 65 | 262.9 | 0.16 | 34 |

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## Table 4(B): Storage Position of Important Reservoirs of India at the end of each month During June 2009 to May 2010

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Dec-09 | | | Jan-10 | | | Feb-10 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage in BCM | Percent-age of normal storage | Level (m) | Live Storage in BCM | Percent-age of normal storage | Level (m) | Live Storage in BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 67 | JHAKAM | (RAJ) | 0.132 | 344.65 | 0.029 | 55 | 338.1 | 0.01 | 29 | 337.9 | 0.01 | 50 |
| 68* | RANA PRATAP SAGAR | (RAJ) | 1.436 | 345.54 | 0.228 | 33 | 345.53 | 0.226 | 37 | 345.63 | 0.238 | 42 |
| 69 | LOWER BHAWANI | (TN ) | 0.792 | 275.65 | 0.599 | 129 | 274.48 | 0.532 | 148 | 273.31 | 0.47 | 155 |
| 70* | METTUR(STANLEY) | (TN ) | 2.647 | 232.40 | 1.572 | 100 | 227.66 | 1.103 | 97 | 226.99 | 1.045 | 96 |
| 71 | VAIGAI | (TN ) | 0.172 | 274.74 | 0.083 | 97 | 271.63 | 0.043 | 78 | 269.02 | 0.022 | 42 |
| 72 | PARAMBIKULAM | (TN ) | 0.380 | 555.6 | 0.366 | 137 | 553.99 | 0.332 | 153 | 552.28 | 0.298 | 176 |
| 73 | ALIYAR | (TN ) | 0.095 | 315.07 | 0.075 | 150 | 313.75 | 0.056 | 187 | 313.85 | 0.057 | 285 |
| 74* | SHOLAYAR | (TN ) | 0.143 | 985.92 | 0.069 | 103 | 969.47 | 0.023 | 70 | 962.65 | 0.011 | 52 |
| 75 | GUMTI | (TRP) | 0.312 | 87.70 | 0.083 | 51 | 86.2 | 0.042 | 32 | 85.47 | 0.027 | 25 |
| 76 | MATATILA | (UP ) | 0.707 | 307.21 | 0.578 | 146 | 306.96 | 0.552 | 179 | 306.75 | 0.531 | 221 |
| 77* | RIHAND | (UP ) | 5.649 | 258.05 | 1.51 | 58 | 257.19 | 1.22 | 55 | 256.61 | 1.025 | 54 |
| 78* | RAMGANGA | (UKH) | 2.196 | 336.30 | 0.567 | 50 | 332.61 | 0.433 | 44 | 331.82 | 0.406 | 50 |
| 79* | TEHRI | (UKH) | 2.615 | 810.45 | 1.845 | 133 | 797.75 | 1.415 | 137 | 783.9 | 0.999 | 142 |
| 80 | MAYURAKSHI | (WB ) | 0.480 | 113.29 | 0.127 | 38 | 113.1 | 0.122 | 39 | 112.93 | 0.117 | 51 |
| 81 | KANGSABATI | (WB ) | 0.914 | 126.70 | 0.221 | 52 | 124.59 | 0.113 | 35 | 124.59 | 0.113 | 50 |
| | Total Storage | | 151.768 | | 78.033 | | | 64.709 | | | 52.701 | |
| | Percentage | | | | 51 | | | 43 | | | 35 | |

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## Table 4(B): Storage Position of Important Reservoirs of India at the end of each month during June 2009 to May 2010

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Mar-10 | | | Apr-10 | | | May-10 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage in BCM | Percent-age of normal storage | Level (m) | Live Storage in BCM | Percent-age of normal storage | Level (m) | Live Storage in BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1* | SRISAILAM | (AP ) | 8.288 | 253.88 | 2.410 | 103 | 247.25 | 1.490 | 103 | 245.03 | 1.246 | 111 |
| 2* | NAGARJUNA SAGAR | (AP ) | 6.841 | 157.86 | 1.568 | 117 | 157.61 | 1.520 | 116 | 158.64 | 1.719 | 121 |
| 3 | SRIRAMSAGAR | (AP ) | 2.300 | 320.95 | -0.651 | 186 | 319.86 | -0.707 | 133 | 319.28 | 0.732 | 132 |
| 4 | SOMASILA | (AP ) | 1.994 | 95.08 | 1.033 | 231 | 94.09 | 0.910 | 249 | 91.95 | 0.673 | 283 |
| 5 | LOWER MANAIR | (AP ) | 0.621 | 268.19 | 0.087 | 44 | 267.98 | 0.082 | 52 | 267.20 | 0.068 | 46 |
| 6 | TENUGHAT | (JHA) | 0.821 | 257.68 | 0.249 | 96 | 256.82 | 0.218 | 93 | 256.02 | 0.192 | 70 |
| 7 | MAITHON | (JHA) | 0.471 | 142.23 | 0.241 | 70 | 138.16 | 0.099 | 50 | 137.00 | 0.071 | 51 |
| 8* | PANCHET HILL | (JHA) | 0.184 | 123.14 | 0.103 | 137 | 120.57 | 0.025 | 125 | 119.92 | 0.009 | 43 |
| 9 | KONAR | (JHA) | 0.176 | 421.74 | 0.109 | 131 | 419.53 | 0.077 | 107 | 418.08 | 0.060 | 120 |
| 10 | TILAIYA | (JHA) | 0.142 | 364.30 | 0.016 | 123 | 364.06 | 0.012 | 120 | 363.90 | 0.008 | 114 |
| 11* | UKAI | (GUJ) | 6.615 | 93.40 | 1.745 | 67 | 91.57 | 1.362 | 71 | 88.75 | 0.843 | 65 |
| 12 | SABARMATI(DHAROI) | (GUJ) | 0.735 | 177.87 | 0.039 | 32 | 177.39 | 0.029 | 29 | 176.84 | 0.018 | 21 |
| 13* | KADANA | (GUJ) | 1.472 | 122.68 | 0.727 | 121 | 121.57 | 0.639 | 116 | 120.65 | 0.573 | 118 |
| 14 | SHETRUNJI | (GUJ) | 0.300 | 48.52 | 0.029 | 57 | 48.07 | 0.023 | 144 | 47.52 | 0.017 | 283 |
| 15 | BHADAR | (GUJ) | 0.188 | 101.19 | 0.018 | 75 | 100.40 | 0.012 | 60 | 99.45 | 0.006 | 33 |
| 16 | DAMANGANGA | (GUJ) | 0.502 | 76.30 | 0.355 | 123 | 74.55 | 0.294 | 123 | 68.15 | 0.123 | 95 |
| 17 | DANTIWADA | (GUJ) | 0.399 | 163.25 | 0.004 | 20 | 162.91 | 0.003 | 30 | 162.38 | 0.001 | 50 |
| 18 | PANAM | (GUJ) | 0.697 | 108.00 | 0.018 | 7 | 107.85 | 0.017 | 9 | 107.65 | 0.016 | 10 |
| 19* | GOBIND SAGAR(BHAKRA) | (HP ) | 6.229 | 462.72 | 0.731 | 63 | 463.18 | 0.753 | 83 | 462.44 | 0.717 | 67 |
| 20* | PONG DAM(BEAS) | (HP ) | 6.157 | 395.45 | 0.904 | 54 | 395.46 | 0.905 | 59 | 393.37 | 0.690 | 65 |
| 21 | KRISHNARAJA SAGARA | (KAR) | 1.163 | 746.09 | 0.497 | 234 | 743.44 | 0.306 | 255 | 739.95 | 0.116 | 215 |
| 22* | TUNGABHADRA | (KAR) | 3.276 | 483.93 | 0.247 | 143 | 479.61 | 0.064 | 83 | 481.37 | 0.121 | 138 |

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## Table 4(B): Storage Position of Important Reservoirs of India at the end of each month during June 2009 to May 2010

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Mar-10 | | | Apr-10 | | | May-10 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage in BCM | Percent-age of normal storage | Level (m) | Live Storage in BCM | Percent-age of normal storage | Level (m) | Live Storage in BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 23 | GHATAPRABHA(HIDKAL) | (KAR) | 1.391 | 641.65 | 0.263 | 216 | 638.06 | 0.159 | 209 | 634.92 | 0.089 | 287 |
| 24 | BHADRA | (KAR) | 1.785 | 652.22 | 1.192 | 177 | 649.22 | 0.922 | 216 | 646.39 | 0.702 | 275 |
| 25 | LINGANAMAKKI | (KAR) | 4.294 | 543.50 | 1.700 | 132 | 539.82 | 1.162 | 134 | 536.74 | 0.702 | 136 |
| 26 | NARAYANPUR | (KAR) | 0.863 | 490.02 | 0.594 | 121 | 487.03 | 0.306 | 94 | 487.62 | 0.356 | 123 |
| 27 | MALAPRABHA(RENUKA) | (KAR) | 0.972 | 625.48 | 0.215 | 430 | 624.87 | 0.187 | 505 | 624.51 | 0.168 | 600 |
| 28 | KABINI | (KAR) | 0.275 | 690.82 | 0.006 | 15 | 689.70 | 0.000 | 0 | 688.31 | 0.000 | 0 |
| 29 | HEMAVATHY | (KAR) | 0.927 | 876.09 | 0.090 | 60 | 874.61 | 0.054 | 62 | 874.22 | 0.044 | 113 |
| 30 | HARANGI | (KAR) | 0.220 | 856.59 | 0.032 | 168 | 855.03 | 0.021 | 117 | 855.63 | 0.026 | 163 |
| 31 | SUPA | (KAR) | 4.120 | 533.49 | 1.311 | 108 | 527.34 | 0.943 | 100 | 522.65 | 0.709 | 103 |
| 32 | VANI VILAS SAGAR | (KAR) | 0.802 | 637.93 | 0.116 | 64 | 636.54 | 0.085 | 50 | 637.08 | 0.095 | 61 |
| 33* | ALMATTI | (KAR) | 3.105 | 512.40 | 0.756 | 402 | 511.86 | 0.660 | 1158 | 510.99 | 0.515 | 1256 |
| 34* | GERUSOPPA | (KAR) | 0.130 | 48.49 | 0.094 | 82 | 50.20 | 0.103 | 84 | 53.00 | 0.118 | 107 |
| 35 | KALLADA(PARAPPAR) | (KRL) | 0.507 | 101.30 | 0.207 | 98 | 97.03 | 0.151 | 99 | 93.94 | 0.116 | 97 |
| 36* | IDAMALAYAR | (KRL) | 1.018 | 142.62 | 0.360 | 105 | 135.66 | 0.230 | 91 | 128.20 | 0.123 | 73 |
| 37* | IDUKKI | (KRL) | 1.460 | 712.26 | 0.512 | 107 | 708.94 | 0.396 | 120 | 704.91 | 0.266 | 125 |
| 38* | KAKKI | (KRL) | 0.447 | 965.81 | 0.235 | 131 | 957.83 | 0.164 | 125 | 948.23 | 0.101 | 117 |
| 39* | PERIYAR | (KRL) | 0.173 | 858.72 | 0.021 | 47 | 858.94 | 0.024 | 45 | 859.15 | 0.027 | 47 |
| 40* | GANDHI SAGAR | (MP ) | 6.827 | 382.92 | 0.263 | 51 | 382.36 | 0.181 | 47 | 381.82 | 0.106 | 34 |
| 41 | TAWA | (MP ) | 1.944 | 347.38 | 0.851 | 242 | 347.20 | 0.835 | 246 | 346.95 | 0.814 | 244 |
| 42* | BARGI | (MP ) | 3.180 | 412.95 | 1.081 | 140 | 410.35 | 0.717 | 138 | 407.85 | 0.436 | 151 |
| 43* | BANSAGAR | (MP ) | 5.166 | 327.58 | 0.651 | 213 | 326.54 | 0.441 | 255 | 325.41 | 0.273 | 276 |
| 44* | INDIRA SAGAR | (MP ) | 9.745 | 249.57 | 1.883 | 199 | 247.14 | 1.104 | 163 | 245.74 | 0.692 | 171 |

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## Table 4(B): Storage Position of Important Reservoirs of India at the end of each month during June 2009 to May 2010

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Mar-10 | | | Apr-10 | | | May-10 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage in BCM | Percent-age of normal storage | Level (m) | Live Storage in BCM | Percent-age of normal storage | Level (m) | Live Storage in BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 45* | MINIMATA BANGO | (CHH) | 3.046 | 346.85 | 1.167 | 85 | 346.05 | 1.109 | 94 | 344.25 | 0.874 | 85 |
| 46 | MAHANADI | (CHH) | 0.767 | 343.18 | 0.331 | 76 | 341.70 | 0.240 | 65 | 340.52 | 0.179 | 56 |
| 47 | JAYAKWADI(PAITHAN) | (MAH) | 2.171 | 456.48 | 0.154 | 20 | 455.96 | 0.072 | 12 | 455.65 | 0.018 | 4 |
| 48* | KOYANA | (MAH) | 2.652 | 650.16 | 1.917 | 147 | 643.00 | 1.340 | 136 | 635.84 | 0.855 | 119 |
| 49 | BHIMA(UJJANI) | (MAH) | 1.517 | 494.82 | 0.897 | 410 | 493.87 | 0.630 | 2739 | 492.42 | 0.293 | 113 |
| 50 | ISAPUR | (MAH) | 0.965 | 426.27 | 0.010 | 3 | 426.01 | 0.000 | 0 | 424.30 | -0.057 | -25 |
| 51 | MULA | (MAH) | 0.609 | 544.80 | 0.276 | 142 | 540.41 | 0.138 | 111 | 536.75 | 0.052 | 133 |
| 52 | YELDARI | (MAH) | 0.809 | 449.24 | 0.042 | 22 | 445.93 | -0.026 | -25 | 445.61 | -0.030 | -56 |
| 53 | GIRNA | (MAH) | 0.524 | 388.05 | 0.140 | 132 | 387.16 | 0.115 | 142 | 385.55 | 0.075 | 132 |
| 54 | KHADAKVASLA | (MAH) | 0.056 | 580.00 | 0.025 | 278 | 578.39 | 0.009 | 112 | 577.96 | 0.006 | 67 |
| 55* | UPPER VAITARNA | (MAH) | 0.331 | 596.72 | 0.135 | 82 | 595.23 | 0.098 | 82 | 593.80 | 0.071 | 84 |
| 56 | UPPER TAPI | (MAH) | 0.255 | 212.20 | 0.157 | 134 | 211.33 | 0.117 | 154 | 209.94 | 0.060 | 200 |
| 57* | PENCH(TOTLADOH) | (MAH) | 1.091 | 476.92 | 0.316 | 170 | 473.41 | 0.199 | 154 | 469.35 | 0.091 | 97 |
| 58* | HIRAKUD | (ORI) | 5.378 | 187.89 | 2.506 | 114 | 185.01 | 1.633 | 117 | 183.80 | 1.143 | 188 |
| 59* | BALIMELA | (ORI) | 2.676 | 447.13 | 0.656 | 140 | 445.37 | 0.496 | 141 | 443.03 | 0.300 | 390 |
| 60 | SALANADI | (ORI) | 0.558 | 65.72 | 0.110 | 61 | 63.19 | 0.088 | 57 | 63.16 | 0.088 | 66 |
| 61* | RENGALI | (ORI) | 3.432 | 117.23 | 1.493 | 118 | 115.00 | 0.972 | 121 | 113.09 | 0.581 | 270 |
| 62* | MACHKUND(JALAPUT) | (ORI) | 0.893 | 824.56 | 0.137 | 34 | 821.86 | 0.064 | 20 | 819.24 | 0.013 | 6 |
| 63* | UPPER KOLAB | (ORI) | 0.935 | 848.26 | 0.192 | 64 | 846.93 | 0.127 | 63 | 846.30 | 0.096 | 83 |
| 64* | UPPER INDRAVATI | (ORI) | 1.456 | 633.76 | 0.644 | 117 | 630.95 | 0.413 | 111 | 628.23 | 0.216 | 93 |
| 65* | THEIN DAM | (PUN) | 2.344 | 497.84 | 0.539 | 109 | 497.83 | 0.539 | 75 | 500.46 | 0.644 | 79 |
| 66* | MAHI BAJAJ SAGAR | (RAJ) | 1.711 | 261.50 | 0.098 | 28 | 261.40 | 0.094 | 34 | 261.10 | 0.081 | 39 |

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## Table 4(B): Storage Position of Important Reservoirs of India at the end of each month during June 2009 to May 2010

| Sl. No. | Name of Reservoirs | Location | Live Capacity at FRL in BCM | Mar-10 | | | Apr-10 | | | May-10 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Level (m) | Live Storage in BCM | Percent-age of normal storage | Level (m) | Live Storage in BCM | Percent-age of normal storage | Level (m) | Live Storage in BCM | Percent-age of normal storage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 67 | JHAKAM | (RAJ) | 0.132 | 337.65 | 0.010 | 62 | 337.35 | 0.009 | 56 | 337.05 | 0.008 | 57 |
| 68* | RANA PRATAP SAGAR | (RAJ) | 1.436 | 345.93 | 0.284 | 52 | 345.62 | 0.239 | 43 | 345.62 | 0.238 | 45 |
| 69 | LOWER BHAWANI | (TN ) | 0.792 | 271.04 | 0.363 | 134 | 269.08 | 0.285 | 133 | 268.84 | 0.276 | 116 |
| 70* | METTUR(STANLEY) | (TN ) | 2.647 | 226.14 | 0.973 | 91 | 226.26 | 0.983 | 92 | 227.37 | 1.077 | 98 |
| 71 | VAIGAI | (TN ) | 0.172 | 267.82 | 0.015 | 26 | 266.54 | 0.010 | 18 | 266.64 | 0.011 | 22 |
| 72 | PARAMBIKULAM | (TN ) | 0.380 | 548.82 | 0.231 | 194 | 545.19 | 0.165 | 201 | 541.16 | 0.097 | 139 |
| 73 | ALIYAR | (TN ) | 0.095 | 313.40 | 0.055 | 275 | 314.91 | 0.063 | 242 | 312.88 | 0.052 | 217 |
| 74* | SHOLAYAR | (TN ) | 0.143 | 961.60 | 0.009 | 64 | 961.40 | 0.009 | 100 | 960.47 | 0.007 | 64 |
| 75 | GUMTI | (TRP) | 0.312 | 81.35 | 0.000 | 0 | 82.99 | 0.000 | 0 | 84.20 | 0.007 | 10 |
| 76 | MATATILA | (UP ) | 0.707 | 307.85 | 0.647 | 252 | 307.09 | 0.575 | 229 | 304.98 | 0.373 | 244 |
| 77* | RIHAND | (UP ) | 5.649 | 255.67 | 0.749 | 52 | 254.54 | 0.426 | 41 | 253.96 | 0.262 | 41 |
| 78* | RAMGANGA | (UKH) | 2.196 | 328.10 | 0.285 | 48 | 323.68 | 0.159 | 34 | 321.82 | 0.112 | 40 |
| 79* | TEHRI | (UKH) | 2.615 | 764.60 | 0.504 | 135 | 748.90 | 0.163 | 116 | 743.35 | 0.054 | 61 |
| 80 | MAYURAKSHI | (WB ) | 0.480 | 111.92 | 0.092 | 63 | 110.76 | 0.066 | 106 | 110.54 | 0.062 | 64 |
| 81 | KANGSABATI | (WB ) | 0.914 | 122.28 | 0.026 | 23 | 122.01 | 0.016 | 36 | 121.80 | 0.010 | 23 |
| | Total Storage | | 151.768 | | 39.097 | | | 28.613 | | | 22.792 | |
| | Percentage | | | | 26 | | | 19 | | | 15 | |

Source : Central Water Commission (WM Directorate)

**FRL** : Full Reservoir Level, BCM: Billion Cubic Metre, m : Metre * : Hydel Power Project having capcity more than 60 M.Watt.

**Note** : 1. Position at the 'End of the month ' refers to the position as on last Day of the month

2. Col 7 refers to Percentage of this year's live storage to average of the last ten year's storage

## Table 5: Basin-wise Number of Hydrological Observation Stations by type

| S. No. | River/Basin | STATE | G | GD | GDQ | GDS | GDSQ | GQ | Sub Total | Sg |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1 | Brahmani-Baitarni | Jharkhand | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| | Basin | Orissa | 6 | 1 | 0 | 0 | 7 | 0 | 14 | 0 |
| | | SubTotal | 6 | 1 | 0 | 0 | 8 | 0 | 15 | 0 |
| 2 | Cauvery Basin | Karnataka | 0 | 0 | 8 | 0 | 5 | 0 | 13 | 0 |
| | | Kerala | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| | | Puducherry | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 |
| | | Tamil Nadu | 0 | 0 | 9 | 0 | 9 | 0 | 18 | 0 |
| | | SubTotal | 0 | 0 | 19 | 0 | 15 | 0 | 34 | 0 |
| 3 | East flowing rivers | Andhra Pradesh | 1 | 1 | 0 | 0 | 2 | 0 | 4 | 0 |
| | between Mahanadi and | Orissa | 6 | 1 | 0 | 0 | 2 | 0 | 9 | 0 |
| | Pennar | SubTotal | 7 | 2 | 0 | 0 | 4 | 0 | 13 | 0 |
| 4 | East flowing rivers | Andhra pradesh | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 |
| | between Pennar and | Puducherry | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| | Kanyakumari | Tamil Nadu | 0 | 0 | 9 | 0 | 5 | 0 | 14 | 0 |
| | | SubTotal | 0 | 0 | 12 | 0 | 5 | 0 | 17 | 1 |
| 5 | Ganga/ | Arunachal Pradesh | 12 | 4 | 2 | 2 | 0 | 4 | 24 | 0 |
| | Brahamputra/ | Assam | 28 | 2 | 7 | 3 | 16 | 17 | 73 | 0 |
| | Meghna/ Barak Basin | Bihar | 34 | 4 | 4 | 1 | 14 | 0 | 57 | 0 |
| | | Chhattisgarh | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| | | Delhi | 0 | 1 | 1 | 0 | 1 | 0 | 3 | 0 |
| | | Haryana | 1 | 3 | 0 | 0 | 1 | 0 | 5 | 0 |
| | | Himanchal Pradesh | 1 | 0 | 2 | 0 | 0 | 0 | 3 | 5 |
| | | Jharkhand | 8 | 11 | 2 | 0 | 2 | 1 | 24 | 0 |
| | | Madhya Pradesh | 0 | 10 | 3 | 0 | 7 | 0 | 20 | 0 |
| | | Manipur | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| | | Meghalaya | 1 | 0 | 5 | 1 | 0 | 0 | 7 | 0 |
| | | Mizoram | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 |
| | | Rajasthan | 0 | 6 | 1 | 0 | 6 | 0 | 13 | 0 |
| | | Sikkim | 6 | 2 | 0 | 7 | 0 | 0 | 15 | 2 |
| | | Tripura | 4 | 4 | 0 | 5 | 0 | 0 | 13 | 0 |
| | | Uttar Pradesh | 36 | 10 | 13 | 0 | 32 | 2 | 93 | 0 |
| | | Uttarakhand | 12 | 10 | 3 | 5 | 4 | 0 | 34 | 5 |
| | | West Bengal | 19 | 12 | 6 | 2 | 18 | 0 | 57 | 0 |
| | | SubTotal | 164 | 81 | 49 | 39 | 101 | 24 | 445 | 13 |

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## Table 5: Basin-wise Number of Hydrological Observation Stations by type

| S. No. | River/Basin | STATE | G | GD | GDQ | GDS | GDSQ | GQ | Sub Total | Sg |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 6 | Godavari Basin | Andhra Pradesh | 11 | 3 | 1 | 0 | 5 | 0 | 20 | 0 |
| | | Chhattisgarh | 1 | 6 | 0 | 0 | 3 | 0 | 10 | 0 |
| | | Karnataka | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| | | Madhya Pradesh | 1 | 4 | 0 | 0 | 0 | 0 | 5 | 0 |
| | | Marharashtra | 12 | 9 | 1 | 1 | 12 | 1 | 36 | 0 |
| | | Orissa | 0 | 4 | 0 | 0 | 1 | 0 | 5 | 0 |
| | | SubTotal | 25 | 26 | 2 | 1 | 22 | 1 | 77 | 0 |
| 7 | Indus Basin | Himachal Pradesh | 4 | 4 | 0 | 1 | 2 | 0 | 11 | 4 |
| | | Jammu & Kashmir | 3 | 4 | 3 | 1 | 4 | 0 | 15 | 19 |
| | | SubTotal | 7 | 8 | 3 | 2 | 6 | 0 | 26 | 23 |
| 8 | Krishna Basin | Andhra Pradesh | 7 | 2 | 4 | 0 | 2 | 1 | 16 | 0 |
| | | Karnataka | 8 | 4 | 5 | 0 | 8 | 0 | 25 | 0 |
| | | Maharashtra | 1 | 7 | 1 | 0 | 3 | 0 | 12 | 0 |
| | | SubTotal | 16 | 13 | 10 | 0 | 13 | 1 | 53 | 0 |
| 9 | Mahanadi Basin | Chhattisgarh | 6 | 2 | 1 | 0 | 12 | 0 | 21 | 0 |
| | | Orissa | 12 | 1 | 0 | 0 | 5 | 0 | 18 | 0 |
| | | SubTotal | 18 | 3 | 1 | 0 | 17 | 0 | 39 | 0 |
| 10 | Mahi Basin | Gujarat | 3 | 1 | 0 | 0 | 1 | 0 | 5 | 0 |
| | | Madhya Pradesh | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| | | Rajasthan | 3 | 1 | 1 | 0 | 1 | 0 | 6 | 0 |
| | | SubTotal | 6 | 2 | 1 | 0 | 3 | 0 | 12 | 0 |
| 11 | Narmada Basin | Gujarat | 3 | 0 | 0 | 0 | 2 | 0 | 5 | 0 |
| | | Madhya Pradesh | 5 | 0 | 7 | 0 | 9 | 0 | 21 | 0 |
| | | SubTotal | 8 | 0 | 7 | 0 | 11 | 0 | 26 | 0 |
| 12 | Pennar Basin | Andhra pradesh | 0 | 0 | 6 | 0 | 2 | 0 | 8 | 0 |
| | | SubTotal | 0 | 0 | 6 | 0 | 2 | 0 | 8 | 0 |
| 13 | Sabarmati Basin | Gujarat | 6 | 3 | 2 | 0 | 1 | 0 | 12 | 0 |
| | | Rajasthan | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| | | SubTotal | 7 | 3 | 2 | 0 | 1 | 0 | 13 | 0 |
| 14 | Subarnarekha Basin | Jharkhand | 0 | 0 | 1 | 0 | 3 | 0 | 4 | 0 |
| | | Orissa | 5 | 1 | 0 | 0 | 1 | 0 | 7 | 0 |
| | | West Bengal | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| | | SubTotal | 5 | 2 | 1 | 0 | 4 | 0 | 12 | 0 |

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## Table 5: Basin-wise Number of Hydrological Observation Stations by type

| S. No. | River/Basin | STATE | G | GD | GDQ | GDS | GDSQ | GQ | Sub Total | Sg |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 15 | Tapi Basin | Gujarat | 3 | 0 | 1 | 0 | 0 | 0 | 4 | 0 |
| | | Madhya Pradesh | 2 | 0 | 0 | 0 | 1 | 0 | 3 | 0 |
| | | Maharashtra | 7 | 1 | 0 | 1 | 2 | 0 | 11 | 0 |
| | | SubTotal | 12 | 1 | 1 | 1 | 3 | 0 | 18 | 0 |
| 16 | West flowing rivers from Tapi to Tadri | Dadra & Nagar Haveli | 4 | 0 | 0 | 0 | 0 | 0 | 4 | 0 |
| | | Goa | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 |
| | | Gujarat | 2 | 1 | 1 | 0 | 2 | 0 | 6 | 0 |
| | | Maharashtra | 2 | 4 | 3 | 0 | 1 | 0 | 10 | 0 |
| | | SubTotal | 8 | 7 | 4 | 0 | 3 | 0 | 22 | 0 |
| 17 | West flowing rivers from Tadri to Kanyakumari | Karanataka | 0 | 0 | 5 | 0 | 1 | 0 | 6 | 0 |
| | | Kerala | 0 | 0 | 4 | 0 | 16 | 0 | 20 | 0 |
| | | Tamil Nadu | 0 | 0 | 2 | 0 | 1 | 0 | 3 | 0 |
| | | SubTotal | 0 | 0 | 11 | 0 | 18 | 0 | 29 | 0 |
| 18 | West flowing rivers of Kutchh & Saurashtra | Gujarat | 3 | 3 | 1 | 0 | 3 | 0 | 10 | 0 |
| | | Rajasthan | 1 | 2 | 1 | 0 | 0 | 0 | 4 | 0 |
| | | SubTotal | 4 | 5 | 2 | 0 | 3 | 0 | 14 | 0 |
| 19 | Area of Inland Drainage in Rajasthan Desert | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Sub Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | Minor Rivers draining Myanmar (Burma) and Bangladesh | | 2 | 0 | 0 | 3 | 0 | 0 | 5 | 0 |
| | | Sub Total | 2 | 0 | 0 | 3 | 0 | 0 | 5 | 0 |
| Grand Total | | | 295 | 154 | 131 | 33 | 239 | 26 | 878 | 36 |

Source : R.D. Dte.,Central Water Commission

Note: One of the site is H.O. site, where Sg observations are also being observed. Hence not counted for total number of stations.

G - Gauge Site, GD - Gauge & Discharge Site

GQ - Gauge & Water Quality Site

GDS - Gauge, Discharge & Silt Site

GDQ - Gauge, Discharge & Water Quality Site

GDSQ - Gauge, Discharge, Silt & Water Quality Site

Sg - Snow Gauge Site

**Table 6: Ultimate Irrigation Potential by State**

( '000 Hactares)

| Sl. No. | State/U.T. | Major & Medium Surface Water | Minor Irrigation | | | Total ( Major, Medium & Minor) |
|---|---|---|---|---|---|---|
| | | | Surface Water | Ground Water | Total | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | Andhra Pradesh | 5000 | 2300 | 3960 | 6260 | 11260 |
| 2 | Arunachal Pradesh | 0 | 150 | 18 | 168 | 168 |
| 3 | Assam | 970 | 1000 | 900 | 1900 | 2870 |
| 4 | Bihar | 5224 | 1544 | 4120 | 5664 | 10888 |
| 5 | Chattisgarh | 1147 | 81 | 490 | 571 | 1718 |
| 6 | Goa | 62 | 25 | - | 25 | 87 |
| 7 | Gujarat | 3000 | 347 | 2756 | 3103 | 6103 |
| 8 | Haryana | 3000 | 50 | 1462 | 1512 | 4512 |
| 9 | Himachal Pradesh | 50 | 235 | 68 | 303 | 353 |
| 10 | Jammu & Kashmir | 250 | 400 | 708 | 1108 | 1358 |
| 11 | Jarkhand | 1276 | 354 | 830 | 1184 | 2460 |
| 12 | Karnataka | 2500 | 900 | 2574 | 3474 | 5974 |
| 13 | Kerala | 1000 | 800 | 879 | 1679 | 2679 |
| 14 | Madhya Pradesh | 4853 | 2111 | 9250 | 11361 | 16214 |
| 15 | Maharashtra | 4100 | 1200 | 3652 | 4852 | 8952 |
| 16 | Manipur | 135 | 100 | 369 | 469 | 604 |
| 17 | Meghalaya | 20 | 85 | 63 | 148 | 168 |
| 18 | Mizoram | 0 | 65 | 5 | 70 | 70 |
| 19 | Nagaland | 10 | 70 | 5 | 75 | 85 |
| 20 | Orissa | 3600 | 1000 | 4203 | 5203 | 8803 |
| 21 | Punjab | 3000 | 50 | 2917 | 2967 | 5967 |
| 22 | Rajasthan | 2750 | 600 | 1778 | 2378 | 5128 |
| 23 | Sikkim | 20 | 50 | 0 | 50 | 70 |
| 24 | Tamil Nadu | 1500 | 1200 | 2832 | 4032 | 5532 |
| 25 | Tripura | 100 | 100 | 81 | 181 | 281 |
| 26 | Uttar Pradesh | 12154 | 1186 | 16295 | 17481 | 29635 |
| 27 | Uttarakhand | 346 | 14 | 504 | 518 | 864 |
| 28 | West Bengal | 2300 | 1300 | 3318 | 4618 | 6918 |
| Total States | | 58367 | 17317 | 64066 | 81383 | 139750 |
| Total UTs | | 98 | 20 | 26 | 46 | 144 |
| Grand Total | | 58465 | 17337 | 64092 | 81429 | 139894 |

Source : Central Water Commission, P & P Directorate and Ministry of Water Resources (Minor Irrigation Division).

## Table 7: Number of Large Dams having capacity as on 30th November 2012 Abstract by State

| Sl. No. | State/U.T. | Number of Dams Completed During The Period | | | | | | | | Year of Construction not Available | Total Completed Dams | Under Cons-truction | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Upto 1900 | 1901 to 1950 | 1951 to 1960 | 1961 to 1970 | 1971 to 1980 | 1981 to 1990 | 1991 to 2000 | 2001 & Beyond | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 1* | Andaman & Nicobar Islands | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 2 |
| 2 | Andhra Pradesh | 7 | 35 | 16 | 22 | 31 | 26 | 15 | 12 | 126 | 290 | 44 | 334 |
| 3 | Arunachal Pradesh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| 4 | Assam | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 2 | 5 |
| 5 | Bihar | 1 | 0 | 1 | 8 | 5 | 6 | 1 | 2 | 0 | 24 | 4 | 28 |
| 6 | Chhattisgarh | 0 | 11 | 1 | 18 | 51 | 98 | 37 | 26 | 1 | 243 | 14 | 257 |
| 7 | Goa | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 5 | 0 | 5 |
| 8 | Gujarat | 6 | 59 | 57 | 86 | 154 | 151 | 56 | 23 | 6 | 621 | 45 | 666 |
| 9 | Himachal Pradesh | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 5 | 2 | 13 | 6 | 19 |
| 10 | Haryana | | | | | | | | 1 | | 1 | | 1 |
| 11 | Jammu & Kashmir | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 4 | 3 | 12 | 2 | 14 |
| 12 | Jharkhand | 0 | 0 | 9 | 5 | 11 | 21 | 0 | 0 | 3 | 49 | 28 | 77 |
| 13 | Karnataka | 6 | 24 | 11 | 39 | 49 | 54 | 17 | 14 | 16 | 230 | 1 | 231 |
| 14 | Kerala | 1 | 1 | 9 | 15 | 10 | 10 | 9 | 3 | 0 | 58 | 1 | 59 |
| 15 | Madhya Pradesh | 3 | 86 | 35 | 67 | 220 | 301 | 93 | 66 | 28 | 899 | 7 | 906 |
| 16 | Maharashtra | 20 | 40 | 23 | 152 | 622 | 416 | 304 | 113 | 3 | 1693 | 152 | 1845 |
| 17 | Manipur | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 3 | 2 | 5 |
| 18 | Meghalaya | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 5 | 1 | 6 |
| 19 | Mizoram | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | Nagaland | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | Orissa | 2 | 2 | 4 | 8 | 55 | 77 | 33 | 13 | 4 | 198 | 6 | 204 |
| 22 | Punjab | 0 | 0 | 1 | 0 | 0 | 4 | 6 | 3 | 0 | 14 | 1 | 15 |
| 23 | Rajasthan | 31 | 8 | 33 | 23 | 29 | 36 | 26 | 15 | 0 | 201 | 10 | 211 |
| 24 | Sikkim | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 2 |
| 25 | Tamil Nadu | 0 | 10 | 10 | 26 | 26 | 17 | 8 | 19 | 0 | 116 | 0 | 116 |

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## Table 7: Number of Large Dams having capacity as on 30th November 2012 Abstract by State

| Sl. No. | State/U.T. | Number of Dams Completed During The Period | | | | | | | | Year of Construction not Available | Total Completed Dams | Under Cons-truction | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Upto 1900 | 1901 to 1950 | 1951 to 1960 | 1961 to 1970 | 1971 to 1980 | 1981 to 1990 | 1991 to 2000 | 2001 & Beyond | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 26 | Tripura | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 27 | Uttar Pradesh | 4 | 24 | 21 | 22 | 16 | 14 | 11 | 2 | 0 | 114 | 16 | 130 |
| 28 | Uttarakhand | 0 | 0 | 0 | 5 | 4 | 2 | 0 | 2 | 0 | 13 | 6 | 19 |
| 29 | West Bengal | 0 | 0 | 1 | 1 | 4 | 16 | 2 | 4 | 0 | 28 | 0 | 28 |
| Total | | 81 | 300 | 233 | 499 | 1295 | 1256 | 625 | 333 | 194 | 4839 | 348 | 5187 |

**Source**: - Central Water Commission, (Dam Safety Monitoring Directorate) National Register of Large Dam.

*** Union Territory (UT)**

## DEFINITION OF LARGE DAMS FOR INCLUSION UNDER NRLD

### Dams other than Earthen and Rock fill dams

A large dam is classified as one with a maximum height of more than 15 metres from its deepest foundation to the crest. A dam between 10 and 15 metres in height from its deepest foundation is also included in the classification of a large dam provided one of the following conditions is satisfied:

a) length of crest of the dam is not less than 500 metres or
b) capacity of the reservoir formed by the dam is not less than one million cubic metres or
c) the maximum flood discharge dealt with by the dam is not less than 2000 cubic metres per second or
d) the dam has specially difficult foundation problems, or
e) the dam is of unusual design

### Earthen and Rock fill dams

A dam exceeding 15m in height above deepest river bed level and a dam between 10 and 15 m height provided volume of earthwork exceeds 0.75 million m3 and storage exceeds 1 million m3 or the maximum flood discharge exceeds 2000 cumecs."

## Table 8: Plan-wise Achievements of Irrigation Potential Created/Utilised(Cumulative) under Major & Medium Irrigation Projects by State

**('000 Hectare)**

| Sl. No. | State/UTs. | Ultimate Potential | Sixth Plan 1980-85 | | Seventh Plan 1985-90 | | Annual Plan 1990-92 | | Eighth Plan 1992-97 | | Ninth Plan 1997-2002 | | Tenth Plan 2002-07 | | % of IPC to UIP | % of IPU to IPC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 1 | **Andhra Pradesh** | 5000 | 2902.0 | 2695.0 | 2991.0 | 2836.0 | 2999.0 | 2847.0 | 3045.1 | 2883.8 | 3303.2 | 3051.6 | 3600.2 | 3244.6 | 72.0 | 90.1 |
| 2 | **Arunachal Pradesh** | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 0.8 | 0.0 | 65.0 |
| 3 | **Assam** | 970 | 98.0 | 55.0 | 144.0 | 97.0 | 176.0 | 111.0 | 196.7 | 138.2 | 243.9 | 174.4 | 302.7 | 211.0 | 31.2 | 69.7 |
| 4 | **Bihar** | 5224 | 2556.0 | 2009.0 | 2743.0 | 2259.0 | 2766.0 | 2295.0 | 2802.5 | 2324.2 | 2680.0 | 1714.8 | 2879.0 | 1814.9 | 55.1 | 63.0 |
| 5 | **Chattisgarh** | 1147 | Included in M.P. | | | | | | | | 922.5 | 760.7 | 1137.0 | 948.2 | 99.1 | 83.4 |
| 6 | **Goa** | 62 | 1.0 | 0.0 | 13.0 | 5.0 | 13.0 | 12.0 | 13.0 | 12.1 | 21.2 | 15.3 | 33.8 | 23.3 | 54.4 | 69.1 |
| 7 | **Gujarat** | 3000 | 1055.0 | 646.0 | 1199.0 | 855.0 | 1246.0 | 986.0 | 1350.0 | 1200.0 | 1430.4 | 1300.8 | 2230.5 | 1835.4 | 74.4 | 82.3 |
| 8 | **Haryana** | 3000 | 1923.0 | 1745.0 | 2021.0 | 1791.0 | 2035.0 | 1791.0 | 2078.8 | 1833.6 | 2099.5 | 1850.0 | 2193.7 | 1893.3 | 73.1 | 86.3 |
| 9 | **Himachal Pradesh** | 50 | 6.0 | 5.0 | 8.0 | 6.0 | 8.0 | 4.0 | 10.6 | 5.6 | 13.4 | 7.5 | 15.5 | 8.2 | 30.9 | 53.3 |
| 10 | **Jammu & Kashmir** | 250 | 153.0 | 112.0 | 158.0 | 117.0 | 158.0 | 136.0 | 173.7 | 147.6 | 179.7 | 168.8 | 187.3 | 174.6 | 74.9 | 93.2 |
| 11 | **Jharkhand** | 1277 | Included in Bihar | | | | | | | | 354.5 | 230.5 | 397.8 | 245.8 | 31.2 | 61.8 |
| 12 | **Karnataka** | 2500 | 1165.0 | 1053.0 | 1308.0 | 1183.0 | 1377.0 | 1192.0 | 1666.0 | 1471.7 | 2121.1 | 1844.8 | 2637.7 | 2119.7 | 105.5 | 80.4 |
| 13 | **Kerala** | 1000 | 375.0 | 342.0 | 402.0 | 355.0 | 416.0 | 367.0 | 513.3 | 464.3 | 609.5 | 558.9 | 669.5 | 591.4 | 66.9 | 88.3 |
| 14 | **Madhya Pradesh** | 4853 | 1592.0 | 1072.0 | 1815.0 | 1269.0 | 1962.0 | 1395.0 | 2317.6 | 1621.0 | 1386.9 | 875.6 | 1931.9 | 1173.3 | 39.8 | 60.7 |
| 15 | **Maharashtra** | 4100 | 1722.0 | 754.0 | 1986.0 | 976.0 | 2030.0 | 1036.0 | 2313.0 | 1287.7 | 3239.0 | 2147.2 | 3494.2 | 2313.1 | 85.2 | 66.2 |
| 16 | **Manipur** | 135 | 40.0 | 25.0 | 59.0 | 46.0 | 59.0 | 50.0 | 63.0 | 52.0 | 91.2 | 72.9 | 106.6 | 81.4 | 78.9 | 76.4 |
| 17 | **Meghalaya** | 20 | - | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 18 | **Mizoram** | 0 | - | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 19 | **Nagaland** | 10 | - | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 20 | **Orissa** | 3600 | 1236.0 | 1178.0 | 1356.0 | 1254.0 | 1409.0 | 1326.0 | 1557.8 | 1442.7 | 1826.6 | 1794.2 | 1974.4 | 1878.7 | 54.8 | 95.2 |
| 21 | **Punjab** | 3000 | 2252.0 | 2234.0 | 2344.0 | 2303.0 | 2367.0 | 2309.0 | 2512.9 | 2452.3 | 2542.5 | 2486.0 | 2574.7 | 2510.5 | 85.8 | 97.5 |
| 22 | **Rajasthan** | 2750 | 1712.0 | 1551.0 | 1913.0 | 1740.0 | 1999.0 | 1887.0 | 2273.9 | 2088.4 | 2482.2 | 2313.9 | 2861.6 | 2526.1 | 104.1 | 88.3 |
| 23 | **Sikkim** | 20 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 24 | **Tamil Nadu** | 1500 | 1499.0 | 1506.0 | 1539.0 | 1536.0 | 1545.0 | 1541.0 | 1545.5 | 1545.5 | 1549.3 | 1549.3 | 1562.6 | 1556.9 | 104.2 | 99.6 |

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## Table 8: Plan-wise Achievements of Irrigation Potential Created/Utilised(Cumulative) under Major & Medium Irrigation Projects by State

**('000 Hectare)**

| Sl. No. | State/UTs. | Ultimate Potential | Sixth Plan 1980-85 | | Seventh Plan 1985-90 | | Annual Plan 1990-92 | | Eighth Plan 1992-97 | | Ninth Plan 1997-2002 | | Tenth Plan 2002-07 | | % of IPC to UIP | % of IPU to IPC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| **25** | **Tripura** | 100 | - | - | 2.0 | 2.0 | 2.0 | 2.0 | 2.3 | 2.3 | 4.9 | 4.5 | 14.1 | 10.5 | 14.1 | 74.4 |
| **26** | **Uttar Pradesh** | 12154 | 6223.0 | 5523.0 | 6667.0 | 5705.0 | 6806.0 | 5763.0 | 7059.0 | 6126.0 | 7910.1 | 6334.0 | 8782.0 | 6809.4 | 72.3 | 77.5 |
| **27** | **Uttarakhand** | 346 | Inlcuded in U.P. | | | | | | | | 280.3 | 185.4 | 289.0 | 191.1 | 83.5 | 66.1 |
| **28** | **West Bengal** | 2300 | 1185.0 | 1069.0 | 1244.0 | 1132.0 | 1353.0 | 1258.0 | 1444.1 | 1332.5 | 1683.3 | 1527.1 | 1754.8 | 1573.6 | 76.3 | 89.7 |
| **Total States** | | 58367 | 27695.0 | 23574.0 | 29912.0 | 25467.0 | 30726.0 | 26308.0 | 32938.6 | 28431.4 | 36974.9 | 30968.2 | 41631.4 | 33735.7 | 71.3 | 81.0 |
| **Total U.Ts.** | | 98 | - | - | 8.0 | 0.0 | 15.0 | 7.0 | 18.5 | 9.3 | 6.5 | 3.9 | 6.5 | 3.9 | 6.6 | 60.5 |
| All India Total | | 58465 | 27695.0 | 23574.0 | 29920.0 | 25467.0 | 30741.0 | 26315.0 | 32957.1 | 28440.7 | 36981.4 | 30972.1 | 41637.9 | 33739.6 | 71.2 | 81.0 |

**Source : Central water Commission (P&P Dte.) and Planning Commission.**

**Note : IPC : Irrigation Potential Created IPU : Irrigation Potential Utilised Total may not tally due to rounding off.**

## Table 9: Irrigation Potential Created and Utilized over plan periods

**(Million ha)**

| Sl.No. | Plan | | Potential created | | | | | Potential Utilized | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Major & Medium | Minor | | | Total | Major & Medium | Minor | | | Total |
| | | | | Surface Water | Ground Water | Total | | | Surface Water | Ground Water | Total | |
| 1 | 2 | | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | Upto 1951 (Pre-Plan) | Cumulative | 9.70 | 6.40 | 6.50 | 12.90 | 22.60 | 9.70 | 6.40 | 6.50 | 12.90 | 22.60 |
| 2 | I Plan | During | 2.50 | 0.03 | 1.13 | 1.16 | 3.66 | 1.28 | 0.03 | 1.13 | 1.16 | 2.44 |
| | (1951-56) | Cumulative | 12.20 | 6.43 | 7.63 | 14.06 | 26.26 | 10.98 | 6.43 | 7.63 | 14.06 | 25.04 |
| 3 | II Plan | During | 2.13 | 0.02 | 0.67 | 0.69 | 2.82 | 2.07 | 0.02 | 0.67 | 0.69 | 2.76 |
| | (1956-61) | Cumulative | 14.33 | 6.45 | 8.30 | 14.75 | 29.08 | 13.05 | 6.45 | 8.30 | 14.75 | 27.80 |
| 4 | III Plan | During | 2.24 | 0.03 | 2.22 | 2.25 | 4.49 | 2.12 | 3.03 | 2.22 | 2.25 | 4.37 |
| | (1961-66) | Cumulative | 16.57 | 6.48 | 10.52 | 17.00 | 33.57 | 15.17 | 6.48 | 10.52 | 17.00 | 32.17 |
| 5 | Annual Plans | During | 1.53 | 0.02 | 1.98 | 2.00 | 3.53 | 1.58 | 0.02 | 1.98 | 2.00 | 3.58 |
| | (1966-69) | Cumulat ive | 18.10 | 6.50 | 12.50 | 19.00 | 37.10 | 16.75 | 6.50 | 12.50 | 19.00 | 35.75 |
| 6 | IV Plan | During | 2.60 | 0.50 | 4.00 | 4.50 | 7.10 | 1.64 | 0.50 | 4.00 | 4.50 | 6.14 |
| | (1969-1974) | Cumulative | 20.70 | 7.00 | 16.50 | 23.50 | 44.20 | 18.39 | 7.00 | 16.50 | 23.50 | 41.89 |
| 7 | V Plan | During | 4.02 | 0.50 | 3.30 | 3.80 | 7.82 | 2.70 | 0.50 | 3.30 | 3.80 | 6.50 |
| | (1974-1978) | Cumulative | 24.72 | 7.50 | 19.80 | 27.30 | 52.02 | 21.16 | 7.50 | 19.80 | 27.30 | 48.46 |
| 8 | Annual Plans | During | 1.89 | 0.50 | 2.20 | 2.70 | 4.59 | 1.48 | 0.50 | 2.20 | 2.70 | 4.18 |
| | (1978-1980) | Cumulat ive | 26.61 | 8.00 | 22.00 | 30.00 | 56.61 | 22.64 | 8.00 | 22.00 | 30.00 | 52.64 |
| 9 | VI Plan | During | 1.09 | 1.70 | 5.82 | 7.52 | 8.61 | 0.93 | 1.01 | 4.24 | 5.25 | 6.18 |
| | (1980-1985) | Cumulative | 27.70 | 9.70 | 27.82 | 37.52 | 65.22 | 23.57 | 9.01 | 26.24 | 35.25 | 58.82 |
| 10 | VII Plan | During | 2.22 | 1.29 | 7.80 | 9.09 | 11.31 | 1.90 | 0.96 | 6.91 | 7.87 | 9.77 |
| | (1985-1990) | Cumulat ive | 29.92 | 10.90 | 35.62 | 46.52 | 76.44 | 25.47 | 9.97 | 33.15 | 43.12 | 68.59 |

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## Table 9: Irrigation Potential Created and Utilized over plan periods

**(Million ha)**

| Sl.No. | Plan | | Potential created | | | | | Potential Utilized | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Major & Medium | Minor | | | Total | Major & Medium | Minor | | | Total |
| | | | | Surface Water | Ground Water | Total | | | Surface Water | Ground Water | Total | |
| 1 | 2 | | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 11 | Annual Plan | During | 0.82 | 0.47 | 3.27 | 3.74 | 4.56 | 0.85 | 0.32 | 3.10 | 3.42 | 4.27 |
| | (1990-1992) | Cumulat ive | 30.74 | 11.46 | 38.89 | 50.35 | 81.09 | 26.31 | 10.29 | 36.25 | 46.54 | 72.85 |
| 12 | VIII Plan | During | 2.21 | 1.05 | 1.91 | 2.96 | 5.17 | 2.13 | 0.78 | 1.45 | 2.23 | 4.36 |
| | (1992-1997) | Cumulat ive | 32.95 | 12.51 | 40.80 | 53.31 | 86.26 | 28.44 | 11.07 | 37.70 | 48.77 | 77.21 |
| 13 | IX Plan | During | 4.10 | 1.09 | 2.50 | 3.59 | 7.69 | 2.57 | 0.37 | 0.85 | 1.22 | 3.79 |
| | (1997-2002) | Cumulative | 37.05 | 13.60 | 43.30 | 56.90 | 93.95 | 31.01 | 11.44 | 38.55 | 49.99 | 81.00 |
| 14 | X Plan | During | 4.59 | N.A | N.A | 3.20 | 7.79 | 2.73 | N.A | N.A | 1.49 | 4.22 |
| | (2002-2007) | Cumulative | 41.64 | N.A | N.A | 60.10 | 101.74 | 33.74 | N.A | N.A | 51.48 | 85.22 |
| 15 | XI Plan* | During | 3.70 | N.A | N.A | 3.47 | 7.17 | 0.92 | N.A | N.A | 1.25 | 2.17 |
| | (2007-2012) | Cumulative | 45.34 | N.A | N.A | 63.57 | 108.91 | 34.66 | N.A | N.A | 52.73 | 87.39 |

Source : Planning Commission(Report of the working group on MMI and CAD for the XII Five Year Plan)

* : The figures upto 2010-11 have been considered. It includes likely achievement figure for 2010-11.

## Table 10: Year-wise Achievements of Irrigation Potential Created/Utilised under Major & Medium Irrigation of XI plan* by State

**('000 Hectare)**

| Sl. No. | Name of State/ UT UT | Ultimate Irrigation Potential | XI Plan | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Target | | Achievement 2007-08 | | Achievement 2008-09 | | Achievement 2009-10 | | Likely achievement 2010-11 | | Target for 2011-12 | |
| | | | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 1 | Andhra Pradesh | 5000.00 | 3326.36 | NF | 142.06 | NF | 177.25 | NF | 47.21 | NF | 64.91 | NF | 517.00 | NF |
| 2 | Arunachal Pradesh | 0.00 | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil |
| 3 | Assam | 970.00 | 132.38 | NF | 2.15 | NF | 8.85 | NF | 35.69 | NF | 85.51 | NF | 93.46 | NF |
| 4 | Bihar | 5223.50 | 1560.57 | NF | NF | NF | 10.00 | NF | 7.00 | NF | 6.20 | NF | 65.00 | NF |
| 5 | Chhattisgarh | 1146.93 | 196.00 | NF | 6.62 | NF | 19.60 | NF | 36.10 | NF | 35.00 | NF | 35.00 | NF |
| 6 | Goa | 62.00 | 17.95 | 25.03 | 8.00 | 0.22 | 3.27 | 0.31 | 0.76 | 0.29 | 3.82 | 0.51 | 5.95 | NF |
| 7 | Gujarat | 3000.00 | 1545.00 | NF | 401.49 | NF | 428.52 | NF | 34.58 | 7.30 | 270.00 | 20.00 | 314.00 | 10.00 |
| 8 | Haryana | 3000.00 | 46.16 | NF | 2.37 | NF | 7.16 | NF | 2.31 | NF | NF | NF | NF | NF |
| 9 | Himachal Pradesh | 50.00 | 16.00 | NF | 2.50 | NF | 2.00 | NF | 3.00 | NF | 3.50 | NF | 4.00 | NF |
| 10 | Jharkhand | 1276.50 | 148.20 | NF | NF | NF | 12.55 | NF | 0.50 | NF | 34.00 | NF | 62.70 | NF |
| 11 | Jammu Kashmir | 250.00 | 12.96 | 12.96 | 5.99 | 6.01 | 11.89 | NF | NF | NF | 2.00 | 2.00 | 110.00 | NF |
| 12 | Karnataka | 2500.00 | 440.34 | 328.24 | 82.50 | 63.25 | 47.20 | 18.88 | 42.02 | 22.99 | 59.45 | 17.30 | 94.50 | 90.00 |
| 13 | Kerala | 1000.00 | 50.00 | NF | 8.00 | NF | 3.20 | NF | 12.00 | NF | NF | NF | NF | NF |
| 14 | Madhya Pradesh | 4853.07 | 777.06 | NF | 104.03 | NF | 93.24 | NF | 67.41 | NF | 93.70 | NF | 206.15 | NF |
| 15 | Maharashtra | 4100.00 | 1512.00 | NF | 107.56 | NF | 118.00 | NF | 60.00 | NF | NF | NF | 209.00 | NF |
| 16 | Manipur | 135.00 | 46.95 | NF | 10.92 | NF | 4.14 | NF | 1.80 | NF | 15.00 | NF | 20.09 | NF |
| 17 | Meghayala | 20.00 | - | - | - | - | - | - | - | - | - | - | - | - |
| 18 | Mizoram | 0.00 | - | - | - | - | - | - | - | - | - | - | - | - |
| 19 | Nagaland | 10.00 | 10.00 | NF | - | - | - | - | - | - | - | - | - | - |
| 20 | Orissa | 3600.00 | 321.73 | NF | 10.40 | NF | 25.03 | NF | 36.06 | NF | 28.61 | NF | 50.51 | NF |

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## Table 10: Year-wise Achievements of Irrigation Potential Created/Utilised under Major & Medium Irrigation of XI plan* by State

**('000 Hectare)**

| Sl. No. | Name of State/ UT UT | Ultimate Irrigation Potential | XI Plan | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Target | | Achievement 2007-08 | | Achievement 2008-09 | | Achievement 2009-10 | | Likely achievement 2010-11 | | Target for 2011-12 | |
| | | | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 21 | Punjab | 3000.00 | 177.32 | NF | 43.51 | NF | 29.25 | NF | NF | NF | NF | NF | NF | NF |
| 22 | Rajasthan | 2750.00 | 824.30 | NF | 124.20 | NF | 54.20 | NF | 59.85 | NF | 32.50 | NF | 34.50 | NF |
| 23 | Sikkim | 20.00 | - | - | - | - | - | - | - | - | - | - | - | - |
| 24 | TamilNadu | 1500.00 | NF | NF | 4.23 | NF | 3.48 | NF | 4.00 | NF | NF | NF | NF | NF |
| 25 | Tripura | 100.00 | 8.97 | NF | 1.01 | NF | 1.27 | NF | 3.85 | NF | 6.57 | NF | 3.03 | NF |
| 26 | Uttar Pradesh | 12154.00 | 1170.00 | 1170.13 | 85.82 | 165.00 | 49.53 | 200.00 | 29.00 | 150.00 | 172.80 | 250.00 | 163.97 | 250.00 |
| 27 | Uttarakhand | 346.00 | - | - | - | - | - | - | - | - | - | - | - | - |
| 28 | West Bengal | 2300.00 | 303.07 | NF | NF | NF | 5.00 | NF | 5.34 | NF | 30.97 | NF | 76.18 | NF |
| 29 | Union Territories | 98.00 | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil |
| **Total** | | **58465.00** | **12643.32** | **1536.36** | **1153.35** | **234.48** | **1114.63** | **219.19** | **488.49** | **180.58** | **944.54** | **289.81** | **2065.04** | **350.00** |

**Source : Planning Commission**

*** : Figures under reconciliation with states** **NF: Not furnished by the State**

## Table 11: Year-wise Achievements of Irrigation Potential Created/Utilised under Minor Irrigation Projects of XI plan* by State

**('000 Hectare)**

| Sl. No. | Name of State/ UT | Ultimate Irrigation Potential | Cumulative achievement Up to X Plan | | XI Plan | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Target | | Achievement 2007-08 | | Achievement 2008-09 | | Achievement 2009-10 | | Likely achievement 2010-11 | | Target for 2011-12 | |
| | | | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 1 | Andhra Pradesh | 6260.00 | 3092.42 | 2843.92 | 222.70 | NF | 58.40 | NF | 60.01 | NF | 33.84 | NF | 34.68 | NF | 55.46 | NF |
| 2 | Arunachal Pradesh | 168.00 | 114.37 | 86.61 | 42.00 | NF | 7.00 | NF | 4.35 | NF | 1.57 | NF | 2.46 | NF | 2.50 | NF |
| 3 | Assam | 1900.00 | 631.98 | 508.56 | 137.86 | NF | 11.45 | NF | 25.65 | NF | 45.46 | NF | 188.86 | NF | 154.57 | NF |
| 4 | Bihar | 5663.50 | 4758.78 | 3793.33 | 1384.00 | NF | NF | NF | 366.00 | NF | NF | NF | NF | NF | 400.00 | NF |
| 5 | Chhattisgarh | 571.00 | 556.76 | 378.11 | 604.00 | NF | 20.39 | NF | 60.40 | NF | 4.75 | NF | 120.00 | NF | 80.00 | NF |
| 6 | Goa | 54.00 | 24.39 | 20.92 | 2.70 | 2.30 | 0.27 | 0.23 | 0.31 | 0.26 | 0.11 | 0.09 | 0.56 | 0.46 | 0.30 | 0.25 |
| 7 | Gujarat | 3103.00 | 2019.42 | 1892.54 | 60.00 | NF | 1.98 | 2.94 | 16.27 | NF | 9.30 | 4.79 | 20.00 | 10.00 | 5.00 | 5.00 |
| 8 | Haryana | 1512.00 | 1637.67 | 1583.50 | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil |
| 9 | Himachal Pradesh | 303.00 | 171.09 | 144.77 | 15.00 | NF | 2.70 | NF | 2.80 | NF | 3.63 | NF | 3.00 | NF | 3.00 | NF |
| 10 | Jharkhand | 1183.50 | 661.09 | 500.83 | 120.00 | NF | 15.52 | NF | 17.73 | NF | 10.32 | NF | 14.14 | NF | 26.87 | NF |
| 11 | Jammu Kashmir | 1108.00 | 390.35 | 367.63 | 3.34 | 3.34 | 23.76 | 20.53 | 31.09 | NF | NF | NF | 21.00 | 15.20 | 68.00 | NF |
| 12 | Karnataka | 3474.00 | 1641.89 | 1592.22 | 50.00 | 50.00 | 8.94 | 8.94 | 16.04 | 16.04 | 17.30 | 17.30 | 14.26 | 14.26 | 10.00 | 10.00 |
| 13 | Kerala | 1679.00 | 687.02 | 629.36 | 200.00 | NF | 20.00 | NF | 8.63 | NF | 26.00 | NF | NF | NF | NF | NF |
| 14 | Madhya Pradesh | 11361.00 | 2340.88 | 2217.28 | 267.00 | NF | 22.68 | NF | 49.48 | NF | 28.70 | NF | 46.30 | NF | 46.30 | NF |
| 15 | Maharastra | 4852.00 | 3055.60 | 2648.12 | 276.00 | NF | | NF | | NF | 43.00 | NF | NF | NF | 52.00 | NF |
| 16 | Manipur | 469.00 | 92.69 | 73.30 | 22.30 | NF | | NF | 7.50 | NF | NF | NF | 9.00 | NF | 11.50 | NF |
| 17 | Meghayala | 148.00 | 61.57 | 53.89 | 16.50 | NF | 1.80 | NF | 2.03 | NF | 3.28 | NF | 4.33 | NF | 4.76 | NF |
| 18 | Mizoram | 70.00 | 21.26 | 14.95 | 21.26 | NF | 9.00 | NF | 9.00 | NF | 3.87 | 2.30 | 4.93 | 3.00 | 3.68 | 2.20 |
| 19 | Nagaland | 75.00 | 93.17 | 72.20 | 22.00 | NF | 0.78 | NF | 3.50 | NF | 9.61 | NF | 8.95 | NF | 8.50 | NF |
| 20 | Orissa | 5203.00 | 1648.91 | 1441.97 | 147.27 | NF | 33.40 | NF | 35.79 | NF | 53.25 | NF | 32.40 | NF | 62.20 | NF |
| 21 | Punjab | 2967.00 | 3430.08 | 3368.20 | 108.68 | NF | 26.67 | NF | 17.92 | NF | NF | NF | NF | NF | NF | NF |
| 22 | Rajasthan | 2378.00 | 2467.90 | 2374.44 | 70.47 | NF | 5.00 | NF | 5.87 | NF | 2.99 | NF | 3.00 | NF | 3.00 | NF |

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## Table 11: Year-wise Achievements of Irrigation Potential Created/Utilised under Minor Irrigation Projects of XI plan* by State

**('000 Hectare)**

| Sl. No. | Name of State/ UT | Ultimate Irrigation Potential | Cumulative achievement Up to X Plan | | XI Plan | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Target | | Achievement 2007-08 | | Achievement 2008-09 | | Achievement 2009-10 | | Likely achievement 2010-11 | | Target for 2011-12 | |
| | | | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU | IPC | IPU |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 23 | Sikkim | 50.00 | 34.47 | 25.62 | 10.00 | NF | 1.50 | NF | 1.13 | NF | 1.14 | NF | 1.50 | NF | 1.50 | NF |
| 24 | TamilNadu | 4032.00 | 2137.33 | 2128.40 | NF | NF | 4.83 | NF | 52.83 | NF | 69.00 | NF | NF | NF | NF | NF |
| 25 | Tripura | 181.00 | 134.98 | 116.35 | 30.00 | NF | 2.13 | NF | 1.83 | NF | 1.97 | NF | 9.33 | NF | 11.63 | NF |
| 26 | Uttar Pradesh | 17481.00 | 23603.67 | 18871.32 | 2990.36 | 2218.39 | 520.05 | 406.10 | 407.96 | 312.53 | 275.90 | 208.30 | 240.00 | 165.20 | 261.50 | 179.20 |
| 27 | Uttarakhand | 518.00 | 518.75 | 408.84 | 187.36 | NF | 17.49 | NF | 23.00 | NF | NF | NF | 12.14 | NF | 13.97 | NF |
| 28 | West Bengal | 4618.00 | 4022.68 | 3282.25 | 174.00 | NF | | NF | 47.00 | 38.00 | NF | NF | NF | NF | NF | NF |
| **Total(States)** | | **81382.00** | **60051.17** | **51443.44** | **7184.80** | **2274.03** | **815.72** | **438.74** | **1274.12** | **366.83** | **611.14** | **232.78** | **756.16** | **208.12** | **1230.78** | **196.65** |
| 29 | A&N Islands | | 2.10 | 1.88 | 1.50 | NF | 0.35 | NF | 0.07 | NF | 0.07 | NF | 0.07 | NF | 0.04 | NF |
| 30 | Chandigarh | | 0.30 | 0.28 | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil |
| 31 | D&N Haveli | | 1.35 | 1.07 | 0.45 | NF | NF | NF | 0.06 | NF | 0.03 | NF | 0.04 | NF | 0.06 | NF |
| 32 | Daman&Diu | | 17.76 | 10.44 | 2.00 | NF | 2.00 | NF | 2.00 | NF | 2.00 | NF | 2.00 | NF | 2.00 | NF |
| 33 | Delhi | | 21.64 | 18.52 | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil |
| 34 | Lakshadweep | | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | NF | Nil | Nil |
| 35 | Puducherry | | 7.97 | 6.06 | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | NF | Nil | Nil |
| **Total(UT"s)** | | **46.00** | **51.12** | **38.26** | **3.95** | **0.00** | **2.35** | **0.00** | **2.13** | **0.00** | **2.10** | **0.00** | **2.11** | **0.00** | **2.10** | **0.00** |
| **Total(States&UT's)** | | **81428.00** | **60102.29** | **51481.70** | **7188.75** | **2274.03** | **818.07** | **438.74** | **1276.24** | **366.83** | **613.24** | **232.78** | **758.27** | **208.12** | **1232.88** | **196.65** |

**Source : Planning Commission**

*** : Figures under reconciliation with states** **NF: Not furnished by the State**

## Table 12: Irrigation Potential Created ,Utilised and Gross Irrigated Area by State, 2009-10

( '000 Hectare)

| Sl. No. | Name of the State/UTs. | Potential Created Upto 2009-10 | | | Potential Utilised * Upto 2009-10 | | | Gross Irrigated Area* 2009-10 | Gap (8)-(9) |
|---|---|---|---|---|---|---|---|---|---|
| | | Major & Medium | Minor | Total | Major& Medium | Minor | Total | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | **Andhra Pradesh** | 3967 | 3245 | 7211 | 3245 | 2844 | 6089 | 5764 | 325 |
| 2 | **Arunachal Pradesh** | 1 | 127 | 128 | 1 | 87 | 87 | 56 | 31 |
| 3 | **Assam** | 349 | 715 | 1064 | 211 | 509 | 720 | 225 | 495 |
| 4 | **Bihar** | 2896 | 5125 | 8021 | 1815 | 3793 | 5608 | 4625 | 983 |
| 5 | **Chhattisgarh** | 1199 | 642 | 1842 | 948 | 378 | 1326 | 1487 | -161 |
| 6 | **Goa** | 46 | 25 | 71 | 24 | 22 | 46 | 38 | 8 |
| 7 | **Gujarat** | 3095 | 2047 | 5142 | 1843 | 1900 | 3743 | 4933 | -1190 |
| 8 | **Haryana** | 2206 | 1638 | 3843 | 1893 | 1584 | 3477 | 5545 | -2068 |
| 9 | **Himachal Pradesh** | 23 | 180 | 203 | 8 | 145 | 153 | 188 | -35 |
| 10 | **Jharkhand** | 411 | 705 | 1115 | 246 | 501 | 747 | 155 | 592 |
| 11 | **Jammu & Kashmir** | 205 | 445 | 650 | 181 | 392 | 573 | 480 | 93 |
| 12 | **Karnataka** | 2809 | 1684 | 4494 | 2225 | 1635 | 3859 | 4096 | -237 |
| 13 | **Kerala** | 693 | 742 | 1434 | 591 | 629 | 1221 | 455 | 766 |
| 14 | **Madhya Pradesh** | 2197 | 2442 | 4638 | 1173 | 2217 | 3391 | 7162 | -3771 |
| 15 | **Maharashtra** | 3780 | 3099 | 6878 | 2313 | 2648 | 4961 | 4352 | 609 |
| 16 | **Manipur** | 123 | 100 | 224 | 81 | 73 | 155 | 52 | 103 |
| 17 | **Meghalaya** | 0 | 69 | 69 | 0 | 54 | 54 | 74 | -20 |
| 18 | **Mizoram** | 0 | 43 | 43 | 0 | 17 | 17 | 10 | 7 |
| 19 | **Nagaland** | 0 | 107 | 107 | 0 | 72 | 72 | 85 | -13 |
| 20 | **Orissa** | 2046 | 1771 | 3817 | 1879 | 1442 | 3321 | 3197 | 124 |
| 21 | **Punjab** | 2647 | 3475 | 6122 | 2511 | 3368 | 5879 | 7714 | -1835 |
| 22 | **Rajasthan** | 3100 | 2482 | 5582 | 2526 | 2374 | 4901 | 7309 | -2408 |
| 23 | **Sikkim** | 0 | 38 | 38 | 0 | 26 | 26 | 18 | 8 |
| 24 | **Tamil Nadu** | 1574 | 2264 | 3838 | 1557 | 2128 | 3685 | 3238 | 447 |

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## Table 12: Irrigation Potential Created ,Utilised and Gross Irrigated Area by State, 2009-10

( '000 Hectare)

| Sl. No. | Name of the State/UTs. | Potential Created Upto 2009-10 | | | Potential Utilised * Upto 2009-10 | | | Gross Irrigated Area* 2009-10 | Gap (8)-(9) |
|---|---|---|---|---|---|---|---|---|---|
| | | Major & Medium | Minor | Total | Major& Medium | Minor | Total | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 25 | **Tripura** | 20 | 141 | 161 | 10 | 116 | 127 | 106 | 21 |
| 26 | **Uttar Pradesh** | 8946 | 24808 | 33754 | 7324 | 19798 | 27123 | 18896 | 8227 |
| 27 | **Uttarakhand** | 289 | 559 | 848 | 191 | 409 | 600 | 567 | 33 |
| 28 | **West Bengal** | 1765 | 4070 | 5835 | 1574 | 3320 | 4894 | 5525 | -631 |
| **Total States** | | 44388 | 62752 | 107174 | 34370 | 52482 | 86852 | 85353 | 1499 |
| **Total U.Ts.** | | 7 | 58 | 64 | 4 | 38 | 42 | 70 | -28 |
| **Grand Total** | | 44394 | 62810 | 107238 | 34374 | 52520 | 86894 | 86423 | 471 |

**Source** : (i) Planning Commission. (ii) Ministry of Agriculture (DE & S)

**Note** : Totals may not tally due to rounding off. * : Provisional

**Table 13 (1) : Project -wise Irrigation Potential Created (IPC) under AIBP**

( '000 Hectare)

| State | Sr. No | Project Name | Project Potential | | | Irrigation Potential created under AIBP during 2011-12 | Potential Created under AIBP upto 3/2012 |
|---|---|---|---|---|---|---|---|
| | | | Ultimate Potential | Created before AIBP | Target for AIBP | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **Andhra Pradesh** | | | | | | | |
| | C 1 | Sriramsagar St.I | 392.000 | 255.040 | 137.040 | | 137.040 |
| | C 2 | Cheyyeru(Annamaya) | 7.890 | 0.000 | 9.105 | | 9.105 |
| | C 3 | Priyadarshini Jurala | 41.360 | 1.200 | 40.160 | | 40.160 |
| | C 4 | Somasila | 38.475 | 0.000 | 38.475 | | 39.774 |
| | C 5 | Nagarjunsagar | 89.280 | 848.850 | 27.944 | | 27.944 |
| | C 6 | Madduvalasa | 99.280 | 0.000 | 10.000 | | 10.000 |
| | C 7 | Gundalavagu | 1.045 | 0.000 | 1.045 | | 1.045 |
| | C 8 | Maddigedda | 2.520 | 1.105 | 1.415 | | 1.415 |
| | x 9 | Kanupur Canal | 7.638 | 7.077 | 0.561 | | 0.000 |
| | 10. | Yerrakalva Res. | 9.996 | 3.035 | 6.961 | | 5.060 |
| | C 11 | Vamsdhara St-II Ph I | 25.203 | 8.100 | 17.103 | | 24.487 |
| | 12. | FFC of SRSP | 40.000 | 0.000 | 40.000 | | 0.000 |
| | 13. | SRSP St.II | 178.066 | 0.000 | 178.066 | | 119.416 |
| | 14. | Tadipudi LIS | 83.609 | 0.000 | 83.609 | | 50.601 |
| | 15. | Pushkara LIS | 75.235 | 4.051 | 71.184 | | 48.559 |
| | 16. | Ralivagu | 2.428 | 0.000 | 2.428 | | 1.012 |
| | 17. | Gollavagu | 3.845 | 0.000 | 3.845 | | 0.607 |
| | 18. | Mathadivagu | 3.440 | 0.000 | 3.440 | | 2.024 |
| | 19. | Peddavagu | 6.073 | 0.000 | 6.073 | | 0.000 |
| | 20. | Gundlakdamma | 32.400 | 0.000 | 32.400 | | 23.440 |
| | C 21 | Veligallu | 9.713 | 0.000 | 9.713 | | 9.713 |
| | C 22 | Alisagar LIS | 21.770 | 0.000 | 21.770 | | 21.769 |
| | 23. | J. Chokka Rao LIS | 249.000 | 0.000 | 249.000 | | 16.188 |
| | C 24 | Guthpa LIS | 15.698 | | 15.698 | | 15.698 |
| | 25. | Neelwai | 5.260 | 0.000 | 5.260 | | 0.000 |
| | 26 | Sri Komaram Bheem | 9.915 | 0.000 | 9.915 | | 0.000 |
| | 27. | Thotapally Barrage | 48.563 | 0.000 | 48.563 | | 25.900 |
| | 28 | Tarakarama thirtha Sagaram | 10.000 | 0.000 | 10.000 | | 0.000 |
| | C 29 | Swarnamukhi | 4.656 | 0.000 | 4.656 | | 3.651 |
| | 30 | Palemvagu | 4.100 | 0.000 | 4.100 | | 0.000 |
| | 31. | Musurumilli | 9.164 | 0.000 | 9.164 | | 6.537 |
| | 32 | Rajiv Bhima LIS | 82.153 | 0.000 | 82.153 | | 0.000 |
| | 33. | Indira Sagar (Polavaram) | 436.000 | 0.000 | 436.000 | | 0.000 |
| **Total** | | | 2045.775 | 1128.458 | 1616.846 | 0.000 | 641.145 |
| **Assam** | | | | | | | |
| | C 1 | Pahumara | 12.955 | 1.200 | 11.755 | | 10.551 |
| | C 2 | Hawaipur lift | 3.887 | 0.000 | 3.887 | | 3.887 |
| | C 3. | Rupahi Lift | 5.668 | 0.000 | 2.768 | | 2.768 |
| | 4. | Dhansiri | 83.366 | 15.000 | 68.366 | | 41.258 |

**Contd..**

**Table 13 (1) : Project -wise Irrigation Potential Created (IPC) under AIBP**

( '000 Hectare)

| State | Sr. No | Project Name | Project Potential | | | Irrigation Potential created under AIBP during 2011-12 | Potential Created under AIBP upto 3/2012 |
|---|---|---|---|---|---|---|---|
| | | | Ultimate Potential | Created before AIBP | Target for AIBP | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | 5. | Champamati | 24.994 | 0.000 | 24.994 | | 9.746 |
| | 6. | Borolia | 13.562 | 0.000 | 13.562 | | 3.300 |
| | C 7 | Bordikarai | 34.042 | 25.452 | 7.406 | | 7.203 |
| | 8. | Burhi Dihing lift | 5.054 | 0.564 | 4.490 | | 2.425 |
| | C 9 | Intg. Irr. Scheme in Kollong Basin | 34.400 | 25.753 | 8.647 | | 3.775 |
| | C 10 | Kolonga @ | 2.690 | 0.000 | 2.690 | | 0.000 |
| | C 11 | Mod. Of Jamuna Irr. | 42.014 | 28.256 | 13.758 | | 12.700 |
| **Total** | | | 262.632 | 96.225 | 162.323 | 0.000 | 97.613 |
| **Bihar** | | | | | | | 0.000 |
| | 1. | Western Kosi | 234.800 | 22.750 | 212.050 | | 145.675 |
| | C 2 | Upper Kiul | 19.000 | 7.320 | 11.680 | | 10.180 |
| | 3. | Durgawati | 36.317 | 16.020 | 20.297 | | 3.300 |
| | | Bansagar [IS] | 94.000 | 0.000 | 94.000 | | 0.000 |
| | C 4 | Orni Reservoir | 9.717 | 0.160 | 9.557 | | 9.459 |
| | C 5. | Bilasi Reservoir | 4.000 | 0.000 | 4.000 | | 4.000 |
| | C 6 | Sone Modernisation | 900.000 | 585.420 | 314.580 | | 290.580 |
| | 7. | Batane | 12.126 | 7.320 | 4.806 | | 0.000 |
| | 8. | Punpun | 13.680 | 0.000 | 13.680 | 0.000 | 0.000 |
| | C 9 | Restoration of Kosi Barrage and its appurtenants for sustaining created irrigation Potential (ERM) | 0.000 | 792.000 | 0.000 | | 0.000 |
| **Total** | | | 1323.640 | 1430.990 | 684.650 | 0.000 | 463.194 |
| **Chhattisgarh** | | | | | | | 0.000 |
| | C 1 | Hasdeo Bango | 392.000 | 122.500 | 86.500 | | 86.500 |
| | C 2 | Shivnath Diversion | 5.870 | 0.632 | 5.238 | | 5.238 |
| | C 3 | Jonk Diversion | 14.569 | 5.000 | 9.569 | | 7.870 |
| | 4. | Koserteda | 11.120 | 0.000 | 11.120 | | 6.500 |
| | C 5 | Mahanadi Res Project | 264.311 | 250.428 | 13.883 | | 13.760 |
| | C 6 | Barnai | 2.820 | 1.312 | 1.508 | | 1.508 |
| | C 7 | Minimata (Hasdeo Bango Ph. IV) | 40.874 | 2.474 | 38.400 | | 38.400 |
| | 8. | Kelo Project | 22.810 | 0.000 | 22.810 | | 0.000 |
| | 9. | Kharung(ERM) | 15.800 | 5.500 | 10.300 | 4.000 | 5.000 |
| | 10. | Sutiapat | 6.960 | 4.060 | 2.900 | 0.600 | 0.600 |
| | 11. | Maniyari Tank (ERM) | 14.515 | 3.037 | 11.478 | | |
| **Total** | | | 791.649 | 391.906 | 213.706 | 4.600 | 165.376 |
| **Goa** | | | | | | | 0.000 |
| | C 1 | Salauli Ph-I | 14.106 | 4.806 | 9.300 | | 9.300 |
| | 2. | Tillari | 14.521 | 0.000 | 14.521 | 0.170 | 8.747 |
| **Total** | | | 28.627 | 4.806 | 23.821 | 0.170 | 18.047 |

**Contd..**

**Table 13 (1) : Project -wise Irrigation Potential Created (IPC) under AIBP**

( '000 Hectare)

| State | Sr. No | Project Name | Project Potential | | | Irrigation Potential created under AIBP during 2011-12 | Potential Created under AIBP upto 3/2012 |
|---|---|---|---|---|---|---|---|
| | | | Ultimate Potential | Created before AIBP | Target for AIBP | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **Gujarat** | | | | | | | 0.000 |
| | 1. | Sardar Sarovar | 1792.000 | 0.000 | 1792.000 | 21.267 | 545.276 |
| | C 2 | Jhuj | 5.810 | 2.912 | 2.907 | | 2.907 |
| | C 3 | Sipu | 22.080 | 19.665 | 1.016 | | 1.016 |
| | C 4 | Mukteshwar | 6.190 | 0.565 | 5.066 | | 5.066 |
| | C 5 | Harnav - II | 3.440 | 2.940 | 0.000 | | 0.000 |
| | C 6 | Umaria | 2.370 | 2.062 | 0.162 | | 0.162 |
| | C 7. | Damanganga | 51.650 | 42.594 | 6.686 | | 6.686 |
| | C 8 | Karjan | 70.380 | 55.730 | 5.989 | | 5.989 |
| | C 9 | Sukhi | 25.250 | 21.585 | 3.488 | | 3.488 |
| | C 10 | Deo | 8.530 | 7.580 | 0.103 | | 0.103 |
| | C 11 | Watrak | 16.870 | 12.574 | 3.714 | | 3.714 |
| | C 12 | Aji-IV | 3.750 | 0.000 | 3.750 | | 3.750 |
| | C 13 | Ozat-II | 9.400 | 0.000 | 1.800 | | 3.338 |
| | C 14 | Brahmini-II | 2.062 | 0.000 | 2.062 | | 2.062 |
| | C 15 | Bhadar-II | 8.570 | 0.000 | 1.500 | | 6.000 |
| **Total** | | | 2028.352 | 168.207 | 1830.243 | 21.267 | 589.557 |
| **Haryana** | | | | | | | 0.000 |
| | C 1 | Gurgaon canal # | 81.000 | 61.000 | | | 0.000 |
| | C 2 | WRCP | 155.500 | 23.530 | 131.970 | | 115.222 |
| | x 3 | J. L. N. Lift Irr. | 164.000 | 95.000 | 69.000 | | 0.000 |
| **Total** | | | 400.500 | 179.530 | 200.970 | 0.000 | 115.222 |
| **Himachal Pradesh** | | | | | | | 0.000 |
| | 1. | Shahnehar Irr. project | 24.760 | 0.000 | 24.760 | | 18.026 |
| | 2. | Sidhata | 5.350 | 0.000 | 5.350 | | 0.823 |
| | 3. | Changer Lift | 3.041 | 0.000 | 3.041 | | 3.041 |
| | 4. | Balh Vally (Left Bank) | 4.354 | 0.000 | 4.354 | | 0.940 |
| **Total** | | | 37.505 | 0.000 | 37.505 | 0.000 | 22.830 |
| **J&K** | | | | | | | 0.000 |
| | C 1. | Marwal Lift* | 11.420 | 0.030 | 11.390 | | 0.000 |
| | C 2 | Lethpora Lift* | 3.200 | 0.542 | 2.658 | | 2.656 |
| | C 3. | Koil Lift* | 2.300 | 0.150 | 2.150 | | 0.000 |
| | 4. | Mod. of Ranbir Canal* | 15.266 | 1.600 | 13.666 | | 7.442 |
| | 5. | Mod. of New Pratap Canal | 13.309 | 10.511 | 2.619 | | 2.348 |
| | C 6 | Mod. of Kathua Canal | 3.300 | 0.093 | 3.207 | | 3.207 |
| | 7. | Rajpora Lift | 2.430 | 0.000 | 2.430 | | 1.593 |
| | 8. | Tral Lift | 6.000 | 0.000 | 6.000 | | 0.910 |
| | C 9 | Igophey | 4.373 | 0.900 | 3.473 | | 3.473 |
| | C 10 | Rafiabad High Lift Irr. | 2.932 | 0.000 | 2.932 | | 2.932 |
| | C 11. | Mod. of Zaingir Canal | 2.140 | 0.000 | 2.140 | | 2.140 |

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**Table 13 (1) : Project -wise Irrigation Potential Created (IPC) under AIBP**

( '000 Hectare)

| State | Sr. No | Project Name | Project Potential | | | Irrigation Potential created under AIBP during 2011-12 | Potential Created under AIBP upto 3/2012 |
|---|---|---|---|---|---|---|---|
| | | | Ultimate Potential | Created before AIBP | Target for AIBP | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | 12. | Mod. Of Dadi Canal | 4.650 | 2.077 | 2.573 | | 1.973 |
| | C 13 | Mod. Of Martand Canal | 6.498 | 4.709 | 1.789 | | 1.789 |
| | C 14 | Mod. Of Mav Khul | 9.352 | 6.806 | 2.547 | | 2.547 |
| | C 15 | Mod. of Babul Canal | 3.077 | 2.388 | 0.689 | | 0.289 |
| | 16. | Mod. Kandi Canal | 3.229 | 0.000 | 3.229 | | 0.000 |
| | 17. | Prakachik Khows Canal | 2.262 | 0.000 | 2.262 | | 0.400 |
| | 18. | Mod. Of Ahji Canal | 8.316 | 6.101 | 2.215 | | 0.730 |
| | 19. | Restoration & Mod. Of Main Ravi Canal | 50.749 | 12.232 | 38.517 | | 0.000 |
| **Total** | | | 154.803 | 48.139 | 106.486 | 0.000 | 34.429 |
| **Jharkhand** | | | | | | | 0.000 |
| | 1. | Gumani | 16.194 | 0.000 | 16.194 | | 0.000 |
| | x 2 | Torai + | 8.000 | 0.000 | 8.000 | | 0.000 |
| | C 3. | Latratu | 9.900 | 3.800 | 6.100 | | 6.100 |
| | C 4 | Kansjore | 6.264 | 0.000 | 6.264 | | 6.264 |
| | 5. | Sonua | 8.008 | 0.000 | 8.008 | | 0.000 |
| | 6. | Surangi | 2.601 | 0.000 | 2.601 | | 0.000 |
| | C 7. | Tapkara Reservoir | 1.860 | 0.041 | 1.819 | | 1.520 |
| | 8. | Upper Sankh | 7.069 | 0.000 | 7.069 | | 0.400 |
| | 9. | Panchkhero | 3.085 | 0.000 | 3.085 | | 0.000 |
| | 10. | Subernarekha Multipurpose | 236.846 | 2.200 | 234.646 | | |
| **Total** | | | 299.827 | 6.041 | 293.786 | 0.000 | 14.284 |
| **Karnataka** | | | | | | | 0.000 |
| | 1. | Upper Krishna St.I | 458.894 | 215.000 | 243.904 | | 148.799 |
| | 2. | Malaprabha | 218.190 | 161.556 | 48.090 | | 49.031 |
| | C 3 | Hirehalla | 8.330 | 0.000 | 8.330 | | 4.180 |
| | C 4 | Ghataprabha St.III | 177.822 | 38.098 | 148.800 | | 111.574 |
| | 5. | Karanja | 35.640 | 4.674 | 30.966 | | 18.119 |
| | 6. | Upper Krishna St.II | 226.688 | 18.799 | 178.321 | | 165.247 |
| | C 7 | Gandori Nala | 8.094 | 0.000 | 8.094 | | 7.943 |
| | C 8 | Maskinallah | 3.001 | | 3.001 | | 3.502 |
| | C 9 | Votehole | 7.487 | 7.487 | 0.000 | | 0.000 |
| | 10. | Varahi | 15.702 | 0.142 | 15.560 | | 0.383 |
| | 11. | Dudhganga | 15.167 | 3.800 | 11.367 | | 0.000 |
| | 12. | Mod. Canal System of Bhadra Reservoir Canal System (ERM) | 177.337 | 153.223 | 24.114 | | 147.561 |
| | 13. | Hipparagi LIS | 74.742 | 0.000 | 74.742 | | 31.813 |
| | 14. | Restoration Bhimasamundra Tank | 3.600 | 2.800 | 0.800 | | 0.000 |
| | 15. | Bhima LIS | 24.292 | 0.000 | 24.292 | | 0.581 |
| | 16. | Guddada Malapura Lift | 5.261 | 0.000 | 5.261 | | 0.000 |
| **Total** | | | 1460.247 | 605.579 | 825.642 | 0.000 | 688.733 |

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**Table 13 (1) : Project -wise Irrigation Potential Created (IPC) under AIBP**

( '000 Hectare)

| State | Sr. No | Project Name | Project Potential | | | Irrigation Potential created under AIBP during 2011-12 | Potential Created under AIBP upto 3/2012 |
|---|---|---|---|---|---|---|---|
| | | | Ultimate Potential | Created before AIBP | Target for AIBP | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **Kerala** | | | | | | | 0.000 |
| | C 1 | Kallada | 80.579 | 43.778 | 9.276 | | 9.276 |
| | 2. | Muvattupuzha | 37.737 | 4.900 | 32.105 | 0.268 | 25.654 |
| | 3. | Karapuzha | 9.874 | 0.000 | 9.874 | 0.000 | 0.608 |
| | 4. | Kanhirapuzha | 9.714 | 8.467 | 1.247 | 1.060 | 1.240 |
| | 5. | Chitturpuzha | 16.940 | 11.976 | 4.964 | 6.226 | 6.226 |
| **Total** | | | 154.844 | 57.145 | 57.466 | 7.554 | 43.004 |
| **Madhya Pradesh** | | | | | | | 0.000 |
| | 1. | Indira Sagar Unit- I | 0.000 | | | | 0.000 |
| | | Indira Sagar Unit- II (CCA) | 169.000 | 0.000 | 62.200 | 6.121 | 41.727 |
| | C 2 | Bansagar Unit-I | 0.000 | 0.000 | 0.000 | | 0.000 |
| | | Bansagar Unit-II (CCA) | 249.359 | 0.000 | 154.543 | 30.660 | 128.744 |
| | C 3 | Upper Wainganga | 105.300 | 70.000 | 28.255 | | 28.255 |
| | C C | Rajghat Dam | 0.000 | 0.000 | 0.000 | | 0.000 |
| | 4. | Sindh Phase II | 162.100 | 3.053 | 159.047 | 2.175 | 79.429 |
| | C 5 | Sindh Phase I | 44.900 | 31.984 | 10.580 | | 5.212 |
| | 6. | Mahi | 26.430 | 0.000 | 26.430 | 2.000 | 26.430 |
| | 7. | Bariarpur LBC | 43.850 | 0.000 | 43.850 | 8.000 | 32.460 |
| | C 8 | Urmil R.B.C. | 7.700 | 4.877 | 2.123 | | 2.123 |
| | C 9. | Banjar | 2.400 | 1.334 | 1.095 | | 1.095 |
| | 10. | Bawanthadi | 29.412 | 0.000 | 29.412 | 1.000 | 28.018 |
| | 11. | Mahan | 19.740 | 0.000 | 19.740 | 4.254 | 9.000 |
| | 12. | Omkareshwar Phase I (CCA) | 24.000 | 0.000 | 24.000 | | 10.800 |
| | 13. | Bargi Diversion Ph - I | | 0.000 | 21.194 | | 15.248 |
| | | Bargi Diversion Ph -I I | 245.000 | 0.000 | 31.899 | 0.800 | 21.584 |
| | | Bargi Diversion Ph -I I I | | 0.000 | 26.000 | 0.000 | 0.000 |
| | 14. | Pench Div-I | 96.959 | 0.000 | 28.268 | | 0.000 |
| | | Omkareshwar, Ph.-II | 19.578 | 0.000 | 19.578 | | 0.300 |
| | | Omkareshwar, Ph.-III | 48.592 | 0.000 | 48.592 | 16.195 | 17.200 |
| | | Indira Sagar Canal Ph. III | 20.700 | 0.000 | 20.700 | 0.000 | 0.000 |
| | 15. | Upper Beda | 9.917 | 0.000 | 9.917 | 1.301 | 8.694 |
| | 16. | Punasa LIS | 35.008 | 0.000 | 35.008 | 5.000 | 17.600 |
| | 17. | Lower Goi | 15.686 | 0.000 | 15.686 | 0.000 | 0.000 |
| | | Indira Sagar Unit IV | 19.600 | 0.000 | 19.600 | 0.000 | 0.000 |
| | | Bargi Diversion Ph-IV | | 0.000 | 34.000 | 0.000 | 0.000 |
| | 18. | Jobat | 9.848 | 7.000 | 2.848 | 0.548 | 2.048 |
| | 19. | Sagar(Sagad) | 17.061 | 0.000 | 17.061 | 0.000 | 0.000 |
| | 20. | Singhpur | 10.200 | 0.000 | 10.200 | 0.000 | 0.000 |
| | 21. | Sanjay Sagar (Bah) | 17.807 | 0.000 | 17.807 | 0.000 | 0.000 |
| **Total** | | | 1450.147 | 118.248 | 919.633 | 78.054 | 475.967 |

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**Table 13 (1) : Project -wise Irrigation Potential Created (IPC) under AIBP**

( '000 Hectare)

| State | Sr. No | Project Name | Project Potential | | | Irrigation Potential created under AIBP during 2011-12 | Potential Created under AIBP upto 3/2012 |
|---|---|---|---|---|---|---|---|
| | | | Ultimate Potential | Created before AIBP | Target for AIBP | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **Maharashtra** | | | | | | | 0.000 |
| | 1. | Gosikhurd | 250.800 | 0.000 | 231.081 | | 25.185 |
| | C 2 | Surya | 27.190 | 22.088 | 2.968 | | 0.460 |
| | 3. | Waghur | 38.570 | 0.000 | 38.570 | 0.140 | 13.655 |
| | C 4. | Bhima | 259.540 | 184.441 | 58.758 | | 44.017 |
| | C 5 | Upper Tapi # | 55.140 | 50.500 | 1.398 | | 1.398 |
| | C 6 | Upper Wardha | 75.080 | 37.822 | 37.258 | | 34.522 |
| | C 7 | Wan | 19.177 | 3.902 | 15.275 | | 14.921 |
| | C 8 | Jayakwadi Stage-II | 129.690 | 89.143 | 7.273 | | 7.273 |
| | C 9 | Vishnupuri | 33.724 | 15.630 | 2.636 | | 2.636 |
| | C 10 | Bahula | 4.654 | 0.352 | 4.302 | | 1.668 |
| | C 11 | Krishna | 74.000 | 54.412 | 19.588 | | 19.588 |
| | C 12 | Kukadi (CCA) | 156.278 | 103.135 | 53.143 | | 40.715 |
| | 13. | Upper Manar(W) | 8.280 | 0.000 | 8.280 | 2.503 | 4.339 |
| | C 14 | Hetwane | 6.668 | 0.500 | 6.168 | | 0.546 |
| | C 15 | Chaskaman | 32.824 | 6.635 | 26.189 | | 24.996 |
| | 16. | Upper Penganga | 116.728 | 70.959 | 44.472 | 1.188 | 26.301 |
| | | Bawanthadi | 27.708 | 0.000 | 27.708 | 1.500 | 26.203 |
| | 17. | Lower Dudhna (W) | 44.482 | 0.000 | 44.482 | 7.456 | 18.275 |
| | | Tillari (Maharashtra Portion)(W) | 6.676 | 0.106 | 6.570 | | 4.757 |
| | 18. | Warna | 150.882 | 3.558 | 54.749 | | 5.875 |
| | C 19 | Wan - II | 19.177 | 13.747 | 5.080 | | 0.000 |
| | 20. | Punad | 10.846 | 0.000 | 10.846 | 1.027 | 8.902 |
| | C 21 | Pothra Nalla | 9.380 | 4.221 | 5.159 | | 5.159 |
| | C 22 | Utawali | 5.394 | 0.320 | 5.074 | | 5.074 |
| | C 23 | Purna (W) | 7.530 | 0.023 | 7.507 | | 7.507 |
| | C 24 | Nandur Madhmeshwar | 45.123 | 20.500 | 24.623 | | 32.246 |
| | C 25 | Kar (W) | 6.744 | 3.500 | 3.244 | | 1.675 |
| | 26. | Lower Wardha (W) | 63.333 | 0.000 | 63.333 | 2.000 | 17.379 |
| | C 27 | Lal Nalla (W) | 7.290 | 0.146 | 7.144 | | 3.421 |
| | 28. | Khadakpurna (W) | 24.864 | 0.000 | 24.864 | 2.200 | 13.900 |
| | C 29 | Arunavati (W) | 24.003 | 23.234 | 0.769 | | 0.769 |
| | C 30 | Tajnapur LIS | 3.622 | 0.000 | 3.622 | | 4.471 |
| | C 31 | Khadakwasla | 62.146 | 61.522 | 0.624 | | 0.624 |
| | C 32 | Kadvi | 9.220 | 8.855 | 0.365 | | 0.365 |
| | C 33 | Kasarsai | 4.119 | 1.083 | 3.036 | | 3.036 |
| | C 34 | Jawalgaon | 5.341 | 3.506 | 1.807 | | 1.807 |
| | C 35 | Kumbhi | 8.711 | 3.277 | 5.434 | | 3.604 |
| | C 36 | Kasari | 9.458 | 8.223 | 1.235 | | 1.235 |
| | C 37 | Patgoan | 8.100 | 6.108 | 1.992 | | 1.992 |

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**Table 13 (1) : Project -wise Irrigation Potential Created (IPC) under AIBP**

( '000 Hectare)

| State | Sr. No | Project Name | Project Potential | | | Irrigation Potential created under AIBP during 2011-12 | Potential Created under AIBP upto 3/2012 |
|---|---|---|---|---|---|---|---|
| | | | Ultimate Potential | Created before AIBP | Target for AIBP | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | C 38 | Madan Tank | 3.280 | 0.000 | 3.28 | | 1.200 |
| | 39. | Dongargaon Tank | 3.942 | 1.176 | 2.766 | | 1.977 |
| | C 40 | Shivna Takli | 6.389 | 0.000 | 6.389 | | 6.390 |
| | C 41 | Amravati | 2.606 | 0.000 | 2.606 | | 2.000 |
| | 42. | Gul | 3.025 | 0.000 | 3.025 | | 1.331 |
| | 43. | Bembla | 52.543 | 0.000 | 52.543 | 6.356 | 34.519 |
| | C 44 | Chandarbhaga | 6.732 | 4.808 | 1.920 | | 1.924 |
| | C 45 | Sapan | 6.380 | 1.954 | 4.426 | | 2.781 |
| | 46. | Uttermand | 5.280 | 0.550 | 4.730 | | 3.145 |
| | 47. | Sangola Branch Canal | 11.288 | 0.000 | 11.288 | | 5.815 |
| | C 48 | Pentakli | 14.332 | 11.112 | 3.220 | | 2.100 |
| | 49. | Tarali | 14.276 | 0.000 | 14.276 | 1.266 | 3.766 |
| | 50. | Dhom Balakwadi | 18.100 | 0.000 | 18.100 | 0.909 | 5.680 |
| | 51. | Morna (Gureghar) | 3.075 | 0.000 | 3.075 | | 0.085 |
| | 52. | Arjuna | 9.411 | 0.000 | 9.411 | 0.000 | 0.868 |
| | C 53 | Prakasha Barrage | 10.307 | 0.000 | 10.307 | | 10.307 |
| | C 54 | Sulwade Barrage | 8.582 | 0.000 | 8.582 | | 8.582 |
| | C 55 | Sarangkheda | 11.519 | 0.000 | 11.519 | | 11.519 |
| | 56. | Lower Pedhi | 17.023 | 0.000 | 17.023 | 0.000 | 0.000 |
| | 57. | Upper Kundalika | 2.800 | 0.000 | 2.800 | 0.100 | 0.100 |
| | 58. | Wang Project | 7.068 | 0.000 | 7.068 | | 0.615 |
| | 59. | Lower Panzara | 7.585 | 0.800 | 6.785 | 0.780 | 2.075 |
| | 60. | Aruna | 9.027 | 0.000 | 9.027 | 0.000 | 0.000 |
| | 61. | Krishna Koyana Lift | 109.127 | 4.960 | 104.167 | 12.018 | 20.267 |
| | 62. | Naradave (Mahammadwadi) | 8.084 | 0.160 | 7.924 | 0.075 | 0.462 |
| | 63. | Gadnadi | 4.296 | 0.823 | 3.473 | 0.000 | 0.500 |
| | 64. | Kudali | 5.327 | 0.000 | 5.327 | 0.000 | 0.000 |
| | | Nandur Madhmeshwar Ph-II | 20.500 | 0.000 | 20.500 | 0.000 | 0.000 |
| **Total** | | | 2234.396 | 827.791 | 1222.183 | 39.518 | 558.504 |
| **Manipur** | | | | | | | 0.000 |
| | 1. | Khuga | 15.000 | 0.000 | 15.000 | 0.000 | 10.000 |
| | 2. | Thoubal | 33.449 | 4.000 | 29.449 | | 10.861 |
| | 3. | Dolaithabi Barrage | 7.545 | 0.000 | 7.545 | | 0.000 |
| **Total** | | | 55.994 | 4.000 | 51.994 | 0.000 | 20.861 |
| **Meghalaya** | | | | | | | 0.000 |
| | x 1 | Rangai Valley | 4.775 | 0.000 | 4.775 | | 0.000 |
| **Total** | | | 4.775 | 0.000 | 4.775 | 0.000 | 0.000 |
| **Orissa** | | | | | | | 0.000 |
| | 1. | Upper Indravati(KBK) | 86.389 | 0.000 | 86.389 | | 66.338 |

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**Table 13 (1) : Project -wise Irrigation Potential Created (IPC) under AIBP**

( '000 Hectare)

| State | Sr. No | | Project Name | Project Potential | | | Irrigation Potential created under AIBP during 2011-12 | Potential Created under AIBP upto 3/2012 |
|---|---|---|---|---|---|---|---|---|
| | | | | Ultimate Potential | Created before AIBP | Target for AIBP | | |
| 1 | 2 | | 3 | 4 | 5 | 6 | 7 | 8 |
| | 2. | | Subernarekha | 187.462 | 4.326 | 183.136 | | 39.858 |
| | 3. | | Rengali | 143.490 | 0.000 | 143.490 | | 22.515 |
| | 4. | | Anandpur Barr. Ph.-I / Integrated Anandpur Barr. | 65.877 | 40.800 | 5.877 | | 5.877 |
| | C 5 | | Upper Kolab(KBK) | 88.760 | 68.010 | 21.400 | | 21.400 |
| | C 6 | | Titlagarh St-II (KBK) | 2.670 | 0.470 | 2.200 | | 2.700 |
| | 7. | | Lower Indra(KBK) | 38.870 | 0.000 | 38.870 | | 17.160 |
| | 8. | | Lower Suktel(KBK) | 40.424 | 0.000 | 40.424 | | 0.000 |
| | C 9 | | Potteru(KBK) | 109.880 | 102.600 | 7.280 | | 7.280 |
| | C 10 | | Naraj Barrage | 0.000 | 0.000 | 0.000 | | 0.000 |
| | 11. | | Telengiri(KBK) | 13.829 | 0.000 | 13.829 | | 0.000 |
| | 12. | | RET Irrigation(KBK) | 8.500 | 0.000 | 8.500 | | 0.000 |
| | 13. | | Kanupur | 29.578 | 0.000 | 29.578 | | 0.000 |
| | 14. | | Chheligada Dam | 3.000 | 0.000 | 3.000 | | 0.000 |
| | C 15 | | Improvement to Sason Canal System | 0.000 | 0.000 | 16.282 | | 16.282 |
| | C 16 | | Salandi Left Main Canal- 6.84 km - 14.33 km (Ambahata Canal) | 0.000 | 0.000 | 3.650 | | 3.650 |
| | C 17 | | Improvement to Salki Irrigation | 0.000 | 0.000 | 20.140 | | 20.140 |
| | 18. | | Rukura-Tribal | 7.648 | 0.000 | 7.648 | | 0.000 |
| **Total** | | | | 826.377 | 216.206 | 631.693 | 0.000 | 223.200 |
| **Punjab** | | | | | | | | 0.000 |
| | C 1. | | Ranjit Sagar Dam | 0.000 | 0.000 | 0.000 | | 0.000 |
| | C 2 | | Remodelling of UBDC $ | 118.000 | 0.000 | 118.000 | | 100.990 |
| | C 3 | | Irr. to H.P. below Talwara | 0.000 | 0.000 | 0.000 | | 0.000 |
| | 4. | | Shahpur Kandi Dam [NP] | 0.000 | 0.000 | 0.000 | | 0.000 |
| | 5. | | Kandi Canal Extension (Ph.II) $ | 23.326 | 0.000 | 23.326 | 0.000 | 17.728 |
| | 6. | | Rehabilitation of Ist Patiala Feeder and Kotla Branch Project | 68.624 | 0.000 | 68.624 | 0.000 | 61.600 |
| | 7. | RF | Relining of Rajasthan Feeder Cannal & Sirhind Feeder Canal [RD 179000 to RD 496000] | 93.117 | 0.000 | 93.117 | 0.000 | 0.000 |
| | | SF | | 34.548 | 0.000 | 34.548 | 0.000 | 0.000 |
| **Total** | | | | 337.615 | 0.000 | 337.615 | 0.000 | 180.318 |
| **Rajasthan** | | | | | | | | 0.000 |
| | C 1. | | Jaismand (Modernisation) | 8.353 | 4.634 | 2.398 | | 2.398 |
| | C 2 | | Chhapi | 7.000 | 0.000 | 6.991 | | 6.556 |
| | C 3 | | Panchana | 10.606 | 4.500 | 6.106 | | 6.106 |
| | 4. | | IGNP Stage-II | | | 1071.000 | | 407.000 |
| | C 5. | | Bisalpur | 55.224 | 0.000 | 1.800 | | 1.800 |
| | 6. | | Narmada Canal | 245.881 | 0.000 | 245.881 | 11.000 | 216.093 |
| | C 7. | | Gambhiri (Modernisation) | 4.770 | 2.532 | 0.925 | | 0.925 |
| | C 8 | | Chauli | 8.963 | 0.000 | 8.963 | | 8.960 |

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**Table 13 (1) : Project -wise Irrigation Potential Created (IPC) under AIBP**

( '000 Hectare)

| State | Sr. No | Project Name | Project Potential | | | Irrigation Potential created under AIBP during 2011-12 | Potential Created under AIBP upto 3/2012 |
|---|---|---|---|---|---|---|---|
| | | | Ultimate Potential | Created before AIBP | Target for AIBP | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | C 9 | Mahi Bajaj Sagar | 71.200 | 52.794 | 18.406 | | 18.406 |
| | 10. | Mod. of Gang Canal | 96.510 | 5.646 | 69.694 | 0.925 | 68.328 |
| **Total** | | | 508.507 | 70.106 | 1432.164 | 11.925 | 736.572 |
| **Tripura** | | | | | | | 0.000 |
| | 1. | Manu | 7.600 | 0.000 | 7.600 | | 3.185 |
| | 2. | Gumti | 9.800 | 2.180 | 7.620 | | 4.765 |
| | 3. | Khowai | 9.320 | 0.000 | 9.320 | | 8.642 |
| **Total** | | | 26.720 | 2.180 | 24.540 | 0.000 | 16.592 |
| **Tamilnadu** | | | | | | | 0.000 |
| | C 1. | WRCP | 0.000 | | 0.000 | | 0.000 |
| **Total** | | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Uttar Pradesh** | | | | | | | 0.000 |
| | C 1 | Upper Ganga including | 187.000 | 132.820 | 18.270 | | 18.270 |
| | | Madhya Ganga Canal | | | 35.905 | | 34.107 |
| | C 2 | Sarda Sahayak | 1925.100 | 1536.640 | 388.460 | | 366.680 |
| | 3. | Saryu Nahar | 1076.000 | 92.000 | 505.000 | | 563.800 |
| | C 4 | Providing Kharif Channel in H.K. Doab | 11.600 | 0.000 | 11.040 | | 11.038 |
| | C 5 | Rajghat Dam | 0.000 | 0.000 | 0.000 | | 0.000 |
| | C 6 | Gunta Nala Dam | 3.880 | 0.000 | 3.880 | | 3.880 |
| | 7. | Bansagar Canal | 150.132 | 0.000 | 150.132 | | 0.000 |
| | C 8 | Gyanpur Pump Canal | 37.260 | 35.760 | 1.500 | | 1.500 |
| | C 9 | Eastern Ganga Canal | 105.000 | 32.714 | 72.286 | | 69.125 |
| | C 10 | Rajghat Canal | 138.661 | 77.571 | 43.353 | | 41.005 |
| | C 11 | Mod. of Agra Canal | 50.000 | 15.000 | 35.000 | | 37.800 |
| | C 12 | Jarauli Pump Canal | 39.750 | 0.000 | 39.748 | | 17.625 |
| | 13. | Mod. of Lachhura Dam | 46.485 | 31.910 | 14.575 | | 31.910 |
| | 14. | Improving Irr. Intensity of Hardoi Branch System | 95.961 | 0.000 | 95.961 | | 83.188 |
| | 15. | Madhya Ganga Canal Ph-II | 146.532 | 0.000 | 146.532 | | 33.960 |
| | 16. | Kachnoda Dam | 10.850 | 0.000 | 10.850 | | 3.255 |
| | 17. | Arjun Shyak | 59.485 | 15.104 | 44.381 | | 0.000 |
| | 18. | Restoring Cap. of Sarda Sahayak [NP] | 790.000 | 0.000 | 790.000 | | 105.560 |
| **Total** | | | 4873.696 | 1969.519 | 2406.873 | 0.000 | 1422.703 |
| **Uttrakhand** | | | | | | | |
| | x 1 | Lakhwar Vyasi | 40.000 | 0.000 | 0.000 | | 0.000 |
| | C 2 | Tehri | 270.000 | 0.000 | 270.000 | | 0.000 |
| **Total** | | | 310.000 | 0.000 | 270.000 | 0.000 | 0.000 |
| **West Bengal** | | | | | | | 0.000 |
| | 1. | Teesta Barrage | 526.688 | 79.610 | 342.150 | | 88.660 |
| | C 2. | Kangsabati | 401.660 | 319.600 | 82.060 | | 17.800 |

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**Table 13 (1) : Project -wise Irrigation Potential Created (IPC) under AIBP**

( '000 Hectare)

| State | Sr. No | Project Name | Project Potential | | | Irrigation Potential created under AIBP during 2011-12 | Potential Created under AIBP upto 3/2012 |
|---|---|---|---|---|---|---|---|
| | | | Ultimate Potential | Created before AIBP | Target for AIBP | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | C 3 | Mod. of Barrage and Irri. System of DVC | 8.000 | 0.000 | 8.000 | | 4.896 |
| | 4. | Tatko | 2.494 | 1.296 | 1.198 | | 0.674 |
| | 5. | Patloi | 2.158 | 0.000 | 2.158 | | 0.270 |
| | C 6 | Hanumata | 2.766 | 1.512 | 1.254 | | 1.189 |
| | 7. | Subarnarekha Barrage | 114.198 | 0.000 | 114.198 | | 0.000 |
| **Total** | | | 1057.964 | 402.018 | 551.018 | 0.000 | 113.489 |
| | 294. | Grand Total | 20674.592 | 7734.601 | 13905.932 | 163.088 | 6641.639 |

**Source : Mon-(C), Project Monitoring Organisation, Central Water Commission.**

C : Completed X : Deferred

## Table 13(ii) : Year-wise Irrigation Potential Created by Major and Medium Irrigation Projects under AIBP

( '000 Hectare)

| State | Project Potential | | | Potential Created under AIBP during | | | | | | | | | | | | | | | | Potential Created under AIBP upto 3/2012 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ultimate Potential | Created before AIBP | Target for AIBP | 96-97 | 97-98 | 98-99 | 99-2000 | 2000-01 | 2001-02 | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| **Andhra Pradesh** | 2045.775 | 1128.458 | 1616.846 | 0 | 18.66 | 40.665 | 16.921 | 8.839 | 36.449 | 75.825 | 11.288 | 14.121 | 82.505 | 48.422 | 91.499 | 85.4225 | 11.296 | 99.232 | 0 | 641.145 |
| **Assam** | 262.632 | 96.225 | 162.323 | 1.130 | 4.446 | 4.725 | 7.900 | 7.206 | 7.999 | 3.653 | 3.950 | 4.118 | 2.692 | 2.800 | 4.326 | 8.795 | 7.162 | 26.711 | 0.000 | 97.613 |
| **Bihar** | 1323.640 | 1430.990 | 684.650 | 1.180 | 0.000 | 8.000 | 7.791 | 13.525 | 43.299 | 47.950 | 44.785 | 60.377 | 174.648 | 44.770 | 6.400 | 10.000 | 0.469 | 0.000 | 0.000 | 463.194 |
| **Chhattisgarh** | 791.649 | 391.906 | 213.706 | 0.000 | 0.000 | 0.000 | 3.500 | 2.696 | 36.192 | 19.207 | 11.906 | 15.969 | 11.646 | 11.940 | 15.820 | 18.862 | 10.205 | 2.833 | 4.600 | 165.376 |
| **Goa** | 28.627 | 4.806 | 23.821 | 0.000 | 0.000 | 1.479 | 0.539 | 0.147 | 0.893 | 1.716 | 2.920 | 1.800 | 0.252 | 0.414 | 4.891 | 1.500 | 0.526 | 0.800 | 0.170 | 18.047 |
| **Gujarat** | 2028.352 | 168.207 | 1830.243 | 16.120 | 20.383 | 36.529 | 28.438 | 40.616 | 15.355 | 11.980 | 61.364 | 77.946 | 34.087 | 81.840 | 68.197 | 20.885 | 25.658 | 28.892 | 21.267 | 589.557 |
| **Haryana** | 400.500 | 179.530 | 200.970 | 12.090 | 12.400 | 14.970 | 21.120 | 11.230 | 12.320 | 3.266 | 2.956 | 7.885 | 6.896 | 10.089 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 115.222 |
| **Himachal Pradesh** | 37.505 | 0.000 | 37.505 | 0.000 | 0.000 | 0.243 | 0.243 | 0.332 | 0.165 | 0.324 | 0.486 | 0.486 | 0.486 | 3.533 | 3.335 | 4.146 | 4.042 | 5.011 | 0.000 | 22.830 |
| **J&K** | 154.803 | 48.139 | 106.486 | 0.000 | 0.000 | 0.000 | 0.622 | 0.878 | 2.428 | 5.587 | 2.620 | 1.076 | 1.319 | 1.190 | 4.523 | 4.737 | 4.231 | 5.218 | 0.000 | 34.429 |
| **Jharkhand** | 299.827 | 6.041 | 293.786 | 0.000 | 0.000 | 1.800 | 1.400 | 1.800 | 3.600 | 2.020 | 1.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.507 | 1.657 | 0.000 | 14.284 |
| **Karnataka** | 1460.247 | 605.579 | 825.642 | 0.770 | 3.105 | 7.190 | 8.481 | 4.816 | 66.920 | 54.970 | 129.232 | 69.148 | 50.478 | 76.012 | 21.732 | 42.012 | 108.121 | 45.746 | 0.000 | 688.733 |
| **Kerala** | 154.844 | 57.145 | 57.466 | 0.426 | 1.578 | 0.000 | 0.802 | 1.646 | 5.924 | 4.800 | 9.219 | 4.995 | 0.646 | 2.712 | 0.953 | 0.117 | 1.632 | 0.000 | 7.554 | 43.004 |
| **Madhya Pradesh** | 1450.147 | 118.248 | 919.633 | 0.000 | 0.000 | 0.000 | 5.000 | 9.473 | 9.318 | 16.680 | 11.161 | 51.298 | 18.981 | 15.449 | 82.060 | 49.832 | 37.554 | 91.107 | 78.054 | 475.967 |
| **Maharashtra** | 2234.396 | 827.791 | 1222.183 | 0.460 | 26.938 | 24.124 | 11.981 | 21.548 | 10.490 | 12.899 | 27.587 | 35.971 | 39.626 | 50.327 | 78.147 | 77.356 | 68.944 | 32.588 | 39.518 | 558.504 |
| **Manipur** | 55.994 | 4.000 | 51.994 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 5.000 | 5.921 | 4.140 | 1.800 | 4.000 | 0.000 | 20.861 |
| **Meghalaya** | 4.775 | 0.000 | 4.775 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Orissa** | 826.377 | 216.206 | 631.693 | 1.312 | 17.221 | 13.541 | 8.725 | 13.039 | 6.409 | 4.070 | 40.000 | 15.518 | 4.150 | 4.605 | 14.401 | 10.731 | 29.373 | 40.105 | 0.000 | 223.200 |
| **Punjab** | 337.615 | 0.000 | 337.615 | 0.000 | 0.000 | 0.000 | 0.000 | 14.160 | 79.750 | 2.090 | 0.000 | 4.990 | 4.534 | 4.666 | 4.796 | 27.442 | 12.890 | 25.000 | 0.000 | 180.318 |
| **Rajasthan** | 508.507 | 70.106 | 1432.164 | 0.825 | 51.620 | 58.987 | 34.774 | 12.700 | 29.095 | 37.363 | 50.367 | 55.327 | 79.191 | 60.148 | 127.465 | 52.000 | 44.000 | 30.785 | 11.925 | 736.572 |
| **Tripura** | 26.720 | 2.180 | 24.540 | 0.620 | 0.210 | 0.100 | 0.670 | 0.750 | 0.890 | 0.000 | 0.000 | 0.519 | 2.050 | 3.008 | 1.725 | 1.266 | 4.273 | 0.511 | 0.000 | 16.592 |
| **Tamilnadu** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Uttar Pradesh** | 4873.696 | 1969.519 | 2406.873 | 29.020 | 42.610 | 38.200 | 56.100 | 351.230 | 68.220 | 78.860 | 30.069 | 93.549 | 111.300 | 88.616 | 79.650 | 105.178 | 37.343 | 212.758 | 0.000 | 1422.703 |
| **Uttrakhand** | 310.000 | 0.000 | 270.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **West Bengal** | 1057.964 | 402.018 | 551.018 | 11.700 | 3.150 | 10.000 | 11.346 | 16.249 | 10.135 | 5.428 | 2.545 | 2.474 | 5.153 | 2.309 | 7.6 | 4.85 | 5.28 | 15.27 | 0 | 113.489 |
| **Grand Total** | 20674.592 | 7727.094 | 13905.932 | 75.653 | 202.321 | 260.553 | 226.353 | 532.880 | 445.851 | 388.688 | 443.455 | 517.567 | 630.640 | 518.350 | 623.441 | 529.272 | 415.306 | 668.223 | 163.088 | 6641.639 |

**Source: Mon-(C), Project Monitoring Organisation, Central Water Commission.**

**Table 13(iii) : Year-wise Central Assistance releases to States for Major, Medium, ERM Projets for the period 1996-97 to 2012-13 under AIBP**

(Rs. In crores')

| Sr. No | State | CLA released | Grant released | | | | | | | | | Cumulative CLA/Grant released |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Total upto 2004-05 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | Total upto 31.03.2013 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1. | ANDHRA PRADESH | 930.614 | 26.264 | 311.382 | 816.422 | 987.769 | 623.520 | 1300.728 | 22.792 | 256.131 | 0.000 | 5275.622 |
| 2. | ASSAM | 98.052 | 0.068 | 12.600 | 0.000 | 15.190 | 83.250 | 12.004 | 49.500 | 46.965 | 0.000 | 317.627 |
| 3. | BIHAR | 454.901 | 11.165 | 16.238 | 3.230 | 58.690 | 74.854 | 77.913 | 23.400 | 0.000 | 0.000 | 720.390 |
| 4. | CHHATISGARH | 267.328 | 0.878 | 7.665 | 0.000 | 37.394 | 42.020 | 44.847 | 43.012 | 22.252 | 15.525 | 480.919 |
| 5. | GOA | 130.855 | 0.195 | 0.000 | 1.910 | 32.480 | 39.230 | 20.250 | 20.000 | 20.250 | 8.000 | 273.170 |
| 6. | GUJARAT | 4107.172 | 45.750 | 339.600 | 121.889 | 585.720 | 258.610 | 6.080 | 361.420 | 0.000 | 1285.934 | 7112.174 |
| 7. | HARYANA | 78.030 | 3.341 | 6.000 | 3.170 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 90.540 |
| 8. | HIMACHAL PRADESH | 60.108 | 1.589 | 16.057 | 2.220 | 70.540 | 81.810 | 52.860 | 11.121 | 82.590 | 0.000 | 378.894 |
| 9. | JAMMU & KASHMIR | 75.794 | 6.574 | 24.763 | 18.247 | 94.040 | 95.309 | 13.674 | 38.297 | 61.650 | 12.707 | 441.055 |
| 10. | JHARKHAND | 77.813 | 6.386 | 5.037 | 1.290 | 9.224 | 3.720 | 0.000 | 11.240 | 335.540 | 515.721 | 965.970 |
| 11. | KARNATAKA | 2269.010 | 81.503 | 140.776 | 160.373 | 349.900 | 442.419 | 773.471 | 533.121 | 452.236 | 207.357 | 5410.165 |
| 12. | KERALA | 123.698 | 14.832 | 9.359 | 16.647 | 0.000 | 0.905 | 3.812 | 10.017 | 0.000 | 0.000 | 179.270 |
| 13. | MADHYA PRADESH | 1866.694 | 155.010 | 168.097 | 25.810 | 386.200 | 418.913 | 585.373 | 456.189 | 262.177 | 491.510 | 4815.973 |
| 14. | MAHARASHTRA | 973.882 | 158.786 | 267.986 | 395.221 | 892.307 | 1535.760 | 1395.386 | 1812.912 | 1122.682 | 840.175 | 9395.097 |
| 15. | MANIPUR | 102.900 | 10.350 | 70.304 | 138.072 | 54.180 | 182.113 | 0.000 | 209.497 | 0.000 | 375.000 | 1142.415 |
| 16. | MEGHALAYA | 4.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 4.000 |
| 17. | ORISSA | 873.161 | 7.267 | 147.999 | 134.105 | 609.489 | 705.097 | 826.243 | 563.827 | 614.947 | 14.818 | 4496.953 |
| 18. | PUNJAB | 415.470 | 0.000 | 26.317 | 0.000 | 13.500 | 9.540 | 22.050 | 140.476 | 43.630 | 0.000 | 670.983 |
| 19. | RAJASTHAN | 1387.427 | 105.871 | 90.295 | 11.600 | 156.530 | 178.620 | 143.407 | 41.920 | 3.375 | 0.000 | 2119.045 |
| 20. | TRIPURA | 30.920 | 2.700 | 16.200 | 0.940 | 0.000 | 22.669 | 4.860 | 48.000 | 0.000 | 0.000 | 126.288 |
| 21. | TAMILNADU | 20.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 20.000 |
| 22. | UTTAR PRADESH | 1337.289 | 42.276 | 108.105 | 81.895 | 150.690 | 315.473 | 238.081 | 432.738 | 279.844 | 144.638 | 3131.029 |
| 23. | UTTRAKHAND | 574.230 | 10.500 | 25.023 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 609.753 |
| 24. | WEST BENGAL | 166.133 | 4.035 | 0.029 | 6.700 | 0.830 | 22.810 | 0.914 | 81.000 | 102.546 | 0.000 | 384.997 |
| | Grand Total | 16425.477 | 695.338 | 1809.829 | 1939.741 | 4504.674 | 5136.641 | 5521.955 | 4910.478 | 3706.8134 | 3911.384 | 48562.329 |

**Source: Mon-(C), Project Monitoring Organisation, Central Water Commission.**

**Table 14(i) : Number of Major, Medium and ERM Irrigation Projects in India by State**

| Sl. No. | Name of the State/UTs. | Major Project | | | | | | Medium Project | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Completed in Pre-plan Period | Completed in Plan Period upto IX Plan | Completed in X Plan | Completed in XI Plan* | Spilled over projects in XII Plan* | new Projects in XII Plan* | Completed in Pre-plan Period | Completed in Plan Period upto IX Plan | Completed in X Plan | Completed in XI Plan* | Spilled over projects in XII Plan* | new Projects in XII Plan* |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** |
| 1 | **Andhra Pradesh** | 11 | 5 | 6 | 13 | 30 | 1 | 45 | 69 | 7 | 14 | 10 | NR |
| 2 | **Arunachal Pradesh** | 0 | 0 | 0 | NR | NR | NR | 0 | 0 | 0 | NR | NR | NR |
| 3 | **Assam** | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 8 | 1 | 1 | 1 | 0 |
| 4 | **Bihar** | 2 | 14 | 1 | 1 | 8 | 2 | 2 | 17 | 1 | 1 | 2 | 1 |
| 5 | **Chhattisgarh** | 4 | 3 | 1 | 3 | 2 | 3 | 4 | 22 | 2 | 1 | 4 | 1 |
| 6 | **Goa** | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 7 | **Gujarat** | 2 | 17 | 0 | 0 | 1 | 0 | 0 | 114 | 1 | 6 | 4 | 0 |
| 8 | **Haryana** | 1 | 5 | 1 | 4 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 9 | **Himachal Pradesh** | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 2 | 0 | 0 |
| 10 | **Jammu & Kashmir** | 1 | 1 | 0 | 0 | 0 | 0 | 6 | 10 | 2 | 0 | 0 | 0 |
| 11 | **Jharkhand** | 0 | 1 | 0 | NR | 6 | 0 | 0 | 35 | 3 | 6 | 4 | 0 |
| 12 | **Karnataka** | 4 | 4 | 0 | 5 | 11 | 0 | 8 | 30 | 1 | 13 | 11 | 2 |
| 13 | **Kerala** | 0 | 10 | 1 | 1 | 1 | 0 | 0 | 7 | 0 | 0 | 3 | 0 |
| 14 | **Madhya Pradesh** | 2 | 9 | 4 | 2 | 15 | 16 | 10 | 91 | 1 | 2 | 13 | 13 |
| 15 | **Maharashtra** | 5 | 16 | 5 | 2 | 49 | 4 | 16 | 171 | 12 | 10 | 71 | 12 |
| 16 | **Manipur** | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 4 | 0 | 1 | 1 | 2 |
| 17 | **Meghalaya** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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**Table 14(i) : Number of Major, Medium and ERM Irrigation Projects in India by State**

| Sl. No. | Name of the State/UTs. | Major Project | | | | | | Medium Project | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Completed in Pre-plan Period | Completed in Plan Period upto IX Plan | Completed in X Plan | Completed in XI Plan* | Spilled over projects in XII Plan* | new Projects in XII Plan* | Completed in Pre-plan Period | Completed in Plan Period upto IX Plan | Completed in X Plan | Completed in XI Plan* | Spilled over projects in XII Plan* | new Projects in XII Plan* |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** |
| 18 | **Mizoram** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | **Nagaland** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | **Orissa** | 3 | 6 | 3 | 0 | 11 | 0 | 3 | 37 | 6 | 1 | 13 | 1 |
| 21 | **Punjab** | 3 | 5 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| 22 | **Rajasthan** | 1 | 5 | 2 | 3 | NR | 0 | 42 | 55 | 3 | 2 | 0 | 0 |
| 23 | **Sikkim** | 0 | 0 | 0 | NR | NR | NR | 0 | 0 | 0 | NR | NR | NR |
| 24 | **Tamil Nadu** | 17 | 5 | 0 | 0 | 0 | 0 | 7 | 39 | 0 | 0 | 0 | 0 |
| 25 | **Tripura** | 0 | 0 | 0 | NR | NR | NR | 0 | 0 | 0 | NR | NR | NR |
| 26 | **Uttarakhand** | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | **Uttar Pradesh** | 15 | 42 | 0 | 0 | 6 | 1 | 0 | 40 | 0 | 0 | 0 | 0 |
| 28 | **West Bengal** | 3 | 3 | 0 | 0 | 2 | 0 | 0 | 17 | 0 | 1 | 0 | 0 |
| | **TOTAL** | 74 | 154 | 32 | 35 | 149 | 27 | 143 | 773 | 40 | 62 | 138 | 32 |

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**Table 14(i) : Number of Major, Medium and ERM Irrigation Projects in India by State**

**'(in Nos.)**

| Sl. No. | Name of the State/UTs. | ERM | | | | | Total | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Compl-eted in Plan Period upto IX Plan | Compl-eted in X Plan | Compl-eted in XI Plan* | Spilled over projects in XII Plan* | new Projects in XII Plan* | Compl-eted in Pre-plan Period | Compl-eted in Plan Period upto IX Plan | Compl-eted in X Plan | Compl-eted in XI Plan* | Compl-eted upto XI Plan* | Spilled over projects in XII Plan* | new Projects in XII Plan* |
| **1** | **2** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** | **25** | **26** |
| 1 | **Andhra Pradesh** | 0 | 6 | 1 | 2 | 0 | 56 | 74 | 19 | 28 | 177 | 42 | 1 |
| 2 | **Arunachal Pradesh** | 0 | 0 | NR | NR | NR | 0 | 0 | 0 | NR | NR | NR | NR |
| 3 | **Assam** | 1 | 0 | 0 | 0 | 0 | 0 | 11 | 3 | 1 | 15 | 3 | 0 |
| 4 | **Bihar** | 2 | 0 | 1 | 3 | 0 | 4 | 33 | 2 | 3 | 42 | 13 | 3 |
| 5 | **Chhattisgarh** | 2 | 0 | 0 | 1 | 0 | 8 | 27 | 3 | 4 | 42 | 7 | 4 |
| 6 | **Goa** | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 0 |
| 7 | **Gujarat** | 12 | 0 | 0 | 13 | 0 | 2 | 143 | 1 | 6 | 152 | 18 | 0 |
| 8 | **Haryana** | 12 | 1 | 1 | 0 | 0 | 1 | 17 | 2 | 6 | 26 | 3 | 0 |
| 9 | **Himachal Pradesh** | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 3 | 7 | 0 | 0 |
| 10 | **Jammu & Kashmir** | 4 | 2 | 0 | 0 | 0 | 7 | 15 | 4 | 0 | 26 | 0 | 0 |
| 11 | **Jharkhad** | 1 | 0 | 0 | 4 | 0 | 0 | 37 | 3 | 6 | 46 | 14 | 0 |
| 12 | **Karnataka** | 0 | 0 | 3 | 0 | 0 | 12 | 34 | 1 | 21 | 68 | 22 | 2 |
| 13 | **Kerala** | 1 | 0 | 1 | 0 | 0 | 0 | 18 | 1 | 2 | 21 | 4 | 0 |
| 14 | **Madhya Pradesh** | 1 | 0 | 6 | 2 | 4 | 12 | 101 | 5 | 10 | 128 | 30 | 33 |
| 15 | **Maharashtra** | 1 | 3 | 1 | 4 | 0 | 21 | 188 | 20 | 13 | 242 | 124 | 16 |
| 16 | **Manipur** | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 1 | 6 | 2 | 2 |
| 17 | **Meghalaya** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | **Mizoram** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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**Table 14(i) : Number of Major, Medium and ERM Irrigation Projects in India by State**

**'(in Nos.)**

| Sl. No. | Name of the State/UTs. | ERM | | | | | Total | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Compl-eted in Plan Period upto IX Plan | Compl-eted in X Plan | Compl-eted in XI Plan* | Spilled over projects in XII Plan* | new Projects in XII Plan* | Compl-eted in Pre-plan Period | Compl-eted in Plan Period upto IX Plan | Compl-eted in X Plan | Compl-eted in XI Plan* | Compl-eted upto XI Plan* | Spilled over projects in XII Plan* | new Projects in XII Plan* |
| **1** | **2** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** | **25** | **26** |
| 19 | **Nagaland** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | **Orissa** | 8 | 13 | 5 | 5 | 21 | 6 | 51 | 22 | 6 | 85 | 29 | 22 |
| 21 | **Punjab** | 8 | 3 | 0 | 2 | 2 | 3 | 15 | 3 | 0 | 21 | 3 | 2 |
| 22 | **Rajasthan** | 7 | 0 | 0 | 0 | 0 | 43 | 67 | 5 | 5 | 120 | 0 | 0 |
| 23 | **Sikkim** | 0 | 0 | NR | NR | NR | 0 | 0 | 0 | NR | NR | NR | NR |
| 24 | **Tamil Nadu** | 11 | 1 | 0 | 0 | 0 | 24 | 55 | 1 | 0 | 80 | 0 | 0 |
| 25 | **Tripura** | 0 | 0 | NR | NR | NR | 0 | 0 | 0 | NR | NR | NR | NR |
| 26 | **Uttarakhand** | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 |
| 27 | **Uttar Pradesh** | 20 | 0 | 0 | 3 | 0 | 15 | 102 | 0 | 0 | 117 | 9 | 1 |
| 28 | **W.Bengal** | 0 | 0 | 0 | 0 | 0 | 3 | 20 | 0 | 1 | 24 | 2 | 0 |
| | **TOTAL** | **91** | **30** | **19** | **39** | **27** | **217** | **1018** | **102** | **116** | **1453** | **326** | **86** |

**Source: Central Water Commission ( P & P Directorate)**

**E.R.M. : Extention, Renovation and Modernisation Projects.**

**Note- * : Figures are likely to be changed after receiving final data. NR : Non availability of data**

**Table 14 (ii) : STATE-WISE & PROJECT-WISE FINANCIAL STATUS OF MAJOR, MEDIUM AND ERM PROJECTS AS REPORTED COMPLETED IN XI PLAN**

| STATE | Project Name | Type of Project | Status | Approval Status | Un approved Cost | Original Cost | Latest Estimated Cost | Start Year | Upto X Plan | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | Liability in XII Plan | Beyond XII plan | Cumm. Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| ANDHRA PRADESH | **Alisagar Lift Irrigation Scheme** | Major | Completed in XI Plan | APD | 0.00 | 107.87 | 261.30 | 2005.00 | 210.67 | 34.61 | 3.74 | 10.17 | 5.64 | 20.00 | 0 | 0 | 284.83 |
| ANDHRA PRADESH | **Arugula Raja Ram Guthpa Lift Irrigation Scheme** | Major | Completed in XI Plan | APD | 0.00 | 145.00 | 198.02 | 2005.00 | 130.06 | 32.39 | 8.39 | 20.39 | 21.42 | 25.00 | 0 | 0 | 237.65 |
| ANDHRA PRADESH | **Chagalandu Lift Irrigation Scheme** | Major | Completed in XI Plan | APD | 0.00 | 61.23 | 70.77 | 1999.00 | 70.44 | 1.59 | 1.17 | 0.23 | 8.07 | 5.00 | 0 | 0 | 86.50 |
| ANDHRA PRADESH | **Guru Raghavendra Project** | Major | Completed in XI Plan | UA | 130.42 | 0.00 | 0.00 | 2004.00 | 71.78 | 40.58 | 17.76 | 6.46 | 12.40 | 21.00 | 0 | 0 | 169.98 |
| ANDHRA PRADESH | **Kandula Obula Reddy Gundlakamma Reservoir project** | Major | Completed in XI Plan | UA | 592.18 | 0.00 | 0.00 | 2004.00 | 308.24 | 133.25 | 34.79 | 28.78 | 10.76 | 76.36 | 0 | 0 | 592.18 |
| ANDHRA PRADESH | **Kunool Cuddapah Canal Modernisation Project** | Major | Completed in XI Plan | UA | 0.00 | 0.00 | 0.00 | 1998.00 | 718.93 | 6.54 | 18.14 | 7.67 | 13.49 | 39.00 | 0 | 0 | 803.77 |
| ANDHRA PRADESH | **Lendi Interstate Project** | Major | Completed in XI Plan | UA | 0.00 | 0.00 | 263.89 | 2007.00 | 96.19 | 25.79 | 7.94 | 36.48 | 30.07 | 60.00 | 0 | 0 | 256.47 |
| ANDHRA PRADESH | **Modernisation of Godavari Delta System and Drainage System including lining in Vulnerable** | Major | Completed in XI Plan | UA | 0.00 | 0.00 | 1690.00 | 2008.00 | 0.00 | 0.00 | 57.00 | 37.89 | 15.65 | 166.54 | 0 | 0 | 277.08 |
| ANDHRA PRADESH | **Siddapuram Lift Irrigation Scheme** | Major | Completed in XI Plan | UA | 89.72 | 0.00 | 0.00 | 2008.00 | 0.00 | 0.00 | 7.42 | 18.00 | 13.48 | 33.73 | 0 | 0 | 72.63 |
| ANDHRA PRADESH | **Somasila Project** | Major | Completed in XI Plan | UA | 1196.00 | 0.00 | 0.00 | 1978.00 | 736.74 | 129.11 | 92.71 | 62.61 | 55.10 | 140.00 | 0 | 0 | 1216.27 |
| ANDHRA PRADESH | **Sri Magunta Subbarami Reddy Ramatheertham Balancing Reservoir** | Major | Completed in XI Plan | UA | 52.00 | 0.00 | 0.00 | 2005.00 | 17.22 | 18.27 | 10.26 | 1.04 | 0.28 | 4.93 | 0 | 0 | 52.00 |
| ANDHRA PRADESH | **Thota Venkatachalam Pushkara Lift Irrigation Scheme** | Major | Completed in XI Plan | UA | 1196.00 | 0.00 | 608.04 | 2004.00 | 342.11 | 76.48 | 44.92 | 74.59 | 31.50 | 45.00 | 0 | 0 | 614.60 |

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**Table 14 (ii) : STATE-WISE & PROJECT-WISE FINANCIAL STATUS OF MAJOR, MEDIUM AND ERM PROJECTS AS REPORTED COMPLETED IN XI PLAN**

| STATE | Project Name | Type of Project | Status | Approval Status | Un approved Cost | Original Cost | Latest Estimated Cost | Start Year | Upto X Plan | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | Liability in XII Plan | Beyond XII plan | Cumm. Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| ANDHRA PRADESH | **Thotapalli Barrage Project** | Major | Completed in XI Plan | UA | 1196.00 | 0.00 | 0.00 | 2004.00 | 190.94 | 114.26 | 63.30 | 30.38 | 43.11 | 40.00 | 0 | 0 | 481.99 |
| ANDHRA PRADESH | **Tungabhadra Project High Level Stage Two** | Major | Completed in XI Plan | UA | 1196.00 | 0.00 | 467.26 | 1967.00 | 377.09 | 7.39 | 5.34 | 8.00 | 7.32 | 8.00 | 0 | 0 | 413.14 |
| ANDHRA PRADESH | **Bhupatipalem Reservoir Scheme Final** | Medium | Completed in XI Plan | UA | 0.00 | 0.00 | 187.91 | 2004.00 | 1.54 | 15.00 | 81.34 | 26.79 | 26.01 | 30.00 | 0 | 0 | 180.68 |
| ANDHRA PRADESH | **Choutpally Hanumanth Reddy Lift Irrigation Scheme** | Medium | Completed in XI Plan | UA | 0.00 | 0.00 | 55.50 | 2005.00 | 18.87 | 15.50 | 12.01 | 1.45 | 3.19 | 5.00 | 0 | 0 | 56.02 |
| ANDHRA PRADESH | **Gollavagu Project** | Medium | Completed in XI Plan | UA | 1196.00 | 0.00 | 0.00 | 2004.00 | 71.62 | 3.24 | 1.49 | 0.45 | 3.35 | 5.60 | 0 | 0 | 85.75 |
| ANDHRA PRADESH | **Kovvadakalva Reservoir Scheme** | Medium | Completed in XI Plan | UA | 0.00 | 0.00 | 68.09 | 2000.00 | 60.56 | 0.38 | 0.10 | 0.10 | 0.05 | 1.06 | 0 | 0 | 62.25 |
| ANDHRA PRADESH | **Madduvalasa Reservoir Project** | Medium | Completed in XI Plan | UA | 0.00 | 0.00 | 132.00 | 1976.00 | 130.21 | 0.60 | 0.03 | 27.42 | 5.23 | 0.00 | 0 | 0 | 163.49 |
| ANDHRA PRADESH | **Madduvalasa Reservoir Project Stage two** | Medium | Completed in XI Plan | APD | 0.00 | 39.03 | 57.87 | 2009.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.03 | 20.00 | 0 | 0 | 23.03 |
| ANDHRA PRADESH | **Mathadivagu Project** | Medium | Completed in XI Plan | UA | 0.00 | 0.00 | 0.00 | 2004.00 | 29.31 | 12.04 | 12.95 | 1.94 | 0.19 | 1.50 | 0 | 0 | 57.93 |
| ANDHRA PRADESH | **Musurumilli Reservoir Scheme** | Medium | Completed in XI Plan | APD | 0.00 | 207.00 | 218.65 | 2005.00 | 53.54 | 31.45 | 25.86 | 38.12 | 31.47 | 20.00 | 0 | 0 | 200.44 |
| ANDHRA PRADESH | **Neelwai Project** | Medium | Completed in XI Plan | APD | 0.00 | 90.50 | 0.00 | 2004.00 | 8.71 | 10.92 | 2.65 | 3.95 | 2.94 | 8.50 | 0 | 0 | 37.67 |
| ANDHRA PRADESH | **Peddagedda Reservoir Project Final** | Medium | Completed in XI Plan | APD | 0.00 | 26.52 | 0.00 | 2004.00 | 85.65 | 11.48 | 5.57 | 0.79 | 0.21 | 0.00 | 0 | 0 | 103.70 |
| ANDHRA PRADESH | **Ralivagu Project** | Medium | Completed in XI Plan | APD | 0.00 | 33.30 | 0.00 | 2004.00 | 41.51 | 2.52 | 3.23 | 0.57 | 0.00 | 0.00 | 0 | 0 | 47.83 |
| ANDHRA PRADESH | **Sri K.V.Rama Krishna Surampalem Reservoir Project** | Medium | Completed in XI Plan | APD | 0.00 | 44.38 | 78.70 | 1999.00 | 48.80 | 2.33 | 1.14 | 0.44 | 1.54 | 0.25 | 0 | 0 | 54.50 |
| ANDHRA PRADESH | **Swarnamukhi Barrage** | Medium | Completed in XI Plan | UA | 52.04 | 0.00 | 0.00 | 2005.00 | 32.08 | 11.49 | 0.24 | 6.95 | 6.41 | 9.00 | 0 | 0 | 66.17 |

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**Table 14 (ii) : STATE-WISE & PROJECT-WISE FINANCIAL STATUS OF MAJOR, MEDIUM AND ERM PROJECTS AS REPORTED COMPLETED IN XI PLAN**

| STATE | Project Name | Type of Project | Status | Approval Status | Un approved Cost | Original Cost | Latest Estimated Cost | Start Year | Upto X Plan | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | Liability in XII Plan | Beyond XII plan | Cumm. Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| ANDHRA PRADESH | **Vasireddy Krishna Murthy Naidu Janjhavathi Reservoir Project** | Medium | Completed in XI Plan | UA | 0.00 | 0.00 | 0.00 | 1976.00 | 98.41 | 13.10 | 4.44 | 2.35 | 2.39 | 10.00 | 0 | 0 | 130.69 |
| | | | **28** | | **6896.36** | **754.83** | **4358.00** | | **3951.22** | **750.31** | **523.93** | **454.01** | **354.30** | **795.47** | **0** | **0** | **6829.24** |
| ASSAM | **Buridehing** | Medium | Completed in XI Plan | APD | 0.00 | 17.27 | 0.00 | 1980.00 | 0.00 | 0.00 | 0.00 | 0.00 | 18.28 | 5.73 | 0 | 0 | 24.01 |
| | | | **1** | | **0.00** | **17.27** | **0.00** | | **0.00** | **0.00** | **0.00** | **0.00** | **18.28** | **5.73** | **0** | **0** | **24.01** |
| BIHAR | **Western Kosi Canal Project** | Major | Completed in XI Plan | APD | 0.00 | 13.49 | 1307.21 | 1971.00 | 759.12 | 234.94 | 76.61 | 84.67 | 50.67 | 101.20 | 0 | 0 | 1307.21 |
| BIHAR | **Mandai Wier Scheme** | Medium | Completed in XI Plan | UA | 89.05 | 0.00 | 0.00 | 2007.00 | 0.00 | 7.79 | 18.00 | 9.16 | 5.00 | 0.00 | 0 | 0 | 39.95 |
| BIHAR | **Restoration of Lt. and Rt. Main Canal Under Kulti Irrigation Scheme** | Medium | Completed in XI Plan | UA | 0.81 | 0.00 | 0.00 | 2009.00 | 0.00 | 0.00 | 0.00 | 0.11 | 0.32 | 0.38 | 0 | 0 | 0.81 |
| | | | **3** | | **89.86** | **13.49** | **1307.21** | | **759.12** | **242.73** | **94.61** | **93.94** | **55.99** | **101.58** | **0** | **0** | **1347.97** |
| CHHATTISGARH | **MAHANADI RESERVIOR PROJECT** | Major | Completed in XI Plan | APD | 0.00 | 566.88 | 845.00 | 2000.00 | 656.52 | 51.97 | 56.14 | 63.77 | 74.67 | 20.00 | 0 | 0 | 923.07 |
| CHHATTISGARH | **Minimata (Hasdeo) Bango Project Bilaspur** | Major | Completed in XI Plan | APD | 0.00 | 115.30 | 1660.88 | 1962.00 | 1380.13 | 79.80 | 95.37 | 83.92 | 75.56 | 36.48 | 0 | 0 | 1751.26 |
| CHHATTISGARH | **RAJIV SAMODA NISDA DIVERSION SCHEME PHASE II** | Major | Completed in XI Plan | UA | 114.45 | 0.00 | 0.00 | 2006.00 | 0.00 | 10.54 | 7.25 | 3.07 | 5.40 | 1.17 | 0 | 0 | 27.43 |
| CHHATTISGARH | **KOSARTEDA MEDIUM IRRIGATION PROJECT** | Medium | Completed in XI Plan | APD | 0.00 | 6.01 | 154.65 | 1981.00 | 17.54 | 58.57 | 11.06 | 10.77 | 17.74 | 7.00 | 0 | 0 | 122.68 |
| | | | **4** | | **114.45** | **688.19** | **2660.53** | | **2054.19** | **200.88** | **169.82** | **161.53** | **173.37** | **64.65** | **0** | **0** | **2824.44** |
| GUJARAT | **Bhadar II** | Medium | Completed in XI Plan | APD | 0.00 | 138.56 | 138.56 | 1998.00 | 96.12 | 7.87 | 9.13 | 11.76 | 4.21 | 9.46 | 0 | 0 | 138.55 |
| GUJARAT | **Demi III** | Medium | Completed in XI Plan | APD | 0.00 | 39.04 | 75.16 | 1998.00 | 32.76 | 0.83 | 2.20 | 2.80 | 0.14 | 0.10 | 0 | 0 | 38.83 |
| GUJARAT | **Umrecha** | Medium | Completed in XI Plan | APD | 0.00 | 22.43 | 14.97 | 2004.00 | 4.48 | 5.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 9.83 |

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**Table 14 (ii) : STATE-WISE & PROJECT-WISE FINANCIAL STATUS OF MAJOR, MEDIUM AND ERM PROJECTS AS REPORTED COMPLETED IN XI PLAN**

| STATE | Project Name | Type of Project | Status | Approval Status | Un approved Cost | Original Cost | Latest Estimated Cost | Start Year | Upto X Plan | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | Liability in XII Plan | Beyond XII plan | Cumm. Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| GUJARAT | **Und II** | Medium | Completed in XI Plan | APD | 0.00 | 19.48 | 68.40 | 1986.00 | 6.55 | 0.22 | 0.58 | 0.39 | 0.54 | 0.96 | 0 | 0 | 9.24 |
| GUJARAT | **Varansi** | Medium | Completed in XI Plan | APD | 0.00 | 0.13 | 16.80 | 2001.00 | 6.19 | 0.47 | 0.20 | 0.40 | 0.50 | 0.32 | 0 | 0 | 8.08 |
| GUJARAT | **Vartu II** | Medium | Completed in XI Plan | APD | 0.00 | 24.28 | 57.15 | 1991.00 | 0.13 | 2.21 | 3.13 | 3.96 | 8.30 | 6.45 | 0 | 0 | 24.18 |
| | | | **6** | | **0.00** | **243.91** | **371.04** | | **146.23** | **16.94** | **15.24** | **19.31** | **13.69** | **17.29** | **0** | **0** | **228.70** |
| HARYANA | **Augmentation of Irrigation Potential of Ottu Lake in Sirsa District under RIDF XIII** | Major | Completed in XI Plan | UA | 69.68 | 0.00 | 0.00 | 2007.00 | 0.00 | 14.65 | 4.83 | 25.05 | 0.42 | 24.74 | 0 | 0 | 69.69 |
| HARYANA | **haryana irrigation project for better water management** | Major | Completed in XI Plan | UA | 171.62 | 0.00 | 0.00 | 2009.00 | 0.00 | 0.00 | 27.59 | 33.43 | 20.00 | 62.30 | 0 | 0 | 143.32 |
| HARYANA | **Irrigation Project for better water Management under RIDF XIV** | Major | Completed in XI Plan | UA | 143.34 | 0.00 | 0.00 | 2009.00 | 0.00 | 0.00 | 27.59 | 33.43 | 20.02 | 62.30 | 0 | 0 | 143.34 |
| HARYANA | **NCR WATER SUPPLY CHANNEL Rehabilitation** | Major | Completed in XI Plan | UA | 322.00 | 0.00 | 0.00 | 2008.00 | 322.00 | 0.00 | 145.27 | 109.94 | 19.60 | 8.50 | 0 | 0 | 605.31 |
| HARYANA | **Modernisation of canal and Renovation of drains rechargeground water** | Major | Completed in XI Plan | UA | 322.00 | 0.00 | 0.00 | 2008.00 | 47.70 | 7.70 | 20.00 | 20.00 | 0.00 | 19.58 | 0 | 0 | 114.98 |
| HARYANA | **Irrigation Project for better Water Management under RIDF XIII** | Medium | Completed in XI Plan | UA | 114.62 | 0.00 | 0.00 | 2007.00 | 0.00 | 63.57 | 25.38 | 10.70 | 4.87 | 10.09 | 0 | 0 | 114.61 |
| | | | **6** | | **1143.26** | **0.00** | **0.00** | | **369.70** | **85.92** | **250.66** | **232.55** | **64.91** | **187.51** | **0** | **0** | **1191.25** |

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**Table 14 (ii) : STATE-WISE & PROJECT-WISE FINANCIAL STATUS OF MAJOR, MEDIUM AND ERM PROJECTS AS REPORTED COMPLETED IN XI PLAN**

| STATE | Project Name | Type of Project | Status | Approval Status | Un approved Cost | Original Cost | Latest Estimated Cost | Start Year | Upto X Plan | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | Liability in XII Plan | Beyond XII plan | Cumm. Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| HIMACHAL PRADESH | **Shahnehar Major Irrigation Project in Dist. Kangra (H P)** | Major | Completed in XI Plan | APD | 0.00 | 143.32 | 310.89 | 1997.00 | 158.49 | 53.34 | 33.83 | 46.40 | 22.87 | 70.46 | 0 | 0 | 385.39 |
| HIMACHAL PRADESH | **Balh valley (Left Bank) Medium Irrigation project** | Medium | Completed in XI Plan | APD | 0.00 | 41.64 | 103.78 | 2004.00 | 3.51 | 3.01 | 4.00 | 40.00 | 20.00 | 33.26 | 0 | 0 | 103.78 |
| HIMACHAL PRADESH | **Sidhatha Irrigation Project District Kangra (HP)** | Medium | Completed in XI Plan | APD | 0.00 | 33.62 | 95.29 | 1997.00 | 34.02 | 13.73 | 10.78 | 9.08 | 7.76 | 19.92 | 0 | 0 | 95.29 |
| | | | **3** | | **0.00** | **218.58** | **509.96** | | **196.02** | **70.08** | **48.61** | **95.48** | **50.63** | **123.64** | **0** | **0** | **584.46** |
| JHARKHAND | **DHANSINGHTOLI RESERVOIR SCHEME** | Medium | Completed in XI Plan | UA | 29.52 | 0.00 | 0.00 | 1986.00 | 29.52 | 0.33 | 0.50 | 0.00 | 0.00 | 0.00 | 0 | 0 | 30.35 |
| JHARKHAND | **KANSJORE RESERVOIR SCHEME** | Medium | Completed in XI Plan | UA | 52.97 | 0.00 | 0.00 | 1986.00 | 48.20 | 2.00 | 1.00 | 2.78 | 1.03 | 0.00 | 0 | 0 | 55.01 |
| JHARKHAND | **NAKTI RESERVOIR SCHEME** | Medium | Completed in XI Plan | UA | 35.16 | 0.00 | 0.00 | 1987.00 | 14.97 | 12.00 | 7.42 | 1.97 | 3.25 | 0.00 | 0 | 0 | 39.61 |
| JHARKHAND | **SONUA RESERVOIR SCHEME** | Medium | Completed in XI Plan | UA | 82.65 | 0.00 | 0.00 | 1987.00 | 64.89 | 1.89 | 5.77 | 2.41 | 1.21 | 0.02 | 0 | 0 | 76.19 |
| JHARKHAND | **SURANGI RESERVOIR SCHEME** | Medium | Completed in XI Plan | UA | 41.17 | 0.00 | 0.00 | 1987.00 | 36.41 | 3.28 | 0.51 | 2.96 | 1.05 | 0.00 | 0 | 0 | 44.21 |
| JHARKHAND | **UPPERSANKH RESERVOIR SCHEME** | Medium | Completed in XI Plan | UA | 141.19 | 0.00 | 0.00 | 1986.00 | 92.43 | 11.72 | 11.69 | 5.63 | 5.93 | 11.24 | 0 | 0 | 138.64 |
| | | | **6** | | **382.66** | **0.00** | **0.00** | | **286.42** | **31.22** | **26.89** | **15.75** | **12.47** | **11.26** | **0** | **0** | **384.01** |
| KARNATAKA | **DD Urs Canal Project** | Major | Completed in XI Plan | UA | 18.50 | 0.00 | 0.00 | 1979.00 | 408.21 | 29.29 | 12.14 | 16.67 | 21.06 | 1.00 | 0 | 0 | 488.38 |
| KARNATAKA | **Ghataprabha project third stage** | Major | Completed in XI Plan | UA | 18.50 | 0.00 | 1210.51 | 1972.00 | 990.45 | 76.25 | 55.68 | 83.67 | 108.35 | 85.00 | 0 | 0 | 1399.40 |
| KARNATAKA | **Harangi** | Major | Completed in XI Plan | UA | 11.00 | 0.00 | 0.00 | 1969.00 | 443.73 | 48.68 | 36.12 | 29.21 | 16.01 | 7.00 | 0 | 0 | 580.74 |
| KARNATAKA | **Kabini** | Major | Completed in XI Plan | UA | 3.20 | 0.00 | 0.00 | 1959.00 | 522.90 | 38.90 | 17.02 | 66.94 | 96.06 | 90.00 | 0 | 0 | 831.82 |

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**Table 14 (ii) : STATE-WISE & PROJECT-WISE FINANCIAL STATUS OF MAJOR, MEDIUM AND ERM PROJECTS AS REPORTED COMPLETED IN XI PLAN**

| STATE | Project Name | Type of Project | Status | Approval Status | Un approved Cost | Original Cost | Latest Estimated Cost | Start Year | Upto X Plan | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | Liability in XII Plan | Beyond XII plan | Cumm. Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| KARNATAKA | **Malaprabha** | Major | Completed in XI Plan | UA | 20.00 | 0.00 | 1383.48 | 1962.00 | 883.25 | 57.74 | 55.07 | 69.08 | 96.44 | 168.10 | 0 | 0 | 1329.68 |
| KARNATAKA | **Mulwad Lift Irrigation Scheme A** | Major | Completed in XI Plan | UA | 20.00 | 0.00 | 0.00 | 1992.00 | 275.58 | 9.41 | 7.57 | 2.91 | 9.85 | 3.02 | 0 | 0 | 308.34 |
| KARNATAKA | **Timmapur Lift Irrigation Scheme** | Major | Completed in XI Plan | UA | 95.00 | 0.00 | 0.00 | 2006.00 | 0.00 | 12.13 | 3.10 | 3.21 | 9.34 | 75.00 | 0 | 0 | 102.78 |
| KARNATAKA | **Arkavathy** | Medium | Completed in XI Plan | UA | 22.25 | 0.00 | 0.00 | 1984.00 | 116.21 | 23.15 | 11.35 | 23.74 | 15.59 | 10.00 | 0 | 0 | 200.04 |
| KARNATAKA | **Bannahallihundi LIS** | Medium | Completed in XI Plan | UA | 16.25 | 0.00 | 0.00 | 2006.00 | 5.01 | 3.27 | 5.66 | 4.06 | 1.06 | 2.50 | 0 | 0 | 21.56 |
| KARNATAKA | **CONSTRUCTION OF SONNA LIS** | Medium | Completed in XI Plan | UA | 20.00 | 0.00 | 0.00 | 2006.00 | 8.95 | 3.00 | 2.50 | 2.50 | 0.00 | 0.95 | 0 | 0 | 17.90 |
| KARNATAKA | **Gandorinala Project** | Medium | Completed in XI Plan | UA | 18.50 | 0.00 | 240.00 | 1992.00 | 178.71 | 15.95 | 18.07 | 26.72 | 14.52 | 0.00 | 0 | 0 | 253.97 |
| KARNATAKA | **Hirehalla** | Medium | Completed in XI Plan | UA | 6.35 | 0.00 | 0.00 | 1979.00 | 291.33 | 2.21 | 3.76 | 7.81 | 12.69 | 40.51 | 0 | 0 | 358.31 |
| KARNATAKA | **Iggalur** | Medium | Completed in XI Plan | UA | 3.42 | 0.00 | 0.00 | 1986.00 | 68.91 | 8.13 | 2.31 | 2.48 | 1.78 | 3.00 | 0 | 0 | 86.62 |
| KARNATAKA | **JAVALAHALLA LIS** | Medium | Completed in XI Plan | UA | 3.33 | 0.00 | 0.00 | 2005.00 | 0.39 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0 | 0 | 0.44 |
| KARNATAKA | **KAMASAMUDRA LIS** | Medium | Completed in XI Plan | UA | 70.00 | 0.00 | 0.00 | 1984.00 | 38.34 | 6.49 | 3.10 | 3.71 | 2.12 | 1.60 | 0 | 0 | 55.36 |
| KARNATAKA | **MALALURU LIS** | Medium | Completed in XI Plan | UA | 5.95 | 0.00 | 0.00 | 1997.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 4.10 | 0 | 0 | 4.20 |
| KARNATAKA | **Manchanbele** | Medium | Completed in XI Plan | UA | 2.37 | 0.00 | 0.00 | 1969.00 | 78.19 | 6.11 | 0.63 | 1.53 | 1.97 | 0.50 | 0 | 0 | 88.93 |
| KARNATAKA | **Taraka** | Medium | Completed in XI Plan | UA | 1.70 | 0.00 | 0.00 | 1970.00 | 52.33 | 4.77 | 2.17 | 3.21 | 3.60 | 1.00 | 0 | 0 | 67.08 |
| KARNATAKA | **TEGGISIDDAPUR LIS** | Medium | Completed in XI Plan | UA | 20.00 | 0.00 | 0.00 | 2009.00 | 12.60 | 0.00 | 0.00 | 0.00 | 12.60 | 23.05 | 0 | 0 | 48.25 |
| KARNATAKA | **Uduthorehalla** | Medium | Completed in XI Plan | UA | 7.55 | 0.00 | 0.00 | 1982.00 | 192.06 | 28.76 | 4.89 | 1.20 | 1.24 | 0.50 | 0 | 0 | 228.65 |
| KARNATAKA | **VOTEHOLE** | Medium | Completed in XI Plan | UA | 2.05 | 0.00 | 0.00 | 1976.00 | 53.18 | 1.38 | 0.66 | 0.78 | 0.52 | 1.18 | 0 | 0 | 57.70 |
| | | | **21** | | **385.92** | **0.00** | **2833.99** | | **4620.34** | **375.63** | **241.78** | **349.44** | **424.90** | **518.06** | **0** | **0** | **6530.15** |
| KERALA | **Idamalayar Irrigation Project** | Major | Completed in XI Plan | APD | 0.00 | 107.00 | 1.00 | 1992.00 | 423.00 | 229.76 | 47.89 | 35.62 | 14.21 | 15.00 | 0 | 0 | 765.48 |

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**Table 14 (ii) : STATE-WISE & PROJECT-WISE FINANCIAL STATUS OF MAJOR, MEDIUM AND ERM PROJECTS AS REPORTED COMPLETED IN XI PLAN**

| STATE | Project Name | Type of Project | Status | Approval Status | Un approved Cost | Original Cost | Latest Estimated Cost | Start Year | Upto X Plan | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | Liability in XII Plan | Beyond XII plan | Cumm. Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| KERALA | **Regulator cum Bridge at Chamravattom** | Medium | Completed in XI Plan | APD | 0.00 | 134.03 | 134.03 | 2009.00 | 0.00 | 0.00 | 0.00 | 40.20 | 80.78 | 0.00 | 0 | 0 | 120.98 |
| | | | **2** | | **0.00** | **241.03** | **135.03** | | **423.00** | **229.76** | **47.89** | **75.82** | **94.99** | **15.00** | **0** | **0** | **886.46** |
| MADHYA PRADESH | **Bariyapur Lft Bank Canal** | Major | Completed in XI Plan | UA | 20.93 | 0.00 | 477.00 | 1979.00 | 236.00 | 30.00 | 26.00 | 20.00 | 46.00 | 100.00 | 0 | 0 | 458.00 |
| MADHYA PRADESH | **HARSI PROJECT** | Major | Completed in XI Plan | UA | 135.87 | 0.00 | 0.00 | 2006.00 | 40.96 | 45.61 | 20.49 | 37.49 | 12.54 | 0.45 | 0 | 0 | 157.54 |
| MADHYA PRADESH | **mahi project** | Major | Completed in XI Plan | UA | 20.93 | 0.00 | 490.39 | 1981.00 | 237.89 | 35.21 | 26.78 | 44.88 | 67.75 | 60.00 | 0 | 0 | 472.51 |
| MADHYA PRADESH | **Rehabilitation of ABC Km 0 upto 143.40** | Major | Completed in XI Plan | UA | 99.78 | 0.00 | 0.00 | 2007.00 | 0.00 | 10.85 | 39.99 | 37.96 | 8.91 | 2.07 | 0 | 0 | 99.78 |
| MADHYA PRADESH | **Rehabilitation of CRMC km 93 upto km169** | Major | Completed in XI Plan | UA | 63.94 | 0.00 | 0.00 | 2008.00 | 0.00 | 3.19 | 4.99 | 13.02 | 7.92 | 34.81 | 0 | 0 | 63.93 |
| MADHYA PRADESH | **Rehabilitation of LMC km 0 upto 50** | Major | Completed in XI Plan | UA | 64.41 | 0.00 | 0.00 | 2008.00 | 0.00 | 0.00 | 3.99 | 20.00 | 36.22 | 4.20 | 0 | 0 | 64.41 |
| MADHYA PRADESH | **Rehabilitation of MBC Km 0 upto 36.10** | Major | Completed in XI Plan | UA | 34.16 | 0.00 | 0.00 | 2008.00 | 0.00 | 1.49 | 14.85 | 12.83 | 3.71 | 1.29 | 0 | 0 | 34.16 |
| MADHYA PRADESH | **BANETA MEDIUM L.I.S.** | Medium | Completed in XI Plan | UA | 20.93 | 0.00 | 0.00 | 2008.00 | 0.00 | 5.95 | 10.23 | 8.47 | 3.99 | 9.30 | 0 | 0 | 37.94 |
| MADHYA PRADESH | **Retam Barrage Project** | Medium | Completed in XI Plan | APD | 0.00 | 22.75 | 49.64 | 2006.00 | 7.85 | 27.19 | 1.75 | 7.84 | 4.88 | 0.00 | 0 | 0 | 49.51 |
| MADHYA PRADESH | **Sindh Ramowa Link Canal Project** | Medium | Completed in XI Plan | UA | 5.96 | 0.00 | 0.00 | 1980.00 | 6.68 | 0.43 | 1.05 | 1.19 | 1.56 | 8.60 | 0 | 0 | 19.51 |
| | | | **10** | | **466.91** | **22.75** | **1017.03** | | **529.38** | **159.92** | **150.12** | **203.68** | **193.48** | **220.72** | **0** | **0** | **1457.29** |
| MAHARASHTRA | **Sangola Branch Canal** | Major | Completed in XI Plan | UA | 95.39 | 0.00 | 662.54 | 2007.00 | 19.74 | 6.82 | 7.72 | 27.49 | 53.45 | 106.00 | 0 | 0 | 221.22 |
| MAHARASHTRA | **Sangola Lift Irrigation Scheme** | Major | Completed in XI Plan | UA | 73.59 | 0.00 | 0.00 | 2011.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0 | 0 | 1.00 |
| MAHARASHTRA | **Uper Wardha** | Major | Completed in XI Plan | UA | 73.59 | 0.00 | 1376.63 | 1976.00 | 709.68 | 84.61 | 96.72 | 34.64 | 33.30 | 20.00 | 0 | 0 | 978.95 |

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**Table 14 (ii) : STATE-WISE & PROJECT-WISE FINANCIAL STATUS OF MAJOR, MEDIUM AND ERM PROJECTS AS REPORTED COMPLETED IN XI PLAN**

| STATE | Project Name | Type of Project | Status | Approval Status | Un approved Cost | Original Cost | Latest Estimated Cost | Start Year | Upto X Plan | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | Liability in XII Plan | Beyond XII plan | Cumm. Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| MAHARASHTRA | **Dhapewada Lift Irrigation Scheme Stage 1** | Medium | Completed in XI Plan | APD | 0.00 | 24.01 | 185.68 | 1996.00 | 70.42 | 6.70 | 10.73 | 1.30 | 40.00 | 25.00 | 0 | 0 | 154.15 |
| MAHARASHTRA | **Dongargaon Project** | Medium | Completed in XI Plan | APD | 0.00 | 1.50 | 67.04 | 1979.00 | 33.08 | 3.03 | 4.55 | 1.68 | 13.41 | 16.00 | 0 | 0 | 71.75 |
| MAHARASHTRA | **Haranghat L.I.S.** | Medium | Completed in XI Plan | APD | 0.00 | 49.20 | 0.00 | 1999.00 | 0.00 | 28.00 | 10.00 | 5.00 | 5.70 | 0.50 | 0 | 0 | 49.20 |
| MAHARASHTRA | **Kirmiri L.I.S.** | Medium | Completed in XI Plan | APD | 0.00 | 27.89 | 0.00 | 1997.00 | 26.46 | 1.11 | 0.24 | 0.24 | 0.00 | 0.00 | 0 | 0 | 28.05 |
| MAHARASHTRA | **Madan Tank Project** | Medium | Completed in XI Plan | UA | 88.09 | 0.00 | 88.09 | 1997.00 | 74.60 | 3.07 | 2.53 | 0.60 | 1.40 | 9.00 | 0 | 0 | 91.20 |
| MAHARASHTRA | **Pimpalgaon (Dhale) Project** | Medium | Completed in XI Plan | UA | 95.39 | 0.00 | 0.00 | 1997.00 | 54.89 | 3.96 | 3.81 | 1.07 | 17.07 | 14.58 | 0 | 0 | 95.38 |
| MAHARASHTRA | **PRAKASHA BARRAGE** | Medium | Completed in XI Plan | UA | 95.39 | 0.00 | 0.00 | 1999.00 | 118.64 | 38.81 | 20.05 | 7.16 | 4.98 | 2.00 | 0 | 0 | 191.64 |
| MAHARASHTRA | **Sondyatola Lift Irrigation Scheme** | Medium | Completed in XI Plan | UA | 73.59 | 0.00 | 103.31 | 1995.00 | 46.45 | 4.08 | 13.86 | 1.91 | 25.00 | 0.00 | 0 | 0 | 91.30 |
| MAHARASHTRA | **Wagholi Buti LIS** | Medium | Completed in XI Plan | UA | 9.50 | 0.00 | 48.32 | 1993.00 | 37.27 | 2.04 | 2.16 | 0.57 | 2.15 | 1.50 | 0 | 0 | 45.69 |
| MAHARASHTRA | **Zhansinagar Lift Irrigation Scheme** | Medium | Completed in XI Plan | UA | 9.50 | 0.00 | 45.18 | 2004.00 | 12.82 | 1.00 | 6.61 | 1.38 | 20.00 | 15.00 | 0 | 0 | 56.81 |
| | | | **13** | | **614.03** | **102.60** | **2576.79** | | **1204.05** | **183.23** | **178.98** | **83.04** | **216.46** | **210.58** | **0** | **0** | **2076.34** |
| MANIPUR | **Dolaithabi Barrage Project Manipur** | Medium | Completed in XI Plan | APD | 0.00 | 18.86 | 215.52 | 1992.00 | 58.86 | 15.59 | 13.92 | 41.31 | 49.90 | 93.50 | 0 | 0 | 273.08 |
| | | | **1** | | **0.00** | **18.86** | **215.52** | | **58.86** | **15.59** | **13.92** | **41.31** | **49.90** | **93.50** | **0** | **0** | **273.08** |
| ORISSA | **Extension of Daha Irrigation Project** | ERM | Completed in XI Plan | UA | 10.24 | 0.00 | 0.00 | 2005.00 | 5.07 | 4.32 | 6.96 | 5.52 | 2.80 | 0.00 | 0 | 0 | 24.67 |
| ORISSA | **Extension of Sumandal canal (Salia Irrigation Project)** | ERM | Completed in XI Plan | UA | 2.62 | 0.00 | 0.00 | 2004.00 | 1.59 | 0.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 1.71 |

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**Table 14 (ii) : STATE-WISE & PROJECT-WISE FINANCIAL STATUS OF MAJOR, MEDIUM AND ERM PROJECTS AS REPORTED COMPLETED IN XI PLAN**

| STATE | Project Name | Type of Project | Status | Approval Status | Un approved Cost | Original Cost | Latest Estimated Cost | Start Year | Upto X Plan | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | Liability in XII Plan | Beyond XII plan | Cumm. Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| ORISSA | **Renovation of Rampur Berkley Distributary(Hirakud Dam Project)** | ERM | Completed in XI Plan | UA | 26.42 | 0.00 | 0.00 | 2007.00 | 0.00 | 1.08 | 10.00 | 14.94 | 6.00 | 0.00 | 0 | 0 | 32.02 |
| ORISSA | **Renovation of Bahuda Irrigation Project** | ERM | Completed in XI Plan | UA | 11.88 | 0.00 | 0.00 | 2005.00 | 4.11 | 4.89 | 2.27 | 0.45 | 0.11 | 0.00 | 0 | 0 | 11.83 |
| ORISSA | **Renovation of Satiguda Irrigation Project** | ERM | Completed in XI Plan | UA | 4.29 | 0.00 | 0.00 | 2005.00 | 0.86 | 2.47 | 0.98 | 0.00 | 0.00 | 0.00 | 0 | 0 | 4.31 |
| ORISSA | **Bagh Barrage Project** | Medium | Completed in XI Plan | APD | 0.00 | 44.72 | 0.00 | 1997.00 | 55.09 | 6.85 | 7.61 | 4.98 | 3.13 | 0.00 | 0 | 0 | 77.66 |
| | | | **6** | | **55.45** | **44.72** | **0.00** | | **66.72** | **19.73** | **27.82** | **25.89** | **12.04** | **0.00** | **0** | **0** | **152.20** |
| RAJASTHAN | **Bisalpur** | Major | Completed in XI Plan | APD | 0.00 | 309.07 | 657.91 | 1985.00 | 662.69 | 27.93 | 16.39 | 11.85 | 10.24 | 0.00 | 0 | 0 | 729.10 |
| RAJASTHAN | **Mahi** | Major | Completed in XI Plan | APD | 0.00 | 3.04 | 538.58 | 1971.00 | 890.97 | 22.01 | 27.14 | 0.00 | 0.00 | 0.00 | 0 | 0 | 940.12 |
| RAJASTHAN | **Ratanpura Distributory** | Major | Completed in XI Plan | APD | 0.00 | 27.53 | 0.00 | 2000.00 | 22.02 | 0.32 | 0.12 | 0.51 | 0.00 | 0.00 | 0 | 0 | 22.97 |
| RAJASTHAN | **Bandi Sendra** | Medium | Completed in XI Plan | APD | 0.00 | 37.02 | 0.00 | 1998.00 | 26.64 | 4.37 | 1.93 | 0.00 | 0.00 | 0.00 | 0 | 0 | 32.94 |
| RAJASTHAN | **Sukali** | Medium | Completed in XI Plan | APD | 0.00 | 42.90 | 0.00 | 1998.00 | 32.08 | 7.50 | 4.35 | 0.00 | 0.00 | 0.00 | 0 | 0 | 43.93 |
| | | | **5** | | **0.00** | **419.56** | **1196.49** | | **1634.40** | **62.13** | **49.93** | **12.36** | **10.24** | **0.00** | **0** | **0** | **1769.06** |
| WEST BENGAL | **Patloi Irrigation Project (Revised)** | Medium | Completed in XI Plan | APD | 0.00 | 0.90 | 17.28 | 1977.00 | 8.88 | 0.37 | 1.01 | 1.08 | 0.35 | 5.96 | 0 | 0 | 17.65 |
| | | | **1** | | **0.00** | **0.90** | **17.28** | | **8.88** | **0.37** | **1.01** | **1.08** | **0.35** | **5.96** | **0** | **0** | **17.65** |
| | | | | | | | | | | | | | | | | | 0.00 |
| | **TOTAL** | **MJ 45, MD 66, ERM 5** | **116** | **UA78, APD38** | **10148.91** | **2786.69** | **17198.87** | | **16308.52** | **2444.44** | **1841.21** | **1865.19** | **1746.01** | **2370.94** | **0** | **0** | **26576.31** |

Source: Report of the Working Group on Major & Medium and Command Area Development for the XII Five Year Plan (2012-17) MoWR

**Table 14 (iii) : State-wise & project-wise financial status of Major, Medium and EMR projects as reported completed with liabilities in XII plan**

| STATE | Project Name | Type of Project | Special Classification | Status | Approval Status | Un approved Cost | Original Cost | Latest Estimated Cost | Start Year | Upto X Plan | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | Liability in XII Plan | Beyond XII plan | Cumm. Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| ANDHRA PRADESH | **Sri Tenneti Viswanatham Pedderu Reservoir Project Final** | Medium | Improvement of Water Management | Completed with liabilities in XII plan | APD | 0 | 26.27 | 38.41 | 1999 | 40.07 | 3.22 | 0.25 | 0.02 | 1.15 | 4.42 | 5.4 | 0 | 54.53 |
| | | | | **1** | | **0** | **26.27** | **38.41** | | **40.07** | **3.22** | **0.25** | **0.02** | **1.15** | **4.42** | **5.4** | **0** | **54.53** |
| GUJARAT | **Guhai** | ERM | Not Applicable | Completed with liabilities in XII plan | APD | 0 | 0.029 | 0.057 | 2007 | 0 | 0.35 | 1.32 | 0.22 | 0.61 | 0.7 | 2.5 | 0 | 5.7 |
| GUJARAT | **Panam High Level Canal** | Medium | Improvement of Water Management | Completed with liabilities in XII plan | APD | 0 | 130.71 | 260 | 2004 | 16.25 | 27.98 | 42.5 | 33.18 | 27.95 | 34 | 94.39 | 0 | 276.25 |
| | | | | **2** | | **0** | **130.73** | **260.05** | | **16.25** | **28.33** | **43.82** | **33.4** | **28.56** | **34.7** | **96.89** | **0** | **281.95** |
| HIMACHAL PRADESH | **Changer Area Medium Lift Irrigation Project in Distt. Bilaspur (HP)** | Medium | Not Applicable | Completed with liabilities in XII plan | APD | 0 | 28.37 | 88.09 | 1999 | 16.23 | 30.98 | 20.94 | 9.14 | 5.96 | 2 | 2 | 2 | 89.25 |
| | | | | **1** | | **0** | **28.37** | **88.09** | | **16.23** | **30.98** | **20.94** | **9.14** | **5.96** | **2** | **2** | **2** | **89.25** |
| JHARKHAND | **AJAY BARRAGE PROJECT** | Major | Not Applicable | Completed with liabilities in XII plan | UA | 351.84 | 0 | 0 | 1975 | 255.01 | 10.7 | 12.32 | 7.15 | 12.42 | 20 | 5 | 0 | 322.6 |

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**Table 14 (iii) : State-wise & project-wise financial status of Major, Medium and EMR projects as reported completed with liabilities in XII plan**

| STATE | Project Name | Type of Project | Special Classification | Status | Approval Status | Un approved Cost | Original Cost | Latest Estimated Cost | Start Year | Upto X Plan | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | Liability in XII Plan | Beyond XII plan | Cumm. Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| JHARKHAND | **GUMANI BARRAGE PROJECT** | Major | Not Applicable | Completed with liabilities in XII plan | APD | 0 | 3.8389 | 185.76 | 1976 | 110.88 | 18.48 | 15.45 | 4.236 | 3.352 | 33.35 | 5 | 0 | 190.76 |
| JHARKHAND | **BATANE RESERVOIR SCHEME** | Medium | Not Applicable | Completed with liabilities in XII plan | UA | 116.02 | 0 | 0 | 1984 | 30 | 5.16 | 0.5 | 4.75 | 2.96 | 3.6 | 3 | 0 | 49.97 |
| JHARKHAND | **BHAIRWA RESERVOIR SCHEME** | Medium | Not Applicable | Completed with liabilities in XII plan | UA | 122.64 | 0 | 0 | 1987 | 61.98 | 15.99 | 2.75 | 5.96 | 0 | 28 | 8 | 0 | 122.68 |
| JHARKHAND | **KATRI RESERVOIR SCHEME** | Medium | Not Applicable | Completed with liabilities in XII plan | UA | 47.97 | 0 | 0 | 1986 | 54.18 | 0.73 | 0.34 | 0 | 0 | 0 | 0 | 0 | 55.25 |
| JHARKHAND | **Kesho Reservoir Scheme** | Medium | Not Applicable | Completed with liabilities in XII plan | UA | 102.88 | 0 | 0 | 1988 | 4 | 24.98 | 20 | 4.5 | 14.05 | 30 | 5 | 0 | 102.53 |
| JHARKHAND | **PANCHKHERO RESERVOIR SCHEME** | Medium | Not Applicable | Completed with liabilities in XII plan | APD | 0 | 9.55 | 75.69 | 1990 | 40.28 | 17.16 | 8.25 | 2 | 0.59 | 11 | 5 | 0 | 84.28 |
| JHARKHAND | **RAMREKHA RESERVOIR SCHEME** | Medium | Not Applicable | Completed with liabilities in XII plan | UA | 53.86 | 0 | 0 | 1982 | 25.63 | 12.92 | 8.48 | 0.8 | 1.39 | 4 | 0.5 | 0 | 53.72 |
| JHARKHAND | **TAJNA RESERVOIR SCHEME** | Medium | Not Applicable | Completed with liabilities in XII plan | APD | 0 | 87.76 | 0 | 2011 | 0 | 0 | 0 | 0 | 0 | 25.23 | 62.53 | 0 | 87.76 |

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**Table 14 (iii) : State-wise & project-wise financial status of Major, Medium and EMR projects as reported completed with liabilities in XII plan**

| STATE | Project Name | Type of Project | Special Classification | Status | Approval Status | Un approved Cost | Original Cost | Latest Estimated Cost | Start Year | Upto X Plan | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | Liability in XII Plan | Beyond XII plan | Cumm. Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| | | | | **9** | | **795.21** | **101.14** | **261.45** | | **581.96** | **106.12** | **68.09** | **29.39** | **34.76** | **155.18** | **94.03** | **0** | **1069.55** |
| KARNATAKA | **Almatti Left Bank Canal** | Major | Not Applicable | Completed with liabilities in XII plan | APD | 0 | 79.42 | 182.26 | 1993 | 137.75 | 2.31 | 3.42 | 0.53 | 1.35 | 4 | 5.82 | 0 | 155.18 |
| KARNATAKA | **TLBC** | Major | Not Applicable | Completed with liabilities in XII plan | UA | 17.74 | 0 | 0 | 1950 | 294.57 | 21.42 | 18.45 | 191.7 | 360.12 | 354.57 | 350 | 0 | 1590.83 |
| KARNATAKA | **Maskinala Project** | Medium | Not Applicable | Completed with liabilities in XII plan | UA | 3.11 | 0 | 0 | 1976 | 47.42 | 1.23 | 1.03 | 1.33 | 1 | 1.45 | 5 | 0 | 58.46 |
| | | | | 3 | | 20.85 | 79.42 | 182.26 | | 479.74 | 24.96 | 22.9 | 193.56 | 362.47 | 360.02 | 360.82 | 0 | 1804.47 |
| MADHYA PRADESH | **Barchar Project** | Medium | Improvement of Water Management | Completed with liabilities in XII plan | UA | 3.5 | 0 | 0 | 1981 | 18.14 | 0.53 | 0.924 | 0.149 | 0.11 | 0.17 | 0.23 | 0 | 20.253 |
| MADHYA PRADESH | **MACHAK DISTRIBUTORY EXT PROJECT** | Medium | Not Applicable | Completed with liabilities in XII plan | UA | 44.28 | 0 | 0 | 2003 | 15.31 | 7.28 | 0.78 | 0.1 | 0.3 | 0.54 | 6.34 | 0 | 30.65 |
| MADHYA PRADESH | **Mahan Gulab sagar Medium Project** | Medium | Not Applicable | Completed with liabilities in XII plan | UA | 3.11 | 0 | 486.96 | 1983 | 110.43 | 24.14 | 29.24 | 21.92 | 66.87 | 104 | 103.23 | 0 | 459.83 |

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**Table 14 (iii) : State-wise & project-wise financial status of Major, Medium and EMR projects as reported completed with liabilities in XII plan**

| STATE | Project Name | Type of Project | Special Classification | Status | Approval Status | Un approved Cost | Original Cost | Latest Estimated Cost | Start Year | Upto X Plan | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | Liability in XII Plan | Beyond XII plan | Cumm. Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| MADHYA PRADESH | **Mardan pur (LIS)** | Medium | Not Applicable | Completed with liabilities in XII plan | UA | 16.28 | 0 | 0 | 2008 | 8.4 | 0 | 0 | 0 | 0 | 0 | 7.88 | 0 | 16.28 |
| | | | | **4** | | **67.17** | **0** | **486.96** | | **152.28** | **31.95** | **30.944** | **22.169** | **67.28** | **104.71** | **117.68** | **0** | **527.013** |
| MAHARASHTRA | **Bhima(Ujani)Project** | Major | Not Applicable | Completed with liabilities in XII plan | UA | 1992.78 | 0 | 0 | 1965 | 1092.37 | 29.84 | 19 | 50.57 | 58.29 | 50 | 692.71 | 0 | 1992.78 |
| MAHARASHTRA | **Pench Project** | Major | Not Applicable | Completed with liabilities in XII plan | UA | 168.93 | 0 | 0 | 2008 | 0 | 0 | 8.129 | 1.7852 | 8.3418 | 20 | 168.33 | 0 | 206.586 |
| MAHARASHTRA | **Amba** | Medium | Improvement of Water Management | Completed with liabilities in XII plan | UA | 3.11 | 0 | 0 | 1970 | 16.96 | 0.186 | 0.228 | 0.43 | 0.235 | 0.625 | 25 | 0 | 43.664 |
| MAHARASHTRA | **AMRAWATI PROJECT** | Medium | Not Applicable | Completed with liabilities in XII plan | APD | 0 | 4.63 | 0 | 1985 | 46.76 | 1.58 | 0.74 | 1.41 | 0.8 | 10 | 18 | 0 | 79.29 |
| MAHARASHTRA | **Benitura Medium Project** | Medium | Not Applicable | Completed with liabilities in XII plan | UA | 45.56 | 0 | 0 | 1986 | 26.41 | 0.15 | 0.38 | 0.22 | 1 | 1 | 0 | 0 | 29.16 |
| MAHARASHTRA | **Borghat L.I.S.** | Medium | Not Applicable | Completed with liabilities in XII plan | UA | 121.46 | 0 | 0 | 2009 | 0 | 0 | 12.071 | 5.144 | 8.24 | 35 | 67.19 | 0 | 127.645 |

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**Table 14 (iii) : State-wise & project-wise financial status of Major, Medium and EMR projects as reported completed with liabilities in XII plan**

| STATE | Project Name | Type of Project | Special Classification | Status | Approval Status | Un approved Cost | Original Cost | Latest Estimated Cost | Start Year | Upto X Plan | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | Liability in XII Plan | Beyond XII plan | Cumm. Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| MAHARASHTRA | **Pothara Nalla Project** | Medium | Not Applicable | Completed with liabilities in XII plan | APD | 0 | 63.08 | 0 | 1982 | 19.32 | 14.04 | 8.39 | 22.12 | 9.79 | 3 | 76.34 | 0 | 153 |
| MAHARASHTRA | **Ruti Medium Project** | Medium | Not Applicable | Completed with liabilities in XII plan | UA | 5.04 | 0 | 0 | 1999 | 1.77 | 0.53 | 0 | 0.07 | 0 | 1.52 | 1.15 | 0 | 5.04 |
| | | | | **8** | | **2336.88** | **67.71** | **0** | | **1203.59** | **46.32** | **48.93** | **81.74** | **86.69** | **121.14** | **1048.72** | **0** | **2637.165** |
| ORISSA | **Titilagarh Irrigation Project** | Medium | Not Applicable | Completed with liabilities in XII plan | APD | 0 | 21.13 | 0 | 1995 | 44.09 | 24.67 | 19.86 | 30.46 | 2.24 | 2 | 10 | 0 | 133.32 |
| | | | | **1** | | **0** | **21.13** | **0** | | **44.09** | **24.67** | **19.86** | **30.46** | **2.24** | **2** | **10** | **0** | **133.32** |
| RAJASTHAN | **Gang Canal Modernization** | Major | Improvement of Water Management | Completed with liabilities in XII plan | APD | 0 | 445.79 | 621.42 | 2000 | 339.6 | 41.52 | 24.94 | 16.57 | 10 | 50 | 138.79 | 0 | 621.42 |
| RAJASTHAN | **Rajasthan Water Sector Restructuring Project (RWSRP)** | Major | Special Repairs not covered under ERM | Completed with liabilities in XII plan | APD | 0 | 733.59 | 0 | 2002 | 433.47 | 85.09 | 66.8 | 99.18 | 55 | 100 | 137.46 | 0 | 977 |
| RAJASTHAN | **Gagrin** | Medium | Improvement of Water Management | Completed with liabilities in XII plan | APD | 0 | 80.12 | 0 | 2006 | 1.96 | 16.92 | 6.52 | 11.97 | 25 | 10 | 7.75 | 0 | 80.12 |

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**Table 14 (iii) : State-wise & project-wise financial status of Major, Medium and EMR projects as reported completed with liabilities in XII plan**

| STATE | Project Name | Type of Project | Special Classification | Status | Approval Status | Un approved Cost | Original Cost | Latest Estimated Cost | Start Year | Upto X Plan | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | Liability in XII Plan | Beyond XII plan | Cumm. Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| RAJASTHAN | **Gardada** | Medium | Improvement of Water Management | Completed with liabilities in XII plan | UA | 3.11 | 0 | 0 | 2003 | 47.68 | 26.41 | 27.08 | 9.29 | 2.65 | 2.4 | 31.53 | 0 | 147.04 |
| RAJASTHAN | **Lhasi** | Medium | Improvement of Water Management | Completed with liabilities in XII plan | APD | 0 | 44.73 | 0 | 2007 | 0 | 21.97 | 9.25 | 10 | 10.25 | 15 | 25.53 | 0 | 92 |
| RAJASTHAN | **Piplad** | Medium | Improvement of Water Management | Completed with liabilities in XII plan | APD | 0 | 33.64 | 0 | 2006 | 2 | 4.32 | 9.55 | 15 | 21 | 10 | 3.31 | 0 | 65.18 |
| RAJASTHAN | **Takli** | Medium | Improvement of Water Management | Completed with liabilities in XII plan | APD | 0 | 51.81 | 0 | 2006 | 2 | 3.26 | 7.64 | 0.8 | 34.48 | 25 | 58.26 | 0 | 131.44 |
| | | | | **7** | | **3.11** | **1389.68** | **621.42** | | **826.71** | **199.49** | **151.78** | **162.81** | **158.38** | **212.4** | **402.63** | **0** | **2114.2** |
| UTTAR PRADESH | **SARYU NAHAR PROJECT** | Major | Not Applicable | Completed with liabilities in XII plan | APD | 0 | 78.68 | 7270.32 | 1978 | 2245.13 | 280.99 | 270.42 | 80.2 | 167.54 | 339 | 3887.04 | 0 | 7270.32 |
| | | | | **1** | | **0** | **78.68** | **7270.32** | | **2245.13** | **280.99** | **270.42** | **80.2** | **167.54** | **339** | **3887.04** | **0** | **7270.32** |
| WEST BENGAL | **Tatko Irrigation Project (Revised)** | Medium | Improvement of Water Management | Completed with liabilities in XII plan | APD | 0 | 0.9875 | 19.76 | 1977 | 10.2031 | 0.365 | 1.139 | 0.0729 | 0 | 4.6 | 3.7 | 0 | 20.08 |
| | | | | **1** | | | **0.9875** | **19.76** | | **10.2031** | **0.365** | **1.139** | **0.0729** | **0** | **4.6** | **3.7** | **0** | **20.08** |
| | **TOTAL** | **9 MJ, 28MD, 1ERM** | **11 IWM, 26 NA, 1Spl. Rep.** | **38** | **19UA, 19APD** | **3223.22** | **1924.14** | **9228.72** | | **5616.25** | **777.40** | **679.09** | **642.97** | **915.039** | **1340.18** | **6028.9** | **2** | **16001.86** |

Source: Report of the Working Group on Major & Medium and Command Area Development for the XII Five Year Plan (2012-17) MoWR

**Table 14 (iv): Abstract of New Projects under Appraisal in CWC.**

| Sl no. | Name of States | Major | | | Medium | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | Total | A | B | Total | A | B | Total |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1 | Andhra Pradesh | 2 | 2 | 4 | 0 | 6 | 6 | 2 | 8 | 10 |
| 2 | Arunachal Pradesh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | Assam | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| 4 | Bihar | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 4 | 4 |
| 5 | Chhattisgarh | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 6 | Goa, Daman, Diu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | Gujarat | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 8 | Haryana | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 |
| 9 | Himachal Pradesh | 1 | 0 | 1 | 2 | 1 | 3 | 3 | 1 | 4 |
| 10 | J & K | 0 | 1 | 1 | 1 | 3 | 4 | 1 | 4 | 5 |
| 11 | Jharkhand | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 3 | 3 |
| 12 | Karnataka | 2 | 2 | 4 | 1 | 0 | 1 | 3 | 2 | 5 |
| 13 | Kerala | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 14 | Madhya Pradesh | 4 | 2 | 6 | 2 | 2 | 4 | 6 | 4 | 10 |
| 15 | Maharashtra | 5 | 3 | 8 | 14 | 3 | 17 | 19 | 6 | 25 |
| 16 | Manipur | 0 | 2 | 2 | 2 | 5 | 7 | 2 | 7 | 9 |
| 17 | Meghalaya | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | Mizoram | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | Nagaland | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | Orissa | 2 | 4 | 6 | 6 | 6 | 12 | 8 | 10 | 18 |
| 21 | Punjab | 0 | 3 | 3 | 0 | 1 | 1 | 0 | 4 | 4 |
| 22 | Rajasthan | 1 | 3 | 4 | 1 | 3 | 4 | 2 | 6 | 8 |
| 23 | Sikkim | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | Tamil Nadu | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 25 | Tripura | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | Uttar Pradesh | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 6 | 6 |
| 27 | Uttarakhand | 2 | 1 | 3 | 0 | 2 | 2 | 2 | 3 | 5 |
| 28 | West Bengal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Grand Total | 20 | 41 | 61 | 30 | 32 | 62 | 50 | 73 | 123 |

Source: Central Water Commission, PA (N), PAO

**Table 14 (v) : List of Projects Accepted By Advisory Committee of MoWR upto December 2012.**

| Sl no | Meeting no | Date of meeting | Name of project | State | Major/Medium | Estimated cost Rs. Cr | Price level | Benefits in Ha./ MW | Date of approval by Planning Commission |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | 113th | 12.01.2012 | Eastern Gandak Canal System (Gandak Phase-II), | Bihar | Mjajor-New-ERM | 1799.5 | 2011-12 | 146,000 | 12/13.9.12 |
| 2 | 113th | 12.01.2012 | Udersthan Barrage & other Iner-connected and Independent Schemes. | Bihar | Major-New-ERM | 531.01 | 2011-12 | 41,052 | 28.05.2012 |
| 3 | 113th | 12.01.2012 | Madhya Pradesh Water Sector Restructuring Project (MPWSRP) | Madhya Pradesh | New-ERM | 1919 | 2011.12 | 488,682 | 5/11/2012 |
| 4 | 113th | 12.01.2012 | Orissa Integrated Irrigated Agriculture and Water Management Investment Programme (OIIAWMIP)- Tranche-II | Orissa | New-ERM | 471.43 | 2010-11 | 79,863 | |
| 5 | 113th | 12.01.2012 | Rajgarh Medium Irrigation Project | Rajasthan | New-Medium | 192.13 (irrigation-140.46, drinking water supply-51.46) | 2010-11 | 8,568 | 21.09.2012 |
| 6 | 113th | 12.01.2012 | Bank Protection Works from Ismailpur to Bindtoli in downstream of Vikramshila Bridge on the left bank of river Ganga in Bhagalpur District. | Bihar | Flood Control | 23.39 | 2011-12 | 90,215 (Population 150000 nos) | 26.06.2012 |
| 7 | 113th | 12.01.2012 | Bagaha Town Protection Works Phase-I on the left bank of river Gandak in west Champaran District | Bihar | Flood Control | 48.91 | 2011-12 | 4000 (Population 100000 nos) | 26.06.2012 |
| 8 | 113th | 12.01.2012 | Flood Protection Works along left and right banks of river Beas in Districts Gurdaspur, Hoshiarpur and kapurthala. | Punjab | Flood Control | 46.12 | 2009 | 1800 (Popualtion 225000) | 5/22/2012 |
| 9 | 113th | 12.01.2012 | Purna Barrage (Ner Dhamana) Irrigation Project.(Revised) | Maharashtra | Medium Revised | 617.46 | 2009-10 | 7024 | 26.03.2012 |

Contd..

**Table 14 (v) : List of Projects Accepted By Advisory Committee of MoWR upto December 2012.**

| Sl no | Meeting no | Date of meeting | Name of project | State | Major/Medium | Estimated cost Rs. Cr | Price level | Benefits in Ha./ MW | Date of approval by Planning Commission |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 114th | 28.03.2012 | Raising and Strengthening of Adhwara and Khiroi left embankment from RD 0.0 Km to RD 43.60 Km & from RD 44.00 Km to RD 90.50 Km. and Right embankment from RD 0.0 Km to RD 81.50 Km in Sitamarhi, Madhubani and Darbhanga districts of Bihar. | Bihar | New- Flood Control | 167.03 | 2011 | 141760 ha./Popuation 17,32,000 nos. | |
| 11 | 114th | 28.03.2012 | Improvement of embankment and ancillary works in Kandi and other adjoining areas of the districts of Murshidabad | West Bengal | New- Flood Control | 438.94 | 2011 | 51000 ha./ Ppulation5,00,000 nos. | 13.06.2012 |
| 12 | 114th | 28.03.2012 | Construction of Mahadewa- uska embankment along right bank of river Kunra in Siddharthnagar district of Uttar Pradesh ( Scope Change) | Uttar Pradesh | Revised-Flood Control | 27.76 | 2008-09 | 1924 ha./Population 16184 nos. | |
| 13 | 114th | 28.03.2012 | Construction of Balrampur-Bhadaria embankment along right bank of river Rapti in Balrampur district of Uttar Pradesh | Uttar Pradesh | Revised-Flood Control | 25.61 | 2008-09 | 14373 ha./Population 56000nos. | |
| 14 | 115th | 24.07.2012 | Andhra Pradesh Irrigation and Livelihood Improvement Project | Andhra Pradesh | Major - ERM | 1131.136 | 2010-11 | 114,878 | |
| 15 | 115th | 24.07.2012 | Restoration of Western Gandak Canal System, (Saran Main Canal &Its Distribution System) | Bihar | New - Major - ERM | 2169.51 | 2011-12 | 478,000 | |
| 16 | 115th | 24.07.2012 | Minimata (Hasdeo) Bango Project | Chhattisgarh | Major - ERM | 492.31 | 2011-12 | 45,116 restoration | |
| 17 | 115th | 24.07.2012 | Medium Irrigation Project to Nadaun Area in Tahsil - Nadaun, District - Hamirpur | Himachal Pradesh | Medium -New | 97.59 | Jul-11 | 6,471 | |
| 18 | 115th | 24.07.2012 | Mahuar Medium Irrigation Project | Madhya Pradesh | New - Medium | 191.2707 | 2009 | 13,775 | |
| 19 | 115th | 24.07.2012 | Bilgaon Irrigation Project | Madhya Pradesh | New - Medium | 182.22 | 2009 | 12,285 | 14.12.2012 |
| 20 | 115th | 24.07.2012 | Thoubal Multipurpose Project | Manipur | Revised - Major | 1387.85 | 2011 | 33,387 | 12.09.2012 |

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**Table 14 (v) : List of Projects Accepted By Advisory Committee of MoWR upto December 2012.**

| Sl no | Meeting no | Date of meeting | Name of project | State | Major/Medium | Estimated cost Rs. Cr | Price level | Benefits in Ha./ MW | Date of approval by Planning Commission |
|---|---|---|---|---|---|---|---|---|---|
| 21 | 115th | 24.07.2012 | Khuga Multipurpose Project | Manipur | Revised-Medium | 433.91 | 2011 | 14,755 | 19.09.2012 |
| 22 | 115th | 24.07.2012 | Dolaithabi Barrage Project | Manipur | Revised-Medium | 360.05 | 2011 | 7,545 | 20.09.2012 |
| 23 | 115th | 24.07.2012 | Imphal Barrage Project | Manipur | ERM- Medium | 16.8 | 2011 | 6,400 | |
| 24 | 115th | 24.07.2012 | Sekmal Barrage Project | Manipur | ERM- Medium | 10.2 | 2011 | 8,500 | |
| 25 | 115th | 24.07.2012 | Revised Estimate of Rehabilitation of 1st Patiala Feeder & Kotla Branch with 20% enhanced capacity and changed value of "N" | Punjab | Revised- Major | 199.39 | 2011-12 | 334,109 | |
| 26 | 115th | 24.07.2012 | Construction of Lining of Tumaria- Bahalla & Naktiya Feeder | Uttarkhand | ERM- Medium | 11.2 | 2010-11 | 7,890 restoaration 2,54 and Add.creation10 ha | 14.12.2012 |
| 27 | 116th | 14.12.2012 | Anti erosion works from km 0.650 of Retired bund -1 of Sakraur Bhikharipur Ring bund to km 13.600 of Main bund of Sakraur Bhikharipur along left bank of river Sarayu/Ghaghra in Gonda district | Uttar Pradesh | Flood Control . | 41.51 | 2010 | 2,675 ha, Population 18430 | |
| 28 | 116th | 14.12.2012 | Construction of Marginal Embankment upstream of Elgin bridge along right bank of river Ghaghra in the district of Barabanki | Uttar Pradesh | Flood Control . | 170.08 | 2010 | 44,250 ha, Population 334680 | |
| 29 | 116th | 14.12.2012 | Flood protection works along left benk of river Ghaghra in the disrict of Basti | Uttar Pradesh | Flood Control . | 80.24 | 2010 | 24,743 ha, Population 496480 | |
| 30 | 116th | 14.12.2012 | ERM of Malan Canal System | Uttarakhand | ERM- Medium | 11.4 | 2010-11 | 3984 ha (Restoration 753 ha and Additional | |
| 31 | 116th | 14.12.2012 | Lakhwar Multipurpose project | Uttarakhand | Multipurpose | 3966.51 | 2012 | 33,780 | |

Source: Central Water Commission, PA(N),PAO

## Table 15: Physical Achievements of Field Channels (F.C.) under CAD Programme by State

**(' 000 Hectare)**

| Sl. No. | Name of States | Cummulative Achievement of of F.C. up to end of | | | | Achievemnet During XI Plan | | | | | Total XI Plan | Cumulative Achievement upto XI Plan (31.03.2012) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VII Plan 1985-90 | VIII Plan 1992-97 | IX.Plan 1997-02 | X.Plan 2002-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1 | **Andhra Pradesh** | 650.8 | 664.6 | 680.2 | 738.1 | 30.9 | 4.3 | 4.0 | 0.0 | 0.3 | 39.4 | 777.5 |
| 2 | **Arunachal Pradesh** | 0.0 | 0.0 | 1.0 | 9.0 | 9.1 | 0.0 | 1.2 | 0.3 | 0.8 | 11.5 | 20.4 |
| 3 | **Assam** | 38.4 | 54.1 | 56.1 | 56.6 | 0.0 | 0.0 | 2.0 | 1.4 | 1.5 | 4.9 | 61.5 |
| 4 | **Bihar** | 1220.9 | 1282.4 | 1297.3 | 1344.0 | 0.0 | 31.6 | 19.0 | 37.0 | 39.0 | 126.4 | 1470.5 |
| 5 | **Chattisgarh** | 0.0 | 0.0 | 1.5 | 51.3 | 40.7 | 27.7 | 29.0 | 29.0 | 27.9 | 154.3 | 205.6 |
| 6 | **Goa** | 5.3 | 10.3 | 10.4 | 10.4 | 1.0 | 0.0 | 0.9 | 0.6 | 0.5 | 3.0 | 13.4 |
| 7 | **Gujarat** | 766.1 | 852.0 | 889.9 | 1107.6 | 21.0 | 7.0 | 0.2 | 1.6 | 13.0 | 42.9 | 1150.4 |
| 8 | **Haryana** | 114.3 | 312.7 | 429.4 | 597.3 | 17.9 | 85.9 | 54.0 | 53.8 | 44.0 | 255.6 | 852.9 |
| 9 | **Himachal Pradesh** | 6.3 | 10.7 | 15.7 | 22.2 | 0.0 | 0.0 | 0.1 | 0.5 | 0.0 | 0.6 | 22.9 |
| 10 | **Jammu & Kashmir** | 27.4 | 55.5 | 77.9 | 98.3 | 6.0 | 10.2 | 9.7 | 14.8 | 16.7 | 57.4 | 155.7 |
| 11 | **Jharkhand** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 12 | **Karnataka** | 897.8 | 1043.0 | 1116.2 | 1485.5 | 36.8 | 26.5 | 12.1 | 21.9 | 17.4 | 114.8 | 1600.3 |
| 13 | **Kerala** | 46.2 | 153.7 | 174.1 | 182.3 | 0.4 | 0.5 | 0.1 | 0.2 | 0.2 | 1.4 | 183.7 |
| 14 | **Madhya Pradesh** | 833.5 | 995.8 | 1031.2 | 1073.1 | 9.5 | 9.5 | 10.3 | 10.2 | 22.4 | 62.0 | 1135.0 |
| 15 | **Maharashtra** | 889.2 | 1113.1 | 1223.9 | 1248.1 | 34.0 | 11.5 | 20.7 | 12.4 | 10.3 | 88.9 | 1337.0 |
| 16 | **Manipur** | 20.8 | 36.8 | 50.6 | 63.9 | 0.0 | 3.4 | 5.4 | 6.0 | 7.1 | 22.0 | 85.9 |
| 17 | **Meghalaya** | 0.0 | 1.0 | 1.1 | 2.2 | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.4 | 2.5 |
| 18 | **Mizoram** | 0.0 | 0.0 | 0.1 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.9 |
| 19 | **Nagaland** | 0.0 | 0.0 | 2.0 | 3.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 3.8 |
| 20 | **Orissa** | 256.8 | 346.5 | 396.4 | 437.4 | 11.0 | 14.0 | 18.5 | 27.4 | 33.0 | 103.9 | 541.3 |
| 21 | **Punjab** | 0.0 | 0.0 | 222.7 | 351.5 | 38.3 | 59.8 | 56.2 | 54.7 | 42.5 | 251.4 | 603.0 |
| 22 | **Rajasthan** | 613.6 | 925.5 | 1177.2 | 1427.1 | 17.5 | 12.3 | 40.8 | 46.2 | 14.4 | 131.3 | 1558.4 |
| 23 | **Sikkim** | 0.0 | 0.0 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 |
| 24 | **Tamil Nadu** | 317.9 | 629.6 | 850.8 | 1041.7 | 20.4 | 20.8 | 18.6 | 23.8 | 26.4 | 110.0 | 1151.8 |

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## Table 15: Physical Achievements of Field Channels (F.C.) under CAD Programme by State

**(' 000 Hactare)**

| Sl. No. | Name of States | Cummulative Achievement of of F.C. up to end of | | | | Achievemnet During XI Plan | | | | | Total XI Plan | Cumulative Achievement upto XI Plan (31.03.2012) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VII Plan 1985-90 | VIII Plan 1992-97 | IX.Plan 1997-02 | X.Plan 2002-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 25 | **Tripura** | 0.1 | 0.3 | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| 26 | **Uttar Pradesh** | 4378.0 | 5375.0 | 5936.0 | 6575.3 | 98.6 | 85.8 | 67.0 | 69.0 | 79.1 | 399.5 | 6974.9 |
| 27 | **Uttrakhand** | 0.0 | 0.0 | 0.0 | 4.9 | 0.0 | 0.5 | 6.6 | 0.0 | 0.0 | 7.0 | 11.9 |
| 28 | **West Bengal** | 55.3 | 90.1 | 112.5 | 135.5 | 1.6 | 18.6 | 8.2 | 1.9 | 60.6 | 90.9 | 226.4 |
| | **Total** | **11138.7** | **13952.7** | **15754.6** | **18068.7** | **394.7** | **429.7** | **384.5** | **412.9** | **457.7** | **2079.5** | **20148.2** |

**Source : Ministry of Water Resources (CAD Wing.)**

**Remarks : 1. F.C.-Field Channels. 2. Total may not tally due to rounding off. Note: Figures for the year 2011-12 in respect of Assam & Manipur are provisional.**

## Table 16: Physical Achievements of Field Drains under CAD Programme by State

**(' 000 Hectare)**

| Sl. No. | Name of States | Cumulative Achievement of Field Drains up to end of | | | | Achievement During | | | | | Cumulative Achievement upto 31.03.2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VII Plan 1985-90 | VIII Plan 1992-97 | IX.Plan 1997-02 | X.Plan 2002-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | TOTAL (four Years) | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | **Andhra Pradesh** | 9.1 | 9.1 | 9.1 | 9.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.1 |
| 2 | **Arunachal Pradesh** | 0.0 | 0.0 | 0.7 | 6.9 | 0.4 | 0.3 | 0.0 | 0.0 | 0.7 | 7.6 |
| 3 | **Assam** | 11.6 | 21.0 | 21.8 | 22.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 22.1 |
| 4 | **Bihar** | 0.0 | 0.0 | 0.0 | 18.8 | 0.0 | 12.1 | 1.6 | 0.1 | 13.8 | 32.7 |
| 5 | **Chattisgarh** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6 | **Goa** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 7 | **Gujarat** | 2.2 | 2.9 | 2.9 | 33.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 33.7 |
| 8 | **Haryana** | 0.0 | 0.0 | 0.0 | 24.3 | 0.0 | 1.5 | 15.4 | 0.0 | 17.0 | 41.3 |
| 9 | **Himachal Pradesh** | 0.0 | 0.6 | 2.3 | 6.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.0 |
| 10 | **Jammu & Kashmir** | 0.4 | 6.8 | 13.5 | 26.8 | 1.9 | 1.3 | 7.3 | 9.4 | 19.9 | 46.7 |
| 11 | **Jarkhand** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 12 | **Karnataka** | 8.1 | 27.6 | 37.8 | 69.9 | 3.2 | 18.4 | 30.9 | 29.7 | 82.1 | 152.1 |
| 13 | **Kerala** | 0.0 | 7.1 | 95.7 | 129.9 | 0.6 | 1.7 | 0.0 | 0.2 | 2.4 | 132.3 |
| 14 | **Madhya Pradesh** | 19.8 | 37.8 | 37.8 | 37.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 37.8 |
| 15 | **Maharashtra** | 165.8 | 292.4 | 392.5 | 439.0 | 0.0 | 0.0 | 17.1 | 4.4 | 21.6 | 460.6 |
| 16 | **Manipur** | 4.1 | 11.2 | 12.6 | 15.6 | 0.0 | 4.1 | 5.5 | 2.2 | 11.8 | 27.4 |
| 17 | **Meghalaya** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 18 | **Mizoram** | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 |
| 19 | **Nagaland** | 0.0 | 5.8 | 7.8 | 11.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 11.0 |

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## Table 16: Physical Achievements of Field Drains under CAD Programme by State

**(' 000 Hectare)**

| Sl. No. | Name of States | Cumulative Achievement of Field Drains up to end of | | | | Achievement During | | | | | Cumulative Achievement upto 31.03.2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | VII Plan 1985-90 | VIII Plan 1992-97 | IX.Plan 1997-02 | X.Plan 2002-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | TOTAL (four Years) | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 20 | **Orissa** | 31.3 | 96.1 | 114.4 | 133.6 | 1.8 | 3.4 | 0.6 | 8.8 | 14.6 | 148.2 |
| 21 | **Punjab** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 22 | **Rajasthan** | 9.2 | 16.3 | 35.0 | 42.8 | 1.4 | 0.0 | 0.0 | 0.5 | 1.9 | 44.8 |
| 23 | **Sikkim** | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| 24 | **Tamil Nadu** | 29.2 | 29.2 | 29.4 | 173.9 | 48.2 | 72.3 | 0.8 | 1.2 | 122.5 | 296.4 |
| 25 | **Tripura** | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| 26 | **Uttar Pradesh** | 133.1 | 209.0 | 310.7 | 562.4 | 12.2 | 14.4 | 14.8 | 2.1 | 43.5 | 605.9 |
| 27 | **Uttarakhand** | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 |
| 28 | **West Bengal** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Total** | | **423.9** | **773.0** | **1124.3** | **1765.4** | 69.8 | 129.5 | 94.1 | 58.5 | 351.9 | 2117.3 |

**Source : Ministry of Water Resources (CAD Wing)**

**Note : Totals may not tally due to rounding off.**

**Table 17 : List of On-going Projects under CADWM Programme during the period of XI Plan (2007-08 To 2011-12) as on March, 2012**

**( '000 ha)**

| S. No. | Project Name | Districts benefitted | Year of Inclusion | CCA | CCA Covered till 31.3.2012 | Reported balance of executable CCA |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | **ANDHARA PRADESH** | | | | | |
| 1 | Sriramsagar Project | Karimnagar, Adilabad, Warangal, Nizamabad, Khammam & Nalgonda | 1974-75 | 411.000 | 393.941 | 17.059 |
| 2 | Srisailam R.B.C | Kurnool | 1995-96 | 76.890 | 32.322 | 44.568 |
| | | | **TOTAL** | **487.890** | **426.263** | **61.627** |
| | **ARUNACHAL PRADESH** | | | | | |
| 3 | Cluster of 62 MI in 4 panchayats In the district of Papumpare Namely Sagalee, Megio, Balijan And Itanagar | Lower & Upper Dibang Valley, Lohit, Anjaw, Changlang, Tirap | 2000-01 | 2.760 | 2.760 | 0.000 |
| 4 | Cluster of 102 MI schemes under Daporijo and Itanagar Circle | Tawang, West Kameng, East Kameng, Papurm Pare, Lower Subansiri, Upper Subansiri, E/Siang, U/Sing W/Siang, Kurung Kumey. | 2006-07 | 7.470 | 4.527 | 2.943 |
| 5 | Cluster of 39 MI schemes under Namsai Circle | Lower/Upper Dibang, Lohit Anjaw, Tirap | 2006-07 | 3.340 | 2.164 | 1.176 |
| | | | **TOTAL** | **13.570** | **9.451** | **4.119** |
| | **ASSAM** | | | | | |
| 6 | Bordikarai | Sonitpur | 1992-93 | 16.990 | 0.410 | 16.580 |
| 7 | Kaldiya | Barpeta | 1992-93 | 9.830 | 7.560 | 2.270 |
| 8 | Dakadong | Barpeta | 1992-93 | 4.940 | 3.350 | 1.590 |
| 9 | Pahumara Irrigation | Barpeta | 2010-11 | 9.259 | 1.000 | 8.259 |
| | | | **TOTAL** | **41.019** | **12.320** | **28.699** |
| | **BIHAR** | | | | | |
| 10 | Gandak | Muzaffarpur, Vaishali, East. Champaran, Gopalganj, Siwan, saran, Samastipur | 1974-75 | 960.000 | 622.819 | 337.181 |
| 11 | Badua and Chandan | Bhagalpur, banka, Munger | 1974-75 | 106.380 | 70.115 | 36.265 |

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**Table 17 : List of On-going Projects under CADWM Programme during the period of XI Plan (2007-08 To 2011-12) as on March, 2012**

**( '000 ha)**

| S. No. | Project Name | Districts benefitted | Year of Inclusion | CCA | CCA Covered till 31.3.2012 | Reported balance of executable CCA |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12 | Kiul | Lakhisari, Shekhpura, Jamui | 1991-92 | 22.260 | 16.635 | 5.625 |
| 13 | Kosi | Saharsa, Supaul, Madhupura, Purnia, Araria, Katihar, Darbhanga, Madhubani | 1974-75 | 440.000 | 418.911 | 21.089 |
| 14 | Sone | Patna, Bhojpur, Buxar, Rohtas, Bhabhus, Aurangabad, Gaya, Jehanabad and arwal | 1974-75 | 865.000 | 482.442 | 382.558 |
| 15 | North Koel Project | Aurangabad, Gaya | 1991-92 | 123.000 | 7.391 | 115.609 |
| | | | **TOTAL** | **2516.640** | **1618.313** | **898.327** |
| | **CHHATISGARH** | | | | | |
| 16 | Ballar | Raipur | 1985-86 | 6.550 | 4.362 | 2.188 |
| 17 | Mahanadi, Tandula, Jonk and Kodar | Dhamtari, Raipur, Durg, Mahasamund | 1983-84 | 497.659 | 231.503 | 266.156 |
| 18 | Hasdeo Phase-2 | Korba, Raigarh, Janjgir-Champa | 2003-04 | 168.000 | 105.291 | 62.709 |
| 19 | Khapri Irrigation Project | Durg | 2011-12 | 4.588 | 0.000 | 4.588 |
| | | | **TOTAL** | **676.797** | **341.156** | **335.641** |
| | **GUJARAT** | | | | | |
| 20 | Sardar Sarovar Phase –I | Vadodara, Bharuch, Narmada, Panchmahal | 2003-04 | 446.610 | 277.836 | 168.774 |
| | | | **TOTAL** | **446.610** | **277.836** | **168.774** |
| | **GOA** | | | | | |
| 21 | Tillari | Talukas, Bicholim, Bardez | 2007-08 | 14.521 | 3.847 | 10.674 |
| | | | **TOTAL** | **14.521** | **3.847** | **10.674** |
| | **HARYANA** | | | | | |
| 22 | Bhakra canal Project Phase - II | Hisar, Siras, Fatehbad, ambala, Kurukshetra, kaithal, Karnal & Jind. | 2009-10 | 351.853 | 94.530 | 257.323 |

Contd...

**Table 17 : List of On-going Projects under CADWM Programme during the period of XI Plan (2007-08 To 2011-12) as on March, 2012**

**( '000 ha)**

| S. No. | Project Name | Districts benefitted | Year of Inclusion | CCA | CCA Covered till 31.3.2012 | Reported balance of executable CCA |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23 | Western Yamuna canal Phase -VI | Rothak, Jhajjar, Sonepat, Jind, Bhiwani, Hisar, Gurgaon & Panipat. | 2007-08 | 205.600 | 70.145 | 135.455 |
| 24 | JLN Canal Phase-II | Jhajjar, Rewari, Mahandergarh, Bhiwani & Gurgaon. | 2007-08 | 99.383 | 6.564 | 92.819 |
| | | | **TOTAL** | **656.836** | **171.239** | **485.597** |
| | **HIMACHAL PRADESH** | | | | | |
| 25 | Cluster of 40 MI schemes in Drang & Sadar block of Dist. Mandi. | Mandi | 2003-04 | 1.377 | 1.300 | 0.077 |
| 26 | Cluster of 38 MI schemes in pandonga haroli saloh area in Tehsil Una of Dist. Una. | Una | 2003-04 | 1.468 | 1.108 | 0.360 |
| 27 | Cluster of 42 MI schemes in Tehsil Sarkaghat District Mandi | Mandi | 2003-04 | 1.087 | 0.870 | 0.217 |
| 28 | Cluster of 27 MI schemes in Nallagarh area of District Solan | Solan | 2003-04 | 2.209 | 0.260 | 1.949 |
| 29 | Cluster of 12 MI schemes in Rampur block of District Shimla | Shimla | 2003-04 | 0.766 | 0.232 | 0.534 |
| 30 | Cluster of various MI schemes in Paonta & Shillai Tehsil in Distt. Sirmour | Sirmur | 2007-08 | 2.342 | 0.000 | 2.342 |
| 31 | Shah Nahar Project | Kangra | 2011-12 | 15.287 | 0.000 | 15.287 |
| | | | **TOTAL** | **24.536** | **4.258** | **20.278** |
| | **JAMMU & KASHMIR** | | | | | |
| 32 | Ego-Phey Canal | Leh | 1987-88 | 3.000 | 0.873 | 2.127 |
| 33 | Dachnipora-Rajpora | Anantnag, Pulwama | 2007-08 | 12.526 | 6.437 | 6.089 |
| 34 | Ahaji Beerua | Budgam | 2008-09 | 8.813 | 2.450 | 6.363 |
| 35 | Ganderbal | Ganderbal, Srinagar | 2011-12 | 6.892 | 0.097 | 6.795 |
| 36 | Ranbir Canal | Jammu | 2006-07 | 38.600 | 22.552 | 16.048 |

Contd...

**Table 17 : List of On-going Projects under CADWM Programme during the period of XI Plan (2007-08 To 2011-12) as on March, 2012**

**( '000 ha)**

| S. No. | Project Name | Districts benefitted | Year of Inclusion | CCA | CCA Covered till 31.3.2012 | Reported balance of executable CCA |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 37 | Dehgam Veernag | Anantnag, Kulgam | 2006-07 | 2.934 | 2.584 | 0.350 |
| 38 | Tongri Canal | Shopian and Kulgam | 2010-11 | 4.064 | 0.752 | 3.312 |
| 39 | Zainegeer canal (Kashmir CADA) | Baramulla , Bandipora | 2003-04 | 5.100 | 4.544 | 0.556 |
| 40 | Sonawari | Baramulla and Bandipura | 2010-11 | 20.370 | 0.752 | 19.618 |
| 41 | Kathua canal Command (Jammu CADA) | Proposed for closure | 2003-04 | 8.463 | 4.627 | 3.836 |
| 42 | Arin-Bandipora | Bandipora | 2007-08 | 2.860 | 2.116 | 0.744 |
| 43 | Khemil-Kupwara | Kupwara | 2007-08 | 7.300 | 2.526 | 4.774 |
| 44 | Doda-Sangaldhan Gool-Rajouri Cluster | Doda, Rajouri, Ramban | 2007-08 | 4.177 | 4.235 | 0.000 |
| 45 | Ferozpora Tangmarg Project of Kashmir Command | Baramulla | 2009-10 | 9.644 | 2.057 | 7.587 |
| 46 | New Partap Canal Project of Jammu Command | Jammu | 2010-11 | 9.028 | 0.595 | 8.433 |
| 47 | Vaishow Command Project | Pulwama, Ahopian and Kulgam | 2011-12 | 13.738 | 0.089 | 13.649 |
| 48 | Kargil Projects | Kargil | 2011-12 | 12.000 | 0.097 | 11.903 |
| 49 | Uri-Narvaw Project | Baramulla | 2011-12 | 6.770 | 0.682 | 6.088 |
| | | | **TOTAL** | **176.279** | **58.065** | **118.272** |
| | **JHARKHAND** | | | | | |
| 50 | Kanchi Weir Scheme | | 2003-04 | 17.800 | 0.000 | 17.800 |
| 51 | Mayurakshi Left Bank Canal System | | 2003-04 | 9.500 | 0.000 | 9.500 |
| | | | **TOTAL** | **27.300** | **0.000** | **27.300** |
| | **KARNATAKA** | | | | | |
| 52 | Ghataprabha | Belgaum and Bagalakote | 1974-75 | 317.430 | 259.608 | 57.822 |
| 53 | Malaparaba | Dharwad, Belgaum, Gadag, Bagalakote | 1974-75 | 214.980 | 193.588 | 21.392 |
| 54 | Tungbhadra | Koppal & Raichur, Bellary | 1974-75 | 529.000 | 354.615 | 174.385 |
| 55 | Upper Krishna | Gulbarga, Yadgiri, Bagalkot, Bijapur, raichur | 1974-75 | 622.000 | 567.297 | 54.703 |
| 56 | Bhadra Reservoir | Chikmagalur, Shimoga and Davanagree | 1996-97 | 105.570 | 92.196 | 13.374 |

Contd...

**Table 17 : List of On-going Projects under CADWM Programme during the period of XI Plan (2007-08 To 2011-12) as on March, 2012**

**( '000 ha)**

| S. No. | Project Name | Districts benefitted | Year of Inclusion | CCA | CCA Covered till 31.3.2012 | Reported balance of executable CCA |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 57 | Amarja | Gulbarga | 2003-04 | 8.903 | 0.035 | 8.868 |
| 58 | Bennithora | Cittapur Taluka, Gulbarga | 2003-04 | 20.234 | 18.891 | 1.343 |
| 59 | Karanja Irrigation Project | Bidar | 2009-10 | 35.614 | 20.922 | 14.692 |
| 60 | Upper Mullamari | Bidar | 2010-11 | 3.279 | 0.000 | 3.279 |
| 61 | Gandorinala | Gulbarga | 2010-11 | 8.094 | 6.246 | 1.848 |
| 62 | Lower Mullamari | Gulbarga | 2010-11 | 9.713 | 2.283 | 7.430 |
| 63 | Chulkinala | Gulbarga | 2010-11 | 4.047 | 0.000 | 4.047 |
| | | | **TOTAL** | **1878.864** | **1515.681** | **363.183** |
| | **KERALA** | | | | | |
| 64 | Kallada | Kollam, Pathanamthitta, Alappuzha | 2006-07 | 53.514 | 0.225 | 53.289 |
| 65 | Muvattupuzha Valley Irrigation Project | Idukki, Ernakulam, Kottayam | 2009-10 | 19.237 | 0.000 | 19.237 |
| 66 | Kanhirapuzha | Palakkad | 1998-99 | 9.720 | 7.434 | 2.286 |
| 67 | Pazhassi | Kannur | 1998-99 | 11.530 | 1.882 | 9.648 |
| | | | **TOTAL** | **94.001** | **9.541** | **84.460** |
| | **MADHYA PRADESH** | | | | | |
| 68 | Kolar | Sehore | 1985-86 | 45.000 | 11.354 | 33.646 |
| 69 | Rani Avanti Bai( Bargi) | Jabalpur, Narsinghpur | 1990-91 | 157.000 | 33.967 | 123.033 |
| 70 | Upper Wainganga | Seoni | 1985-86 | 112.900 | 103.007 | 9.893 |
| 71 | Bagh | Balaghat | 1985-86 | 16.600 | 16.412 | 0.188 |
| 72 | Harsi | Gwalior | 1985-86 | 44.354 | 41.979 | 2.375 |
| 73 | Kunwar Chain Sagar (dudhi) | Rajgarh | 2003-04 | 3.700 | 3.136 | 0.564 |
| 74 | Rajghat Canal Project | Ashok Nagar, Shivpuri, Tikamgarh, Datia, Bhind | 2010-11 | 164.789 | 0.388 | 164.401 |
| 75 | Bariyarpur Left Bank Canal | Chhatarpur | 2011-12 | 46.682 | 0.000 | 46.682 |
| 76 | Bansagar Project | Rewa, Satna, Sidhi and Shahdol | 2011-12 | 154.687 | 0.000 | 154.687 |
| | | | **TOTAL** | **745.712** | **220.478** | **525.234** |

Contd...

**Table 17 : List of On-going Projects under CADWM Programme during the period of XI Plan (2007-08 To 2011-12) as on March, 2012**

**( '000 ha)**

| S. No. | Project Name | Districts benefitted | Year of Inclusion | CCA | CCA Covered till 31.3.2012 | Reported balance of executable CCA |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | **MAHARASHTRA** | | | | | |
| 77 | Khadakwasla * | Pune | 1983-84 | 77.680 | 46.457 | 31.223 |
| 78 | Kukadi | | 1979-80 | 132.000 | 138.361 | 0.000 |
| 79 | Surya ** | | 1983-84 | 14.700 | 1.100 | 13.600 |
| 80 | Krishna | | 1974-75 | 74.000 | 72.939 | 1.061 |
| 81 | Chaskaman | Pune | 1996-97 | 43.420 | 34.774 | 8.646 |
| 82 | Upper Penganga | Nanded, Hingoli, Yeotmal | 1974-75 | 104.000 | 83.076 | 20.924 |
| 83 | Lower Wunna | Nagpur, Wardha | 1996-97 | 21.594 | 17.475 | 4.119 |
| 84 | Bhima | Solapur | 1974-75 | 126.000 | 113.783 | 12.217 |
| 85 | Nandur Madhumeshwar Canal Project | Ahmednagar, Aurangabad | 2009-10 | 52.864 | 11.198 | 41.666 |
| 86 | Dhombalkawadi Irr.Project | Pune and Satara | 2010-11 | 28.100 | 1.165 | 26.935 |
| | | | **TOTAL** | **674.358** | **520.328** | **160.391** |
| * Approved In XVIII meeting of IMSC for deletion. The state govt has, however, requested for continuation of this project and delete upper wandha project, on which 63.46 th. ha. CCA is get to be covered. | | | | | | |
| ** Approved In XVIII meeting of IMSC for fore elosore. Formal request with details awaited from state government. | | | | | | |
| | **MANIPUR** | | | | | |
| 87 | cluster of 21 MI scheme in Bishnupur District | Bishnupur | 2007-08 | 9.600 | 6.539 | 3.061 |
| 88 | Cluster of 37 MI scheme in Thoubal,Ukhrul, Chandel and Churachandpur district | Thoubal, Uhrul and Churachandpur | 2007-08 | 6.420 | 4.754 | 1.666 |
| 89 | Cluster of 28 MI scheme in East and West Districts of Imphal | Imphal West, Imphal East | 2007-08 | 6.665 | 5.743 | 0.922 |
| 90 | Khuga Multipupose Project | Churachandpur | 2010-11 | 9.575 | 3.317 | 6.258 |
| 91 | Thoubal Irrigation Project, Ph-II | Thoubal | 2010-11 | 2.485 | 1.900 | 0.585 |
| | | | **TOTAL** | **34.745** | **28.292** | **6.453** |
| | **MEGHALAYA** | | | | | |
| 92 | Cluster of 10 MI schemes viz. Tienglam and Pdem etc. | | 2001-02 | 2.440 | 1.354 | 1.086 |

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**Table 17 : List of On-going Projects under CADWM Programme during the period of XI Plan (2007-08 To 2011-12) as on March, 2012**

**( '000 ha)**

| S. No. | Project Name | Districts benefitted | Year of Inclusion | CCA | CCA Covered till 31.3.2012 | Reported balance of executable CCA |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 93 | Cluster of 6 MI schemes -Kynrut, Phudumjer, Nongtraw, Kharukol, Nekora, Madan Umtheid | West khasi Hills, Ri-Bhoi, South Garo Hills | 2010-11 | 0.380 | 0.371 | 0.009 |
| | | | **TOTAL** | **2.820** | **1.725** | **1.095** |
| | **MIZORAM** | | | | | |
| 94 | Cluster of 5 Minor Irrigation projects | Aizawl, Champai | 2011-12 | 0.222 | 0.000 | 0.222 |
| 95 | Cluster of 60MI Schemes Phase-II I Aizawl, Lunget and Chhimtuipui District | | 2003-04 | 3.040 | 0.000 | 3.040 |
| | | | **TOTAL** | **3.262** | **0.000** | **3.262** |
| | **NAGALAND** | | | | | |
| 96 | Cluster of 13 Minor Irrigation Projects at Changki Valley | Mokokchung | 2011-12 | 1.080 | 0.000 | 1.080 |
| | | | **TOTAL** | **1.080** | **0.000** | **1.080** |
| | **ORISSA** | | | | | |
| 97 | Sunie Irrigation Project | Mayurganj, Balasore | 2009-10 | 10.000 | 5.850 | 4.150 |
| 98 | Jaimangla | Ganjam | 1998-99 | 7.350 | 2.352 | 4.998 |
| 99 | Hirakud | Sambalpur, Badgarh, Bolangir, Subaranpur | 1974-75 | 153.240 | 145.555 | 7.685 |
| 100 | Rengali Irrigation Project, LBC-I & LBC-II Phase-I | Angul, Dhenkanal, | 2011-12 | 41.333 | 0.000 | 41.333 |
| 101 | Mahanadi delta 1974-75 | Puri, Khurda, Cuttack, Jajpur, Kendrapara, Jagatsinghpur | 1974-75 | 336.300 | 30.079 | 306.221 |
| 102 | Rushikulya | Ganjam | 1994-95 | 61.230 | 17.995 | 43.235 |
| 103 | Salandi Right | Bhadrak, Keonjhar | 1994-95 | 40.180 | 12.037 | 28.143 |
| 104 | Baitarani | Bhadra, Jajpur | 1998-99 | 32.770 | 9.395 | 23.375 |
| 105 | Potteru | Malkangiri | 1985-86 | 70.100 | 17.763 | 52.337 |
| 106 | Upper Kolab | Koraput | 2003-04 | 47.200 | 19.808 | 27.392 |
| 107 | Gohira Irrigation Project | Deogarh | 2009-10 | 9.172 | 5.600 | 3.572 |
| 108 | Upper Indrawati Major Irrigation Project | Kalahandi | 2009-10 | 128.000 | 5.441 | 122.559 |
| 109 | Remal Irrigation Project | Keonjhar | 2009-10 | 4.313 | 3.313 | 1.000 |
| | | | **TOTAL** | **941.188** | **275.188** | **666.000** |

Contd...

**Table 17 : List of On-going Projects under CADWM Programme during the period of XI Plan (2007-08 To 2011-12) as on March, 2012**

**( '000 ha)**

| S. No. | Project Name | Districts benefitted | Year of Inclusion | CCA | CCA Covered till 31.3.2012 | Reported balance of executable CCA |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | **PUNJAB** | | | | | |
| 110 | Bhatinda Br Part-II | Ludhiana, Barnala, Bathinda & Muktsar | 2008-09 | 181.707 | 66.941 | 114.766 |
| 111 | Upper Bari Doab Canal Command | Guraspur, Amritsar, & Taran Taran | 2003-04 | 184.861 | 33.504 | 151.357 |
| 112 | Sirhind Feeder Part-II Command Project | Ferozpur, faridkot & Muktsar. | 2007-08 | 314.496 | 128.573 | 185.923 |
| | | | **TOTAL** | **681.064** | **229.018** | **452.046** |
| | **RAJASTHAN** | | | | | |
| 113 | Chambal | Kota, Bundi, baran | 1974-75 | 229.000 | 120.578 | 108.422 |
| 114 | Amar Singh Sub-Branch and Jassana district of Bhakra canal System. | Hanumangarh | 1998-99 | 67.210 | 31.738 | 35.472 |
| 115 | Sidhmukh Nohar | Hanumangarh, Churu | 2003-04 | 111.460 | 98.310 | 13.150 |
| 116 | Bisalpur Project | Tonk, Deoli, Todarisng, Uniyara | 2005-06 | 81.800 | 31.605 | 50.195 |
| 117 | Gang Canal | Sriganganagar | 2010-11 | 183.201 | 0.000 | 183.201 |
| | | | **TOTAL** | **672.671** | **282.231** | **390.440** |
| | **SIKKIM** | | | | | |
| 118 | A Cluster of 17 Minor irrigation of North and East district of Sikkim | | 2000-01 | 1.030 | 0.000 | 1.030 |
| 119 | A Cluster of 21 MI Schemes of South & West district of Sikkim | | 2000-01 | 1.220 | 0.107 | 1.113 |
| | | | **TOTAL** | **2.250** | **0.107** | **2.143** |
| | **TAMIL NADU** | | | | | |
| 120 | Wellington Reservoir | Cuddalore | 2008-09 | 11.153 | 9.650 | 1.503 |
| 121 | Kalingarayan Anicut | Erode | 2011-12 | 4.800 | 0.000 | 4.800 |
| | | | | | | Contd... |
| 122 | Gundar-Chittar-Karuppanadi | Tirunelveli | 2008-09 | 15.000 | 15.002 | 0.000 |
| 123 | Kodiveri Anicut | Erode | 2008-09 | 9.916 | 8.884 | 1.032 |
| 124 | Thirukoilur Anicut | Villupuram | 2008-09 | 9.783 | 9.466 | 0.317 |
| 125 | Varadhamanadhi reservoir | Dindigul | 2011-12 | 2.323 | 0.000 | 2.323 |

**Table 17 : List of On-going Projects under CADWM Programme during the period of XI Plan (2007-08 To 2011-12) as on March, 2012**

**( '000 ha)**

| S. No. | Project Name | Districts benefitted | Year of Inclusion | CCA | CCA Covered till 31.3.2012 | Reported balance of executable CCA |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 126 | Vaigai Project | Maduri, Sivagangai, Ramnathapuram | 2010-11 | 50.188 | 22.486 | 27.702 |
| 127 | Kodaganar Project (DPAP criteria) | Dindigul, Karur | 2010-11 | 4.117 | 2.748 | 1.369 |
| | | | **TOTAL** | **107.280** | **68.236** | **39.046** |
| | **TRIPURA** | | | | | |
| 128 | Cluster of 4 MI Projects | | 2003-04 | 0.440 | 0.216 | 0.224 |
| | | | **TOTAL** | **0.440** | **0.216** | **0.224** |
| | **UTTAR PRADESH** | | | | | |
| 129 | Sharda Shayak Canal System p-II | Lakhimpur Khiri, Sitapur, Barabanki, Lucknow, Raebareli, Pratapgarh, Sultanpur, Faizabad, Ambednagar, Jaunpur, Azamgarh, Mao, Allahabad, Varanasi, Gazipur, Balia. | 2009-10 | 330.000 | 46.012 | 283.988 |
| 130 | Tumaria dam canal System | Allahabad | 2000-01 | 64.010 | 23.010 | 41.000 |
| 131 | Sarda Canal Project | Bareilly, Pilibhit, Shahjahanpur, Hardoi, Unnao, Raebareilly, Kheri, sitapur, Lucknow, Barabanki | 1989-90 | 1613.000 | 925.982 | 687.018 |
| 132 | East Ganga Canal | Bijnor, Jyotiba Fule Nagar | 1990-91 | 233.000 | 76.510 | 156.490 |
| 133 | Lower Rajghat | Lalitpur | 2009-10 | 43.210 | 18.700 | 24.510 |
| 134 | Betwa & Gursarai Canal | Jhansi, Jaloun, Hamirpur | 1990-91 | 422.000 | 271.190 | 150.810 |
| 135 | Ken Canal System | Banda | 1990-91 | 222.000 | 109.410 | 112.590 |
| 136 | Belan Pump Canal System | Allahabad | 1997-98 | 71.050 | 43.920 | 27.130 |
| 137 | Tons Pump Canal System | Allahabad | 1997-98 | 34.000 | 27.560 | 6.440 |
| 138 | Jakhloun Pump Canal System | Lalitpur | 2009-10 | 29.870 | 18.470 | 11.400 |
| 139 | Son Pump Canal System | | 1997-98 | 93.650 | 48.600 | 45.050 |

Contd...

**Table 17 : List of On-going Projects under CADWM Programme during the period of XI Plan (2007-08 To 2011-12) as on March, 2012**

**( '000 ha)**

| S. No. | Project Name | Districts benefitted | Year of Inclusion | CCA | CCA Covered till 31.3.2012 | Reported balance of executable CCA |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 140 | Saryu Canal System Phase-II | Bahraich, Gonda, Sidharth Nagar, Basti, Gorakkpur, Santkabirnagar, Balrampur, Sravasti | 2009-10 | 280.000 | 24.316 | 255.684 |
| 141 | Upper Ganga Canal | Manda, Meja, Korawan, Urua | 1990-91 | 457.000 | 363.510 | 93.490 |
| 142 | Madhya Ganga Canal | Allahabad | 1990-91 | 229.000 | 77.340 | 151.660 |
| 143 | Sirsi dam Project | Allahabad, Mirzapur | 2010-11 | 44.880 | 0.600 | 44.280 |
| | | | **TOTAL** | **4166.670** | **2075.130** | **2091.540** |
| | **UTTARAKHAND** | | | | | |
| 144 | Laster Canal's Offshoots | | 2001-02 | 1.120 | 0.000 | 1.120 |
| 145 | Nathuwala & Balawala Canals | | 2001-02 | 1.120 | 1.605 | 0.000 |
| 146 | Jatowala & Prateetpurcanal | | 2001-02 | 0.540 | 0.262 | 0.278 |
| 147 | Tumaria Dam canal system | | 2003-04 | 32.530 | 2.094 | 30.436 |
| | | | **TOTAL** | **35.310** | **3.961** | **31.834** |
| | **WEST BENGAL** | | | | | |
| 148 | D.V.C System | Burdwan, Hooghly, Bankura, Howrah | 1974-75 | 391.970 | 73.647 | 318.323 |
| 149 | Kangsabati | Bankura, Midnapur, Hooghly | 1974-75 | 340.750 | 91.671 | 249.079 |
| 150 | Mayurakshi | Birbhum, Murshidabad, Burdwan | 1974-75 | 226.630 | 45.128 | 181.502 |
| 151 | Teesta Barrage | Jalpaiguri, Darjeeling, Uttar Dinajpur, Cooch Behar, Malda | 1983-84 | 165.000 | 4.861 | 160.139 |
| | | | **Total=** | **1124.350** | **215.307** | **909.043** |
| | | | **G.Total=** | **16248.06** | **8368.19** | **7886.78** |

**Source : Ministry of Water Resources (CAD Wing)**

**Note : CCA - Cultural Command Area.**

**Table 18: Plan-wise Financial Expenditure on Irrigation in India**

**(Rs. Crores)**

| Sl. No. | Period | Major & Medium | Minor | | | Command Area Deveopment | Major, Medium, Minor and CAD | | | Total Plan Expenditure in All Sectors | Percentage of Expend on Irrigation to Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | State | Institu-tional | Total | | Total | Cumul-ative | Average per year | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1. | First Plan(1951-56) | 376.2 | 65.6 | NEG. | 65.6 | - | 441.8 | 441.8 | 88.4 | 1960 | 23 |
| 2. | Second Plan(1956-61) | 380.0 | 142.2 | 19.4 | 161.6 | - | 541.6 | 983.4 | 108.3 | 4672 | 12 |
| 3. | Third Plan(1961-66) | 576.0 | 326.1 | 115.4 | 441.5 | - | 1017.5 | 2000.9 | 203.5 | 8577 | 12 |
| 4. | Annual Plans(1966-69) | 429.8 | 321.3 | 234.7 | 556.0 | - | 985.9 | 2986.7 | 328.6 | 6625 | 15 |
| 5. | Fourth Plan(1969-74) | 1242.3 | 506.2 | 661.1 | 1167.3 | - | 2409.6 | 5396.3 | 481.9 | 15779 | 15 |
| 6. | Fifth Plan(1974-78) | 2516.2 | 627.5 | 798.8 | 1426.3 | 147.6 | 4090.1 | 9486.4 | 1022.5 | 28653 | 14 |
| 7. | Annual Plans(1978-80) | 2078.6 | 496.2 | 480.4 | 976.6 | 215.3 | 3270.5 | 12756.9 | 1635.3 | 22950 | 14 |
| 8. | Sixth Plan(1980-85) | 7368.8 | 1979.3 | 1437.6 | 3416.8 | 743.1 | 11528.7 | 24285.6 | 2305.8 | 109292 | 11 |
| 9. | Seventh Plan(1985-90) | 11107.3 | 3131.9 | 3061.0 | 6192.9 | 1447.5 | 18747.7 | 43033.2 | 3749.5 | 218730 | 9 |
| 10. | Annual Plan(1990-91) | 2634.8 | 812.2 | 675.6 | 1487.8 | 285.6 | 4408.2 | 47441.5 | 4408.2 | 58369 | 8 |
| 11. | Annual Plan(1991-92) | 2824.0 | 844.1 | 674.0 | 1518.1 | 333.8 | 4675.9 | 52117.4 | 4675.9 | 64751 | 7 |
| 12. | Eighth Plan (1992-97) | 21669.2 | 6230.6 | 4241.8 | 10472.4 | 1937.9 | 34079.5 | 86196.9 | 6815.9 | 485457 | 7 |
| 13 | Ninth Plan (1997-2002) | 49289.6 | 8635.0 | 2661.7 | 11296.7 | 2222.8 | 62809.1 | 149006.0 | 12561.8 | 859200 | 7 |
| 14 | Tenth Plan (2002 - 2007) | 83647.1 | 13924.3 | 3257.4 | 17181.7 | 2534.8 | 103363.6 | 252369.7 | 20672.7 | 1525639 | 7 |
| 15 | Eleventh Plan (2007 - 2012) | | | | | | | | | | |
| (a) | Actual Expenditure (2007-2008) | 29390.6 | 4449.9 | 435.2 | 4885.1 | 1070.3 | 35346.0 | 287715.7 | 35346.0 | 371569 | 10 |
| (b) | Actual Expenditure (2008-2009) | 32341.8 | 5770.8 | 545.9 | 6316.7 | 572.4 | 39230.8 | 39230.8 | 39230.8 | 477236 | 8 |

Contd...

**Table 18: Plan-wise Financial Expenditure on Irrigation in India**

**(Rs. Crores)**

| Sl. No. | Period | Major & Medium | Minor | | | Command Area Deveopment | Major, Medium, Minor and CAD | | | Total Plan Expenditure in All Sectors | Percentage of Expend on Irrigation to Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | State | Institu-tional | Total | | Total | Cumul-ative | Average per year | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| (c) | Actual Expenditure (2009-2010) | 33168.8 | 7038.1 | 496.8 | 7534.9 | 702.9 | 41406.5 | 80637.4 | 41406.5 | 529024 | 8 |
| (d) | Revi. Approved Outlay (2010-2011) | 34310.1 | 8241.0 | 920.3 | 9161.3 | 970.5 | 44441.9 | 125079.3 | 44441.9 | 688816 | 6 |
| (e) | Approved Outlay (2011-12) | 45262.0 | 12106.6 | 660.5 | 12767.1 | 1605.7 | 59634.8 | 184714.0 | 59634.8 | 822009 | 7 |

**Source:** 1. Ministry of Water Resources, Minor Irrigation Division (for Column 5),
2. Annual Plan Document of Planning Commission (for Column-3, 4& 7).
3. Economic Survey 2011-12(for Column-11)

Totals may not tally due to rounding off.

**Table 19: Plan-wise Financial Expenditure on Irrigation in India (at 1993-94 prices)**

(Rs.Crores)

| Sl. No. | Period | Major & Medium | Minor | | | Command Area Development | Major, Medium, Minor and CAD | | | Total Plan Expenditure in All Sectors | Percentage of Expend on Irrigation to Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | State | Institu-tional | Total | | Total | Cumul-ative | Average per year | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1. | First Plan(1951-56) | 5824.1 | 1015.8 | NEG. | 1015.8 | - | 6839.6 | 6839.0 | 1368.0 | 30340.6 | 23 |
| 2. | Second Plan(1956-61) | 5277.8 | 1975.4 | 268.8 | 2244.2 | - | 7521.9 | 13658.1 | 1504.4 | 64888.9 | 12 |
| 3. | Third Plan(1961-66) | 6414.3 | 3631.4 | 1284.7 | 4916.1 | - | 11330.4 | 22281.2 | 2266.1 | 95512.2 | 12 |
| 4. | Annual Plans(1966-69) | 3376.4 | 2524.0 | 1844.0 | 4367.9 | - | 7744.3 | 23461.9 | 2581.3 | 52042.4 | 15 |
| 5. | Fourth Plan(1969-74) | 7783.8 | 3171.7 | 4142.0 | 7313.7 | - | 15097.5 | 33811.2 | 3019.4 | 98865.9 | 15 |
| 6. | Fifth Plan(1974-78) | 9886.8 | 2465.6 | 3138.7 | 5604.3 | 580.0 | 16071.1 | 37274.5 | 4017.7 | 112585.5 | 14 |
| 7. | Annual Plans(1978-80) | 7192.3 | 1717.0 | 1662.3 | 3379.2 | 745.1 | 11316.6 | 44141.4 | 5658.5 | 79411.8 | 14 |
| 8. | Sixth Plan(1980-85) | 17330.3 | 4654.9 | 3380.9 | 8035.8 | 1747.5 | 27113.6 | 57115.6 | 5422.9 | 257036.7 | 11 |
| 9. | Seventh Plan(1985-90) | 18980.3 | 5351.8 | 5230.6 | 10582.5 | 2473.5 | 32036.3 | 73535.9 | 6407.2 | 373769.7 | 9 |
| 10. | Annual Plan(1990-91) | 3575.1 | 1102.0 | 916.7 | 2018.7 | 387.5 | 5981.3 | 64371.0 | 5981.3 | 79198.1 | 8 |

Contd...

**Table 19: Plan-wise Financial Expenditure on Irrigation in India (at 1993-94 prices)**

(Rs.Crores)

| Sl. No. | Period | Major & Medium | Minor | | | Command Area Development | Major, Medium, Minor and CAD | | | Total Plan Expenditure in All Sectors | Percentage of Expend on Irrigation to Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | State | Institu-tional | Total | | Total | Cumul-ative | Average per year | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 11. | Annual Plan(1991-92) | 3365.9 | 1006.1 | 803.3 | 1809.5 | 397.9 | 5573.2 | 62118.5 | 5573.2 | 77176.4 | 7 |
| 12. | Eighth Plan (1992-97) | 19567.6 | 5626.3 | 3830.4 | 9456.7 | 1750.0 | 30774.3 | 77837.2 | 6154.9 | 438375.7 | 7 |
| 13 | Ninth Plan (1997-2002) | 33493.9 | 5867.8 | 1808.7 | 7676.5 | 1510.5 | 42680.8 | 101254.4 | 8536.2 | 583854.3 | 7 |
| 14 | Tenth Plan (2002 - 2007) | 44884.7 | 7471.7 | 1747.9 | 9219.7 | 1360.2 | 55464.5 | 135420.5 | 11092.9 | 818651.5 | 7 |
| 15 | Eleventh Plan (2007 - 2012) | 13625.7 | 2063.0 | 201.8 | 2264.8 | 496.2 | 16386.7 | 133387.0 | 16386.6 | 172261.9 | 10 |
| (a) | Actual Expenditure (2007-2008) | | | | | | | | | | |
| (b) | Actual Expenditure (2008-2009) | 13827.2 | 2467.2 | 233.4 | 2700.6 | 244.7 | 16772.5 | 16772.5 | 16772.5 | 204034.2 | 8 |
| (c) | Actual Expenditure (2009-2010) | 13655.3 | 2897.5 | 204.5 | 3102.0 | 289.4 | 17046.7 | 33197.8 | 17046.7 | 217795.0 | 8 |

**Source: 1. Ministry of Water Resources, Minor Irrigation Division (for Column 5),**
**2. Annual Plan Document of Planning Commission (for Column-3,4& 7).**
**3. Economic Survey 2011-12(for Column-11)**
**Totals may not tally due to rounding off.**

**Note : (All India WPI (Base 1993-94=100) has been used as deflator)**

## Table 20 : State-wise and Plan-wise Financial Expenditure on Major and Medium Irrigation

**(Rs.Crores)**

| Sl. No. | Name of the State/Uts. | Ninth Plan (1997-02) | Tenth Plan (2002-07) | Actual Expenditure (2007-08) | Actual Expenditure (2008-09) | Actual Expenditure (2009-10) | Revised Appoved Outlay (2010-11) | Appoved Outlay (2011-12) |
|---|---|---|---|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | 8 | 9 |
| 1 | **Andhra Pradesh** | 4045.8 | 20434.2 | 11285.5 | 8097.9 | 10488.1 | 9072.3 | 12054.5 |
| 2 | **Arunachal Pradesh** | 1.7 | 2.2 | 0.5 | 0.5 | 0.0 | 0.6 | 0.7 |
| 3 | **Assam** | 213.0 | 106.2 | 23.3 | 80.9 | 90.5 | 36.2 | 151.6 |
| 4 | **Bihar** | 1621.9 | 1597.3 | 559.2 | 519.9 | 514.5 | 561.8 | 984.9 |
| 5 | **Chhatisgarh** | 160.6 | 1503.4 | 444.4 | 586.7 | 850.5 | 720.1** | 1253.8 |
| 6 | **Goa** | 224.2 | 571.5 | 118.2 | 117.5 | 88.6 | 107.2** | 110.7 |
| 7 | **Gujarat** | 5298.4 | 10496.2 | 4020.4 | 6907.6 | 4299.7 | 4560.1** | 8080.1 |
| 8 | **Haryana** | 1154.4 | 1297.8 | 662.6 | 705.2 | 669.7 | 575.0** | 600.0 |
| 9 | **Himachal Pradesh** | 65.1 | 153.9 | 96.0 | 80.0 | 85.1 | 62.0 | 101.8 |
| 10 | **Jammu & Kashmir** | 128.5 | 262.1 | 49.9 | 62.1 | 118.0* | 101.8** | 125.8 |
| 11 | **Jharkhad** | 167.0 | 1248.2 | 694.5 | 322.9 | 215.4 | 408.0 | 886.3 |
| 12 | **Karnataka** | 8700.5 | 16505.4 | 2058.4 | 2020.9 | 2939.4 | 3600.0 | 5434.0 |
| 13 | **Kerala** | 703.3 | 672.0 | 121.7 | 117.2 | 82.2 | 218.0 | 271.1 |
| 14 | **Madhya Pradesh** | 2203.7 | 5429.3 | 1941.1 | 1691.5 | 1652.3 | 2042.7** | 2323.4 |
| 15 | **Maharashtra** | 14807.3 | 10313.3 | 2982.5 | 6196.1 | 6278.7 | 6985.3** | 6113.0 |
| 16 | **Manipur** | 171.7 | 229.8 | 107.4 | 40.7 | 126.6 | 275.2 | 262.3 |
| 17 | **Meghalaya** | 10.7 | 2.8 | 0.0 | 0.0 | 0.0 | 0.2** | 23.6 |
| 18 | **Mizoram** | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 19 | **Nagaland** | 0.9 | 0.1 | 0.1 | 0.1 | 0.2 | 0.0 | 0.0 |
| 20 | **Orissa** | 2331.2 | 2388.6 | 1298.4 | 1283.4 | 1182.8 | 1189.1 | 1310.0 |
| 21 | **Punjab** | 334.9 | 500.4 | 91.8 | 77.3 | 78.2 | 187.3 | 503.6 |
| 22 | **Rajasthan** | 1725.1 | 3028.8 | 595.3 | 586.6 | 569.8 | 447.5 | 609.9 |
| 23 | **Sikkim** | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0** | 0.0 |

Contd...

## Table 20 : State-wise and Plan-wise Financial Expenditure on Major and Medium Irrigation

**(Rs.Crores)**

| Sl. No. | Name of the State/Uts. | Ninth Plan (1997-02) | Tenth Plan (2002-07) | Actual Expenditure (2007-08) | Actual Expenditure (2008-09) | Actual Expenditure (2009-10) | Revised Appoved Outlay (2010-11) | Appoved Outlay (2011-12) |
|---|---|---|---|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | 8 | 9 |
| 24 | **Tamil Nadu** | 1218.5 | 1091.0 | 220.4 | 384.1 | 644.3 | 324.4 | 370.9 |
| 25 | **Tripura** | 32.4 | 41.7 | 6.1 | 9.7 | 15.6 | 58.8 | 38.2 |
| 26 | **Uttar Pradesh** | 3014.7 | 4876.1 | 1695.2 | 1971.1 | 1609.0 | 1831.7 | 1920.0 |
| 27 | **Uttarakhand** | 61.0 | 316.9 | 127.8 | 216.3 | 310.3 | 399.7** | 290.5 |
| 28 | **West Bengal** | 667.8 | 293.1 | 98.3 | 118.9 | 87.5 | 362.7** | 1160.0 |
| **Total for States** | | 49066.7 | 83361.9 | 29298.7 | 32194.9 | 32996.7 | 34127.5 | 44980.3 |
| **Total for U.Ts.** | | 4.2 | 4.0 | 0.1 | 1.1 | 2.6 | 1.1** | 4.6 |
| **Total States & U.Ts.** | | 49070.9 | 83365.9 | 29298.8 | 32196.0 | 32999.3 | 34128.6 | 44984.9 |
| **Central Sector** | | 218.7 | 281.2 | 91.8 | 145.8 | 169.5 | 181.5 | 277.1 |
| **GRAND TOTAL** | | **49289.6** | **83647.1** | **29390.6** | **32341.8** | **33168.8** | **34310.1** | **45262.0** |

**Source :** Planning Commission
**Remarks** : Totals may not tally due to rounding off.
* :Revised Approved Outlay.** : Approved Outlay.

**Table 21: State-wise and Plan-wise Financial Expenditure on Minor Irrigation - State Sector**

**(Rs.Crores)**

| Sl. No. | State/U.ts. | Ninth Plan (1997-02) | Tenth Plan (2002-07) | Actual Expenditure (2007-08) | Actual Expenditure (2008-09) | Actual Expenditure (2009-10) | Revised Approved Outlay (2010-11) | Approved Outlay (2011-12) |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1. | **Andhra Pradesh** | 976.3 | 1742.2 | 661.1 | 684.4 | 954.6 | 1681.4 | 2563.6 |
| 2. | **Arunachal Pradesh** | 94.6 | 142.8 | 58.7 | 70.1 | 70.2 | 113.9 | 74.1 |
| 3. | **Assam** | 382.2 | 145.6 | 9.9 | 144.1 | 370.3 | 431.0 | 192.5 |
| 4. | **Bihar** | 231.6 | 825.1 | 109.7 | 80.9 | 78.4 | 64.9 | 255.5 |
| 5 | **Chattisgarh** | 71.5 | 972.3 | 509.0 | 296.1 | 154.3 | 69.9** | 758.4 |
| 6 | **Goa** | 26.7 | 99.5 | 31.5 | 39.2 | 39.3 | 60.0** | 69.1 |
| 7 | **Gujarat** | 933.3 | 1638.6 | 697.9 | 875.1 | 1016.9 | 986.5** | 1140.5 |
| 8 | **Haryana** | 200.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0** | 0.0 |
| 9 | **Himachal Pradesh** | 232.7 | 327.7 | 89.2 | 140.4 | 130.4 | 141.5 | 161.9 |
| 10 | **Jammu & Kashmir** | 142.9 | 275.6 | 59.0 | 113.7 | 196.1* | 152.3** | 209.8 |
| 11 | **Jharkhand** | 39.3 | 199.8 | 102.5 | 77.2 | 46.5 | 50.0** | 648.7 |
| 12 | **Karnataka** | 459.0 | 987.9 | 362.0 | 591.3 | 551.9 | 787.6 | 956.8 |
| 13 | **Kerala** | 225.8 | 113.7 | 28.8 | 34.1 | 37.0 | 78.2 | 75.3 |
| 14 | **Madhya Pradesh** | 746.3 | 1222.5 | 130.1 | 540.2 | 627.8 | 691.7** | 694.0 |
| 15 | **Maharashtra** | 1348.6 | 1560.3 | 114.8 | 463.9 | 895.5 | 809.7** | 1200.0 |
| 16 | **Manipur** | 30.1 | 197.7 | 57.3 | 3.9 | 50.3 | 63.4 | 63.4 |
| 17 | **Meghalaya** | 34.2 | 33.7 | 11.9 | 40.8 | 43.1 | 86.0** | 101.6 |
| 18 | **Mizoram** | 26.3 | 85.1 | 33.1 | 66.4 | 48.0 | 59.4 | 78.4 |
| 19 | **Nagaland** | 25.3 | 57.5 | 45.5 | 49.7 | 74.0 | 143.3 | 141.6 |
| 20 | **Orissa** | 435.7 | 403.1 | 175.7 | 180.8 | 228.8 | 256.0 | 592.4 |
| 21 | **Punjab** | 189.0 | 185.0 | 60.9 | 145.9 | 202.9 | 169.9 | 140.3 |
| 22 | **Rajasthan** | 259.5 | 505.5 | 225.9 | 176.2 | 144.3 | 144.3 | 257.0 |
| 23 | **Sikkim** | 19.4 | 21.0 | 6.2 | 15.5 | 30.9 | 99.9** | 46.6 |
| 24 | **Tamil Nadu** | 287.7 | 393.2 | 82.1 | 84.6 | 20.0 | 45.6 | 173.8 |
| 25 | **Tripura** | 75.3 | 137.5 | 23.6 | 23.7 | 21.2 | 14.8 | 99.3 |
| 26 | **Uttar Pradesh** | 362.0 | 618.6 | 303.8 | 354.6 | 431.1 | 566.9 | 619.0 |
| 27 | **Uttarakhand** | 19.6 | 393.4 | 218.6 | 275.7 | 368.6 | 209.0** | 235.0 |
| 28 | **West Bengal** | 346.1 | 161.0 | 62.7 | 129.1 | 114.8 | 147.5** | 390.5 |
| **Total States** | | 8221.7 | 13445.9 | 4271.3 | 5697.5 | 6947.1 | 8124.5 | 11939.0 |
| **Union** | **Territories** | | | | | | | |
| **29** | **A & N Island** | | 3.6 | 67.4 | 2.1 | 2.0 | 2.2** | 2.4 |
| **30** | **Chandigarh** | | 8.0 | 0.4 | 0.5 | 0.5 | 0.5** | 0.2*** |
| **31** | **D & N Haveli** | | 4.2 | 3.1 | 0.0 | 1.4 | 8.6** | 10.1 |
| **32** | **Daman & Diu** | | 0.6 | 0.4 | 0.2 | 0.2 | 0.2** | 0.2 |
| **33** | **Delhi** | | 0.2 | 28.2 | 1.9 | 0.3 | 0.2** | 0.1 |
| **34** | **Lakshadweep** | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0** | 0.0 |
| **35** | **Puducherry** | | 54.5 | 13.1 | 11.6 | 13.8 | 13.3 | 20.2 |
| **Total U.Ts** | | 55.3 | 98.7 | 112.5 | 16.2 | 18.2 | 25.0 | 33.1 |
| **Total States & U.Ts** | | 8277.0 | 13544.6 | 4383.9 | 5713.7 | 6965.3 | 8149.5 | 11972.1 |
| **Central Sector** | | 358.0 | 379.7 | 66.0 | 57.1 | 72.8 | 91.5 | 134.5 |
| **Grand Total** | | 8635.0 | 13924.3 | 4449.9 | 5770.8 | 7038.1 | 8241.0 | 12106.6 |

**Source** : Ministry of Water Resources(Minor Irrigation Division),Annual Plan Documents & Planning Commission

*** :Revised Approved Outlay.** **** : Approved Outlay.** ***** : Approval yet to be issued**

**Note** : Totals may not tally due to rounding off.

**Table 22: State-wise and Plan-wise Financial Expenditure on Minor Irrigation - Institutional**

**(Rs. Crores)**

| Sl. No. | State/ U.T. | IX$^{th}$ Plan (1997-02) | X$^{th}$ Plan (2002-07) | XI $^{th}$ Plan | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | (2007-08) | (2008-09) | (2009-10) | (2010-11) | (2011-12) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | **Andhra Pradesh** | 364.69 | 277.84 | 14.84 | 43.85 | 47.72 | 42.57 | 70.12 |
| 2 | **Arunachal Pradesh** | 0.00 | 0.30 | 0.28 | 0.15 | 0.00 | 0.00 | 0.00 |
| 3 | **Assam** | 0.02 | 1.72 | 2.61 | 0.01 | 0.09 | 0.00 | 0.14 |
| 4 | **Bihar** | 12.92 | 283.58 | 12.49 | 0.00 | 1.08 | 39.38 | 32.73 |
| 5 | **Chhattisgarh** | Included in M.P. | 40.97 | 5.03 | 3.58 | 2.81 | 1.22 | 0.51 |
| 6 | **Goa,Daman & Diu** | 0.94 | 0.18 | 0.00 | 0.06 | 0.00 | 0.00 | 0.00 |
| 7 | **Gujarat** | 40.46 | 148.73 | 19.32 | 19.19 | 45.82 | 52.70 | 75.22 |
| 8 | **Haryana** | 183.90 | 168.88 | 64.71 | 98.44 | 138.26 | 192.64 | 144.03 |
| 9 | **Himachal Pradesh** | 113.10 | 21.25 | 3.14 | 6.76 | 0.00 | 9.90 | 0.00 |
| 10 | **Jammu & Kashmir** | 0.51 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11 | **Jharkhand** | Included in Bihar | 1.82 | 2.53 | 0.01 | 0.00 | 1.93 | 0.00 |
| 12 | **Karnataka** | 127.43 | 235.73 | 49.17 | 97.63 | 26.43 | 215.69 | 28.74 |
| 13 | **Kerala** | 92.59 | 73.65 | 7.52 | 11.31 | 8.54 | 0.14 | 131.97 |
| 14 | **Madhya Pradesh** | 146.29 | 368.52 | 60.20 | 59.98 | 17.37 | 35.57 | 26.20 |
| 15 | **Maharashtra** | 102.16 | 277.57 | 23.65 | 11.52 | 7.84 | 35.18 | 18.89 |
| 16 | **Manipur** | 0.00 | 0.38 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17 | **Meghalya** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18 | **Mizoram** | 0.11 | 0.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19 | **Nagaland** | 0.00 | 0.00 | 0.33 | 0.33 | 0.00 | 0.00 | 0.00 |
| 20 | **Orissa** | 1.24 | 21.64 | 3.31 | 1.22 | 1.74 | 0.97 | 0.10 |
| 21 | **Punjab** | 197.80 | 275.91 | 30.81 | 87.43 | 16.25 | 146.83 | 26.02 |
| 22 | **Rajasthan** | 363.74 | 252.79 | 22.54 | 31.59 | 53.20 | 40.91 | 27.63 |
| 23 | **Sikkim** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24 | **Tamil Nadu** | 15.72 | 54.49 | 6.90 | 17.43 | 22.00 | 26.34 | 29.76 |
| 25 | **Tripura** | 0.09 | 0.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26 | **Uttarakhand** | Included in U.P. | 0.08 | 0.13 | 0.06 | 0.00 | 0.15 | 0.00 |
| 27 | **Uttar Pradesh** | 884.08 | 754.70 | 103.91 | 54.87 | 106.88 | 77.19 | 47.95 |
| 28 | **West Bengal** | 11.85 | 13.98 | 1.67 | 0.32 | 0.70 | 0.99 | 0.51 |
| | **Total States** | 2659.64 | 3255.09 | 435.09 | 545.74 | 496.73 | 920.32 | 660.51 |
| 29 | **A & N Island** | - | 0.04 | 0.00 | 0.01 | 0.01 | 0.02 | 0.00 |
| 30 | **Chandigarh** | - | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 |
| 31 | **Dadar & N. Haveli** | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | **Daman & Diu** | - | 0.00 | | | | | |
| 32 | **Delhi** | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33 | **Puducherry** | - | 2.19 | 0.11 | 0.07 | 0.01 | 0.00 | 0.00 |
| 34 | **Lakshadweep** | - | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total U.Ts.** | | 2.00 | 2.26 | 0.11 | 0.12 | 0.02 | 0.02 | 0.00 |
| **GRAND TOTAL** | | **2661.64** | **3257.35** | **435.20** | **545.86** | **496.75** | **920.34** | **660.51** |

**Source**: Ministry of Water Resources (Minor Irrigation Division).

**Note**: - Total may not tally due to rounding off.

## TABLE 23: Central Releases under the Command Area Development Programme by State

**( Rs. in Lakh)**

| Sl. No. | Name of the State | Total upto end of VIII Plan | Up to IX Plan | Upto X Plan | During XI Plan | | | | | Total XI Plan | Cumulative upto 31.03.2012 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | Andhra Pradesh | 5458.2 | 9297.74 | 9297.74 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 9297.74 |
| 2 | Arunachal Pradesh | 0.0 | 48.50 | 573.86 | 238.59 | 250.00 | 0.00 | 40.98 | 56.39 | 585.96 | 1159.81 |
| 3 | Assam | 1874.0 | 2066.41 | 2066.41 | 0.00 | 594.61 | 0.00 | 226.00 | 0.00 | 820.61 | 2887.02 |
| 4 | Bihar | 10918.4 | 11218.43 | 11848.54 | 0.00 | 0.00 | 6095.19 | 2669.09 | 2943.86 | 11708.14 | 23556.68 |
| 5 | Chattisgarh | 0.0 | 46.32 | 2106.34 | 0.00 | 0.00 | 0.00 | 8285.09 | 1392.17 | 9677.26 | 11783.60 |
| 6 | Goa | 897.9 | 917.93 | 917.93 | 0.00 | 0.00 | 0.00 | 80.56 | 6.42 | 86.98 | 1004.91 |
| 7 | Gujarat | 9838.8 | 10928.72 | 15038.72 | 3057.66 | 0.00 | 0.00 | 893.86 | 682.00 | 4633.52 | 19672.24 |
| 8 | Haryana | 8372.8 | 14450.80 | 22509.31 | 2332.22 | 4411.19 | 5451.28 | 4767.24 | 5800.62 | 22762.55 | 45271.86 |
| 9 | Himachal Pradesh | 414.5 | 780.41 | 1184.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1184.70 |
| 10 | Jammu & Kashmir | 1881.1 | 2890.36 | 4753.74 | 777.61 | 1292.83 | 1432.35 | 2250.19 | 2005.52 | 7758.50 | 12512.24 |
| 11 | Jharkhand | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12 | Karnataka | 11031.2 | 18310.06 | 31450.96 | 5771.29 | 1500.00 | 3170.04 | 5341.51 | 5308.00 | 21090.84 | 52541.80 |
| 13 | Kerala | 6475.1 | 9522.83 | 9990.23 | 0.00 | 0.00 | 0.00 | 106.25 | 418.08 | 524.33 | 10514.56 |
| 14 | Madhya Pradesh | 8259.4 | 8818.12 | 10966.79 | 490.07 | 0.00 | 589.67 | 1000.00 | 5510.11 | 7589.85 | 18556.64 |
| 15 | Maharashtra | 21443.6 | 25327.54 | 25873.48 | 622.27 | 2623.63 | 3404.79 | 0.00 | 2148.27 | 8798.96 | 34672.44 |
| 16 | Manipur | 813.0 | 1273.41 | 2065.16 | 184.07 | 554.47 | 938.77 | 1200.00 | 927.02 | 3804.33 | 5869.49 |
| 17 | Meghalaya | 55.9 | 74.29 | 118.02 | 0.00 | 0.00 | 3.56 | 25.52 | 0.00 | 29.08 | 147.10 |
| 18 | Mizoram | 0.0 | 11.88 | 72.95 | 6.43 | 0.00 | 0.00 | 0.00 | 13.00 | 19.43 | 92.38 |
| 19 | Nagaland | 10.0 | 164.59 | 339.19 | 19.43 | 0.00 | 0.00 | 0.00 | 15.00 | 34.43 | 373.62 |
| 20 | Orissa | 4682.4 | 7594.18 | 9455.11 | 1101.91 | 2976.25 | 1577.80 | 3563.07 | 3102.85 | 12321.88 | 21776.99 |
| 21 | Punjab | 0.0 | 5985.55 | 12262.93 | 3589.24 | 6091.13 | 0.00 | 6000.00 | 3000.00 | 18680.37 | 30943.29 |
| 22 | Rajasthan | 30109.1 | 43117.43 | 54716.28 | 1804.38 | 4630.31 | 2980.85 | 0.00 | 2244.07 | 11659.61 | 66375.89 |
| 23 | Sikkim | 0.0 | 5.50 | 6.75 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.75 |
| 24 | Tamil Nadu | 9504.5 | 17914.50 | 26969.48 | 1740.48 | 0.00 | 4650.00 | 1500.00 | 2999.82 | 10890.30 | 37859.78 |

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## TABLE 23: Central Releases under the Command Area Development Programme by State

**( Rs. in Lakh)**

| Sl. No. | Name of the State | Total upto end of VIII Plan | Up to IX Plan | Upto X Plan | During XI Plan | | | | | Total XI Plan | Cumulative upto 31.03.2012 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 25 | Tripura | 12.2 | 12.18 | 19.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 19.70 |
| 26 | Uttar Pradesh | 33944.1 | 49287.65 | 66308.40 | 5746.30 | 7094.76 | 9475.99 | 7000.00 | 10000.00 | 39317.05 | 105625.46 |
| 27 | Uttarakhand | 0.0 | 0.00 | 435.49 | 0.00 | 409.92 | 0.00 | 0.00 | 0.00 | 409.92 | 845.41 |
| 28 | West Bengal | 2077.7 | 3174.18 | 3748.14 | 231.58 | 0.00 | 1600.00 | 690.95 | 0.00 | 2522.53 | 6270.67 |
| | Total | 168073.84 | 243239.50 | 325096.33 | 27713.517 | 32429.10 | 41370.29 | 45640.31 | 48573.20 | 195726.42 | 520822.75 |

Source : Ministry of Water Resources (CAD Wing)

**Table 24: State-wise Expenditure under CAD Programme - State Sector**

**(Rs. Crores)**

| Sl. No. | Name of the State/UT | Eighth Plan (1992-97) | Ninth Plan (1997-02) | Tenth Plan (2002-07) | Cummul-ative upto Tenth Plan | Actual Expendi-ture (2007-08) | Actual Expendi-ture (2008-09) | Actual Expendi-ture (2009-10) | Revised Approved Outlay (2010-11) | Appoved Outlay (2011-12) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1 | Andhra Pradesh | 80.14 | 49.18 | 38.60 | 274.81 | 17.07 | 9.68 | 6.06 | 15.56 | 26.53 |
| 2 | Arunachal Pradesh | 1.61 | 4.99 | 11.16 | 17.76 | 2.40 | 2.50 | 0.30 | 1.51 | 3.00 |
| 3 | Assam | 13.34 | 31.14 | 47.99 | 109.05 | 0.75 | 2.95 | 7.18 | 11.10 | 19.28 |
| 4 | Bihar | 31.53 | 62.66 | 48.22 | 212.97 | 434.39 | 25.95 | 73.12 | 55.00 | 90.00 |
| 5 | Chhattisgarh | 0.00 | 1.57 | 73.42 | 74.99 | 20.98 | 30.06 | 21.35 | 64.12** | 21.96 |
| 6 | Goa | 5.19 | 9.70 | 16.27 | 40.28 | 3.75 | 4.16 | 5.50 | 6.31** | 6.92 |
| 7 | Gujarat | 43.75 | 61.34 | 19.05 | 200.40 | 6.08 | 5.71 | 12.53 | 11.38** | 13.63 |
| 8 | Haryana | 29.92 | 143.03 | 182.76 | 452.51 | 26.84 | 27.32 | 45.85 | 141.00** | 90.00 |
| 9 | Himachal Pradesh | 2.86 | 4.38 | 11.91 | 21.85 | 1.34 | 0.02 | 0.00 | 2.00 | 10.00 |
| 10 | Jammu & Kashmir | 8.95 | 20.58 | 46.77 | 93.00 | 19.50 | 23.84 | 11.00* | 18.00** | 18.00 |
| 11 | Jharkhand | 0.00 | 0.00 | 6.00 | 6.00 | 0.12 | 0.12 | 21.62 | 2.00** | 2.00 |
| 12 | Karnataka | 77.29 | 97.90 | 140.92 | 451.85 | 64.68 | 69.41 | 73.00 | 104.00 | 438.15 |
| 13 | Kerala | 41.86 | 41.80 | 39.36 | 157.53 | 4.79 | 4.06 | 2.65 | 6.27 | 4.25 |
| 14 | Madhya Pradesh | 37.72 | 17.43 | 21.50 | 346.70 | 5.11 | 6.35 | 7.71 | 10.00** | 18.25 |

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**Table 24: State-wise Expenditure under CAD Programme - State Sector**

**(Rs. Crores)**

| Sl. No. | Name of the State/UT | Eighth Plan (1992-97) | Ninth Plan (1997-02) | Tenth Plan (2002-07) | Cummul-ative upto Tenth Plan | Actual Expendi-ture (2007-08) | Actual Expendi-ture (2008-09) | Actual Expendi-ture (2009-10) | Revised Approved Outlay (2010-11) | Appoved Outlay (2011-12) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 15 | Maharashtra | 291.03 | 219.47 | 104.24 | 1087.90 | 0.00 | 22.60 | 0.12 | 43.45** | 44.00 |
| 16 | Manipur | 4.94 | 6.63 | 26.66 | 43.13 | 6.50 | 7.48 | 9.00 | 21.65 | 17.00 |
| 17 | Meghalaya | 1.28 | 0.87 | 1.09 | 4.69 | 0.09 | 0.01 | 0.08 | 0.50** | 0.55 |
| 18 | Mizoram | 0.00 | 0.47 | 0.70 | 1.17 | 0.19 | 0.15 | 0.15 | 0.15 | 0.15 |
| 19 | Nagaland | 0.16 | 0.53 | 3.86 | 4.55 | 0.08 | 0.00 | 0.08 | 0.50 | 1.00 |
| 20 | Orissa | 14.83 | 26.53 | 20.38 | 96.95 | 14.01 | 69.94 | 61.65 | 47.43 | 76.00 |
| 21 | Punjab | 0.00 | 189.34 | 120.20 | 343.60 | 17.20 | 85.53 | 124.48 | 214.76 | 255.00 |
| 22 | Rajasthan | 258.84 | 253.35 | 257.41 | 1092.45 | 54.07 | 72.41 | 68.00 | 90.72 | 102.00 |
| 23 | Sikkim | 0.00 | 0.11 | 4.74 | 4.85 | 0.04 | 0.36 | 0.04 | 0.00** | 0.55 |
| 24 | Tamil Nadu | 41.30 | 65.88 | 81.96 | 276.20 | 22.77 | 19.49 | 19.30 | 21.03 | 24.67 |
| 25 | Tripura | 0.25 | 0.04 | 1.30 | 1.93 | 0.00 | 0.00 | 0.00 | 0.00 | 0.50 |
| 26 | Uttar Pradesh | 83.99 | 155.31 | 222.77 | 767.55 | 54.19 | 64.71 | 79.19 | 63.52 | 294.78 |
| 27 | Uttarakhand | 0.00 | 0.00 | 7.95 | 7.95 | 5.54 | 1.50 | 5.03 | 0.00** | 0.00 |
| 28 | West Bengal | 6.58 | 26.53 | 33.08 | 83.66 | 7.68 | 15.86 | 12.62 | 16.00** | 24.00 |
| | **Total States** | **1077.36** | **1490.76** | **1590.45** | **6276.37** | **790.16** | **572.17** | **667.61** | **967.96** | **1602.17** |

Contd...

**Table 24: State-wise Expenditure under CAD Programme - State Sector**

**(Rs. Crores)**

| Sl. No. | Name of the State/UT | Eighth Plan (1992-97) | Ninth Plan (1997-02) | Tenth Plan (2002-07) | Cummul-ative upto Tenth Plan | Actual Expendi-ture (2007-08) | Actual Expendi-ture (2008-09) | Actual Expendi-ture (2009-10) | Revised Approved Outlay (2010-11) | Appoved Outlay (2011-12) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | **Union Territories** | | | | | | | | | |
| 29 | A & N Island | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00** | 0.00 |
| 29 | Chandigarh | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00** | 0.00 |
| 29 | D & N Haveli | 0.00 | 0.77 | 1.07 | 4.51 | 2.30 | 0.20 | 2.00 | 2.50** | 3.50 |
| 30 | Daman & Diu | 0.00 | 0.10 | 0.05 | 0.48 | 0.00 | 0.00 | 0.00 | 0.00** | 0.00 |
| 33 | Delhi | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00** | 0.00 |
| 34 | Lakshadweep | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00** | 0.00 |
| 35 | Puducherry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 33.28 | 0.00 | 0.00 |
| | **Total U.Ts.** | **0.00** | **0.87** | **1.12** | **4.99** | **2.30** | **0.20** | **35.28** | **2.50** | **3.50** |
| **Total States & Uts** | | **1077.36** | **1491.63** | **1591.57** | **6281.36** | **792.46** | **572.37** | **702.89** | **970.46** | **1605.67** |

**Source** : Ministry of Water Resources (CAD Wing). & Planning Commission

Note : Totals may not tally due to rounding off. * : Revised Approved Outlay ** : Approved Outlay

## Table 25: Water Rates for flow Irrigation by State

| Sl No. | States/UTs | FOR IRRIGATION PURPOSES Flow Irrigation | | Status as on |
|---|---|---|---|---|
| | | Rate (Rs/ha) | Date since applicable | |
| 1 | 2 | 3 | 4 | 5 |
| 1 | Andhra Pradesh | 148.20 to 1235.00 | 01.07.1996 | 12.01.2010 |
| 2 | Arunachal Pradesh | No water rates | - | 29.12.2008 |
| 3 | Assam | 150.00 to 751.00 | 30.03.2000 | 07.03.2009 |
| 4 | Bihar | 74.10 to 370.50 | 17.11.95/26.11.01* | 08.02.2010 |
| 5 | Chhattisgarh | 123.50 to 741.00 | 15.06.1999 | 05.02.2010 |
| 6 | Delhi | 34.03 to 1067.04 | N.A. | 14.01.2009 |
| 7 | Goa | 60.00 to 300.00 | 01.02.1988 | 09.03.2010 |
| 8 | Gujarat | 160.00 to 300.00 | 01.01.2007 | 04.02.2010 |
| 9 | Haryana | 24.70 to 197.60 | 27.07.2000 | 02.02.2010 |
| 10 | Himachal Pradesh | 28.17 | 01.04.2009 | 03.02.2010 |
| 11 | Jammu & Kashmir | 29.65 to 74.13 | 01.04.2005 | 04.02.2010 |
| 12 | Jharkhand | 74.10 to 370.50 | 26.11.2001 & 14.11.1995 | 13.01.2009 |
| 13 | Karnataka | 37.05 to 988.45 | 13.07.2000 | 30.01.2009 |
| 14 | Kerala | 37.00 to 99.00 | 18.09.1974 | 06.02.2009 |
| 15 | Madhya Pradesh | 50.00 to 960.00 | 01.11.2005 | 05.01.2010 |
| 16 | Maharashtra | 238.00 to 6297.00 | 01.07.2003 | 02.04.2009 |
| 17 | Manipur | 45.00 to 150.00 | August,2003 | 27.12.2008 |
| 18 | Meghalaya | No water rates | - | 09.03.2010 |
| 19 | Mizoram | No water rates | - | 06.02.2009 |
| 20 | Nagaland | No water rates | - | 15.01.2009 |
| 21 | Orissa | 28.00 to 930.00 | 05.04.2002 | 05.01.2010 |

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## Table 25: Water Rates for flow Irrigation by State

| Sl No. | States/UTs | FOR IRRIGATION PURPOSES Flow Irrigation | | Status as on |
|---|---|---|---|---|
| | | Rate (Rs/ha) | Date since applicable | |
| 1 | 2 | 3 | 4 | 5 |
| 22 | Punjab | 375.00 | 28.01.2010 | 01.02.2010 |
| 23 | Rajasthan | 29.64 to 607.62 | 24.05.1999 | 21.1.2010 |
| 24 | Sikkim | 10.00 to 250.00 | 2002 | 19.01.2010 |
| 25 | Tamil Nadu | 2.77 to 61.78 | 06.11.1987 | 04.03.2002 |
| 26 | Tripura | 312.50 | 01.10.2003 | 01.04.2009 |
| 27 | Uttarakhand | 35.00 to 474.00 | 18.09.1995 | 18.12.2006 |
| 28 | Uttar Pradesh | 30.00 to 474.00 | 18.09.1995 | 11.09.2007 |
| 29 | West Bengal | 37.06 to 123.50 | 06.04.1977 | 03.02.2010 |
| 30 | A & N Islands | No water rates | - | 01.01.2009 |
| 31 | Chandigarh | No water rates | - | 01.02.2010 |
| 32 | Dadra & Nagar Haveli | 110.00 to 830.00 | 29.01.1996 | 31.08.2005 |
| 33 | Daman & Diu | 200.00 | 1980 | 28.08.2008 |
| 34 | Lakshadweep | No water rates | - | 12.06.2008 |
| 35 | Puducherry | No water rates | 01.01.2005 | 12.12.2008 |

Source: Hydrology Data Directorate, ISO, Central Water Commission,
Remarks : * For Wheat crops

## Table 26: Water Rates for Lift Irrigation by State

| Sl No. | States/UTs | FOR IRRIGATION PURPOSES | | Status as on |
|---|---|---|---|---|
| | | Lift Irrigation | | |
| | | Rate (Rs/ha) | Date since applicable | |
| 1 | 2 | 3 | 4 | 5 |
| 1 | Andhra Pradesh | 148.20 to 1235.00 | 07.01.1996 | 12.01.2010 |
| 2 | Arunachal Pradesh | No water rates specified for irrigation | - | 29.12.2008 |
| 3 | Assam | 150.00 to 751.00 | 30.03.2000 | 07.03.2009 |
| 4 | Bihar | 333.45. to 1970.75 | 06.05.1998 | 08.02.2010 |
| 5 | Chhattisgarh | 123.50 to 741.00 | 15.06.1999 | 05.02.2010 |
| 6 | Delhi | 33.35 to 1067.04 | N.A. | 14.01.2009 |
| 7 | Goa | 120.00 to 600.00 | 01.02.1988 | 09.03.2010 |
| 8 | Gujarat | 160.00 to 300.00 | 01.01.2007 | 04.02.2010 |
| 9 | Haryana | 43.23 to 98.80 | 27.07.2000 | 02.02.2010 |
| 10 | Himachal Pradesh | 56.34 | 01.04.2009 | 03.02.2010 |
| 11 | Jammu & Kashmir | 74.13 to 741.30 | 01.04.2005 | 04.02.2010 |
| 12 | Jharkhand | No separate rate for lift irrigation | - | 13.01.2009 |
| 13 | Karnataka | No separate rate for lift irrigation | - | 30.01.2009 |
| 14 | Kerala | 17.00 to 148.50 | 18.09.1974 | 09.03.2010 |
| 15 | Madhya Pradesh | 50.00 to 960.00 | 01.11.2005 | 15.03.2010 |
| 16 | Maharashtra | 297.00 to 5405.00 | 01.07.2003 | 13.04.2010 |
| 17 | Manipur | 45.00 to 150.00 | 01.08.2003 | 27.12.2008 |
| 18 | Meghalaya | No water rates | - | 23.02.2010 |
| 19 | Mizoram | No water rates | - | 31.01.2010 |
| 20 | Nagaland | No water rates | - | 12.01.2009 |
| 21 | Orissa | No separate rate for lift irrigation | 05.04.2000 | 30.03.2010 |

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## Table 26: Water Rates for Lift Irrigation by State

| Sl No. | States/UTs | FOR IRRIGATION PURPOSES | | Status as on |
|---|---|---|---|---|
| | | Lift Irrigation | | |
| | | Rate (Rs/ha) | Date since applicable | |
| 1 | 2 | 3 | 4 | 5 |
| 22 | Punjab | 375 | 08.01.2010 | 01.02.2010 |
| 23 | Rajasthan | 14.80 to 1215.24 | 24.05.1999 | 21.01.2010 |
| 24 | Sikkim | No separate rate for lift irrigation | - | 19.01.2010 |
| 25 | Tamil Nadu | No separate rate for lift irrigation | - | 02.01.2009 |
| 26 | Tripura | 312.50 | 01.10.2003 | 01.04.2009 |
| 27 | Uttarakhand | 15.00 to 237.00 | 18.09.1995 | 06.01.2009 |
| 28 | Uttar Pradesh | 15.00 to 237.00 | 18.09.1995 | 30.12.2008 |
| 29 | West Bengal | 251.94 to 2015.52 | 01.07.2003 | 03.02.2010 |
| 30 | A & N Islands | No water rates | - | 13.01.2009 |
| 31 | Chandigarh | 23.00 per hour | 01.01.2010 | 01.02.2010 |
| 32 | Dadra & Nagar Haveli | 75.00 to 275.00 | NA | 31.08.2005 |
| 33 | Daman & Diu | 200.00 | 1980 | 28.08.2008 |
| 34 | Lakshadweep | No water rates | - | 12.06.2008 |
| 35 | Puducherry | No separate rate for lift irrigation | 01.01.2005 | 12.12.2008 |

Source: Hydrology Data Directorate, ISO, Central Water Commission

## TABLE 27: Flood Damage/Heavy Rains in India

| Sl. No. | Year | Area affected (M.Ha.) | Population affected (Million) | Damage to Crops | | Damage to | | Cattle lost Nos. ('000) | Human live lost (Nos.) | Damage to public utilities (Rs. Crore) | Total damages Crops, Houses & Public utilities in Rs. Crores (Col. 6+8+11) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Area (M.Ha. | Value (Rs. Crore) | Nos. ('000) | Value (Rs. Crore) | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | 1953 | 2.29 | 24.28 | 0.93 | 42.08 | 265 | 7.42 | 47 | 37 | 2.90 | 52.40 |
| 2 | 1960 | 7.53 | 8.35 | 2.27 | 42.55 | 610 | 14.31 | 14 | 510 | 6.31 | 63.17 |
| 3 | 1965 | 1.46 | 3.61 | 0.27 | 5.87 | 113 | 0.20 | 7 | 79 | 1.07 | 7.14 |
| 4 | 1970 | 8.46 | 31.83 | 4.91 | 162.78 | 1434 | 48.61 | 19 | 1076 | 76.44 | 287.83 |
| 5 | 1975 | 6.17 | 31.36 | 3.85 | 271.49 | 804 | 34.10 | 17 | 686 | 166.05 | 471.64 |
| 6 | 1980 | 11.46 | 54.12 | 5.55 | 366.37 | 2533 | 170.85 | 59 | 1913 | 303.28 | 840.50 |
| 7 | 1985 | 8.38 | 59.59 | 4.65 | 1425.37 | 2450 | 583.86 | 43 | 1804 | 2050.04 | 4059.27 |
| 8 | 1990 | 9.30 | 40.26 | 3.18 | 695.61 | 1020 | 213.73 | 134 | 1855 | 455.27 | 1708.92 |
| 9 | 1991 | 6.36 | 33.89 | 2.70 | 579.02 | 1134 | 180.42 | 41 | 1187 | 728.89 | 1488.33 |
| 10 | 1992 | 2.65 | 19.26 | 1.75 | 1027.58 | 687 | 306.28 | 79 | 1533 | 2010.67 | 3344.53 |
| 11 | 1993 | 11.44 | 30.41 | 3.21 | 1308.63 | 1926 | 528.32 | 211 | 2864 | 1445.53 | 3282.49 |
| 12 | 1994 | 4.81 | 27.55 | 3.96 | 888.62 | 915 | 165.21 | 52 | 2078 | 740.76 | 1794.59 |
| 13 | 1995 | 5.25 | 35.93 | 3.25 | 1714.79 | 2002 | 1307.89 | 62 | 1814 | 679.63 | 3702.31 |
| 14 | 1996 | 8.05 | 44.73 | 3.83 | 1124.49 | 727 | 176.59 | 73 | 1803 | 861.39 | 3005.74 |
| 15 | 1997 | 4.57 | 29.66 | 2.26 | 692.74 | 505 | 152.50 | 28 | 1402 | 1985.93 | 2831.18 |
| 16 | 1998 | 10.85 | 47.44 | 7.50 | 2594.17 | 1933 | 1108.78 | 107 | 2889 | 5157.77 | 8860.72 |
| 17 | 1999 | 7.77 | 27.99 | 1.75 | 1850.87 | 1613 | 1299.06 | 91 | 745 | 462.83 | 3612.76 |
| 18 | 2000 | 5.38 | 45.01 | 3.58 | 4246.62 | 2629 | 680.94 | 123 | 2606 | 3936.98 | 8864.54 |
| 19 | 2001 | 6.18 | 26.46 | 3.96 | 688.48 | 716 | 816.47 | 33 | 1444 | 5604.46 | 7109.42 |
| 20 | 2002 | 7.09 | 26.32 | 2.19 | 913.09 | 762 | 599.37 | 22 | 1001 | 1062.08 | 2574.54 |
| 21 | 2003 | 6.12 | 43.20 | 4.27 | 7307.23 | 775 | 756.48 | 15 | 2166 | 3262.15 | 11325.87 |

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## TABLE 27: Flood Damage/Heavy Rains in India

| Sl. No. | Year | Area affected (M.Ha.) | Population affected (Million) | Damage to Crops | | Damage to | | Cattle lost Nos. ('000) | Human live lost (Nos.) | Damage to public utilities (Rs. Crore) | Total damages Crops, Houses & Public utilities in Rs. Crores (Col. 6+8+11) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Area (M.Ha. | Value (Rs. Crore) | Nos. ('000) | Value (Rs. Crore) | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 22 | 2004 | 5.31 | 43.73 | 2.89 | 778.69 | 1664 | 879.60 | 134 | 1813 | 1656.09 | 3529.71 |
| 23 | 2005 | 12.56 | 22.93 | 12.30 | 2370.92 | 716 | 380.53 | 120 | 1455 | 4688.22 | 7660.49 |
| 24 | 2006 | 1.10 | 25.22 | 1.82 | 2850.67 | 1497 | 3636.85 | 267 | 1431 | 13303.93 | 21546.29 |
| 25 | 2007 | 7.14 | 41.40 | 8.79 | 3121.53 | 3280 | 2113.11 | 89 | 3389 | 8049.04 | 13425.34 |
| 26 | 2008 | 3.43 | 29.91 | 3.19 | 3401.56 | 1567 | 1141.89 | 102 | 2876 | 5046.48 | 9595.34 |
| 27 | 2009 | 3.84 | 29.54 | 3.59 | 4232.61 | 1236 | 10809.80 | 63 | 1513 | 17509.35 | 32554.77 |
| 28 | 2010 | 2.62 | 18.30 | 4.99 | 5887.38 | 294 | 875.95 | 40 | 1582 | 12757.25 | 19520.59 |
| 29 | 2011 | 1.90 | 15.97 | 2.72 | 1393.85 | 1153 | 410.48 | 36 | 1761 | 6053.57 | 7857.89 |
| | **TOTAL** | **426.25** | **1913.39** | **223.57** | **66009.63** | **74042** | **33373.32** | **5699** | **97551** | **110203.29** | **213114.90** |
| | **AVG** | **7.22** | **32.43** | **3.79** | **1118.81** | **1255** | **565.65** | **97** | **1653** | **1867.85** | **3612.12** |
| | **MAX** | **17.50** | **70.45** | **12.30** | **7307.23** | **3508** | **10809.80** | **618** | **11316** | **17509.35** | **32554.77** |
| | **(YEAR** | 1978 | 1978 | 2005 | 2003 | 1978 | 2009 | 1979 | 1977 | 2009 | 2009 |

**Source** : Central Water Commision [FFM Directorate]

## Table 28: Statewise Damage due to Flood / Heavy Rains during 2011*

| Sl. No. | Name of the State/UTs. | Area Affected (Mill. Ha.) | Population Affected (Million) | Damage to Crops | | Damage To Houses | | Cattle lost Nos. | Human lives lost Nos. | Damage to Public Utilities (Rs.Crores) | Total Damages to crops, houses & public utilities (Rs Crores) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Area (M.Ha.) | Value (Rs.Crores) | Nos | Value (Rs.Crores) | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| **1** | **Andhra Pradesh** | 0 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 |
| **2** | **Arunachal Pradesh** | 0.00 | 0.12 | 0.00 | 0.50 | 0 | 0.00 | 3 | 20 | 1203.30 | 1203.80 |
| **3** | **Assam** | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 |
| **4** | **Bihar** | 0.00 | 0.58 | 0.16 | 59.87 | 34906 | 17.79 | 39 | 143 | 25.79 | 103.45 |
| **5** | **Chhattisgarh** | 0.02 | 0.17 | 0.01 | 3.79 | 39126 | 4.49 | 318 | 21 | 53.78 | 62.06 |
| **6** | **Goa** | 0 | 0 | Neg | 1.00 | 185 | 1.00 | 13 | 1 | 0.00 | 1.15 |
| **7** | **Gujarat** | 0.00 | 0.018 | 0.00 | 3.06 | 5007 | 3.35 | 212 | 110 | 5.83 | 12.24 |
| **8** | **Haryana** | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 |
| **9** | **Himachal Pradesh** | 0.03 | 0.61 | 0.16 | 417.39 | 8467 | 0.48 | 2372 | 51 | 618.60 | 1036.47 |
| **10** | **Jammu&Kashmir** | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0 | 0 | 0.00 |
| **11** | **Jharkhand** | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 |
| **12** | **Karnataka** | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 |
| **13** | **Kerala** | 0.00 | 0.37 | 0.01 | 60.21 | 8436 | 9.32 | 466 | 119 | 71.53 | 141.07 |
| **14** | **Madhya Pradesh** | 0.00 | 0.00 | 0.008 | 0.004 | 15431 | 6.51 | 203 | 82 | 2.45 | 8.97 |
| **15** | **Maharashtra** | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 106 | 0.00 | 0.00 |
| **16** | **Manipur** | 0.083 | 0.066 | 0.025 | 7.75 | Nil | Nil | Nil | Nil | 5.90 | 13.65 |
| **17** | **Meghalaya** | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 |
| **18** | **Mizoram** | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 |
| **19** | **Nagaland** | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 |

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## Table 28: Statewise Damage due to Flood / Heavy Rains during 2011*

| Sl. No. | Name of the State/UTs. | Area Affected (Mill. Ha.) | Population Affected (Million) | Damage to Crops | | Damage To Houses | | Cattle lost Nos. | Human lives lost Nos. | Damage to Public Utilities (Rs.Crores) | Total Damages to crops, houses & public utilities (Rs Crores) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Area (M.Ha.) | Value (Rs.Crores) | Nos | Value (Rs.Crores) | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| **20** | **Orissa** | 0.00 | 5.98 | 0.52 | 0.00 | 178481 | 0.00 | 1487 | 87 | 2874.41 | 2874.41 |
| **21** | **Punjab** | 0.00 | 0.00 | 0.20 | 59.56 | 2538 | 6.47 | 28901 | 38 | 31.19 | 97.22 |
| **22** | **Rajasthan** | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 |
| **23** | **Sikkim** | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 |
| **24** | **Tamil Nadu** | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 |
| **25** | **Tripura** | 0.002 | 0.08 | 0.00 | 5.86 | 653 | 0.60 | 29 | 14 | 1.05 | 7.50 |
| **26** | **U.P** | 0.53 | 2.31 | 0.40 | 199.94 | 313436 | 79.37 | 239 | 729 | 1159.13 | 1438.44 |
| **27** | **Uttarakhand** | 0.00 | 0 | 0 | 0 | 3325 | 0 | 1407 | 54 | 0 | 0.00 |
| **28** | **West Bengal** | 1.23 | 5.68 | 1.23 | 575.30 | 542519 | 281.56 | 293 | 186 | 0.60 | 857.46 |
| **29** | **Andaman&Nicobar** | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 |
| **30** | **Chandigarh** | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 |
| **31** | **Dadra & Nagar Haveli** | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 |
| **32** | **Daman & Diu** | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 |
| **33** | **Delhi** | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 |
| **34** | **Lakshadweep** | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0 | 0.00 | 0.00 |
| **35** | **Puducherry** | 0.00 | 0.00 | Neg | 0.00 | 8 | 0.02 | 0 | 0 | 0.00 | 0.02 |
| | **Total** | **1.90** | **15.97** | **2.72** | **1393.85** | **1152518** | **410.48** | **35982** | **1761** | **6053.57** | **7857.89** |

**Source : Central water Commision (FFM Directorate)**

*** : Figures are Tentative.**

Note : Neg : Negliable

**TABLE 29: Flood Damage in India during 1953 TO 2011 (At 1993-94 Prices)**

**(Rs Crore)**

| Sl. No. | Year | Damage to Crops | | Total Damages | |
|---|---|---|---|---|---|
| | | Current Price | 1993-94 Prices | Value | 1993-94 Prices |
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 1953 | 42.08 | 637.58 | 52.40 | 793.94 |
| 2 | 1954 | 40.52 | 653.55 | 57.23 | 923.06 |
| 3 | 1955 | 77.80 | 1318.64 | 102.73 | 1741.19 |
| 4 | 1956 | 44.44 | 663.28 | 53.63 | 800.45 |
| 5 | 1957 | 14.12 | 204.64 | 23.37 | 338.70 |
| 6 | 1958 | 38.28 | 539.15 | 43.97 | 619.30 |
| 7 | 1959 | 56.76 | 767.03 | 86.20 | 1164.86 |
| 8 | 1960 | 42.55 | 538.61 | 63.17 | 799.62 |
| 9 | 1961 | 24.04 | 304.30 | 31.37 | 397.09 |
| 10 | 1962 | 83.18 | 1014.39 | 94.89 | 1157.20 |
| 11 | 1963 | 30.17 | 346.78 | 36.61 | 420.80 |
| 12 | 1964 | 56.87 | 586.29 | 66.61 | 686.70 |
| 13 | 1965 | 5.87 | 56.44 | 7.14 | 68.65 |
| 14 | 1966 | 80.15 | 673.53 | 88.43 | 743.11 |
| 15 | 1967 | 133.31 | 1009.92 | 155.43 | 1177.50 |
| 16 | 1968 | 144.61 | 1103.89 | 211.10 | 1611.45 |
| 17 | 1969 | 281.90 | 2072.79 | 404.44 | 2973.82 |
| 18 | 1970 | 162.78 | 1138.32 | 287.83 | 2012.80 |
| 19 | 1971 | 423.13 | 2802.19 | 632.48 | 4188.61 |
| 20 | 1972 | 98.56 | 590.18 | 158.19 | 947.25 |
| 21 | 1973 | 428.03 | 2129.50 | 569.00 | 2830.85 |
| 22 | 1974 | 411.64 | 1640.00 | 569.02 | 2267.01 |
| 23 | 1975 | 271.49 | 1094.72 | 471.64 | 1901.77 |
| 24 | 1976 | 595.03 | 2351.90 | 888.69 | 3512.61 |
| 25 | 1977 | 720.61 | 2709.06 | 1201.85 | 4518.23 |
| 26 | 1978 | 911.09 | 3425.15 | 1454.76 | 5469.02 |
| 27 | 1979 | 169.97 | 544.78 | 614.20 | 1968.59 |
| 28 | 1980 | 366.37 | 992.87 | 840.50 | 2277.78 |
| 29 | 1981 | 524.56 | 1298.42 | 1196.50 | 2961.63 |
| 30 | 1982 | 589.40 | 1423.67 | 1644.88 | 3973.14 |
| 31 | 1983 | 1285.85 | 2838.52 | 2491.61 | 5500.24 |
| 32 | 1984 | 906.09 | 1864.38 | 1905.56 | 3920.91 |
| 33 | 1985 | 1425.37 | 2778.50 | 4059.27 | 7912.81 |
| 34 | 1986 | 1231.58 | 2280.70 | 3748.53 | 6941.72 |
| 35 | 1987 | 1154.64 | 1983.92 | 2569.72 | 4415.33 |

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**TABLE 29: Flood Damage in India during 1953 TO 2011 (At 1993-94 Prices)**

**(Rs Crore)**

| Sl. No. | Year | Damage to Crops | | Total Damages | |
|---|---|---|---|---|---|
| | | Current Price | 1993-94 Prices | Value | 1993-94 Prices |
| 1 | 2 | 3 | 4 | 5 | 6 |
| 36 | 1988 | 2510.9 | 4036.82 | 4630.30 | 7444.21 |
| 37 | 1989 | 956.74 | 1430.10 | 2405.33 | 3595.41 |
| 38 | 1990 | 695.61 | 943.84 | 1708.92 | 2318.75 |
| 39 | 1991 | 579.02 | 690.13 | 1488.33 | 1773.93 |
| 40 | 1992 | 1027.58 | 1113.30 | 3344.53 | 3623.54 |
| 41 | 1993 | 1308.63 | 1308.63 | 3282.49 | 3282.49 |
| 42 | 1994 | 888.62 | 799.12 | 1794.59 | 1613.84 |
| 43 | 1995 | 1714.79 | 1426.61 | 3702.31 | 3080.12 |
| 44 | 1996 | 1124.49 | 895.29 | 3005.74 | 2393.11 |
| 45 | 1997 | 692.74 | 527.60 | 2831.18 | 2156.27 |
| 46 | 1998 | 2594.17 | 1867.65 | 8860.72 | 6379.21 |
| 47 | 1999 | 1850.87 | 1287.11 | 3612.76 | 2512.35 |
| 48 | 2000 | 4246.62 | 2779.20 | 8864.54 | 5801.40 |
| 49 | 2001 | 688.48 | 428.43 | 7109.41 | 4424.03 |
| 50 | 2002 | 913.09 | 554.40 | 2574.54 | 1563.17 |
| 51 | 2003* | 7298.13 | 4208.84 | 11325.87 | 6525.05 |
| 52 | 2004* | 772.04 | 417.55 | 3529.71 | 1903.63 |
| 53 | 2005* | 2375.31 | 1226.28 | 7660.49 | 3954.56 |
| 54 | 2006* | 2840.82 | 1399.42 | 21546.30 | 10606.46 |
| 55 | 2007* | 3112.73 | 1462.75 | 13425.34 | 6293.70 |
| 56 | 2008* | 3394.91 | 1462.06 | 9595.34 | 4119.87 |
| 57 | 2009* | 4224.86 | 1781.89 | 32554.78 | 13724.75 |
| 58 | 2010* | 5880.73 | - | 19520.59 | - |
| 59 | 2011* | 1386.10 | - | 7857.89 | - |
| Total | | 65950.83 | 78424.64 | 213114.91 | 183027.58 |
| Average | | 1117.81 | 1375.87 | 3612.12 | 3211.01 |
| Maximum (Year) | | 7298.13 '(2003) | 4208.84 (2003) | 32554.78 (2009) | 13724.75 (2009) |

**Source : Central Water Commision (FFM Directorate)**

**Note: Totals may not tally due to rounding off.**

***: Figures are tentative.**

**TABLE 30: Planwise Expenditure under Flood Management**

(Rs Crore)

| Sl. No. | Period | States & U.Ts | Centre | Total | Cumulative benefits (Area-protected in Million Ha. at the end of the period) |
|---|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5** | **6** |
| 1. | First Plan (1954-56) | 13.21 | - | 13.21 | 1.00 |
| 2. | Second Plan (1956-61) | 48.06 | - | 48.06 | 3.24 |
| 3. | Third Plan (1961-66) | 82.09 | - | 82.09 | 5.43 |
| 4. | Annual Plans(1966-69) | 41.96 | - | 41.96 | 5.83 |
| 5. | Fourth Plan (1969-74) | 157.37 | 4.67 | 162.04 | 8.04 |
| 6. | Fifth Plan (1974-78) | 242.46 | 56.15 | 298.61 | 9.98 |
| 7. | Annual Plans (1978-80) | 290.13 | 39.83 | 329.96 | 11.21 |
| 8. | Sixth Plan (1980-85) | 618.88 | 167.97 | 786.85 | 13.01 |
| 9. | Seventh Plan(1985-90) | 781.02 | 160.56 | 941.58 | 13.80 |
| 10. | Annual Plan(1990-92) | 393.61 | 66.83 | 460.44 | 14.20 |
| 11 | Eighth Plan (1992-97) | 1,641.14 | 226.17 | 1,867.31 | 15.29 |
| 12 | Ninth Plan (1997-2002) | 2,469.59 | 453.70 | 2,923.29 | N.A |
| 13 | Tenth Plan (2002-2007) | 3,601.38 | 742.80 | 4,344.18 | 18.22 |
| 14 | Annual Plan (2007-2008) Actual Expenditure | 4,824.60 | 97.69 | 4,922.29 | N.A |
| 15 | Annual Plan 2008-09 Actual Expenditure | 2,094.90 | 250.36 | 2,345.26 | N.A |
| 16 | Annual Plan 2009-10 Actual Expenditure | 2,211.60 | 250.04 | 2,461.64 | N.A |
| 17 | Annual Plan 2010-11 Revised Approved Outlay | 2,225.95 | 287.00 | 2,512.95 | 18.78 |
| 18 | Annual Plan 2011-12 Approved Outlay | 4,579.62 | 308.41 | 4,888.03 | N.A |

Sources: Central Water Commission(FMP Directorate), Planning Commission.

**Table 31: Planwise Expenditure & Cumulative Benefits (Area Protected) under Flood Management (At 1993-94 Prices)**

(Rs.Crore)

| Sl. No. | Period | States & UTs | Centre | Total | Cumulative benefits (Area-protected in Million ha at the end of the period) |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| **1** | First Plan (1951-56) | 203.23 | - | 203.23 | 1.00 |
| **2** | Second Plan (1956-61) | 667.50 | - | 667.50 | 3.24 |
| **3** | Third Plan (1961-66) | 912.11 | - | 912.11 | 5.43 |
| **4** | Annual Plan(1966-69) | 330.39 | - | 330.39 | 5.83 |
| **5** | Fourth Plan (1969-74) | 983.56 | 29.19 | 1,012.75 | 8.04 |
| **6** | Fifth Plan (1974-78) | 950.82 | 220.20 | 1,171.02 | 9.98 |
| **7** | Annual Plan (1978-80) | 1,003.91 | 137.82 | 1,141.73 | 11.21 |
| **8** | Sixth Plan (1980-85) | 1,456.19 | 510.62 | 1,966.81 | 13.01 |
| **9** | Seventh Plan(1985-90) | 1,335.08 | 274.46 | 1,609.54 | 13.80 |
| **10** | Annual Plan(1990-92) | 499.51 | 84.81 | 584.31 | 14.20 |
| **11** | Eighth Plan (1992-97) | 1,482.51 | 204.31 | 1,686.82 | 15.29 |
| **12** | Ninth Plan (1997 - 2002) | 1,677.71 | 308.22 | 1,985.93 | N.A |
| **13** | Tenth Plan(2002-07) | 1,932.07 | 398.50 | 2,330.57 | 18.22 |
| **14** | Annual Plan (2007-2008) Actual Expenditure | 2,236.72 | 45.29 | 2,282.01 | N.A |
| **15** | Annual Plan 2008-09 Actual Expenditure | 895.64 | 107.04 | 1,002.68 | N.A |
| **16** | Annual Plan 2009-10 Actual Expenditure | 910.50 | 102.94 | 1,013.44 | N.A |

Source : Central Water Commission (FMP Dte.), Planning Commission

## Table 32: State-wise Planwise Financial Expenditure on Flood Management Work

**(Rs Crores)**

| Sl. No. | State/ UT | During IX Plan (1997-02) | Upto IX Plan (1997-02) | During X Plan (1902-07) | Upto X Plan (1902-07) | Actual Expendi-ture (2007-08) | Actual Expendi-ture (2008-09) | Actual Expendi-ture (2009-10) | Revised Approved Outlay (2010-11) | Approved Outlay (2011-12) |
|---|---|---|---|---|---|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1 | Andhra Pradesh | 214.64 | 676.91 | 255.04 | 931.95 | 252.32 | 209.46 | 290.67 | 202.70 | 325.06 |
| 2 | Arunachal Pradesh | 20.07 | 47.72 | 35.85 | 83.57 | 5.95 | 46.10 | 36.14 | 70.39 | 39.76 |
| 3 | Assam | 73.66 | 322.19 | 136.79 | 458.98 | 86.88 | 103.47 | 137.52 | 60.00 | 648.87 |
| 4 | Bihar | 316.98 | 1044.57 | 474.37 | 1518.94 | 232.18 | 670.47 | 404.94 | 412.03 | 983.88 |
| 5 | Chhatisgarh | 0.09 | 0.09 | 3.02 | 3.11 | 3.70 | 3.34 | 5.39 | 5.00** | 7.50 |
| 6 | Goa | 6.61 | 11.99 | 29.81 | 41.80 | 18.10 | 37.94 | 72.35 | 69.90** | 79.95 |
| 7 | Gujarat | 15.60 | 70.21 | 7.76 | 77.97 | 90.13 | 84.05 | 99.85 | 112.32** | 93.31 |
| 8 | Haryana | 93.62 | 390.51 | 252.56 | 643.07 | 69.98 | 86.00 | 82.61 | 73.40** | 100.00 |
| 9 | Himachal Pradesh | 31.05 | 51.64 | 79.08 | 130.72 | 22.79 | 27.52 | 70.97 | 105.00 | 92.53 |
| 10 | Jammu & Kashmir | 76.35 | 244.66 | 127.91 | 372.57 | 7.23 | 9.83 | 25.68* | 30.33** | 96.66 |
| 11 | Jharkhand | 0.00 | 0.00 | 125.97 | 125.97 | 4.11 | 2.12 | 8.26 | 15.00** | 18.00 |
| 12 | Karnataka | 51.81 | 109.35 | 50.68 | 160.03 | 19.37 | 13.70 | 14.08 | 16.30 | 14.50 |
| 13 | Kerala | 116.44 | 305.75 | 41.45 | 347.20 | 41.05 | 24.57 | 94.43 | 30.35 | 200.35 |
| 14 | Madhya Pradesh | 14.71 | 18.92 | 14.48 | 33.40 | 13.30 | 9.87 | 7.25 | 10.00** | 11.00 |
| 15 | Maharashtra | 8.01 | 115.85 | 17.44 | 133.29 | 3107.03 | 17.36 | 8.77 | 15.85** | 29.02 |
| 16 | Manipur | 32.14 | 81.76 | 48.55 | 130.31 | 18.08 | 27.38 | 21.67 | 167.58 | 97.22 |
| 17 | Meghalya | 12.04 | 22.51 | 10.05 | 32.56 | 2.26 | 3.12 | 2.50 | 2.50** | 2.75 |
| 18 | Mizoram | 0.00 | 1.11 | 0.00 | 1.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19 | Nagaland | 0.44 | 1.40 | 14.40 | 15.80 | 7.08 | 4.44 | 7.58 | 0.68 | 5.00 |
| 20 | Orissa | 53.50 | 160.20 | 15.39 | 175.59 | 53.50 | 38.69 | 129.86 | 154.50 | 270.00 |
| 21 | Punjab | 349.56 | 703.35 | 126.08 | 829.43 | 43.57 | 109.97 | 70.91 | 45.22 | 131.47 |
| 22 | Rajasthan | 28.45 | 132.71 | 28.34 | 161.05 | 1.86 | 1.62 | 1.82 | 2.00 | 2.00 |

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## Table 32: State-wise Planwise Financial Expenditure on Flood Management Work

**(Rs Crores)**

| Sl. No. | State/ UT | During IX Plan (1997-02) | Upto IX Plan (1997-02) | During X Plan (1902-07) | Upto X Plan (1902-07) | Actual Expendi-ture (2007-08) | Actual Expendi-ture (2008-09) | Actual Expendi-ture (2009-10) | Revised Approved Outlay (2010-11) | Approved Outlay (2011-12) |
|---|---|---|---|---|---|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 23 | Sikkim | 8.36 | 11.61 | 15.89 | 27.50 | 5.95 | 16.88 | 6.68 | 9.20** | 96.74 |
| 24 | Tamil Nadu | 0.00 | 34.70 | 0.00 | 34.70 | 0.00 | 0.00 | 0.00 | 155.39 | 182.80 |
| 25 | Tripura | 26.73 | 56.94 | 34.86 | 91.80 | 11.55 | 9.22 | 8.00 | 1.86 | 36.92 |
| 26 | Uttar Pradesh | 139.88 | 495.00 | 909.64 | 1404.64 | 301.13 | 314.97 | 238.17 | 298.45 | 535.00 |
| 27 | Uttarakhand | 3.52 | 3.52 | 83.42 | 86.94 | 23.62 | 18.14 | 6.50 | 5.50** | 10.50 |
| 28 | West Bengal | 653.69 | 1220.57 | 418.89 | 1639.46 | 146.19 | 140.90 | 289.48 | 78.55** | 328.25 |
| | Total States | 2348.73 | 6335.74 | 3357.72 | 9693.46 | 4588.91 | 2031.13 | 2142.08 | 2150.00 | 4439.04 |
| 29 | A & N Island | 0.00 | 2.52 | 12.38 | 14.90 | 202.08 | 2.94 | 4.92 | 9.61** | 15.23 |
| 30 | Chandigarh | 0.00 | 0.00 | 0.55 | 0.55 | 0.00 | 0.00 | 0.00 | 0.00** | 0.00 |
| 31 | Dadar & N. Haveli | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00** | 0.00 |
| 32 | Daman & Diu | 1.36 | 3.21 | 1.33 | 4.54 | 0.36 | 0.16 | 0.26 | 0.30** | 2.40 |
| 33 | Delhi | 77.92 | 289.71 | 106.20 | 395.91 | 0.00 | 41.84 | 59.32 | 37.80** | 59.95 |
| 34 | Lakshadweep | 18.39 | 31.21 | 16.21 | 47.42 | 4.65 | 4.00 | 5.02 | 4.00** | 3.00 |
| 35 | Puducherry | 23.19 | 44.23 | 106.99 | 151.22 | 27.60 | 14.83 | 0.00 | 24.24 | 60.00 |
| Total U.Ts. | | 120.86 | 370.88 | 243.66 | 614.5 | 235.69 | 63.77 | 69.52 | 75.95 | 140.58 |
| Total States & Uts | | 2469.59 | 6706.62 | 3601.38 | 10308.00 | 4824.60 | 2094.90 | 2211.60 | 2225.95 | 4579.62 |
| Central Sector | | 453.70 | 3229.95 | 742.80 | 3972.75 | 97.69 | 250.36 | 250.04 | 287.00 | 308.41 |
| **GRAND TOTAL** | | **2923.29** | **9936.57** | **4344.18** | **14280.75** | **4922.29** | **2345.26** | **2461.64** | **2512.95** | **4888.03** |

Source: Annual Plan Documents & Planning Commission.

*: Revised Approved Outlay. **: Approved Outlay. Note: - Total may not tally due to rounding off.

## Table 33: State-wise Progress of Physical Works under Flood Management till March 2011

| Sl. No. | Name of the State/U.T | Area Benefitted Upto March 2011 (Million Ha) | Length of Embankments (Km) | Length of Drainage Channels (Km) | Villages Raised/ Protected (No.) | Town/Village Protection Work (No.) | Raised Platforms (No.) |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 | Andhra Pradesh | 1.311 | 2230.00 | 13569.00 | 23 | 72 | - |
| 2 | Arunachal Pradesh | 0.100 | 65.23 | 16.92 | 17 | 30 | - |
| 3 | Assam | 2.110 | 4467.90 | 857.79 | 1100 | 795 | - |
| 4 | Bihar | 2.949 | 3610.00 | 365.00 | 0 | 204 | 58 |
| 5 | Chhattisgarh | 0.000 | 0.00 | 0.00 | 0 | 0 | - |
| 6 | Delhi | 0.078 | 83.00 | 453.00 | 0 | 0 | - |
| 7 | Goa | 0.003 | 23.19 | 32.77 | 0 | 2 | - |
| 8 | Gujarat | 0.483 | 104.12 | 271.00 | 30 | 805 | - |
| 9 | Haryana | 2.000 | 1144.00 | 4385.00 | 98 | 448 | 7 |
| 10 | Himachal Pradesh | 0.018 | 159.16 | 11.00 | 82 | 0 | - |
| 11 | Jammu & Kashmir | 0.217 | 560.68 | 324.00 | 1301 | 22 | - |
| 12 | Jharkhand | 0.001 | 14.00 | 0.00 | 5 | 2 | - |
| 13 | Karnataka | 0.005 | 73.52 | 10.00 | 0 | 30 | - |
| 14 | Kerala | 0.346 | 205.74 | 82.19 | 6 | 4 | - |
| 15 | Madhya Pradesh | 0.004 | 26.00 | 0.00 | 0 | 37 | - |
| 16 | Maharashtra | 0.001 | 44.50 | 110.00 | 0 | 0 | - |
| 17 | Manipur | 0.132 | 577.00 | 166.00 | 512 | 38 | - |
| 18 | Meghalaya | 0.015 | 112.00 | 0.00 | 10 | 8 | - |
| 19 | Mizoram | 0.000 | 0.00 | 0.00 | 0 | 38 | - |
| 20 | Nagaland | 0.632 | 10.52 | 0.00 | 0 | 8 | - |

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## Table 33: State-wise Progress of Physical Works under Flood Management till March 2011

| Sl. No. | Name of the State/U.T | Area Benefitted Upto March 2011 (Million Ha) | Length of Embankments (Km) | Length of Drainage Channels (Km) | Villages Raised/ Protected (No.) | Town/Village Protection Work (No.) | Raised Platforms (No.) |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 21 | Orissa | 0.630 | 7137.75 | 650.00 | 14 | 29 | - |
| 22 | Punjab | 3.190 | 1370.00 | 6622.00 | 0 | 3 | - |
| 23 | Rajasthan | 0.082 | 145.00 | 197.00 | 0 | 25 | - |
| 24 | Sikkim | 0.041 | 101.81 | 64.86 | 0 | 18 | - |
| 25 | Tamil Nadu | 0.122 | 87.00 | 19.00 | 4 | 46 | - |
| 26 | Tripura | 0.033 | 141.74 | 95.23 | 0 | 11 | - |
| 27 | Uttar Pradesh | 1.703 | 2097.00 | 3995.00 | 4511 | 65 | - |
| 28 | Uttarakhand | 0.002 | 9.00 | 0.00 | 0 | 6 | - |
| 29 | West Bengal | 2.568 | 10539.00 | 7392.76 | 0 | 48 | - |
| 30 | A&N Islands | 0.000 | 0.00 | 0.00 | 0 | 0 | - |
| 31 | Chandigarh | 0.000 | 0.00 | 0.00 | 0 | 0 | - |
| 32 | Dadra & Nagar Haveli | 0.000 | 0.00 | 0.00 | 0 | 0 | - |
| 33 | Daman & Diu | 0.000 | 0.00 | 0.00 | 0 | 0 | - |
| 34 | Lakshadweep | 0.000 | 0.00 | 0.00 | 0 | 0 | - |
| 35 | Puducherry | 0.004 | 61.00 | 20.00 | 0 | 0 | - |
| **Grand Total** | | **18.78** | **35199.86** | **39709.52** | **7713** | **2794** | **65** |

**Source** : Flood Management Planning (FMP) Directortae , Central Water Commission

## Table 34 (A) : Flood Forecasting Performance at various Forecasting stations during the flood season 2010

| Sl.No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2010 | | During 2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| | **Ganga Basin** | | | | | | | | | | | |
| 1 | Alaknanda | Srinagar | Uttarakhand | 539.00 | 540.00 | 536.85 | 05/09/1995 | 536.00 | 19/09/2010 1:00 | 0 | 0 | |
| 2 | Ganga | Rishikesh | Uttarakhand | 339.50 | 340.50 | 341.72 | 03/09/1978 | 341.50 | 19/09/2010 5:00 | 35 | 27 | 77.14 |
| 3 | Ganga | Haridwar | Uttarakhand | 293.00 | 294.00 | 296.23 | 02/09/1978 | 296.30 | 19/09/2010 8:00 | 51 | 34 | 66.67 |
| 4 | Ganga | Narora Barrage | Uttar Pradesh | | | 180.18 | 06/09/1978 | 180.61 | 23/09/2010;10:00 | 72 | 70 | 97.22 |
| 5 | Ganga | Kannauj | Uttar Pradesh | 124.97 | 125.97 | 126.24 | 29/08/1998 | 126.78 | 27/09/2010;07:00 | 44 | 44 | 100.00 |
| 6 | Ganga | Ankinghat | Uttar Pradesh | 123.00 | 124.00 | 124.31 | 09/09/1978 | 124.49 | 28/09/2010;05:00 | 44 | 44 | 100.00 |
| 7 | Ganga | Kanpur | Uttar Pradesh | 113.00 | 114.00 | 113.47 | 02/09/1967 | 114.08 | 29/09/2010;14:00 | 53 | 51 | 96.23 |
| 8 | Ganga | Dalmau | Uttar Pradesh | 98.36 | 99.36 | 99.84 | 03/08/1973 | 99.63 | 30/09/2010;19:00 | 37 | 37 | 100.00 |
| 9 | Ganga | Phphamau Allahabad | Uttar Pradesh | 83.73 | 84.73 | 87.98 | 08/09/1978 | 81.36 | 02/10/2010:17 | 0 | 0 | |
| 10 | Ganga | Chhatnag | Uttar Pradesh | 83.73 | 84.73 | 88.03 | 08/09/1978 | 79.54 | 02/10/2010:12 | 0 | 0 | |
| 11 | Ganga | Mirzapur | Uttar Pradesh | 76.72 | 77.72 | 80.34 | 09/09/1978 | 72.76 | 03/10/2010:08 | 0 | 0 | |
| 12 | Ganga | Varanasi | Uttar Pradesh | 70.26 | 71.26 | 73.90 | 09/09/1978 | 67.58 | 03/10/2010:17 | 0 | 0 | |
| 13 | Ganga | Ghazipur | Uttar Pradesh | 62.11 | 63.11 | 65.22 | 09/09/1978 | 61.33 | 03/10/2010:16 | 0 | 0 | |
| 14 | Ganga | Buxar | Bihar | 59.32 | 60.32 | 62.09 | 1948 | 58.42 | 03/10/2010 (17-24) hrs | 0 | 0 | |
| 15 | Ganga | Ballia | Uttar Pradesh | 56.62 | 57.62 | 60.25 | 14/09/2003 | 57.60 | 26/09/2010:01 | 33 | 33 | 100.00 |
| 16 | Ganga | Patna Dighaghat | Bihar | 49.45 | 50.45 | 52.52 | 23/08/1975 | 49.77 | 25/0/9/2010 20 hrs | 28 | 28 | 100.00 |
| 17 | Ganga | Patna Gandhighat | Bihar | 47.60 | 48.60 | 50.27 | 14/08/1994 | 48.77 | 20/09/2010 20 hrs | 46 | 46 | 100.00 |
| 18 | Ganga | Hathidah | Bihar | 40.76 | 41.76 | 43.15 | 07/08/1971 | 41.78 | 21/09/2010 08 hrs | 44 | 44 | 100.00 |
| 19 | Ganga | Munger | Bihar | 38.33 | 39.33 | 40.99 | 19/09/1976 | 38.14 | 02/09/2010 14 hrs | 0 | 0 | |

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## Table 34 (A) : Flood Forecasting Performance at various Forecasting stations during the flood season 2010

| Sl.No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2010 | | During 2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 20 | Ganga | Bhagalpur | Bihar | 32.68 | 33.68 | 34.20 | 17/09/2003 | 33.26 | 03/09/2010 17 hrs | 35 | 35 | 100.00 |
| 21 | Ganga | Kahalgaon | Bihar | 30.09 | 31.09 | 32.87 | 17/09/2003 | 31.59 | 03/09/2010 11 hrs | 45 | 45 | 100.00 |
| 22 | Ganga | Sahibgunj | Jharkhand | 26.25 | 27.25 | 30.91 | 1998 | 27.96 | 03/09/2010 03 hrs | 52 | 52 | 100.00 |
| 23 | Ganga | Farakka | West Bengal | 21.25 | 22.25 | 25.14 | 07/09/1998 | 23.13 | 03/09/2010 23 hrs | 99 | 97 | 97.98 |
| 24 | Ramganga | Moradabad | Uttar Pradesh | 189.60 | 190.60 | 192.68 | 03/09/1978 | 192.88 | 21/09/2010;02:00 | 39 | 37 | 94.87 |
| 25 | Ramganga | Bareilly | Uttar Pradesh | 162.70 | 163.70 | 162.88 | 06/08/1978 | 162.82 | 22/09/2010;21:00 | 5 | 5 | 100.00 |
| 26 | Yamuna | Tajewala Weir | Haryana | | | 328.27 | 03/09/1978 | 338.10 | 20.09.10 | 0 | 0 | |
| 27 | Yamuna | Mawi | Uttar Pradesh | 230.00 | 230.85 | 232.45 | 26/09/1988 | 232.33 | 21.09.10 | 47 | 44 | 93.62 |
| 28 | Yamuna | Delhi Rly Bridge | NCT Delhi | 204.00 | 204.83 | 207.49 | 06/09/1978 | 207.11 | 22.09.10 | 46 | 42 | 91.30 |
| 29 | Yamuna | Mathura | Uttar Pradesh | 164.20 | 165.20 | 169.73 | 08/09/1978 | 167.34 | 26.09.10 | 65 | 65 | 100.00 |
| 30 | Yamuna | Agra | Uttar Pradesh | 151.40 | 152.40 | 154.76 | 09/09/1978 | 152.08 | 27/Sep/10 00 | 12 | 12 | 100.00 |
| 31 | Yamuna | Etawa | Uttar Pradesh | 120.92 | 121.92 | 126.13 | 11/09/1978 | 122.41 | 29/Sep/10 00 | 17 | 16 | 94.12 |
| 32 | Yamuna | Auraiya | Uttar Pradesh | 112.00 | 113.00 | 118.19 | 25/08/1996 | 105.13 | 30/Sep/10 00 | 0 | 0 | |
| 33 | Yamuna | Kalpi | Uttar Pradesh | 107.00 | 108.00 | 112.98 | 25/08/1996 | 100.09 | 23/09/2010 01 | 0 | 0 | |
| 34 | Yamuna | Hamirpur | Uttar Pradesh | 102.63 | 103.63 | 108.59 | 12/09/1983 | 94.43 | 23/09/2010 18 | 0 | 0 | |
| 35 | Yamuna | Chilaghat | Uttar Pradesh | 99.00 | 100.00 | 105.16 | 06/09/1978 | 91.99 | 05/09/2010 15 | 0 | 0 | |
| 36 | Yamuna | Naini | Uttar Pradesh | 83.74 | 84.74 | 87.99 | 08/09/1978 | 80.14 | 02/10/2010 18 | 0 | 0 | |
| 37 | Sahibi | Dhansa | NCT Delhi | 211.44 | 212.44 | 213.58 | 06/08/1977 | 210.38 | 23.09.10 | 0 | 0 | |
| 38 | Chambal | Gandhisagar Dam | Madhya Pradesh | | | | | | | 0 | 0 | |
| 39 | Betwa | Mohana | Uttar Pradesh | 121.66 | 122.66 | 133.35 | 11/09/1983 | 113.79 | 27/07/2010 19 | 0 | 0 | |

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## Table 34 (A) : Flood Forecasting Performance at various Forecasting stations during the flood season 2010

| Sl.No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2010 | | During 2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 40 | Betwa | Sahjina | Uttar Pradesh | 103.54 | 104.54 | 108.67 | 12/09/1983 | 93.87 | 23/09/2010 17 | 0 | 0 | |
| 41 | Ken | Banda | Uttar Pradesh | 103.00 | 104.00 | 113.29 | 7/7/2005 | 102.30 | 27/07/2010 20 | 0 | 0 | |
| 42 | Gomati | Lucknow HanumanSetu | Uttar Pradesh | 108.50 | 109.50 | 110.85 | 11/09/1971 | 106.32 | 28/09/2010;20:00 | 0 | 0 | |
| 43 | Gomati | Jaunpur | Uttar Pradesh | 73.07 | 74.07 | 77.74 | 22/09/1971 | 70.06 | 30/09/2010:18 | 0 | 0 | |
| 44 | SAI | Raibareli | Uttar Pradesh | 100.00 | 101.00 | 104.81 | 17/09/1982 | 98.25 | 03/08/2010;13:00 | 0 | 0 | |
| 45 | Ghaghra | Elgin Bridge | Uttar Pradesh | 105.07 | 106.07 | 107.56 | 10/10/2009 | 107.16 | 26/08/2010 05 | 73 | 71 | 97.26 |
| 46 | Ghaghra | Ayodhya | Uttar Pradesh | 91.73 | 92.73 | 94.01 | 11/10/2009 | 93.91 | 27/08/2010 21 | 77 | 75 | 97.40 |
| 47 | Ghaghra | Turtipar | Uttar Pradesh | 63.01 | 64.01 | 66.00 | 28/08/1998 | 64.80 | 29/08/2010 21 | 76 | 75 | 98.68 |
| 48 | Ghaghra | Darauli | Bihar | 59.82 | 60.82 | 61.74 | 29/08/1998 | 61.05 | 29/08/2010 14 hrs | 50 | 50 | 100.00 |
| 49 | Ghaghra | Gangpur Siswan | Bihar | 56.04 | 57.04 | 58.01 | 18/09/1983 | 57.41 | 31/08/2010 09 hrs | 41 | 41 | 100.00 |
| 50 | Ghaghra | Chhapra | Bihar | 52.68 | 53.68 | 54.59 | 03/09/1982 | 50.88 | 26/09/2010 07hrs | 0 | 0 | |
| 51 | Rapti | Balrampur | Uttar Pradesh | 103.62 | 104.62 | 105.25 | 11/09/2000 | 104.47 | 25/08/2010 22 | 21 | 21 | 100.00 |
| 52 | Rapti | Bansi | Uttar Pradesh | 83.90 | 84.90 | 85.82 | 21/08/1998 | 84.89 | 29/08/2010 22 | 29 | 29 | 100.00 |
| 53 | Rapti | Gorakpur Birdghat | Uttar Pradesh | 73.98 | 74.98 | 77.54 | 23/08/1998 | 75.98 | 29/08/2010 22 | 44 | 44 | 100.00 |
| 54 | Sone | Inderpuri | Bihar | 107.20 | 108.20 | 108.85 | 23/08/1975 | 104.10 | 14/07/2010 08 hrs | 0 | 0 | |
| 55 | Sone | Koelwar | Bihar | 54.52 | 55.52 | 58.88 | 20/07/1971 | 52.01 | 25/09/2010 18 hrs | 0 | 0 | |
| 56 | Sone | Maner | Bihar | 51.00 | 52.00 | 53.79 | 10/09/1976 | 51.31 | 25/09/2010 21 hrs | 20 | 20 | 100.00 |
| 57 | PunPun | Sripalpur | Bihar | 49.60 | 50.60 | 53.91 | 18/09/1976 | 50.23 | 20/09/2010 06 hrs | 6 | 6 | 100.00 |
| 58 | Gandak | Khadda | Uttar Pradesh | 95.00 | 96.00 | 97.50 | 23/07/2002 | 96.30 | 24/08/2010 15 hrs | 109 | 109 | 100.00 |
| 59 | Gandak | Chatia | Bihar | 68.15 | 69.15 | 70.04 | 26/07/2002 | 69.45 | 2708/2010 04 hrs | 12 | 12 | 100.00 |

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## Table 34 (A) : Flood Forecasting Performance at various Forecasting stations during the flood season 2010

| Sl.No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2010 | | During 2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 60 | Gandak | Rewaghat | Bihar | 53.41 | 54.41 | 55.41 | 17/09/1986 | 54.54 | 28/08/2010 10 hrs | 28 | 28 | 100.00 |
| 61 | Gandak Burhi | Hazipur | Bihar | 49.32 | 50.32 | 50.93 | 1948 | 49.16 | 29/08/2010 06 hrs | 0 | 0 | |
| 62 | Gandak Burhi | Lalbeghiaghat Muzaffarpur | Bihar | 62.20 | 63.20 | 67.09 | 30/07/1975 | 62.92 | 31/08/2010 13 hrs | 9 | 9 | 100.00 |
| 63 | Gandak Burhi | Sikandarpur | Bihar | 51.53 | 52.53 | 54.29 | 15/08/1987 | 51.65 | 04/09/2010 04 hrs | 4 | 4 | 100.00 |
| 64 | Gandak Burhi | Samastipur | Bihar | 45.02 | 46.02 | 49.38 | 15/08/1987 | 45.56 | 05/09/2010 07 hrs | 8 | 8 | 100.00 |
| 65 | Gandak Burhi | Rosera | Bihar | 41.63 | 42.63 | 46.35 | 16/08/1987 | 42.34 | 05/09/2010 12 hrs | 10 | 10 | 100.00 |
| 66 | Gandak | Khagaria | Bihar | 35.58 | 36.58 | 39.22 | 1976 | 36.95 | 06/09/2010 01 hr | 41 | 41 | 100.00 |
| 67 | Bagmati | Benibad | Bihar | 47.68 | 48.68 | 50.01 | 12/07/2004 | 49.71 | 27/08/2010 18 hrs | 93 | 93 | 100.00 |
| 68 | Bagmati | Hayaghat | Bihar | 44.72 | 45.72 | 48.96 | 14/08/1987 | 45.15 | 01/09/2010 17 hrs | 5 | 5 | 100.00 |
| 69 | Adhwara Group | Kamtaul | Bihar | 49.00 | 50.00 | 52.99 | 12/08/1987 | 50.03 | 29/08/2010 05hrs | 13 | 13 | 100.00 |
| 70 | Adhwara Group | Ekmighat | Bihar | 45.94 | 46.94 | 49.52 | 12/07/2004 | 46.30 | 30/08/2010 21 hrs | 7 | 7 | 100.00 |
| 71 | Kamla Balan | Jhanjharpur | Bihar | 49.00 | 50.00 | 53.01 | 10/07/2004 | 51.69 | 25/08/2010 15 hrs | 37 | 37 | 100.00 |
| 72 | Kosi | Basua | Bihar | 46.75 | 47.75 | 48.87 | 11/07/2004 | 49.17 | 25/08/2010 06 hrs | 232 | 232 | 100.00 |
| 73 | Kosi | Baltara | Bihar | 32.85 | 33.85 | 36.40 | 15/08/1987 | 35.05 | 29/08/2010 19 hrs | 88 | 88 | 100.00 |
| 74 | Kosi | Kursela | Bihar | 29.00 | 30.00 | 32.04 | 06/09/1998 | 30.66 | 03/09/2010 23 hrs | 45 | 45 | 100.00 |
| 75 | Mahananda | Dhengraghat | Bihar | 34.65 | 35.65 | 38.09 | 1968 | 36.81 | 22/07/2010 14 hrs | 76 | 76 | 100.00 |
| 76 | Mahananda | Jhawa | Bihar | 30.40 | 31.40 | 33.51 | 14/08/1987 | 32.05 | 23/07/2010 18 hrs | 139 | 139 | 100.00 |

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## Table 34 (A) : Flood Forecasting Performance at various Forecasting stations during the flood season 2010

| Sl.No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2010 | | During 2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 77 | Mayurakshi | Massanjore Dam | Jharkhand | 121.31 | | 122.87 | 25/09/1999 | 115.47 | 15/10/2010 16 hrs | 0 | 0 | |
| 78 | Mayurakshi | Tilpara Barrage | West Bengal | 62.79 | | 67.05 | 27/09/1978 | 62.79 | 12/10/2010 11 hrs | 0 | 0 | |
| 79 | Mayurakshi | Narayanpur | West Bengal | 26.99 | 27.99 | 29.69 | 27/09/1995 | 23.91 | 26/08/2010 21 hrs | 0 | 0 | |
| 80 | Ajoy | Gheropara | West Bengal | 38.42 | 39.42 | 43.94 | 27/09/1978 | 37.65 | 26/08/2010 19 hrs | 0 | 0 | |
| 81 | Damodar | Tenughat Dam | Jharkhand | 268.83 | | 265.56 | 17/09/1985 | 260.16 | 20/09/2010 11 hrs | 4 | 4 | 100.00 |
| 82 | Damodar | Panchet Dam | Jharkhand | 132.59 | | 132.89 | 02/10/1959 | 126.03 | 28/09/2010 21 hrs | 16 | 16 | 100.00 |
| 83 | Damodar | Durgapur Barrage | West Bengal | 64.47 | | 64.47 | 31/10/2002 | 64.47 | 15/07/2010 01 hr | 1 | 1 | 100.00 |
| 84 | Barakar | Maithon Dam | Jharkhand | 150.88 | | 151.79 | 02/10/1959 | 146.70 | 29/09/2010 03 hrs | 14 | 14 | 100.00 |
| 85 | Mundeshwari | Harinkhola | West Bengal | 11.80 | 12.80 | 14.58 | 29/09/1978 | 7.42 | 25/08/2010 18 hrs | 0 | 0 | |
| 86 | Kangsabati | Kangsabati Dam | West Bengal | 134.11 | | 134.71 | 02/09/1978 | 125.61 | 10/10/2010 06 hrs | 0 | 0 | |
| 87 | Kangsabati | Mohanpur | West Bengal | 24.73 | 25.73 | 29.87 | 02/09/1978 | 20.26 | 01/07/2010 11 hrs | 0 | 0 | |
| | **Brahmaputra Basin** | | | | | | | | | | | |
| 88 | Brahmaputra | Dibrugrah | Assam | 103.24 | 104.24 | 106.48 | 03/09/1998 | 105.97 | 09/09/2010(18-21) | 307 | 307 | 100.00 |
| 89 | Brahmaputra | Neamatighat | Assam | 84.04 | 85.04 | 87.37 | 11/07/1991 | 86.38 | 10/09/2010(13-15) | 143 | 143 | 100.00 |
| 90 | Brahmaputra | Tezpur | Assam | 64.23 | 65.23 | 66.59 | 27/08/1988 | 65.69 | 11-12/9/2010(23-12) | 95 | 95 | 100.00 |
| 91 | Brahmaputra | Guwahati | Assam | 48.68 | 49.68 | 51.46 | 21/07/2004 | 49.93 | 13/09/10 (10-18)hrs | 59 | 59 | 100.00 |
| 92 | Brahmaputra | Goalpara | Assam | 35.27 | 36.27 | 37.43 | 31/07/1954 | 36.37 | 13/09/10(19-24)hrs | 86 | 86 | 100.00 |
| 93 | Brahmaputra | Dhubri | Assam | 27.62 | 28.62 | 30.36 | 28/08/1988 | 29.30 | 29/06/2010 24 hr | 252 | 252 | 100.00 |
| 94 | Burhidihing | Naharkatia | Assam | 119.40 | 120.40 | 122.69 | 17/06/1973 | 118.57 | 31/07/2010(18-19) | 0 | 0 | |

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## Table 34 (A) : Flood Forecasting Performance at various Forecasting stations during the flood season 2010

| Sl.No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2010 | | During 2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 95 | Burhidihing | Khowang | Assam | 101.11 | 102.11 | 103.92 | 25/08/1988 | 102.52 | 23/07/2010(09-17) | 50 | 50 | 100.00 |
| 96 | Desang | Nanglamoraghat | Assam | 93.46 | 94.46 | 96.49 | 06/09/1998 | 95.88 | 22/07/2010(06-09) | 84 | 84 | 100.00 |
| 97 | Dikhow | Shivsagar | Assam | 91.40 | 92.40 | 95.62 | 08/07/1974 | 93.81 | 27-28/06/10(23-03) | 101 | 100 | 99.01 |
| 98 | Subansiri | Badatighat | Assam | 81.53 | 82.53 | 86.84 | 28/06/1972 | 82.35 | 10/09/2010(21-24) | 41 | 41 | 100.00 |
| 99 | Dhansiri (S) | Golaghat | Assam | 88.50 | 89.50 | 91.30 | 11/10/1986 | 89.98 | 09/10/2010(2400) | 117 | 117 | 100.00 |
| 100 | Dhansiri (S) | Numaligarh | Assam | 76.42 | 77.42 | 79.87 | 24/09/1985 | 78.88 | 22/08/2010(13-15) | 258 | 256 | 99.22 |
| 101 | Jiabharali | Jiabharali_NTX | Assam | 76.00 | 77.00 | 78.50 | 26/07/2007 | 77.75 | 23/08/2010(08-12) | 355 | 352 | 99.15 |
| 102 | Kopilli | Kampur | Assam | 59.50 | 60.50 | 61.86 | 16/06/1973 | 61.52 | 10/10/2010(16-18) | 12 | 12 | 100.00 |
| 103 | Kopilli | Dharmatul | Assam | 55.00 | 56.00 | 58.09 | 21/07/2004 | 55.65 | 12/10/2010(09-24) | 31 | 31 | 100.00 |
| 104 | Puthimari | Puthimari _NHX | Assam | 50.81 | 51.81 | 55.08 | 31/08/2008 | 54.22 | 28/06/10(18-19)hrs | 307 | 297 | 96.74 |
| 105 | Pagladiya | Pagladia_NTX | Assam | 51.75 | 52.75 | 55.45 | 08/07/2004 | 52.51 | 28/06/10(18-19)hrs | 18 | 18 | 100.00 |
| 106 | Beki | Beki Rd Bridge | Assam | 44.10 | 45.10 | 46.20 | 04/08/2000 | 45.80 | 28/06/2010 (05-06) hrs | 471 | 471 | 100.00 |
| 107 | Manas | Manas NHX | Assam | 47.81 | 48.42 | 50.08 | 15/09/1984 | 48.79 | 28/06/2010 (12-13)hrs | 34 | 34 | 100.00 |
| 108 | Sankosh | Golakganj | Assam | 28.94 | 29.94 | 30.95 | 08/09/2007 | 30.45 | 12/07/2010 (04-06) hrs | 170 | 169 | 99.41 |
| 109 | Raidak-I | Tufanganj | West Bengal | 34.22 | 35.30 | 36.36 | 21/07/1993 | 34.84 | 12/07/2010 (07-11) hrs | 18 | 16 | 88.89 |
| 110 | Torsa | Ghughumari | West Bengal | 39.80 | 40.41 | 41.46 | 03/08/2000 | 40.58 | 21/07/2010 (19-21) hrs | 58 | 57 | 98.28 |
| 111 | Jaldhaka | NH-31 | West Bengal | 80.00 | 80.90 | 81.33 | 28/08/1972 | 80.30 | 09/7/2010 (14) hr | 45 | 45 | 100.00 |
| 112 | Jaldhaka | Mathabhanga | West Bengal | 47.70 | 48.20 | 49.85 | 07/09/2007 | 48.00 | 21/07/2010 (16-17)hrs | 5 | 5 | 100.00 |
| 113 | Tista | Domohani | West Bengal | 85.65 | 85.95 | 89.30 | 04/10/1968 | 86.09 | 24/08/2010 (02-03) hrs | 115 | 115 | 100.00 |
| 114 | Tista | Mekhliganj | West Bengal | 65.45 | 65.95 | 66.45 | 13/07/1996 | 65.91 | 23/08/2010 (24)hr | 45 | 45 | 100.00 |

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## Table 34 (A) : Flood Forecasting Performance at various Forecasting stations during the flood season 2010

| Sl.No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2010 | | During 2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| | **Barak & Meghna Basins** | | | | | | | | | | | |
| 115 | Barak | APGhat | Assam | 18.83 | 19.83 | 21.84 | 01/08/1989 | 20.72 | 10/06/10(21-24)hrs | 118 | 115 | 97.46 |
| 116 | Katakhal | Matizuri | Assam | 19.27 | 20.27 | 22.73 | 10/09/2007 | 21.13 | 06/06/10(06-07) | 79 | 79 | 100.00 |
| 117 | Kushiyara | Karimganj | Assam | 13.94 | 14.94 | 16.55 | 09/09/2007 | 16.57 | 10/06/10(23-24)hrs | 241 | 241 | 100.00 |
| 118 | Manu | Kailashar | Tripura | 24.34 | 25.34 | 25.79 | 07/06/1993 | 24.99 | 09/10/10(15-16)hrs | 5 | 1 | 20.00 |
| 119 | Gumti | Sonamura | Tripura | 11.50 | 12.50 | 14.42 | 23/07/1993 | 11.77 | 09/10/10(08-09)hrs | 2 | 1 | 50.00 |
| | **Eastern Rivers (Excluding Mahanadi)** | | | | | | | | | | | |
| 120 | Subernarekna | Rajghat | Odisha | 9.45 | 10.36 | 12.69 | 19/06/2008 | 7.11 | 20/09/2010 17 hrs | 0 | 0 | |
| 121 | Burhabalang | NH_5 _Road Bridge | Odisha | 7.21 | 8.13 | 9.50 | 12/10/1973 | 7.34 | 19/09/2010 14 hrs | 1 | 1 | 100.00 |
| 122 | Baitarni | Anandpur | Odisha | 37.44 | 38.36 | 41.20 | 19/08/1975 | 35.53 | 20/09/2010 06 hrs | 0 | 0 | |
| 123 | Baitarni | Akhuapada | Odisha | | 17.83 | 21.95 | 16/08/1960 | 17.40 | 25/07/2010 06 hrs | 0 | 0 | |
| 124 | Brahmani | Jenapur | Odisha | 22.00 | 23.00 | 24.78 | 20/08/1975 | 19.72 | 07/08/2010 15 hrs | 0 | 0 | |
| 125 | Rushikuluya | Purushottampur | Odisha | 15.83 | 16.83 | 19.65 | 04/11/1990 | 15.28 | 08/09/2010 15 hrs | 0 | 0 | |
| 126 | Vamsadhara | Gunupur | Odisha | 83.00 | 84.00 | 88.75 | 17/09/1980 | 82.67 | 06/08/2010 06 hrs | 0 | 0 | |
| 127 | Vamsadhara | Kashinagar | Odisha | 53.60 | 54.60 | 58.93 | 18/09/1980 | 55.00 | 05/08/2010 04 hrs | 52 | 52 | 100.00 |
| 128 | Vamsadhara | Gotta Barrage | Andhra Pradesh | 34.84 | 34.84 | 39.92 | 07/10/1999 | 34.84 | 01/07/2010 01 hr | 7 | 7 | 100.00 |
| | **Mahanadi Basin** | | | | | | | | | | | |
| 129 | Mahanadi | Hirakud Dam | Odisha | 192.02 | | 192.30 | 30/01/1998 | 192.02 | 25/09/2010 18 hrs | 59 | 58 | 98.31 |

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## Table 34 (A) : Flood Forecasting Performance at various Forecasting stations during the flood season 2010

| Sl.No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2010 | | During 2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 130 | Mahanadi | Naraj | Odisha | 25.41 | 26.41 | 27.61 | 31/08/1982 | 26.76 | 25/09/2010 24 hrs | 12 | 12 | 100.00 |
| 131 | Mahanadi | Alipingal Devi | Odisha | 10.85 | 11.76 | 13.05 | 20/09/2008 | 8.50 | 21/09/2010 08 hrs | 0 | 0 | |
| 132 | Mahanadi | Nimapara | Odisha | 9.85 | 10.76 | 11.60 | 31/08/1982 | 6.86 | 08/08/2010 24 hrs | 0 | 0 | |
| | **Godavari Basin** | | | | | | | | | | | |
| 133 | Godavari | Kopergaon | Maharashtra | 490.90 | 493.68 | 499.17 | 1969 | 489.85 | 04/08/2010 19 hrs | 0 | 0 | |
| 134 | Godavari | Jaikwadi Dam | Maharashtra | 463.91 | | 464.69 | 12/10/1990 | 461.31 | 11/10/2010 13 hrs | 0 | 0 | |
| 135 | Godavari | Gangakhed | Maharashtra | 374.00 | 375.00 | 377.57 | 1947 | 369.91 | 13/08/2010 19 hrs | 0 | 0 | |
| 136 | Godavari | Nanded | Maharashtra | 353.00 | 354.00 | 357.10 | 06/08/2006 | 346.30 | 07/08/2010 14 hrs | 0 | 0 | |
| 137 | Godavari | Sriram Sagar | Andhra Pradesh | 332.54 | | 332.72 | 13/10/1990 | 332.54 | 12/09/2010 19 hrs | 29 | 27 | 93.10 |
| 138 | Godavari | Kaleswaram | Andhra Pradesh | 103.50 | 104.75 | 107.05 | 15/08/1986 | 103.81 | 09/09/2010 07 hrs | 3 | 3 | 100.00 |
| 139 | Godavari | Eturunagaram | Andhra Pradesh | 73.29 | 75.79 | 77.66 | 24/08/1990 | 75.93 | 07/08/2010 24 hrs | 61 | 56 | 91.80 |
| 140 | Godavari | Dummagudam | Andhra Pradesh | 53.00 | 55.00 | 60.25 | 16/08/1986 | 56.23 | 08/08/2010 07 hrs | 51 | 47 | 92.16 |
| 141 | Godavari | Bhadrachalam | Andhra Pradesh | 45.72 | 48.77 | 55.66 | 16/08/1986 | 50.81 | 08/08/2010 14 hrs | 72 | 68 | 94.44 |
| 142 | Godavari | Kunavaram | Andhra Pradesh | 37.74 | 39.24 | 51.30 | 16/08/1986 | 42.00 | 09/08/2010 03 hrs | 62 | 56 | 90.32 |
| 143 | Godavari | Rajamundry | Andhra Pradesh | 17.68 | 19.51 | 20.48 | 16/08/1986 | 18.37 | 09/08/2010 07 hrs | 25 | 22 | 88.00 |
| 144 | Godavari | Dowalaiswaram | Pradesh | 14.25 | 16.08 | 18.36 | 8/16/1986 | 16.14 | 09/08/2010 09 hrs | 80 | 80 | 100.00 |
| 145 | Wardha | Balharsha | Maharashtra | 171.50 | 174.00 | 176.00 | 15/08/1986 | 172.25 | 08/08/2010 08 hrs | 9 | 8 | 88.89 |

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## Table 34 (A) : Flood Forecasting Performance at various Forecasting stations during the flood season 2010

| Sl.No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2010 | | During 2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 146 | Wainganga | Bhandara | Maharashtra | 244.00 | 244.50 | 250.90 | 16/09/2005 | 243.95 | 08/09/2010 22 hrs | 0 | 0 | |
| 147 | Wainganga | Pauni | Maharashtra | 226.73 | 227.73 | 232.35 | 07/09/1994 | 226.38 | 09/09/2010 06 hrs | 0 | 0 | |
| 148 | Manjira | Singur Dam | Andhra Pradesh | 523.60 | | 523.60 | 15/10/1999 | 523.60 | 12/09/2010 08 hrs | 21 | 20 | 95.24 |
| 149 | Manjira | Nizamsagar Dam | Andhra Pradesh | 428.24 | | 428.24 | 10/15/1999 | 428.24 | 02/09/2010 24 hrs | 13 | 13 | 100.00 |
| 150 | Indravati | Jagdalpur | Chhatisgarh | 539.50 | 540.80 | 544.68 | 09/07/1973 | 544.08 | 06/08/2010 19 hrs | 57 | 51 | 89.47 |
| | **Krishna Basin** | | | | | | | | | | | |
| 151 | Krishna | Arjunwad | Maharashtra | 542.07 | 543.29 | 543.69 | 05/08/2005 | | | 0 | 0 | |
| 152 | Krishna | Alamati Dam | Karnataka | 519.60 | | 519.60 | 18/09/2002 | 519.60 | 30/8/2010 06 hrs | 31 | 30 | 96.77 |
| 153 | Krishna | Narayanpur Dam | Karnataka | 492.25 | | 492.22 | 26/09/2008 | 492.03 | 21/10/2010 15 hrs | 43 | 41 | 95.35 |
| 154 | Krishna | Priyadarshini | Andhra Pradesh | 318.52 | | 316.50 | 21/10/1993 | 318.20 | 28/06/2010 09 hrs | 133 | 127 | 95.49 |
| 155 | Krishna | Srisailam Dam | Andhra Pradesh | 269.75 | | 273.25 | 03/10/2009 | 269.75 | 30/08/2010 01 hr | 133 | 124 | 93.23 |
| 156 | Krishna | Prakasham Barrage | Andhra Pradesh | 18.30 | | 21.50 | 07/10/1903 | 17.39 | 15/06/2010 01 hr | 110 | 100 | 90.91 |
| 157 | Bhima | Deongaon | Karnataka | 402.00 | 404.50 | 407.34 | 13/08/2006 | 400.05 | 23/08/2010 17 hrs | 0 | 0 | |
| 158 | Tungbhadra | Tungabhadra Dam | Karnataka | 497.74 | | 497.74 | 05/10/1992 | 497.74 | 21/08/2010 16 hrs | 150 | 145 | 96.67 |
| 159 | Tungbhadra | Mantralayam | Andhra Pradesh | 310.00 | 312.00 | 318.77 | 02/10/2009 | 312.69 | 25/08/2010 08 hrs | 14 | 14 | 100.00 |
| | **Southern River System:** | | | | | | | | | | | |
| 160 | Pennar | Nellore | Andhra Pradesh | 15.91 | 17.28 | 18.70 | 30/11/1882 | 13.60 | 28/08/2010 08 hrs | 0 | 0 | |

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## Table 34 (A) : Flood Forecasting Performance at various Forecasting stations during the flood season 2010

| Sl.No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2010 | | During 2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| | **Western River Systems:** | | | | | | | | | | | |
| 161 | Banas | Dantiwada Dam | Gujarat | 182.88 | 185.06 | 186.04 | 01/09/1973 | 173.23 | 22/09/2010 11 hrs | 0 | 0 | |
| 162 | Sabarmati | Dharoi Dam | Gujarat | 187.45 | 192.25 | 189.63 | 03/09/1990 | 186.77 | 08/10/2010 08 hrs | 1 | 1 | 100.00 |
| 163 | Sabarmati | Ahmedabad Shubhash Bridge | Gujarat | 44.09 | 45.34 | 47.45 | 19/08/2006 | 41.84 | 15/10/2010 19 hrs | 0 | 0 | |
| 164 | Mahi | Kadana Dam | Gujarat | 126.19 | 127.71 | 127.74 | 09/09/1989 | 125.96 | 25/09/2010 04 hrs | 0 | 0 | |
| 165 | Mahi | Wanakbori | Gujarat | 71.00 | 72.54 | 76.10 | 12/08/2006 | 67.59 | 10/09/2010 09 hrs | 0 | 0 | |
| 166 | Naramada | Mandla | Madhya Pradesh | 437.20 | 437.80 | 439.41 | 18/08/1974 | 436.22 | 26/07/2010 10 hrs | 0 | 0 | |
| 167 | Naramada | Hoshangabad | Madhya Pradesh | 292.83 | 293.83 | 300.90 | 30/08/1973 | 290.05 | 05/09/2010 14 hrs | 0 | 0 | |
| 168 | Naramada | Garudeswar | Gujarat | 30.48 | 31.09 | 41.65 | 06/09/1970 | 18.93 | 10/09/2010 06 hrs | 0 | 0 | |
| 169 | Naramada | Bharuch | Gujarat | 6.71 | 7.31 | 12.65 | 07/09/1970 | 6.10 | 11/09/2010 06 hrs | 0 | 0 | |
| 170 | Tapi | Hatnur Dam | Maharashtra | 212.00 | 214.00 | 214.00 | 12/10/1989 | 214.00 | 01/10/201008 hrs | 111 | 110 | 99.10 |
| 171 | Tapi | Ukai Dam | Gujarat | 102.41 | 105.16 | 105.51 | 08/10/1990 | 103.81 | 19/09/2010 15 hrs | 79 | 79 | 100.00 |
| 172 | Tapi | Surat | Gujarat | 8.50 | 9.50 | 12.50 | 09/08/2006 | 6.80 | 11/09/2010 07 hrs | 0 | 0 | |
| 173 | Damanganga | Madhuban Dam | Gujarat | 79.86 | 82.40 | 80.60 | 27/09/1993 | 80.00 | 07/10/2010 06 hrs | 1 | 1 | 100.00 |
| 174 | Damanganga | Vapi Town | Gujarat | 18.20 | 19.20 | 23.76 | 03/08/2004 | 16.10 | 09/09/2010 11 hrs | 0 | 0 | |
| 175 | Damanganga | Daman | Dadra & Nagar Haveli | 2.60 | 3.40 | 4.00 | 03/08/2004 | 1.90 | 26/06/2010 16 hrs | 0 | 0 | |
| | | | | | | | | **Total Forecasts** | | **7519** | **7378** | **98.12** |
| | | | | | | | | **Level Forecasts** | | **6491** | **6390** | **98.44** |
| | | | | | | | | **Inflow Forecast** | | **1028** | **988** | **96.11** |

Source : Central Water Commission (Flood Forecasting Monitoring Directoirate)

Note : FF : Flood Forecasting **m**: Meter

## Table 34 (B) : Flood Forecasting Performance at various Forcasting stations during Flood Season 2009

| Sl. No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2009 | | During 2009 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| | **Ganga Basin** | | | | | | | | | | | |
| 1 | Alaknanda | Srinagar | Uttaranchal | 539.00 | 540.00 | 536.85 | 05/09/1995 | 534.35 | 11/Sep/09 01 | 0 | 0 | |
| 2 | Ganga | Rishikesh | Uttaranchal | 339.50 | 340.50 | 341.72 | 03/09/1978 | 339.02 | 11/Sep/09 04 | 0 | 0 | |
| 3 | Ganga | Haridwar | Uttaranchal | 293.00 | 294.00 | 296.23 | 02/09/1978 | 293.15 | 11/Sep/09 05 | 1 | 0 | 0 |
| 4 | Ganga | Narora Barrage | Uttar Pradesh | | | 180.18 | 06/09/1978 | 179.16 | 29/Jul/09 06 | 4 | 3 | 75 |
| 5 | Ganga | Kannauj | Uttar Pradesh | 124.97 | 125.97 | 126.24 | 29/08/1998 | 124.48 | 15/Sep/09 19 | 0 | 0 | |
| 6 | Ganga | Ankinghat | Uttar Pradesh | 123.00 | 124.00 | 124.31 | 09/09/1978 | 122.62 | 15/Sep/09 14 | 0 | 0 | |
| 7 | Ganga | Kanpur | Uttar Pradesh | 113.00 | 114.00 | 113.47 | 02/09/1967 | 111.98 | 16/Sep/09 09 | 0 | 0 | |
| 8 | Ganga | Dalmau | Uttar Pradesh | 98.36 | 99.36 | 99.84 | 03/08/1973 | 97.85 | 17/Sep/09 01 | 0 | 0 | |
| 9 | Ganga | Phphamau Allahabad | Uttar Pradesh | 83.73 | 84.73 | 87.98 | 08/09/1978 | 78.77 | 17/Aug/09 21 | 0 | 0 | |
| 10 | Ganga | Chhatnag | Uttar Pradesh | 83.73 | 84.73 | 88.03 | 08/09/1978 | 77.53 | 14/Sep/09 00 | 0 | 0 | |
| 11 | Ganga | Mirzapur | Uttar Pradesh | 76.72 | 77.72 | 80.34 | 09/09/1978 | 70.52 | 14/Sep/09 17 | 0 | 0 | |
| 12 | Ganga | Varanasi | Uttar Pradesh | 70.26 | 71.26 | 73.90 | 09/09/1978 | 65.31 | 15/Sep/09 02 | 0 | 0 | |
| 13 | Ganga | Ghazipur | Uttar Pradesh | 62.11 | 63.11 | 65.22 | 09/09/1978 | 59.29 | 15/Sep/09 21 | 0 | 0 | |
| 14 | Ganga | Buxar | Bihar | 59.32 | 60.32 | 62.09 | 1948 | 56.58 | 16/Sep/09 06 | 0 | 0 | |
| 15 | Ganga | Ballia | Uttar Pradesh | 56.62 | 57.62 | 60.25 | 14/09/2003 | 55.89 | 16/Sep/09 14 | 0 | 0 | |
| 16 | Ganga | Patna Dighaghat | Bihar | 49.45 | 50.45 | 52.52 | 23/08/1975 | 48.67 | 15/Oct/09 13 | 0 | 0 | |
| 17 | Ganga | Patna Gandhighat | Bihar | 47.60 | 48.60 | 50.27 | 14/08/1994 | 47.57 | 25/Aug/09 17 | 2 | 2 | 100 |
| 18 | Ganga | Hathidah | Bihar | 40.76 | 41.76 | 43.15 | 07/08/1971 | 40.91 | 26/Aug/09 13 | 7 | 7 | 100 |
| 19 | Ganga | Munger | Bihar | 38.33 | 39.33 | 40.99 | 19/09/1976 | 37.05 | 27/Aug/09 16 | 0 | 0 | |
| 20 | Ganga | Bhagalpur | Bihar | 32.68 | 33.68 | 34.20 | 17/09/2003 | 32.18 | 27/Aug/09 08 | 0 | 0 | |

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## Table 34 (B) : Flood Forecasting Performance at various Forcasting stations during Flood Season 2009

| Sl. No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2009 | | During 2009 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 21 | Ganga | Kahalgaon | Bihar | 30.09 | 31.09 | 32.87 | 17/09/2003 | 30.59 | 27/Aug/09 04 | 13 | 13 | 100 |
| 22 | Ganga | Sahibgunj | Jharkhand | 26.25 | 27.25 | 30.91 | 1998 | 27.19 | 28/Aug/09 05 | 34 | 34 | 100 |
| 23 | Ganga | Farakka | West Bengal | 21.25 | 22.25 | 25.14 | 07/09/1998 | 22.58 | 27/Aug/09 10 | 82 | 81 | 98.78 |
| 24 | Ramganga | Moradabad | Uttar Pradesh | 189.60 | 190.60 | 192.68 | 03/09/1978 | 189.95 | 13/Sep/09 17 | 5 | 5 | 100 |
| 25 | Ramganga | Bareilly | Uttar Pradesh | 162.70 | 163.70 | 162.88 | 06/08/1978 | 161.12 | 19/Aug/09 19 | 0 | 0 | |
| 26 | Yamuna | Tajewala Weir | Haryana | | | 328.27 | 03/09/1978 | 335.80 | 11/Sep/09 02 | 0 | 0 | |
| 27 | Yamuna | Mawi | Uttar Pradesh | 230.00 | 230.85 | 232.45 | 26/09/1988 | 230.98 | 12/Sep/09 21 | 4 | 4 | 100 |
| 28 | Yamuna | Delhi Rly Bridge | NCT Delhi | 204.00 | 204.83 | 207.49 | 06/09/1978 | 205.33 | 15/Sep/09 03 | 5 | 4 | 80 |
| 29 | Yamuna | Mathura | Uttar Pradesh | 164.20 | 165.20 | 169.73 | 08/09/1978 | 165.15 | 16/Sep/09 23 | 8 | 8 | 100 |
| 30 | Yamuna | Agra | Uttar Pradesh | 151.40 | 152.40 | 154.76 | 09/09/1978 | 149.98 | 17/Sep/09 18 | 0 | 0 | |
| 31 | Yamuna | Etawa | Uttar Pradesh | 120.92 | 121.92 | 126.13 | 11/09/1978 | 119.00 | 18/Sep/09 18 | 0 | 0 | |
| 32 | Yamuna | Auraiya | Uttar Pradesh | 112.00 | 113.00 | 118.19 | 25/08/1996 | 104.68 | 27/Jul/09 08 | 0 | 0 | |
| 33 | Yamuna | Kalpi | Uttar Pradesh | 107.00 | 108.00 | 112.98 | 25/08/1996 | 99.53 | 28/Jul/09 03 | 0 | 0 | |
| 34 | Yamuna | Hamirpur | Uttar Pradesh | 102.63 | 103.63 | 108.59 | 12/09/1983 | 93.46 | 28/Jul/09 18 | 0 | 0 | |
| 35 | Yamuna | Chilaghat | Uttar Pradesh | 99.00 | 100.00 | 105.16 | 06/09/1978 | 92.56 | 13/Sep/09 01 | 0 | 0 | |
| 36 | Yamuna | Naini | Uttar Pradesh | 83.74 | 84.74 | 87.99 | 08/09/1978 | 78.22 | 13/Sep/09 22 | 0 | 0 | |
| 37 | Sahibi | Dhansa | NCT Delhi | 211.44 | 212.44 | 213.58 | 06/08/1977 | 210.50 | 14/Sep/09 08 | 0 | 0 | |
| 38 | Chambal | Gandhisagar Dam | Madhya Pradesh | | | | | | | 0 | 0 | |
| 39 | Betwa | Mohana | Uttar Pradesh | 121.66 | 122.66 | 133.35 | 11/09/1983 | 114.95 | 12/Sep/09 02 | 0 | 0 | |
| 40 | Betwa | Sahjina | Uttar Pradesh | 103.54 | 104.54 | 108.67 | 12/09/1983 | 93.98 | 12/Sep/09 23 | 0 | 0 | |
| 41 | Ken | Banda | Uttar Pradesh | 103.00 | 104.00 | 113.29 | 7/7/2005 | 105.50 | 12/Sep/09 11 | 5 | 5 | 100.00 |

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## Table 34 (B) : Flood Forecasting Performance at various Forcasting stations during Flood Season 2009

| Sl. No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2009 | | During 2009 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 42 | Gomati | Lucknow HanumanSetu | Uttar Pradesh | 108.50 | 109.50 | 110.85 | 11/09/1971 | 106.47 | 16/Oct/09 00 | 0 | 0 | |
| 43 | Gomati | Jaunpur | Uttar Pradesh | 73.07 | 74.07 | 77.74 | 22/09/1971 | 70.55 | 10/Oct/09 10 | 0 | 0 | |
| 44 | SAI | Raibareli | Uttar Pradesh | 100.00 | 101.00 | 104.81 | 17/09/1982 | 98.97 | 18/Sep/09 15 | 0 | 0 | |
| 45 | Ghaghra | Elgin Bridge | Uttar Pradesh | 105.07 | 106.07 | 107.48 | 23/09/2008 | 107.56 | 10/Oct/09 06 | 69 | 60 | 86.96 |
| 46 | Ghaghra | Ayodhya | Uttar Pradesh | 91.73 | 92.73 | 93.84 | 24/09/2008 | 94.01 | 11/Oct/09 11 | 79 | 75 | 94.94 |
| 47 | Ghaghra | Turtipar | Uttar Pradesh | 63.01 | 64.01 | 66.00 | 28/08/1998 | 64.71 | 13/Oct/09 15 | 58 | 57 | 98.28 |
| 48 | Ghaghra | Darauli | Bihar | 59.82 | 60.82 | 61.74 | 29/08/1998 | 60.82 | 14/Oct/09 12 | 22 | 22 | 100.00 |
| 49 | Ghaghra | Gangpur Siswan | Bihar | 56.04 | 57.04 | 58.01 | 18/09/1983 | 57.25 | 25/Aug/09 19 | 21 | 21 | 100.00 |
| 50 | Ghaghra | Chhapra | Bihar | 52.68 | 53.68 | 54.59 | 03/09/1982 | 51.23 | 16/Sep/09 20 | 0 | 0 | |
| 51 | Rapti | Balrampur | Uttar Pradesh | 103.62 | 104.62 | 105.25 | 11/09/2000 | 104.64 | 21/Aug/09 18 | 26 | 26 | 100.00 |
| 52 | Rapti | Bansi | Uttar Pradesh | 83.90 | 84.90 | 85.82 | 21/08/1998 | 84.87 | 25/Aug/09 12 | 22 | 21 | 95.45 |
| 53 | Rapti | Gorakpur Birdghat | Uttar Pradesh | 73.98 | 74.98 | 77.54 | 23/08/1998 | 76.00 | 22/Aug/09 06 | 39 | 37 | 94.87 |
| 54 | Sone | Inderpuri | Bihar | 107.20 | 108.20 | 108.85 | 23/08/1975 | 105.80 | 08/Sep/09 12 | 0 | 0 | |
| 55 | Sone | Koelwar | Bihar | 54.52 | 55.52 | 58.88 | 20/07/1971 | 53.66 | 10/Sep/09 23 | 0 | 0 | |
| 56 | Sone | Maner | Bihar | 51.00 | 52.00 | 53.79 | 10/09/1976 | 51.15 | 25/Aug/09 18 | 4 | 4 | 100.00 |
| 57 | PunPun | Sripalpur | Bihar | 49.60 | 50.60 | 53.91 | 18/09/1976 | 52.99 | 13/Sep/09 07 | 13 | 13 | 100.00 |
| 58 | Gandak | Khadda | Uttar Pradesh | 95.00 | 96.00 | 97.50 | 23/07/2002 | 95.84 | 18/Aug/09 21 | 44 | 42 | 95.45 |
| 59 | Gandak | Chatia | Bihar | 68.15 | 69.15 | 70.04 | 26/07/2002 | 68.31 | 20/Aug/09 18 | 2 | 2 | 100.00 |
| 60 | Gandak | Rewaghat | Bihar | 53.41 | 54.41 | 55.41 | 17/09/1986 | 53.53 | 21/Aug/09 07 | 6 | 6 | 100.00 |
| 61 | Gandak | Hazipur | Bihar | 49.32 | 50.32 | 50.93 | 1948 | 48.08 | 26/Aug/09 18 | 0 | 0 | |

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## Table 34 (B) : Flood Forecasting Performance at various Forcasting stations during Flood Season 2009

| Sl. No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2009 | | During 2009 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 62 | Burhi Gandak | Lalbeghiaghat | Bihar | 62.20 | 63.20 | 67.09 | 30/07/1975 | 62.76 | 24/Aug/09 06 | 5 | 5 | 100.00 |
| 63 | Burhi Gandak | Muzaffarpur Sikandarpur | Bihar | 51.53 | 52.53 | 54.29 | 15/08/1987 | 51.77 | 25/Aug/09 06 | 6 | 6 | 100.00 |
| 64 | Burhi Gandak | Samastipur | Bihar | 45.02 | 46.02 | 49.38 | 15/08/1987 | 45.76 | 28/Aug/09 02 | 15 | 15 | 100.00 |
| 65 | Burhi Gandak | Rosera | Bihar | 41.63 | 42.63 | 46.35 | 16/08/1987 | 42.70 | 28/Aug/09 07 | 19 | 19 | 100.00 |
| 66 | Gandak | Khagaria | Bihar | 35.58 | 36.58 | 39.22 | 1976 | 36.20 | 28/Aug/09 05 | 11 | 11 | 100.00 |
| 67 | Bagmati | Benibad | Bihar | 47.68 | 48.68 | 50.01 | 12/07/2004 | 49.72 | 09/Jul/09 22 | 68 | 67 | 98.53 |
| 68 | Bagmati | Hayaghat | Bihar | 44.72 | 45.72 | 48.96 | 14/08/1987 | 46.77 | 26/Aug/09 09 | 39 | 38 | 97.44 |
| 69 | Adhwara Group | Kamtaul | Bihar | 49.00 | 50.00 | 52.99 | 12/08/1987 | 50.95 | 21/Aug/09 06 | 36 | 36 | 100.00 |
| 70 | Adhwara Group | Ekmighat | Bihar | 45.94 | 46.94 | 49.52 | 12/07/2004 | 47.72 | 26/Aug/09 01 | 42 | 42 | 100.00 |
| 71 | Kamla Balan | Jhanjharpur | Bihar | 49.00 | 50.00 | 53.01 | 10/07/2004 | 51.83 | 21/Aug/09 00 | 60 | 59 | 98.33 |
| 72 | Kosi | Basua | Bihar | 46.75 | 47.75 | 48.87 | 11/07/2004 | 48.85 | 18/Aug/09 10 | 166 | 166 | 100.00 |
| 73 | Kosi | Baltara | Bihar | 32.85 | 33.85 | 36.40 | 15/08/1987 | 35.36 | 27/Aug/09 18 | 79 | 79 | 100.00 |
| 74 | Kosi | Kursela | Bihar | 29.00 | 30.00 | 32.04 | 06/09/1998 | 29.85 | 27/Aug/09 03 | 19 | 19 | 100.00 |
| 75 | Mahananda | Dhengraghat | Bihar | 34.65 | 35.65 | 38.09 | 1968 | 36.78 | 21/Aug/09 09 | 42 | 41 | 97.62 |
| 76 | Mahananda | Jhawa | Bihar | 30.40 | 31.40 | 33.51 | 14/08/1987 | 32.02 | 21/Aug/09 23 | 78 | 77 | 98.72 |
| 77 | Mayurakshi | Massanjore Dam | Jharkhand | 121.31 | | 122.87 | 25/09/1999 | 119.31 | 09/Oct/09 22 | 5 | 5 | 100.00 |
| 78 | Mayurakshi | Tilpara Barrage | West Bengal | 62.79 | | 67.05 | 27/09/1978 | 62.79 | 06/Oct/09 12 | 4 | 4 | 100.00 |
| 79 | Mayurakshi | Narayanpur | West Bengal | 26.99 | 27.99 | 29.69 | 27/09/1995 | 25.17 | 10/Sep/09 16 | 0 | 0 | |

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## Table 34 (B) : Flood Forecasting Performance at various Forcasting stations during Flood Season 2009

| Sl. No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2009 | | During 2009 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 80 | Ajoy | Gheropara | West Bengal | 38.42 | 39.42 | 43.94 | 27/09/1978 | 40.15 | 07/Sep/09 14 | 2 | 2 | 100.00 |
| 81 | Damodar | Tenughat Dam | Jharkhand | 268.83 | | 265.56 | 17/09/1985 | 263.33 | 07/Sep/09 19 | 20 | 20 | 100.00 |
| 82 | Damodar | Panchet Dam | Jharkhand | 132.59 | | 132.89 | 02/10/1959 | 131.57 | 07/Sep/09 23 | 40 | 40 | 100.00 |
| 83 | Damodar | Durgapur Barrage | West Bengal | 64.47 | | 64.47 | 31/10/2002 | 64.47 | | 28 | 28 | 100.00 |
| 84 | Barakar | Maithon Dam | Jharkhand | 150.88 | | 151.79 | 02/10/1959 | 151.36 | 07/Sep/09 16 | 26 | 21 | 80.77 |
| 85 | Mundeshwari | Harinkhola | West Bengal | 11.80 | 12.80 | 14.58 | 29/09/1978 | 14.43 | 08/Sep/09 21 | 6 | 6 | 100.00 |
| 86 | Kangsabati | Kangsabati Dam | West Bengal | 134.11 | | 134.71 | 02/09/1978 | 133.33 | 07/Sep/09 13 | 17 | 17 | 100.00 |
| 87 | Kangsabati | Mohanpur | West Bengal | 24.73 | 25.73 | 29.87 | 02/09/1978 | 24.18 | 09/Sep/09 08 | 0 | 0 | |
| | **Brahmaputra Basin** | | | | | | | | | | | |
| 88 | Brahmaputra | Dibrugrah | Assam | 103.24 | 104.24 | 106.48 | 03/09/1998 | 105.53 | 01/Jul/09 07 | 307 | 307 | 100.00 |
| 89 | Brahmaputra | Neamatighat | Assam | 84.04 | 85.04 | 87.37 | 11/07/1991 | 85.56 | 02/Jul/09 09 | 71 | 71 | 100.00 |
| 90 | Brahmaputra | Tezpur | Assam | 64.23 | 65.23 | 66.59 | 27/08/1988 | 65.25 | 24/Aug/09 07 | 40 | 40 | 100.00 |
| 91 | Brahmaputra | Guwahati | Assam | 48.68 | 49.68 | 51.46 | 21/07/2004 | 48.94 | 24/Aug/09 01 | 8 | 8 | 100.00 |
| 92 | Brahmaputra | Goalpara | Assam | 35.27 | 36.27 | 37.43 | 31/07/1954 | 35.74 | 26/Aug/09 01 | 19 | 19 | 100.00 |
| 93 | Brahmaputra | Dhubri | Assam | 27.62 | 28.62 | 30.36 | 28/08/1988 | 28.99 | 22/Aug/09 06 | 103 | 103 | 100.00 |
| 94 | Burhidihing | Naharkatia | Assam | 119.40 | 120.40 | 122.69 | 17/06/1973 | 118.12 | 17/Aug/09 09 | 0 | 0 | |
| 95 | Burhidihing | Khowang | Assam | 101.11 | 102.11 | 103.92 | 25/08/1988 | 102.49 | 23/Aug/09 02 | 22 | 22 | 100.00 |
| 96 | Desang | Nanglamoraghat | Assam | 93.46 | 94.46 | 96.49 | 06/09/1998 | 96.04 | 11/Jul/09 21 | 64 | 64 | 100.00 |
| 97 | Dikhow | Shivsagar | Assam | 91.40 | 92.40 | 95.62 | 08/07/1974 | 94.14 | 11/Jul/09 08 | 46 | 46 | 100.00 |
| 98 | Subansiri | Badatighat | Assam | 81.53 | 82.53 | 86.84 | 28/06/1972 | 82.10 | 24/Aug/09 10 | 48 | 48 | 100.00 |
| 99 | Dhansiri (S) | Golaghat | Assam | 88.50 | 89.50 | 91.30 | 11/10/1986 | 88.90 | 26/Sep/09 00 | 9 | 9 | 100.00 |

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## Table 34 (B) : Flood Forecasting Performance at various Forcasting stations during Flood Season 2009

| Sl. No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2009 | | During 2009 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 100 | Dhansiri (S) | Numaligarh | Assam | 76.42 | 77.42 | 79.87 | 24/09/1985 | 77.80 | 25/Aug/09 12 | 106 | 106 | 100.00 |
| 101 | Jiabharali | Jiabharali_NTX | Assam | 76.00 | 77.00 | 78.50 | 26/07/2007 | 77.56 | 29/Jul/09 18 | 194 | 193 | 99.48 |
| 102 | Kopilli | Kampur | Assam | 59.50 | 60.50 | 61.86 | 16/06/1973 | 61.08 | 11/Oct/09 06 | 3 | 3 | 100.00 |
| 103 | Kopilli | Dharmatul | Assam | 55.00 | 56.00 | 58.09 | 21/07/2004 | 55.17 | 11/Oct/09 19 | 5 | 5 | 100.00 |
| 104 | Puthimari | Puthimari _NHX | Assam | 50.81 | 51.81 | 55.08 | 31/08/2008 | 52.82 | 03/Jul/09 19 | 228 | 225 | 98.68 |
| 105 | Pagladiya | Pagladia_NTX | Assam | 51.75 | 52.75 | 55.45 | 08/07/2004 | 52.78 | 02/Jul/09 19 | 20 | 20 | 100.00 |
| 106 | Beki | Beki NHX | Assam | 44.10 | 45.10 | 46.20 | 04/08/2000 | 45.38 | 20/Aug/09 00 | 292 | 292 | 100.00 |
| 107 | Manas | Manas NHX | Assam | 47.81 | 48.42 | 50.08 | 15/09/1984 | 48.08 | 17/Aug/09 11 | 5 | 5 | 100.00 |
| 108 | Sankosh | Golakganj | Assam | 28.94 | 29.94 | 30.95 | 08/09/2007 | 30.24 | 20/Aug/09 23 | 78 | 78 | 100.00 |
| 109 | Raidak-I | Tufanganj | West Bengal | 34.22 | 35.30 | 36.36 | 21/07/1993 | 34.65 | 06/Jul/09 07 | 7 | 7 | 100.00 |
| 110 | Torsa | Ghughumari | West Bengal | 39.80 | 40.41 | 41.46 | 03/08/2000 | 40.40 | 20/Aug/09 21 | 38 | 36 | 94.74 |
| 111 | Jaldhaka | NH-31 | West Bengal | 80.00 | 80.90 | 81.33 | 28/08/1972 | 80.49 | 08/Oct/09 05 | 11 | 11 | 100.00 |
| 112 | Jaldhaka | Mathabhanga | West Bengal | 47.70 | 48.20 | 49.85 | 07/09/2007 | 48.18 | 20/Aug/09 17 | 2 | 2 | 100.00 |
| 113 | Tista | Domohani | West Bengal | 85.65 | 85.95 | 89.30 | 04/10/1968 | 86.45 | 20/Aug/09 11 | 56 | 56 | 100.00 |
| 114 | Tista | Mekhliganj | West Bengal | 65.45 | 65.95 | 66.45 | 13/07/1996 | 66.10 | 20/Aug/09 13 | 24 | 24 | 100.00 |
| | **Barak & Meghna Basins** | | | | | | | | | | | |
| 115 | Barak | APGhat | Assam | 18.83 | 19.83 | 21.84 | 01/08/1989 | 19.48 | 02/Aug/09 12 | 16 | 16 | 100.00 |
| 116 | Katakhal | Matizuri | Assam | 19.27 | 20.27 | 22.73 | 10/09/2007 | 19.74 | 28/Aug/09 17 | 10 | 10 | 100.00 |
| 117 | Kushiyara | Karimganj | Assam | 13.94 | 14.94 | 16.55 | 09/09/2007 | 15.96 | 22/Aug/09 17 | 63 | 63 | 100.00 |
| 118 | Manu | Kailashar | Tripura | 24.34 | 25.34 | 25.79 | 07/06/1993 | 24.37 | 01/Jul/09 21 | 0 | 0 | |
| 119 | Gumti | Sonamura | Tripura | 11.50 | 12.50 | 14.42 | 23/07/1993 | 11.64 | 02/Jul/09 06 | 1 | 1 | 100.00 |

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## Table 34 (B) : Flood Forecasting Performance at various Forcasting stations during Flood Season 2009

| Sl. No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2009 | | During 2009 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| | **Eastern Rivers (Excluding Mahanadi)** | | | | | | | | | | | |
| 120 | Subernarekna | Rajghat NH_5 _Road | Orissa | 9.45 | 10.36 | 12.69 | 19/06/2008 | 11.17 | 09/Sep/09 12 | 7 | 7 | 100.00 |
| 121 | Burhabalang | Bridge | Orissa | 7.21 | 8.13 | 9.50 | 12/10/1973 | 8.30 | 02/Oct/09 23 | 4 | 3 | 75.00 |
| 122 | Baitarni | Anandpur | Orissa | 37.44 | 38.36 | 41.20 | 19/08/1975 | 37.67 | 21/Jul/09 13 | 2 | 2 | 100.00 |
| 123 | Baitarni | Akhuapada | Orissa | | 17.83 | 21.95 | 16/08/1960 | 18.00 | 03/Oct/09 10 | 7 | 7 | 100.00 |
| 124 | Brahmani | Jenapur | Orissa | 22.00 | 23.00 | 24.78 | 20/08/1975 | 22.50 | 22/Jul/09 09 | 2 | 2 | 100.00 |
| 125 | Rushikuluya | Purushottampur | Orissa | 15.83 | 16.83 | 19.65 | 04/11/1990 | 17.30 | 20/Jul/09 05 | 8 | 8 | 100.00 |
| 126 | Vamsadhara | Gunupur | Orissa | 83.00 | 84.00 | 88.75 | 17/09/1980 | 84.00 | 19/Jul/09 16 | 7 | 6 | 85.71 |
| 127 | Vamsadhara | Kashinagar | Orissa | 53.60 | 54.60 | 58.93 | 18/09/1980 | 55.65 | 19/Jul/09 19 | 81 | 76 | 93.83 |
| 128 | Vamsadhara | Gotta Barrage | Andhra Pradesh | 34.84 | 34.84 | 39.92 | 07/10/1999 | 38.12 | 25/Jul/09 22 | 10 | 10 | 100.00 |
| | **Mahanadi Basin** | | | | | | | | | | | |
| 129 | Mahanadi | Hirakud Dam | Orissa | 192.02 | | 192.30 | 30/01/1998 | | | 50 | 49 | 98.00 |
| 130 | Mahanadi | Naraj | Orissa | 25.41 | 26.41 | 27.61 | 31/08/1982 | 26.11 | 21/Jul/09 14 | 17 | 16 | 94.12 |
| 131 | Mahanadi | Alipingal Devi | Orissa | 10.85 | 11.76 | 13.05 | 20/09/2008 | 10.86 | 21/Jul/09 14 | 1 | 1 | 100.00 |
| 132 | Mahanadi | Nimapara | Orissa | 9.85 | 10.76 | 11.60 | 31/08/1982 | 10.04 | 21/Jul/09 19 | 4 | 4 | 100.00 |
| | **Godavari Basin** | | | | | | | | | | | |
| 133 | Godavari | Kopergaon | Maharashtra | 490.90 | 493.68 | 499.17 | 1969 | 489.75 | 25/Jul/09 05 | 0 | 0 | |
| 134 | Godavari | Jaikwadi Dam | Maharashtra | 463.91 | | 464.69 | 12/10/1990 | 458.47 | 06/Oct/09 12 | 0 | 0 | |
| 135 | Godavari | Gangakhed | Maharashtra | 374.00 | 375.00 | 377.57 | 1947 | 366.56 | 26/Aug/09 07 | 0 | 0 | |
| 136 | Godavari | Nanded | Maharashtra | 353.00 | 354.00 | 357.10 | 06/08/2006 | 344.52 | 06/Oct/09 17 | 0 | 0 | |

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## Table 34 (B) : Flood Forecasting Performance at various Forcasting stations during Flood Season 2009

| Sl. No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2009 | | During 2009 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 137 | Godavari | Sriram Sagar | Andhra Pradesh | 332.54 | | 332.72 | 13/10/1990 | 326.17 | 08/Oct/09 16 | 0 | 0 | |
| 138 | Godavari | Kaleswaram | Andhra Pradesh | 103.50 | 104.75 | 107.05 | 15/08/1986 | 99.08 | 25/Jul/09 12 | 0 | 0 | |
| 139 | Godavari | Eturunagaram | Andhra Pradesh | 73.29 | 75.79 | 77.66 | 24/08/1990 | 70.47 | 29/Aug/09 04 | 0 | 0 | |
| 140 | Godavari | Dummagudam | Andhra Pradesh | 53.00 | 55.00 | 60.25 | 16/08/1986 | 49.09 | 28/Aug/09 21 | 0 | 0 | |
| 141 | Godavari | Bhadrachalam | Andhra Pradesh | 45.72 | 48.77 | 55.66 | 16/08/1986 | 42.06 | 29/Aug/09 00 | 0 | 0 | |
| 142 | Godavari | Kunavaram | Andhra Pradesh | 37.74 | 39.24 | 51.30 | 16/08/1986 | 30.32 | 29/Aug/09 09 | 0 | 0 | |
| 143 | Godavari | Rajamundri | Andhra Pradesh | 17.68 | 19.51 | 20.48 | 16/08/1986 | 14.50 | 29/Aug/09 07 | 0 | 0 | |
| 144 | Godavari | Dowalaiswaram | Andhra Pradesh | 14.25 | 16.08 | 18.36 | 16/08/1986 | 14.14 | 14/Jul/09 12 | 0 | 0 | |
| 145 | Wardha | Balharsha | Maharashtra | 171.50 | 174.00 | 176.00 | 15/08/1986 | 161.47 | 04/Sep/09 06 | 0 | 0 | |
| 146 | Wainganga | Bhandara | Maharashtra | 244.00 | 244.50 | 250.90 | 16/09/2005 | 244.05 | 23/Jul/09 14 | 3 | 3 | 100.00 |
| 147 | Wainganga | Pauni | Maharashtra | 226.73 | 227.73 | 232.35 | 07/09/1994 | 226.73 | 23/Jul/09 17 | 4 | 3 | 75.00 |
| 148 | Manjira | Singur Dam | Andhra Pradesh | 523.60 | | 523.60 | 15/10/1999 | 520.15 | 12/Oct/09 06 | 0 | 0 | |
| 149 | Manjira | Nizamsagar Dam | Andhra Pradesh | 428.24 | | 428.24 | 15/10/1999 | 421.90 | 11/Sep/09 15 | 0 | 0 | |
| 150 | Indravati | Jagdalpur | Chhatisgarh | 539.50 | 540.80 | 544.68 | 07/09/1973 | 538.80 | 26/Aug/09 22 | 0 | 0 | |
| | **Krishna Basin** | | | | | | | | | | | |
| 151 | Krishna | Arjunwad | Maharashtra | 542.07 | 543.29 | 543.69 | 05/08/2005 | | | 0 | 0 | |

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## Table 34 (B) : Flood Forecasting Performance at various Forcasting stations during Flood Season 2009

| Sl. No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2009 | | During 2009 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 152 | Krishna | Alamati Dam | Karnataka | 519.60 | | 519.60 | 18/09/2002 | 519.60 | 24/Aug/09 15 | 41 | 36 | 87.80 |
| 153 | Krishna | Narayanpur Dam | Karnataka | 492.25 | | 492.22 | 9/26/2008 | 492.21 | 22/Sep/09 09 | 34 | 30 | 88.24 |
| 154 | Krishna | Priyadarshini | Andhra Pradesh | 318.52 | | 316.50 | 21/10/1993 | 318.20 | 02/Oct/09 15 | 73 | 69 | 94.52 |
| 155 | Krishna | Srisailam Dam | Andhra Pradesh | 269.75 | | 269.93 | 13/10/1990 | 273.25 | 03/Oct/09 11 | 95 | 87 | 91.58 |
| 156 | Krishna | Prakasham Barrage | Andhra Pradesh | 18.30 | | 21.50 | 07/10/1903 | 20.45 | 06/Oct/09 00 | 30 | 27 | 90.00 |
| 157 | Bhima | Deongaon | Karnataka | 402.00 | 404.50 | 407.34 | 13/08/2006 | 404.22 | 01/Oct/09 18 | 8 | 7 | 87.50 |
| 158 | Tungbhadra | Tungabhadra Dam | Karnataka | 497.74 | | 497.74 | 05/10/1992 | 497.74 | 08/Aug/09 06 | 141 | 136 | 96.45 |
| 159 | Tungbhadra | Mantralayam | Andhra Pradesh | 310.00 | 312.00 | 315.80 | 19/11/1992 | 318.77 | 02/Oct/09 22 | 17 | 16 | 94.12 |
| | **Southern River System:** | | | | | | | | | | | |
| 160 | Pennar | Nellore | Andhra Pradesh | 15.91 | 17.28 | 18.70 | 30/11/1882 | 14.57 | 10/Nov/09 08 | 0 | 0 | |
| | **Western River Systems:** | | | | | | | | | | | |
| 161 | Banas | Dantiwada Dam | Gujarat | 182.88 | 185.06 | 186.04 | 01/09/1973 | 165.32 | 30/Jul/09 04 | 0 | 0 | |
| 162 | Sabarmati | Dharoi Dam | Gujarat | 187.45 | 192.25 | 189.63 | 03/09/1990 | 183.14 | 18/Sep/09 08 | 5 | 5 | 100.00 |
| 163 | Sabarmati | Ahmedabad Shubhash Bridge | Gujarat | 44.09 | 45.34 | 47.45 | 19/08/2006 | 41.98 | 20/Sep/09 20 | 0 | 0 | |
| 164 | Mahi | Kadana Dam | Gujarat | 126.19 | 127.71 | 127.74 | 09/09/1989 | 125.99 | 15/Sep/09 13 | 0 | 0 | |
| 165 | Mahi | Wanakbori | Gujarat | 71.00 | 72.54 | 76.10 | 12/08/2006 | 67.97 | 29/Aug/09 15 | 0 | 0 | |
| 166 | Naramada | Mandla | Madhya Pradesh | 437.20 | 437.80 | 439.41 | 18/08/1974 | 434.54 | 09/Sep/10 12 | 0 | 0 | |

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## Table 34 (B) : Flood Forecasting Performance at various Forcasting stations during Flood Season 2009

| Sl. No. | Name of the river | Name of FF site | Name of State | Warning Level (m) | Danger level (m) | Highest Flood Level | | Maximum Level -2009 | | During 2009 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level (m) | Date/ Month/ Year | Level (m) | Date and Time DD/MM/YY: HH) | No.of Forecasts issued | No.of Forecasts within limits | Percent-age of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 167 | Naramada | Hoshangabad | Madhya Pradesh | 292.83 | 293.83 | 300.90 | 30/08/1973 | 296.70 | 10/Sep/09 04 | 11 | 10 | 90.91 |
| 168 | Naramada | Garudeswar | Gujarat | 30.48 | 31.09 | 41.65 | 06/09/1970 | 24.00 | 12/Sep/09 20 | 0 | 0 | |
| 169 | Naramada | Bharuch | Gujarat | 6.71 | 7.31 | 12.65 | 07/09/1970 | 6.10 | 13/Sep/09 12 | 0 | 0 | |
| 170 | Tapi | Hatnur Dam | Maharashtra | 212.00 | 214.00 | 214.00 | 12/10/1989 | 214.00 | 27/Sep/09 06 | 31 | 29 | 93.55 |
| 171 | Tapi | Ukai Dam | Gujarat | 102.41 | 105.16 | 105.51 | 08/10/1990 | 99.58 | 17/Sep/09 06 | 5 | 5 | 100.00 |
| 172 | Tapi | Surat | Gujarat | 8.50 | 9.50 | 12.50 | 09/08/2006 | 5.10 | 23/Jul/09 16 | 0 | 0 | |
| 173 | Damanganga | Madhuban Dam | Gujarat | 79.86 | 82.40 | 80.60 | 27/09/1993 | 79.75 | 15/Oct/09 18 | 8 | 8 | 100.00 |
| 174 | Damanganga | Vapi Town | Gujarat | 18.20 | 19.20 | 23.76 | 03/08/2004 | 17.30 | 22/Jul/09 23 | 0 | 0 | |
| 175 | Damanganga | Daman | Dadra & Nagar Haveli | 2.60 | 3.40 | 4.00 | 03/08/2004 | 2.30 | 24/Jul/09 16 | 0 | 0 | |
| | | | | | | | | **Total Forecasts** | | ***4010*** | ***3927*** | **97.93** |
| | | | | | | | | **Level Forecasts** | | **3343** | **3298** | **98.65** |
| | | | | | | | | **Inflow Forecast** | | **667** | **629** | **94.30** |

Source : Central Water Commission (Flood Forecasting Monitoring Directoirate)

Note : FF : Flood Forecasting **m**: Meter

## Table 35 (A) : Broad Features of Flood Forecasting Performance during the Flood season 2010

| Sl.No | Details of Flood Forecasting Performance during the Flood season 2010 | No.of FF Sites | Percentage of FF sites |
|---|---|---|---|
| **1** | **2** | **3** | **4** |
| 1 | Number of Operational Flood Forecasting stations during the Flood season | 175 | 100 |
| 2 | Flood Forecasting Sites where no forecasts were issued/ required because water level/ inflowwere below warning during the flood season | 62 | 35.43 |
| 3 | Flood Forecasting sites where forecasts were actually issued. | 113 | 64.57 |
| 4 | Sites with performance accuracy between 0.0 % to 25.0% | 1 | 0.88% |
| 5 | Sites with performance accuracy between 25.1 % to 50.0% | 1 | 0.88% |
| 6 | Sites with performance accuracy between 50.1 % to 75.0% | 1 | 0.88% |
| 7 | Sites with performance accuracy between 75.1 % to 99.99% | 36 | 31.87% |
| 8 | Sites with 100% performance accuracy i.e. where all forecasts issued were within permissible limit of accuracy | 74 | 65.49% |
| 9 | **Details of Unprecedented Flood Events during Flood Season - 2010**<br>See separate statement with information of item 9 | | |
| 10 | **Details of High Flood Events during Flood Season - 2010**<br>See separate statement with information of item 10 | | |

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**Table 35 (A): Broad features of Flood Forecasting Performance during Flood Season 2010**

| Sl .No | River | Station | State | Danger level in metres | Existing Highest Flood Level (HFL) | | New HFL | | Duration | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Level in metres | Date of occurrence | Level in metres | Date of occurrence | From | To |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **9. Unprecedented flood events in India under CWC FF & W Network - 2010 flood season** | | | | | | | | | | |
| 1 | Ganga | Haridwar | U.K. | 294.00 | 296.23 | 02/09/1978 | 296.3 | 19/9/2010 | 19/09/2010 08.00 | 19.09.2010 10.00 |
| 2 | Ganga | Kannauj | U.P. | 125.97 | 126.24 | 29/08/1998 | 126.78 | 27/09/2010 | 23/09/2010; 14:00 | 30/09/2010;10:00 |
| 3 | Ganga | Ankinghat | U.P. | 124.00 | 124.305 | 9/9/1978 | 124.49 | 28/09/2010 | 26/09/2010; 05:00 | 28/09/2010; 24:00 |
| 4 | Ganga | Kanpur | U.P. | 114.00 | 113.47 | 2/9/1967 | 114.08 | 29/09/2010 | 25/09/2010; 07:00 | 02/10/2010; 16:00 |
| 5 | Ramganga | Moradabad | U.P. | 190.60 | 192.68 | 09/03/1978 | 192.88 | 21/09/2010 | 20/09/2010; 23:00 | 21/09/2010; 05:00 |
| 6 | Kosi | Basua | Bihar | 47.75 | 48.87 | 11.07.2004 | 49.17 | 25/Aug/10 00 | 21/08/2010 07:00<br>24/08/2010 09:00 | 21/08/2010 20:00<br>26/08/2010 07:00 |
| 7 | Kushiyara | Karimgunj | Assam | 14.94 | 16.55 | 09/09/07& 11/09/07 | 16.57 | 10/06/2010& 11/06/2010 | 10/06/2010 (2300) | 11/06/10 (1000) |

Unprecedented flood : Flood level => HF L

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**Table 35 (A) : Broad features of Flood Forecasting Performance during Flood Season 2010**

| Sl.No | River | Station | State | District | Danger level in metres | Existing HFL | | Duration of High Flood | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level in metres | Date of occurrence | From | To |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| **10. High Flood Events during Flood Season - 2010** | | | | | | | | | |
| 1 | Ganga | Rishikesh | Uttarakhand | Haridwar | 340.50 | 341.72 | 05.09.1995 | 19.09.2010 01:00 | 19.09.2010 13:00 |
| 2 | Ganga | Haridwar | Uttarakhand | Haridwar | 294.00 | 296.23 | 02.09.1978 | 19.09.2010 02:00 | 19.09.2010 16:00 |
| 3 | Ganga | Kannauj | U.P. | Kannauj | 125.97 | 126.24 | 29/08/1998 | 27.08.2010 02:00 | 02.09.2010 24:00 |
| | | | | | | | | 18.09.2010 12:00 | 01.10.2010 17:00 |
| 4 | Ganga | Ankinghat | U.P. | Kanpur Dehat | 124 | 124.305 | 9/9/1978 | 22.09.2010 14:00 | 01.10.2010 12:00 |
| 5 | Ganga | Kanpur | U.P. | Kanpur Dehat | 114 | 113.47 | 2/9/1967 | 27.08.2010 04:00 | 03.09.2010 22:00 |
| | | | | | | | | 19.09.2010 03:00 | 03.10.2010 19:00 |
| 6 | Ganga | Dalmau | U.P. | Raebareilly | 99.36 | 99.84 | 3/8/1973 | 28.09.2010 17:00 | 02.10.2010 17:00 |
| 7 | Ramganga | Moradabad | U.P. | Moradabad | 190.60 | 192.68 | 3/9/1978 | 20.09.2010 17:00 | 21.09.2010 14:00 |
| 8 | Ramganga | Bareilly | U.P. | Bareilly | 163.07 | 162.881 | 6/8/1978 | 20.09.2010 22:00 | 24.09.2010 02:00 |
| 9 | Yamuna | Mawi | U.P | Muzaffar Nagar | 230.85 | 232.45 | 26.09.88 | 10.09.2010 07:00 | 10.09.2010 13:00 |
| | | | | | | | | 21.09.2010 02:00 | 22.09.2010 08:00 |
| 10 | Yamuna | Delhi Railway Bridge | Delhi | Delhi | 204.83 | 207.49 | 06.09.78 | 22.09.2010 13:00 | 23.09.2010 08:00 |
| 11 | Ghagra | Elgin Bridge | U.P. | Barabanki | 106.07 | 107.556 | 10.10.2009 | 25/8/2010 00:00 | 28/08/2010 3:00 |
| 12 | Ghagra | Ayodhya | U.P. | Faizabad | 92.73 | 94.01 | 11.10.2009 | 24/8/2010 21:00 | 5/9/2010 7:00 |
| 13 | Bagmathi | Benibad | Bihar | Muzzafarpur | 48.68 | 50.01 | 12.07.2004 | 26/8/2010 2:00 | 28/8/2010 21:00 |
| 14 | Kosi | Basua | Bihar | Supaul | 47.75 | 48.87 | 11.07.2004 | 17/8/2010 23:00 | 27/8/2010 8:00 |
| 15 | Sankosh | Golokganj | Assam | Dhubri | 29.94 | 30.95 | 08.09.2007 | 12/7/2010 4:00 | 12/7/2010 6:00 |
| 16 | Beki | Road Bridge | Assam | Barpeta | 45.10 | 46.20 | 04.08.2000 | 27/06/2010 22:00 | 28/06/2010 1300 |
| | | | | | | | | 12/07/2010 00:00 | 12/07/2010 0300 |
| | | | | | | | | 18/07/2010 1800 | 19/07/2010 0200 |
| | | | | | | | | 21/07/2010 1600 | 22/07/2010 0200 |
| 17 | Kopili | Kampur | Assam | Nagaon | 60.5 | 61.86 | 16/06/1973 | 10/10/2010 1000 | 11/10/2010 0400 |
| 18 | Kushiyara | Karimgunj | Assam | Karimgunj | 14.94 | 16.55 | 09/09/07& 11/09/07 | 08/06/10(22) 15/06/10(01) 20/09/10(12) | 12/06/10(17) 22/06/10(10) 22/09/10(17) |

Source : Flood Forecasting Monitoring Directorate
High Flood : Flood level>=HFL-0.5 m and < HFL

## Table 35 (B) : Broad Features of Flood Forecasting Performance during the Flood season 2009

| Sl.No | Details of Flood Forecasting Performance during the Flood season 2009 | No.of FF Sites | Percentage of FF sites |
|---|---|---|---|
| **1** | **2** | **3** | **4** |
| 1 | Number of Operational Flod Forecasting stations during the Flood season | 175 | 100 |
| 2 | Flood Forecasting sites where "No Forecast" was issued / required because water level at those sites were below warning stages during the flood season. | 68 | 38.86 |
| 3 | Flood Forecasting sites where forecasts were actually issued. | 107 | 61.14 |
| 4 | Sites with performance accuracy between 0.0 % to 25.0% | 1 | 0.93 |
| 5 | Sites with performance accuracy between 25.1 % to 50.0% | 0 | 0.00 |
| 6 | Sites with performance accuracy between 50.1 % to 75.0% | 3 | 2.80 |
| 7 | Sites with performance accuracy between 75.1 % to 99.99% | 31 | 28.98 |
| 8 | Sites with 100% performance accuracy i.e. where all forecasts issued were within permissible limit of accuracy | 72 | 67.29 |
| 9 | **Details of Unprecedented Flood Events during Flood Season - 2009**<br>See separate statement with information of item 9 | | |
| 10 | **Details of High Flood Events during Flood Season - 2009**<br>See separate statement with information of item 10 | | |

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## Table 35 (B) : Broad Features of Flood Forecasting Performance during the Flood season 2009

| Sl .No | River | Station | State | Danger level in metres | Existing Highest Flood Level (HFL) | | New HFL | | Duration of Unprecedented Flood Situation | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Level in metres | Date of occurrence | Level in metres | Date of occurrence | From | To |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **9. Unprecedented flood events in India under CWC FF & W Network - 2009 flood season** | | | | | | | | | | |
| 1 | Ghaghra | Elgin Bridge | Uttar Pradesh | 106.07 | 107.48 | 23/09/2008 | 107.56 | 10/10/2009 | 10/10/2009 6:00:00 AM | 10/10/2009 16:00:00 |
| 2 | Ghaghra | Ayodhya | Uttar Pradesh | 92.73 | 93.84 | 24/09/2008 | 94.01 | 11/10/2009 | 11/10/2009 11:00:00 AM | 11/10/2009 20:00:00 |
| 3 | Tungbhadra | Mantralayam | Andhra Pradesh | 312.00 | 315.80 | 19/11/1992 | 318.77 | 2/10/2009 | 1/10/2009 22:00:00 | 3/10/2009 7:00:00 AM |

Unprecedented flood : Flood level >= HFL

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## Table 35 (B) : Broad Features of Flood Forecasting Performance during the Flood season 2009

| Sl.No | River | Station | State | District | Danger level in metres | Existing HFL | | Duration of High Flood | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Level in metres | Date of occurrence | From | To |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **10. High Flood Events during Flood Season - 2009** | | | | | | | | | |
| 1 | Ghaghra | Elgin Bridge | Uttar Pradesh | Barabanki | 106.07 | 107.48 | 23/09/2008 | 20/8/2009 13:00:00 | 22/8/2009 17:00:00 |
| | | | | | | | | 8/10/2009 19:00:00 | 12/10/2009 04:00:00 AM |
| 2 | Ghaghra | Ayodhya | Uttar Pradesh | Faizabad | 92.73 | 93.84 | 24/09/2008 | 21/8/2009 03:00:00 AM | 24/8/2009 18:00:00 |
| | | | | | | | 24/09/2008 | 9/10/2009 09:00:00 AM | 14/10/2009 08:00:00 AM |
| 3 | Bagmati | Benibad | Bihar | Muzaffarpur | 48.68 | 50.01 | 12/07/2004 | 20/8/2009 17:00:00 | 23/8/2009 22:00:00 |
| 4 | Kosi | Basua | Bihar | Supaul | 47.75 | 48.87 | 11/07/2004 | 17/8/2009 11:00:00 AM | 22/8/2009 4:00:00 AM |
| 5 | Mundeshwari | Harinkhola | West Bengal | Hooghly | 12.8 | 14.58 | 29/9/1978 | 8/9/2009 12:00:00 PM | 9/9/2009 4:00:00 PM |
| 6 | Desang | Nanglamoraghat | Assam | Sibsagar | 94.46 | 96.49 | 06/091998 | 11/7/2009 4:00:00 PM | 12/7/2009 3:00:00 PM |
| 5 | Tungbhadra | Mantralayam | Andhra Pradesh | Kurnool | 312 | 315.8 | 19/11/1992 | 1/10/2009 7:00:00 PM | 3/10/2009 8:00:00 AM |

Source : Flood Forecasting Monitoring Directorate

High Flood : Flood level>=HFL-0.5 m and < HFL

## Table 36 : Comparative Flood Forcasting Performance from 1986 to 2010

| Year | No.of Level Forecasts issued | | | No.of Inflow Forecasts issued | | | Total No.of Forecasts issued | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Within +/-15 cm of deviation from actual | Percentage of accuracy | Total | Within +/-20% cumec of deviation from actual | Percentage of accuracy | Total | Within +/-15 cm or +/-20% cumec of deviation from actual | Percentage of accuracy |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **1986** | 3956 | 3635 | 91.89 | 831 | 744 | 89.53 | 4787 | 4379 | 91.48 |
| **1987** | 4793 | 4560 | 95.14 | 1021 | 965 | 94.52 | 5814 | 5525 | 95.03 |
| **1988** | 5472 | 5131 | 93.77 | 1510 | 1425 | 94.37 | 6982 | 6556 | 93.90 |
| **1989** | 4323 | 4081 | 94.40 | 1213 | 1181 | 97.36 | 5536 | 5262 | 95.05 |
| **1990** | 6578 | 6124 | 93.10 | 1988 | 1947 | 97.94 | 8566 | 8071 | 94.22 |
| **1991** | 5234 | 4890 | 93.43 | 1369 | 1335 | 97.52 | 6603 | 6225 | 94.28 |
| **1992** | 3588 | 3418 | 95.26 | 1176 | 1149 | 97.70 | 4764 | 4567 | 95.86 |
| **1993** | 5226 | 5066 | 96.94 | 1417 | 1372 | 96.82 | 6643 | 6438 | 96.91 |
| **1994** | 5472 | 5158 | 94.26 | 2004 | 1929 | 96.26 | 7476 | 7087 | 94.80 |
| **1995** | 5393 | 5201 | 96.44 | 1024 | 988 | 96.48 | 6417 | 6189 | 96.45 |
| **1996** | 5104 | 4945 | 96.88 | 1363 | 1321 | 96.92 | 6467 | 6266 | 96.89 |
| **1997** | 4059 | 3895 | 95.96 | 1406 | 1368 | 97.30 | 5465 | 5263 | 96.30 |
| **1998** | 6401 | 5264 | 82.24 | 1542 | 1511 | 97.99 | 7943 | 6775 | 85.30 |
| **1999** | 5550 | 5428 | 97.80 | 1505 | 1398 | 92.89 | 7055 | 6826 | 96.75 |
| **2000** | 5622 | 5504 | 97.90 | 821 | 747 | 90.99 | 6443 | 6251 | 97.02 |
| **2001** | 4606 | 4533 | 98.42 | 857 | 809 | 94.40 | 5463 | 5342 | 97.79 |
| **2002** | 3618 | 3549 | 98.09 | 623 | 602 | 96.63 | 4241 | 4151 | 97.88 |
| **2003** | 5989 | 5789 | 96.66 | 611 | 586 | 95.91 | 6600 | 6375 | 96.59 |
| **2004** | 4184 | 4042 | 96.61 | 705 | 654 | 92.77 | 4889 | 4696 | 96.05 |
| **2005** | 4323 | 4162 | 96.28 | 1295 | 1261 | 97.37 | 5618 | 5423 | 96.53 |
| **2006** | 5070 | 4827 | 95.21 | 1593 | 1550 | 97.30 | 6663 | 6377 | 95.71 |
| **2007** | 6516 | 6339 | 97.28 | 1707 | 1651 | 96.72 | 8223 | 7990 | 97.17 |
| **2008** | 5670 | 5551 | 97.90 | 1021 | 1003 | 98.24 | 6691 | 6554 | 97.95 |
| **2009** | 3343 | 3298 | 98.65 | 667 | 629 | 94.30 | 4010 | 3927 | 97.93 |
| **2010** | 6491 | 6390 | 98.44 | 1028 | 988 | 96.11 | 7519 | 7378 | 98.12 |
| **Average** | 5063 | 4831 | 95.42 | 1212 | 1165 | 96.12 | 6275 | 5996 | 95.55 |

Source : Flood Forecasting Monitoring Directorate

**Table 37 : Projected Water Demand in India (By Different Uses)**

| Sl No. | Sector | Total water reqierment for different uses (in BCM) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Year | 2010 | | 2025 | | 2050 | |
| | | 1997-98 | Low | High | Low | High | Low | High |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | Irrigation | 524 | 543 | 557 | 561 | 611 | 628 | 807 |
| 2 | Domestic | 30 | 42 | 43 | 55 | 62 | 90 | 111 |
| 3 | Industries | 30 | 37 | 37 | 67 | 67 | 81 | 81 |
| 4 | Power | 9 | 18 | 19 | 31 | 33 | 63 | 70 |
| 5 | Inland Navigation | 0 | 7 | 7 | 10 | 10 | 15 | 15 |
| 6 | Flood Control | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | Environment(1) Afforestation | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | Environment(2) Ecology | 0 | 5 | 5 | 10 | 10 | 20 | 20 |
| 9 | Evaporation losses | 36 | 42 | 42 | 50 | 50 | 76 | 76 |
| | **TOTAL** | **629** | **694** | **710** | **784** | **843** | **973** | **1180** |

**Source** :Basin Planning Directorate, CWC, --"National Commission on Integrated Water Resources Development (NCIWRD-1999)

**BCM :** Billion Cubic Meters

## Table 38 : Status of Coverage of Rural Habitations Under Rural Water Supply as on 1.04.2012

| Sl. No. | Name of the State UT | Total Habitations | No. of Habitations with Population Coverage > 0 and < 25% | No. of Habitations with Population Coverage >= 25 and < 50% | No. of Habitations with Population Coverage >= 50 and < 75% | No. of Habitations with Population Coverage >= 75 and < 100% | No. of Habitations with 100% Population Coverage |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1. | **Andhra Pradesh** | 72407 | 4298 | 7258 | 8074 | 8214 | 44563 |
| 2. | **Arunachal Pradesh** | 5612 | 1301 | 659 | 567 | 324 | 2761 |
| 3. | **Assam** | 86976 | 18048 | 8331 | 7527 | 4133 | 48937 |
| 4. | **Bihar** | 107642 | 1287 | 2825 | 3502 | 5531 | 94497 |
| 5. | **Chhatisgarh** | 72231 | 98 | 5146 | 13587 | 12804 | 40596 |
| 6. | **Goa** | 347 | 0 | 43 | 1 | 1 | 302 |
| 7. | **Gujarat** | 34415 | 9 | 153 | 250 | 341 | 33662 |
| 8. | **Haryana** | 7385 | 12 | 40 | 219 | 1102 | 6012 |
| 9. | **Himachal Pradesh** | 53201 | 4910 | 3343 | 1899 | 702 | 42347 |
| 10 | **Jammu & Kashmir** | 12826 | 3431 | 1030 | 1169 | 1298 | 5898 |
| 11 | **Jharkhand** | 118981 | 447 | 31 | 202 | 797 | 117504 |
| 12 | **Karnataka** | 59532 | 3586 | 11333 | 11992 | 9050 | 23571 |
| 13. | **Kerala** | 11883 | 0 | 0 | 0 | 0 | 11883 |
| 14. | **Madhya Pradesh** | 127197 | 481 | 4856 | 17160 | 18146 | 86554 |
| 15. | **Maharashtra** | 98842 | 438 | 3495 | 7791 | 1493 | 85625 |
| 16. | **Manipur** | 2870 | 413 | 368 | 395 | 106 | 1588 |
| 17. | **Meghalaya** | 9326 | 1251 | 1560 | 935 | 510 | 5070 |
| 18. | **Mizoram** | 777 | 10 | 16 | 20 | 20 | 711 |
| 19. | **Nagaland** | 1432 | 212 | 16 | 43 | 23 | 1138 |
| 20. | **Orissa** | 141928 | 542 | 19520 | 33387 | 14176 | 74303 |
| 21. | **Punjab** | 15170 | 1973 | 197 | 501 | 819 | 11680 |
| 22. | **Rajasthan** | 121133 | 30988 | 11104 | 4952 | 2380 | 71709 |

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## Table 38 : Status of Coverage of Rural Habitations Under Rural Water Supply as on 1.04.2012

| Sl. No. | Name of the State UT | Total Habitations | No. of Habitations with Population Coverage > 0 and < 25% | No. of Habitations with Population Coverage >= 25 and < 50% | No. of Habitations with Population Coverage >= 50 and < 75% | No. of Habitations with Population Coverage >= 75 and < 100% | No. of Habitations with 100% Population Coverage |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 23. | **Sikkim** | 2498 | 96 | 273 | 320 | 4 | 1805 |
| 24. | **Tamil Nadu** | 94614 | 2257 | 2915 | 3945 | 1382 | 84115 |
| 25 | **Tripura** | 8132 | 1123 | 1203 | 1761 | 802 | 3243 |
| 26 | **Uttar Pradesh** | 260110 | 0 | 0 | 0 | 14242 | 245868 |
| 27 | **Uttarakhand** | 39142 | 4085 | 2400 | 2433 | 3136 | 27088 |
| 28 | **West Bengal** | 95395 | 264 | 1378 | 5410 | 673 | 87670 |
| 29 | **Andaman & Nicobar** | 491 | 53 | 4 | 0 | 0 | 434 |
| 30 | **Dadra & Nagar Haveli** | 70 | 70 | 0 | 0 | 0 | 0 |
| 31 | **Daman & Diu** | 21 | 21 | 0 | 0 | 0 | 0 |
| 33 | **Lakshadweep** | 9 | 9 | 0 | 0 | 0 | 0 |
| 34 | **Puducherry** | 248 | 0 | 0 | 0 | 2 | 246 |
| 35 | **Chandigarh** | 18 | 0 | 0 | 0 | 0 | 18 |
| | **Total** | **1662861** | **81713** | **89497** | **128042** | **102211** | **1261398** |

**Source** :- Ministry of Rural Development, Department of Drinking Water Supply.

Note : There may be variation in the above data till it is finalised by the respective State Govt.

**Table 39: Detail of layers under India-WRIS**

| S.No | Name of GIS layer |
|---|---|
| 1 | 2 |
| 1 | Basin, sub basin, catchment, water shed |
| 2 | River network |
| 3 | Digital Elevation model |
| 4 | Administrative boundary like International, state, district & block boundary |
| 5 | Village boundary |
| 6 | Town/village location and extent |
| 7 | Road network |
| 8 | Major tourist station |
| 9 | Location of major & medium irrigation projects |
| 10 | Location of Hydroelectric project |
| 11 | Location of multipurpose projects |
| 12 | Major & medium irrigation command boundary |
| 13 | Waterlogged and salt affected area in major & medium command |
| 14 | Soil samples of major & medium irrigation project command |
| 15 | Canal network |
| 16 | Surface water bodies |
| 17 | Ground water observation well location & data |
| 18 | Litholog data with aquifer data |
| 19 | Landuse/land cover |
| 20 | Land degradation |
| 21 | Wasteland map |
| 22 | Snow cover area |
| 23 | Flood inundation map |
| 24 | Drought prone area map |
| 25 | Inland navigation waterways |
| 26 | Inter-basin transfer link as per NWDA |
| 27 | Hydro-meteorological (Gauge & Discharge) sites of CWC |
| 28 | Meteorological station of IMD & CWC |
| 29 | Climate related data |
| 30 | Pollution monitoring station/water quality station of CWC |

Source: Remote Sensing Directorate, CWC.

**Table 40: Status of Hydro Electric Potential Development- Region and State- wise ( In terms of Installed capacity - Above 25 MW)**

**As on 30.09.2013**

| Region/ State | Identified Capacity as per reassessment study | | Capacity Under Operation | | Capacity Under Construction | | Capacity Under Operation + Under Construction | | Capacity yet to be taken up under construction | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Above 25 MW | | | | | | | | |
| | (MW) | (MW) | (MW) | % | (MW) | (%) | (MW) | (%) | (MW) | % |
| **NORTHERN** | | | | | | | | | | |
| Jammu & Kashmir | 14146 | 13543 | 2504.00 | 18.49 | 1795.00 | 13.25 | 4299.00 | 31.74 | 9244.00 | 68.26 |
| Himachal Pradesh | 18820 | 18540 | 7594.00 | 40.96 | 3912.00 | 21.10 | 11506.00 | 62.06 | 7034.00 | 37.94 |
| Punjab | 971 | 971 | 1206.30 | 100.00 | 0.00 | 0.00 | 1206.30 | 100.00 | 0.00 | 0.00 |
| Haryana | 64 | 64 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 64.00 | 100.00 |
| Rajasthan | 496 | 483 | 411.00 | 85.09 | 0.00 | 0.00 | 411.00 | 85.09 | 72.00 | 14.91 |
| Uttarakhand | 18175 | 17998 | 3426.35 | 19.04 | 1196.00 | 6.65 | 4622.35 | 25.68 | 13375.65 | 74.32 |
| Uttar Pradesh | 723 | 664 | 501.60 | 75.54 | 0.00 | 0.00 | 501.60 | 75.54 | 162.40 | 24.46 |
| Sub Total (NR) | 53395 | 52263 | 15643.25 | 29.93 | 6903.00 | 13.21 | 22546.25 | 43.14 | 29716.75 | 56.86 |
| **WESTERN** | | | | | | | | | | |
| Madhya Pradesh. | 2243 | 1970 | 2395.00 | 100.00 | 400.00 | 20.30 | 2795.00 | 100.00 | 0.00 | 0.00 |
| Chhattisgarh | 2242 | 2202 | 120.00 | 5.45 | 0.00 | 0.00 | 120.00 | 5.45 | 2082.00 | 94.55 |
| Gujarat | 619 | 590 | 550.00 | 93.22 | 0.00 | 0.00 | 550.00 | 93.22 | 40.00 | 6.78 |

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**Table 40: Status of Hydro Electric Potential Development- Region and State- wise ( In terms of Installed capacity - Above 25 MW)**

**As on 30.09.2013**

| Region/ State | Identified Capacity as per reassessment study | | Capacity Under Operation | | Capacity Under Construction | | Capacity Under Operation + Under Construction | | Capacity yet to be taken up under construction | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Above 25 MW | | | | | | | | |
| | (MW) | (MW) | (MW) | % | (MW) | (%) | (MW) | (%) | (MW) | % |
| Maharashtra | 3769 | 3314 | 2487.00 | 75.05 | 0.00 | 0.00 | 2487.00 | 75.05 | 827.00 | 24.95 |
| Goa | 55 | 55 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 55.00 | 100.00 |
| Sub total (WR) | 8928 | 8131 | 5552.00 | 68.28 | 400.00 | 4.92 | 5952.00 | 73.20 | 2179.00 | 26.80 |
| **SOUTHERN** | | | | | | | | | | |
| Andhra Pradesh | 4424 | 4360 | 2177.75 | 49.95 | 410.00 | 9.40 | 2587.75 | 59.35 | 1772.25 | 40.65 |
| Karnataka | 6602 | 6459 | 3585.40 | 55.51 | 0.00 | 0.00 | 3585.40 | 55.51 | 2873.60 | 44.49 |
| Kerala | 3514 | 3378 | 1881.50 | 55.70 | 100.00 | 2.96 | 1981.50 | 58.66 | 1396.50 | 41.34 |
| Tamilnadu | 1918 | 1693 | 1782.20 | 100.00 | 0.00 | 0.00 | 1782.20 | 100.00 | 0.00 | 0.00 |
| Sub Total (SR) | 16458 | 15890 | 9426.85 | 59.33 | 510.00 | 3.21 | 9936.85 | 62.54 | 5953.15 | 37.46 |
| **EASTERN** | | | | | | | | | | |
| Jharkhand | 753 | 582 | 170.00 | 29.21 | 0.00 | 0.00 | 170.00 | 29.21 | 412.00 | 70.79 |
| Bihar | 70 | 40 | 0.00 | | 0.00 | 0.00 | 0.00 | | 40.00 | 100.00 |
| Orissa | 2999 | 2981 | 2027.50 | 68.01 | 0.00 | 0.00 | 2027.50 | 68.01 | 953.50 | 31.99 |

Contd..

**Table 40: Status of Hydro Electric Potential Development- Region and State- wise ( In terms of Installed capacity - Above 25 MW)**

**As on 30.09.2013**

| Region/ State | Identified Capacity as per reassessment study | | Capacity Under Operation | | Capacity Under Construction | | Capacity Under Operation + Under Construction | | Capacity yet to be taken up under construction | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Above 25 MW | | | | | | | | |
| | (MW) | (MW) | (MW) | % | (MW) | (%) | (MW) | (%) | (MW) | % |
| West Bengal | 2841 | 2829 | 272.20 | 9.62 | 160.00 | 5.66 | 432.20 | 15.28 | 2396.80 | 84.72 |
| Sikkim | 4286 | 4248 | 669.00 | 15.75 | 2322.00 | 54.66 | 2991.00 | 70.41 | 1257.00 | 29.59 |
| Sub Total (ER) | 10949 | 10680 | 3138.70 | 29.39 | 2482.00 | 23.24 | 5620.70 | 52.63 | 5059.30 | 47.37 |
| **NORTH EASTERN** | | | | | | | | | | |
| Meghalaya | 2394 | 2298 | 282.00 | 12.27 | 40.00 | 1.74 | 322.00 | 14.01 | 1976.00 | 85.99 |
| Tripura | 15 | 0 | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| Manipur | 1784 | 1761 | 105.00 | 5.96 | 0.00 | 0.00 | 105.00 | 5.96 | 1656.00 | 94.04 |
| Assam | 680 | 650 | 375.00 | 57.69 | 0.00 | 0.00 | 375.00 | 57.69 | 275.00 | 42.31 |
| Nagaland | 1574 | 1452 | 75.00 | 5.17 | 0.00 | 0.00 | 75.00 | 5.17 | 1377.00 | 94.83 |
| Arunachal Pd | 50328 | 50064 | 405.00 | 0.81 | 2710.00 | 5.41 | 3115.00 | 6.22 | 46949.00 | 93.78 |
| Mizoram | 2196 | 2131 | 0.00 | 0.00 | 60.00 | 2.82 | 60.00 | 2.82 | 2071.00 | 97.18 |
| Sub Total (NER) | 58971 | 58356 | 1242.00 | 2.13 | 2810.00 | 4.82 | 4052.00 | 6.94 | 54304.00 | 93.06 |
| **ALL INDIA** | **148701** | **145320** | **35002.80** | **24.09** | **13105.00** | **9.02** | **48107.80** | **33.10** | **97212.20** | **66.90** |

Source: Central Electricity Authority, HP& I Division

Note: - 1. Does not include pumped storage schemes

2. In some states the total of the capacity developed and balance capacity is different from the potential assessed . This is due to underassessment of the potential initially.

3. In addition to above 9 PSS ( 4785.6 MW) are under operation and 2 PSS (1080 MW) are under construction

## Table 41: Status of Hydro Electric Power Potential Development-Basin-wise (In terms of Installed Capacity above 25 MW)

As on 30.09. 2013

| BASIN | Identified capacity as per assessment study | | Capacity Under Operation | | Capacity under construction | | Capacity under operation + under construction | | Capacity yet to be taken up under Construction | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total (MW) | Above 25 MW (MW) | (MW) | ( % ) | (MW) | ( % ) | (MW) | ( % ) | (MW) | ( % ) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **INDUS** | 33832 | 33028 | 11244.30 | 34.04 | 5596.00 | 16.94 | 16840.30 | 50.99 | 16187.70 | 49.01 |
| **GANGA** | 20711 | 20252 | 4987.15 | 24.63 | 1307.00 | 6.45 | 6294.15 | 31.08 | 13957.60 | 68.92 |
| **CENTRAL INDIAN RIVERS** | 4152 | 3868 | 3147.50 | 81.37 | 400.00 | 10.34 | 3547.50 | 91.71 | 320.50 | 8.29 |
| **WEST FLOWING RIVERS** | 9430 | 8997 | 5660.70 | 62.92 | 100.00 | 1.11 | 5760.70 | 64.03 | 3236.30 | 35.97 |
| **EAST FLOWING RIVERS** | 14511 | 13775 | 7843.15 | 56.94 | 410.00 | 2.98 | 8253.15 | 59.91 | 5521.85 | 40.09 |
| **BRAHMAPUTRA BASIN** | 66065 | 65400 | 2120.00 | 3.24 | 5292.00 | 8.09 | 7412.00 | 11.33 | 57988.00 | 88.67 |
| **ALL INDIA** | **148701** | **145320** | **35002.80** | **24.09** | **13105.00** | **9.02** | **48107.80** | **33.10** | **97212.20** | **66.90** |

Source : Central Electricity Authority, HP& I Division

Note: - 1. Does not include pumped storage schemes

2. In some states the total of the capacity developed and balance capacity is different from the potential assessed. This is due to underassessment of the potential initially.

3. In addition to above 9 PSS (4785.6 MW) are under operation and 2 PSS (1080 MW) are under construction.

## Table 42 : Hydro Electric Power Installed Capacity and Generation - All India(Utilities)

| Sl. No. | Year | Installed Capacity(Utilities) | | | Generation(Utilities) | | | Load Factor |
|---|---|---|---|---|---|---|---|---|
| | | Total (MW) | Hydro (MW) | Percentage Installed Capacity of Total | Total (GWH) | Hydro (GWH) | Percentage Generation of Total | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | 1947.0 | 1361.8 | 508.1 | 37.3 | 4073.3 | 2194.5 | 53.9 | 49.0 |
| 2 | 1950.0 | 1712.5 | 559.3 | 32.7 | 5106.7 | 2519.8 | 49.3 | 51.0 |
| 3 | 1955.0 | 2694.8 | 939.5 | 34.9 | 8592.5 | 3742.2 | 43.6 | 45.0 |
| 4 | 1960-61 | 4653.1 | 1916.7 | 41.2 | 16937.0 | 7836.6 | 46.3 | 47.0 |
| 5 | 1965-66 | 9027.0 | 4123.7 | 45.7 | 32990.1 | 15225.0 | 46.2 | 42.0 |
| 6 | 1973.7 | 16663.6 | 6965.3 | 41.8 | 66689.0 | 28971.8 | 43.4 | 47.0 |
| 7 | 1979-80 | 28447.8 | 11384.0 | 40.0 | 104627.3 | 45477.6 | 43.5 | 46.0 |
| 8 | 1985-86 | 46796.0 | 15471.6 | 33.1 | 170350.1 | 51020.8 | 30.0 | 38.0 |
| 9 | 1989-90 | 63627.3 | 18307.6 | 28.8 | 245437.9 | 62116.1 | 25.3 | 39.0 |
| 10 | 1990-91 | 66086.3 | 18753.4 | 28.4 | 264328.6 | 71641.3 | 27.1 | 44.0 |
| 11 | 1995-96 | 83293.5 | 20985.6 | 25.2 | 379877.1 | 72579.2 | 19.1 | NA |
| 12 | 1996-97 | 85795.4 | 21658.1 | 25.2 | 395889.5 | 68900.8 | 17.4 | NA |
| 13 | 1997-98 | 89102.3 | 21904.5 | 24.6 | 421747.3 | 74581.7 | 17.7 | NA |
| 14 | 1998-99 | 93293.5 | 22479.1 | 24.1 | 448544.1 | 82922.6 | 18.5 | NA |
| 15 | 1999-00 | 97884.5 | 23856.8 | 24.4 | 481055.2 | 80755.5 | 16.8 | NA |
| 16 | 2000-01 | 101626.2 | 25152.9 | 24.8 | 501204.1 | 74361.9 | 14.8 | NA |
| 17 | 2001-02 | 105046.0 | 26268.8 | 25.0 | 517439.4 | 73579.9 | 14.2 | NA |
| 18 | 2002-03 | 107877.4 | 26766.8 | 24.8 | 532693.0 | 64013.7 | 12.0 | NA |
| 19 | 2003-04 | 112683.5 | 29506.8 | 26.2 | 565101.7 | 75242.5 | 13.3 | NA |
| 20 | 2004-05 | 118425.7 | 30942.2 | 26.1 | 594456.2 | 84610.4 | 14.2 | NA |
| 21 | 2005-06 | 124287.2 | 32325.8 | 26.0 | 623819.5 | 101494.4 | 16.3 | NA |
| 22 | 2006-07 | 132329.2 | 34653.8 | 26.2 | 670654.2 | 113501.6 | 16.9 | NA |
| 23 | 2007-08 | 143061.0 | 35908.8 | 25.1 | 722625.5 | 120386.7 | 16.7 | NA |
| 24 | 2008-09 | 147965.41 | 36877.76 | 24.9 | 741167.36 | 110098.5 | 14.9 | NA |
| 25 | 2009-10 | 159398.5 | 36863.4 | 23.1 | 799850.6 | 104059.4 | 13.0 | NA |
| 26 | 2010-11 | 173626.4 | 37567.4 | 21.6 | 844748.2 | 114415.5 | 13.5 | NA |
| 27 | 2011-12 | 199877.0 | 38990.4 | 19.5 | 922451.1 | 130511.5 | 14.1 | NA |
| 28 | 2012-13* | 223343.6 | 39491.4 | 17.7 | 963722.2 | 113626.2 | 11.8 | NA |

**Sources** : Central Electricity Authority (DMLF Division)

**MW** : Mega Watt **GWH** : Giga Watt Hours

**N.A.** : Not Available * Provisional

## Table 43: List of Water Resources projects declared as National Projects

| Sl. No. | Name of the Project | 1) Irrigation (ha.)<br>2) Power (MW)<br>3) Storage (MAF) | State |
|---|---|---|---|
| 1 | Teesta Barrage | 1) 9.23 lakh<br>2) 1000 MW<br>3) Barrage | West Bengal |
| 2 | ShahpurKandi | 1) .37 lakh<br>2) 168 MW<br>3) 0.012 MAF | Punjab |
| 3 | Bursar | 1) 1 lakh (indirect)<br>2) 1230 MW<br>3) 1 MAF | J&K |
| 4 | 2nd Ravi Vyas Link | Harness water flowing across border of about 3 MAF | Punjab |
| 5. | Ujh multipurpose project | 1) 0.32 lakh ha<br>2) 280 MW<br>3) 0.66 MAF | J&K |
| 6. | Gyspa project | 1) 0.50 lakh ha<br>2) 240 MW<br>3) 0.6 MAF | HP |
| 7. | LakhvarVyasi | 1) 0.49 lakh<br>2) 420 MW<br>3) 0.325 MAF | Uttarakhand |
| 8. | Kishau | 1) 0.97 Lakh<br>2) 600 MW<br>3) 1.04 MAF | HP/ Uttarakhand |
| 9. | Renuka | 1) Drinking water<br>2) 40 MW<br>3) 0.44 MAF | HP |
| 10. | Noa-Dehang Dam Project | 1) 8000 ha.<br>2) 75 MW<br>3) 0.26 MAF | Arunanchal Pradesh |
| 11. | Kulsi Dam Project | 1) 23,900 ha.<br>2) 29 MW<br>3) 0.28 MAF | Assam |
| 12. | Upper Siang | 1) Indirect<br>2) 9500 MW<br>3) 17.50 MAF<br>4) Flood moderation | Arunanchal Pradesh |
| 13 | Gosi khurd | 1) 2.50 lakh<br>2) 3 MW<br>3) 0.93 MAF | Maharashtra |
| 14 | Ken Betwa | 1) 6.46 lakh<br>2) 72 MW<br>3) 2.25 MAF | Madhya Pradesh |
| 15 | Saryu Nahar Pariyojana | 1) 4.86 lakh (additional)<br>2) –<br>3) Barrage | Uttar Pradesh |

Source: PCP Directorate, CWC

MAF- Million Acre Feet MW – Mega Watt

## GLOSSARY OF TERMS

| | |
|---|---|
| Area sown more than once | This represents the areas on which crops are cultivated more than once during the agricultural year. This is obtained by deducting Net Area Sown from Total Cropped Area. |
| Cropping Intensity | It is the ratio of gross (total) area sown to the net area sown expressed as a percentage. |
| Culturable Command Area (CCA) | It is the area which can be physically irrigated from a scheme and is fit for cultivation. |
| Dam | Any artificial barrier which impounds or diverts water. A dam is generally considered hydrologically significant if<br>it is 1.25 feet (0.4 meter) or more in height from the natural bed of the stream and has a storage of at least 15 acre-feet<br>or<br>it has an impounding capacity of 50 acre-feet or more and is at least six feet (2 meters) above the natural bed of the stream. |
| Large Dam | A dam exceeding 15m in height above deepest river bed level and a dam between 10 and 15 m height provided volume of earthwork exceeds 0.75 million cubic meter and storage exceeds 1 million cubic meter or the maximum flood discharge exceeds 2000 cumecs. |
| Gross Area sown | This is the sum total of the areas under all crops over the various seasons in an agriculture year (i.e. from the 1st July to 30th June next year). |
| Gross reservoir Capacity | The total amount of storage capacity available in a reservoir for all purposes from the streambed to the normal water or normal water or normal pool surface level. It does not include surcharge, but does include dead storage |
| Ground water | Water within the earth that supplies wells and springs; water in the zone of saturation where all openings in rocks and soil are filled, the upper surface of which forms the water table. |
| Irrigated Area | The area is assumed to be irrigated for cultivation through such sources as canals (Govt. & Private), tanks, tube-wells, other wells and other sources. |
| Net Irrigated Area | It is the total area which is irrigated counting area irrigated more than once on the same land in an agricultural year once only. |

| | |
|---|---|
| Gross Irrigated Area | It is the total area irrigated under various crops in a year, counting the area irrigated under more than one crop during the same year as many times as the number of crops grown and irrigated. |
| Habitation | Habitation means a place where people have settled permanently. Temporary settlement like that of quarry workers, construction workers, farm workers, nomads etc. will not be classified as habitation. |
| Irrigation Potential Created (IPC) | The Irrigation potential created by a project at a given time during or after its construction is the aggregate gross area that can be irrigated annually by the quantity of water that could be made available by all the connected and completed works up to the end of the water courses or the last point in the water delivery system. It is the area that can be irrigated from a project in a design agriculture year that is from the 1July to 30 June next year for the projected cropping pattern and accepted water allowance on its full development. Before an area is included under potential created, it has to be ensured that the water for the area to be reported upon is available and the conveyance system up to and including the irrigation outlet to serve an area up to 40 hectares in the area to be irrigated is completed. |
| Irrigation Potential Utilised | The Irrigation potential utilised is the total gross area actually irrigated by a project/scheme during the agricultural year under consideration. |
| Live capacity | It is the total amount of storage capacity available in a reservoir for all purposes, from the dead storage level to the normal water or normal pool level surface level. It does not include surcharge, or dead storage, but does include inactive storage, active conservation storage and exclusive flood control storage. |
| Major Irrigation Scheme | A scheme having Culturable Command Area (CCA) more than 10,000 hectares is classified as major irrigation scheme. |
| Medium Irrigation Scheme | A scheme having CCA more than 2,000 hectares and up to 10,000 hectares individually is classified as medium irrigation scheme. |
| Minor Irrigation Scheme | A scheme having CCA up to 2,000 hectares individually is classified as minor irrigation scheme. |
| Net Area Sown | It is the total area sown with crops and orchards, counting areas sown more than once in the same agricultural year only once. |
| Reporting Area for Land Utilisation Statistics | The Reporting area stands for the area for which data on land use classification are available. |
| River Basin | River Basin is the basic hydrological unit for water resources planning and management. |

| | |
|---|---|
| Runoff | Water which is not absorbed by the soil and flows to lower ground, eventually draining into a stream, river, or other body of water. It is that part of precipitation that flows toward the streams on the surface of the ground or within the ground. Runoff is composed of base flow and surface runoff. |
| Runoff/ potential | Runoff/ potential of a river for a specified period at a site is the total volume of water flow/passed from/through the site during the specified period. It is the notional depth of water in mm over the catchment, equivalent to annual runoff (in Cum.)/Catchment Area (km2)* 1000 and calculated at the discharge measurement station. |
| Surface runoff | The runoff that travels overland to the stream channel. Rain that falls on the stream channel is often lumped with this quantity. |
| Surface water | Water that flows in streams and rivers and in natural lakes, in wetlands, and in reservoirs constructed by humans |
| Total Cultivable Area | This consists of net area sown, current fallows, fallow lands other than current fallows, culturable waste and land under miscellaneous tree crops. |
| Ultimate Irrigation Potential | The ultimate irrigation potential is the gross area that can be irrigated from a project in design year for the projected cropping pattern and assumed water allowance on its full development. The gross irrigated area will be the aggregate of the areas irrigated in the different crop seasons, the areas under two seasonal and perennial crops being counted only once in the year.<br><br>The Ultimate Irrigation Potential of ground water may however, be taken as the total area that can be irrigated by utilizing the Annually Rechargeable Ground Water Resource Available for Irrigation considering the gross irrigation requirement of crops grown in an unit area. |